Analytical Resources, LLC
Analytical Chemists and Consultants

28 December 2022

Ali Judkins
Anchor QEA, LLC
1201 3rd Ave, Suite 2600
Seattle, WA 98101

RE: AOC5 MR Phase 1

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
22L0198	N/A

Susan Dunnihoo

Digitally signed by Susan Dunnihoo
Date: 2022.12.28 17:13:36 -08'00'

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclosed Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, LLC

Susan Dunnihoo, Director, Client Services

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

1 of 1 — 22L0198

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 3397

Project/Client Name: AOC5 MR Phase 1
Project Number: 210075-0102
Contact Name: Amara Vandervort
Sampled By: Windward

Ship to: ARI
Attn: Sue Amihood
Shipper: Courier
Form filled out by: A. Vandervort, K. McPeek

Shipping Date: 12/8/22
Airbill Number:
Turnaround requested: Results by 12/28/22

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required) PCBs	SMS SVOCs	SMS Metals	TOC Total Solids	DIF	Archive		Comments / Instructions [Jar tag number(s)]
12/8/22	0816	LDW23-SS1253	3	Sediment	X	NA	NA	X	NA	X		NA=archive
	0839	LDW23-SS1254	3		x	NA	NA	x	NA	x		
	0857	LDW23-SS1255	3		x	NA	NA	x	NA	x		Results by 12/28/22
	0916	LDW23-SS1257	3		x	NA	NA	x	NA	x		
	0935	LDW23-SS1258	3		x	NA	NA	x	NA	x		
	0954	LDW23-SS1259	3		x	NA	NA	x	NA	x		
	1036	LDW23-SS1262	3		x	NA	NA	x	NA	x		
	1012	LDW23-SS1260	3		x	NA	NA	x	NA	x		
	1054	LDW23-SS1263	3		x	NA	NA	x	NA	x		
	1114	LDW23-SS1245	3		x	NA	NA	x	NA	x		
					12/8/22							
		Total Number of Containers	30	Purchase Order / Statement of Work # APS-110222-AOC5-ARI								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Amara Vandervort	YAREN	YAREN	
Signature:			
Company: Windward	Company: YA YA SAFETY	Company: YA YA SAFETY	Company: ARI
Date/Time: 12/8/22 4:38	Date/Time: 12/8/22 4:38	Date/Time: 12/8/22 5:18PM	Date/Time: 12/8/22 1718

* Distribution: White copies accompany shipment; yellow retained by consignor.

Wind Ward environmental LLC
200 1st Ave W, Suite 500
Seattle, WA 98119
206.378.1364

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Windward

Project Name: ACCS MR Phase 1

COC No(s): NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other:

Assigned ARI Job No: 22L0198

Tracking No: NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 1718 — 2.1 3.0 1.8 4.9 4.8 5.1 2.9

If cooler temperature is out of compliance fill out form 00070F — Temp Gun ID#: 9708

Cooler Accepted by: JM Date: 12/08/22 Time: 1718

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? ...	Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	YES	NO
How were bottles sealed in plastic bags?	Individually	Grouped	Not
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) ...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA		

Were the sample(s) split by ARI? NA YES Date/Time: Equipment: Split by:

Samples Logged by: Date: 12/09/22 Time: 8:16 Labels checked by:

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-0102	**Reported:**
Seattle, WA 98101	Project Manager: Ali Judkins	12/28/2022 17:04

ANALYTICAL REPORT FOR SAMPLES

Laboratory ID	Sample ID	Matrix	Date Sampled	Date Received
22L0198-01	LDW23-SS1253	Solid	12/08/22 08:16	12/08/22 17:18
22L0198-02	LDW23-SS1254	Solid	12/08/22 08:39	12/08/22 17:18
22L0198-03	LDW23-SS1255	Solid	12/08/22 08:57	12/08/22 17:18
22L0198-04	LDW23-SS1257	Solid	12/08/22 09:16	12/08/22 17:18
22L0198-05	LDW23-SS1258	Solid	12/08/22 09:35	12/08/22 17:18
22L0198-06	LDW23-SS1259	Solid	12/08/22 09:54	12/08/22 17:18
22L0198-07	LDW23-SS1262	Solid	12/08/22 10:36	12/08/22 17:18
22L0198-08	LDW23-SS1260	Solid	12/08/22 10:12	12/08/22 17:18
22L0198-09	LDW23-SS1263	Solid	12/08/22 10:54	12/08/22 17:18
22L0198-10	LDW23-SS1245	Solid	12/08/22 11:14	12/08/22 17:18

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-0102	**Reported:**
Seattle WA, 98101	Project Manager: Ali Judkins	28-Dec-2022 17:04

Case Narrative

Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Work Order: 22L0198

Sample receipt

Samples as listed on the preceding page were received 08-Dec-2022 17:18 under ARI work order 22L0198. For details regarding sample receipt, please refer to the Cooler Receipt Form.

PCB Aroclors - EPA Method SW8082A

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits.

The reference material (SRM) percent recoveries were within control limits.

Wet Chemistry (Total Organic Carbon)

The sample(s) were prepared and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The reference material (SRM) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits.

QUALIFIERS AND NOTES

Qualifier	Definition
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
P1	The reported value is greater than 40% difference between the concentrations determined on two GC columns where applicable.
J	Estimated concentration value detected below the reporting limit.
*	Flagged value is not within established control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1253

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	22L0198-01 A	File ID:	12202230ECD7.D
Sampled:	12/08/22 08:16	Prepared:	12/16/22 17:27	Analyzed:	12/20/22 23:01
% Solids:	40.84	Preparation:	EPA 3546 (Microwave)	Initial/Final:	30.65 g Wet / 2.5 mL
Batch:	BKL0377	Sequence:	SKL0304	Calibration:	FL00010
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	32.6	1.6	4.0	
11097-69-1	Aroclor 1254	1	1	44.9	1.6	4.0	
11096-82-5	Aroclor 1260	1	1	63.0	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9888*	*8.10*	*101*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9888*	*5.55*	*69.5*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202230ECD7.D
Data file 2: /221220.b/221220.b/12202230ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0198-01
Client ID:
Injection Date: 20-DEC-2022 23:01
Report Date: 12/22/2022 09:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.831	-0.005	189858	5.708	-0.005	114319	27.8	30.0	7.6	Tetrachloro-m-xylene
13.898	-0.010	168643	14.127	-0.010	166594	40.5	36.5	10.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	481726	7.6
Hexabromobiphenyl	798898	453788	-43.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	277886	11.6
Hexabromobiphenyl	362541	321551	-11.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.414	-0.014	36267	175.1	1	8.317	-0.010	24899	219.3
Aroclor-1248	2	8.582	-0.023	31444	118.9	2	8.722	-0.010	22350	187.2
Aroclor-1248	3	8.998	-0.024	92239	193.9	3	9.154	-0.024	35290	243.0
Aroclor-1248	4	9.301	-0.010	102873	441.4	4	9.549	-0.054	58362	342.3
		Total Col1Ave (4 peaks):			232.3		Total Col2Ave (4 peaks):			248.0 RPD = 7
		Corrected Ave (3 peaks):			162.6		Corrected Ave (3 peaks):			216.5 RPD = 28
Aroclor-1254	1	9.301	-0.020	102873	242.5	1	9.454	-0.013	59385	331.5
Aroclor-1254	2	9.423	0.021	7718	46.8	2	9.971	-0.015	34893	242.2
Aroclor-1254	3	9.672	-0.022	88586	330.7	3	10.119	-0.020	105662	341.3
Aroclor-1254	4	9.800	-0.030	146373	280.3	4	10.358	-0.031	136582	425.9
Aroclor-1254	5	10.138	-0.051	189192	528.5	5	10.568	-0.018	90687	586.4
		Total Col1Ave (5 peaks):			285.8		Total Col2Ave (5 peaks):			385.5 RPD = 30
		Corrected Ave (4 peaks):			225.1		Corrected Ave (4 peaks):			335.2 RPD = 39
Aroclor-1260	1	11.046	-0.016	52071	315.2	1	11.658	-0.011	52025	306.5
Aroclor-1260	2	11.361	-0.016	46684	273.3	2	11.918	-0.014	99508	233.6
Aroclor-1260	3	11.731	-0.021	140561	313.1	3	12.437	-0.015	42006	370.4
Aroclor-1260	4	12.130	-0.028	71584	313.1	4	12.502	-0.015	71658	252.4
Aroclor-1260	5	12.248	-0.014	33979	363.1	NS	---			----
		Total Col1Ave (5 peaks):			315.6		Total Col2Ave (4 peaks):			290.7 RPD = 8
		Corrected Ave (4 peaks):			303.7		Corrected Ave (3 peaks):			264.2 RPD = 14
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.936 - 13.808) = 2801598 Col1 Total PCB = 0.5 ppm*

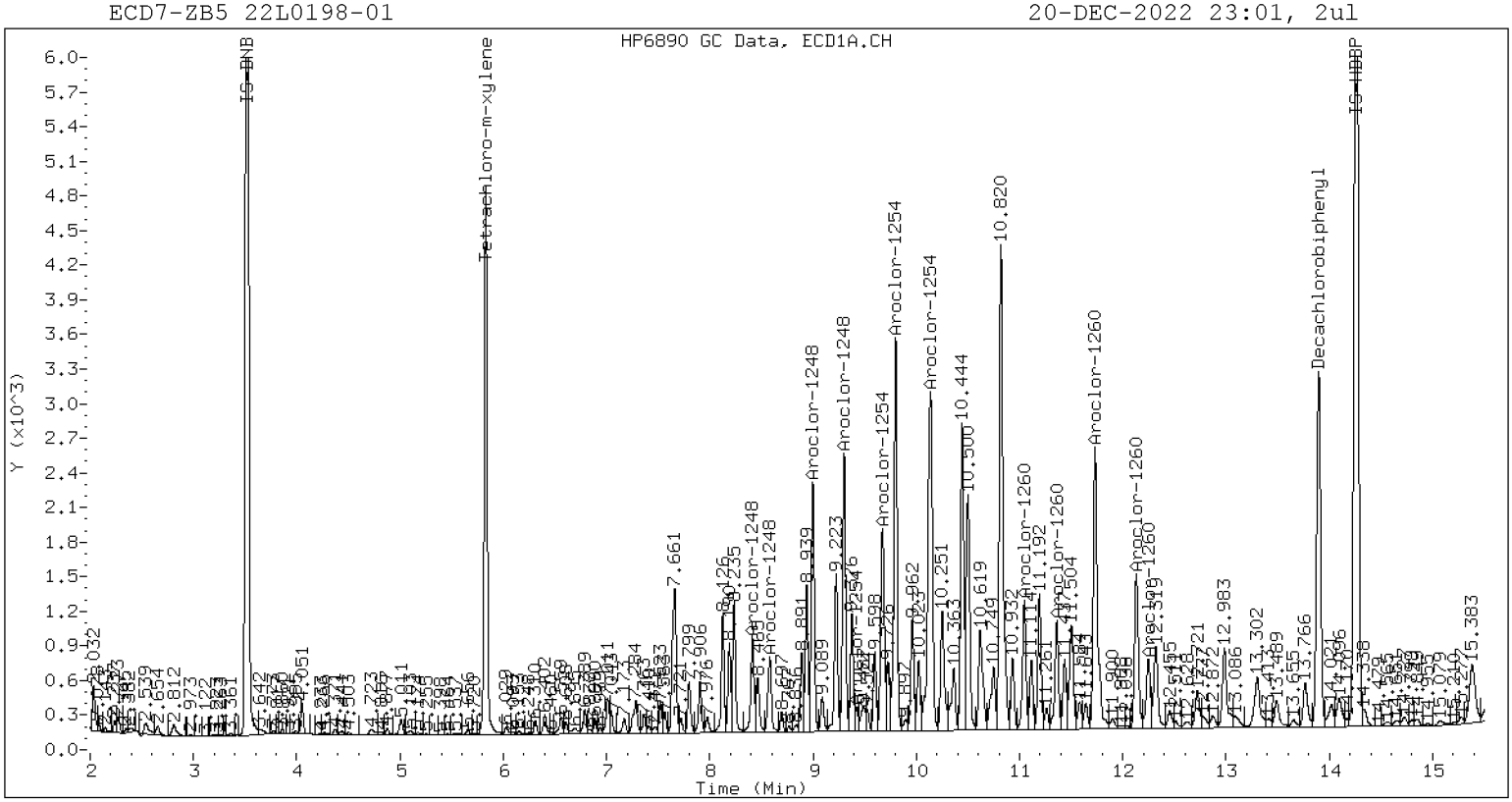
Total PCB Area Col2 (5.936 - 13.808) = 1846821 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

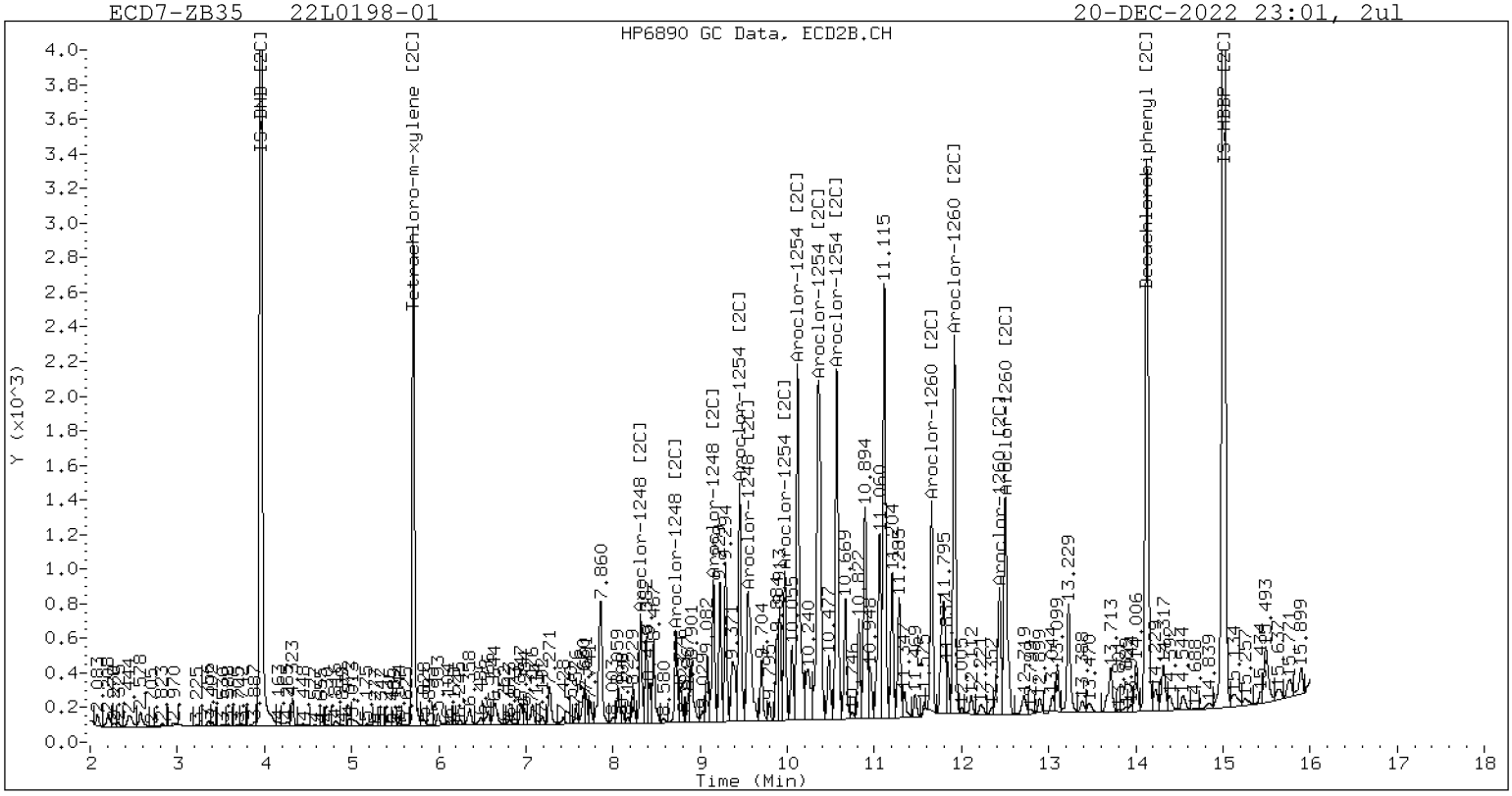
PCB Dual Column Chromatograms

ECD7-ZB5 22L0198-01 20-DEC-2022 23:01, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 22L0198-01 20-DEC-2022 23:01, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1254

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	22L0198-02 A	File ID:	12202231ECD7.D
Sampled:	12/08/22 08:39	Prepared:	12/16/22 17:27	Analyzed:	12/20/22 23:22
% Solids:	39.87	Preparation:	EPA 3546 (Microwave)	Initial/Final:	31.38 g Wet / 2.5 mL
Batch:	BKL0377	Sequence:	SKL0304	Calibration:	FL00010
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	29.4	1.6	4.0	
11097-69-1	Aroclor 1254	1	1	52.4	1.6	4.0	
11096-82-5	Aroclor 1260	1	1	52.9	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9928*	*7.95*	*99.5*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9928*	*5.53*	*69.2*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202231ECD7.D
Data file 2: /221220.b/221220.b/12202231ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0198-02
Client ID:
Injection Date: 20-DEC-2022 23:22
Report Date: 12/22/2022 09:59
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.831	-0.005	185681	5.708	-0.005	113261	27.7	30.6	9.9	Tetrachloro-m-xylene
13.897	-0.010	160013	14.127	-0.009	161059	39.8	36.3	9.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	473325	5.7
Hexabromobiphenyl	798898	438662	-45.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270396	8.6
Hexabromobiphenyl	362541	312863	-13.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.414	-0.014	32824	161.3	1	8.317	-0.009	24598	222.7
Aroclor-1248	2	8.581	-0.023	27607	106.2	2	8.723	-0.010	20075	172.8
Aroclor-1248	3	8.999	-0.023	81138	173.6	3	9.154	-0.024	30759	217.7
Aroclor-1248	4	9.301	-0.010	92238	402.8	4	9.548	-0.054	51465	310.2
		Total Col1Ave (4 peaks):			211.0		Total Col2Ave (4 peaks):			230.8 RPD = 9
		Corrected Ave (3 peaks):			147.0		Corrected Ave (3 peaks):			204.4 RPD = 33
Aroclor-1254	1	9.301	-0.020	92238	221.3	1	9.453	-0.013	54237	311.1
Aroclor-1254	2	9.421	0.020	7150	44.1	2	9.972	-0.015	31806	226.9
Aroclor-1254	3	9.673	-0.021	81617	310.1	3	10.120	-0.020	94321	313.1
Aroclor-1254	4	9.801	-0.030	131280	255.9	4	10.359	-0.030	121170	388.3
Aroclor-1254	5	10.138	-0.052	164549	467.9	5	10.569	-0.017	77822	517.1
		Total Col1Ave (5 peaks):			259.8		Total Col2Ave (5 peaks):			351.3 RPD = 30
		Corrected Ave (4 peaks):			207.8		Corrected Ave (4 peaks):			309.9 RPD = 39
Aroclor-1260	1	11.046	-0.016	41538	260.1	1	11.657	-0.012	43750	264.9
Aroclor-1260	2	11.360	-0.017	36160	219.0	2	11.918	-0.014	80888	195.2
Aroclor-1260	3	11.731	-0.021	115756	266.8	3	12.436	-0.015	36588	331.6
Aroclor-1260	4	12.131	-0.027	58593	265.2	4	12.501	-0.015	58651	212.3
Aroclor-1260	5	12.246	-0.015	28194	311.7	NS	---			----
		Total Col1Ave (5 peaks):			264.5		Total Col2Ave (4 peaks):			251.0 RPD = 5
		Corrected Ave (4 peaks):			252.8		Corrected Ave (3 peaks):			224.1 RPD = 12
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.936 - 13.808) = 2484219 Col1 Total PCB = 0.5 ppm*

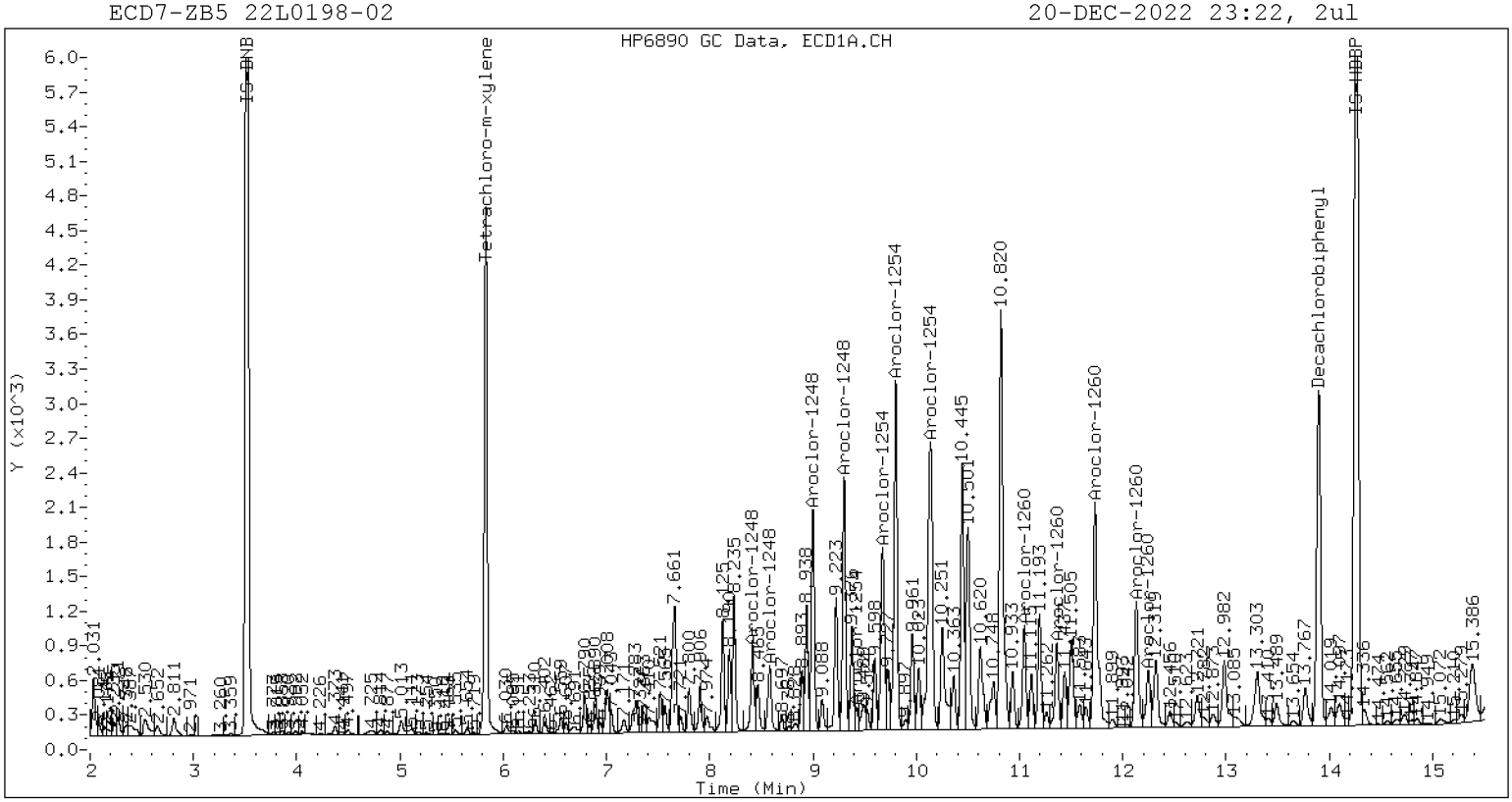
Total PCB Area Col2 (5.936 - 13.808) = 1659292 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

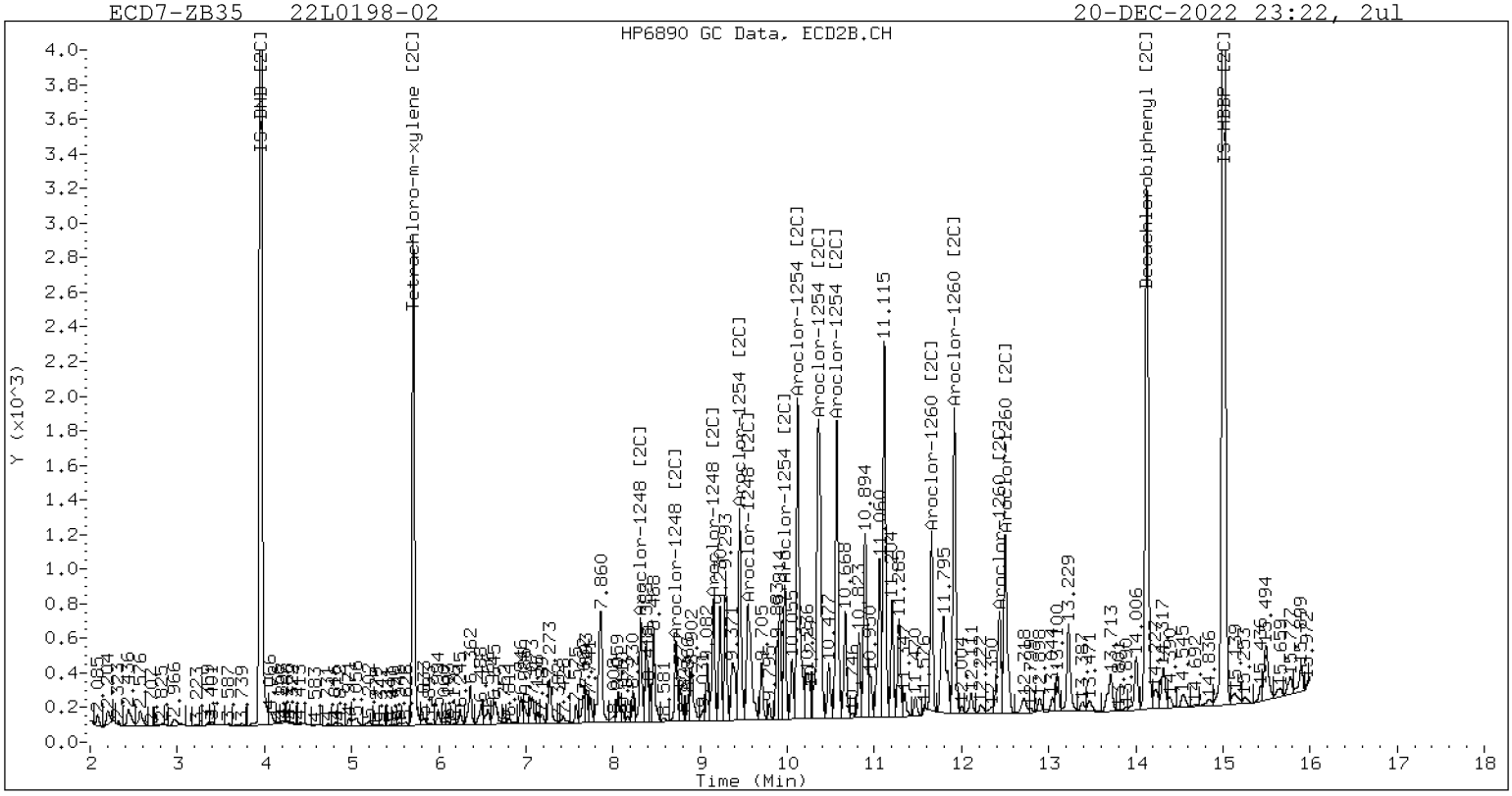
PCB Dual Column Chromatograms

ECD7-ZB5 22L0198-02 20-DEC-2022 23:22, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 22L0198-02 20-DEC-2022 23:22, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1255

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	22L0198-03 A	File ID:	12202232ECD7.D
Sampled:	12/08/22 08:57	Prepared:	12/16/22 17:27	Analyzed:	12/20/22 23:43
% Solids:	41.52	Preparation:	EPA 3546 (Microwave)	Initial/Final:	30.17 g Wet / 2.5 mL
Batch:	BKL0377	Sequence:	SKL0304	Calibration:	FL00010
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	31.1	1.6	4.0	
11097-69-1	Aroclor 1254	1	1	51.1	1.6	4.0	
11096-82-5	Aroclor 1260	1	1	54.9	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9830*	*8.67*	*109*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9830*	*5.95*	*74.5*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202232ECD7.D
Data file 2: /221220.b/221220.b/12202232ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0198-03
Client ID:
Injection Date: 20-DEC-2022 23:43
Report Date: 12/22/2022 09:59
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.830	-0.006	197038	5.707	-0.006	121024	29.8	33.3	11.2	Tetrachloro-m-xylene
13.896	-0.011	172625	14.128	-0.009	174949	43.4	40.0	8.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	466610	4.2
Hexabromobiphenyl	798898	433475	-45.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	264933	6.4
Hexabromobiphenyl	362541	308127	-15.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.413	-0.014	35088	174.9	1	8.317	-0.009	25735	237.8
Aroclor-1248	2	8.581	-0.023	30072	117.4	2	8.723	-0.010	20558	180.6
Aroclor-1248	3	8.998	-0.024	80593	174.9	3	9.154	-0.024	30978	223.7
Aroclor-1248	4	9.301	-0.010	89753	397.6	4	9.549	-0.053	51672	317.9
		Total Col1Ave (4 peaks):			216.2	Total Col2Ave (4 peaks):				240.0 RPD = 10
		Corrected Ave (3 peaks):			155.7	Corrected Ave (3 peaks):				214.0 RPD = 32
Aroclor-1254	1	9.301	-0.020	89753	218.5	1	9.454	-0.013	52744	308.8
Aroclor-1254	2	9.422	0.020	7342	46.0	2	9.971	-0.015	29984	218.3
Aroclor-1254	3	9.672	-0.022	76752	295.8	3	10.120	-0.020	91534	310.1
Aroclor-1254	4	9.801	-0.030	127506	252.1	4	10.358	-0.032	122600	401.0
Aroclor-1254	5	10.138	-0.052	160398	462.6	5	10.568	-0.018	76992	522.2
		Total Col1Ave (5 peaks):			255.0	Total Col2Ave (5 peaks):				352.1 RPD = 32
		Corrected Ave (4 peaks):			203.1	Corrected Ave (4 peaks):				309.6 RPD = 42*
Aroclor-1260	1	11.046	-0.016	42955	272.2	1	11.658	-0.012	44049	270.8
Aroclor-1260	2	11.360	-0.017	37680	230.9	2	11.918	-0.015	83649	205.0
Aroclor-1260	3	11.730	-0.021	117032	272.9	3	12.437	-0.015	37587	345.8
Aroclor-1260	4	12.131	-0.028	59450	272.3	4	12.501	-0.015	60801	223.5
Aroclor-1260	5	12.246	-0.015	29281	327.6	NS	---			----
		Total Col1Ave (5 peaks):			275.2	Total Col2Ave (4 peaks):				261.3 RPD = 5
		Corrected Ave (4 peaks):			262.1	Corrected Ave (3 peaks):				233.1 RPD = 12
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.936 - 13.808) = 2549441 Col1 Total PCB = 0.5 ppm*

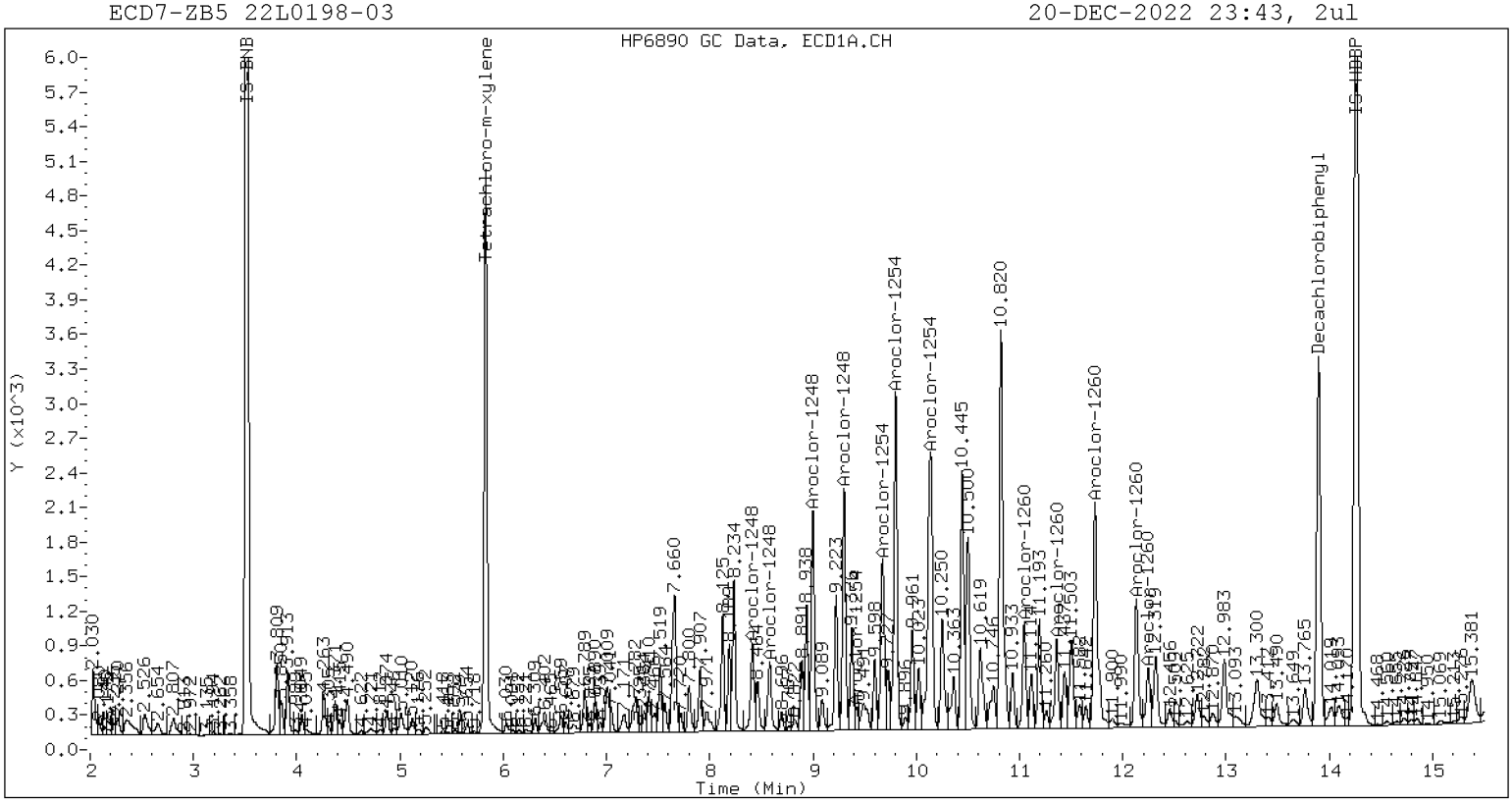
Total PCB Area Col2 (5.936 - 13.808) = 1695164 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

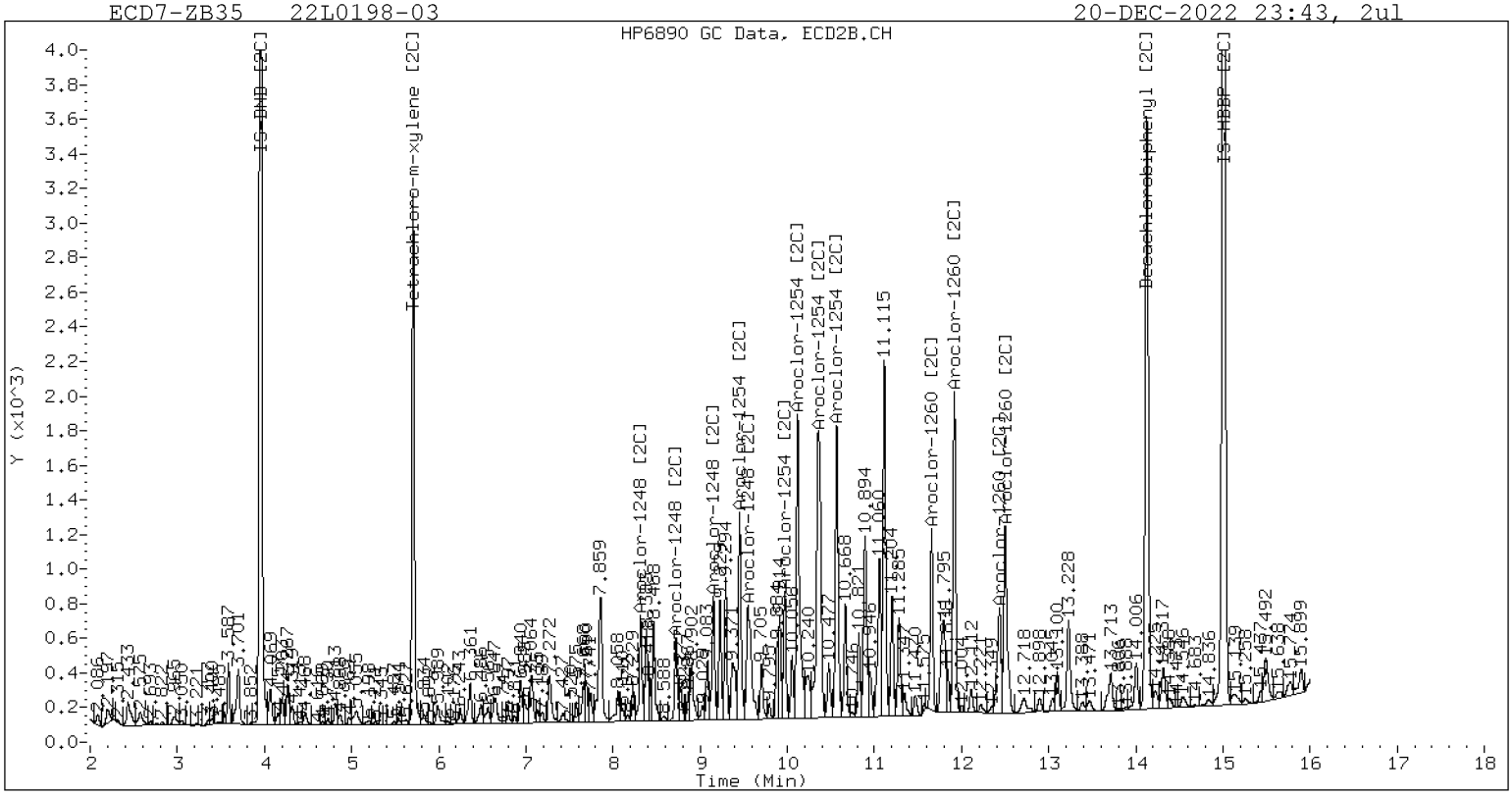
PCB Dual Column Chromatograms

ECD7-ZB5 22L0198-03 20-DEC-2022 23:43, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 22L0198-03 20-DEC-2022 23:43, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1257

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	22L0198-04 A	File ID:	12202233ECD7.D
Sampled:	12/08/22 09:16	Prepared:	12/16/22 17:27	Analyzed:	12/21/22 00:04
% Solids:	38.88	Preparation:	EPA 3546 (Microwave)	Initial/Final:	32.17 g Wet / 2.5 mL
Batch:	BKL0377	Sequence:	SKL0304	Calibration:	FL00010
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	33.2	1.6	4.0	
11097-69-1	Aroclor 1254	1	1	58.2	1.6	4.0	
11096-82-5	Aroclor 1260	1	1	64.1	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9951*	*8.41*	*105*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9951*	*5.85*	*73.1*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202233ECD7.D
Data file 2: /221220.b/221220.b/12202233ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0198-04
Client ID:
Injection Date: 21-DEC-2022 00:04
Report Date: 12/22/2022 09:59
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.831	-0.006	188400	5.707	-0.006	115661	29.2	31.3	6.8	Tetrachloro-m-xylene
13.897	-0.010	160660	14.128	-0.009	164611	42.1	38.3	9.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	454626	1.6
Hexabromobiphenyl	798898	416614	-47.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	269505	8.2
Hexabromobiphenyl	362541	302634	-16.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	7.272	-0.004	11484	83.3
Aroclor-1016	2	---			0.0	2	7.859	-0.011	43145	145.2
Aroclor-1016	3	---			0.0	3	8.058	-0.012	8273	64.8
Aroclor-1016	4	---			0.0	4	8.229	-0.012	9416	140.3
	Col1Ave: <3 Quant Peaks					Col2Ave: 108.4				
Aroclor-1221	1	---			0.0	1	4.972	-0.015	1999	87.9
Aroclor-1221	2	---			0.0	2	6.360	0.038	6999	161.5
Aroclor-1221	3	---			0.0	3	6.644	-0.001	8369	114.7
	Col1Ave: <3 Quant Peaks					Col2Ave: 121.4				
Aroclor-1232	1	---			0.0	1	4.972	-0.017	1999	152.5
Aroclor-1232	2	---			0.0	2	7.272	-0.005	11484	171.6
Aroclor-1232	3	---			0.0	3	7.859	-0.017	43145	329.8
Aroclor-1232	4	---			0.0	4	8.722	-0.012	22282	628.1
	Col1Ave: <3 Quant Peaks					Col2Ave: 320.5				
Aroclor-1242	1	---			0.0	1	7.272	-0.006	11484	100.7
Aroclor-1242	2	---			0.0	2	7.859	-0.015	43145	178.2
Aroclor-1242	3	---			0.0	3	9.153	-0.025	35069	448.9
Aroclor-1242	4	---			0.0	4	9.548	-0.057	58346	621.4
	Col1Ave: <3 Quant Peaks					Col2Ave: 337.3				
Aroclor-1248	1	8.413	-0.014	34943	178.8	1	8.317	-0.010	24670	224.1
Aroclor-1248	2	8.581	-0.023	29608	118.6	2	8.722	-0.010	22282	192.4
Aroclor-1248	3	8.998	-0.024	89685	199.8	3	9.153	-0.024	35069	249.0
Aroclor-1248	4	9.301	-0.010	98561	448.1	4	9.548	-0.054	58346	352.9
	Total Col1Ave (4 peaks):				236.3	Total Col2Ave (4 peaks):				254.6 RPD = 7
	Corrected Ave (3 peaks):				165.7	Corrected Ave (3 peaks):				221.8 RPD = 29
Aroclor-1254	1	9.301	-0.020	98561	246.2	1	9.453	-0.014	59182	340.6
Aroclor-1254	2	9.421	0.020	7692	49.4	2	9.971	-0.016	34613	247.8
Aroclor-1254	3	9.672	-0.022	85899	339.8	3	10.119	-0.021	103882	345.9
Aroclor-1254	4	9.801	-0.030	141398	286.9	4	10.358	-0.032	133727	430.0
Aroclor-1254	5	10.136	-0.053	180619	534.7	5	10.568	-0.018	88476	589.9
	Total Col1Ave (5 peaks):				291.4	Total Col2Ave (5 peaks):				390.8 RPD = 29
	Corrected Ave (4 peaks):				230.6	Corrected Ave (4 peaks):				341.1 RPD = 39
Aroclor-1260	1	11.046	-0.017	48099	317.2	1	11.657	-0.012	50954	319.0
Aroclor-1260	2	11.360	-0.017	43262	275.8	2	11.917	-0.015	96635	241.1
Aroclor-1260	3	11.730	-0.022	131304	318.6	3	12.436	-0.015	41400	387.8
Aroclor-1260	4	12.131	-0.027	67135	319.9	4	12.501	-0.016	69682	260.8
Aroclor-1260	5	12.245	-0.016	31889	371.2	NS	---			----
	Total Col1Ave (5 peaks):				320.5	Total Col2Ave (4 peaks):				302.2 RPD = 6
	Corrected Ave (4 peaks):				307.9	Corrected Ave (3 peaks):				273.6 RPD = 12
Aroclor-1262	1	---			0.0	1	11.203	-0.014	35233	153.1
Aroclor-1262	2	---			0.0	2	11.657	-0.013	50954	255.7
Aroclor-1262	3	---			0.0	3	12.436	-0.015	41400	188.3
Aroclor-1262	4	---			0.0	4	12.501	-0.018	69682	202.4
	Col1Ave: <3 Quant Peaks					Col2Ave: 199.9				
Aroclor-1268	1	---			0.0	1	12.436	-0.013	41400	72.5
Aroclor-1268	2	---			0.0	2	12.501	-0.016	69682	119.0
Aroclor-1268	3	---			0.0	3	12.898	-0.012	4210	19.4
Aroclor-1268	4	---			0.0	4	13.713	-0.013	17457	11.2
	Col1Ave: <3 Quant Peaks					Col2Ave: 55.5				

Total PCB Area Col1 (5.936 - 13.808) = 2715462 Col1 Total PCB = 0.5 ppm*

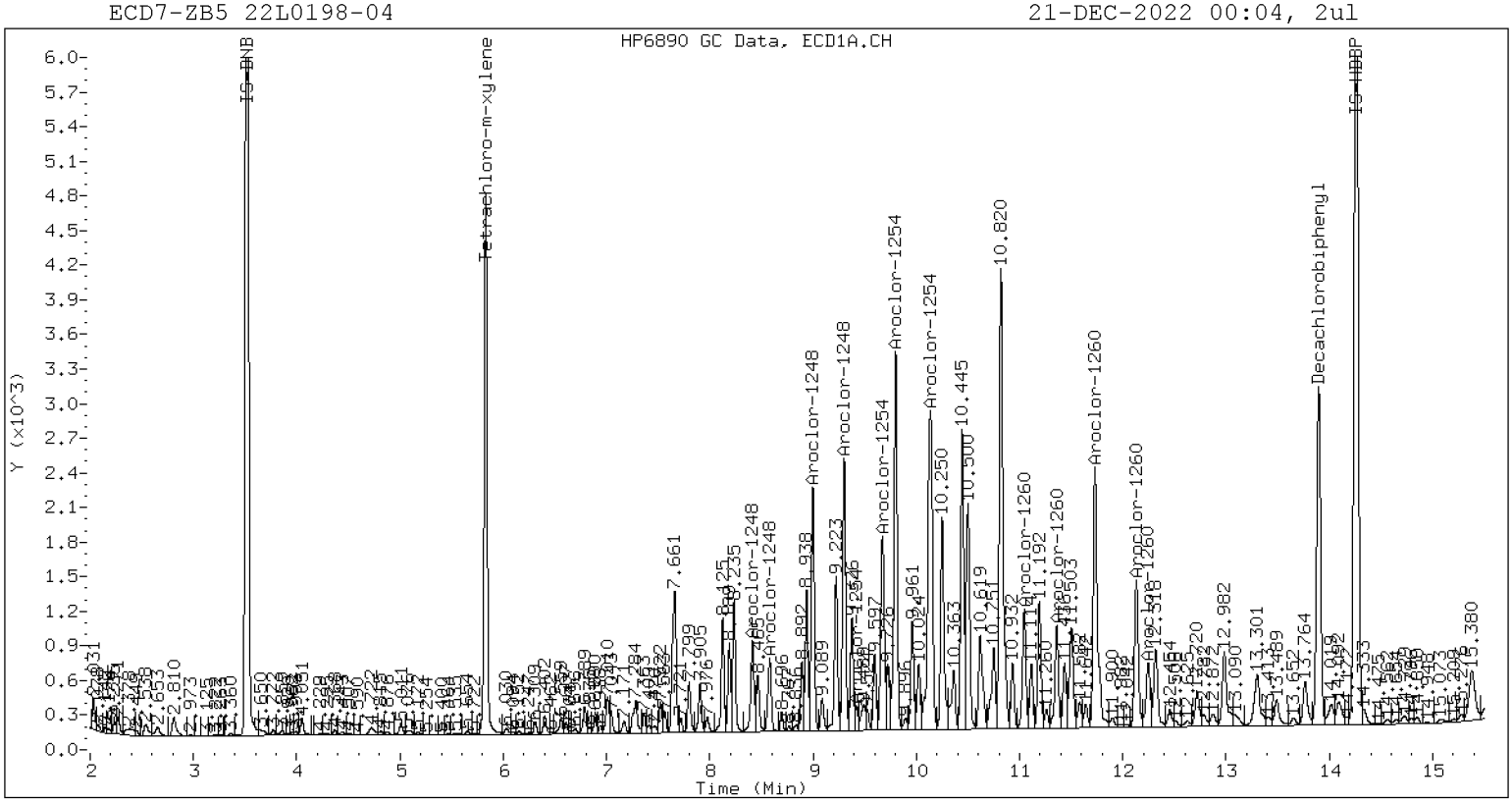
Total PCB Area Col2 (5.936 - 13.808) = 1856000 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

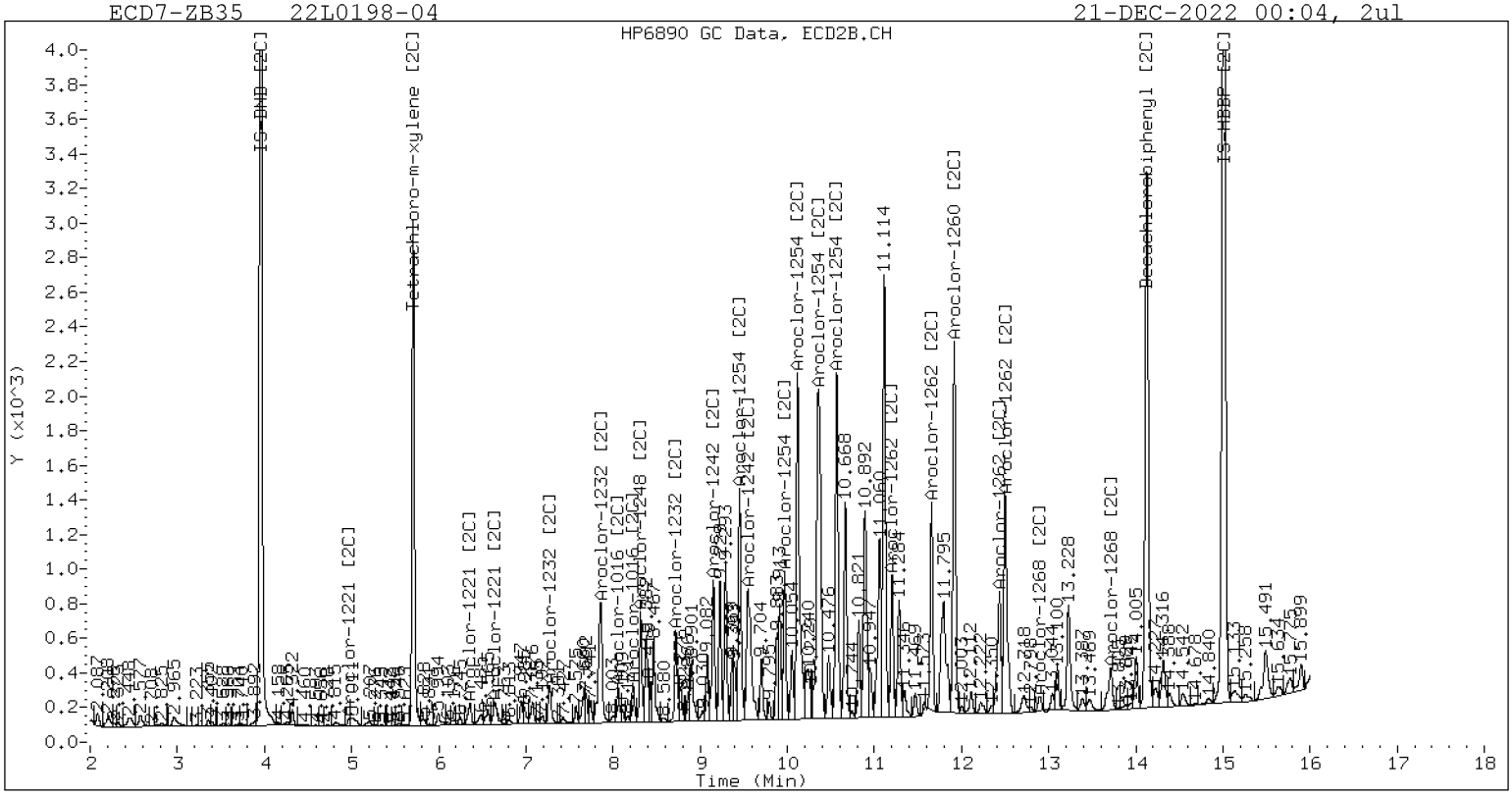
PCB Dual Column Chromatograms

ECD7-ZB5 22L0198-04 21-DEC-2022 00:04, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 22L0198-04 21-DEC-2022 00:04, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1258

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	22L0198-05 A	File ID:	12202234ECD7.D
Sampled:	12/08/22 09:35	Prepared:	12/16/22 17:27	Analyzed:	12/21/22 00:26
% Solids:	40.87	Preparation:	EPA 3546 (Microwave)	Initial/Final:	30.59 g Wet / 2.5 mL
Batch:	BKL0377	Sequence:	SKL0304	Calibration:	FL00010
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	32.0	1.6	4.0	
11097-69-1	Aroclor 1254	1	1	56.7	1.6	4.0	
11096-82-5	Aroclor 1260	1	1	66.9	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9986*	*8.43*	*105*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9986*	*5.66*	*70.8*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202234ECD7.D
Data file 2: /221220.b/221220.b/12202234ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0198-05
Client ID:
Injection Date: 21-DEC-2022 00:26
Report Date: 12/22/2022 09:59
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.831	-0.005	189792	5.708	-0.005	119837	28.3	31.6	10.9	Tetrachloro-m-xylene
13.896	-0.012	161488	14.127	-0.010	164285	42.1	38.4	9.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	473044	5.7
Hexabromobiphenyl	798898	418064	-47.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	276924	11.2
Hexabromobiphenyl	362541	301232	-16.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.414	-0.014	35317	173.6	1	8.317	-0.009	27012	238.8
Aroclor-1248	2	8.581	-0.023	29207	112.5	2	8.723	-0.010	22945	192.8
Aroclor-1248	3	8.999	-0.024	90878	194.5	3	9.154	-0.024	33947	234.5
Aroclor-1248	4	9.301	-0.010	101825	444.9	4	9.548	-0.054	56321	331.5
	Total Col1Ave (4 peaks):				231.4	Total Col2Ave (4 peaks):				249.4 RPD = 7
	Corrected Ave (3 peaks):				160.2	Corrected Ave (3 peaks):				222.1 RPD = 32
Aroclor-1254	1	9.301	-0.020	101825	244.5	1	9.453	-0.014	60739	340.2
Aroclor-1254	2	9.422	0.020	6538	40.4	2	9.972	-0.015	35027	244.0
Aroclor-1254	3	9.671	-0.023	84789	322.3	3	10.119	-0.020	108043	350.2
Aroclor-1254	4	9.800	-0.031	147030	286.7	4	10.357	-0.032	137253	429.5
Aroclor-1254	5	10.137	-0.053	184088	523.7	5	10.568	-0.018	91123	591.2
	Total Col1Ave (5 peaks):				283.5	Total Col2Ave (5 peaks):				391.0 RPD = 32
	Corrected Ave (4 peaks):				223.5	Corrected Ave (4 peaks):				341.0 RPD = 42*
Aroclor-1260	1	11.046	-0.016	50767	333.6	1	11.657	-0.012	53016	333.4
Aroclor-1260	2	11.361	-0.016	44188	280.8	2	11.918	-0.015	104478	261.9
Aroclor-1260	3	11.730	-0.021	140041	338.6	3	12.436	-0.015	43047	405.2
Aroclor-1260	4	12.130	-0.028	72445	344.0	4	12.501	-0.016	75829	285.1
Aroclor-1260	5	12.246	-0.016	32309	374.8	NS	---			----
	Total Col1Ave (5 peaks):				334.3	Total Col2Ave (4 peaks):				321.4 RPD = 4
	Corrected Ave (4 peaks):				324.2	Corrected Ave (3 peaks):				293.5 RPD = 10
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.936 - 13.808) = 2689643 Col1 Total PCB = 0.5 ppm*

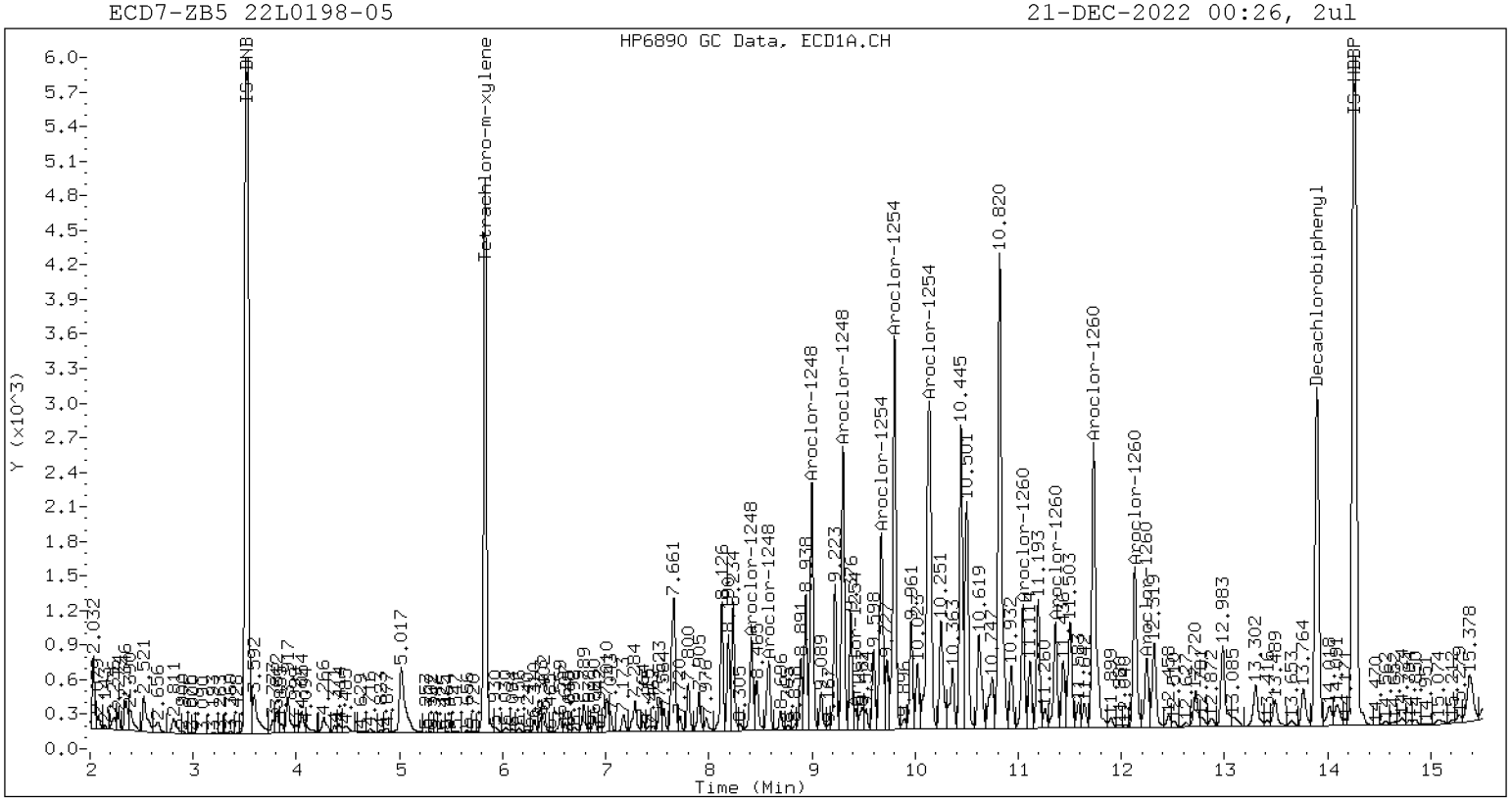
Total PCB Area Col2 (5.936 - 13.808) = 1877189 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

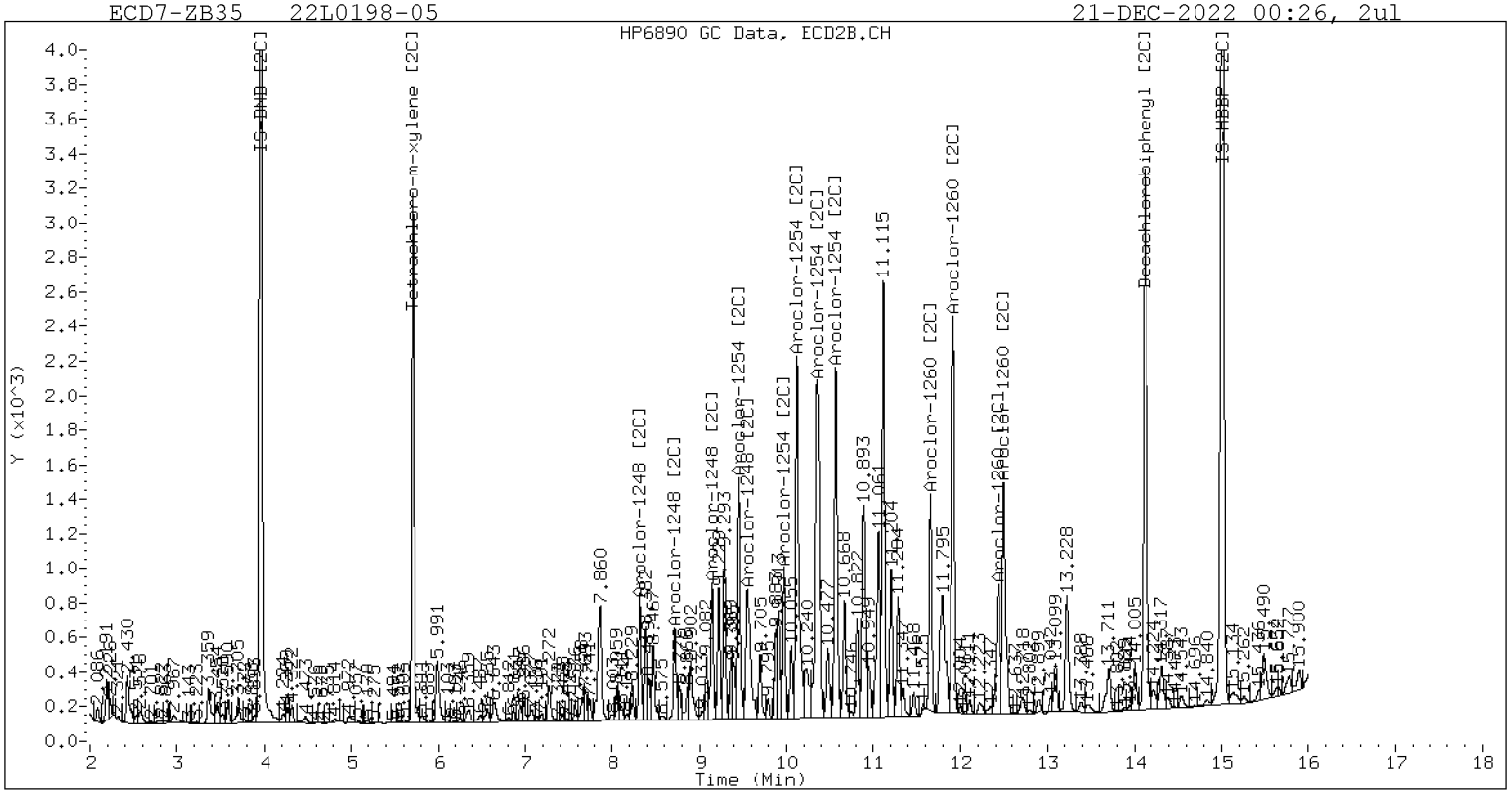
PCB Dual Column Chromatograms

ECD7-ZB5 22L0198-05 21-DEC-2022 00:26, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 22L0198-05 21-DEC-2022 00:26, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1259

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	22L0198-06 A	File ID:	12202235ECD7.D
Sampled:	12/08/22 09:54	Prepared:	12/16/22 17:27	Analyzed:	12/21/22 00:47
% Solids:	39.87	Preparation:	EPA 3546 (Microwave)	Initial/Final:	31.41 g Wet / 2.5 mL
Batch:	BKL0377	Sequence:	SKL0304	Calibration:	FL00010
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	29.1	1.6	4.0	
11097-69-1	Aroclor 1254	1	1	49.9	1.6	4.0	
11096-82-5	Aroclor 1260	1	1	59.4	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9852*	*8.05*	*101*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9852*	*5.47*	*68.5*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202235ECD7.D
Data file 2: /221220.b/221220.b/12202235ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0198-06
Client ID:
Injection Date: 21-DEC-2022 00:47
Report Date: 12/22/2022 09:59
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.831	-0.005	177253	5.709	-0.005	110952	27.4	30.0	8.9	Tetrachloro-m-xylene
13.896	-0.012	153625	14.127	-0.010	153923	40.3	36.2	10.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	456292	1.9
Hexabromobiphenyl	798898	415465	-48.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270183	8.5
Hexabromobiphenyl	362541	299597	-17.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.414	-0.014	31271	159.4	1	8.317	-0.009	21827	197.8
Aroclor-1248	2	8.581	-0.023	26767	106.9	2	8.723	-0.009	19961	171.9
Aroclor-1248	3	8.999	-0.024	77841	172.7	3	9.154	-0.024	31251	221.3
Aroclor-1248	4	9.302	-0.009	83068	376.3	4	9.549	-0.053	51418	310.2
	Total Col1Ave (4 peaks):				203.8	Total Col2Ave (4 peaks):				225.3 RPD = 10
	Corrected Ave (3 peaks):				146.3	Corrected Ave (3 peaks):				197.0 RPD = 30
Aroclor-1254	1	9.302	-0.019	83068	206.8	1	9.454	-0.013	51234	294.1
Aroclor-1254	2	9.423	0.021	7299	46.7	2	9.972	-0.015	29531	210.9
Aroclor-1254	3	9.674	-0.020	74241	292.6	3	10.120	-0.020	89724	298.0
Aroclor-1254	4	9.801	-0.030	124881	252.5	4	10.359	-0.030	116553	373.8
Aroclor-1254	5	10.137	-0.052	153003	451.3	5	10.569	-0.017	75837	504.3
	Total Col1Ave (5 peaks):				250.0	Total Col2Ave (5 peaks):				336.2 RPD = 29
	Corrected Ave (4 peaks):				199.6	Corrected Ave (4 peaks):				294.2 RPD = 38
Aroclor-1260	1	11.046	-0.016	42397	280.3	1	11.658	-0.012	43108	272.6
Aroclor-1260	2	11.361	-0.016	42242	270.1	2	11.918	-0.015	84132	212.0
Aroclor-1260	3	11.731	-0.021	117193	285.2	3	12.437	-0.015	37319	353.2
Aroclor-1260	4	12.131	-0.027	58859	281.2	4	12.502	-0.015	62341	235.7
Aroclor-1260	5	12.248	-0.014	31854	371.8	NS	---			----
	Total Col1Ave (5 peaks):				297.7	Total Col2Ave (4 peaks):				268.4 RPD = 10
	Corrected Ave (4 peaks):				279.2	Corrected Ave (3 peaks):				240.1 RPD = 15
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.936 - 13.808) = 2389614 Col1 Total PCB = 0.5 ppm*

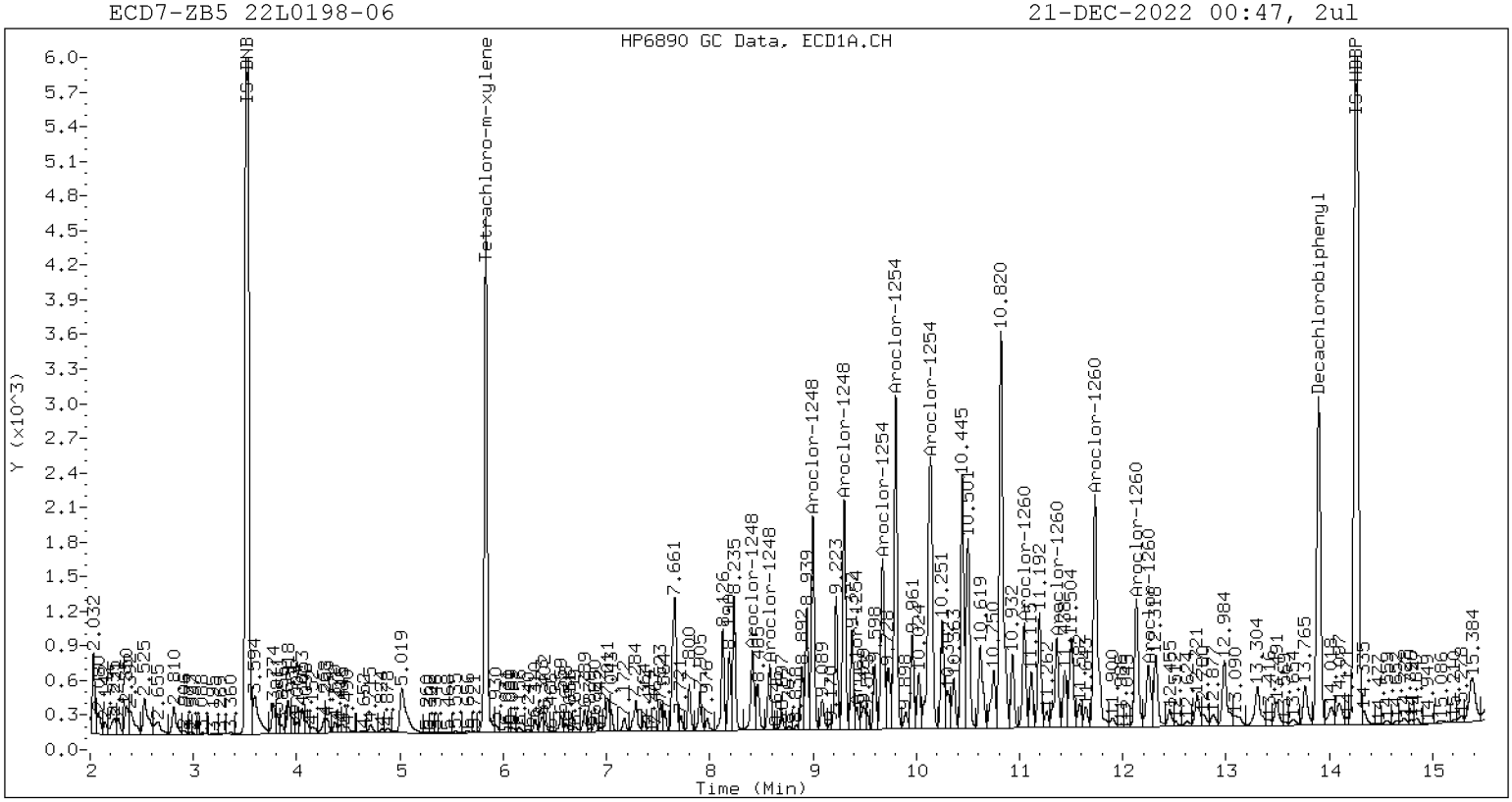
Total PCB Area Col2 (5.936 - 13.808) = 1649329 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

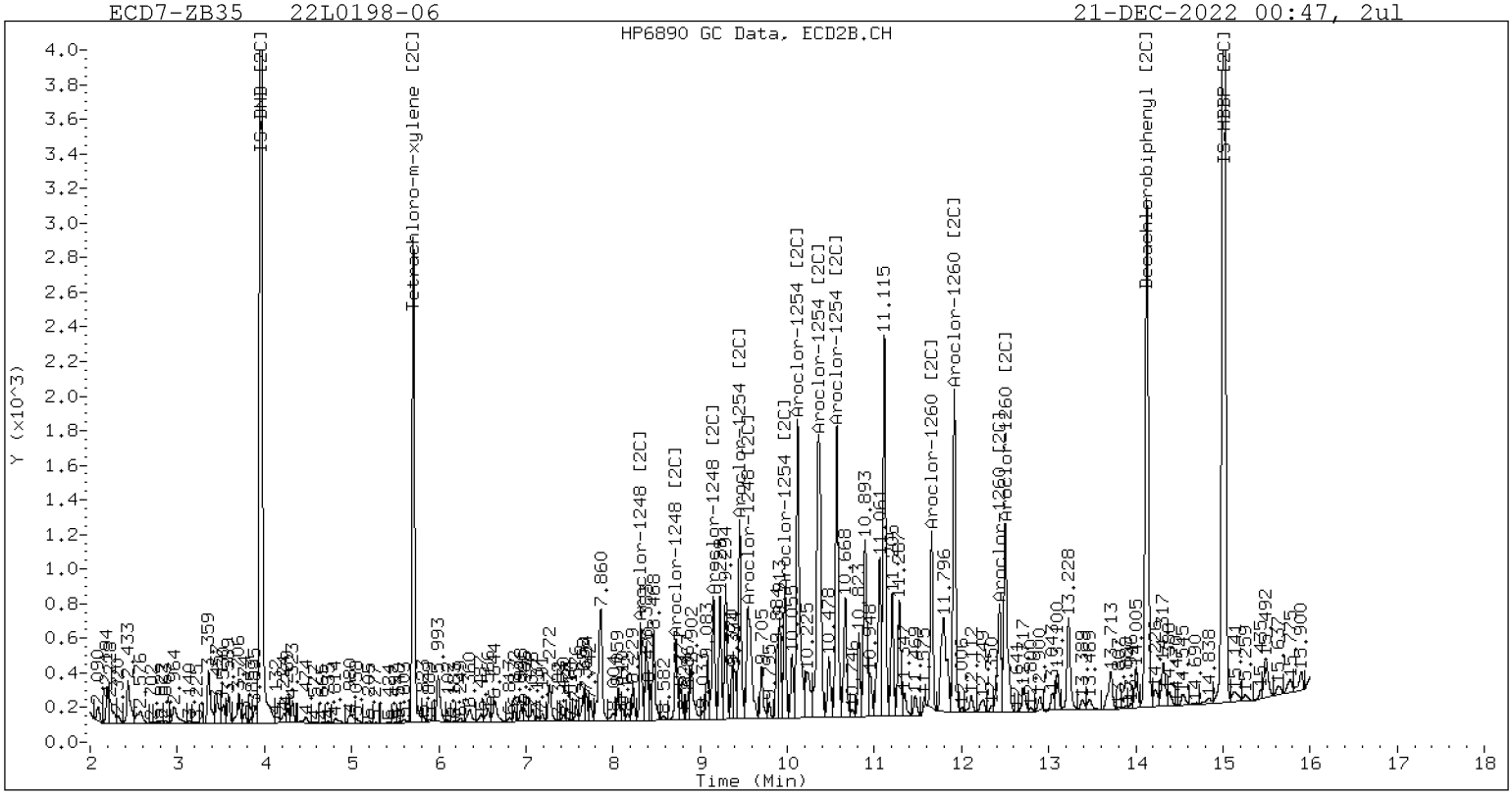
PCB Dual Column Chromatograms

ECD7-ZB5 22L0198-06 21-DEC-2022 00:47, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 22L0198-06 21-DEC-2022 00:47, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1262

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	22L0198-07 A	File ID:	12202236ECD7.D
Sampled:	12/08/22 10:36	Prepared:	12/16/22 17:27	Analyzed:	12/21/22 01:08
% Solids:	39.06	Preparation:	EPA 3546 (Microwave)	Initial/Final:	32 g Wet / 2.5 mL
Batch:	BKL0377	Sequence:	SKL0304	Calibration:	FL00010
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	33.8	1.6	4.0	
11097-69-1	Aroclor 1254	1	1	56.5	1.6	4.0	
11096-82-5	Aroclor 1260	1	1	60.1	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*8.0005*	*8.85*	*111*	*40 - 126*	
Tetrachlorometaxylene	*1*	*8.0005*	*6.04*	*75.5*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202236ECD7.D
Data file 2: /221220.b/221220.b/12202236ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0198-07
Client ID:
Injection Date: 21-DEC-2022 01:08
Report Date: 12/22/2022 09:59
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.830	-0.006	187560	5.707	-0.006	117487	30.2	33.4	9.9	Tetrachloro-m-xylene
13.897	-0.010	167719	14.128	-0.008	168315	44.3	40.3	9.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	438254	-2.1
Hexabromobiphenyl	798898	413327	-48.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	256997	3.2
Hexabromobiphenyl	362541	294047	-18.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.414	-0.014	34673	184.0	1	8.317	-0.009	25865	246.4
Aroclor-1248	2	8.581	-0.023	30299	125.9	2	8.723	-0.010	22525	204.0
Aroclor-1248	3	8.998	-0.024	85996	198.7	3	9.154	-0.024	33704	250.9
Aroclor-1248	4	9.302	-0.010	91317	430.7	4	9.549	-0.053	55941	354.8
	Total Col1Ave (4 peaks):				234.8	Total Col2Ave (4 peaks):				264.0 RPD = 12
	Corrected Ave (3 peaks):				169.5	Corrected Ave (3 peaks):				233.8 RPD = 32
Aroclor-1254	1	9.302	-0.020	91317	236.7	1	9.454	-0.013	56255	339.5
Aroclor-1254	2	9.423	0.022	7660	51.0	2	9.972	-0.014	32123	241.1
Aroclor-1254	3	9.673	-0.022	79220	325.1	3	10.120	-0.019	98977	345.7
Aroclor-1254	4	9.801	-0.030	134945	284.1	4	10.357	-0.032	126665	427.1
Aroclor-1254	5	10.139	-0.050	167771	515.2	5	10.569	-0.018	81920	572.7
	Total Col1Ave (5 peaks):				282.4	Total Col2Ave (5 peaks):				385.2 RPD = 31
	Corrected Ave (4 peaks):				224.2	Corrected Ave (4 peaks):				338.4 RPD = 41*
Aroclor-1260	1	11.046	-0.016	43836	291.4	1	11.658	-0.011	47204	304.1
Aroclor-1260	2	11.361	-0.017	39949	256.7	2	11.918	-0.014	87677	225.1
Aroclor-1260	3	11.731	-0.021	125944	308.0	3	12.436	-0.015	41439	399.5
Aroclor-1260	4	12.132	-0.027	61616	295.9	4	12.501	-0.015	63204	243.4
Aroclor-1260	5	12.247	-0.015	29823	349.9	NS	---			----
	Total Col1Ave (5 peaks):				300.4	Total Col2Ave (4 peaks):				293.1 RPD = 2
	Corrected Ave (4 peaks):				288.0	Corrected Ave (3 peaks):				257.6 RPD = 11
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.936 - 13.808) = 2590675 Col1 Total PCB = 0.5 ppm*

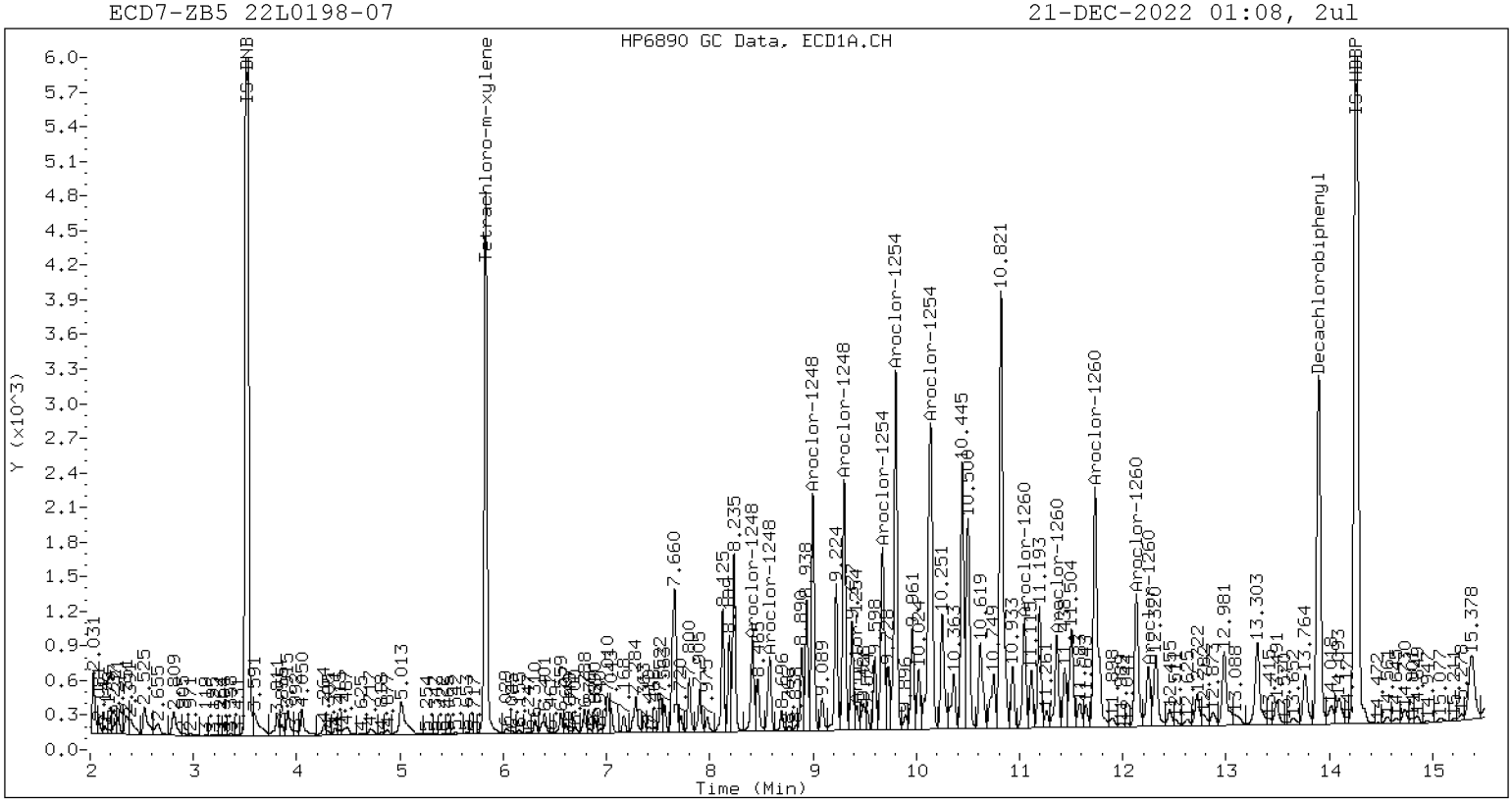
Total PCB Area Col2 (5.936 - 13.808) = 1758135 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

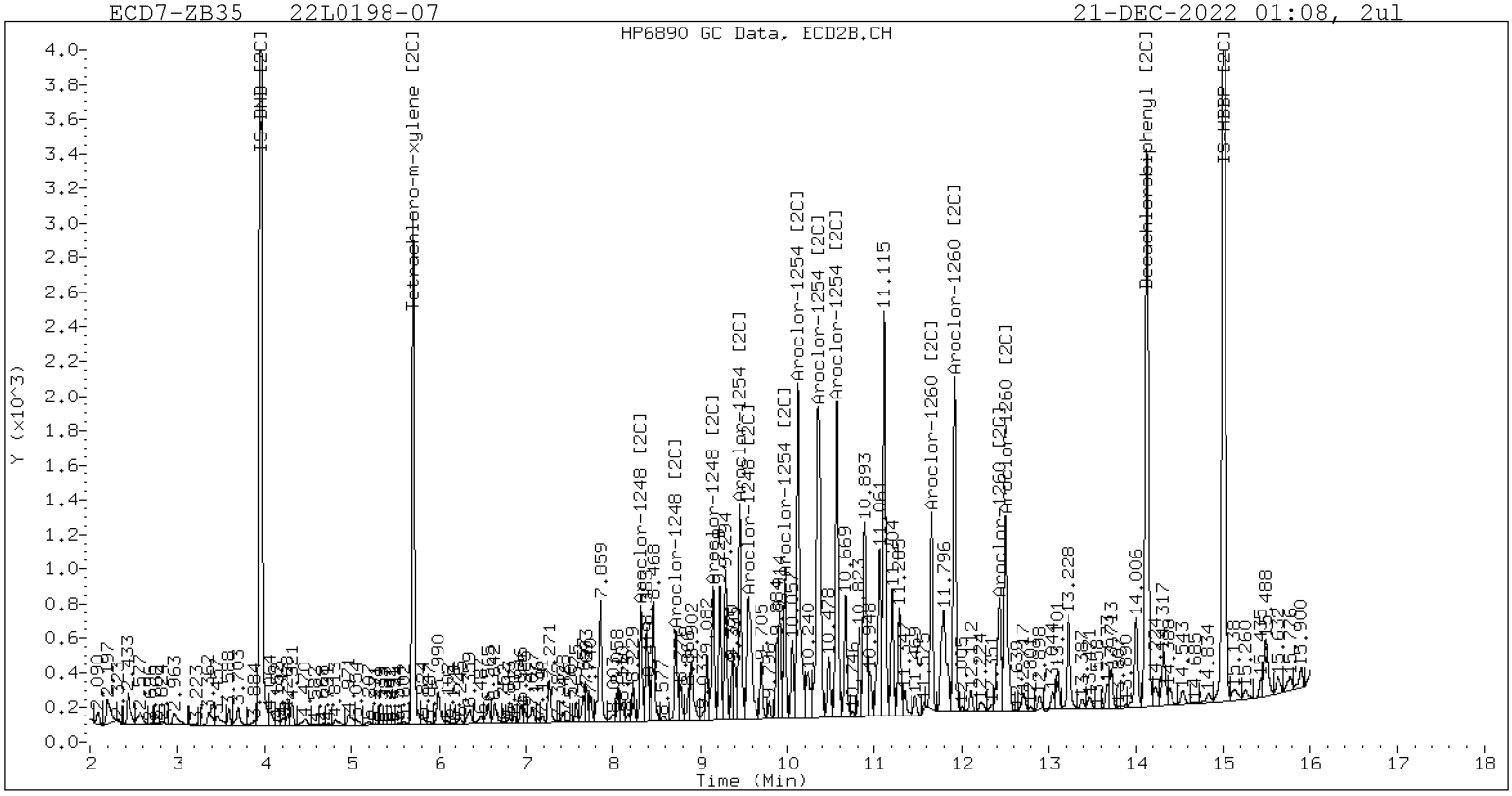
PCB Dual Column Chromatograms

ECD7-ZB5 22L0198-07 21-DEC-2022 01:08, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 22L0198-07 21-DEC-2022 01:08, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1260

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	22L0198-08 A	File ID:	12202237ECD7.D
Sampled:	12/08/22 10:12	Prepared:	12/16/22 17:27	Analyzed:	12/21/22 01:29
% Solids:	40.58	Preparation:	EPA 3546 (Microwave)	Initial/Final:	30.84 g Wet / 2.5 mL
Batch:	BKL0377	Sequence:	SKL0304	Calibration:	FL00010
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	32.4	1.6	4.0	
11097-69-1	Aroclor 1254	1	1	55.7	1.6	4.0	
11096-82-5	Aroclor 1260	1	1	65.6	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9905*	*8.36*	*105*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9905*	*5.63*	*70.4*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202237ECD7.D
Data file 2: /221220.b/221220.b/12202237ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0198-08
Client ID:
Injection Date: 21-DEC-2022 01:29
Report Date: 12/22/2022 09:59
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.831	-0.005	184620	5.708	-0.006	114147	28.2	31.5	11.2	Tetrachloro-m-xylene
13.895	-0.012	158529	14.127	-0.010	162878	41.9	38.8	7.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	462540	3.3
Hexabromobiphenyl	798898	413113	-48.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	264386	6.1
Hexabromobiphenyl	362541	295728	-18.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.413	-0.014	35536	178.7	1	8.317	-0.009	26108	241.7
Aroclor-1248	2	8.582	-0.022	29313	115.4	2	8.723	-0.009	21438	188.7
Aroclor-1248	3	8.999	-0.024	87659	191.9	3	9.155	-0.023	32892	238.0
Aroclor-1248	4	9.301	-0.010	98319	439.3	4	9.549	-0.053	55937	344.8
	Total Col1Ave (4 peaks):				231.3	Total Col2Ave (4 peaks):				253.3 RPD = 9
	Corrected Ave (3 peaks):				162.0	Corrected Ave (3 peaks):				222.8 RPD = 32
Aroclor-1254	1	9.301	-0.020	98319	241.4	1	9.454	-0.013	57532	337.5
Aroclor-1254	2	9.422	0.020	6311	39.8	2	9.972	-0.015	33859	247.1
Aroclor-1254	3	9.672	-0.022	81398	316.5	3	10.120	-0.020	102795	349.0
Aroclor-1254	4	9.800	-0.030	140199	279.6	4	10.359	-0.030	133316	437.0
Aroclor-1254	5	10.137	-0.053	177883	517.6	5	10.569	-0.018	87732	596.2
	Total Col1Ave (5 peaks):				279.0	Total Col2Ave (5 peaks):				393.3 RPD = 34
	Corrected Ave (4 peaks):				219.3	Corrected Ave (4 peaks):				342.6 RPD = 44*
Aroclor-1260	1	11.046	-0.016	49212	327.3	1	11.657	-0.012	50777	325.3
Aroclor-1260	2	11.360	-0.018	43132	277.3	2	11.918	-0.014	99094	253.0
Aroclor-1260	3	11.730	-0.021	128448	314.3	3	12.436	-0.015	40454	387.8
Aroclor-1260	4	12.131	-0.027	67908	326.3	4	12.501	-0.016	71284	273.0
Aroclor-1260	5	12.246	-0.015	33731	395.9	NS	---			----
	Total Col1Ave (5 peaks):				328.2	Total Col2Ave (4 peaks):				309.8 RPD = 6
	Corrected Ave (4 peaks):				311.3	Corrected Ave (3 peaks):				283.8 RPD = 9
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.936 - 13.808) = 2813145 Col1 Total PCB = 0.5 ppm*

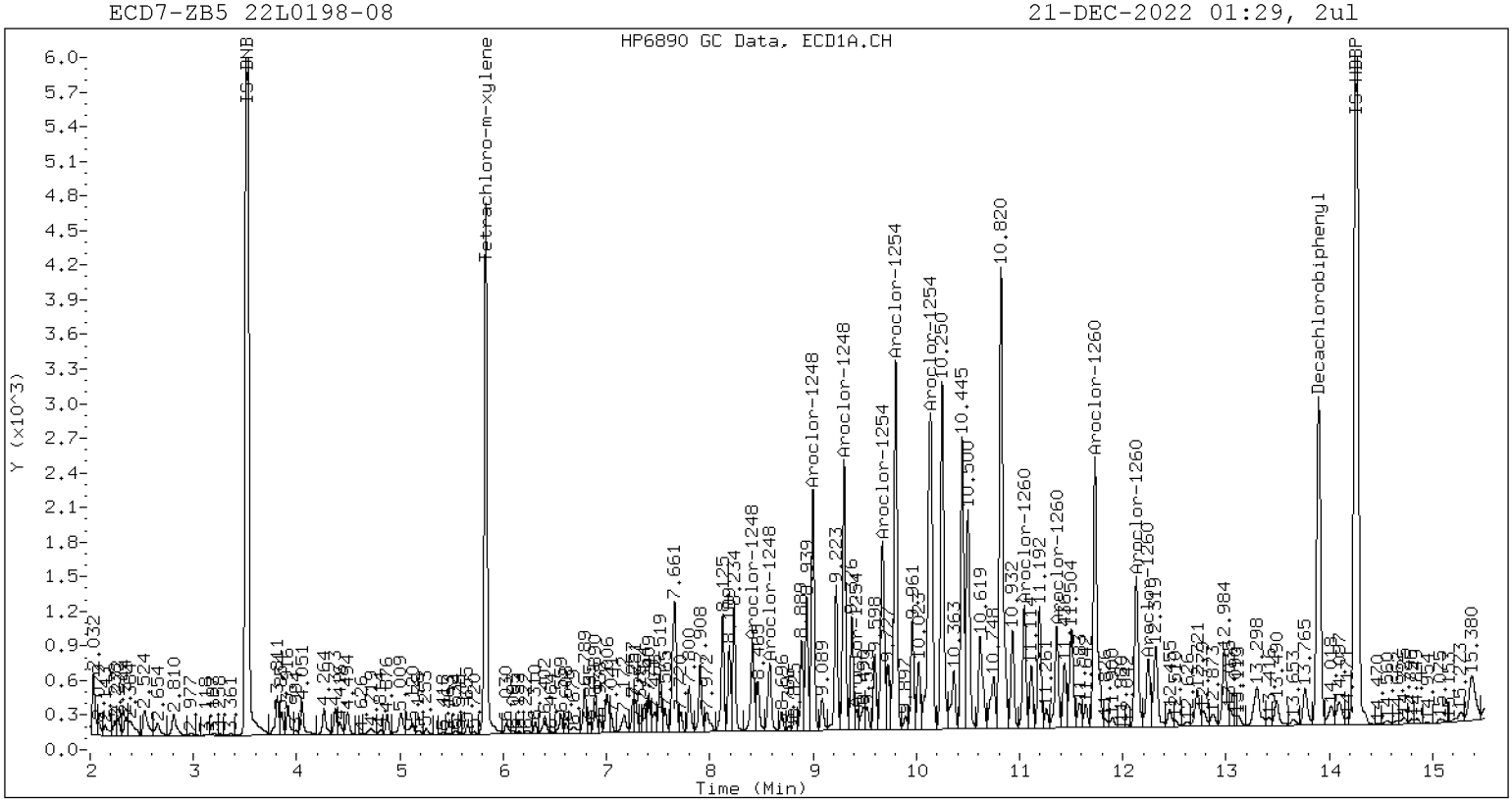
Total PCB Area Col2 (5.936 - 13.808) = 1931065 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

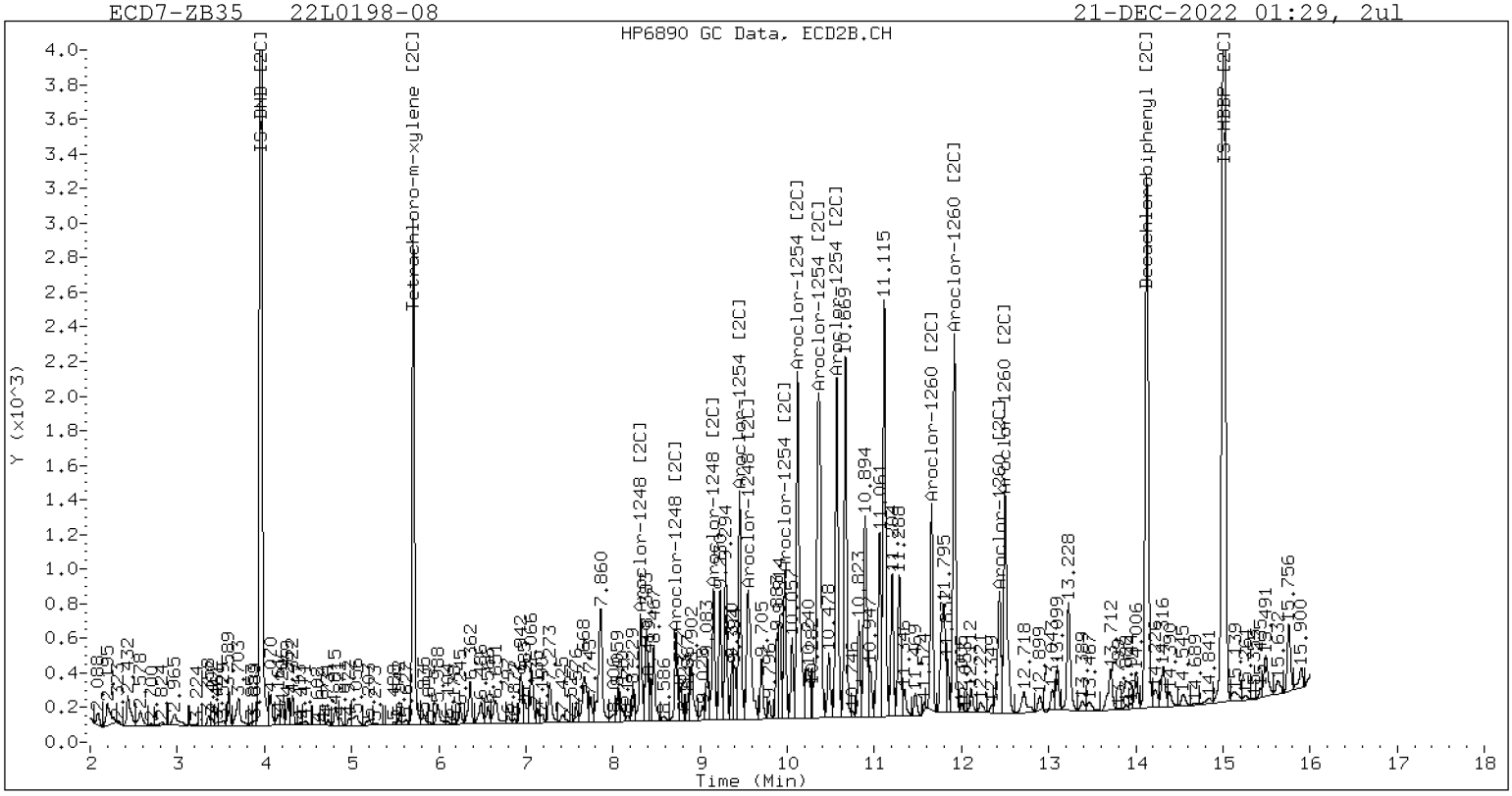
PCB Dual Column Chromatograms

ECD7-ZB5 22L0198-08 21-DEC-2022 01:29, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 22L0198-08 21-DEC-2022 01:29, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1263

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	22L0198-09 A	File ID:	12202238ECD7.D
Sampled:	12/08/22 10:54	Prepared:	12/16/22 17:27	Analyzed:	12/21/22 01:50
% Solids:	38.18	Preparation:	EPA 3546 (Microwave)	Initial/Final:	32.76 g Wet / 2.5 mL
Batch:	BKL0377	Sequence:	SKL0304	Calibration:	FL00010
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	28.8	1.6	4.0	
11097-69-1	Aroclor 1254	1	1	50.1	1.6	4.0	
11096-82-5	Aroclor 1260	1	1	57.1	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9950*	*7.85*	*98.2*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9950*	*5.51*	*68.9*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202238ECD7.D
Data file 2: /221220.b/221220.b/12202238ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0198-09
Client ID:
Injection Date: 21-DEC-2022 01:50
Report Date: 12/22/2022 09:59
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.831	-0.006	178131	5.707	-0.006	110151	27.5	30.3	9.6	Tetrachloro-m-xylene
13.897	-0.011	149781	14.128	-0.009	153543	39.3	36.5	7.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	456278	1.9
Hexabromobiphenyl	798898	415963	-47.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	264991	6.4
Hexabromobiphenyl	362541	296496	-18.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.413	-0.014	30767	156.8	1	8.317	-0.009	22477	207.6
Aroclor-1248	2	8.580	-0.024	25997	103.8	2	8.723	-0.010	19170	168.4
Aroclor-1248	3	8.999	-0.024	76903	170.7	3	9.154	-0.023	29623	213.9
Aroclor-1248	4	9.301	-0.010	84998	385.0	4	9.549	-0.054	50257	309.1
	Total Col1Ave (4 peaks):				204.1	Total Col2Ave (4 peaks):				224.8 RPD = 10
	Corrected Ave (3 peaks):				143.8	Corrected Ave (3 peaks):				196.6 RPD = 31
Aroclor-1254	1	9.301	-0.020	84998	211.6	1	9.454	-0.013	52345	306.4
Aroclor-1254	2	9.422	0.020	7129	45.6	2	9.972	-0.015	29757	216.6
Aroclor-1254	3	9.672	-0.022	72912	287.4	3	10.120	-0.020	90793	307.5
Aroclor-1254	4	9.800	-0.030	123108	248.9	4	10.360	-0.029	117146	383.1
Aroclor-1254	5	10.137	-0.053	155570	458.9	5	10.568	-0.018	77482	525.4
	Total Col1Ave (5 peaks):				250.5	Total Col2Ave (5 peaks):				347.8 RPD = 33
	Corrected Ave (4 peaks):				198.4	Corrected Ave (4 peaks):				303.4 RPD = 42*
Aroclor-1260	1	11.045	-0.017	42118	278.2	1	11.657	-0.012	44777	286.1
Aroclor-1260	2	11.361	-0.016	37431	239.0	2	11.918	-0.015	83738	213.2
Aroclor-1260	3	11.731	-0.021	121782	296.0	3	12.435	-0.016	43413	415.1
Aroclor-1260	4	12.131	-0.027	58819	280.7	4	12.501	-0.015	60837	232.4
Aroclor-1260	5	12.247	-0.014	28772	335.4	NS	---			----
	Total Col1Ave (5 peaks):				285.9	Total Col2Ave (4 peaks):				286.7 RPD = 0
	Corrected Ave (4 peaks):				273.5	Corrected Ave (3 peaks):				243.9 RPD = 11
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.936 - 13.808) = 2379173 Col1 Total PCB = 0.5 ppm*

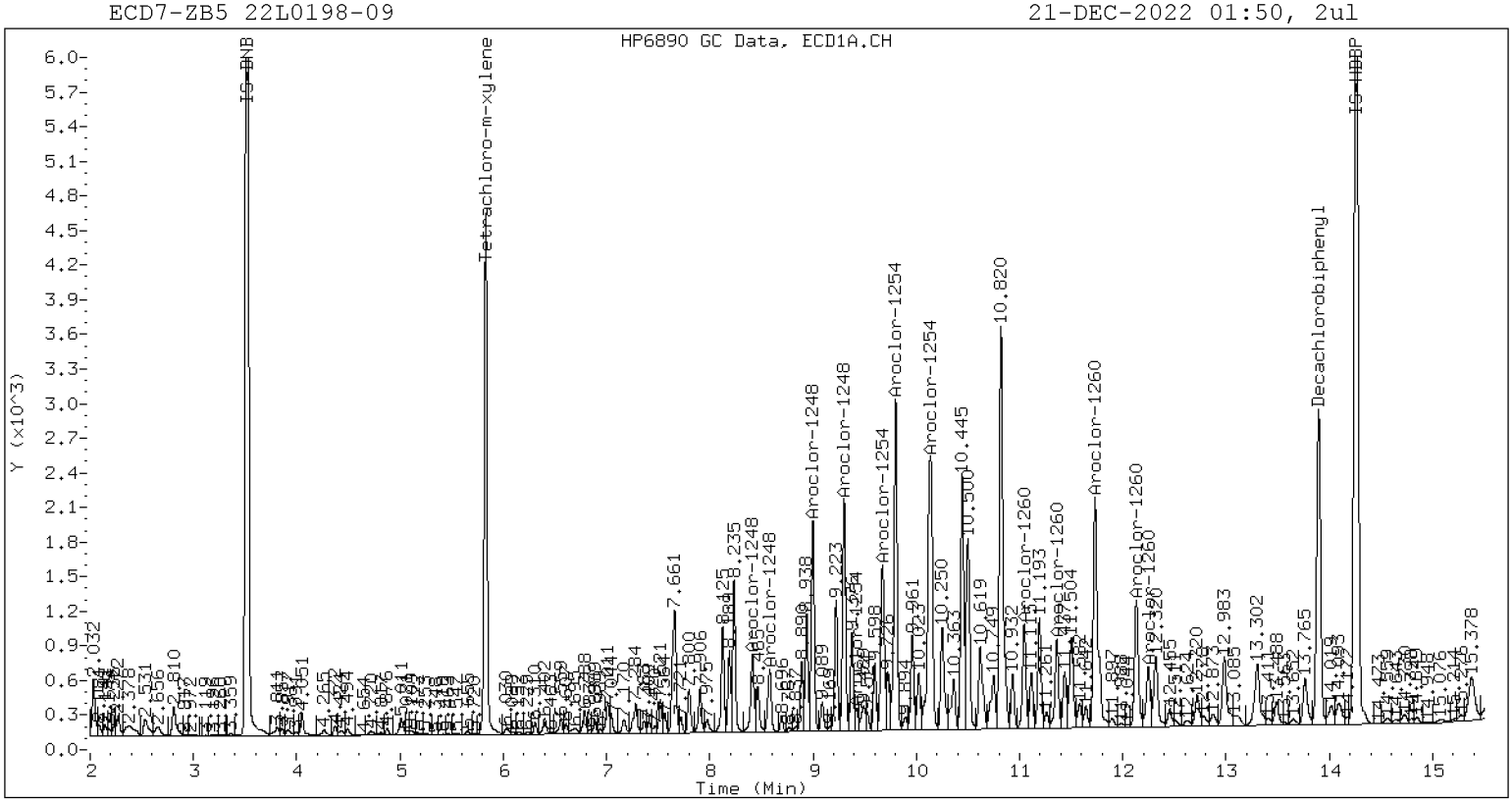
Total PCB Area Col2 (5.936 - 13.808) = 1616100 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

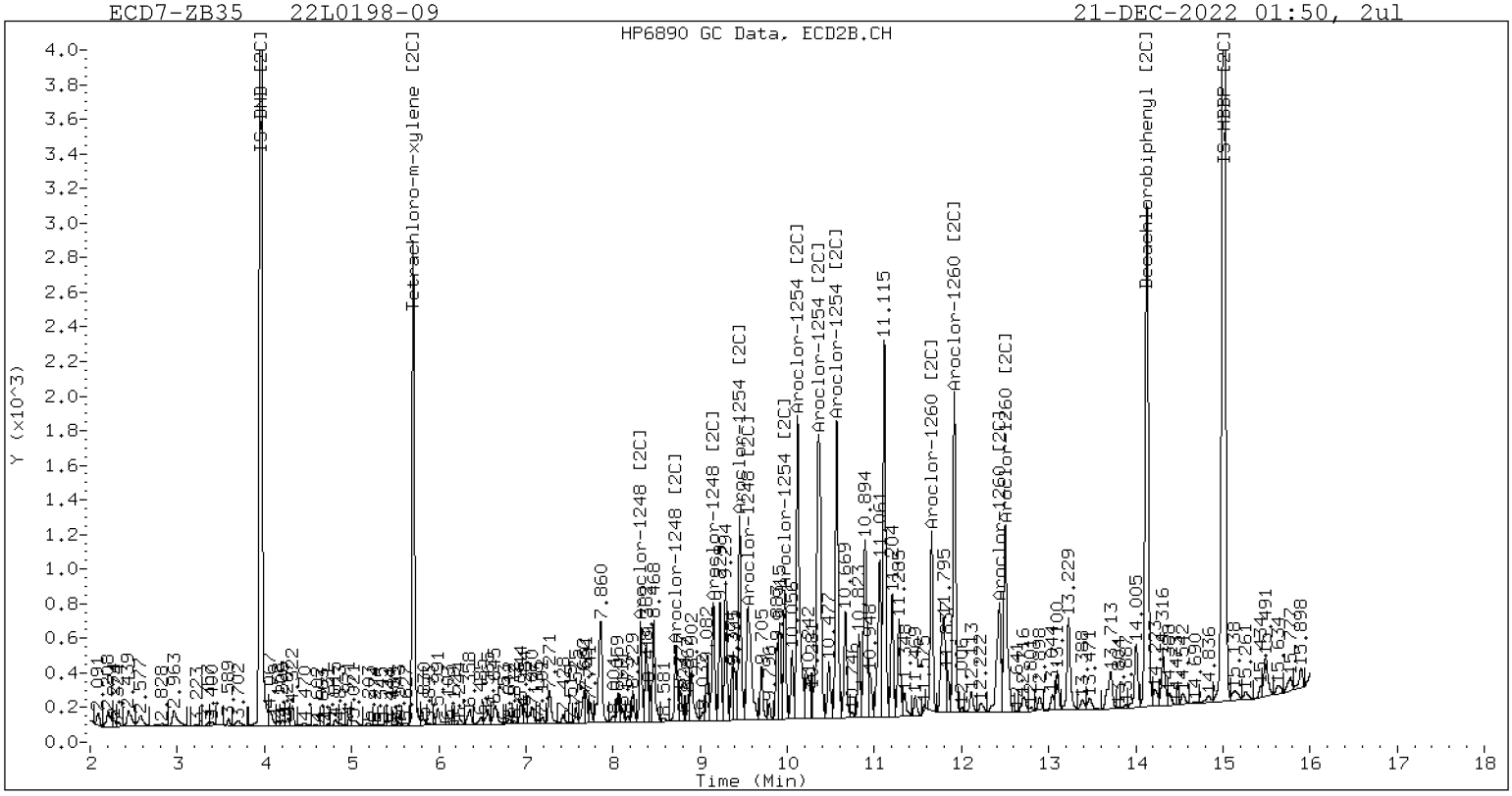
PCB Dual Column Chromatograms

ECD7-ZB5 22L0198-09 21-DEC-2022 01:50, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 22L0198-09 21-DEC-2022 01:50, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1245

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	22L0198-10 A	File ID:	12202239ECD7.D
Sampled:	12/08/22 11:14	Prepared:	12/16/22 17:27	Analyzed:	12/21/22 02:12
% Solids:	43.64	Preparation:	EPA 3546 (Microwave)	Initial/Final:	28.67 g Wet / 2.5 mL
Batch:	BKL0377	Sequence:	SKL0304	Calibration:	FL00010
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	19.2	1.6	4.0	
11097-69-1	Aroclor 1254	1	1	34.5	1.6	4.0	
11096-82-5	Aroclor 1260	1	1	34.5	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9926*	*7.78*	*97.4*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9926*	*5.78*	*72.4*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202239ECD7.D
Data file 2: /221220.b/221220.b/12202239ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0198-10
Client ID:
Injection Date: 21-DEC-2022 02:12
Report Date: 12/22/2022 09:59
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.831	-0.006	182998	5.708	-0.006	114699	29.0	30.9	6.5	Tetrachloro-m-xylene
13.897	-0.010	152863	14.127	-0.009	152154	38.9	35.7	8.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	446057	-0.4
Hexabromobiphenyl	798898	428205	-46.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270802	8.7
Hexabromobiphenyl	362541	299889	-17.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.414	-0.014	20845	108.7	1	8.317	-0.009	14716	133.0
Aroclor-1248	2	8.582	-0.022	16513	67.4	2	8.723	-0.010	12318	105.9
Aroclor-1248	3	8.999	-0.023	49320	112.0	3	9.154	-0.023	19163	135.4
Aroclor-1248	4	9.302	-0.010	58248	269.9	4	9.549	-0.053	33228	200.0
	Total Col1Ave (4 peaks):				139.5	Total Col2Ave (4 peaks):				143.6 RPD = 3
	Corrected Ave (3 peaks):				96.0	Corrected Ave (3 peaks):				124.8 RPD = 26
Aroclor-1254	1	9.302	-0.020	58248	148.3	1	9.454	-0.013	35273	202.0
Aroclor-1254	2	9.423	0.021	5641	36.9	2	9.972	-0.015	19940	142.0
Aroclor-1254	3	9.673	-0.021	49528	199.7	3	10.120	-0.019	59605	197.5
Aroclor-1254	4	9.801	-0.029	81865	169.3	4	10.361	-0.028	80416	257.3
Aroclor-1254	5	10.137	-0.052	102059	307.9	5	10.569	-0.017	50890	337.7
	Total Col1Ave (5 peaks):				172.4	Total Col2Ave (5 peaks):				227.3 RPD = 27
	Corrected Ave (4 peaks):				138.6	Corrected Ave (4 peaks):				199.7 RPD = 36
Aroclor-1260	1	11.046	-0.016	27023	173.4	1	11.658	-0.012	27561	174.1
Aroclor-1260	2	11.360	-0.017	22612	140.3	2	11.918	-0.014	51217	128.9
Aroclor-1260	3	11.731	-0.021	70490	166.4	3	12.437	-0.014	24677	233.3
Aroclor-1260	4	12.131	-0.027	37232	172.6	4	12.502	-0.015	37888	143.1
Aroclor-1260	5	12.248	-0.014	18549	210.1	NS	---			----
	Total Col1Ave (5 peaks):				172.5	Total Col2Ave (4 peaks):				169.9 RPD = 2
	Corrected Ave (4 peaks):				163.2	Corrected Ave (3 peaks):				148.7 RPD = 9
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.936 - 13.808) = 1539879 Col1 Total PCB = 0.3 ppm*

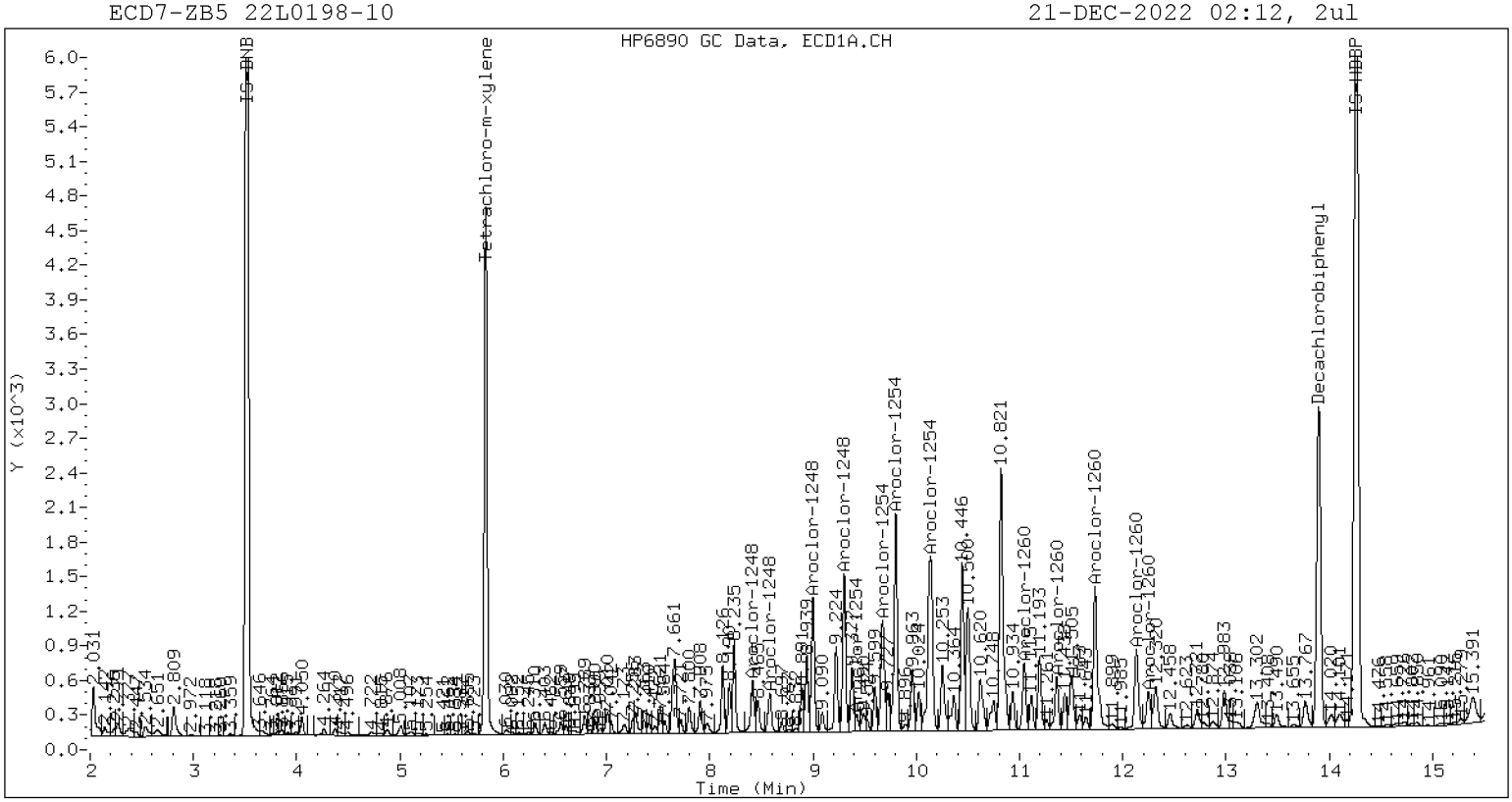
Total PCB Area Col2 (5.936 - 13.808) = 1063882 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

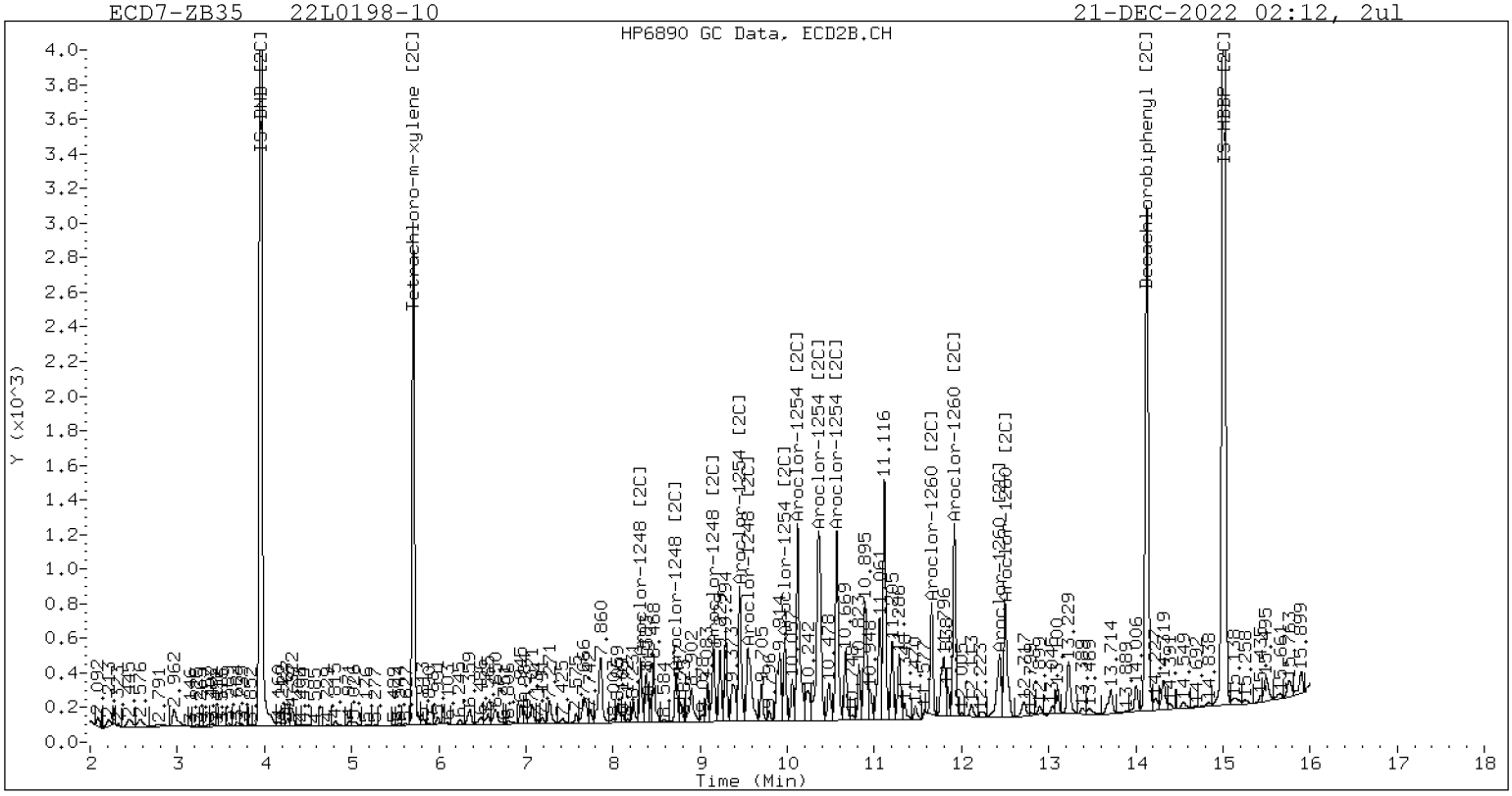
PCB Dual Column Chromatograms

ECD7-ZB5 22L0198-10 21-DEC-2022 02:12, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 22L0198-10 21-DEC-2022 02:12, 2ul



ZB-35 Manual Integration: NO

PREPARATION BATCH SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC SDG: 22L0198

Client: Anchor QEA, LLC Project: AOC5 MR Phase 1

Batch: BKL0377 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1253	22L0198-01	12202230ECD7.D	12/16/22 17:27	
LDW23-SS1254	22L0198-02	12202231ECD7.D	12/16/22 17:27	
LDW23-SS1255	22L0198-03	12202232ECD7.D	12/16/22 17:27	
LDW23-SS1257	22L0198-04	12202233ECD7.D	12/16/22 17:27	
LDW23-SS1258	22L0198-05	12202234ECD7.D	12/16/22 17:27	
LDW23-SS1259	22L0198-06	12202235ECD7.D	12/16/22 17:27	
LDW23-SS1262	22L0198-07	12202236ECD7.D	12/16/22 17:27	
LDW23-SS1260	22L0198-08	12202237ECD7.D	12/16/22 17:27	
LDW23-SS1263	22L0198-09	12202238ECD7.D	12/16/22 17:27	
LDW23-SS1245	22L0198-10	12202239ECD7.D	12/16/22 17:27	
Blank	BKL0377-BLK1	12202225ECD7.D	12/16/22 17:27	
LCS	BKL0377-BS1	12202226ECD7.D	12/16/22 17:27	
LCS Dup	BKL0377-BSD1	12202227ECD7.D	12/16/22 17:27	
MRL Check	BKL0377-MRL1	12202228ECD7.D	12/16/22 17:27	
LDW23-SS1245	BKL0377-MS1	12202240ECD7.D	12/16/22 17:27	
LDW23-SS1245	BKL0377-MSD1	12202241ECD7.D	12/16/22 17:27	
Reference	BKL0377-SRM1	12202229ECD7.D	12/16/22 17:27	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BKL0377

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:7 Aroclors)

Matrix: Solid Date Prepared: 12/16/22 Balance ID: B139298002 Set Up By: GD 12/14/22

WO Comments

22L0198: <G> These are end of month rushes priortize over other AOC samples </G> <C>BPR SRM, MS, DUP </C> <E>PCB RM J006840-43, 7935-36, MS/MSD </E>

Analysis: 8082A PCB Solid 4

Lab Number & Container	% Solids	Initial (g) Target Dry: 12.5 (Wet) Actual	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL) 1 2 3	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
22L0198-01 A	40.8	(30.61) 30.65	5mL	5mL	2mL	2.5	1.0	
22L0198-02 A	39.9	(31.35) 31.38	5mL	5mL	2mL	2.5	1.0	
22L0198-03 A	41.5	(30.11) 30.17	5mL	5mL	2mL	2.5	1.0	
22L0198-04 A	38.9	(32.15) 32.17	5mL	5mL	2mL	2.5	1.0	
22L0198-05 A	40.9	(30.59) 30.59	5mL	5mL	2mL	2.5	1.0	
22L0198-06 A	39.9	(31.35) 31.41	5mL	5mL	2mL	2.5	1.0	
22L0198-07 A	39.1	(32.00) 32.00	5mL	5mL	2mL	2.5	1.0	
22L0198-08 A	40.6	(30.80) 30.84	5mL	5mL	2mL	2.5	1.0	
22L0198-09 A	38.2	(32.74) 32.76	5mL	5mL	2mL	2.5	1.0	
22L0198-10 A	43.6	(28.64) 28.67	5mL	5mL	2mL	2.5	1.0	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 12.5 (Wet) Actual	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL) 1 2 3	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BKL0377-BLK1	100.0	(12.50) 12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BKL0377-BS1	100.0	(12.50) 12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BKL0377-BSD1	100.0	(12.50) 12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BKL0377-MRL1	100.0	(12.50) 12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BKL0377-MS1	43.6	(28.64) 28.67	5mL	5mL	2mL	2.5	1.0	Use 22L0198-10
BKL0377-MSD1	43.6	(28.64) 28.67	5mL	5mL	2mL	2.5	1.0	Use 22L0198-10
BKL0377-SRM1	100.0	~~(12.50)~~ (2.50) 2.50 +1g DI WATER	5mL	5mL	2mL	2.5	1.0	Use K003525

CR 12/16/22 AA 12-19-22 12/16/22 17:27

Client ID verified By Date Preparation Reviewed By Date Extraction Date and Time

Printed: 12/14/2022 3:22:11PM

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BKL0377

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:7 Aroclors)

WO Comments

22L0198: <G> These are end of month rushes priortize over other AOC samples </G> <C>BPR SRM, MS, DUP </C> <E>PCB RM J006840-43, 7935-36, MS/MSD </E>

Prep Steps

Microwave

1 2 3

CT 12/17/22 Analyst/Date

KD
100°C
Hexane Exchange
(2 X 20 mL)

1 2 3 4 5 6

LJ 12/14/22 Analyst/Date

TurboVap
Pre Cleanups

1 2 3 4 5

AA 12-14-22 Analyst/Date

TurboVap
Post Cleanups

1 2 3 4 5

AA 12-14-22 Analyst/Date

Vialing

AA 12-14-22 Analyst/Date

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: CT/VL Date: 12/17/22	
Neutral Glass Wool	KΦ11285
1:1 Hexane/Acetone	KΦ11389
Hexane	KΦ11373
Anhydrous Sodium Sulfate	KΦ11562
KD Analyst: LJ Date: 12/14/22	
Anhydrous Sodium Sulfate	N/A
Hexane	K011373
Vialing Analyst: AA Date: 12-14-22	
Hexane	K011373
Concentrated Sulfuric Acid	K010364
Silica Gel (SPE) Darts	K011573
Sodium Sulfite	K003744
Tetrabutylammonium hydrogensulfate (TBAS)	K010832

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 2µg/mL	N K010600 VL Exp Date: 1/23/2023	50µL	CT	✓
Spike 20µg/mL	1 K008150 VL Exp Date: 3/5/2023	63µL	CT	✓
QLS Spike 2µg/mL	QLS K009793 Exp Date: 3/5/2023	25µL	CT	✓

MANUALLY ENTER EXPIRATION DATES!

(V) indicates a virtual standard combining two or more physical standards. In these cases the Standard ID refers to the virtual standard, not the parent standards.

If a Standard ID is missing, but should be present, check the standard definition in Element LIMS to be sure Standard Info 6 has the correct letter or number designator matching the vial designator inthe Standard ID column. If it is correct, check the batch and bench sheet in Element LIMS to be sure the correct standards are selected for surrogate(s) and spike(s).

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BKL0377

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:7 Aroclors)

WO Comments

22L0198: <G> These are end of month rushes priortize over other AOC samples </G> <C>BPR SRM, MS, DUP </C> <E>PCB RM J006840-43, 7935-36, MS/MSD </E>

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh soil/sed into beakers-lightly dry with sodium sulfate. 2. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 Hexane/Acetone until the solvent layer is 3 inches above the soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then cool vessels in R-05 15 minutes. Re-homogenize while cool. 7. Decant 1:1 Hex/Ace into Erlenmeyer flask with sodium sulfate in bottom and funnel with neutral glasswool plug. 8. Re-homogenize and rinse with 1:1 Hexane/Acetone. 9. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane. 10. KD on 100° bath. 11. Exchange (2 X with 20mL) Hexane. 12. TurboVap. 13. Clean-ups. 14. TurboVap. 15. Vial with Hexane. A. Need Total Solids Y (N) B. Archive/Freeze (Y) N	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

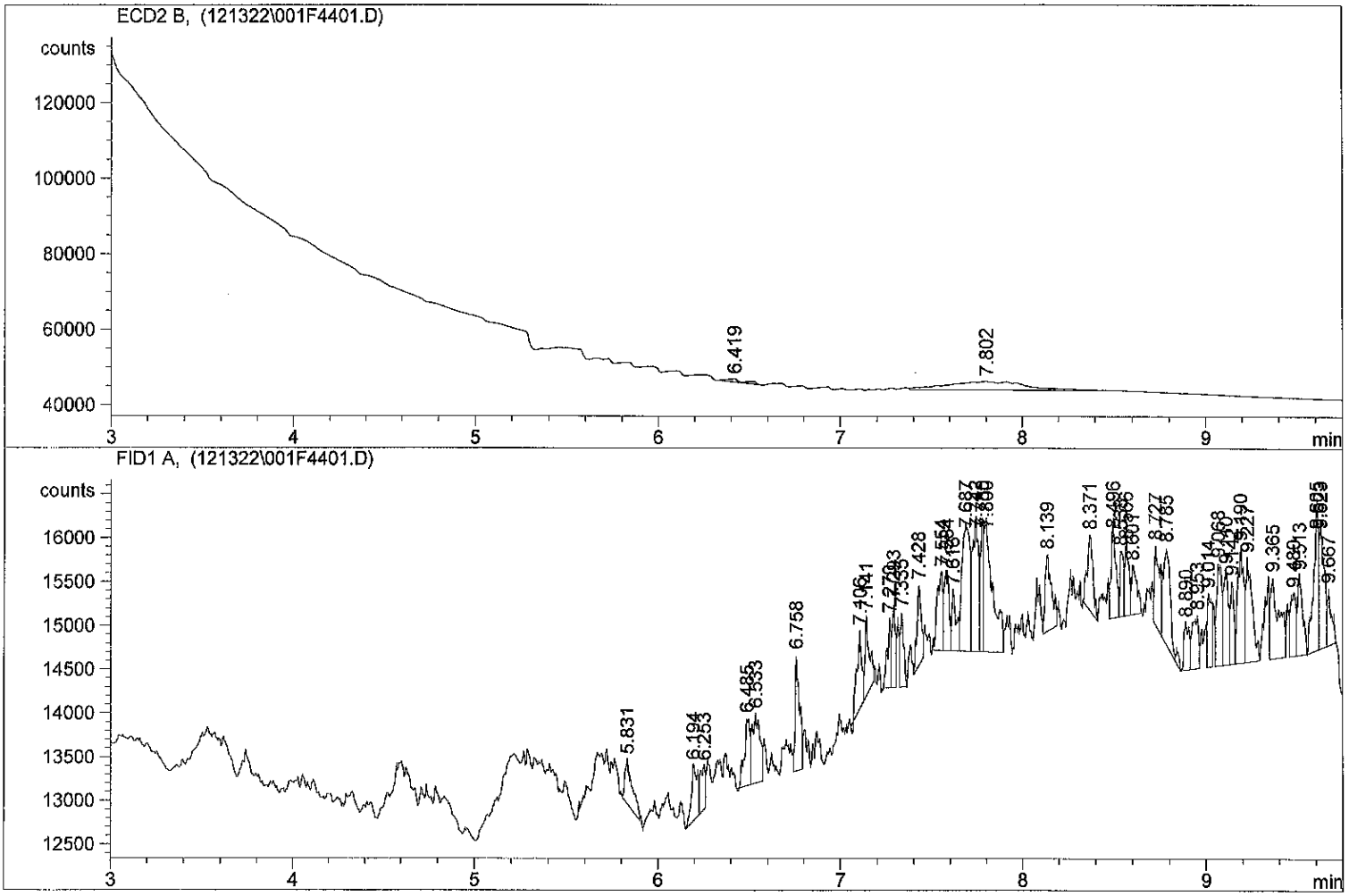
Extraction Parameter: PCB Extraction Batch BKL0377

Total Solids Batch: BKL0239 Work Order(s): 22L0198

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☒ Standing Water Decanted (Not shared)= 01-10	CR 12/13/22
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= 01-10	CR 12/13/22
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y / (N)	CR 12/13/22
☒ Multiple Jars Y / (N)	CR 12/13/22
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

Data File C:\HPCHEM\1\DATA\121322\001F4401.D Sample Name: DCM RINSE

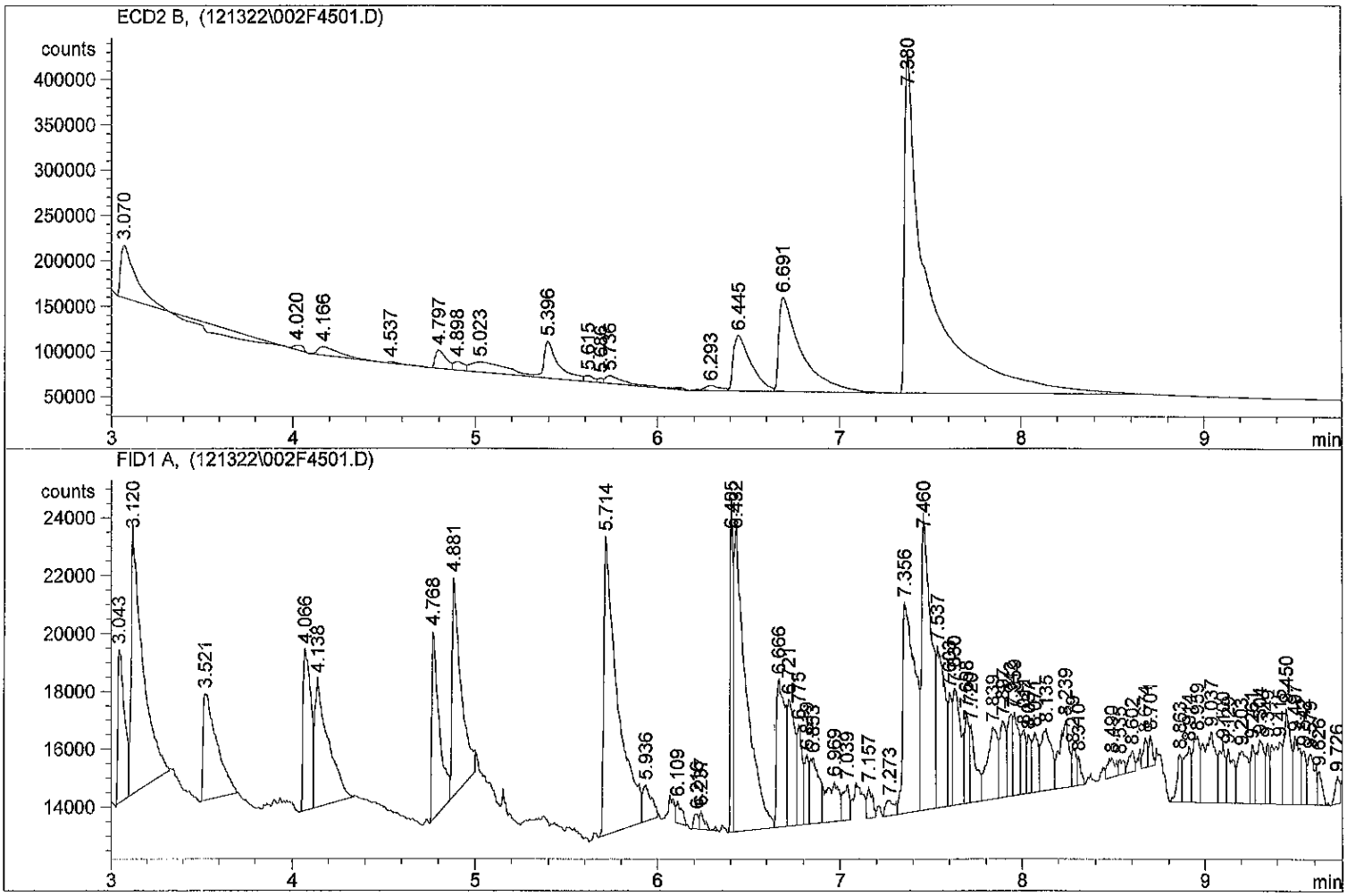
Injection Date	: 12/14/2022 2:32:43 AM	Seq. Line	: 44
Sample Name	: DCM RINSE	Location	: Vial 1
Acq. Operator	: CR	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\121322.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

Data File C:\HPCHEM\1\DATA\121322\002F4501.D Sample Name: PNA STD 10PPM

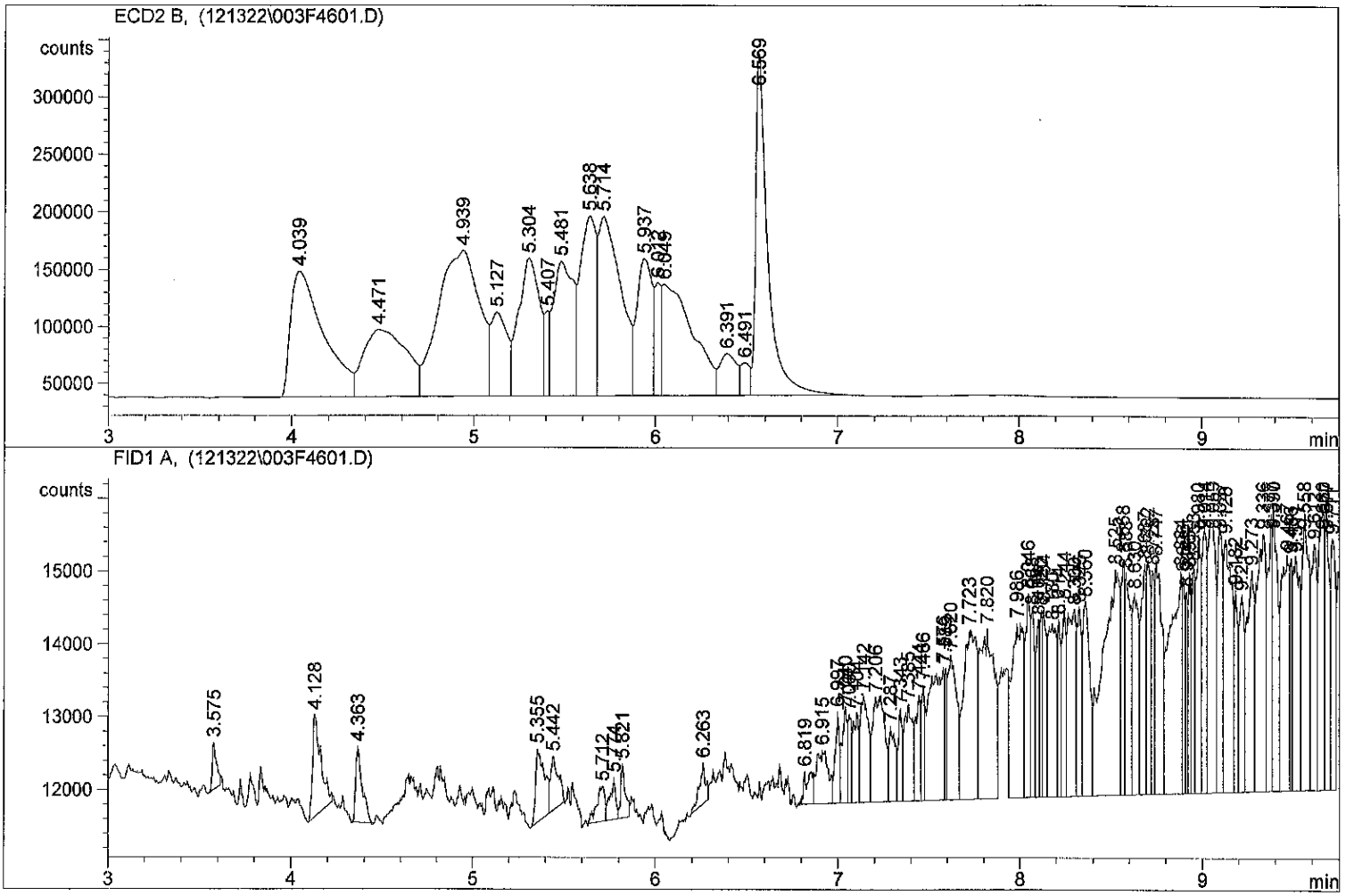
Injection Date	: 12/14/2022 2:47:24 AM	Seq. Line	: 45
Sample Name	: PNA STD 10PPM	Location	: Vial 2
Acq. Operator	: CR	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\121322.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

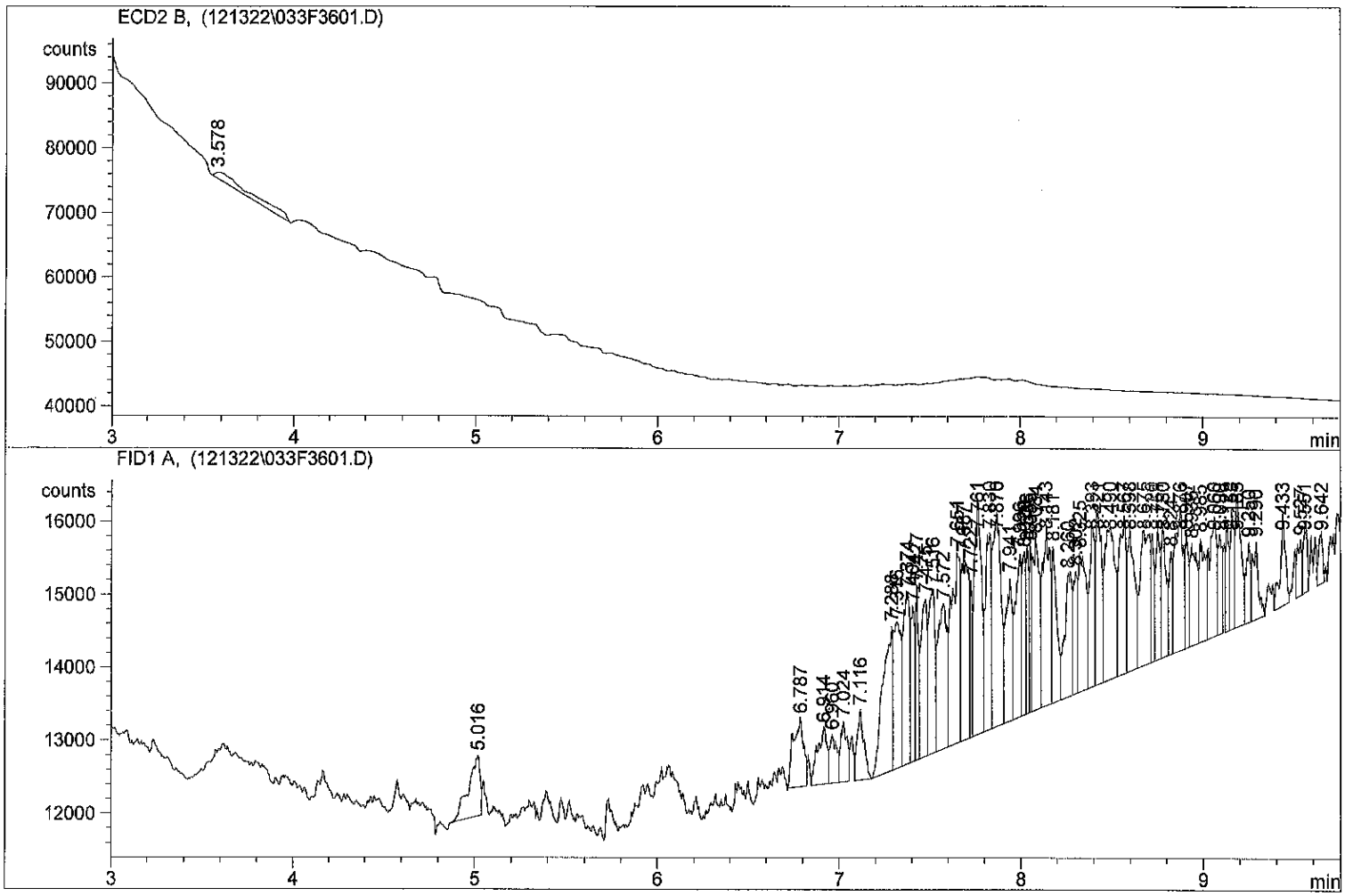
Injection Date : 12/14/2022 3:00:53 AM Seq. Line : 46
Sample Name : AR1660 1PPM Location : Vial 3
Acq. Operator : CR Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\121322.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD



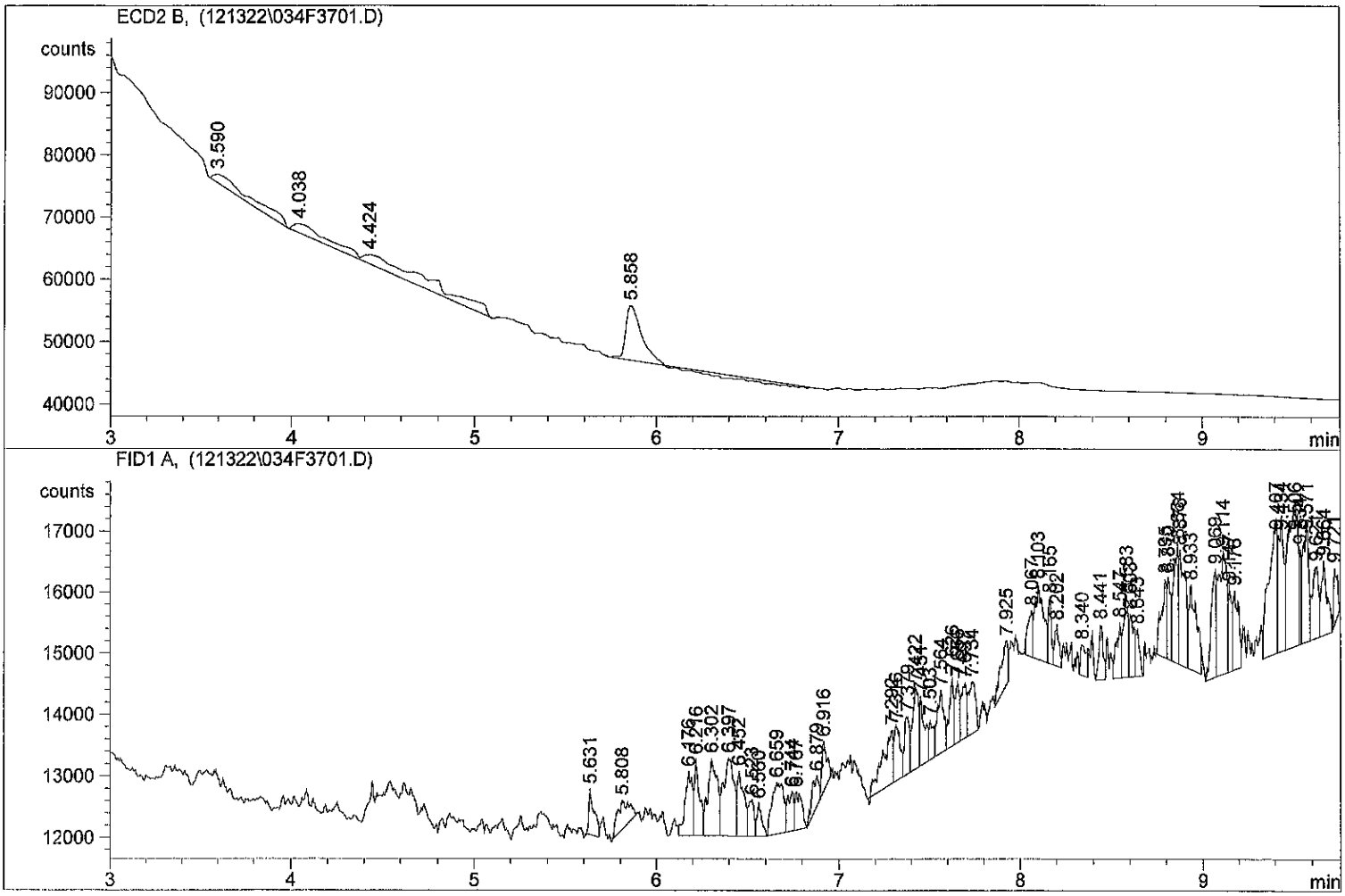
*** End of Report ***

```
Injection Date  : 12/14/2022 12:39:18 AM        Seq. Line :  36
Sample Name     : 22L0198 01                    Location : Vial 33
Acq. Operator   : CR                               Inj :   1
                                                Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\1\SEQUENCE\121322.S
Method          : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed    : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD
```



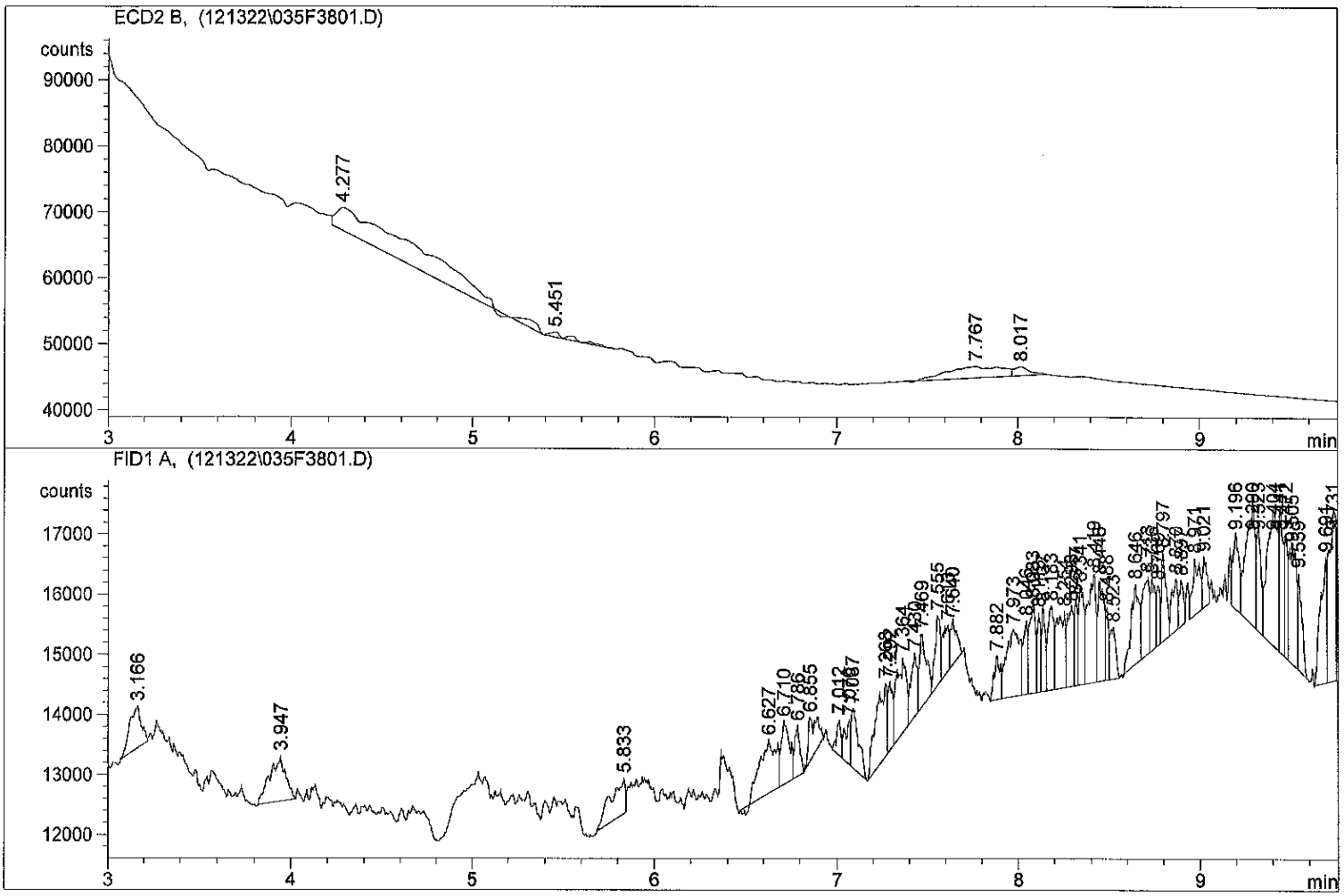
*** End of Report ***

Injection Date	: 12/14/2022 12:52:14 AM	Seq. Line	: 37
Sample Name	: 22L0198 02	Location	: Vial 34
Acq. Operator	: CR	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\121322.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



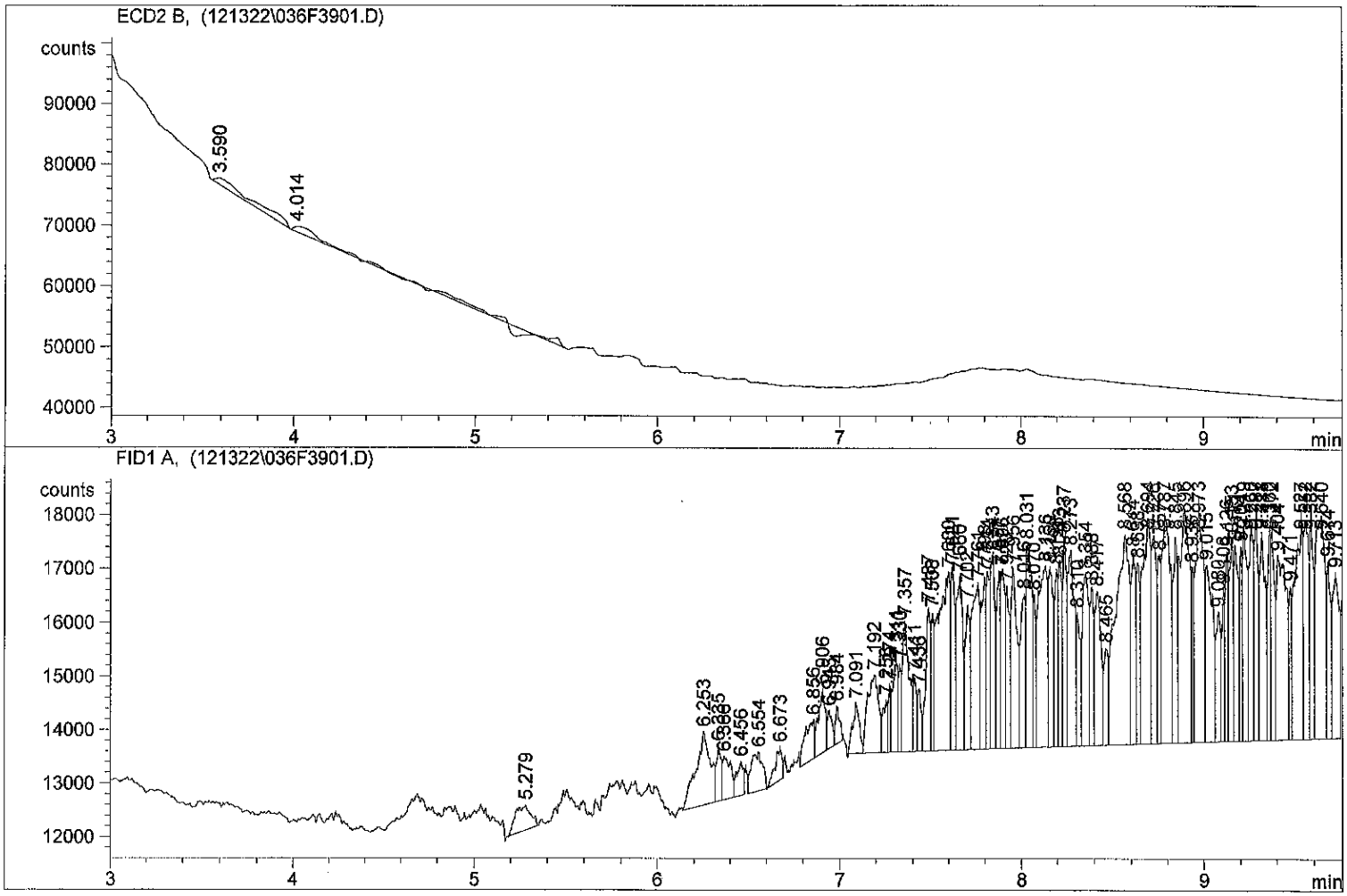
*** End of Report ***

Injection Date	: 12/14/2022 1:08:52 AM	Seq. Line	: 38
Sample Name	: 22L0198 03	Location	: Vial 35
Acq. Operator	: CR	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\121322.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



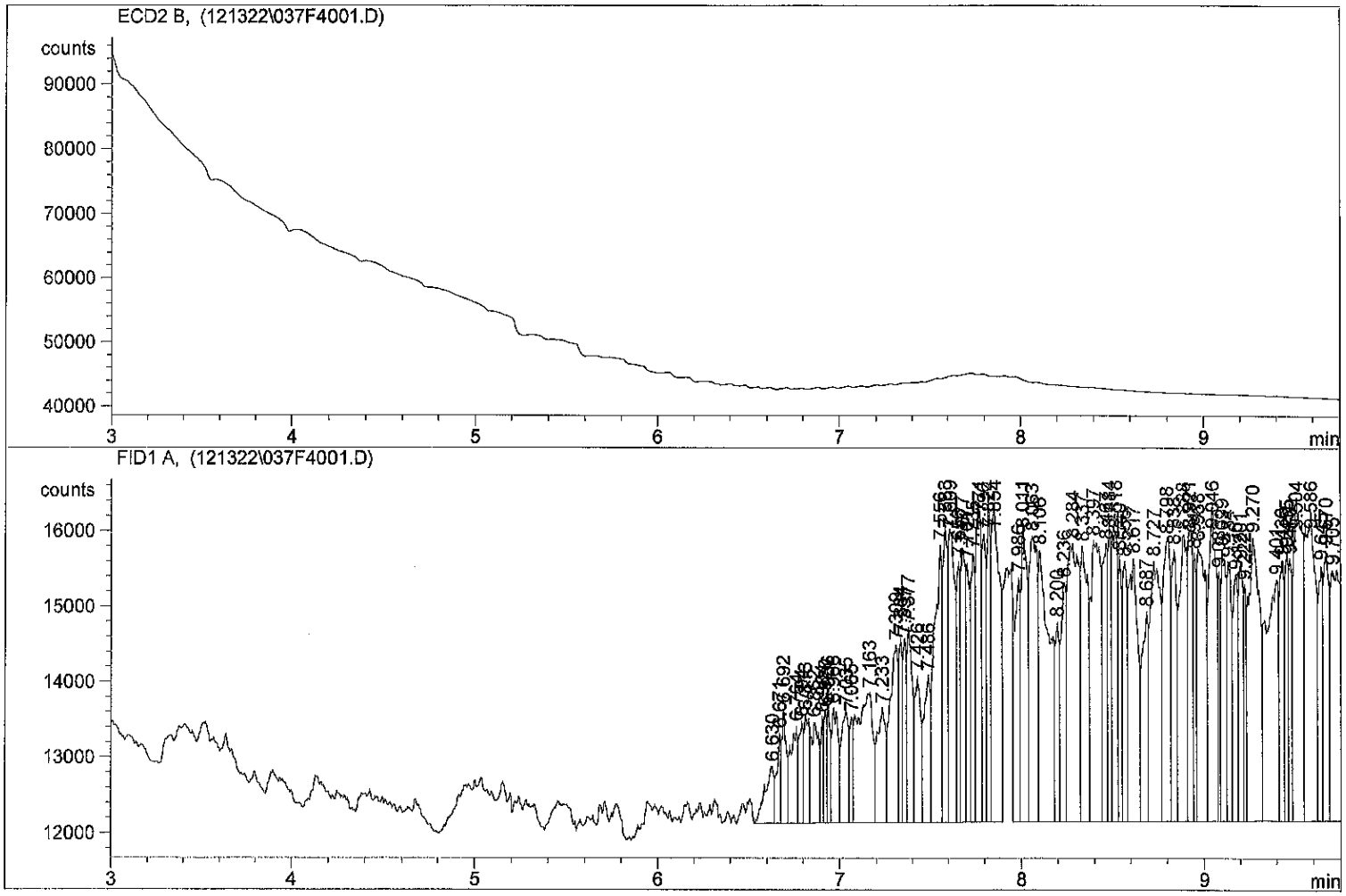
*** End of Report ***

Injection Date	: 12/14/2022 1:23:32 AM	Seq. Line	: 39
Sample Name	: 22L0198 04	Location	: Vial 36
Acq. Operator	: CR	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\121322.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



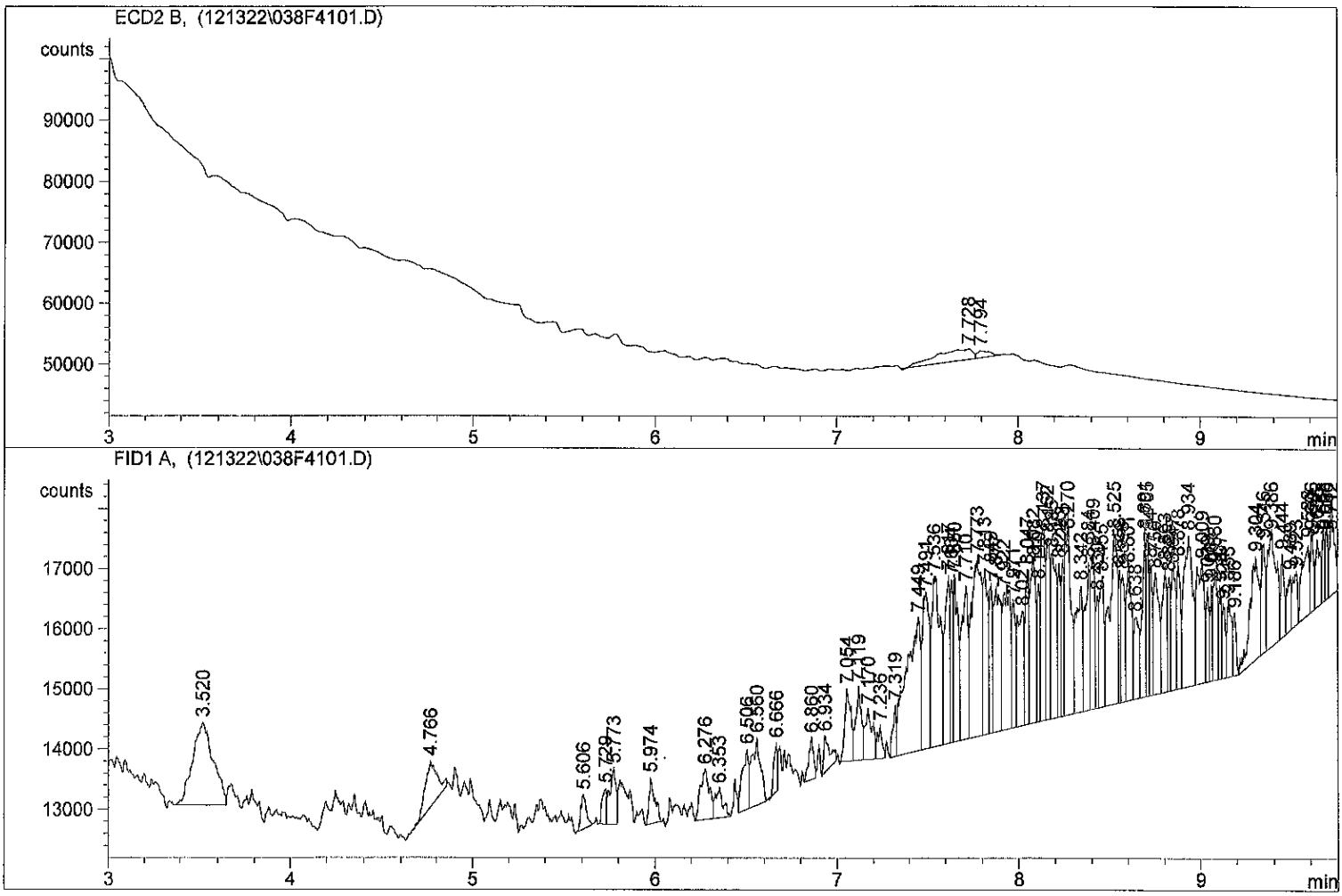
*** End of Report ***

Injection Date	: 12/14/2022 1:37:01 AM	Seq. Line	: 40
Sample Name	: 22L0198 05	Location	: Vial 37
Acq. Operator	: CR	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\121322.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



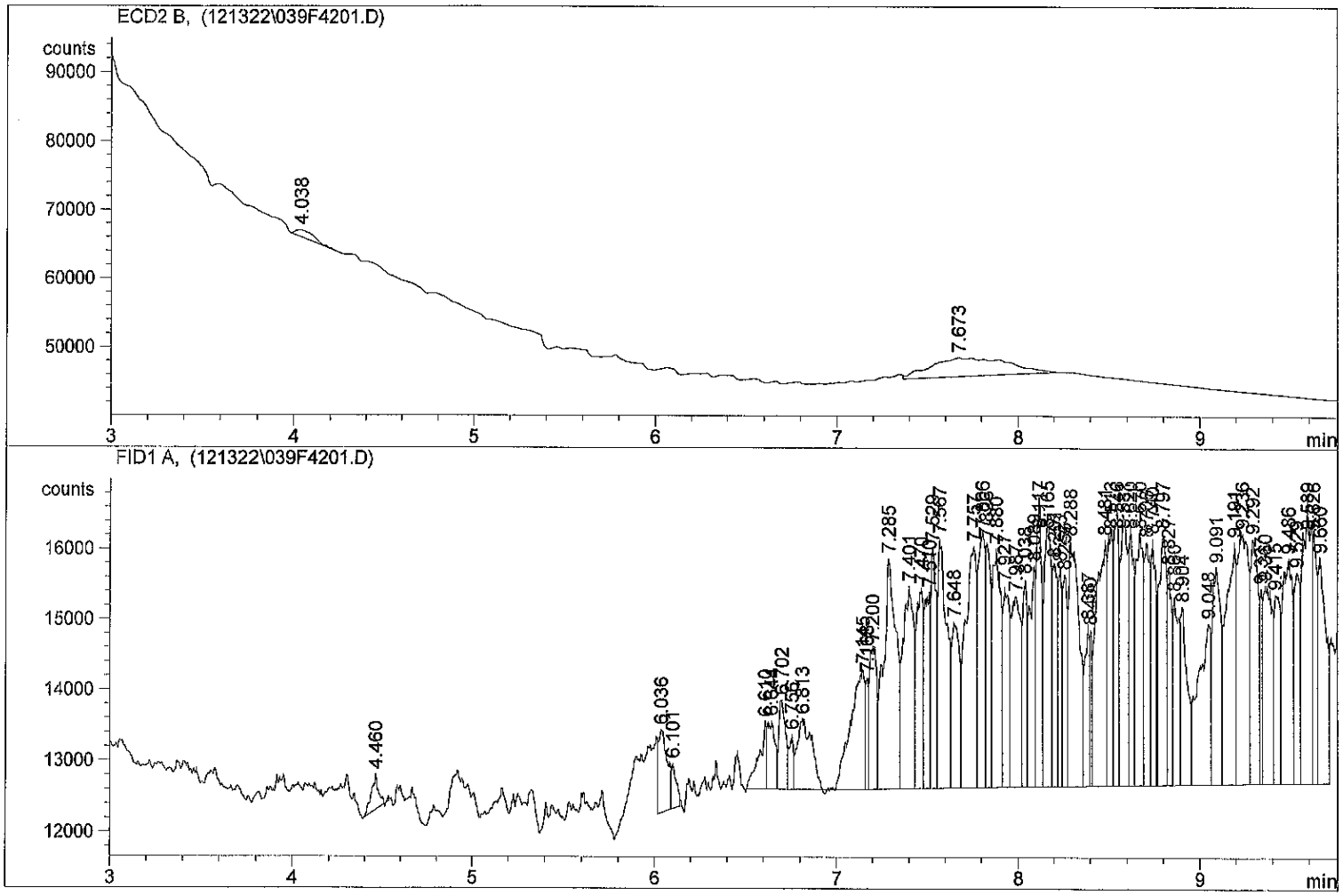
*** End of Report ***

Injection Date	: 12/14/2022 1:50:50 AM	Seq. Line	: 41
Sample Name	: 22L0198 06	Location	: Vial 38
Acq. Operator	: CR	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\121322.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

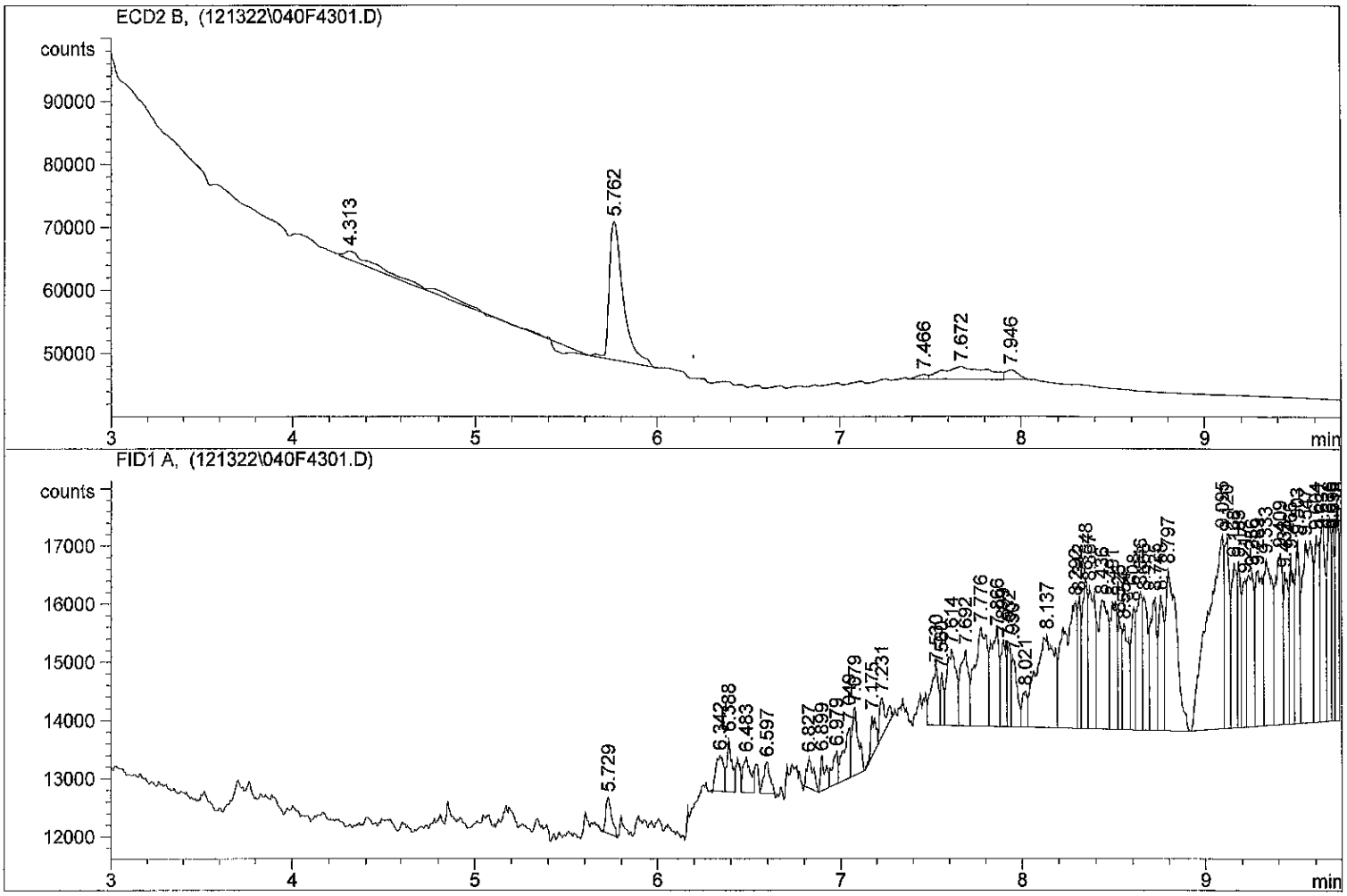
Injection Date	: 12/14/2022 2:05:26 AM	Seq. Line	: 42
Sample Name	: 22L0198 07	Location	: Vial 39
Acq. Operator	: CR	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\121322.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

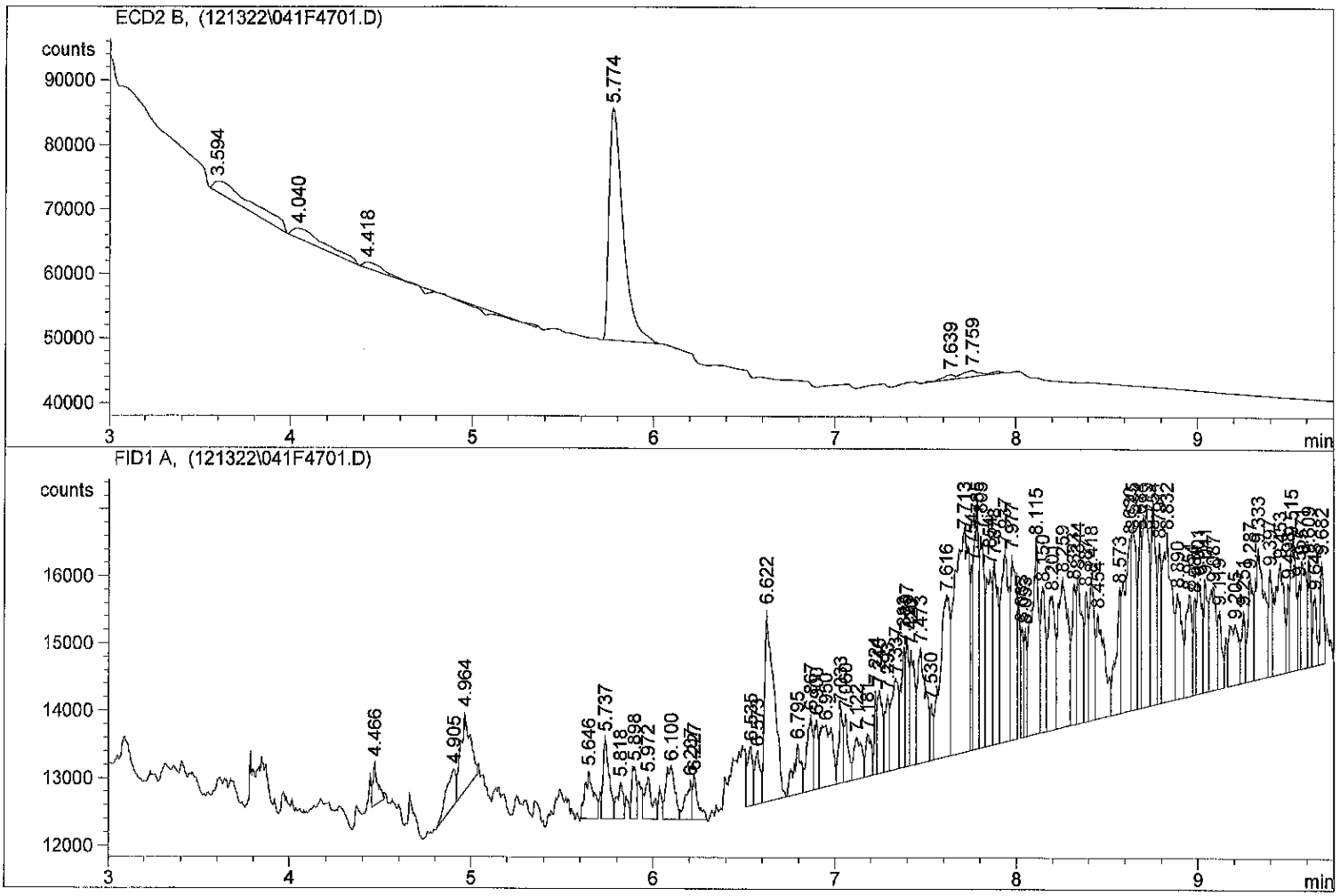
Injection Date : 12/14/2022 2:18:56 AM Seq. Line : 43
Sample Name : 22L0198 08 Location : Vial 40
Acq. Operator : CR Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\121322.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD



*** End of Report ***

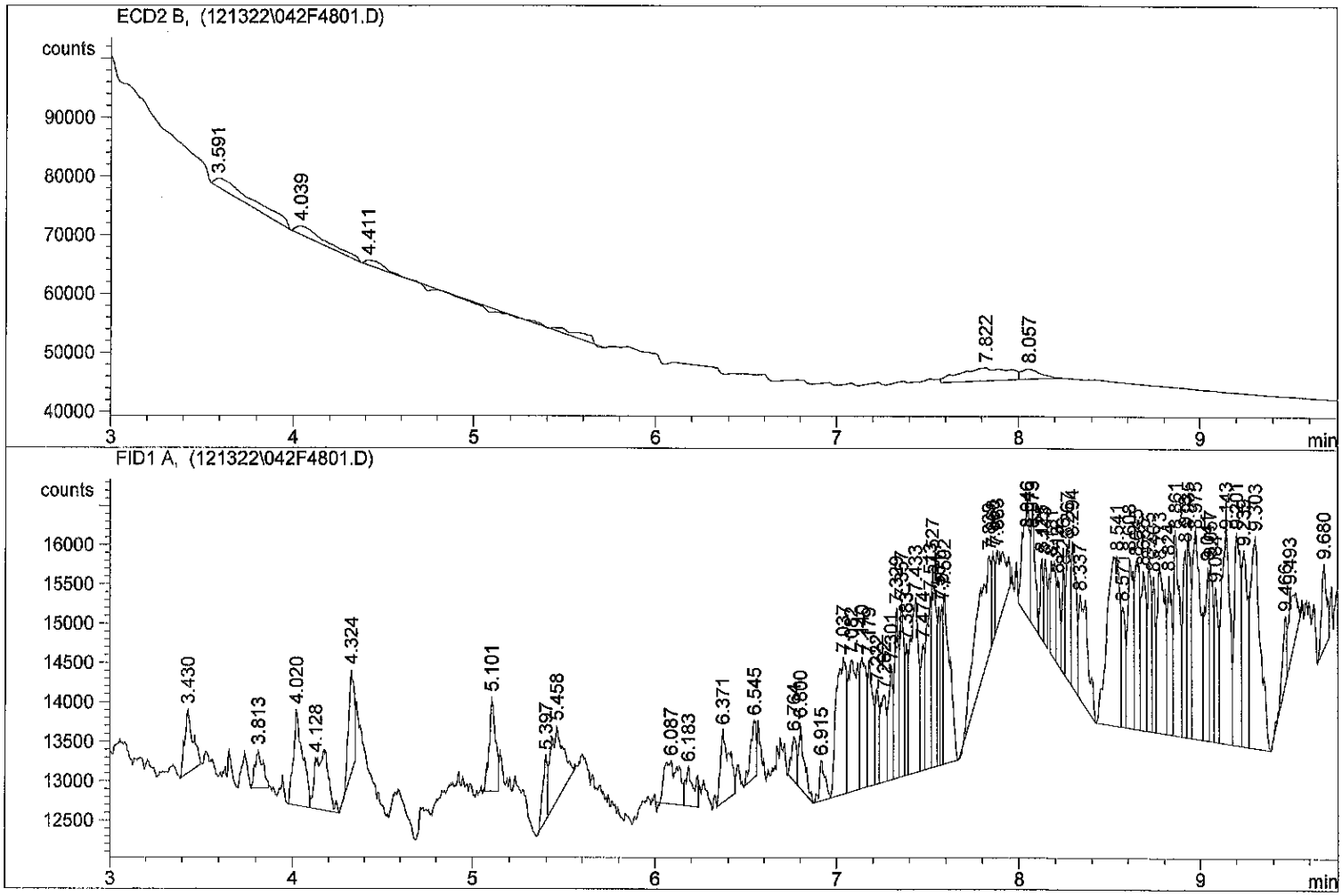
Injection Date	: 12/14/2022 3:14:42 AM	Seq. Line	: 47
Sample Name	: 22L0198 09	Location	: Vial 41
Acq. Operator	: CR	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\121322.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

Injection Date : 12/14/2022 3:29:15 AM Seq. Line : 48
Sample Name : 22L0198 10 Location : Vial 42
Acq. Operator : CR Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\121322.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD



*** End of Report ***

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CKL0219	Cleanup Type:	Sulfuric Acid
Cleanup Method:	EPA 3665 Sulfuric Acid Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Reference	BKL0377-SRM1	12202229ECD7.D	12/19/2022	
LDW23-SS1245	22L0198-10	12202239ECD7.D	12/19/2022	
LDW23-SS1263	22L0198-09	12202238ECD7.D	12/19/2022	
LDW23-SS1262	22L0198-07	12202236ECD7.D	12/19/2022	
LDW23-SS1260	22L0198-08	12202237ECD7.D	12/19/2022	
Blank	BKL0377-BLK1	12202225ECD7.D	12/19/2022	
LCS	BKL0377-BS1	12202226ECD7.D	12/19/2022	
Matrix Spike Dup	BKL0377-MSD1	12202241ECD7.D	12/19/2022	
MRL Check	BKL0377-MRL1	12202228ECD7.D	12/19/2022	
LDW23-SS1254	22L0198-02	12202231ECD7.D	12/19/2022	
LDW23-SS1257	22L0198-04	12202233ECD7.D	12/19/2022	
LDW23-SS1253	22L0198-01	12202230ECD7.D	12/19/2022	
LCS Dup	BKL0377-BSD1	12202227ECD7.D	12/19/2022	
LDW23-SS1255	22L0198-03	12202232ECD7.D	12/19/2022	
LDW23-SS1258	22L0198-05	12202234ECD7.D	12/19/2022	
LDW23-SS1259	22L0198-06	12202235ECD7.D	12/19/2022	
Matrix Spike	BKL0377-MS1	12202240ECD7.D	12/19/2022	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CKL0222	Cleanup Type:	Sulfur
Cleanup Method:	EPA 3660B Sulfur Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LCS	BKL0377-BS1	12202226ECD7.D	12/19/2022	
LDW23-SS1260	22L0198-08	12202237ECD7.D	12/19/2022	
LDW23-SS1262	22L0198-07	12202236ECD7.D	12/19/2022	
LDW23-SS1263	22L0198-09	12202238ECD7.D	12/19/2022	
LDW23-SS1258	22L0198-05	12202234ECD7.D	12/19/2022	
LDW23-SS1257	22L0198-04	12202233ECD7.D	12/19/2022	
LDW23-SS1255	22L0198-03	12202232ECD7.D	12/19/2022	
LDW23-SS1245	22L0198-10	12202239ECD7.D	12/19/2022	
LDW23-SS1253	22L0198-01	12202230ECD7.D	12/19/2022	
LCS Dup	BKL0377-BSD1	12202227ECD7.D	12/19/2022	
Blank	BKL0377-BLK1	12202225ECD7.D	12/19/2022	
Matrix Spike	BKL0377-MS1	12202240ECD7.D	12/19/2022	
Matrix Spike Dup	BKL0377-MSD1	12202241ECD7.D	12/19/2022	
MRL Check	BKL0377-MRL1	12202228ECD7.D	12/19/2022	
LDW23-SS1259	22L0198-06	12202235ECD7.D	12/19/2022	
Reference	BKL0377-SRM1	12202229ECD7.D	12/19/2022	
LDW23-SS1254	22L0198-02	12202231ECD7.D	12/19/2022	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CKL0222

Matrix: Solid **Cleanup using: Organics - EPA 3660B Sulfur Cleanup - uL** **Printed: 12/19/2022 5:26:26PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
22L0198-01	A	LDW23-SS1253	A 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	AA	
22L0198-02	A	LDW23-SS1254	A 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	AA	
22L0198-03	A	LDW23-SS1255	A 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	AA	
22L0198-04	A	LDW23-SS1257	A 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	AA	
22L0198-05	A	LDW23-SS1258	A 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	AA	
22L0198-06	A	LDW23-SS1259	A 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	AA	
22L0198-07	A	LDW23-SS1262	A 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	AA	
22L0198-08	A	LDW23-SS1260	A 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	AA	
22L0198-09	A	LDW23-SS1263	A 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	AA	
22L0198-10	A	LDW23-SS1245	A 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	AA	
BKL0377-BLK1	-	Blank	-	2.5	2.5	-	12/19/2022	AA	
BKL0377-BS1	-	LCS	-	2.5	2.5	-	12/19/2022	AA	
BKL0377-BSD1	-	LCS Dup	-	2.5	2.5	-	12/19/2022	AA	
BKL0377-MRL1	-	MRL Check	-	2.5	2.5	-	12/19/2022	AA	
BKL0377-MS1	-	Matrix Spike	-	2.5	2.5	-	12/19/2022	AA	
BKL0377-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	12/19/2022	AA	
BKL0377-SRM1	-	Reference	-	2.5	2.5	-	12/19/2022	AA	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CKL0223	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3660C Silica Gel Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1245	22L0198-10	12202239ECD7.D	12/19/2022	
LDW23-SS1262	22L0198-07	12202236ECD7.D	12/19/2022	
MRL Check	BKL0377-MRL1	12202228ECD7.D	12/19/2022	
Matrix Spike Dup	BKL0377-MSD1	12202241ECD7.D	12/19/2022	
Matrix Spike	BKL0377-MS1	12202240ECD7.D	12/19/2022	
LCS Dup	BKL0377-BSD1	12202227ECD7.D	12/19/2022	
LCS	BKL0377-BS1	12202226ECD7.D	12/19/2022	
LDW23-SS1259	22L0198-06	12202235ECD7.D	12/19/2022	
LDW23-SS1263	22L0198-09	12202238ECD7.D	12/19/2022	
Blank	BKL0377-BLK1	12202225ECD7.D	12/19/2022	
LDW23-SS1260	22L0198-08	12202237ECD7.D	12/19/2022	
Reference	BKL0377-SRM1	12202229ECD7.D	12/19/2022	
LDW23-SS1258	22L0198-05	12202234ECD7.D	12/19/2022	
LDW23-SS1255	22L0198-03	12202232ECD7.D	12/19/2022	
LDW23-SS1254	22L0198-02	12202231ECD7.D	12/19/2022	
LDW23-SS1253	22L0198-01	12202230ECD7.D	12/19/2022	
LDW23-SS1257	22L0198-04	12202233ECD7.D	12/19/2022	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CKL0223

Matrix: Solid **Cleanup using: Organics - EPA 3660C Silica Gel Cleanup - uL** **Printed: 12/19/2022 5:27:06PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
22L0198-01	A	LDW23-SS1253	A 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	AA	
22L0198-02	A	LDW23-SS1254	A 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	AA	
22L0198-03	A	LDW23-SS1255	A 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	AA	
22L0198-04	A	LDW23-SS1257	A 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	AA	
22L0198-05	A	LDW23-SS1258	A 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	AA	
22L0198-06	A	LDW23-SS1259	A 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	AA	
22L0198-07	A	LDW23-SS1262	A 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	AA	
22L0198-08	A	LDW23-SS1260	A 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	AA	
22L0198-09	A	LDW23-SS1263	A 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	AA	
22L0198-10	A	LDW23-SS1245	A 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	AA	
BKL0377-BLK1	-	Blank	-	2.5	2.5	-	12/19/2022	AA	
BKL0377-BS1	-	LCS	-	2.5	2.5	-	12/19/2022	AA	
BKL0377-BSD1	-	LCS Dup	-	2.5	2.5	-	12/19/2022	AA	
BKL0377-MRL1	-	MRL Check	-	2.5	2.5	-	12/19/2022	AA	
BKL0377-MS1	-	Matrix Spike	-	2.5	2.5	-	12/19/2022	AA	
BKL0377-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	12/19/2022	AA	
BKL0377-SRM1	-	Reference	-	2.5	2.5	-	12/19/2022	AA	

Form I

METHOD BLANK DATA SHEET

EPA 8082A

Blank

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BKL0377-BLK1	File ID:	12202225ECD7.D
Sampled:	N/A	Prepared:	12/16/22 17:27	Analyzed:	12/20/22 21:15
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	12.5 g / 2.5 mL
Batch:	BKL0377	Sequence:	SKL0304	Calibration:	FL00010
Instrument:	ECD7	Column:	ZB5	Cleanups:	Silica Gel, Sulfur, Sulfuric Acid

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
12674-11-2	Aroclor 1016	1	4.0	U	1.6	4.0
11104-28-2	Aroclor 1221	1	4.0	U	1.6	4.0
11141-16-5	Aroclor 1232	1	4.0	U	1.6	4.0
53469-21-9	Aroclor 1242	1	4.0	U	1.6	4.0
12672-29-6	Aroclor 1248	1	4.0	U	1.6	4.0
11097-69-1	Aroclor 1254	1	4.0	U	1.6	4.0
11096-82-5	Aroclor 1260	1	4.0	U	0.6	4.0

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
Decachlorobiphenyl	8.0000	8.74	109	40 - 126	
Tetrachlorometaxylene	8.0000	6.97	87.1	44 - 120	
Decachlorobiphenyl [2C]	8.0000	8.13	102	40 - 126	
Tetrachlorometaxylene [2C]	8.0000	6.77	84.7	44 - 120	

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202225ECD7.D
Data file 2: /221220.b/221220.b/12202225ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0377-BLK1
Client ID:
Injection Date: 20-DEC-2022 21:15
Report Date: 12/22/2022 09:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.835	-0.001	239424	5.712	-0.001	133486	34.9	33.9	2.9	Tetrachloro-m-xylene
13.904	-0.004	307324	14.132	-0.005	234325	43.7	40.7	7.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	484753	8.3
Hexabromobiphenyl	798898	766785	-4.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	287479	15.4
Hexabromobiphenyl	362541	405921	12.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.936 - 13.808) = 45861 Col1 Total PCB = 0.0 ppm*

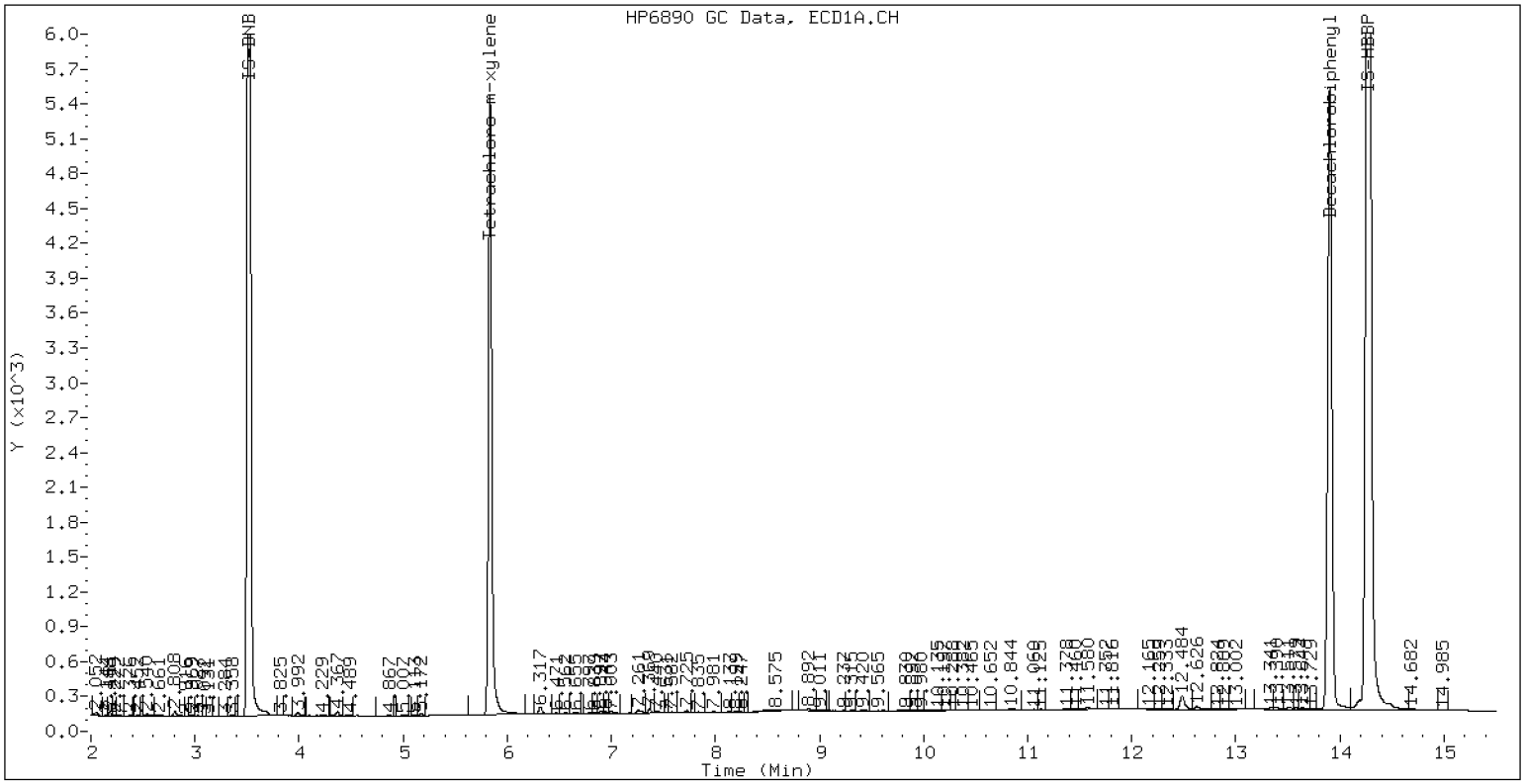
Total PCB Area Col2 (5.936 - 13.808) = 20816 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

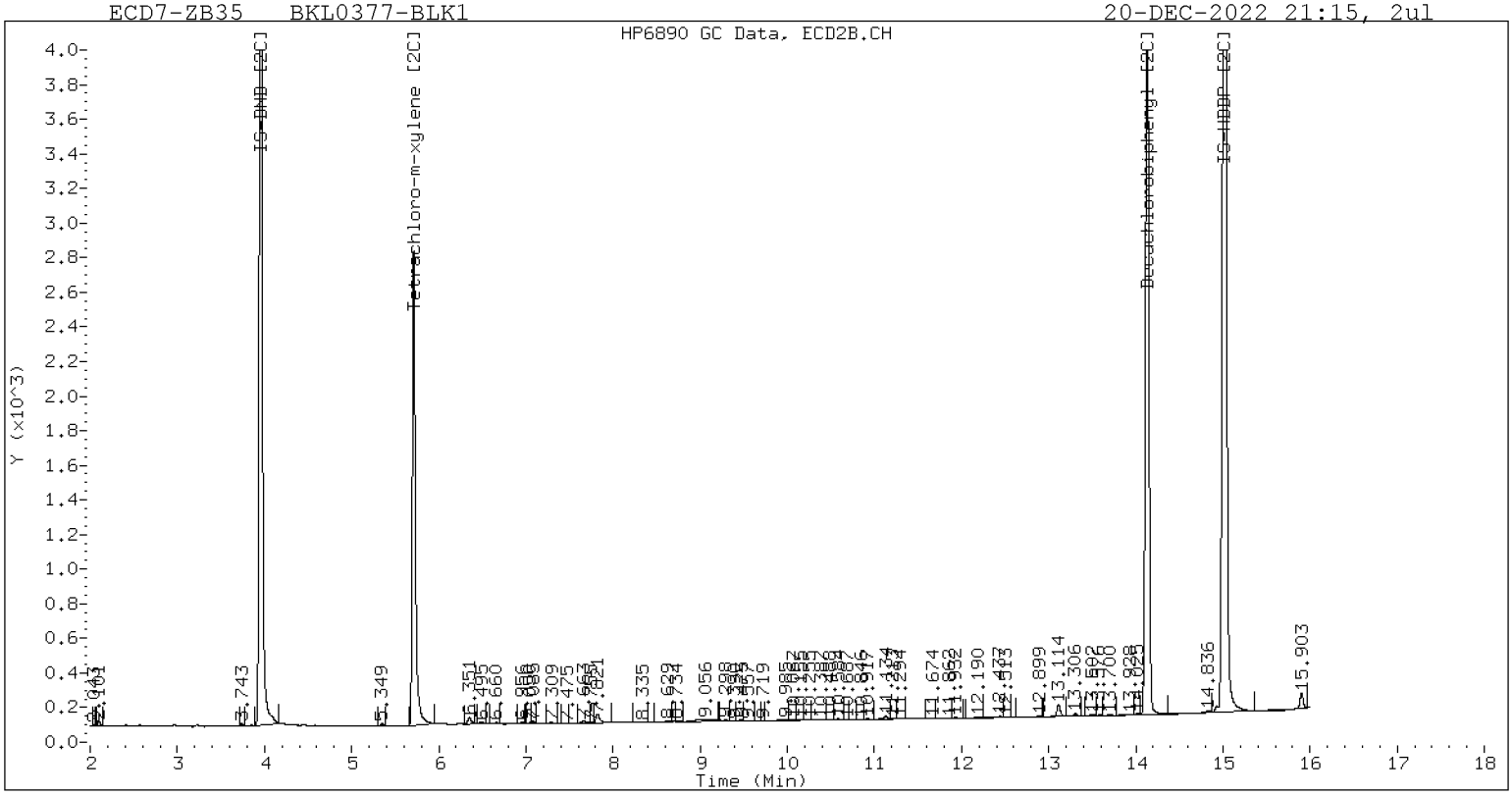
PCB Dual Column Chromatograms

ECD7-ZB5 BKL0377-BLK1 20-DEC-2022 21:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0377-BLK1 20-DEC-2022 21:15, 2ul



ZB-35 Manual Integration: NO

LCS / LCS DUPLICATE RECOVERY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	12/20/22 21:36
Batch:	BKL0377	Laboratory ID:	BKL0377-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	12.5 g / 2.5 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Aroclor 1016	101	89.5		88.8	56 - 120
Aroclor 1260	101	111		110	58 - 120

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Aroclor 1016	101	87.7		87.0	2.03	30	56 - 120
Aroclor 1260	101	106		105	4.38	30	58 - 120

* Indicates values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202226ECD7.D
Data file 2: /221220.b/221220.b/12202226ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0377-BS1
Client ID:
Injection Date: 20-DEC-2022 21:36
Report Date: 12/22/2022 09:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.834	-0.002	270545	5.711	-0.002	144625	37.3	35.0	6.2	Tetrachloro-m-xylene
13.904	-0.004	345106	14.132	-0.005	261525	44.8	42.4	5.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	512409	14.5
Hexabromobiphenyl	798898	839760	5.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	301393	21.0
Hexabromobiphenyl	362541	434825	19.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.289	-0.005	76564	447.9	1	7.274	-0.001	63663	413.1
Aroclor-1016	2	7.670	-0.014	249204	451.6	2	7.868	-0.002	143159	430.8
Aroclor-1016	3	7.808	-0.010	103552	414.1	3	8.067	-0.003	57810	405.0
Aroclor-1016	4	8.421	-0.008	76094	477.3	4	8.239	-0.003	34219	455.9
Total Col1Ave (4 peaks):					447.7	Total Col2Ave (4 peaks):				426.2 RPD = 5
Corrected Ave (3 peaks):					437.9	Corrected Ave (3 peaks):				416.3 RPD = 5
Aroclor-1221	1	4.761	0.001	619	14.6	1	4.980	-0.007	672	26.4
Aroclor-1221	2	6.155	-0.003	10816	144.9	2	6.321	-0.000	7811	161.1
Aroclor-1221	3	6.406	-0.003	50167	291.4	3	6.643	-0.002	28999	355.5
Total Col1Ave (3 peaks):					150.3	Total Col2Ave (3 peaks):				181.0 RPD = 19
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.761	-0.000	619	24.3	1	4.980	-0.010	672	45.9
Aroclor-1232	2	6.155	-0.004	10816	200.9	2	7.274	-0.003	63663	850.6
Aroclor-1232	3	7.670	-0.013	249204	1030.5	3	7.868	-0.009	143159	978.4
Aroclor-1232	4	8.594	-0.012	98011	955.3	4	8.728	-0.006	43372	1093.3
Total Col1Ave (4 peaks):					552.7	Total Col2Ave (4 peaks):				742.0 RPD = 29
Corrected Ave (3 peaks):					393.5	Corrected Ave (3 peaks):				624.9 RPD = 45*
Aroclor-1242	1	7.289	-0.005	76564	527.2	1	7.274	-0.003	63663	499.1
Aroclor-1242	2	7.670	-0.015	249204	540.4	2	7.868	-0.007	143159	528.7
Aroclor-1242	3	8.421	-0.009	76094	573.5	3	9.168	-0.010	8047	92.1
Aroclor-1242	4	9.009	-0.022	108153	392.6	4	9.592	-0.013	4102	39.1
Total Col1Ave (4 peaks):					508.4	Total Col2Ave (4 peaks):				289.7 RPD = 55*
Corrected Ave (3 peaks):					486.7	Corrected Ave (3 peaks):				210.1 RPD = 79*
Aroclor-1248	1	8.421	-0.006	76094	345.4	1	8.322	-0.004	42184	342.6
Aroclor-1248	2	8.594	-0.011	98011	348.4	2	8.728	-0.004	43372	334.9
Aroclor-1248	3	9.009	-0.013	108153	213.7	3	9.168	-0.009	8047	51.1
Aroclor-1248	4	9.314	0.003	83083	335.1	4	9.592	-0.010	4102	22.2
Total Col1Ave (4 peaks):					310.7	Total Col2Ave (4 peaks):				187.7 RPD = 49*
Corrected Ave (3 peaks):					298.1	Corrected Ave (3 peaks):				136.1 RPD = 75*
Aroclor-1254	1	9.314	-0.007	83083	184.2	1	9.461	-0.005	36413	187.4
Aroclor-1254	2	---			0.0	2	9.982	-0.005	8033	51.4
Aroclor-1254	3	9.681	-0.013	16444	57.7	3	10.158	0.019	81783	243.5
Aroclor-1254	4	9.819	-0.012	46433	83.6	4	10.383	-0.006	104962	301.8
Aroclor-1254	5	10.133	-0.057	202713	532.4	5	10.578	-0.008	140859	839.8
Total Col1Ave (4 peaks):					214.5	Total Col2Ave (5 peaks):				324.8 RPD = 41*
Corrected Ave (3 peaks):					108.5	Corrected Ave (4 peaks):				196.0 RPD = 57*
Aroclor-1260	1	11.056	-0.006	166043	543.2	1	11.665	-0.004	107790	469.6
Aroclor-1260	2	11.373	-0.005	174427	551.7	2	11.928	-0.005	264786	459.7
Aroclor-1260	3	11.745	-0.007	454460	547.1	3	12.448	-0.004	73540	479.5
Aroclor-1260	4	12.149	-0.009	242502	573.2	4	12.512	-0.005	180910	471.2
Aroclor-1260	5	12.256	-0.005	95664	552.4	NS	---			----
Total Col1Ave (5 peaks):					553.5	Total Col2Ave (4 peaks):				470.0 RPD = 16
Corrected Ave (4 peaks):					548.6	Corrected Ave (3 peaks):				466.9 RPD = 16
Aroclor-1262	1	10.837	-0.011	328322	1169.1	1	11.211	-0.006	99458	300.8
Aroclor-1262	2	12.256	-0.007	95664	219.1	2	11.665	-0.005	107790	376.4
Aroclor-1262	3	12.331	-0.005	117083	251.1	3	12.448	-0.004	73540	232.8
Aroclor-1262	4	12.998	-0.007	103958	277.8	4	12.512	-0.007	180910	365.6
Total Col1Ave (4 peaks):					479.3	Total Col2Ave (4 peaks):				318.9 RPD = 40*
Corrected Ave (3 peaks):					249.3	Corrected Ave (3 peaks):				299.8 RPD = 18
Aroclor-1268	1	12.256	-0.006	95664	81.4	1	12.448	-0.002	73540	89.6
Aroclor-1268	2	12.331	-0.004	117083	101.9	2	12.512	-0.005	180910	215.0
Aroclor-1268	3	12.734	0.018	52837	56.1	3	12.905	-0.005	3408	10.9
Aroclor-1268	4	13.499	-0.006	40807	14.2	4	13.721	-0.006	20533	9.1
Total Col1Ave (4 peaks):					63.4	Total Col2Ave (4 peaks):				81.2 RPD = 25

Corrected Ave (3 peaks): 50.6 Corrected Ave (3 peaks): 36.6 RPD = 32

Total PCB Area Col1 (5.936 - 13.808) = 4755199 Col1 Total PCB = 0.8 ppm*

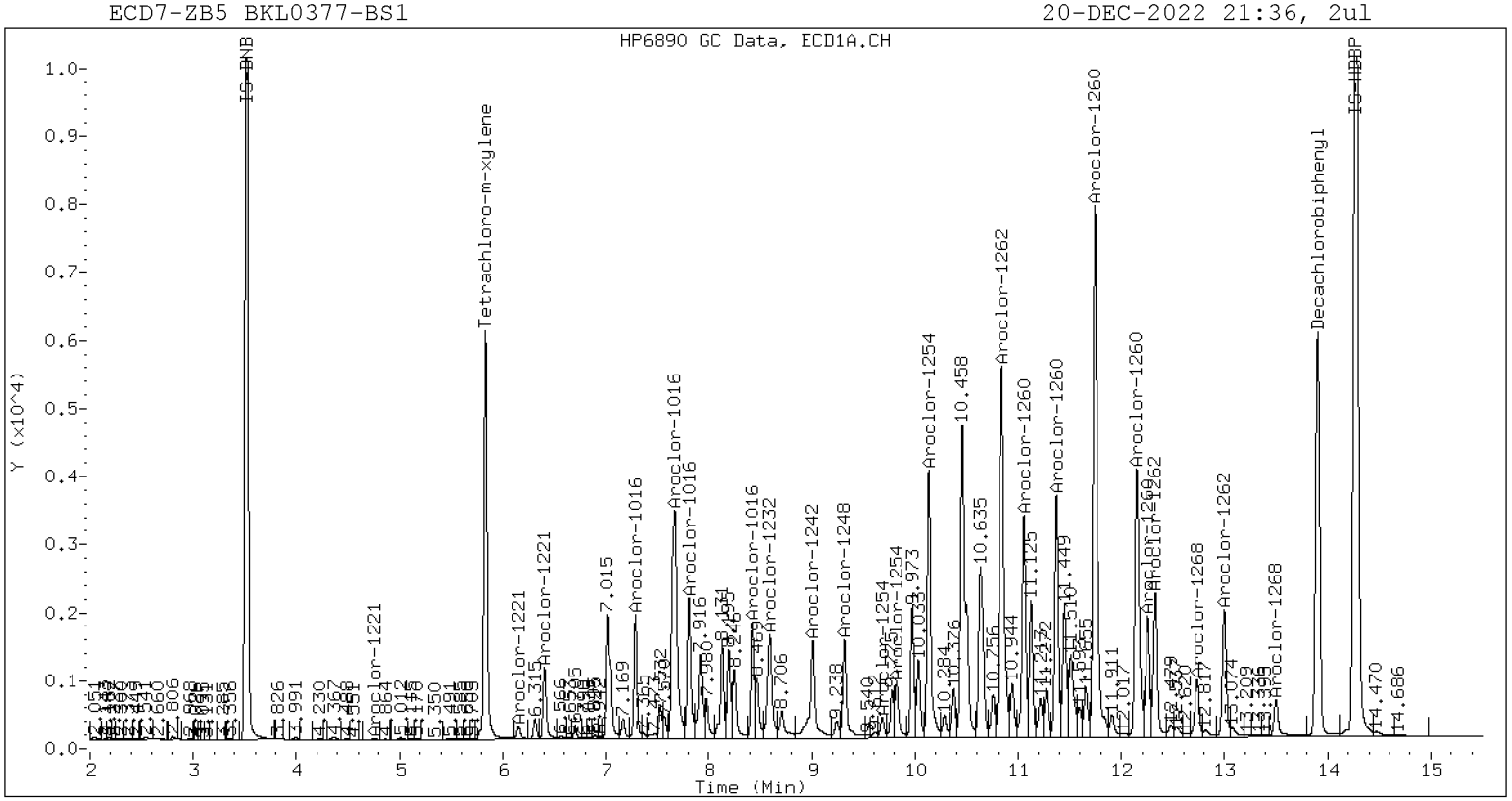
Total PCB Area Col2 (5.936 - 13.808) = 2578155 Col2 Total PCB = 1.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

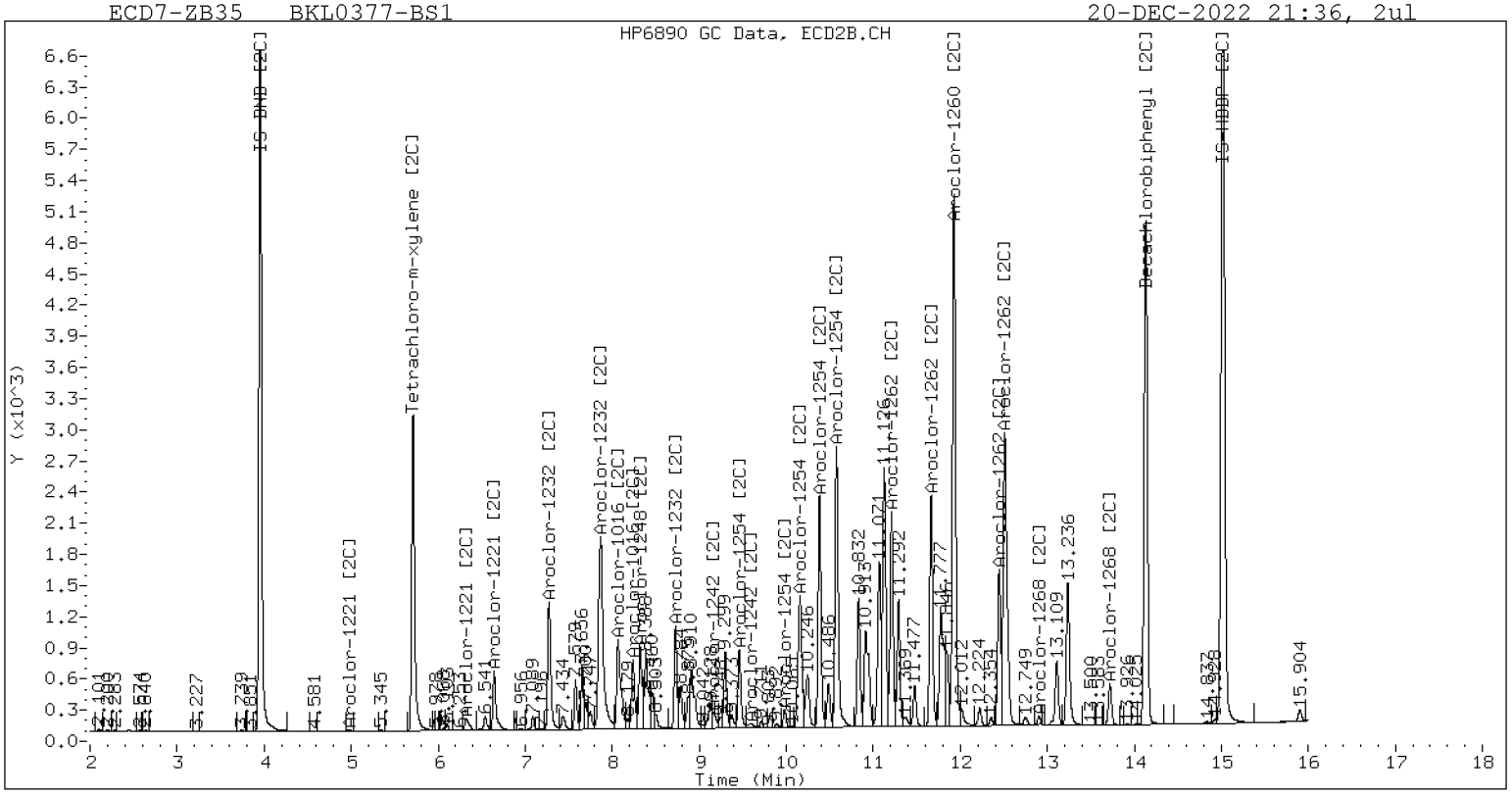
PCB Dual Column Chromatograms

ECD7-ZB5 BKL0377-BS1 20-DEC-2022 21:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0377-BS1 20-DEC-2022 21:36, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202227ECD7.D
Data file 2: /221220.b/221220.b/12202227ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0377-BSD1
Client ID:
Injection Date: 20-DEC-2022 21:57
Report Date: 12/22/2022 09:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.834	-0.002	271610	5.711	-0.002	147340	36.5	34.8	4.7	Tetrachloro-m-xylene
13.903	-0.004	350337	14.131	-0.006	266190	43.1	41.4	4.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	524969	17.3
Hexabromobiphenyl	798898	885901	10.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	308454	23.8
Hexabromobiphenyl	362541	453119	25.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.289	-0.005	76466	436.7	1	7.274	-0.001	64165	406.9
Aroclor-1016	2	7.671	-0.014	252614	446.8	2	7.868	-0.002	145523	427.8
Aroclor-1016	3	7.807	-0.010	104389	407.4	3	8.068	-0.002	58839	402.8
Aroclor-1016	4	8.421	-0.009	75778	464.0	4	8.238	-0.003	34872	454.0
Total Col1Ave (4 peaks):					438.7	Total Col2Ave (4 peaks):				422.9 RPD = 4
Corrected Ave (3 peaks):					430.3	Corrected Ave (3 peaks):				412.5 RPD = 4
Aroclor-1221	1	4.761	0.001	629	14.5	1	4.981	-0.006	538	20.7
Aroclor-1221	2	6.155	-0.004	10110	132.2	2	6.321	-0.000	7022	141.5
Aroclor-1221	3	6.406	-0.003	50177	284.5	3	6.643	-0.002	29284	350.7
Total Col1Ave (3 peaks):					143.7	Total Col2Ave (3 peaks):				171.0 RPD = 17
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.761	-0.000	629	24.1	1	4.981	-0.008	538	35.9
Aroclor-1232	2	6.155	-0.005	10110	183.3	2	7.274	-0.003	64165	837.7
Aroclor-1232	3	7.671	-0.013	252614	1019.6	3	7.868	-0.008	145523	971.8
Aroclor-1232	4	8.594	-0.012	98538	937.4	4	8.728	-0.006	43885	1080.9
Total Col1Ave (4 peaks):					541.1	Total Col2Ave (4 peaks):				731.5 RPD = 30
Corrected Ave (3 peaks):					381.6	Corrected Ave (3 peaks):				615.1 RPD = 47*
Aroclor-1242	1	7.289	-0.005	76466	513.9	1	7.274	-0.003	64165	491.5
Aroclor-1242	2	7.671	-0.014	252614	534.7	2	7.868	-0.006	145523	525.1
Aroclor-1242	3	8.421	-0.009	75778	557.5	3	9.166	-0.012	8145	91.1
Aroclor-1242	4	9.009	-0.022	98407	348.6	4	9.593	-0.012	4191	39.0
Total Col1Ave (4 peaks):					488.7	Total Col2Ave (4 peaks):				286.7 RPD = 52*
Corrected Ave (3 peaks):					465.7	Corrected Ave (3 peaks):				207.2 RPD = 77*
Aroclor-1248	1	8.421	-0.007	75778	335.7	1	8.322	-0.004	42982	341.1
Aroclor-1248	2	8.594	-0.010	98538	341.9	2	8.728	-0.005	43885	331.1
Aroclor-1248	3	9.009	-0.013	98407	189.8	3	9.166	-0.012	8145	50.5
Aroclor-1248	4	9.314	0.003	82027	323.0	4	9.593	-0.009	4191	22.1
Total Col1Ave (4 peaks):					297.6	Total Col2Ave (4 peaks):				186.2 RPD = 46*
Corrected Ave (3 peaks):					282.8	Corrected Ave (3 peaks):				134.6 RPD = 71*
Aroclor-1254	1	9.314	-0.007	82027	177.5	1	9.462	-0.005	37319	187.7
Aroclor-1254	2	---			0.0	2	9.982	-0.005	8201	51.3
Aroclor-1254	3	9.681	-0.014	15514	53.1	3	10.158	0.018	83094	241.8
Aroclor-1254	4	9.819	-0.012	45728	80.4	4	10.383	-0.006	106558	299.4
Aroclor-1254	5	10.133	-0.056	206199	528.6	5	10.577	-0.009	142507	830.1
Total Col1Ave (4 peaks):					209.9	Total Col2Ave (5 peaks):				322.0 RPD = 42*
Corrected Ave (3 peaks):					103.7	Corrected Ave (4 peaks):				195.0 RPD = 61*
Aroclor-1260	1	11.056	-0.006	166733	517.1	1	11.664	-0.005	109593	458.2
Aroclor-1260	2	11.372	-0.005	175466	526.1	2	11.928	-0.005	269733	449.4
Aroclor-1260	3	11.745	-0.007	457830	522.4	3	12.446	-0.005	75166	470.3
Aroclor-1260	4	12.148	-0.011	245222	549.5	4	12.511	-0.005	183635	459.0
Aroclor-1260	5	12.255	-0.006	97540	533.9	NS	---			----
Total Col1Ave (5 peaks):					529.8	Total Col2Ave (4 peaks):				459.2 RPD = 14
Corrected Ave (4 peaks):					524.9	Corrected Ave (3 peaks):				455.5 RPD = 14
Aroclor-1262	1	10.836	-0.012	331622	1119.4	1	11.211	-0.006	101007	293.2
Aroclor-1262	2	12.255	-0.007	97540	211.8	2	11.664	-0.006	109593	367.3
Aroclor-1262	3	12.330	-0.006	117565	239.0	3	12.446	-0.005	75166	228.4
Aroclor-1262	4	12.999	-0.006	104582	264.9	4	12.511	-0.008	183635	356.2
Total Col1Ave (4 peaks):					458.8	Total Col2Ave (4 peaks):				311.2 RPD = 38
Corrected Ave (3 peaks):					238.6	Corrected Ave (3 peaks):				292.6 RPD = 20
Aroclor-1268	1	12.255	-0.007	97540	78.7	1	12.446	-0.003	75166	87.9
Aroclor-1268	2	12.330	-0.005	117565	97.0	2	12.511	-0.006	183635	209.4
Aroclor-1268	3	12.736	0.020	51501	51.8	3	12.904	-0.006	3614	11.1
Aroclor-1268	4	13.499	-0.006	30672	10.1	4	13.719	-0.007	20773	8.9
Total Col1Ave (4 peaks):					59.4	Total Col2Ave (4 peaks):				79.3 RPD = 29

Corrected Ave (3 peaks): 46.9 Corrected Ave (3 peaks): 36.0 RPD = 26

Total PCB Area Col1 (5.936 - 13.808) = 4726127 Col1 Total PCB = 0.8 ppm*

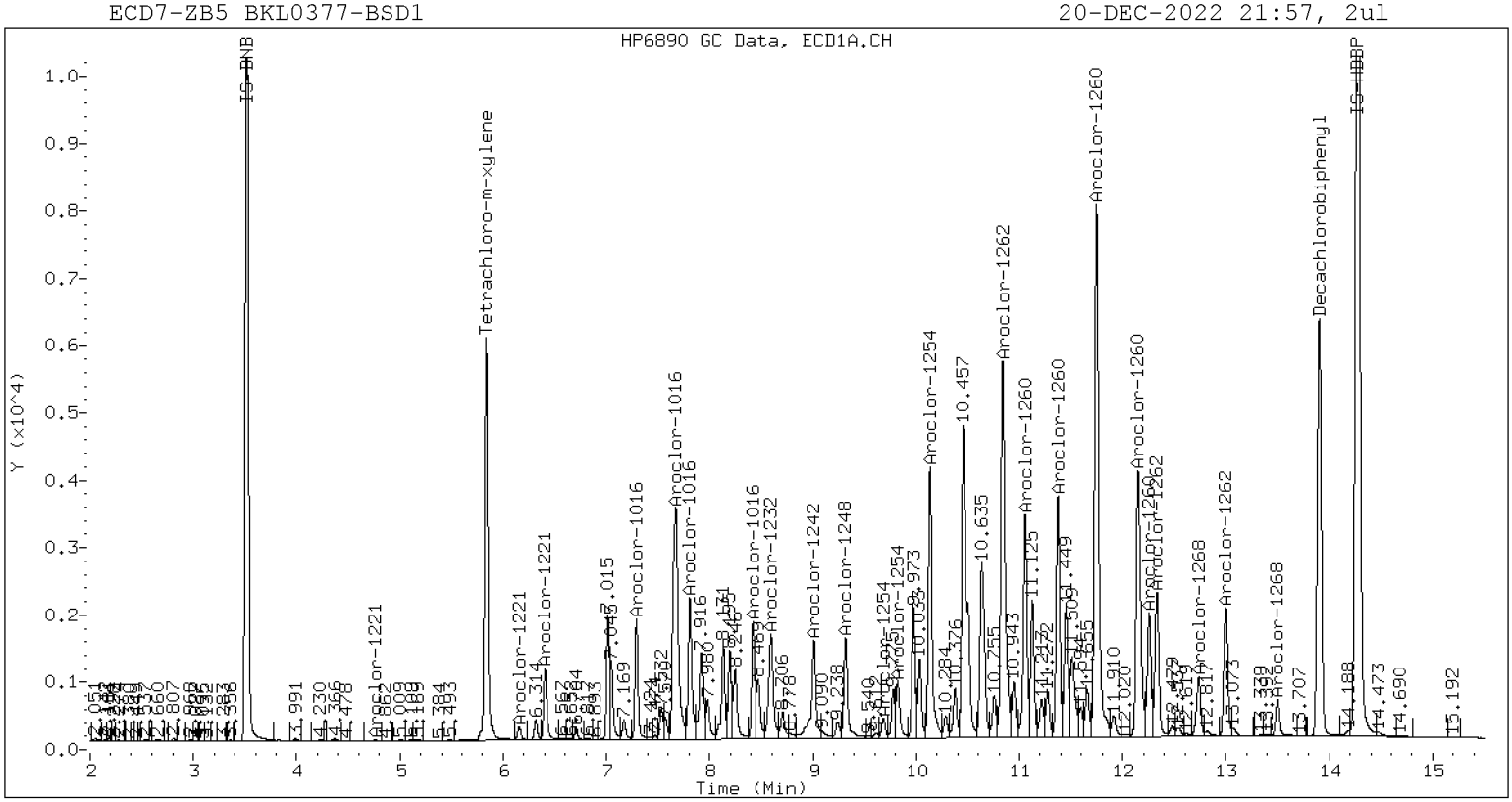
Total PCB Area Col2 (5.936 - 13.808) = 2615145 Col2 Total PCB = 1.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

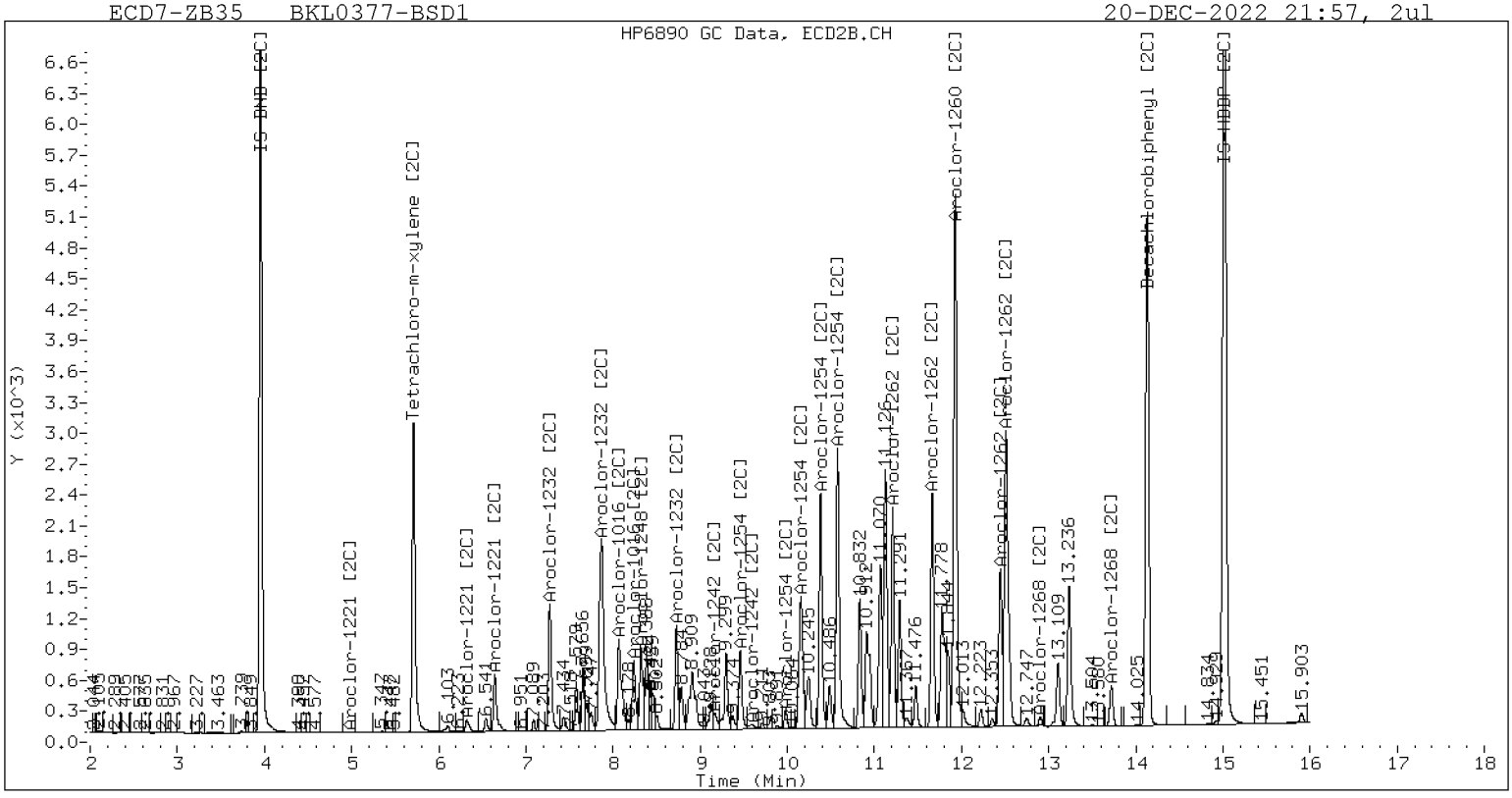
PCB Dual Column Chromatograms

ECD7-ZB5 BKL0377-BSD1 20-DEC-2022 21:57, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0377-BSD1 20-DEC-2022 21:57, 2ul



ZB-35 Manual Integration: NO

MS / MS DUPLICATE RECOVERY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	12/21/22 02:33
Batch:	BKL0377	Laboratory ID:	BKL0377-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	28.67 g / 2.5 mL	Source Sample:	LDW23-SS1245

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Aroclor 1016	101	ND	U	69.9		69.4	56 - 120
Aroclor 1260	101	34.5		113		77.7	58 - 120

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

MS / MS DUPLICATE RECOVERY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	12/21/22 02:54
Batch:	BKL0377	Laboratory ID:	BKL0377-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	28.67 g / 2.5 mL	Source Sample:	LDW23-SS1245

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor 1016	101	76.9		76.3	9.48	30	56 - 120
Aroclor 1260	101	123		87.6	8.66	30	58 - 120

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202240ECD7.D
Data file 2: /221220.b/221220.b/12202240ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0377-MS1
Client ID:
Injection Date: 21-DEC-2022 02:33
Report Date: 12/22/2022 09:59
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.830	-0.006	164804	5.707	-0.007	101228	25.8	27.8	7.7	Tetrachloro-m-xylene
13.897	-0.011	141433	14.127	-0.010	140403	35.3	32.5	8.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	450949	0.7
Hexabromobiphenyl	798898	437470	-45.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	265240	6.5
Hexabromobiphenyl	362541	304309	-16.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.285	-0.010	52030	345.9	1	7.270	-0.005	47197	348.0
Aroclor-1016	2	7.660	-0.025	177121	364.7	2	7.859	-0.011	108032	369.4
Aroclor-1016	3	7.798	-0.019	60979	277.1	3	8.059	-0.011	40097	319.2
Aroclor-1016	4	8.414	-0.016	57775	411.8	4	8.228	-0.013	25918	392.4
Total Col1Ave (4 peaks):					349.9	Total Col2Ave (4 peaks):				357.3 RPD = 2
Corrected Ave (3 peaks):					329.2	Corrected Ave (3 peaks):				345.5 RPD = 5
Aroclor-1221	1	4.722	-0.038	3244	87.0	1	4.971	-0.016	1991	88.9
Aroclor-1221	2	6.151	-0.008	5908	90.0	2	6.318	-0.003	4493	105.3
Aroclor-1221	3	6.401	-0.008	34938	230.6	3	6.639	-0.007	25475	354.8
Total Col1Ave (3 peaks):					135.9	Total Col2Ave (3 peaks):				183.0 RPD = 30
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.722	-0.039	3244	144.6	1	4.971	-0.018	1991	154.4
Aroclor-1232	2	6.151	-0.009	5908	124.7	2	7.270	-0.007	47197	716.5
Aroclor-1232	3	7.660	-0.024	177121	832.2	3	7.859	-0.017	108032	839.0
Aroclor-1232	4	8.582	-0.023	58057	643.0	4	8.722	-0.012	38322	1097.6
Total Col1Ave (4 peaks):					436.1	Total Col2Ave (4 peaks):				701.9 RPD = 47*
Corrected Ave (3 peaks):					304.1	Corrected Ave (3 peaks):				570.0 RPD = 61*
Aroclor-1242	1	7.285	-0.010	52030	407.1	1	7.270	-0.007	47197	420.4
Aroclor-1242	2	7.660	-0.025	177121	436.4	2	7.859	-0.016	108032	453.3
Aroclor-1242	3	8.414	-0.016	57775	494.8	3	9.154	-0.024	30272	393.8
Aroclor-1242	4	9.000	-0.031	81586	336.5	4	9.549	-0.056	39355	425.9
Total Col1Ave (4 peaks):					418.7	Total Col2Ave (4 peaks):				423.4 RPD = 1
Corrected Ave (3 peaks):					393.3	Corrected Ave (3 peaks):				413.4 RPD = 5
Aroclor-1248	1	8.414	-0.014	57775	298.0	1	8.317	-0.010	38814	358.2
Aroclor-1248	2	8.582	-0.022	58057	234.5	2	8.722	-0.010	38322	336.3
Aroclor-1248	3	9.000	-0.022	81586	183.2	3	9.154	-0.024	30272	218.4
Aroclor-1248	4	9.302	-0.009	92471	423.8	4	9.549	-0.053	39355	241.8
Total Col1Ave (4 peaks):					284.9	Total Col2Ave (4 peaks):				288.7 RPD = 1
Corrected Ave (3 peaks):					238.6	Corrected Ave (3 peaks):				265.5 RPD = 11
Aroclor-1254	1	9.302	-0.019	92471	232.9	1	9.454	-0.013	56575	330.8
Aroclor-1254	2	9.422	0.021	6250	40.5	2	9.972	-0.015	25651	186.6
Aroclor-1254	3	9.673	-0.022	61528	245.4	3	10.120	-0.019	105722	357.7
Aroclor-1254	4	9.801	-0.030	120521	246.6	4	10.373	-0.016	141412	462.0
Aroclor-1254	5	10.127	-0.062	195215	582.6	5	10.569	-0.018	125911	853.0
Total Col1Ave (5 peaks):					269.6	Total Col2Ave (5 peaks):				438.0 RPD = 48*
Corrected Ave (4 peaks):					191.3	Corrected Ave (4 peaks):				334.3 RPD = 54*
Aroclor-1260	1	11.046	-0.016	93175	585.1	1	11.658	-0.011	81270	505.9
Aroclor-1260	2	11.360	-0.017	83083	504.5	2	11.918	-0.014	190909	473.6
Aroclor-1260	3	11.731	-0.020	244147	564.2	3	12.438	-0.014	65304	608.4
Aroclor-1260	4	12.133	-0.025	128127	581.4	4	12.502	-0.014	128392	477.8
Aroclor-1260	5	12.246	-0.015	52433	581.2	NS	---			----
Total Col1Ave (5 peaks):					563.3	Total Col2Ave (4 peaks):				516.5 RPD = 9
Corrected Ave (4 peaks):					557.8	Corrected Ave (3 peaks):				485.8 RPD = 14
Aroclor-1262	1	10.821	-0.027	260265	1779.0	1	11.204	-0.013	66820	288.8
Aroclor-1262	2	12.246	-0.016	52433	230.5	2	11.658	-0.012	81270	405.5
Aroclor-1262	3	12.320	-0.017	62777	258.4	3	12.438	-0.014	65304	295.4
Aroclor-1262	4	12.986	-0.019	59250	303.9	4	12.502	-0.017	128392	370.8
Total Col1Ave (4 peaks):					643.0	Total Col2Ave (4 peaks):				340.1 RPD = 62*
Corrected Ave (3 peaks):					264.3	Corrected Ave (3 peaks):				318.3 RPD = 19
Aroclor-1268	1	12.246	-0.016	52433	85.7	1	12.438	-0.012	65304	113.7
Aroclor-1268	2	12.320	-0.016	62777	104.8	2	12.502	-0.015	128392	218.0
Aroclor-1268	3	12.720	0.004	30288	61.7	3	12.900	-0.010	4621	21.2
Aroclor-1268	4	13.489	-0.016	20267	13.5	4	13.713	-0.013	21747	13.8
Total Col1Ave (4 peaks):					66.4	Total Col2Ave (4 peaks):				91.7 RPD = 32

Corrected Ave (3 peaks): 53.6 Corrected Ave (3 peaks): 49.6 RPD = 8

Total PCB Area Col1 (5.936 - 13.808) = 3586688 Col1 Total PCB = 0.7 ppm*

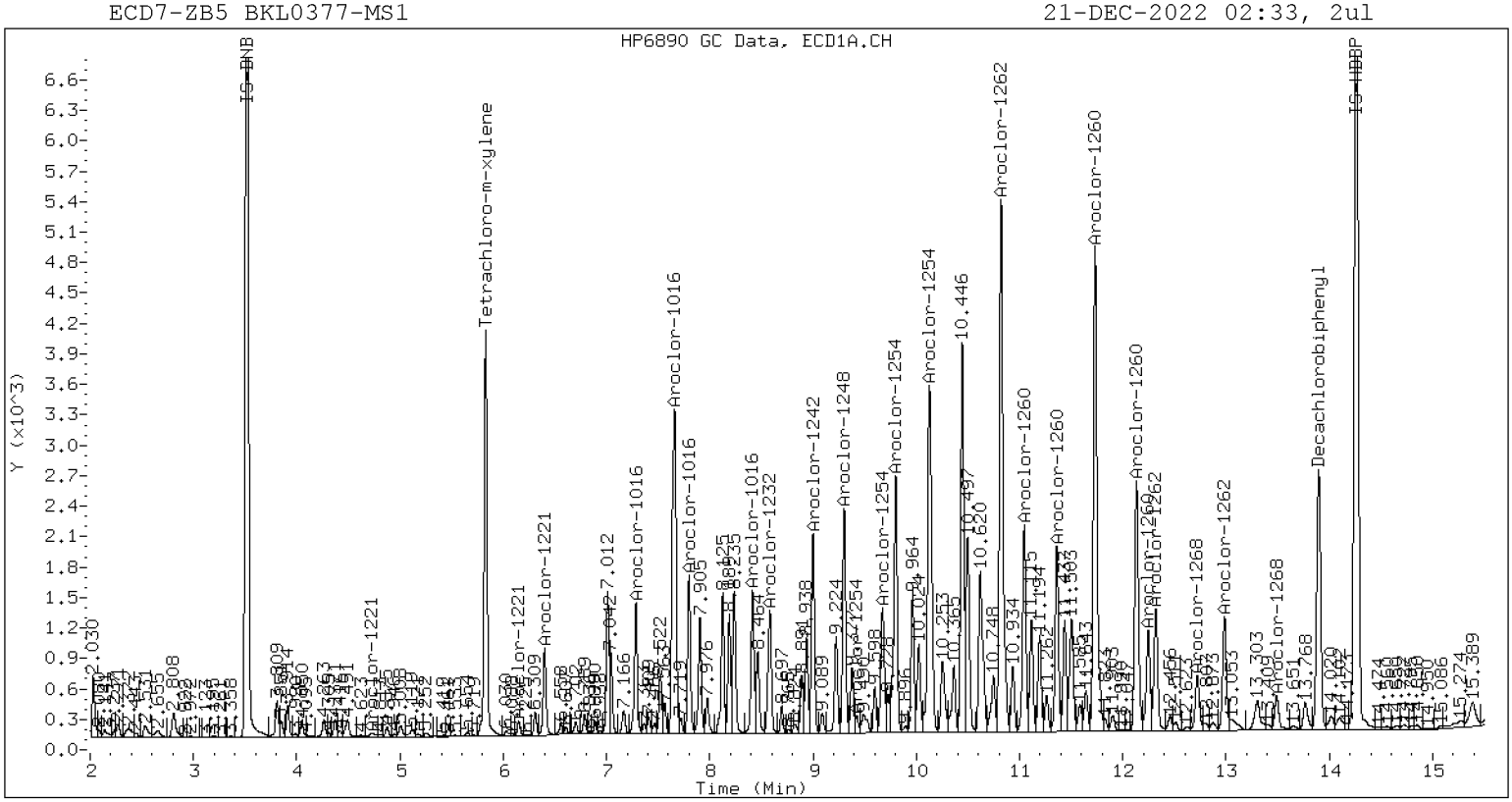
Total PCB Area Col2 (5.936 - 13.808) = 2482064 Col2 Total PCB = 1.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

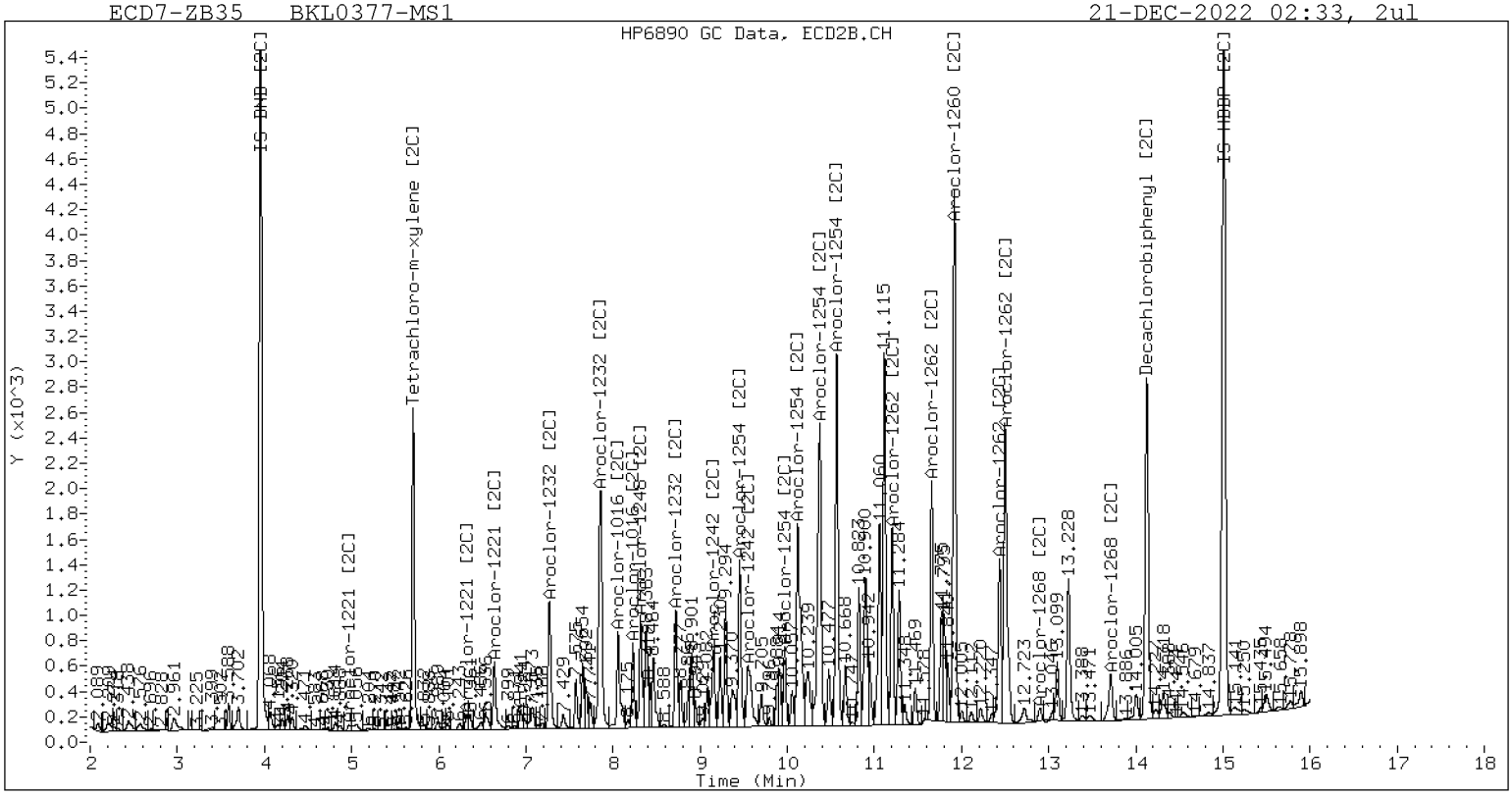
PCB Dual Column Chromatograms

ECD7-ZB5 BKL0377-MS1 21-DEC-2022 02:33, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0377-MS1 21-DEC-2022 02:33, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202241ECD7.D
Data file 2: /221220.b/221220.b/12202241ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0377-MSD1
Client ID:
Injection Date: 21-DEC-2022 02:54
Report Date: 12/22/2022 09:59
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.831	-0.006	181049	5.708	-0.006	113544	27.3	30.6	11.4	Tetrachloro-m-xylene
13.897	-0.011	152581	14.127	-0.010	151335	38.2	34.6	9.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	468686	4.7
Hexabromobiphenyl	798898	435994	-45.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	271064	8.8
Hexabromobiphenyl	362541	308279	-15.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.285	-0.009	60363	386.1	1	7.271	-0.005	53419	385.4
Aroclor-1016	2	7.661	-0.024	201386	399.0	2	7.859	-0.011	121587	406.8
Aroclor-1016	3	7.798	-0.019	69439	303.6	3	8.059	-0.011	43020	335.1
Aroclor-1016	4	8.414	-0.016	65636	450.1	4	8.228	-0.013	29284	433.8
Total Col1Ave (4 peaks):					384.7	Total Col2Ave (4 peaks):				390.3 RPD = 1
Corrected Ave (3 peaks):					362.9	Corrected Ave (3 peaks):				375.8 RPD = 3
Aroclor-1221	1	4.720	-0.040	3452	89.1	1	4.974	-0.013	1665	72.8
Aroclor-1221	2	6.152	-0.006	7558	110.7	2	6.319	-0.002	5044	115.7
Aroclor-1221	3	6.401	-0.008	38137	242.2	3	6.639	-0.006	27909	380.4
Total Col1Ave (3 peaks):					147.3	Total Col2Ave (3 peaks):				189.6 RPD = 25
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.720	-0.041	3452	148.0	1	5.003	0.014	2021	153.3
Aroclor-1232	2	6.152	-0.007	7558	153.5	2	7.271	-0.006	53419	793.6
Aroclor-1232	3	7.661	-0.023	201386	910.5	3	7.859	-0.017	121587	923.9
Aroclor-1232	4	8.582	-0.023	65680	699.9	4	8.722	-0.012	43162	1209.7
Total Col1Ave (4 peaks):					478.0	Total Col2Ave (4 peaks):				770.1 RPD = 47*
Corrected Ave (3 peaks):					333.8	Corrected Ave (3 peaks):				623.6 RPD = 61*
Aroclor-1242	1	7.285	-0.010	60363	454.4	1	7.271	-0.006	53419	465.6
Aroclor-1242	2	7.661	-0.024	201386	477.4	2	7.859	-0.015	121587	499.3
Aroclor-1242	3	8.414	-0.016	65636	540.8	3	9.154	-0.024	33723	429.2
Aroclor-1242	4	9.000	-0.031	90730	360.0	4	9.549	-0.056	42878	454.1
Total Col1Ave (4 peaks):					458.2	Total Col2Ave (4 peaks):				462.0 RPD = 1
Corrected Ave (3 peaks):					430.6	Corrected Ave (3 peaks):				449.6 RPD = 4
Aroclor-1248	1	8.414	-0.014	65636	325.7	1	8.317	-0.010	42212	381.2
Aroclor-1248	2	8.582	-0.022	65680	255.3	2	8.722	-0.010	43162	370.6
Aroclor-1248	3	9.000	-0.022	90730	196.0	3	9.154	-0.024	33723	238.0
Aroclor-1248	4	9.302	-0.010	99783	440.0	4	9.549	-0.053	42878	257.8
Total Col1Ave (4 peaks):					304.3	Total Col2Ave (4 peaks):				311.9 RPD = 2
Corrected Ave (3 peaks):					259.0	Corrected Ave (3 peaks):				288.8 RPD = 11
Aroclor-1254	1	9.302	-0.020	99783	241.8	1	9.454	-0.013	61884	354.1
Aroclor-1254	2	9.423	0.021	6800	42.4	2	9.972	-0.015	27766	197.6
Aroclor-1254	3	9.673	-0.022	67542	259.1	3	10.120	-0.019	116516	385.8
Aroclor-1254	4	9.801	-0.030	131614	259.1	4	10.374	-0.015	153269	490.0
Aroclor-1254	5	10.127	-0.062	212341	609.7	5	10.569	-0.018	136696	906.1
Total Col1Ave (5 peaks):					282.4	Total Col2Ave (5 peaks):				466.7 RPD = 49*
Corrected Ave (4 peaks):					200.6	Corrected Ave (4 peaks):				356.9 RPD = 56*
Aroclor-1260	1	11.047	-0.016	101432	639.1	1	11.658	-0.011	88204	542.0
Aroclor-1260	2	11.360	-0.017	91149	555.3	2	11.919	-0.014	208269	510.0
Aroclor-1260	3	11.731	-0.020	267065	619.2	3	12.438	-0.013	70850	651.6
Aroclor-1260	4	12.132	-0.026	138864	632.3	4	12.502	-0.015	140197	515.0
Aroclor-1260	5	12.247	-0.015	56241	625.5	NS	---			----
Total Col1Ave (5 peaks):					614.3	Total Col2Ave (4 peaks):				554.7 RPD = 10
Corrected Ave (4 peaks):					608.1	Corrected Ave (3 peaks):				522.4 RPD = 15
Aroclor-1262	1	10.820	-0.028	282741	1939.2	1	11.205	-0.012	72890	311.0
Aroclor-1262	2	12.247	-0.016	56241	248.1	2	11.658	-0.012	88204	434.5
Aroclor-1262	3	12.320	-0.016	67223	277.7	3	12.438	-0.013	70850	316.4
Aroclor-1262	4	12.984	-0.021	62407	321.2	4	12.502	-0.018	140197	399.7
Total Col1Ave (4 peaks):					696.6	Total Col2Ave (4 peaks):				365.4 RPD = 62*
Corrected Ave (3 peaks):					282.3	Corrected Ave (3 peaks):				342.3 RPD = 19
Aroclor-1268	1	12.247	-0.016	56241	92.2	1	12.438	-0.011	70850	121.8
Aroclor-1268	2	12.320	-0.015	67223	112.6	2	12.502	-0.015	140197	235.0
Aroclor-1268	3	12.722	0.006	32204	65.8	3	12.900	-0.009	4894	22.1
Aroclor-1268	4	13.489	-0.016	20287	13.6	4	13.713	-0.013	23227	14.6
Total Col1Ave (4 peaks):					71.1	Total Col2Ave (4 peaks):				98.4 RPD = 32

Corrected Ave (3 peaks): 57.2 Corrected Ave (3 peaks): 52.8 RPD = 8

Total PCB Area Col1 (5.936 - 13.808) = 3935510 Col1 Total PCB = 0.7 ppm*

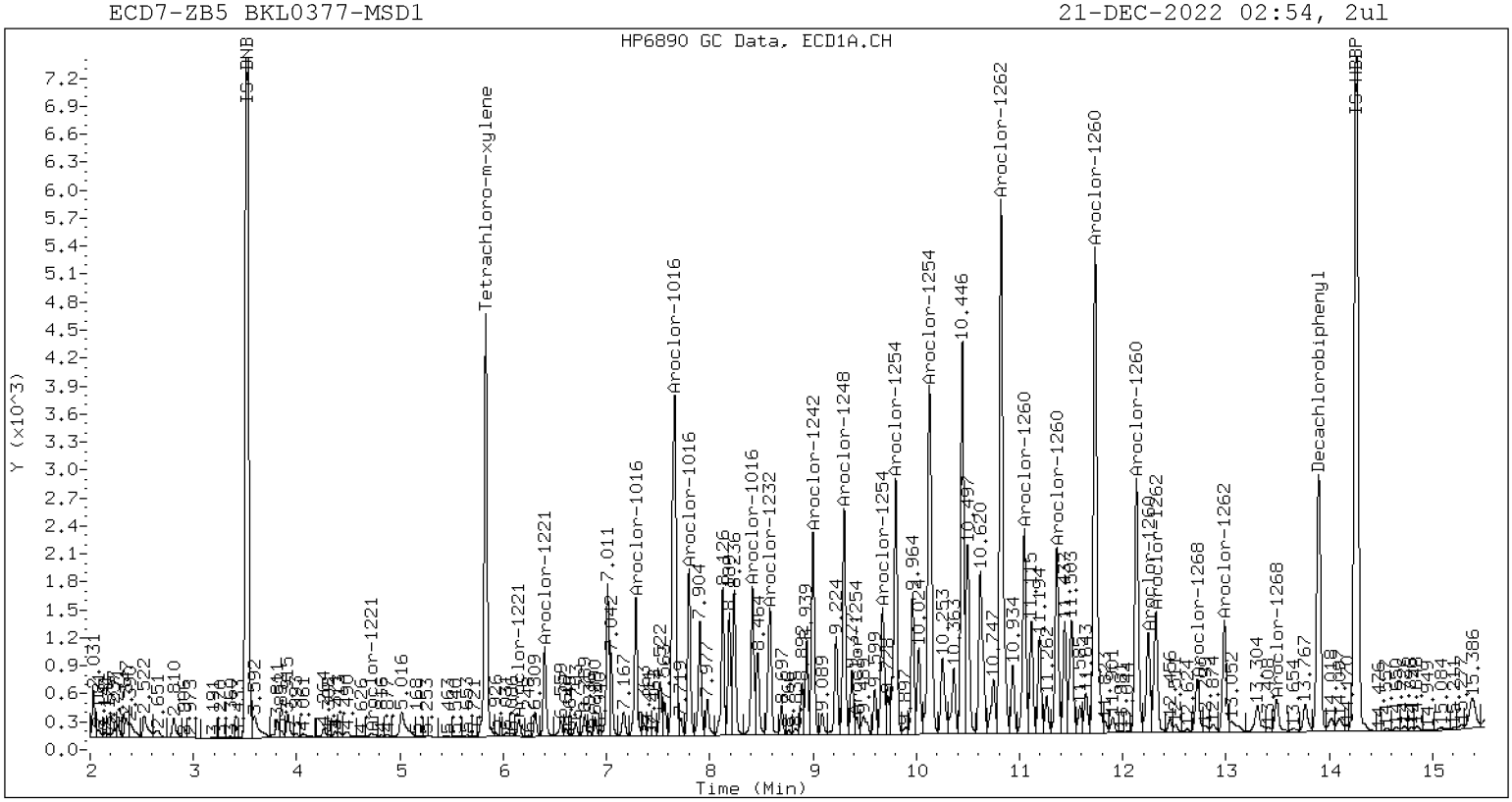
Total PCB Area Col2 (5.936 - 13.808) = 2719261 Col2 Total PCB = 1.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

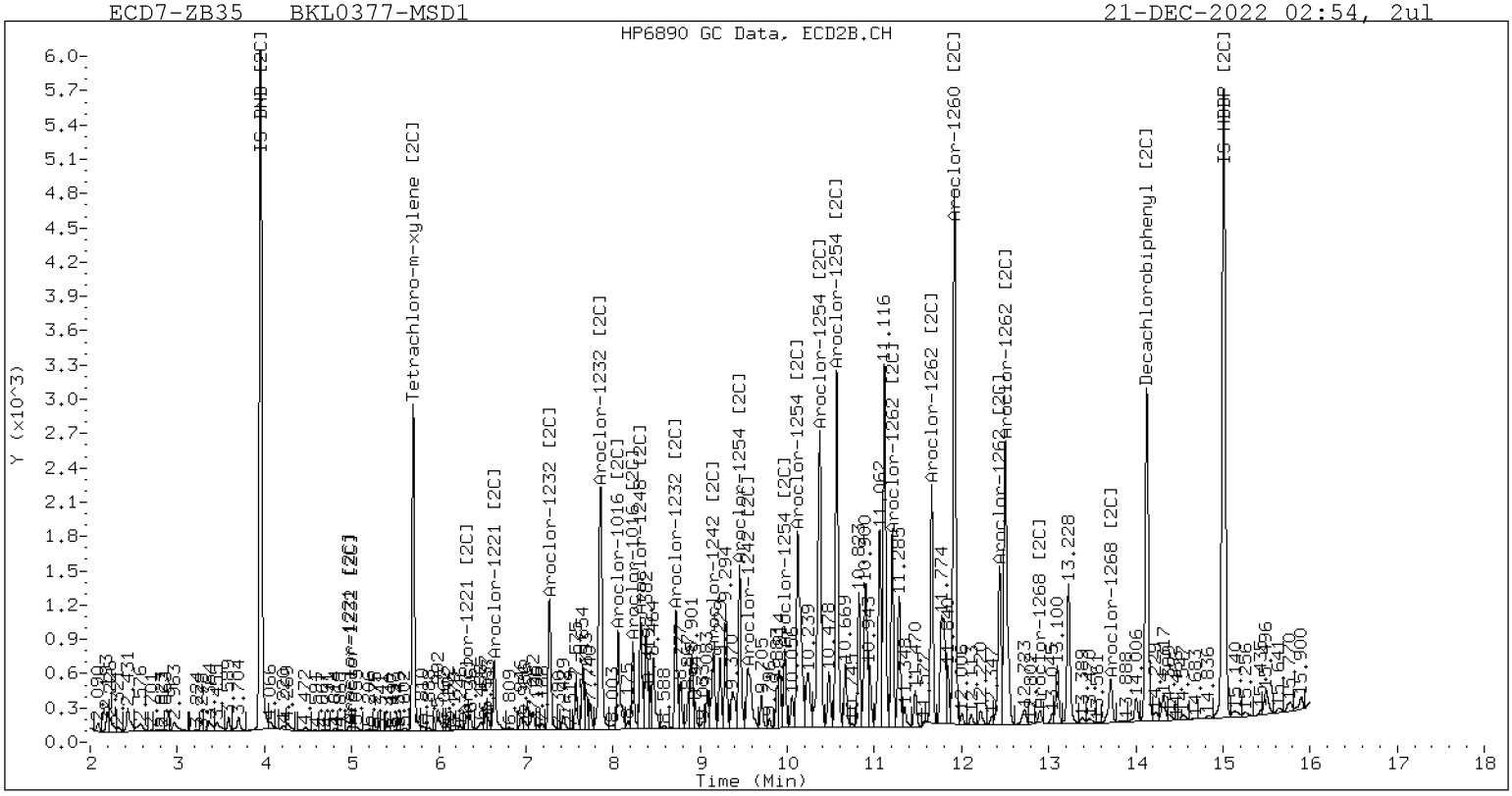
PCB Dual Column Chromatograms

ECD7-ZB5 BKL0377-MSD1 21-DEC-2022 02:54, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0377-MSD1 21-DEC-2022 02:54, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BKL0377-SRM1
Batch: BKL0377
Initial/Final: 2.5 g / 2.5 mL
Preparation: EPA 3546 (Microwave)
Analyzed: 12/20/2022 22:40
Standard ID: K003525
Expires: 04/12/2023
Standard Lot#: PSRM0148
Description: Puget Sound reference-SRM

ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Aroclor 1260	108.00	114	2.9	20.0		106	38 - 167
Aroclor 1260 [2C]	108.00	114	2.9	20.0		105	38 - 167

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202229ECD7.D
Data file 2: /221220.b/221220.b/12202229ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0377-SRM1
Client ID:
Injection Date: 20-DEC-2022 22:40
Report Date: 12/22/2022 09:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.833	-0.003	237066	5.711	-0.003	138579	32.8	34.6	5.4	Tetrachloro-m-xylene
13.899	-0.009	272250	14.129	-0.008	214518	42.2	37.2	12.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	509892	13.9
Hexabromobiphenyl	798898	703686	-11.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	291989	17.2
Hexabromobiphenyl	362541	406268	12.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.327	0.032	3724	21.9	1	7.282	0.007	7568	50.7
Aroclor-1016	2	7.667	-0.018	8288	15.1	2	7.862	-0.009	5354	16.6
Aroclor-1016	3	7.818	0.000	6069	24.4	3	8.064	-0.006	1533	11.1
Aroclor-1016	4	8.419	-0.010	10123	63.8	4	8.233	-0.008	1431	19.7
Total Col1Ave (4 peaks):					31.3	Total Col2Ave (4 peaks):				24.5 RPD = 24
Corrected Ave (3 peaks):					20.5	Corrected Ave (3 peaks):				15.8 RPD = 26
Aroclor-1221	1	4.726	-0.034	1103	26.2	1	4.973	-0.014	296	12.0
Aroclor-1221	2	6.142	-0.017	1662	22.4	2	6.366	0.044	12243	260.7
Aroclor-1221	3	6.417	0.008	2681	15.7	3	6.657	0.012	2788	35.3
Total Col1Ave (3 peaks):					21.4	Total Col2Ave (3 peaks):				102.7 RPD = 131*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.726	-0.035	1103	43.5	1	4.973	-0.016	296	20.8
Aroclor-1232	2	6.142	-0.018	1662	31.0	2	7.282	0.005	7568	104.4
Aroclor-1232	3	7.667	-0.017	8288	34.4	3	7.862	-0.015	5354	37.8
Aroclor-1232	4	8.587	-0.018	7734	75.8	4	8.726	-0.008	4031	104.9
Total Col1Ave (4 peaks):					46.2	Total Col2Ave (4 peaks):				67.0 RPD = 37
Corrected Ave (3 peaks):					36.3	Corrected Ave (3 peaks):				54.3 RPD = 40
Aroclor-1242	1	7.327	0.032	3724	25.8	1	7.282	0.005	7568	61.2
Aroclor-1242	2	7.667	-0.018	8288	18.1	2	7.862	-0.013	5354	20.4
Aroclor-1242	3	8.419	-0.010	10123	76.7	3	9.160	-0.018	6483	76.6
Aroclor-1242	4	9.006	-0.025	18999	69.3	4	9.553	-0.053	9220	90.6
Total Col1Ave (4 peaks):					47.5	Total Col2Ave (4 peaks):				62.2 RPD = 27
Corrected Ave (3 peaks):					37.7	Corrected Ave (3 peaks):				52.7 RPD = 33
Aroclor-1248	1	8.419	-0.008	10123	46.2	1	8.320	-0.006	5570	46.7
Aroclor-1248	2	8.587	-0.017	7734	27.6	2	8.726	-0.007	4031	32.1
Aroclor-1248	3	9.006	-0.016	18999	37.7	3	9.160	-0.017	6483	42.5
Aroclor-1248	4	9.306	-0.005	25635	103.9	4	9.553	-0.050	9220	51.5
Total Col1Ave (4 peaks):					53.9	Total Col2Ave (4 peaks):				43.2 RPD = 22
Corrected Ave (3 peaks):					37.2	Corrected Ave (3 peaks):				40.4 RPD = 8
Aroclor-1254	1	9.306	-0.015	25635	57.1	1	9.457	-0.009	14467	76.8
Aroclor-1254	2	9.380	-0.022	9263	53.1	2	9.975	-0.012	6602	43.6
Aroclor-1254	3	9.677	-0.017	15458	54.5	3	10.126	-0.014	27707	85.2
Aroclor-1254	4	9.808	-0.023	34816	63.0	4	10.377	-0.012	35138	104.3
Aroclor-1254	5	10.129	-0.061	55326	146.0	5	10.571	-0.015	35509	218.5
Total Col1Ave (5 peaks):					74.7	Total Col2Ave (5 peaks):				105.7 RPD = 34
Corrected Ave (4 peaks):					56.9	Corrected Ave (4 peaks):				77.5 RPD = 31
Aroclor-1260	1	11.049	-0.014	31024	121.1	1	11.660	-0.009	23530	109.7
Aroclor-1260	2	11.363	-0.015	25765	97.3	2	11.921	-0.012	56136	104.3
Aroclor-1260	3	11.734	-0.018	84323	121.1	3	12.439	-0.013	19180	133.8
Aroclor-1260	4	12.135	-0.023	42695	120.4	4	12.504	-0.012	38067	106.1
Aroclor-1260	5	12.248	-0.014	15954	109.9	NS	---			----
Total Col1Ave (5 peaks):					114.0	Total Col2Ave (4 peaks):				113.5 RPD = 0
Corrected Ave (4 peaks):					112.2	Corrected Ave (3 peaks):				106.7 RPD = 5
Aroclor-1262	1	10.824	-0.024	73195	311.0	1	11.206	-0.011	21483	69.5
Aroclor-1262	2	12.248	-0.015	15954	43.6	2	11.660	-0.010	23530	87.9
Aroclor-1262	3	12.323	-0.014	21351	54.6	3	12.439	-0.013	19180	65.0
Aroclor-1262	4	12.987	-0.018	22024	70.2	4	12.504	-0.015	38067	82.3
Total Col1Ave (4 peaks):					119.9	Total Col2Ave (4 peaks):				76.2 RPD = 45*
Corrected Ave (3 peaks):					56.2	Corrected Ave (3 peaks):				72.3 RPD = 25
Aroclor-1268	1	12.248	-0.015	15954	16.2	1	12.439	-0.011	19180	25.0
Aroclor-1268	2	12.323	-0.012	21351	22.2	2	12.504	-0.013	38067	48.4
Aroclor-1268	3	12.726	0.009	12310	15.6	3	12.899	-0.010	835	2.9
Aroclor-1268	4	13.493	-0.012	5692	2.4	4	13.714	-0.012	4539	2.2
Total Col1Ave (4 peaks):					14.1	Total Col2Ave (4 peaks):				19.6 RPD = 33

Corrected Ave (3 peaks): 11.4 Corrected Ave (3 peaks): 10.0 RPD = 13

Total PCB Area Col1 (5.936 - 13.808) = 1083115 Col1 Total PCB = 0.2 ppm*

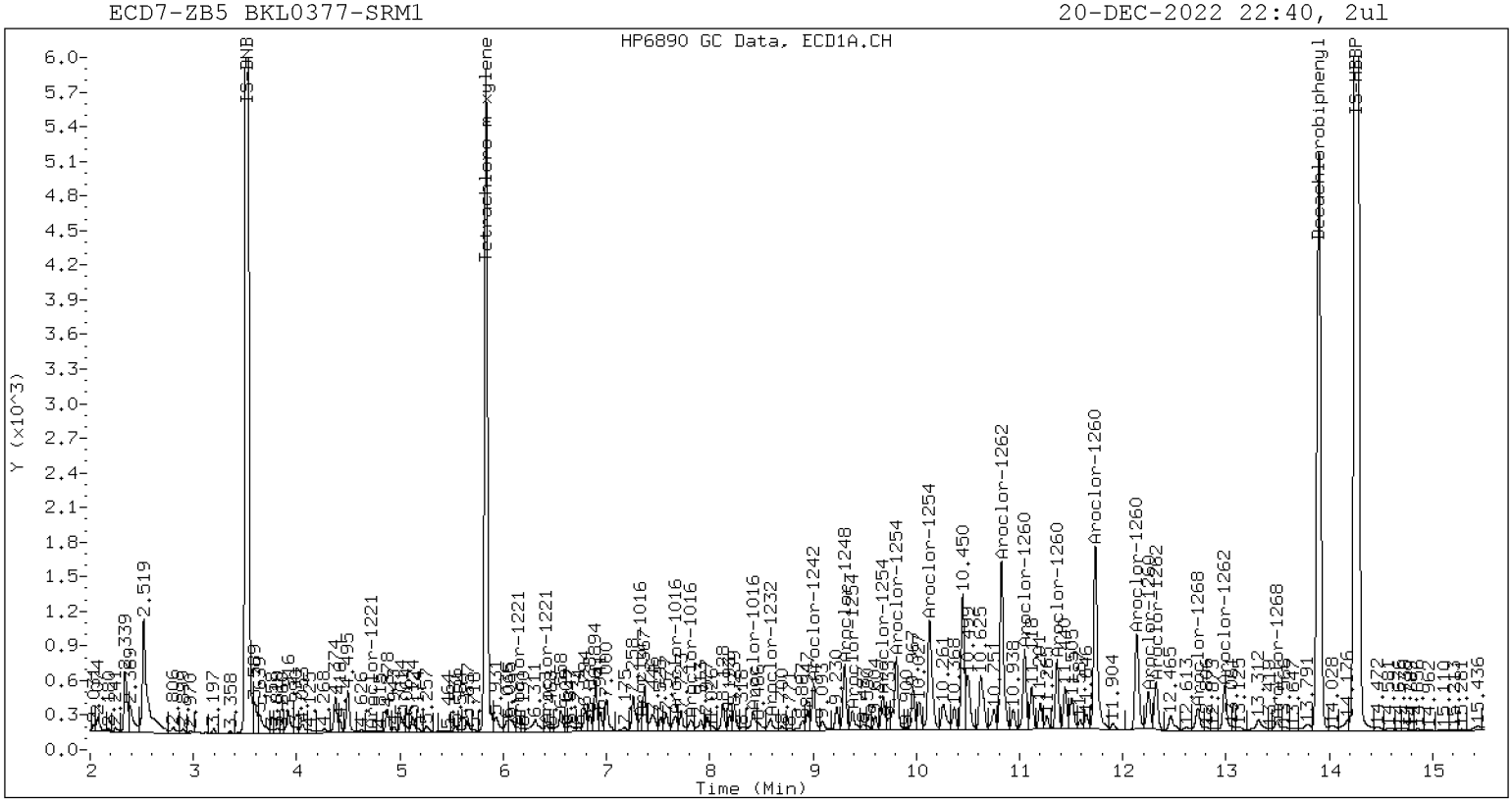
Total PCB Area Col2 (5.936 - 13.808) = 673060 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

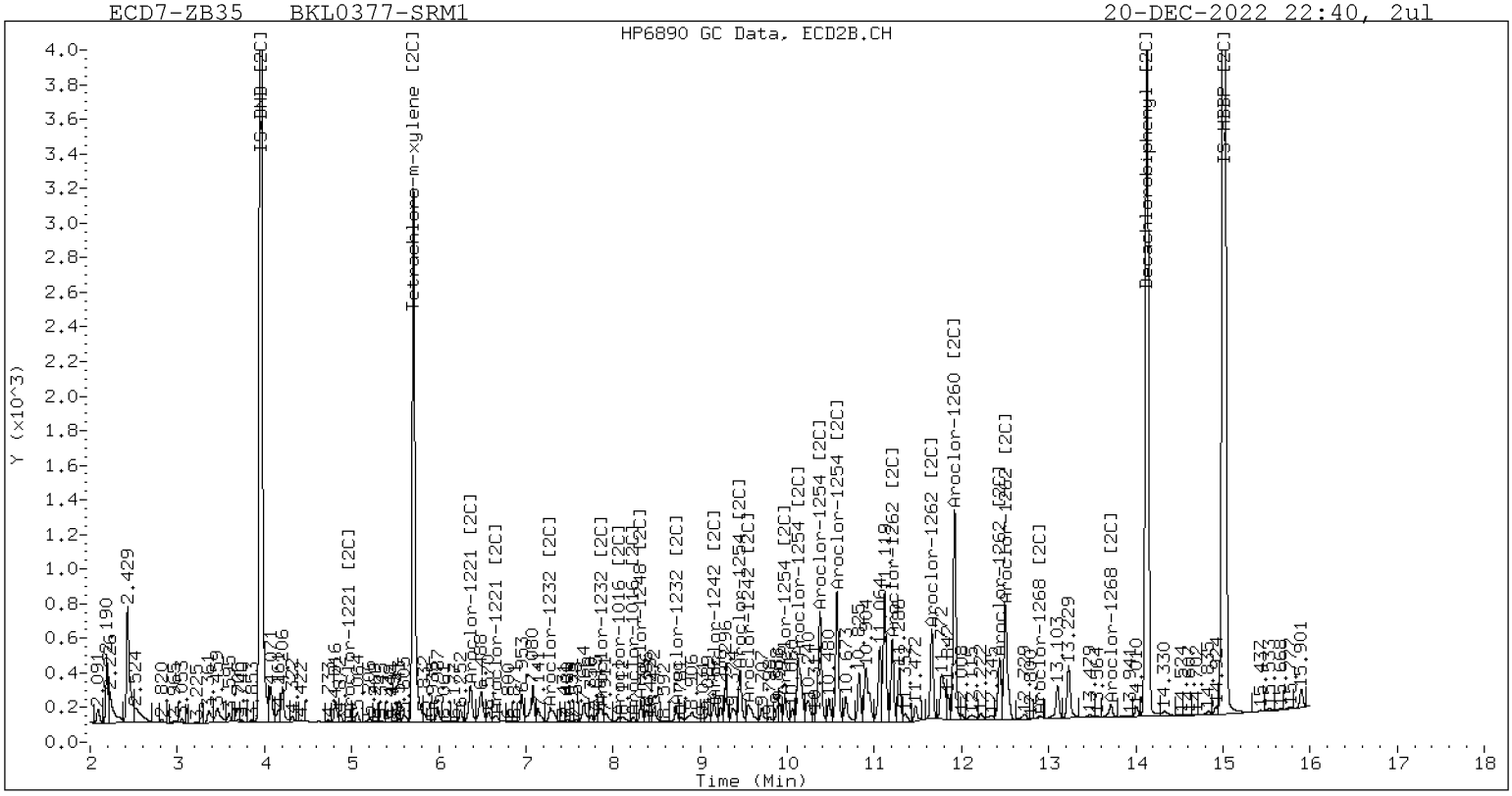
PCB Dual Column Chromatograms

ECD7-ZB5 BKL0377-SRM1 20-DEC-2022 22:40, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 BKL0377-SRM1 20-DEC-2022 22:40, 2ul

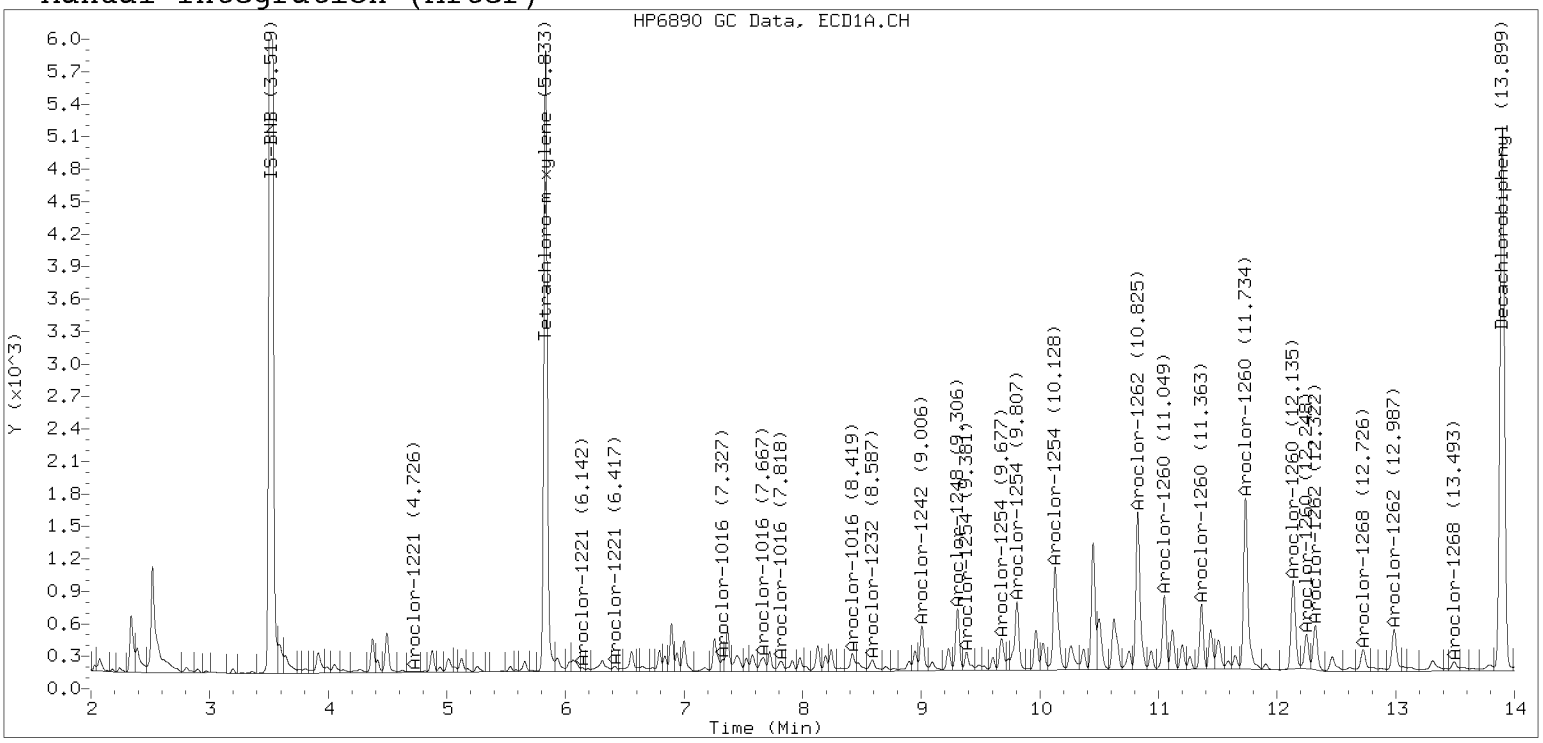


ZB-35 Manual Integration: NO

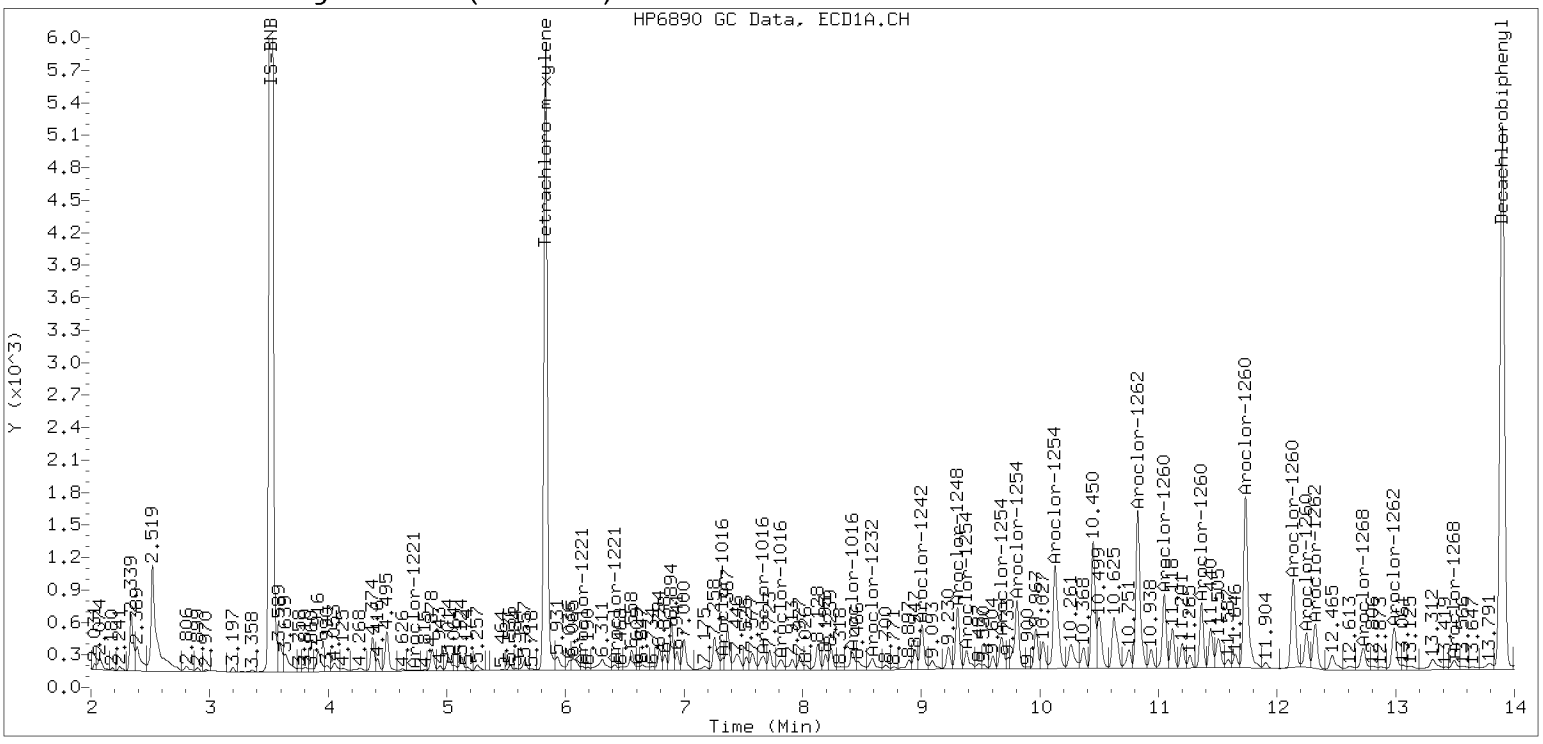
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221220.b/12202229ECD7.D Injection Date: 20-DEC-2022 22:40

Manual Integration (After)



Processed Integration (Before)



INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00010	Instrument:	ECD7
Calibration Date:	12/03/2022	Column (1):	ZB5

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1016	250	4.442913E-02	20	4.639571E-02	50	4.556147E-02	1000	3.903737E-02	100	4.740063E-02	500	4.233908E-02
Aroclor-1016 (1)	250	0.0268956	20	2.831682E-02	50	2.733211E-02	1000	2.312039E-02	100	2.907079E-02	500	2.538029E-02
Aroclor-1016 (2)	250	8.716121E-02	20	8.901322E-02	50	8.663465E-02	1000	7.848829E-02	100	9.099677E-02	500	8.464895E-02
Aroclor-1016 (3)	250	3.855698E-02	20	4.367479E-02	50	4.254251E-02	1000	3.139182E-02	100	4.326795E-02	500	3.482108E-02
Aroclor-1016 (4)	250	2.510275E-02	20	2.457802E-02	50	2.573659E-02	1000	2.314899E-02	100	2.626702E-02	500	2.450599E-02
Aroclor 1260	250	3.933402E-02	20	3.911434E-02	50	3.944532E-02	1000	3.674839E-02	100	4.123393E-02	500	3.832917E-02
Aroclor-1260 (1)	250	2.958395E-02	20	0.0300145	50	2.965004E-02	1000	0.0267287	100	3.044201E-02	500	2.830143E-02
Aroclor-1260 (2)	250	3.061257E-02	20	3.036959E-02	50	3.047228E-02	1000	2.827023E-02	100	0.0314491	500	2.953467E-02
Aroclor-1260 (3)	250	7.944504E-02	20	7.975557E-02	50	8.046888E-02	1000	7.412282E-02	100	8.422959E-02	500	7.678876E-02
Aroclor-1260 (4)	250	4.058671E-02	20	3.908843E-02	50	3.991468E-02	1000	3.908356E-02	100	4.249747E-02	500	4.063095E-02
Aroclor-1260 (5)	250	1.644185E-02	20	1.634363E-02	50	1.672073E-02	1000	1.553661E-02	100	1.755145E-02	500	1.639006E-02
Decachlorobiphenyl	40	0.7065182	3.2	0.8368252	8	0.7533014	160	0.6637701	16	0.7576822	80	0.6818994
Tetrachlorometaxylene	40	1.143098	3.2	1.157321	8	1.126881	160	1.081522	16	1.184437	80	1.108767

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00010	Instrument:	ECD7
Calibration Date:	12/03/2022	Column (1):	ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1221							250	1.504683E-02				
Aroclor-1221 (1)							250	6.613213E-03				
Aroclor-1221 (2)							250	1.165022E-02				
Aroclor-1221 (3)							250	2.687706E-02				
Aroclor 1232									250	0.0165403		
Aroclor-1232 (1)									250	3.980209E-03		
Aroclor-1232 (2)									250	8.407005E-03		
Aroclor-1232 (3)									250	3.775546E-02		
Aroclor-1232 (4)									250	1.601853E-02		
Aroclor 1242	250	3.960003E-02										
Aroclor-1242 (1)	250	2.267549E-02										
Aroclor-1242 (2)	250	0.0719967										
Aroclor-1242 (3)	250	2.071466E-02										
Aroclor-1242 (4)	250	4.301325E-02										
Aroclor 1248			250	4.900615E-02								
Aroclor-1248 (1)			250	3.439698E-02								
Aroclor-1248 (2)			250	4.391715E-02								
Aroclor-1248 (3)			250	7.900514E-02								
Aroclor-1248 (4)			250	3.870534E-02								
Aroclor 1254					250	5.769652E-02						
Aroclor-1254 (1)					250	7.043771E-02						
Aroclor-1254 (2)					250	2.739345E-02						
Aroclor-1254 (3)					250	4.448852E-02						
Aroclor-1254 (4)					250	8.671846E-02						
Aroclor-1254 (5)					250	5.944443E-02						
Aroclor-1262 (1)							250	2.675294E-02				
Aroclor-1262 (2)							250	4.159274E-02				
Aroclor-1262 (3)							250	4.441976E-02				

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00010	Instrument:	ECD7
Calibration Date:	12/03/2022	Column (1):	ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor-1262 (4)							250	0.0356499				
Aroclor-1268 (1)									250	0.1119264		
Aroclor-1268 (2)									250	0.1094959		
Aroclor-1268 (3)									250	8.974437E-02		
Aroclor-1268 (4)									250	0.2739969		

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00010	Instrument:	ECD7
Calibration Date:	12/03/2022	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016	0.0441939	6.9			RSD (20)	
Aroclor-1016 (1)	0.026686	8.1			RSD (20)	
Aroclor-1016 (2)	8.615718E-02	5.0			RSD (20)	
Aroclor-1016 (3)	3.904252E-02	13.0			RSD (20)	
Aroclor-1016 (4)	2.488989E-02	4.4			RSD (20)	
Aroclor 1221		0.0			RSD (20)	
Aroclor-1221 (1)		0.0			RSD (20)	
Aroclor-1221 (2)		0.0			RSD (20)	
Aroclor-1221 (3)		0.0			RSD (20)	
Aroclor 1232		0.0			RSD (20)	
Aroclor-1232 (1)		0.0			RSD (20)	
Aroclor-1232 (2)		0.0			RSD (20)	
Aroclor-1232 (3)		0.0			RSD (20)	
Aroclor-1232 (4)		0.0			RSD (20)	
Aroclor 1242		0.0			RSD (20)	
Aroclor-1242 (1)		0.0			RSD (20)	
Aroclor-1242 (2)		0.0			RSD (20)	
Aroclor-1242 (3)		0.0			RSD (20)	
Aroclor-1242 (4)		0.0			RSD (20)	
Aroclor 1248		0.0			RSD (20)	
Aroclor-1248 (1)		0.0			RSD (20)	
Aroclor-1248 (2)		0.0			RSD (20)	
Aroclor-1248 (3)		0.0			RSD (20)	
Aroclor-1248 (4)		0.0			RSD (20)	
Aroclor 1254		0.0			RSD (20)	
Aroclor-1254 (1)		0.0			RSD (20)	
Aroclor-1254 (2)		0.0			RSD (20)	
Aroclor-1254 (3)		0.0			RSD (20)	
Aroclor-1254 (4)		0.0			RSD (20)	
Aroclor-1254 (5)		0.0			RSD (20)	
Aroclor 1260	0.0390342	3.8			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00010	Instrument:	ECD7
Calibration Date:	12/03/2022	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor-1260 (1)	2.912011E-02	4.7			RSD (20)	
Aroclor-1260 (2)	3.011807E-02	3.6			RSD (20)	
Aroclor-1260 (3)	7.913511E-02	4.3			RSD (20)	
Aroclor-1260 (4)	0.0403003	3.2			RSD (20)	
Aroclor-1260 (5)	1.649739E-02	3.9			RSD (20)	
Aroclor-1262 (1)		0.0			RSD (20)	
Aroclor-1262 (2)		0.0			RSD (20)	
Aroclor-1262 (3)		0.0			RSD (20)	
Aroclor-1262 (4)		0.0			RSD (20)	
Aroclor-1268 (1)		0.0			RSD (20)	
Aroclor-1268 (2)		0.0			RSD (20)	
Aroclor-1268 (3)		0.0			RSD (20)	
Aroclor-1268 (4)		0.0			RSD (20)	
Decachlorobiphenyl	0.7333327	8.6			RSD (20)	
Tetrachlorometaxylene	1.133671	3.2			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00010	Instrument:	ECD7
Calibration Date:	12/03/2022	Column (2):	ZB35

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
Aroclor 1016 [2C]	250	4.636996E-02	20	4.892746E-02	50	4.983417E-02	1000	4.130781E-02	100	4.955636E-02	500	4.439044E-02
Aroclor-1016 (1) [2C]	250	4.084306E-02	20	4.420829E-02	50	4.265547E-02	1000	3.510686E-02	100	0.0443387	500	3.826546E-02
Aroclor-1016 (2) [2C]	250	8.779336E-02	20	9.126619E-02	50	9.396419E-02	1000	7.840925E-02	100	9.357078E-02	500	8.428834E-02
Aroclor-1016 (3) [2C]	250	3.650991E-02	20	4.176802E-02	50	4.245186E-02	1000	3.207576E-02	100	3.977512E-02	500	3.472696E-02
Aroclor-1016 (4) [2C]	250	2.033353E-02	20	1.846735E-02	50	2.026517E-02	1000	1.963937E-02	100	2.054085E-02	500	0.020281
Aroclor 1260 [2C]	250	6.221729E-02	20	0.0650374	50	6.381838E-02	1000	5.557609E-02	100	6.547338E-02	500	5.844879E-02
Aroclor-1260 (1) [2C]	250	4.226259E-02	20	4.530508E-02	50	4.502141E-02	1000	3.753653E-02	100	0.0443443	500	3.890007E-02
Aroclor-1260 (2) [2C]	250	0.1084108	20	0.1102753	50	0.109287	1000	9.364812E-02	100	0.1132315	500	0.1009332
Aroclor-1260 (3) [2C]	250	0.0279644	20	2.937953E-02	50	2.834399E-02	1000	2.696653E-02	100	2.956699E-02	500	2.708248E-02
Aroclor-1260 (4) [2C]	250	7.023139E-02	20	7.518967E-02	50	7.262117E-02	1000	0.0641532	100	0.0747507	500	6.687944E-02
Decachlorobiphenyl [2C]	40	1.127762	3.2	1.199521	8	1.131904	160	1.086775	16	1.175985	80	1.092964
Tetrachlorometaxylene [2C]	40	1.103254	3.2	1.151553	8	1.074022	160	1.032691	16	1.152616	80	1.06551

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00010	Instrument:	ECD7
Calibration Date:	12/03/2022	Column (2):	ZB35

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1221 [2C]							250	0.0137578				
Aroclor-1221 (1) [2C]							250	6.751325E-03				
Aroclor-1221 (2) [2C]							250	1.286764E-02				
Aroclor-1221 (3) [2C]							250	2.165445E-02				
Aroclor 1232 [2C]									250	1.828151E-02		
Aroclor-1232 (1) [2C]									250	3.890243E-03		
Aroclor-1232 (2) [2C]									250	1.986677E-02		
Aroclor-1232 (3) [2C]									250	3.883859E-02		
Aroclor-1232 (4) [2C]									250	1.053044E-02		
Aroclor 1242 [2C]	250	3.919814E-02										
Aroclor-1242 (1) [2C]	250	3.385823E-02										
Aroclor-1242 (2) [2C]	250	7.187561E-02										
Aroclor-1242 (3) [2C]	250	2.318837E-02										
Aroclor-1242 (4) [2C]	250	2.787036E-02										
Aroclor 1248 [2C]			250	3.948755E-02								
Aroclor-1248 (1) [2C]			250	3.268192E-02								
Aroclor-1248 (2) [2C]			250	3.437347E-02								
Aroclor-1248 (3) [2C]			250	4.181202E-02								
Aroclor-1248 (4) [2C]			250	0.0490828								
Aroclor 1254 [2C]					250	6.380467E-02						
Aroclor-1254 (1) [2C]					250	5.157979E-02						
Aroclor-1254 (2) [2C]					250	4.146889E-02						
Aroclor-1254 (3) [2C]					250	8.913704E-02						
Aroclor-1254 (4) [2C]					250	0.092314						
Aroclor-1254 (5) [2C]					250	4.452362E-02						
Aroclor-1262 (1) [2C]							250	6.082829E-02				
Aroclor-1262 (2) [2C]							250	5.268389E-02				
Aroclor-1262 (3) [2C]							250	5.811375E-02				

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00010	Instrument:	ECD7
Calibration Date:	12/03/2022	Column (2):	ZB35

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor-1262 (4) [2C]							250	9.103002E-02				
Aroclor-1268 (1) [2C]									250	0.1510112		
Aroclor-1268 (2) [2C]									250	0.1548399		
Aroclor-1268 (3) [2C]									250	5.741847E-02		
Aroclor-1268 (4) [2C]									250	0.4132099		

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00010	Instrument:	ECD7
Calibration Date:	12/03/2022	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016 [2C]	4.673103E-02	7.3			RSD (20)	
Aroclor-1016 (1) [2C]	4.090297E-02	8.9			RSD (20)	
Aroclor-1016 (2) [2C]	8.821535E-02	6.9			RSD (20)	
Aroclor-1016 (3) [2C]	0.0378846	10.9			RSD (20)	
Aroclor-1016 (4) [2C]	1.992121E-02	3.9			RSD (20)	
Aroclor 1221 [2C]		0.0			RSD (20)	
Aroclor-1221 (1) [2C]		0.0			RSD (20)	
Aroclor-1221 (2) [2C]		0.0			RSD (20)	
Aroclor-1221 (3) [2C]		0.0			RSD (20)	
Aroclor 1232 [2C]		0.0			RSD (20)	
Aroclor-1232 (1) [2C]		0.0			RSD (20)	
Aroclor-1232 (2) [2C]		0.0			RSD (20)	
Aroclor-1232 (3) [2C]		0.0			RSD (20)	
Aroclor-1232 (4) [2C]		0.0			RSD (20)	
Aroclor 1242 [2C]		0.0			RSD (20)	
Aroclor-1242 (1) [2C]		0.0			RSD (20)	
Aroclor-1242 (2) [2C]		0.0			RSD (20)	
Aroclor-1242 (3) [2C]		0.0			RSD (20)	
Aroclor-1242 (4) [2C]		0.0			RSD (20)	
Aroclor 1248 [2C]		0.0			RSD (20)	
Aroclor-1248 (1) [2C]		0.0			RSD (20)	
Aroclor-1248 (2) [2C]		0.0			RSD (20)	
Aroclor-1248 (3) [2C]		0.0			RSD (20)	
Aroclor-1248 (4) [2C]		0.0			RSD (20)	
Aroclor 1254 [2C]		0.0			RSD (20)	
Aroclor-1254 (1) [2C]		0.0			RSD (20)	
Aroclor-1254 (2) [2C]		0.0			RSD (20)	
Aroclor-1254 (3) [2C]		0.0			RSD (20)	
Aroclor-1254 (4) [2C]		0.0			RSD (20)	
Aroclor-1254 (5) [2C]		0.0			RSD (20)	
Aroclor 1260 [2C]	6.176189E-02	6.4			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00010	Instrument:	ECD7
Calibration Date:	12/03/2022	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor-1260 (1) [2C]	4.222833E-02	7.8			RSD (20)	
Aroclor-1260 (2) [2C]	0.1059643	6.9			RSD (20)	
Aroclor-1260 (3) [2C]	2.821732E-02	3.9			RSD (20)	
Aroclor-1260 (4) [2C]	7.063759E-02	6.3			RSD (20)	
Aroclor-1262 (1) [2C]		0.0			RSD (20)	
Aroclor-1262 (2) [2C]		0.0			RSD (20)	
Aroclor-1262 (3) [2C]		0.0			RSD (20)	
Aroclor-1262 (4) [2C]		0.0			RSD (20)	
Aroclor-1268 (1) [2C]		0.0			RSD (20)	
Aroclor-1268 (2) [2C]		0.0			RSD (20)	
Aroclor-1268 (3) [2C]		0.0			RSD (20)	
Aroclor-1268 (4) [2C]		0.0			RSD (20)	
Decachlorobiphenyl [2C]	1.135818	3.9			RSD (20)	
Tetrachlorometaxylene [2C]	1.096608	4.4			RSD (20)	

Printed: 12/6/2022 9:25:24AM

ANALYSIS SEQUENCE

SKL0048

Instrument: ECD7 Element Column ID:
Calibration ID: FL00010

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0048-CAL1	0.25PPM AR1660	QC		1	K006954	K006953		
SKL0048-CAL2	0.02PPM AR1660	QC		2	K010070	K006953		
SKL0048-CAL3	0.05PPM AR1660	QC		3	K010069	K006953		
SKL0048-CAL4	1PPM AR1660	QC		4	K006741	K006953		
SKL0048-CAL5	0.1PPM AR1660	QC		5	K010068	K006953		
SKL0048-CAL6	0.5PPM AR1660	QC		6	K010067	K006953		
SKL0048-CAL7	0.25PPM AR1242	QC		7	K006955	K006953		
SKL0048-CAL8	0.25PPM AR1248	QC		8	K006956	K006953		
SKL0048-CAL9	0.25PPM AR1254	QC		9	K006957	K006953		
SKL0048-CALA	0.25PPM AR2162	QC		10	K010071	K006953		
SKL0048-CALB	0.25PPM AR3268	QC		11	K010072	K006953		
SKL0048-SCV1	AR1660SCV1	QC		12	K007655	K006953		
SKL0048-SCV2	AR1242SCV2	QC		13	K007656	K006953		
SKL0048-SCV3	AR1248SCV3	QC		14	K007657	K006953		
SKL0048-SCV4	AR1254SCV4	QC		15	K007658	K006953		
SKL0048-SCV5	AR2162SCV5	QC		16	K007659	K006953		
SKL0048-SCV6	AR3268SCV6	QC		17	K007660	K006953		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221203.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	03-DEC-2022 17:58	12032210ECD7.D	1	IB	
2	03-DEC-2022 18:19	12032211ECD7.D	1	0.25PPAR1660	
3	03-DEC-2022 18:40	12032212ECD7.D	1	0.02PPAR1660	
4	03-DEC-2022 19:01	12032213ECD7.D	1	0.05PPAR1660	
5	03-DEC-2022 19:23	12032214ECD7.D	1	1PPMAR1660	
6	03-DEC-2022 19:44	12032215ECD7.D	1	0.1PPMAR1660	
7	03-DEC-2022 20:05	12032216ECD7.D	1	0.5PPMAR1660	
8	03-DEC-2022 20:26	12032217ECD7.D	1	AR1242	
9	03-DEC-2022 20:48	12032218ECD7.D	1	AR1248	
10	03-DEC-2022 21:09	12032219ECD7.D	1	AR1254	
11	03-DEC-2022 21:30	12032220ECD7.D	1	AR2162	
12	03-DEC-2022 21:52	12032221ECD7.D	1	AR3268	
13	03-DEC-2022 22:13	12032222ECD7.D	1	AR1660SCV1	
14	03-DEC-2022 22:34	12032223ECD7.D	1	AR1242SCV2	
15	03-DEC-2022 22:55	12032224ECD7.D	1	AR1248SCV3	
16	03-DEC-2022 23:17	12032225ECD7.D	1	AR1254SCV4	
17	03-DEC-2022 23:38	12032226ECD7.D	1	AR2162SCV5	
18	03-DEC-2022 23:59	12032227ECD7.D	1	AR3268SCV6	
19	04-DEC-2022 00:20	12032228ECD7.D	1	0.1 PPM DDTS	
20	04-DEC-2022 00:42	12032229ECD7.D	1	DDT BD	
21	04-DEC-2022 01:03	12032230ECD7.D	1	AR1254ICV1	
22	04-DEC-2022 01:24	12032231ECD7.D	1	AR1660ICV2	
23	04-DEC-2022 01:46	12032232ECD7.D	1	BKK0834-BLK1	
24	04-DEC-2022 02:07	12032233ECD7.D	1	BKK0834-BS1	
25	04-DEC-2022 02:28	12032234ECD7.D	1	BKK0834-BSD1	
26	04-DEC-2022 02:49	12032235ECD7.D	1	22K0523-01	
27	04-DEC-2022 03:11	12032236ECD7.D	1	22K0525-01	
28	04-DEC-2022 03:32	12032237ECD7.D	1	BKK0374-BLK1	
29	04-DEC-2022 03:53	12032238ECD7.D	1	BKK0374-BS1	
30	04-DEC-2022 04:15	12032239ECD7.D	1	BKK0374-BSD1	
31	04-DEC-2022 04:36	12032240ECD7.D	1	22K0161-01	
32	04-DEC-2022 04:57	12032241ECD7.D	1	AR1248CCV1	
33	04-DEC-2022 05:18	12032242ECD7.D	1	AR1660CCV2	
34	04-DEC-2022 05:40	12032243ECD7.D	1	BKL0017-BLK1	
35	04-DEC-2022 06:01	12032244ECD7.D	1	BKL0017-BS1	
36	04-DEC-2022 06:22	12032245ECD7.D	1	BKL0017-BSD1	
37	04-DEC-2022 06:44	12032246ECD7.D	1	22J0139-01	
38	04-DEC-2022 07:05	12032247ECD7.D	1	BKK0383-BLK1	
39	04-DEC-2022 07:26	12032248ECD7.D	1	BKK0383-BS1	
40	04-DEC-2022 07:47	12032249ECD7.D	1	BKK0383-BSD	
41	04-DEC-2022 08:09	12032250ECD7.D	1	22K0075-01	
42	04-DEC-2022 08:30	12032251ECD7.D	1	BKK00803-BLK1	
43	04-DEC-2022 08:51	12032252ECD7.D	1	BKK00803-BS1	
44	04-DEC-2022 09:13	12032253ECD7.D	1	BKK00803-BSD1	
45	04-DEC-2022 09:34	12032254ECD7.D	1	22K0511-01	
46	04-DEC-2022 09:55	12032255ECD7.D	1	AR1242CCV3	
47	04-DEC-2022 10:17	12032256ECD7.D	1	AR1660CCV4	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221203.b

Instrument: ecd7.i Date: 03-DEC-2022

Time	Filename	LabID	DF	Manually Integrated Compounds
1758	12032210ECD7.D	IB	1	NO MANUAL INTEGRATION
1819	12032211ECD7.D	0.25PPAR1660	1	NO MANUAL INTEGRATION
1840	12032212ECD7.D	0.02PPAR1660	1	NO MANUAL INTEGRATION
1901	12032213ECD7.D	0.05PPAR1660	1	NO MANUAL INTEGRATION
1923	12032214ECD7.D	1PPMAR1660	1	NO MANUAL INTEGRATION
1944	12032215ECD7.D	0.1PPMAR1660	1	NO MANUAL INTEGRATION
2005	12032216ECD7.D	0.5PPMAR1660	1	NO MANUAL INTEGRATION
2026	12032217ECD7.D	AR1242	1	Aroclor-1242,
2048	12032218ECD7.D	AR1248	1	NO MANUAL INTEGRATION
2109	12032219ECD7.D	AR1254	1	NO MANUAL INTEGRATION
2130	12032220ECD7.D	AR2162	1	NO MANUAL INTEGRATION
2152	12032221ECD7.D	AR3268	1	NO MANUAL INTEGRATION
2213	12032222ECD7.D	AR1660SCV1	1	NO MANUAL INTEGRATION
2234	12032223ECD7.D	AR1242SCV2	1	NO MANUAL INTEGRATION
2255	12032224ECD7.D	AR1248SCV3	1	NO MANUAL INTEGRATION
2317	12032225ECD7.D	AR1254SCV4	1	NO MANUAL INTEGRATION
2338	12032226ECD7.D	AR2162SCV5	1	NO MANUAL INTEGRATION

Instrument: ecd7.i Date: 03-DEC-2022

Time	Filename	LabID	DF	Manually Integrated Compounds
2359	12032227ECD7.D	AR3268SCV6	1	NO MANUAL INTEGRATION

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032210ECD7.D
Data file 2: /221203.b/221203.b/12032210ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 03-DEC-2022 17:58
Report Date: 12/05/2022 13:27
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.001	239778	5.713	-0.000	128576	38.5	38.5	0.1	Tetrachloro-m-xylene
13.907	-0.001	273387	14.135	-0.002	193829	39.5	39.9	1.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	439478	-1.8
Hexabromobiphenyl	798898	755658	-5.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	243327	-2.3
Hexabromobiphenyl	362541	342503	-5.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.936 - 13.808) = 14711 Col1 Total PCB = 0.0 ppm*

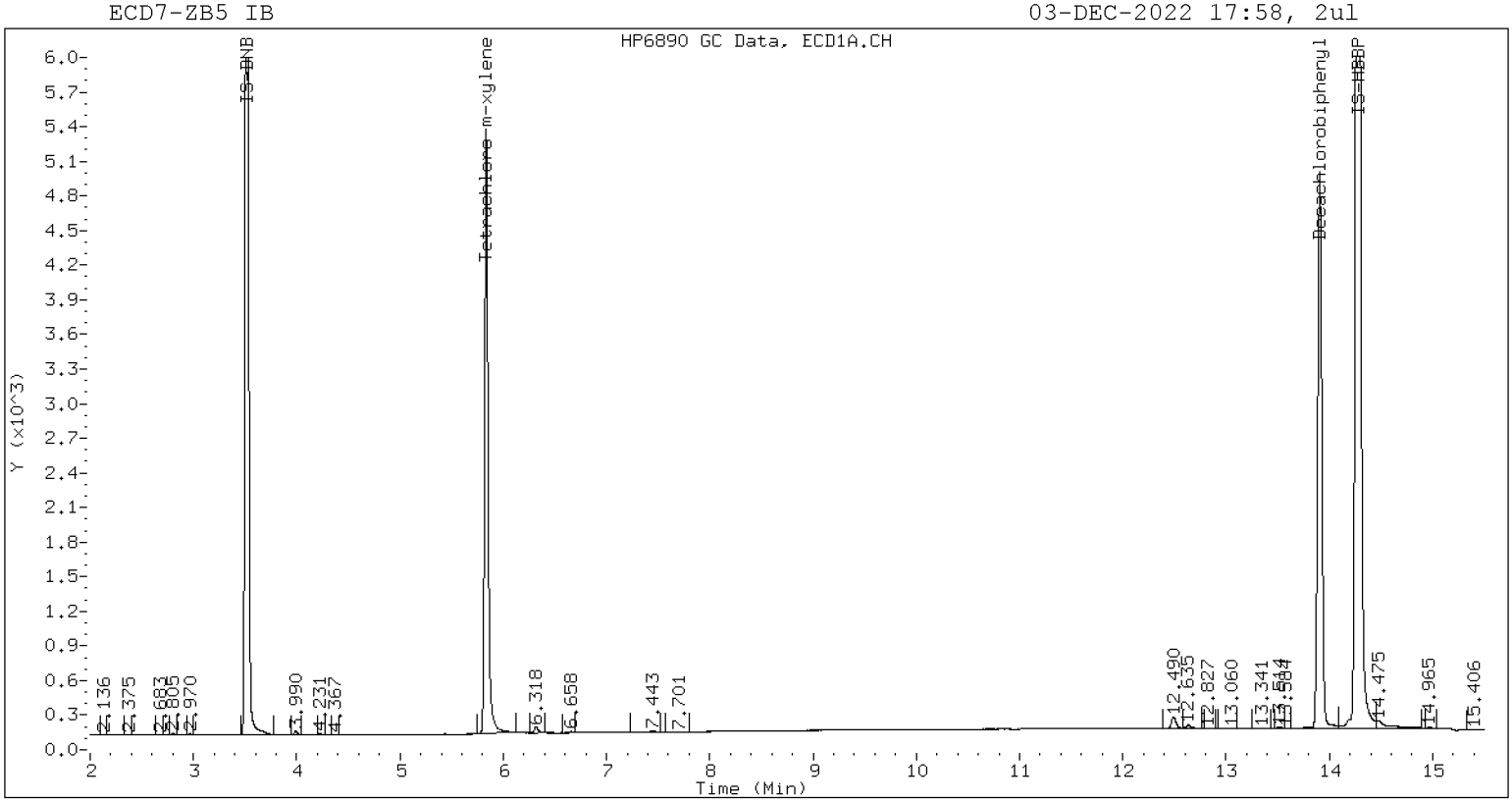
Total PCB Area Col2 (5.936 - 13.808) = 6305 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

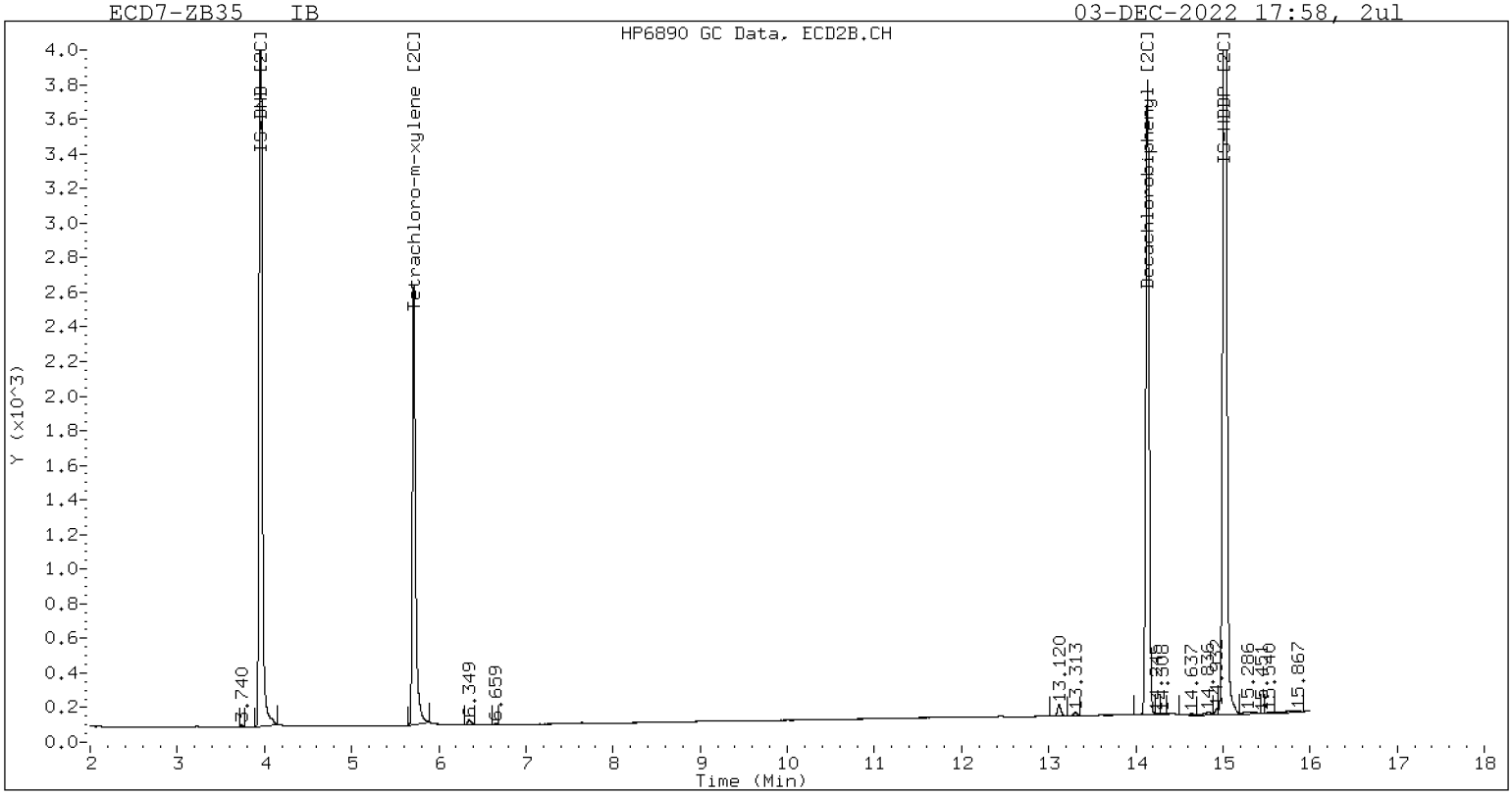
PCB Dual Column Chromatograms

ECD7-ZB5 IB 03-DEC-2022 17:58, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 IB 03-DEC-2022 17:58, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032211ECD7.D
Data file 2: /221203.b/221203.b/12032211ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPAR1660
Client ID:
Injection Date: 03-DEC-2022 18:19
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.000	255851	5.713	-0.000	137407	40.3	40.2	0.2	Tetrachloro-m-xylene
13.908	-0.001	282218	14.135	-0.001	204430	38.5	39.7	3.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	447645	0.0
Hexabromobiphenyl	798898	798898	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	249094	0.0
Hexabromobiphenyl	362541	362541	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.293	0.001	37624	252.0	1	7.277	0.002	31793	249.6
Aroclor-1016	2	7.679	0.005	121929	252.9	2	7.873	0.002	68340	248.8
Aroclor-1016	3	7.813	0.003	53937	246.9	3	8.072	0.002	28420	240.9
Aroclor-1016	4	8.426	0.002	35116	252.1	4	8.243	0.002	15828	255.2
Total Col1Ave (4 peaks):					251.0	Total Col2Ave (4 peaks):				248.6 RPD = 1
Corrected Ave (3 peaks):					250.3	Corrected Ave (3 peaks):				246.5 RPD = 2
CalAmt %D:					0.4	CalAmt %D:				-0.5
Aroclor-1260	1	11.062	0.001	73858	254.0	1	11.670	0.001	47881	250.2
Aroclor-1260	2	11.378	0.000	76426	254.1	2	11.933	0.000	122823	255.8
Aroclor-1260	3	11.752	0.002	198339	251.0	3	12.452	0.001	31682	247.8
Aroclor-1260	4	12.156	0.002	101327	251.8	4	12.518	0.001	79568	248.6
Aroclor-1260	5	12.262	0.002	41048	249.2	NS	---			----
Total Col1Ave (5 peaks):					252.0	Total Col2Ave (4 peaks):				250.6 RPD = 1
Corrected Ave (4 peaks):					251.5	Corrected Ave (3 peaks):				248.8 RPD = 1
CalAmt %D:					0.8	CalAmt %D:				0.2

Total PCB Area Col1 (5.936 - 13.808) = 2139467 Col1 Total PCB = 0.4 ppm*

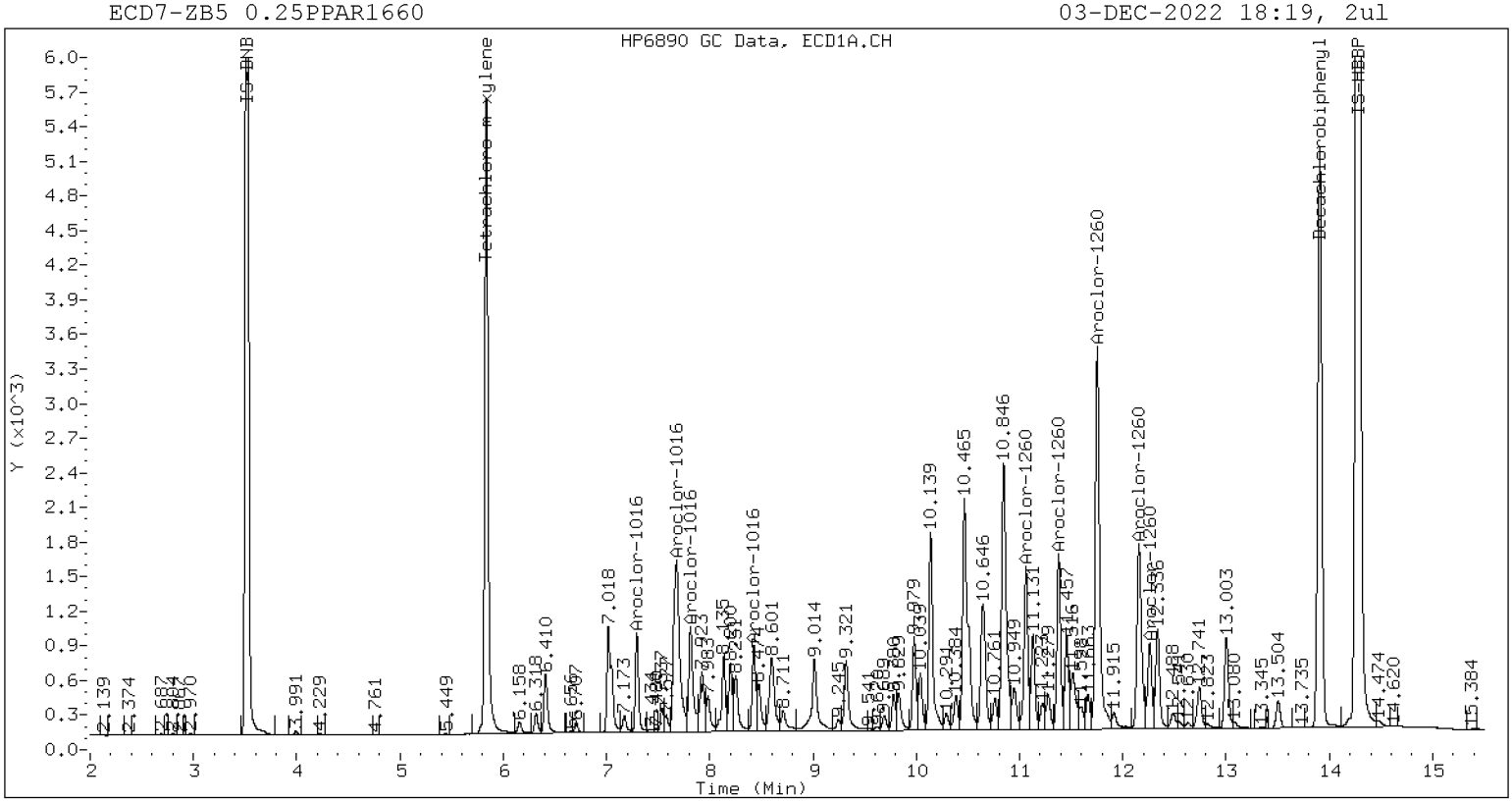
Total PCB Area Col2 (5.936 - 13.808) = 1168134 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

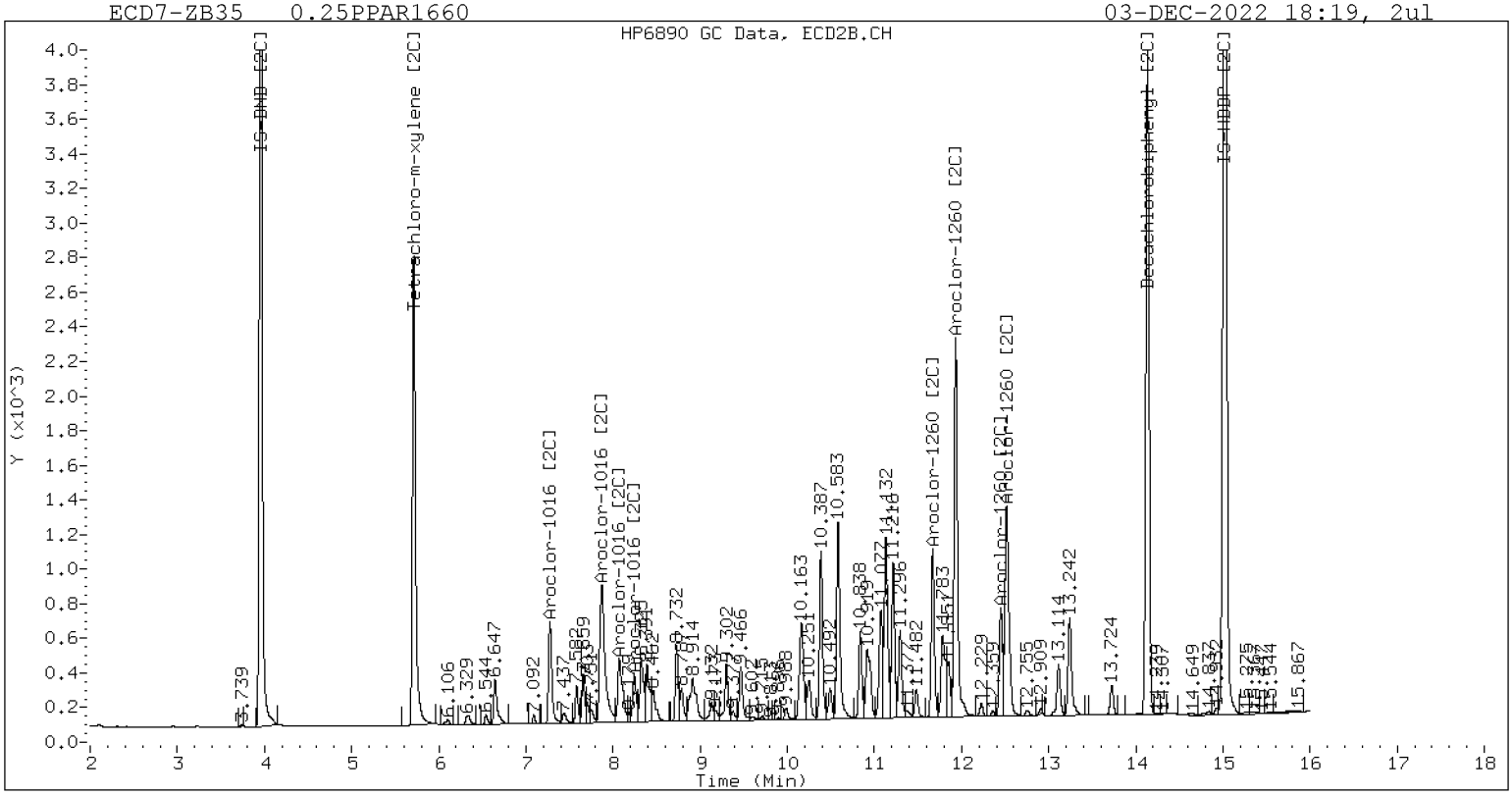
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPAR1660 03-DEC-2022 18:19, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPAR1660 03-DEC-2022 18:19, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032212ECD7.D
Data file 2: /221203.b/221203.b/12032212ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPAR1660
Client ID:
Injection Date: 03-DEC-2022 18:40
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.001	21148	5.713	-0.000	11703	3.3	3.4	2.8	Tetrachloro-m-xylene
13.907	-0.002	27903	14.135	-0.002	17860	3.7	3.4	7.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	456831	2.1
Hexabromobiphenyl	798898	833597	4.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	254070	2.0
Hexabromobiphenyl	362541	372232	2.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.294	0.002	3234	21.2	1	7.276	0.001	2808	21.6
Aroclor-1016	2	7.687	0.013	10166	20.7	2	7.879	0.009	5797	20.7
Aroclor-1016	3	7.819	0.009	4988	22.4	3	8.077	0.007	2653	22.1
Aroclor-1016	4	8.430	0.006	2807	19.7	4	8.249	0.008	1173	18.5
Total Col1Ave (4 peaks):					21.0	Total Col2Ave (4 peaks):				20.7 RPD = 1
Corrected Ave (3 peaks):					20.5	Corrected Ave (3 peaks):				20.3 RPD = 1
CalAmt %D:					5.0	CalAmt %D:				3.6
Aroclor-1260	1	11.066	0.004	6255	20.6	1	11.672	0.003	4216	21.5
Aroclor-1260	2	11.382	0.004	6329	20.2	2	11.937	0.005	10262	20.8
Aroclor-1260	3	11.758	0.008	16621	20.2	3	12.453	0.002	2734	20.8
Aroclor-1260	4	12.162	0.008	8146	19.4	4	12.521	0.004	6997	21.3
Aroclor-1260	5	12.264	0.004	3406	19.8	NS	---			----
Total Col1Ave (5 peaks):					20.0	Total Col2Ave (4 peaks):				21.1 RPD = 5
Corrected Ave (4 peaks):					19.9	Corrected Ave (3 peaks):				21.0 RPD = 5
CalAmt %D:					0.2	CalAmt %D:				5.5

Total PCB Area Col1 (5.936 - 13.808) = 188011 Col1 Total PCB = 0.0 ppm*

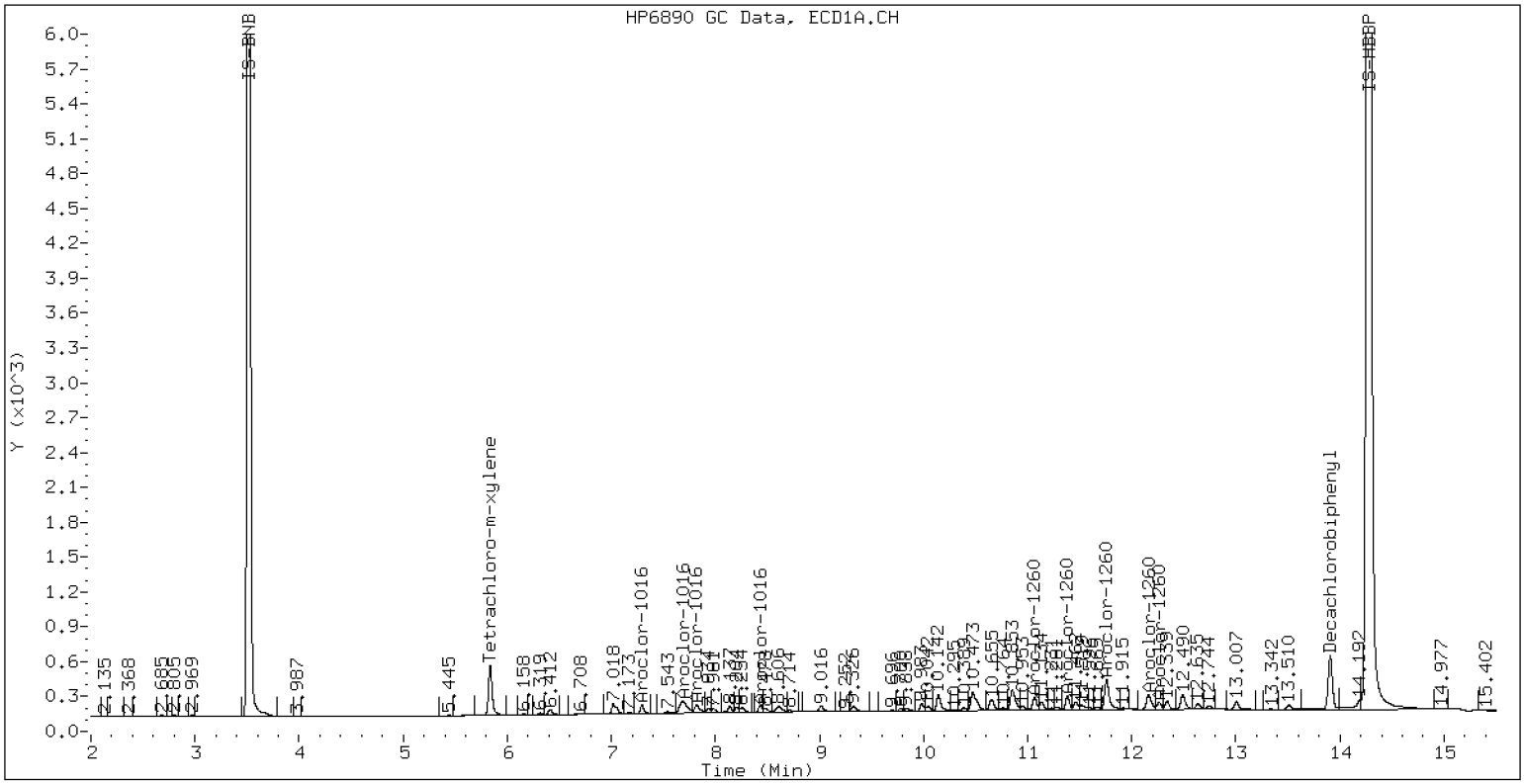
Total PCB Area Col2 (5.936 - 13.808) = 100527 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

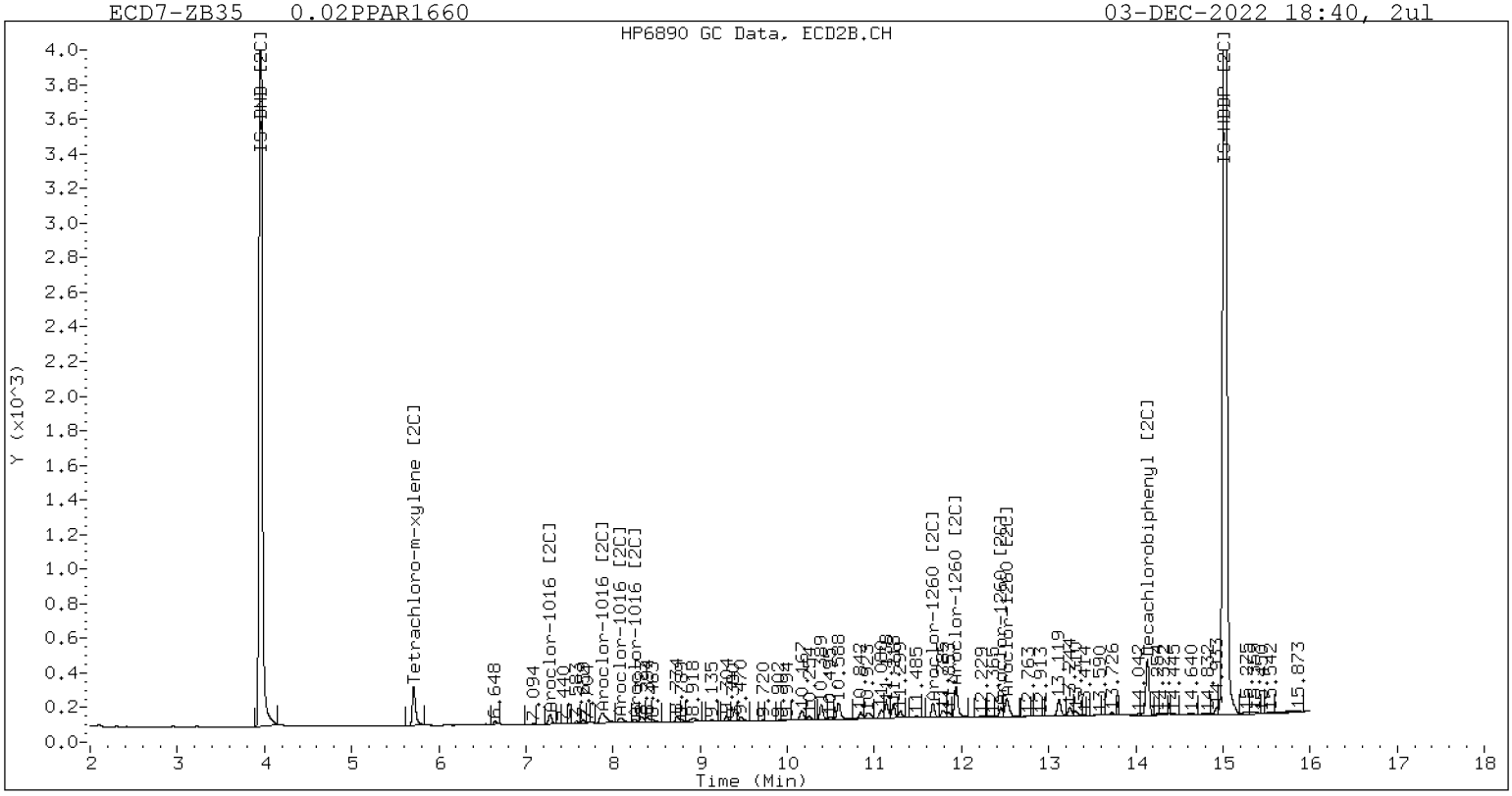
PCB Dual Column Chromatograms

ECD7-ZB5 0.02PPAR1660 03-DEC-2022 18:40, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.02PPAR1660 03-DEC-2022 18:40, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032213ECD7.D
Data file 2: /221203.b/221203.b/12032213ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPAR1660
Client ID:
Injection Date: 03-DEC-2022 19:01
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.000	51078	5.713	-0.000	27008	8.0	7.8	1.5	Tetrachloro-m-xylene
13.907	-0.001	63325	14.137	-0.000	42829	8.2	8.0	3.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	453269	1.3
Hexabromobiphenyl	798898	840633	5.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	251466	1.0
Hexabromobiphenyl	362541	378380	4.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.294	0.002	7743	51.2	1	7.277	0.002	6704	52.1
Aroclor-1016	2	7.686	0.012	24543	50.3	2	7.879	0.008	14768	53.3
Aroclor-1016	3	7.818	0.008	12052	54.5	3	8.078	0.007	6672	56.0
Aroclor-1016	4	8.429	0.005	7291	51.7	4	8.249	0.007	3185	50.9
Total Col1Ave (4 peaks):					51.9	Total Col2Ave (4 peaks):				53.1 RPD = 2
Corrected Ave (3 peaks):					51.1	Corrected Ave (3 peaks):				52.1 RPD = 2
CalAmt %D:					3.8	CalAmt %D:				6.1
Aroclor-1260	1	11.066	0.004	15578	50.9	1	11.673	0.003	10647	53.3
Aroclor-1260	2	11.382	0.005	16010	50.6	2	11.937	0.004	25845	51.6
Aroclor-1260	3	11.757	0.007	42278	50.8	3	12.454	0.002	6703	50.2
Aroclor-1260	4	12.160	0.006	20971	49.5	4	12.520	0.004	17174	51.4
Aroclor-1260	5	12.263	0.004	8785	50.7	NS	---			----
Total Col1Ave (5 peaks):					50.5	Total Col2Ave (4 peaks):				51.6 RPD = 2
Corrected Ave (4 peaks):					50.4	Corrected Ave (3 peaks):				51.1 RPD = 1
CalAmt %D:					1.0	CalAmt %D:				3.3

Total PCB Area Col1 (5.936 - 13.808) = 457627 Col1 Total PCB = 0.1 ppm*

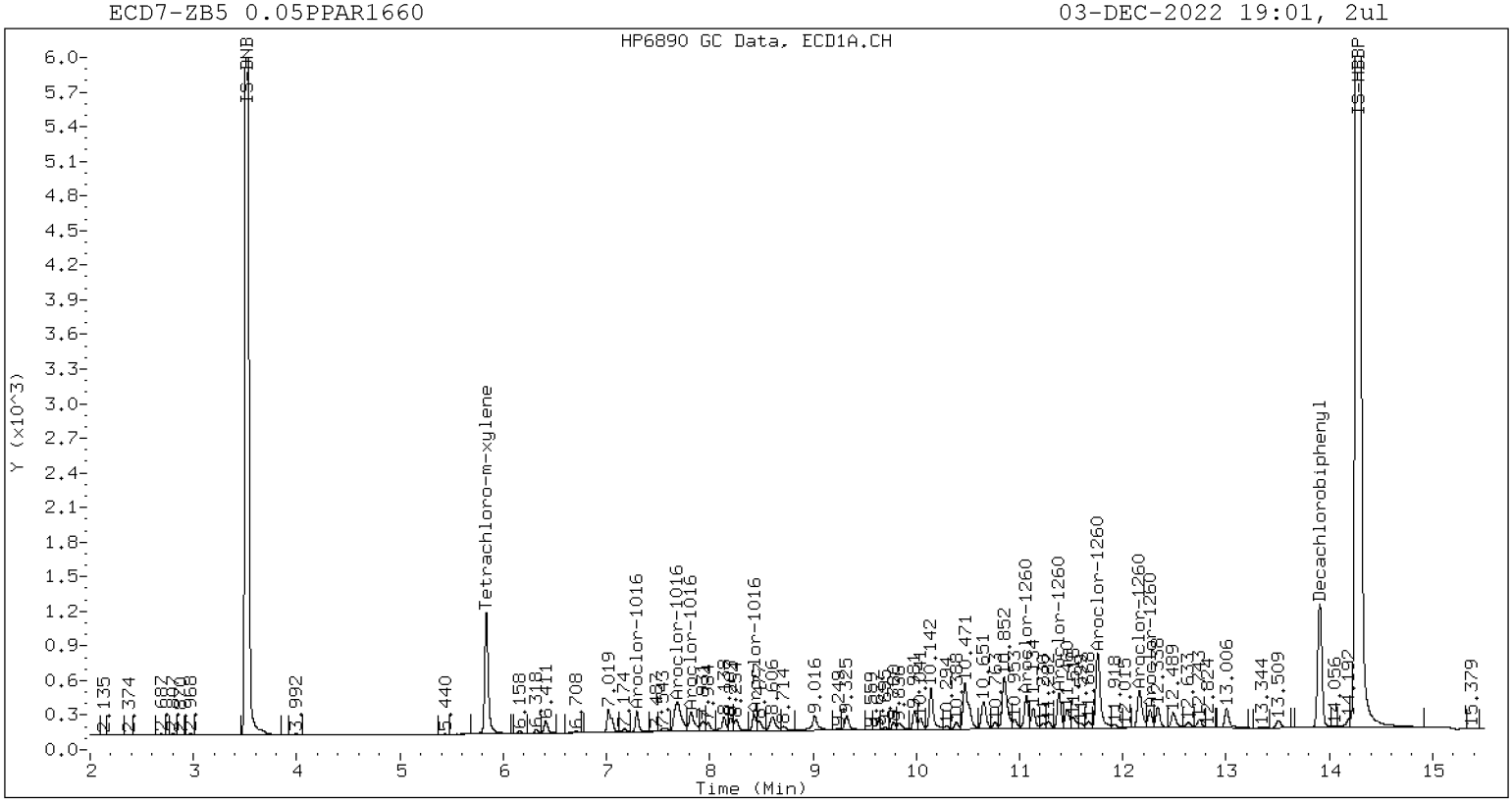
Total PCB Area Col2 (5.936 - 13.808) = 253240 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

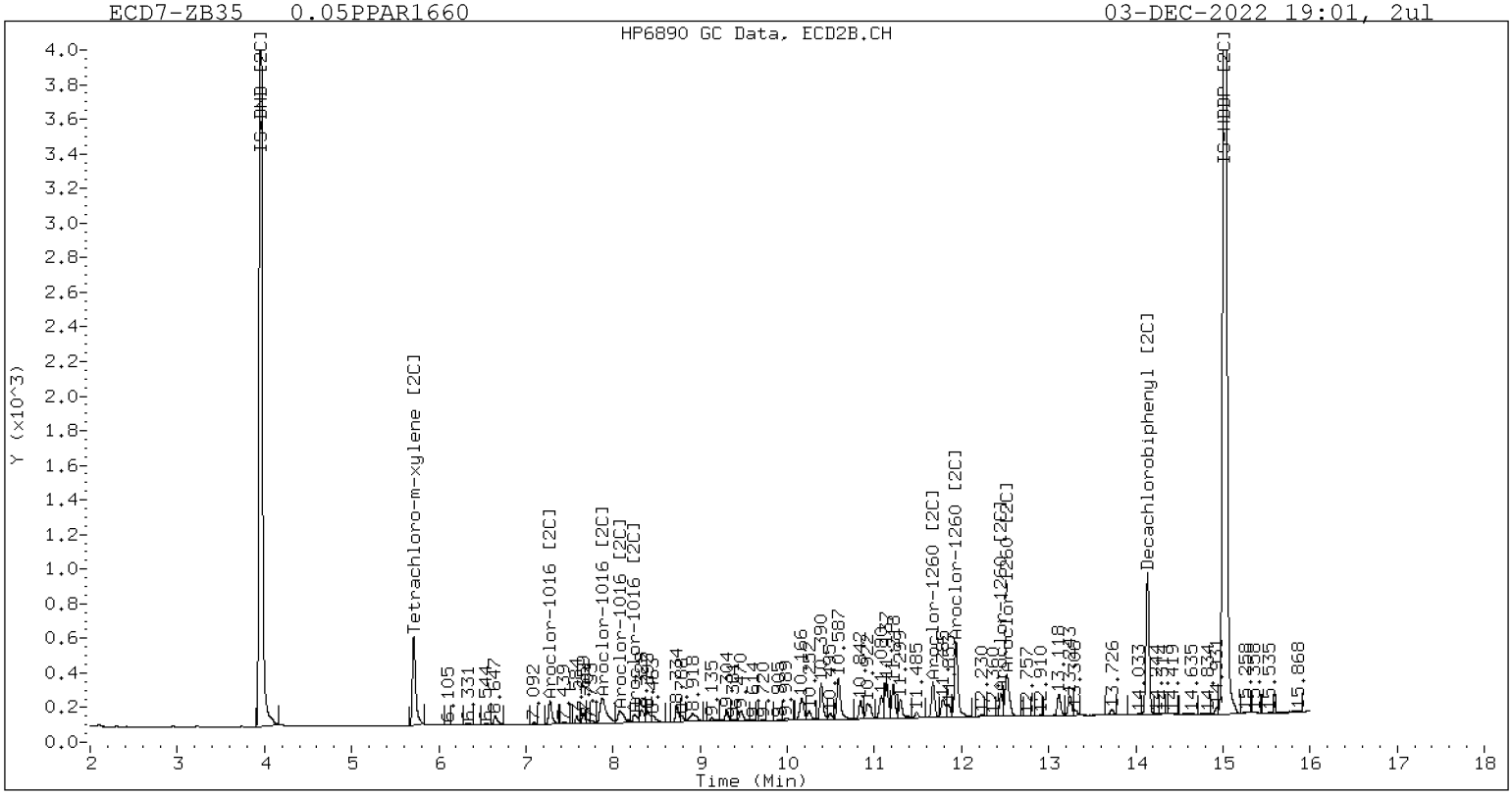
PCB Dual Column Chromatograms

ECD7-ZB5 0.05PPAR1660 03-DEC-2022 19:01, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.05PPAR1660 03-DEC-2022 19:01, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032214ECD7.D
Data file 2: /221203.b/221203.b/12032214ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 1PPMAR1660
Client ID:
Injection Date: 03-DEC-2022 19:23
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.001	1010529	5.712	-0.002	531708	152.6	150.7	1.3	Tetrachloro-m-xylene
13.908	-0.001	1103073	14.137	-0.000	836962	144.8	153.1	5.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	467179	4.4
Hexabromobiphenyl	798898	830915	4.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	257438	3.3
Hexabromobiphenyl	362541	385067	6.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.291	-0.001	135017	866.4	1	7.276	0.001	112973	858.3
Aroclor-1016	2	7.671	-0.003	458351	911.0	2	7.869	-0.001	252319	888.8
Aroclor-1016	3	7.807	-0.003	183320	804.0	3	8.068	-0.002	103219	846.7
Aroclor-1016	4	8.423	-0.001	135184	930.1	4	8.239	-0.002	63199	985.9
Total Col1Ave (4 peaks):					877.9	Total Col2Ave (4 peaks):				894.9 RPD = 2
Corrected Ave (3 peaks):					860.5	Corrected Ave (3 peaks):				864.6 RPD = 0
CalAmt %D:					-12.2	CalAmt %D:				-10.5
Aroclor-1260	1	11.058	-0.003	277616	917.9	1	11.668	-0.002	180676	888.9
Aroclor-1260	2	11.375	-0.002	293627	938.6	2	11.930	-0.002	450760	883.8
Aroclor-1260	3	11.748	-0.002	769872	936.7	3	12.449	-0.002	129799	955.7
Aroclor-1260	4	12.151	-0.003	405939	969.8	4	12.514	-0.002	308791	908.2
Aroclor-1260	5	12.259	-0.001	161370	941.8	NS	---			----
Total Col1Ave (5 peaks):					941.0	Total Col2Ave (4 peaks):				909.1 RPD = 3
Corrected Ave (4 peaks):					933.7	Corrected Ave (3 peaks):				893.6 RPD = 4
CalAmt %D:					-5.9	CalAmt %D:				-9.1

Total PCB Area Col1 (5.936 - 13.808) = 7995465 Col1 Total PCB = 1.5 ppm*

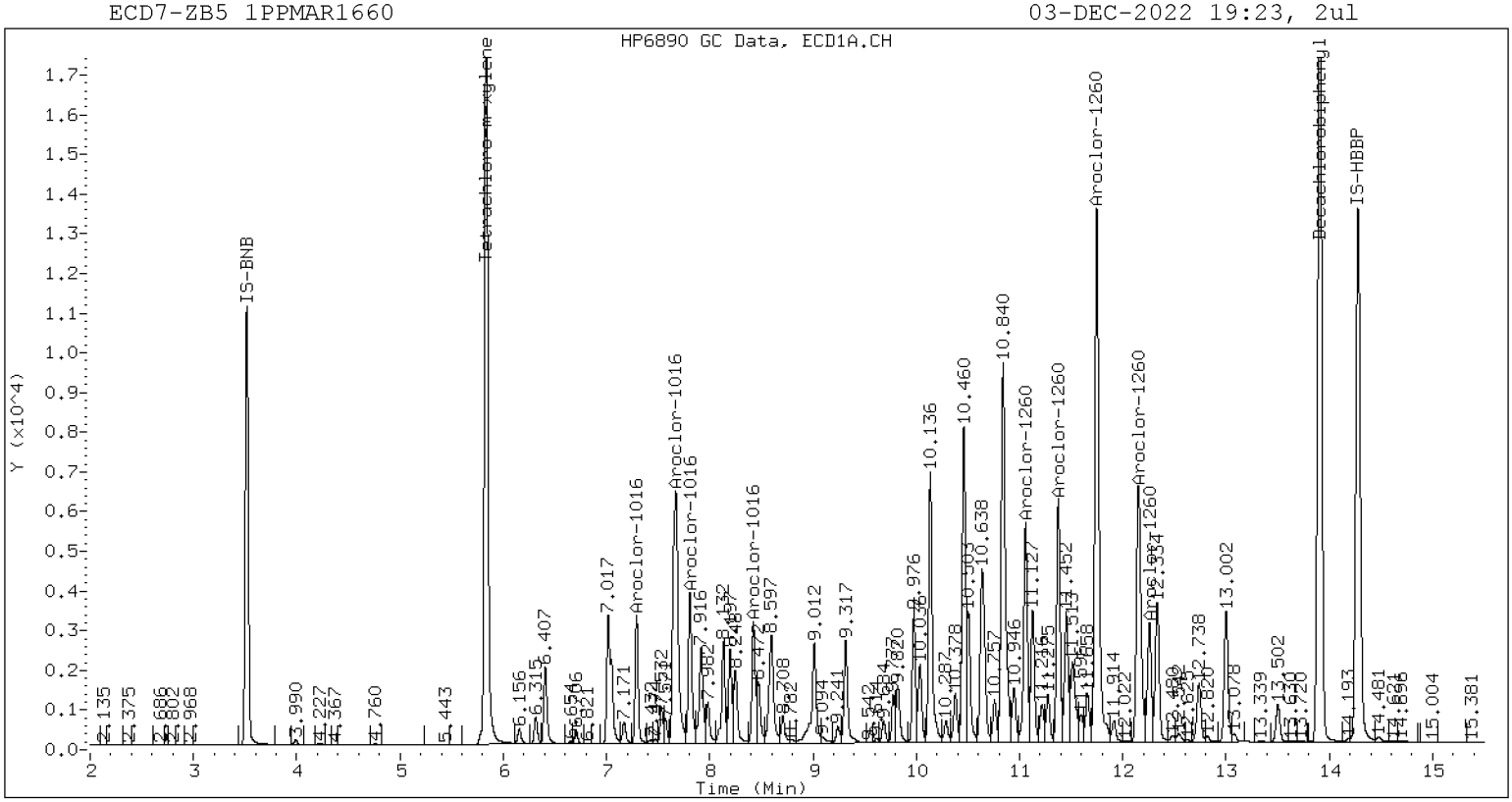
Total PCB Area Col2 (5.936 - 13.808) = 4426537 Col2 Total PCB = 2.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

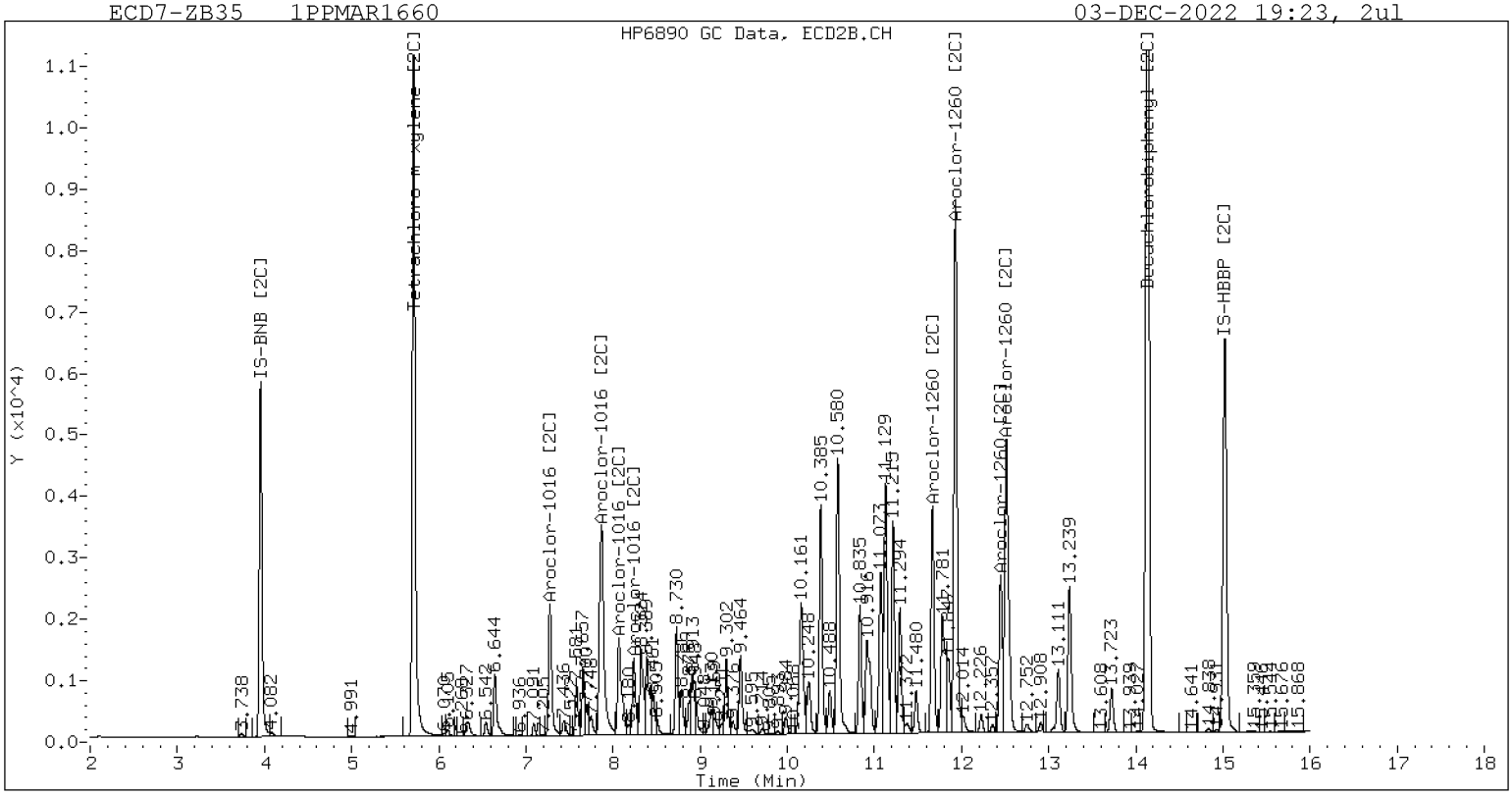
PCB Dual Column Chromatograms

ECD7-ZB5 1PPMAR1660 03-DEC-2022 19:23, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 1PPMAR1660 03-DEC-2022 19:23, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032215ECD7.D
Data file 2: /221203.b/221203.b/12032215ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPMAR1660
Client ID:
Injection Date: 03-DEC-2022 19:44
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.000	108416	5.713	-0.000	58717	16.7	16.8	0.6	Tetrachloro-m-xylene
13.907	-0.002	126876	14.136	-0.001	91231	16.5	16.6	0.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	457669	2.2
Hexabromobiphenyl	798898	837264	4.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	254712	2.3
Hexabromobiphenyl	362541	387892	7.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.293	0.001	16631	108.9	1	7.277	0.001	14117	108.4
Aroclor-1016	2	7.680	0.007	52058	105.6	2	7.876	0.006	29792	106.1
Aroclor-1016	3	7.816	0.006	24753	110.8	3	8.076	0.005	12664	105.0
Aroclor-1016	4	8.428	0.004	15027	105.5	4	8.247	0.006	6540	103.1
Total Col1Ave (4 peaks):					107.7	Total Col2Ave (4 peaks):				105.6 RPD = 2
Corrected Ave (3 peaks):					106.7	Corrected Ave (3 peaks):				104.7 RPD = 2
CalAmt %D:					7.7	CalAmt %D:				5.6
Aroclor-1260	1	11.064	0.003	31860	104.5	1	11.671	0.002	21501	105.0
Aroclor-1260	2	11.381	0.003	32914	104.4	2	11.935	0.003	54902	106.9
Aroclor-1260	3	11.756	0.006	88153	106.4	3	12.453	0.002	14336	104.8
Aroclor-1260	4	12.159	0.005	44477	105.5	4	12.520	0.004	36244	105.8
Aroclor-1260	5	12.262	0.002	18369	106.4	NS	---			----
Total Col1Ave (5 peaks):					105.4	Total Col2Ave (4 peaks):				105.6 RPD = 0
Corrected Ave (4 peaks):					105.2	Corrected Ave (3 peaks):				105.2 RPD = 0
CalAmt %D:					5.4	CalAmt %D:				5.6

Total PCB Area Col1 (5.936 - 13.808) = 933356 Col1 Total PCB = 0.2 ppm*

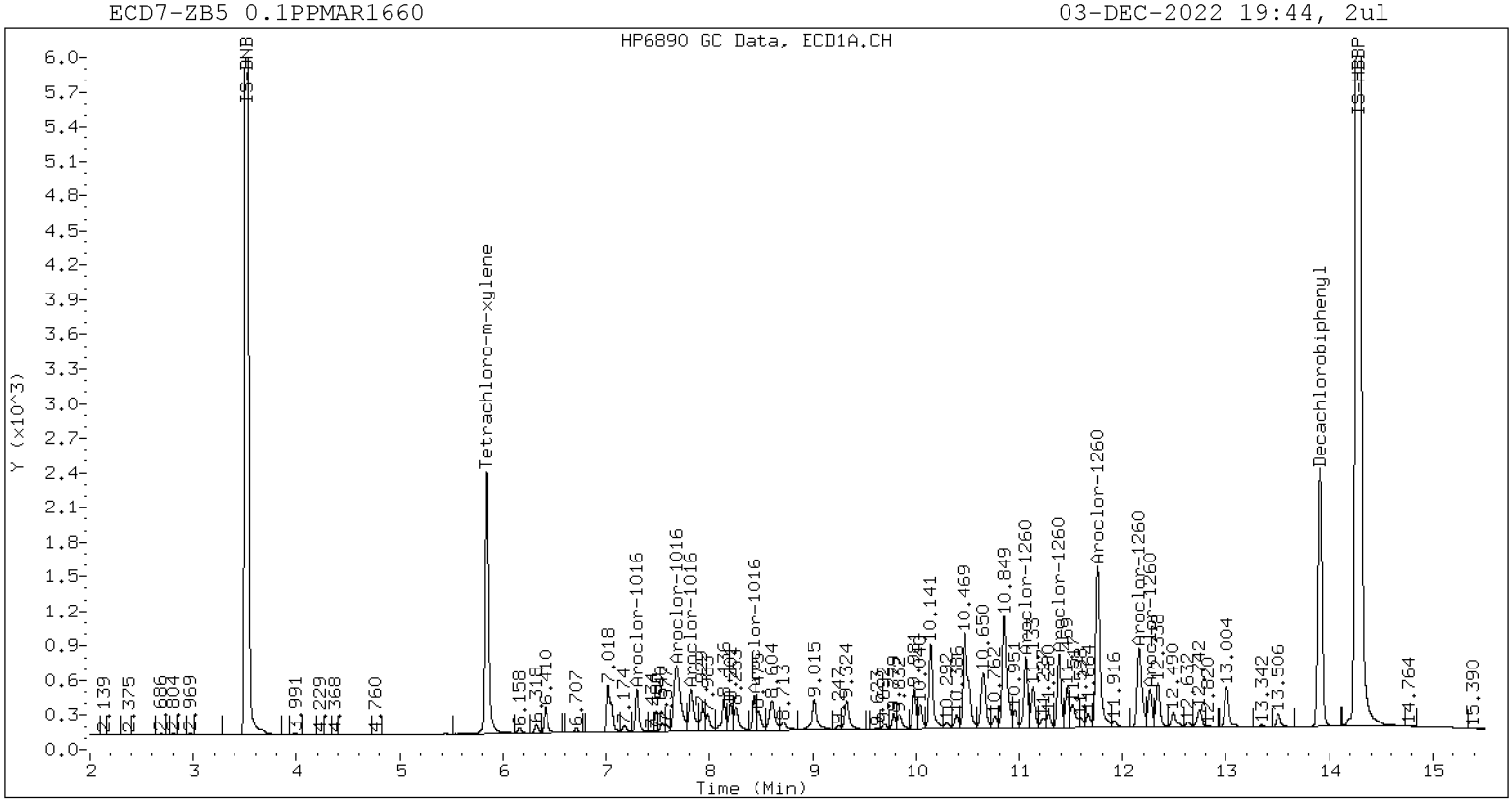
Total PCB Area Col2 (5.936 - 13.808) = 523507 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

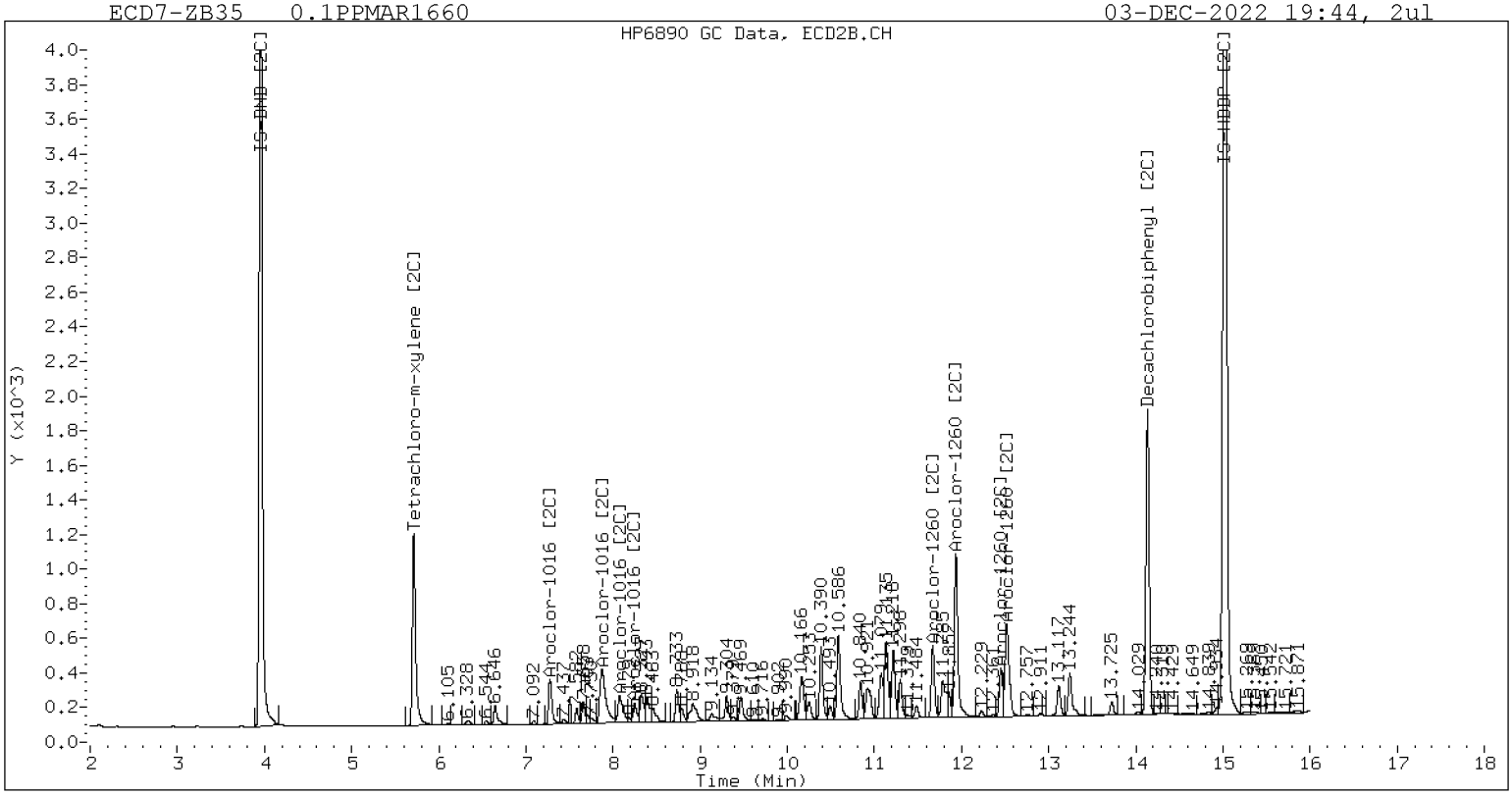
PCB Dual Column Chromatograms

ECD7-ZB5 0.1PPMAR1660 03-DEC-2022 19:44, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.1PPMAR1660 03-DEC-2022 19:44, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032216ECD7.D
Data file 2: /221203.b/221203.b/12032216ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPMAR1660
Client ID:
Injection Date: 03-DEC-2022 20:05
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.835	-0.001	510310	5.711	-0.002	273850	78.2	77.7	0.7	Tetrachloro-m-xylene
13.908	-0.001	570893	14.137	-0.000	431489	74.4	77.0	3.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	460250	2.8
Hexabromobiphenyl	798898	837210	4.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	257013	3.2
Hexabromobiphenyl	362541	394788	8.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.292	0.000	73008	475.5	1	7.275	0.000	61467	467.8
Aroclor-1016	2	7.674	0.000	243498	491.2	2	7.870	0.000	135395	477.7
Aroclor-1016	3	7.810	0.000	100165	445.9	3	8.070	0.000	55783	458.3
Aroclor-1016	4	8.424	0.000	70493	492.3	4	8.241	0.000	32578	509.0
Total Col1Ave (4 peaks):					476.3	Total Col2Ave (4 peaks):				478.2 RPD = 0
Corrected Ave (3 peaks):					470.9	Corrected Ave (3 peaks):				467.9 RPD = 1
CalAmt %D:					-4.7	CalAmt %D:				-4.4
Aroclor-1260	1	11.062	0.000	148089	485.9	1	11.669	0.000	95983	460.6
Aroclor-1260	2	11.377	0.000	154542	490.3	2	11.933	0.000	249045	476.3
Aroclor-1260	3	11.750	0.000	401802	485.2	3	12.451	0.000	66824	479.9
Aroclor-1260	4	12.154	0.000	212604	504.1	4	12.517	0.000	165020	473.4
Aroclor-1260	5	12.260	0.000	85762	496.7	NS	---			----
Total Col1Ave (5 peaks):					492.5	Total Col2Ave (4 peaks):				472.5 RPD = 4
Corrected Ave (4 peaks):					489.5	Corrected Ave (3 peaks):				470.1 RPD = 4
CalAmt %D:					-1.5	CalAmt %D:				-5.5

Total PCB Area Col1 (5.936 - 13.808) = 4267475 Col1 Total PCB = 0.8 ppm*

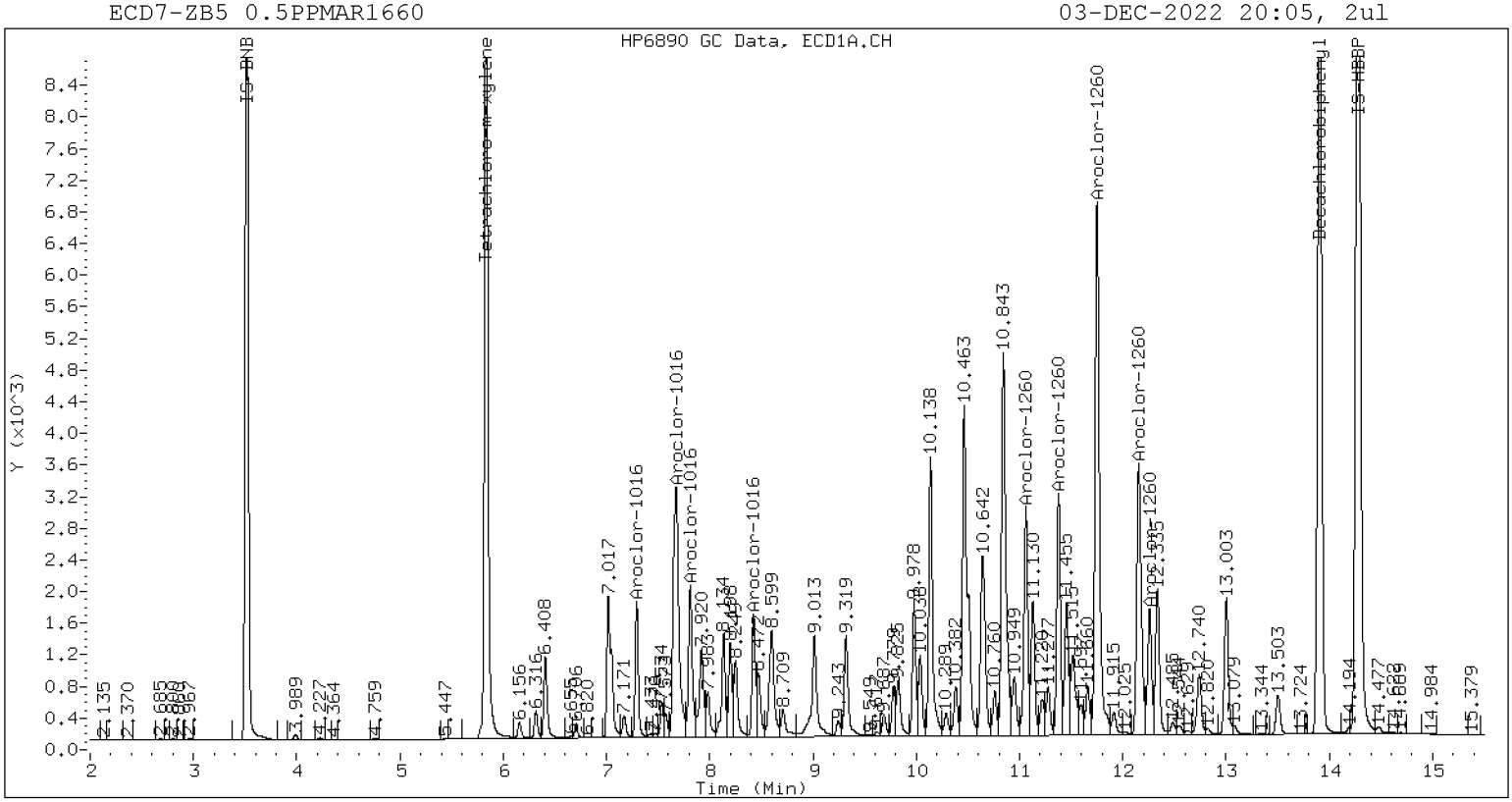
Total PCB Area Col2 (5.936 - 13.808) = 2352394 Col2 Total PCB = 1.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

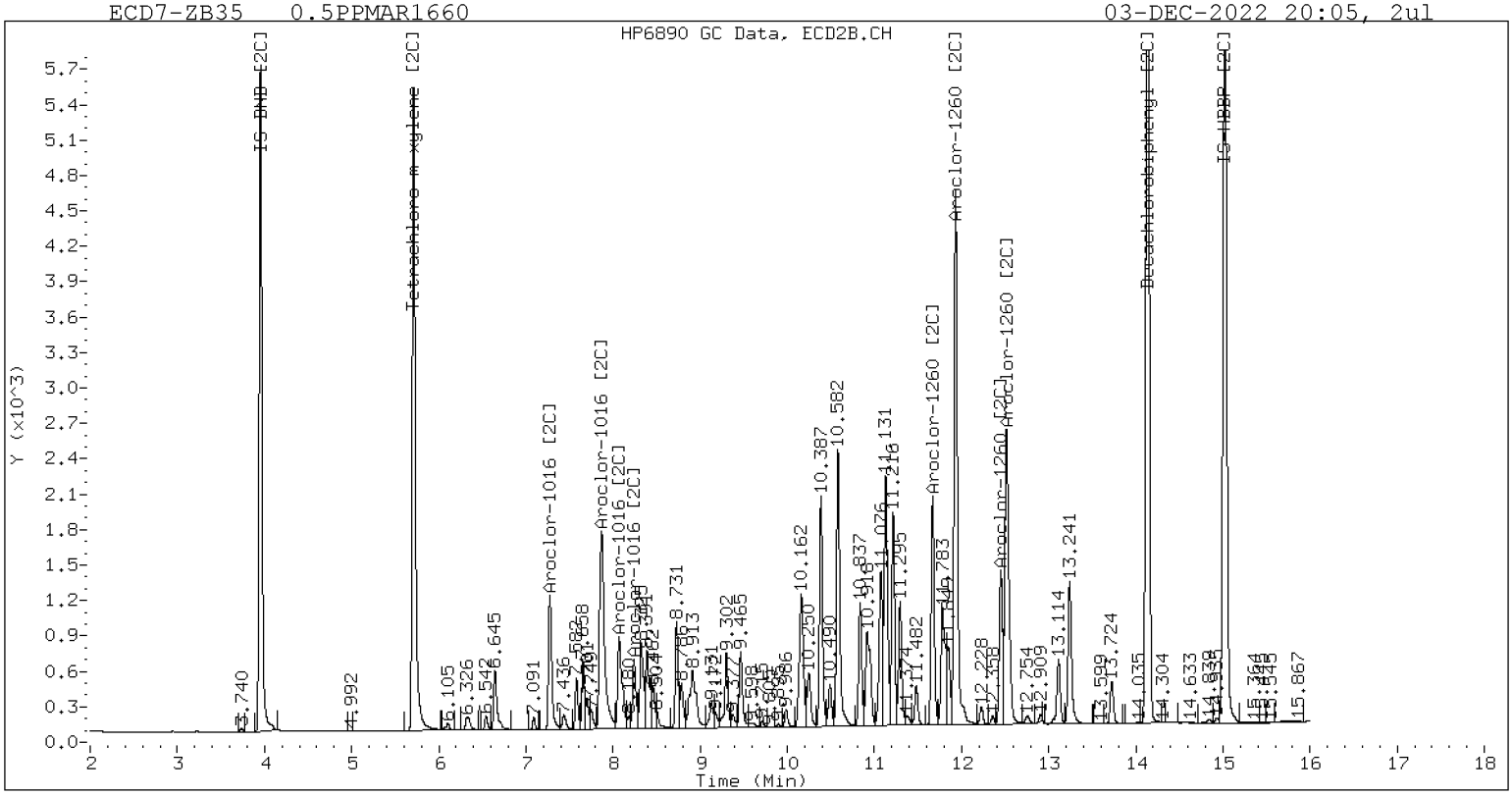
PCB Dual Column Chromatograms

ECD7-ZB5 0.5PPMAR1660 03-DEC-2022 20:05, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.5PPMAR1660 03-DEC-2022 20:05, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032217ECD7.D
Data file 2: /221203.b/221203.b/12032217ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 03-DEC-2022 20:26
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.000	243461	5.713	-0.000	130768	37.3	37.1	0.4	Tetrachloro-m-xylene
13.908	-0.001	300671	14.137	0.000	218277	38.5	38.4	0.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	461030	3.0
Hexabromobiphenyl	798898	851899	6.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	257053	3.2
Hexabromobiphenyl	362541	400012	10.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.294	0.000	32669	250.0	1	7.277	0.000	27198	250.0
Aroclor-1242	2	7.680	0.000	103727	250.0	2	7.875	0.000	57737	250.0
Aroclor-1242	3	8.427	0.000	29844	250.0	3	9.178	0.000	18627	250.0
Aroclor-1242	4	9.030	0.000	61970	250.0	4	9.605	0.000	22388	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.936 - 13.808) = 766457 Col1 Total PCB = 0.1 ppm*

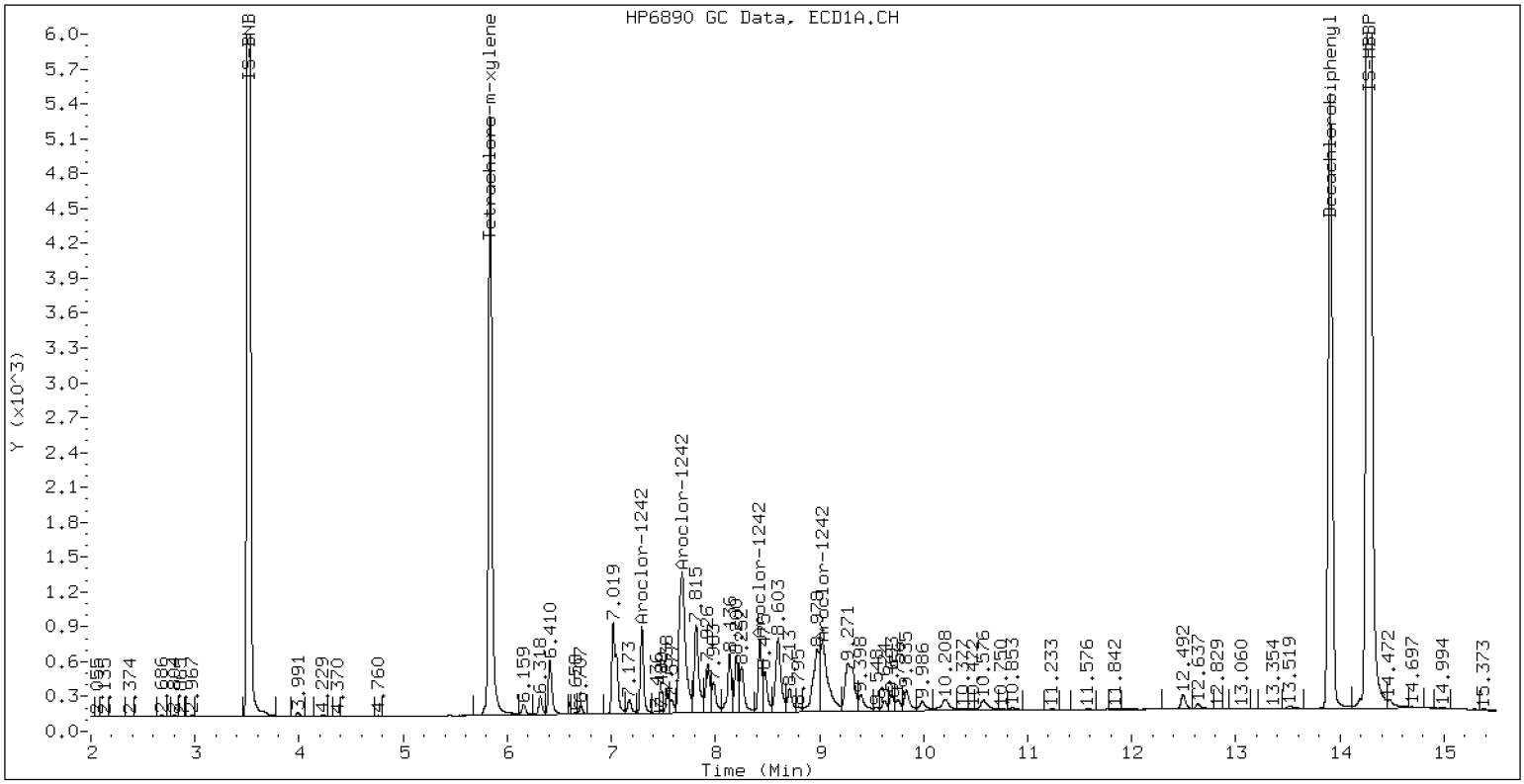
Total PCB Area Col2 (5.936 - 13.808) = 407128 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

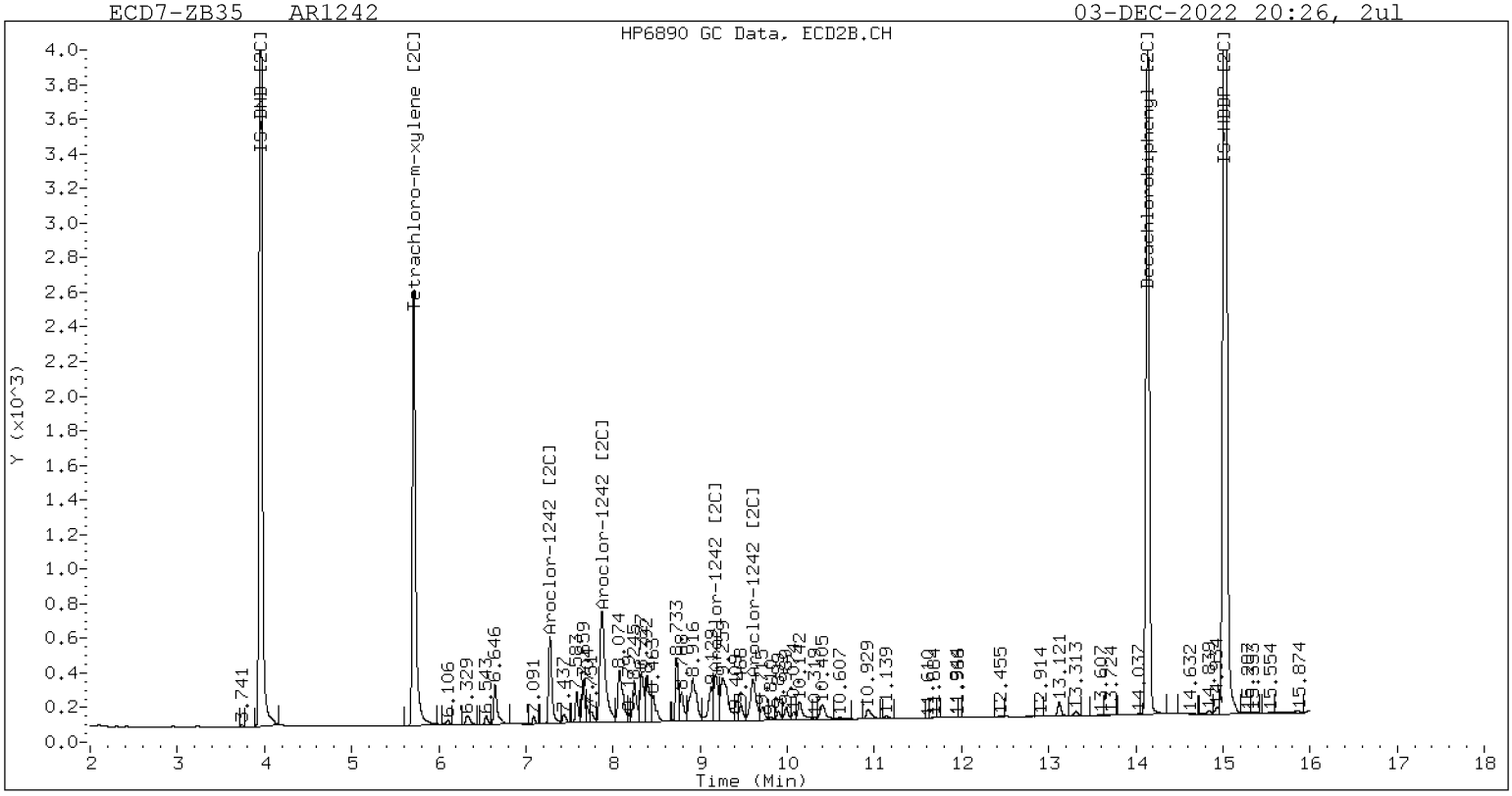
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242 03-DEC-2022 20:26, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1242 03-DEC-2022 20:26, 2ul

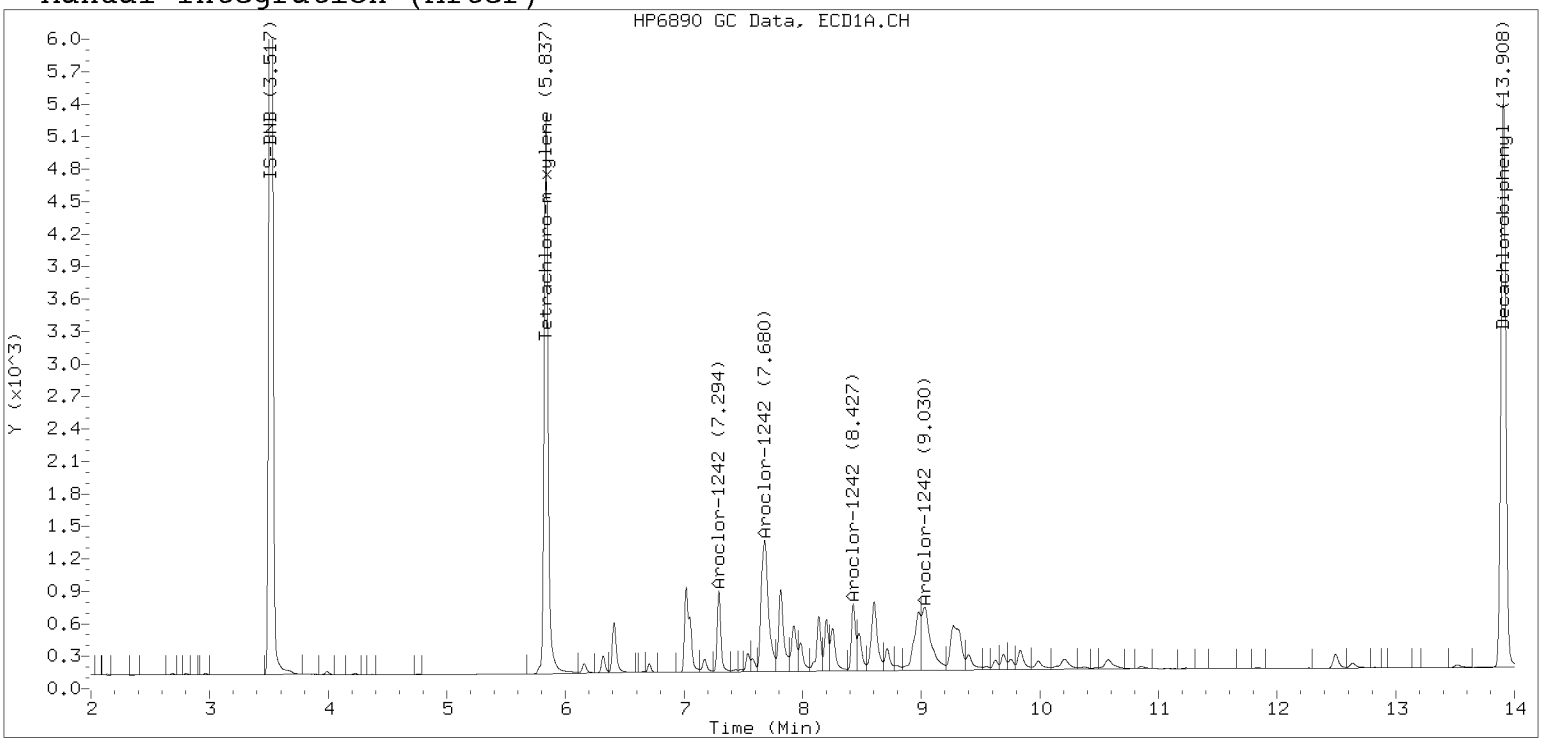


ZB-35 Manual Integration: YES

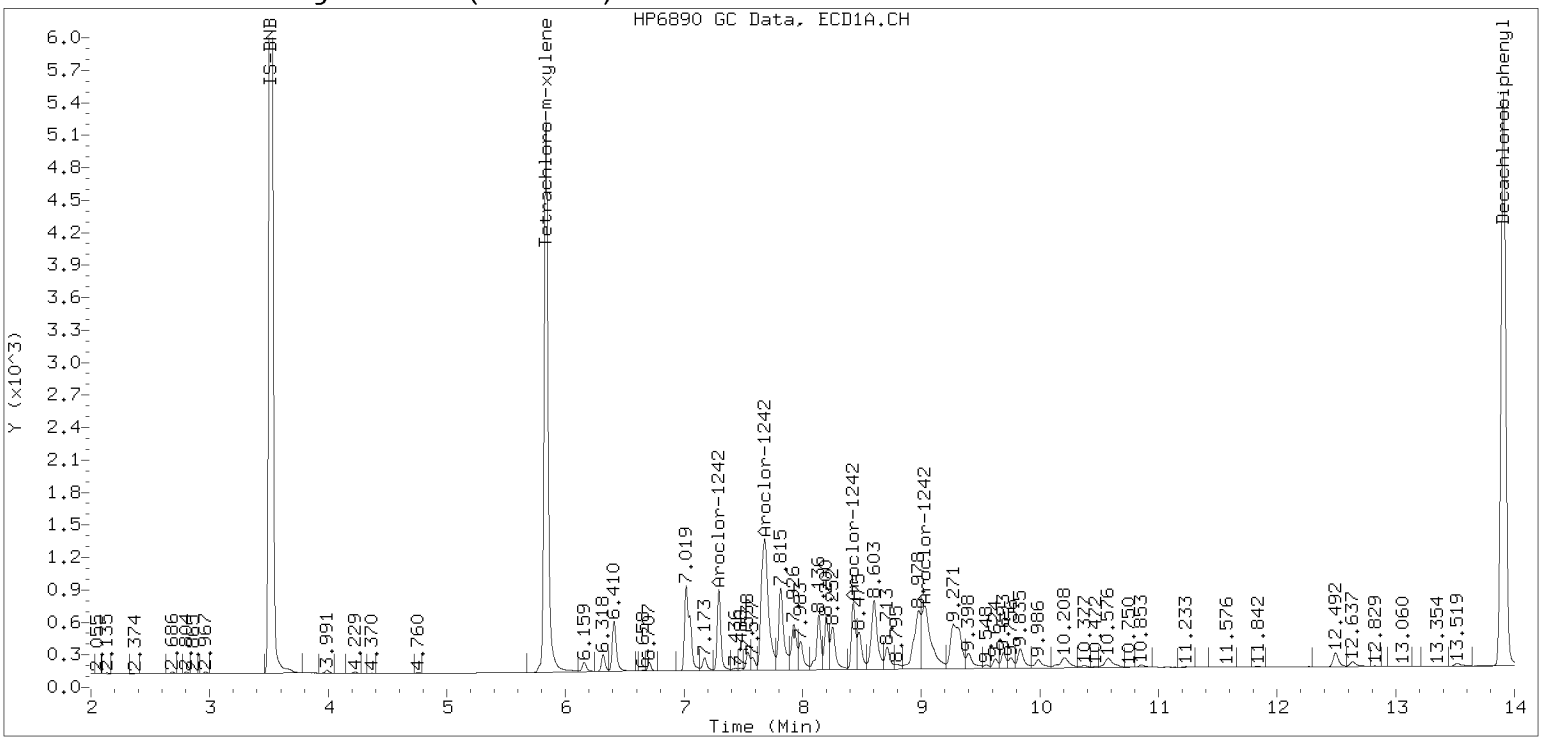
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221203.b/12032217ECD7.D Injection Date: 03-DEC-2022 20:26

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032218ECD7.D
Data file 2: /221203.b/221203.b/12032218ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 03-DEC-2022 20:48
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.001	231737	5.713	-0.000	124430	36.1	35.8	0.8	Tetrachloro-m-xylene
13.907	-0.001	296478	14.137	0.000	215774	38.9	38.1	1.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	453370	1.3
Hexabromobiphenyl	798898	832030	4.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	253684	1.8
Hexabromobiphenyl	362541	398468	9.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.427	0.000	48733	250.0	1	8.326	0.000	25909	250.0
Aroclor-1248	2	8.603	0.000	62221	250.0	2	8.733	0.000	27250	250.0
Aroclor-1248	3	9.023	0.000	111933	250.0	3	9.177	0.000	33147	250.0
Aroclor-1248	4	9.315	0.000	54837	250.0	4	9.602	0.000	38911	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.936 - 13.808) = 964384 Col1 Total PCB = 0.2 ppm*

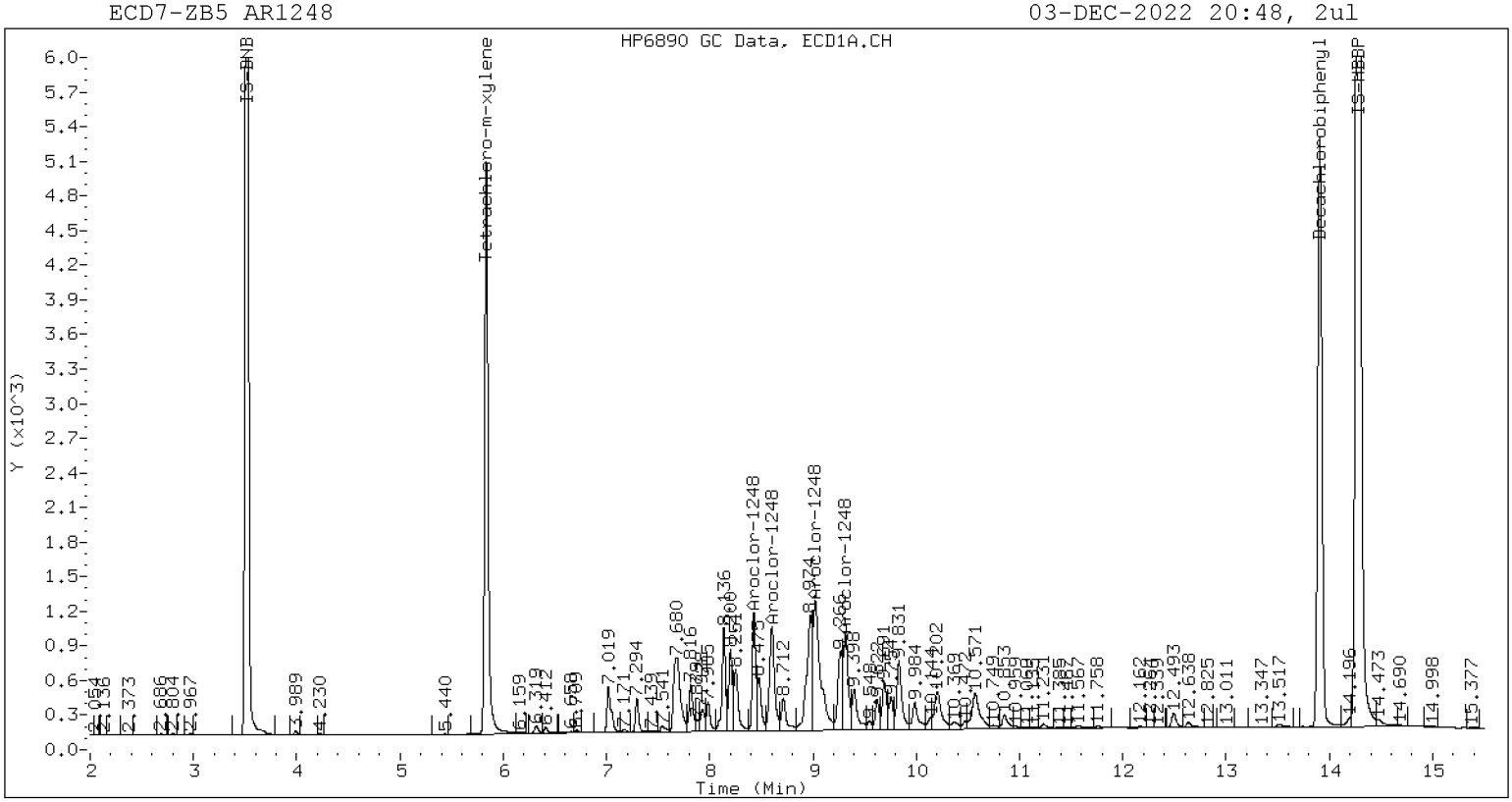
Total PCB Area Col2 (5.936 - 13.808) = 514558 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

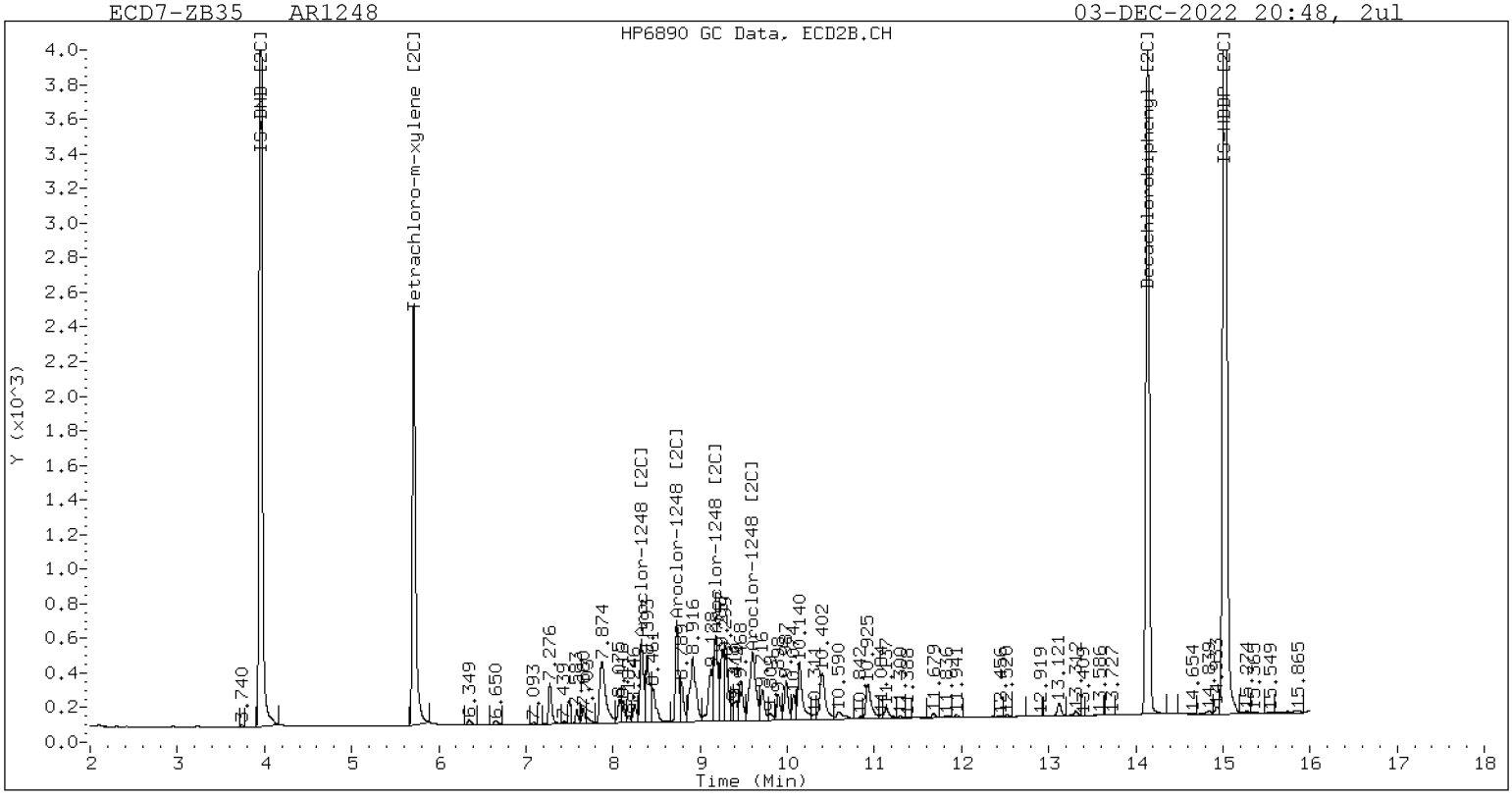
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248 03-DEC-2022 20:48, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248 03-DEC-2022 20:48, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032219ECD7.D
Data file 2: /221203.b/221203.b/12032219ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 03-DEC-2022 21:09
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.000	235742	5.713	-0.000	129532	36.3	36.8	1.4	Tetrachloro-m-xylene
13.908	-0.000	304424	14.136	-0.001	220843	39.5	38.4	2.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	458200	2.4
Hexabromobiphenyl	798898	841638	5.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	256547	3.0
Hexabromobiphenyl	362541	405063	11.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.319	0.000	100858	250.0	1	9.467	0.000	41352	250.0
Aroclor-1254	2	9.397	0.000	39224	250.0	2	9.987	0.000	33246	250.0
Aroclor-1254	3	9.688	0.000	63702	250.0	3	10.139	0.000	71462	250.0
Aroclor-1254	4	9.828	0.000	124170	250.0	4	10.389	0.000	74009	250.0
Aroclor-1254	5	10.194	0.000	85117	250.0	5	10.586	0.000	35695	250.0

Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0

Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.936 - 13.808) = 1310899 Col1 Total PCB = 0.2 ppm*

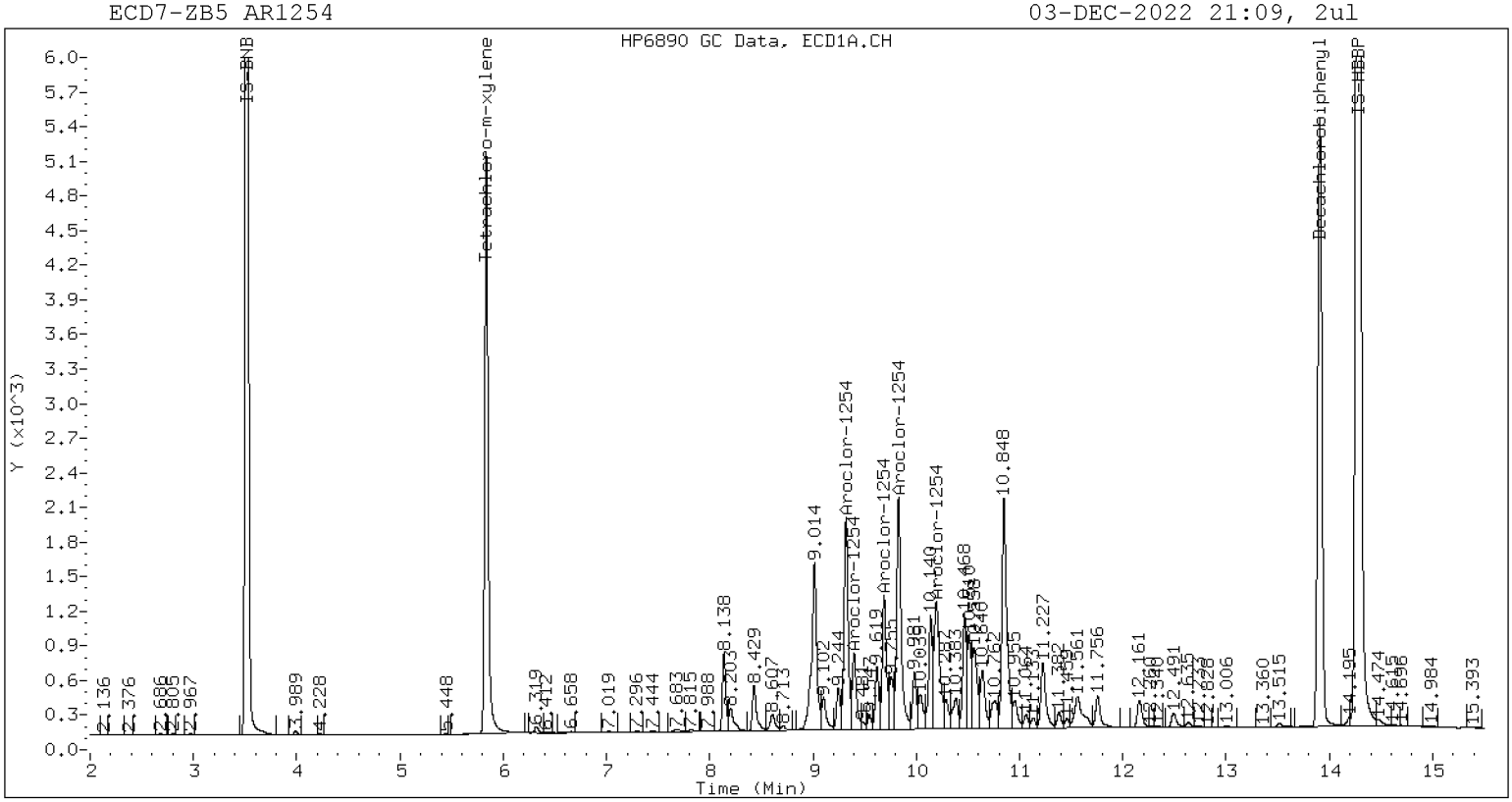
Total PCB Area Col2 (5.936 - 13.808) = 697760 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

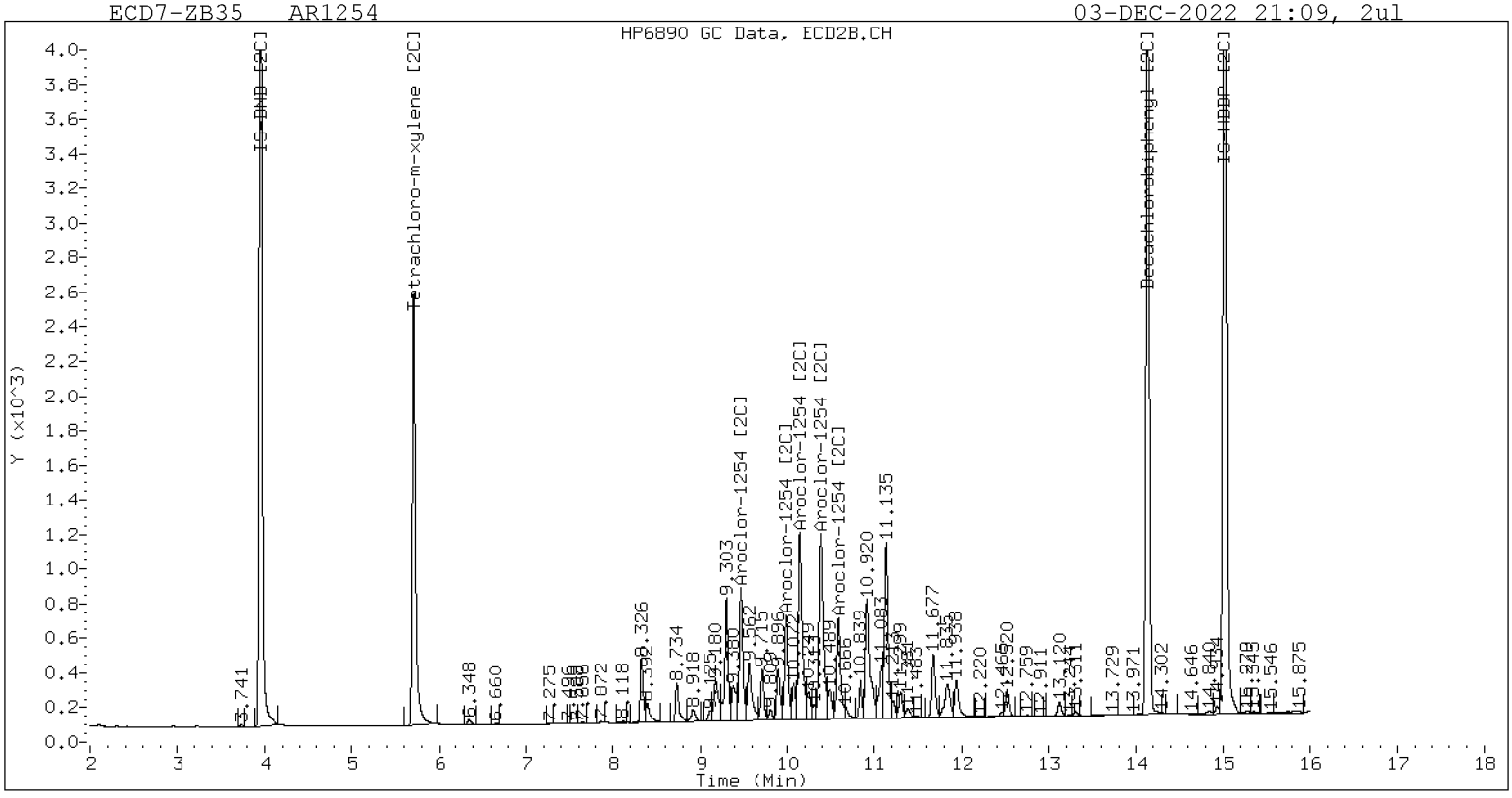
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254 03-DEC-2022 21:09, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254 03-DEC-2022 21:09, 2ul



ZB-35 Manual Integration: YES

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032220ECD7.D
Data file 2: /221203.b/221203.b/12032220ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR2162.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162
Client ID:
Injection Date: 03-DEC-2022 21:30
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.835	-0.001	241351	5.713	-0.001	129143	36.5	36.2	0.7	Tetrachloro-m-xylene
13.908	0.000	313862	14.136	-0.001	226219	40.2	38.7	4.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	466944	4.3
Hexabromobiphenyl	798898	850987	6.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	260026	4.4
Hexabromobiphenyl	362541	412003	13.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	4.760	0.000	9650	250.0	1	4.987	0.000	5486	250.0
Aroclor-1221	2	6.159	0.000	17000	250.0	2	6.322	0.000	10456	250.0
Aroclor-1221	3	6.409	0.000	39219	250.0	3	6.645	0.000	17596	250.0
Total Col1Ave (3 peaks):					250.0	Total Col2Ave (3 peaks):				250.0 RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.848	0.000	71145	250.0	1	11.217	0.000	78317	250.0
Aroclor-1262	2	12.263	0.000	110609	250.0	2	11.670	0.000	67831	250.0
Aroclor-1262	3	12.337	0.000	118127	250.0	3	12.451	0.000	74822	250.0
Aroclor-1262	4	13.005	0.000	94805	250.0	4	12.519	0.000	117202	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.936 - 13.808) = 1878739 Col1 Total PCB = 0.3 ppm*

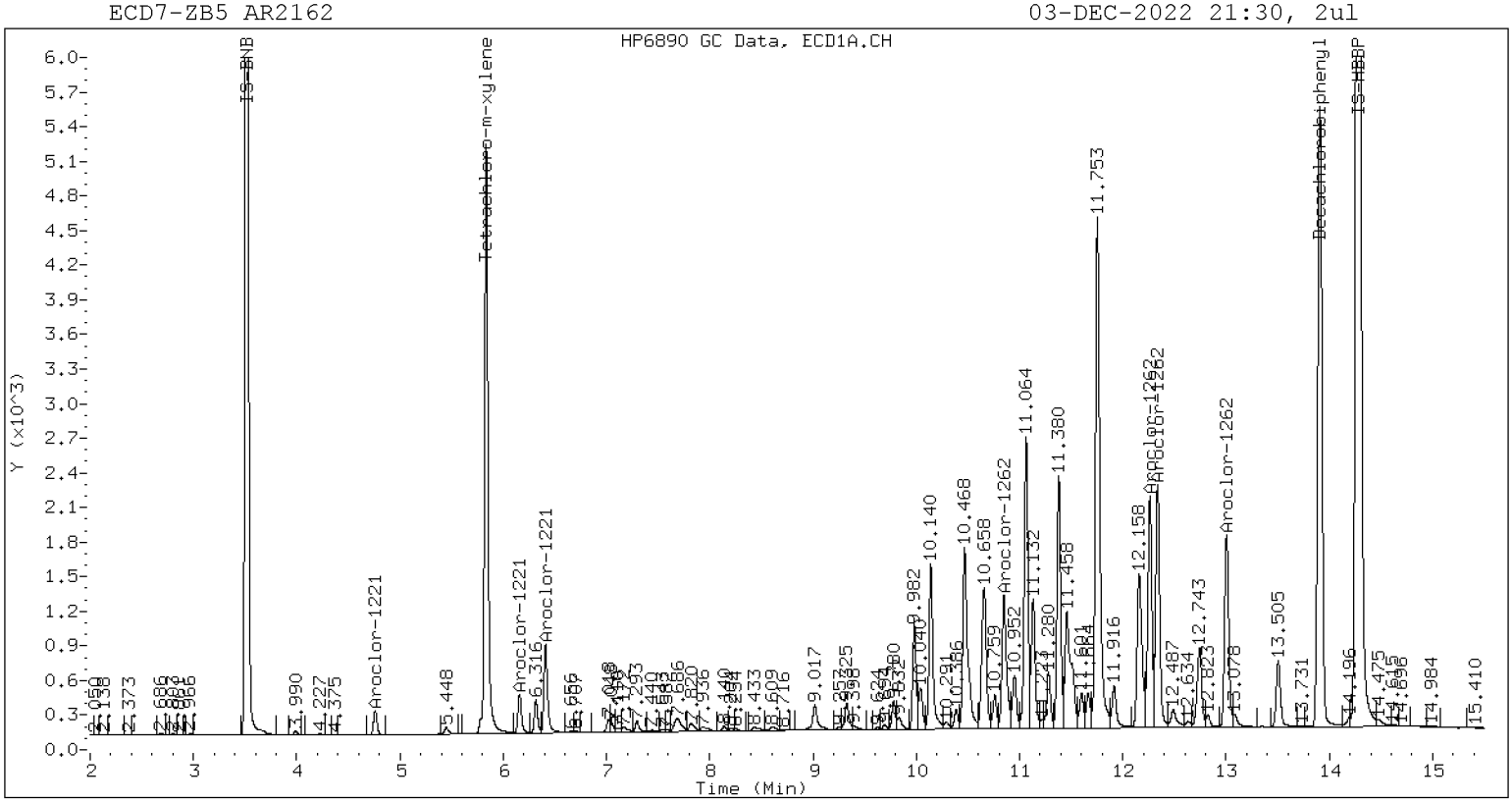
Total PCB Area Col2 (5.936 - 13.808) = 1073324 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

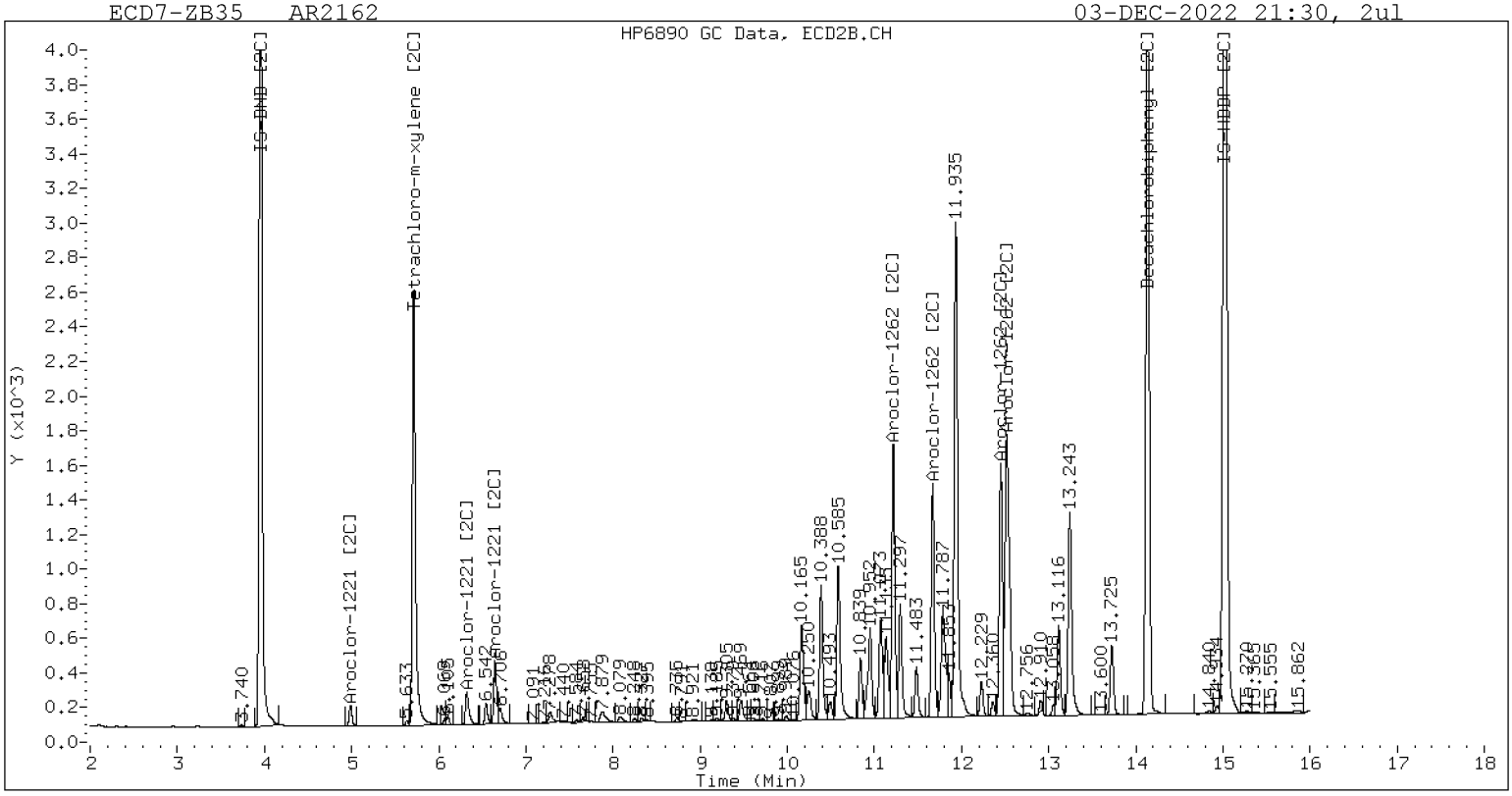
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162 03-DEC-2022 21:30, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162 03-DEC-2022 21:30, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032221ECD7.D
Data file 2: /221203.b/221203.b/12032221ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR3268.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268
Client ID:
Injection Date: 03-DEC-2022 21:52
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	0.000	243663	5.713	0.000	131067	37.5	37.4	0.3	Tetrachloro-m-xylene
13.908	0.000	449152	14.137	0.000	328563	57.2	55.9	2.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	458589	2.4
Hexabromobiphenyl	798898	855928	7.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	255655	2.6
Hexabromobiphenyl	362541	413793	14.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	4.761	0.000	5704	250.0	1	4.989	0.000	3108	250.0
Aroclor-1232	2	6.160	0.000	12048	250.0	2	7.277	0.000	15872	250.0
Aroclor-1232	3	7.684	0.000	54107	250.0	3	7.876	0.000	31029	250.0
Aroclor-1232	4	8.606	0.000	22956	250.0	4	8.734	0.000	8413	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0
Aroclor-1268	1	12.262	0.000	299378	250.0	1	12.450	0.000	195273	250.0
Aroclor-1268	2	12.335	0.000	292877	250.0	2	12.517	0.000	200224	250.0
Aroclor-1268	3	12.716	0.000	240046	250.0	3	12.910	0.000	74248	250.0
Aroclor-1268	4	13.505	0.000	732880	250.0	4	13.726	0.000	534323	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.936 - 13.808) = 2400701 Col1 Total PCB = 0.5 ppm*

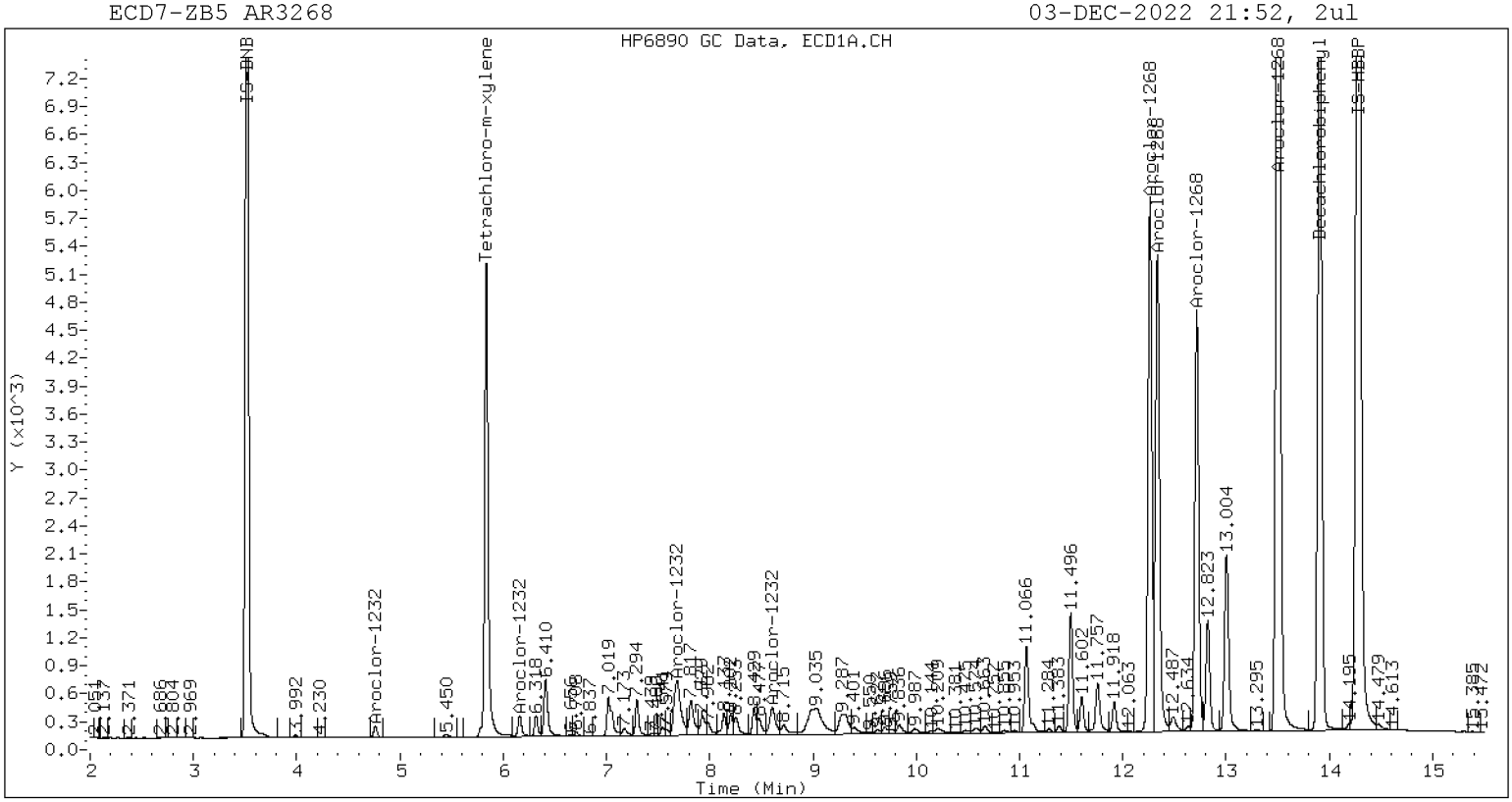
Total PCB Area Col2 (5.936 - 13.808) = 1468669 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

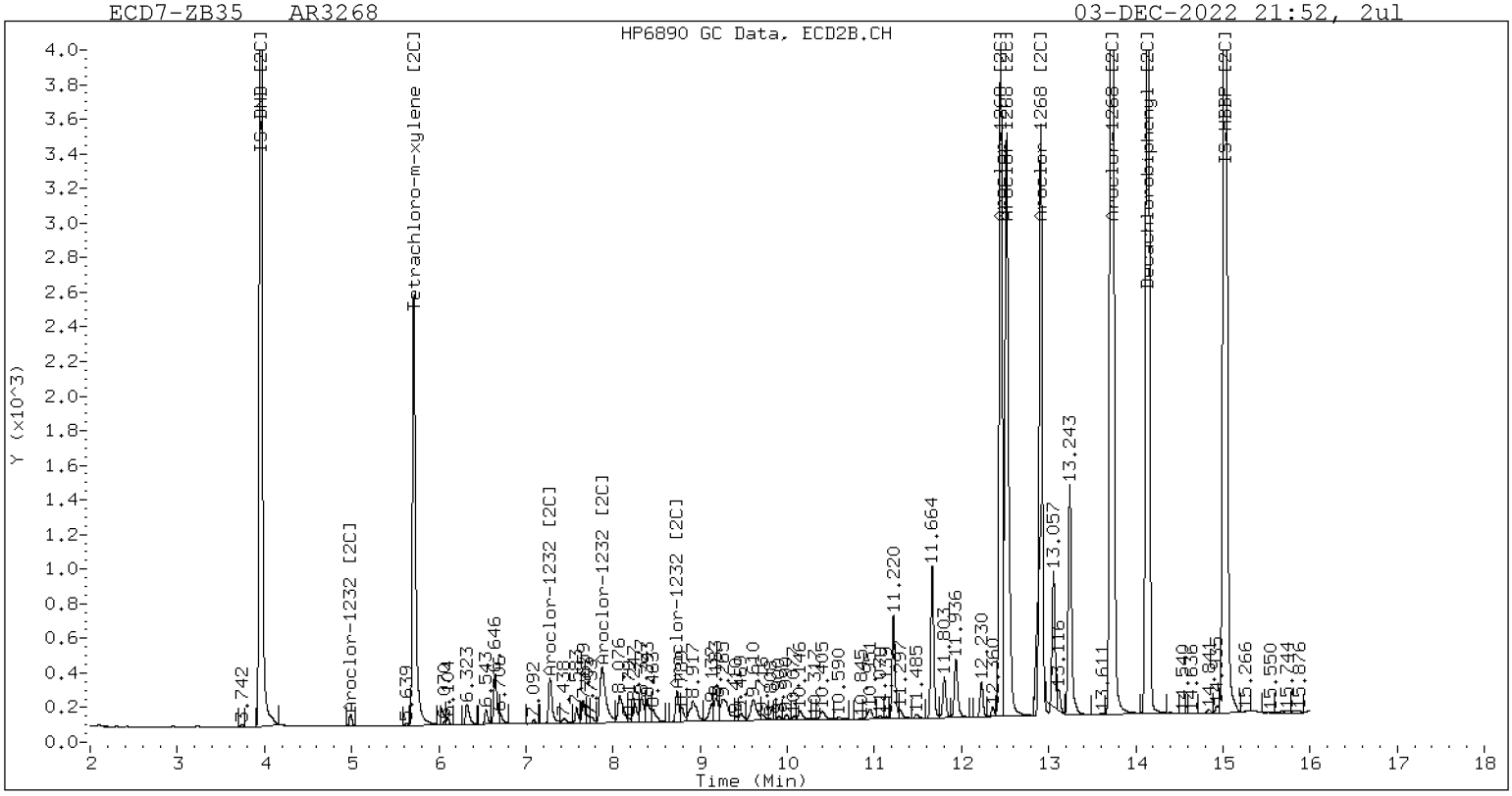
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268 03-DEC-2022 21:52, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268 03-DEC-2022 21:52, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032222ECD7.D
Data file 2: /221203.b/221203.b/12032222ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV1
Client ID:
Injection Date: 03-DEC-2022 22:13
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.000	247495	5.714	0.000	133904	36.1	36.1	0.2	Tetrachloro-m-xylene
13.909	0.001	325466	14.137	0.000	234467	39.8	38.2	4.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	483506	8.0
Hexabromobiphenyl	798898	892033	11.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270882	8.7
Hexabromobiphenyl	362541	432562	19.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.293	0.001	36100	223.8	1	7.277	0.002	30155	217.7
Aroclor-1016	2	7.681	0.007	113995	218.9	2	7.875	0.004	64468	215.8
Aroclor-1016	3	7.815	0.004	53043	224.8	3	8.074	0.004	27130	211.5
Aroclor-1016	4	8.428	0.004	33958	225.7	4	8.245	0.004	14848	220.1
Total Col1Ave (4 peaks):					223.3	Total Col2Ave (4 peaks):				216.3 RPD = 3
Corrected Ave (3 peaks):					222.5	Corrected Ave (3 peaks):				215.0 RPD = 3
Aroclor-1260	1	11.063	0.001	93173	286.9	1	11.671	0.002	56796	248.7
Aroclor-1260	2	11.380	0.003	95530	284.5	2	11.935	0.002	153247	267.5
Aroclor-1260	3	11.754	0.004	250548	283.9	3	12.452	0.001	41316	270.8
Aroclor-1260	4	12.159	0.005	120399	267.9	4	12.519	0.003	100704	263.7
Aroclor-1260	5	12.263	0.003	55639	302.5	NS	---			----
Total Col1Ave (5 peaks):					285.1	Total Col2Ave (4 peaks):				262.7 RPD = 8
Corrected Ave (4 peaks):					280.8	Corrected Ave (3 peaks):				260.0 RPD = 8

Total PCB Area Col1 (5.936 - 13.808) = 2318083 Col1 Total PCB = 0.4 ppm*

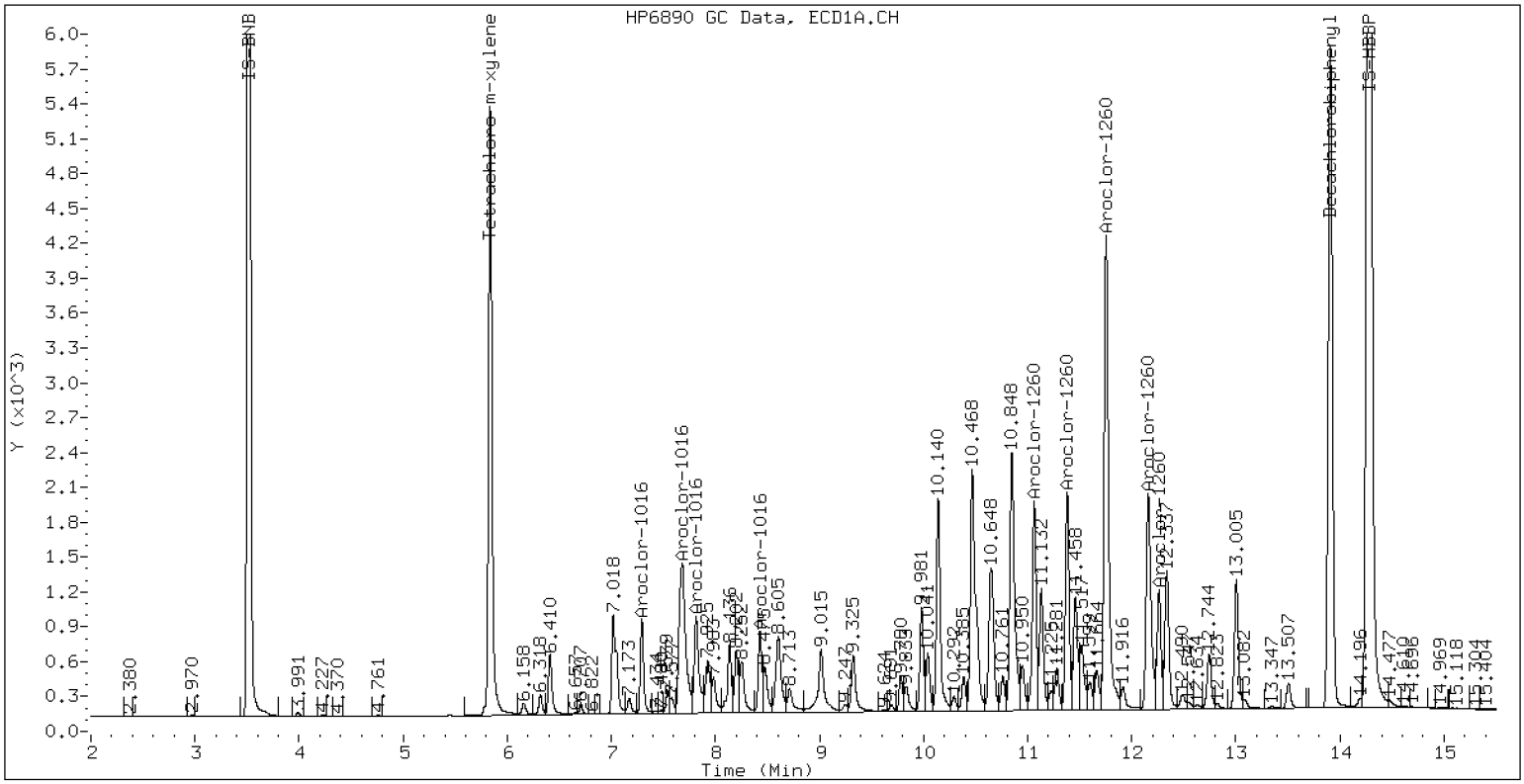
Total PCB Area Col2 (5.936 - 13.808) = 1275603 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

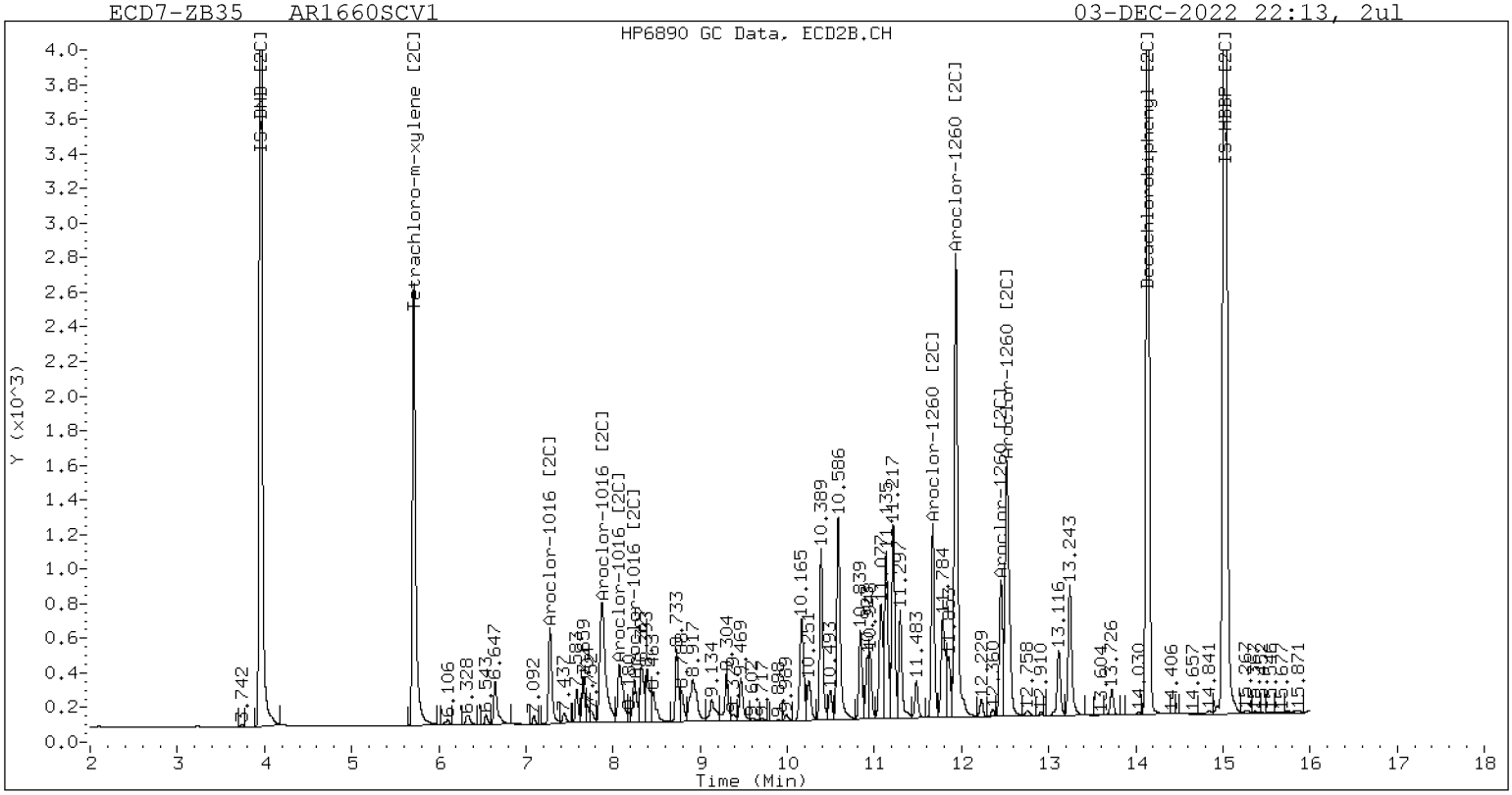
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV1 03-DEC-2022 22:13, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV1 03-DEC-2022 22:13, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032223ECD7.D
Data file 2: /221203.b/221203.b/12032223ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV2
Client ID:
Injection Date: 03-DEC-2022 22:34
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.000	242356	5.713	-0.001	132586	35.6	35.8	0.7	Tetrachloro-m-xylene
13.909	0.001	321690	14.136	-0.001	228130	39.1	38.0	2.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	480791	7.4
Hexabromobiphenyl	798898	896515	12.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270117	8.4
Hexabromobiphenyl	362541	422729	16.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.294	0.000	26316	193.1	1	7.277	-0.001	23973	209.7
Aroclor-1242	2	7.677	-0.003	89703	207.3	2	7.873	-0.002	50204	206.9
Aroclor-1242	3	8.427	0.000	26786	215.2	3	9.176	-0.002	19686	251.4
Aroclor-1242	4	9.025	-0.005	54647	211.4	4	9.599	-0.006	21874	232.4
Total Col1Ave (4 peaks):					206.7	Total Col2Ave (4 peaks):				225.1 RPD = 9
Corrected Ave (3 peaks):					203.9	Corrected Ave (3 peaks):				216.3 RPD = 6

Total PCB Area Col1 (5.936 - 13.808) = 731052 Col1 Total PCB = 0.1 ppm*

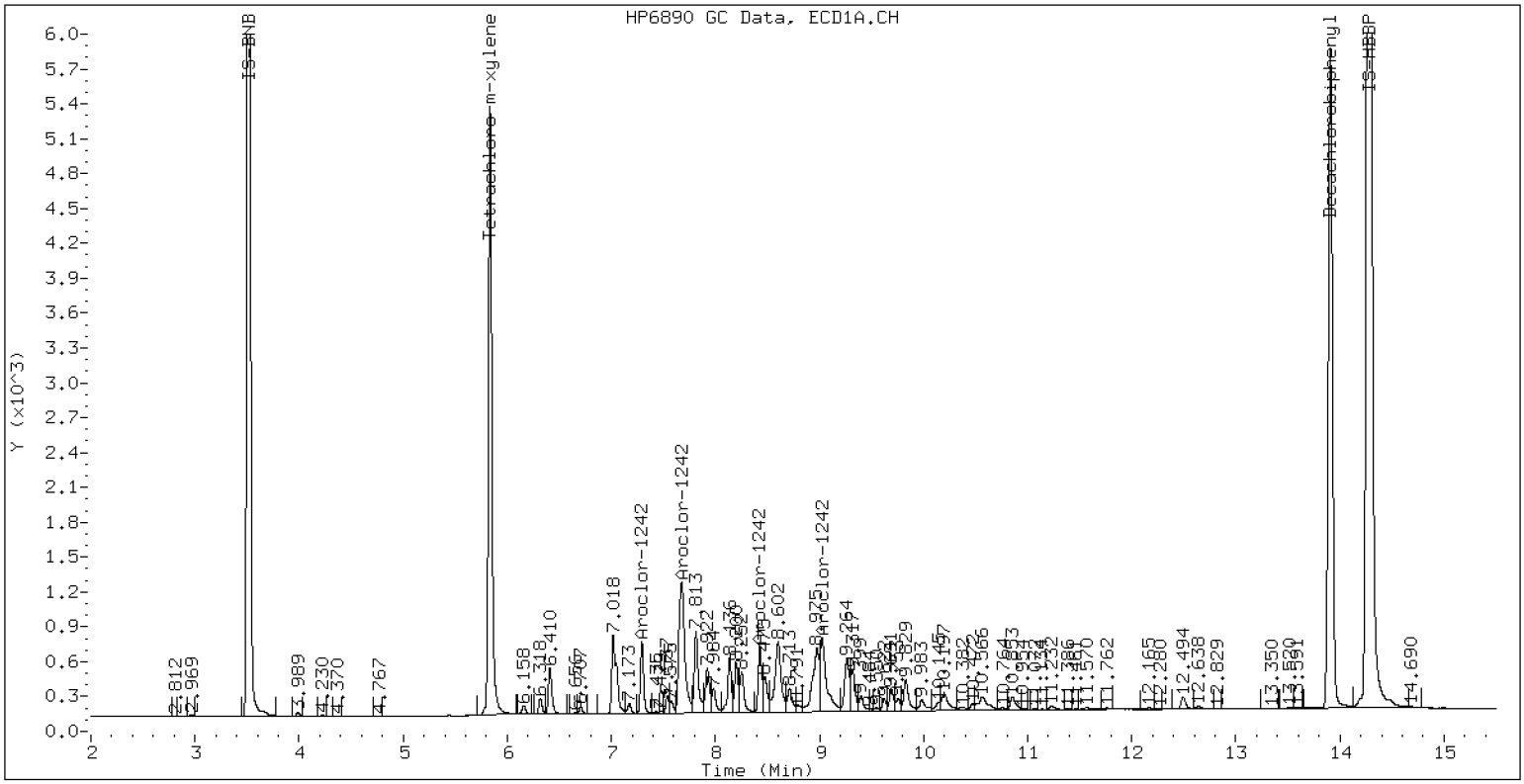
Total PCB Area Col2 (5.936 - 13.808) = 398143 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

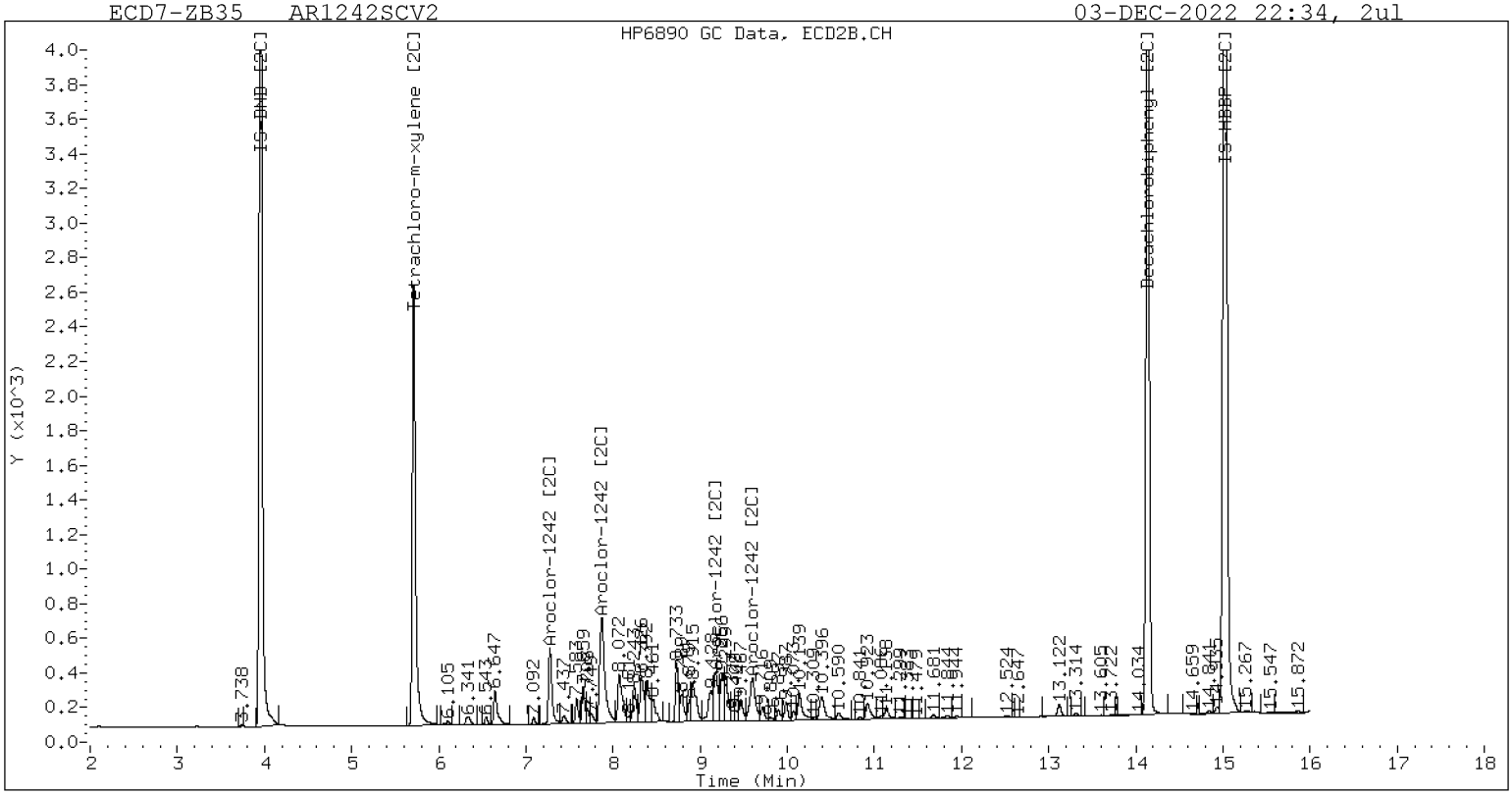
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV2 03-DEC-2022 22:34, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV2 03-DEC-2022 22:34, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032224ECD7.D
Data file 2: /221203.b/221203.b/12032224ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV3
Client ID:
Injection Date: 03-DEC-2022 22:55
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.000	238518	5.713	-0.001	130772	34.7	35.1	1.0	Tetrachloro-m-xylene
13.909	0.001	329816	14.137	0.000	230748	39.3	38.1	3.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	484977	8.3
Hexabromobiphenyl	798898	915518	14.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	272055	9.2
Hexabromobiphenyl	362541	426674	17.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.427	-0.000	49184	235.9	1	8.326	0.000	25647	230.8
Aroclor-1248	2	8.604	0.002	62884	236.2	2	8.733	0.000	26944	230.5
Aroclor-1248	3	9.021	-0.002	117065	244.4	3	9.179	0.001	32692	229.9
Aroclor-1248	4	9.315	0.000	62309	265.6	4	9.604	0.002	38342	229.7

Total Col1Ave (4 peaks): 245.5 Total Col2Ave (4 peaks): 230.2 RPD = 6

Corrected Ave (3 peaks): 238.8 Corrected Ave (3 peaks): 230.0 RPD = 4

Total PCB Area Col1 (5.936 - 13.808) = 991353 Col1 Total PCB = 0.2 ppm*

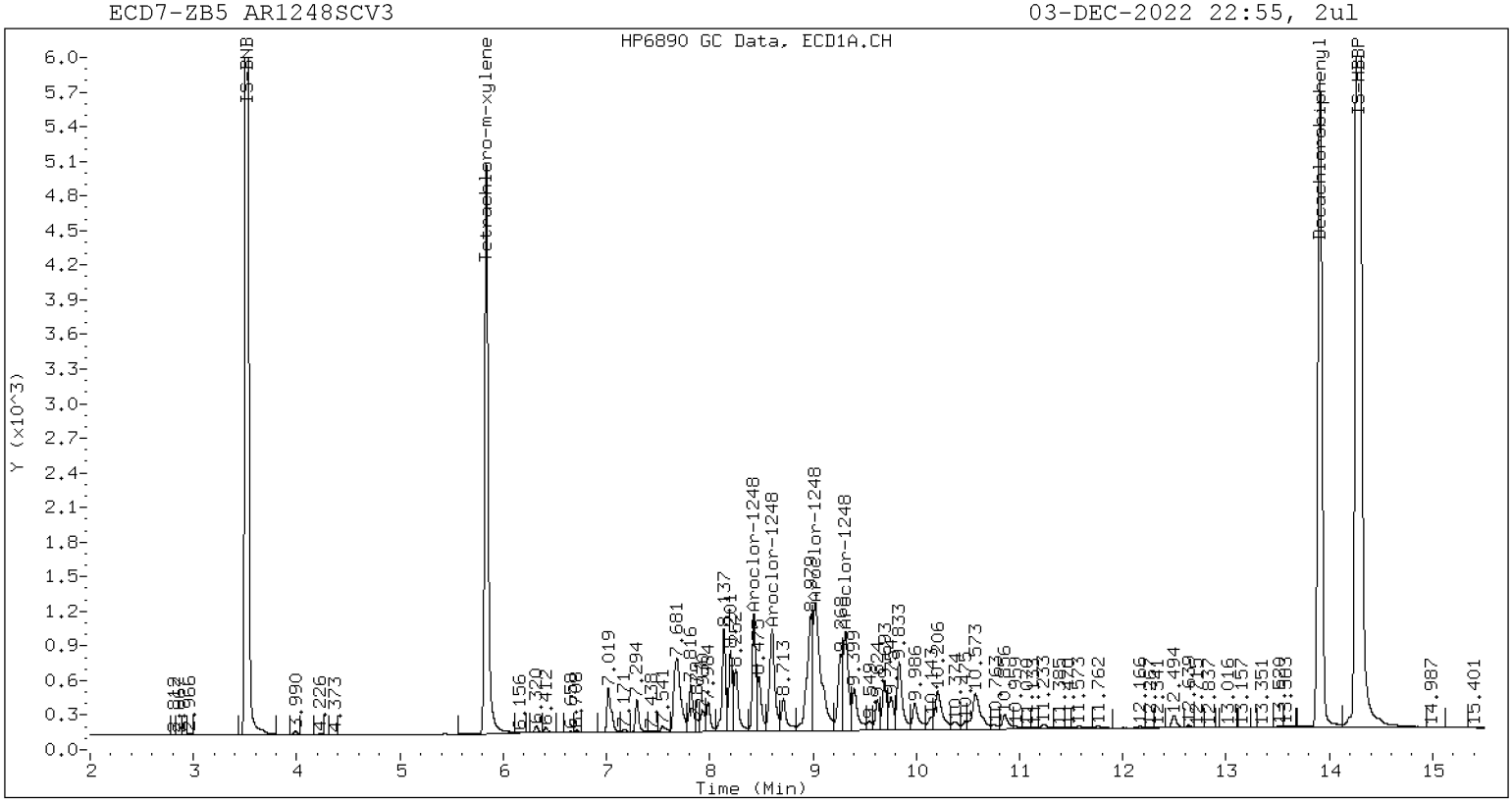
Total PCB Area Col2 (5.936 - 13.808) = 508870 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

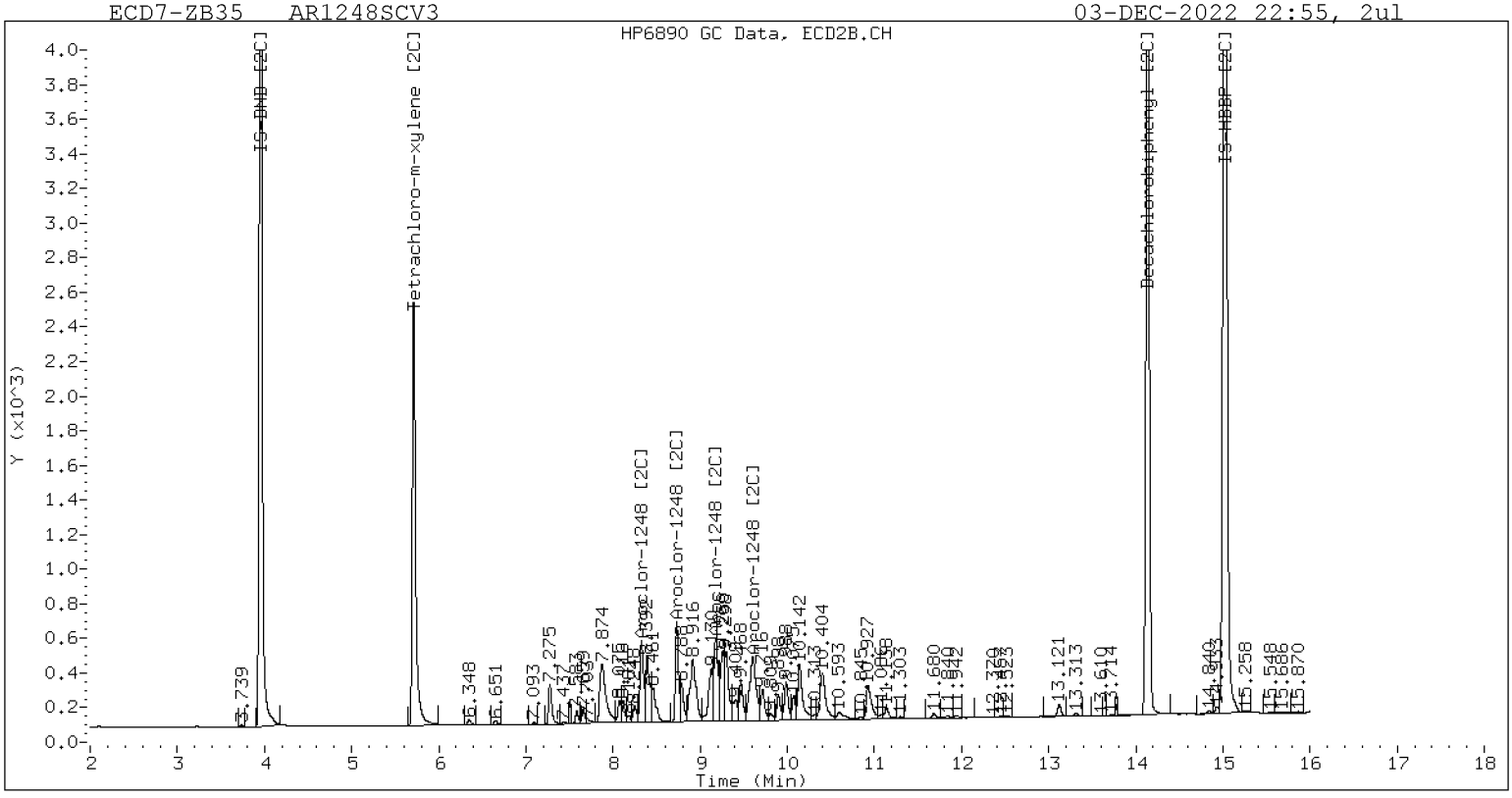
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV3 03-DEC-2022 22:55, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV3 03-DEC-2022 22:55, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032225ECD7.D
Data file 2: /221203.b/221203.b/12032225ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV4
Client ID:
Injection Date: 03-DEC-2022 23:17
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.000	243863	5.713	-0.000	133610	35.5	36.0	1.4	Tetrachloro-m-xylene
13.909	0.001	332566	14.137	-0.000	233115	39.5	38.1	3.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	484642	8.3
Hexabromobiphenyl	798898	917405	14.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270782	8.7
Hexabromobiphenyl	362541	431238	18.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.321	0.003	94448	221.3	1	9.469	0.002	39410	225.7
Aroclor-1254	2	9.401	0.003	41171	248.1	2	9.989	0.002	31415	223.8
Aroclor-1254	3	9.692	0.004	60946	226.1	3	10.143	0.004	66244	219.6
Aroclor-1254	4	9.832	0.004	116490	221.7	4	10.392	0.003	70095	224.3
Aroclor-1254	5	10.199	0.005	80050	222.3	5	10.588	0.002	39206	260.2

Total Col1Ave (5 peaks): 227.9 Total Col2Ave (5 peaks): 230.7 RPD = 1

Corrected Ave (4 peaks): 222.9 Corrected Ave (4 peaks): 223.4 RPD = 0

Total PCB Area Col1 (5.936 - 13.808) = 1261470 Col1 Total PCB = 0.2 ppm*

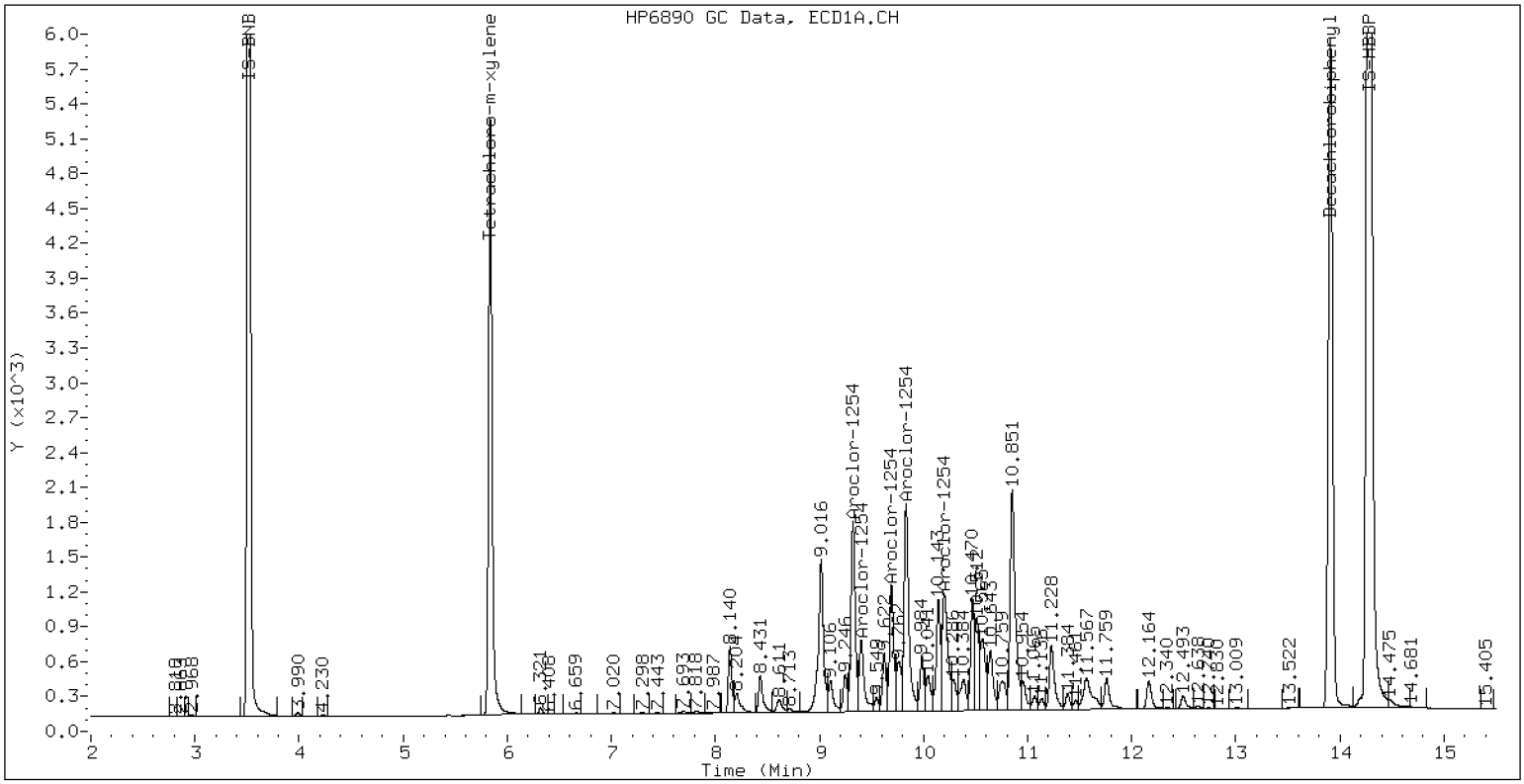
Total PCB Area Col2 (5.936 - 13.808) = 664781 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

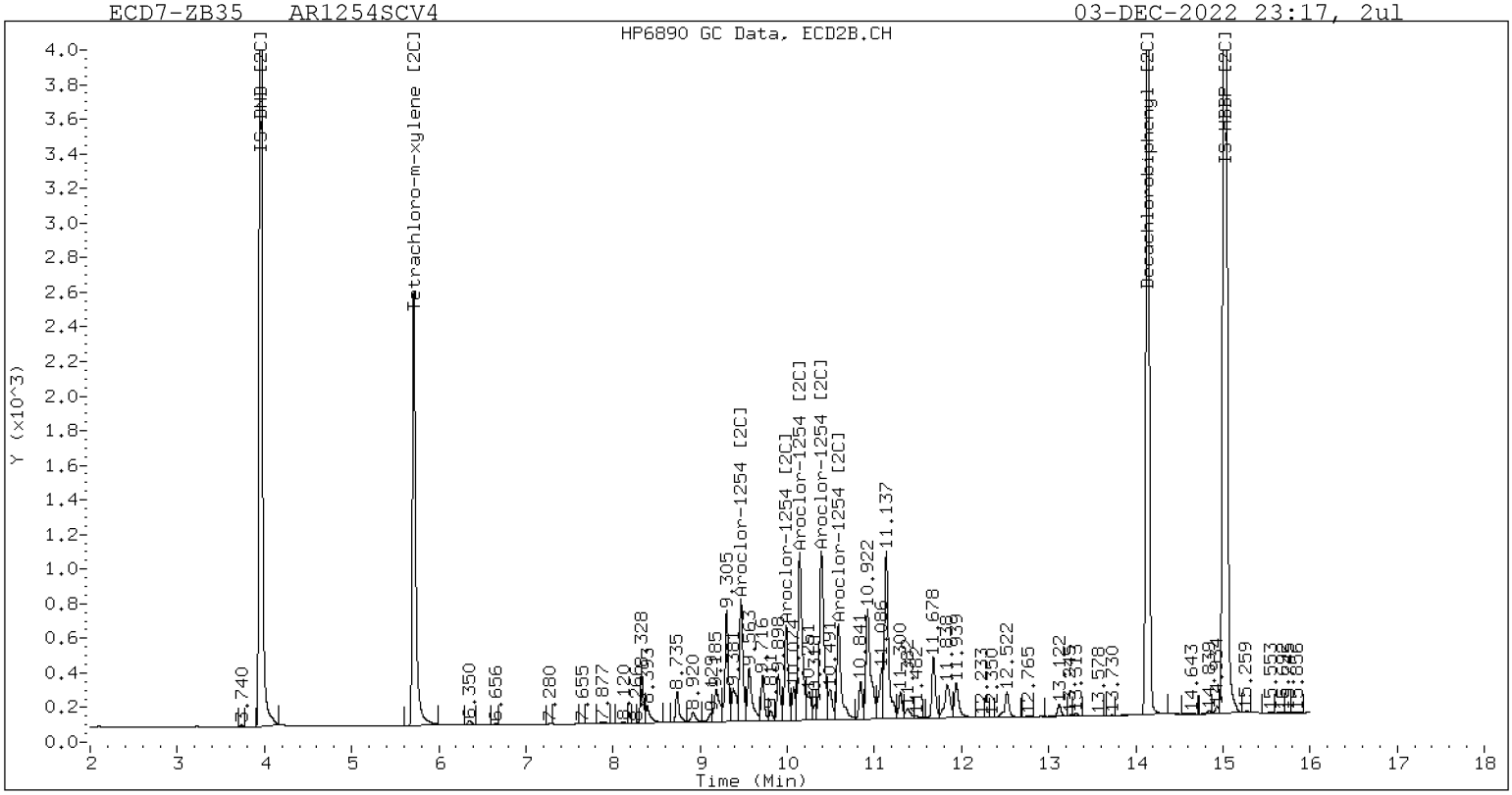
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV4 03-DEC-2022 23:17, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV4 03-DEC-2022 23:17, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032226ECD7.D
Data file 2: /221203.b/221203.b/12032226ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR2162.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV5
Client ID:
Injection Date: 03-DEC-2022 23:38
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	0.000	246394	5.713	-0.000	131378	36.1	35.7	1.1	Tetrachloro-m-xylene
13.908	-0.001	334929	14.136	-0.001	237241	40.0	38.4	4.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	482097	7.7
Hexabromobiphenyl	798898	913775	14.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	268757	7.9
Hexabromobiphenyl	362541	434790	19.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	4.761	0.001	9579	240.4	1	4.988	0.001	5527	243.7
Aroclor-1221	2	6.159	0.001	16402	233.6	2	6.323	0.001	10041	232.3
Aroclor-1221	3	6.410	0.001	38315	236.6	3	6.646	0.001	16814	231.1
Total Col1Ave (3 peaks):					236.8	Total Col2Ave (3 peaks):				235.7 RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.845	-0.003	145305	475.5	1	11.216	-0.001	152840	462.3
Aroclor-1262	2	12.261	-0.001	222795	469.0	2	11.668	-0.002	131097	457.9
Aroclor-1262	3	12.336	-0.001	238475	470.0	3	12.449	-0.002	148386	469.8
Aroclor-1262	4	13.004	-0.001	188009	461.7	4	12.518	-0.001	231081	467.1
Total Col1Ave (4 peaks):					469.1	Total Col2Ave (4 peaks):				464.3 RPD = 1
Corrected Ave (3 peaks):					466.9	Corrected Ave (3 peaks):				462.4 RPD = 1

Total PCB Area Col1 (5.936 - 13.808) = 3654831 Col1 Total PCB = 0.7 ppm*

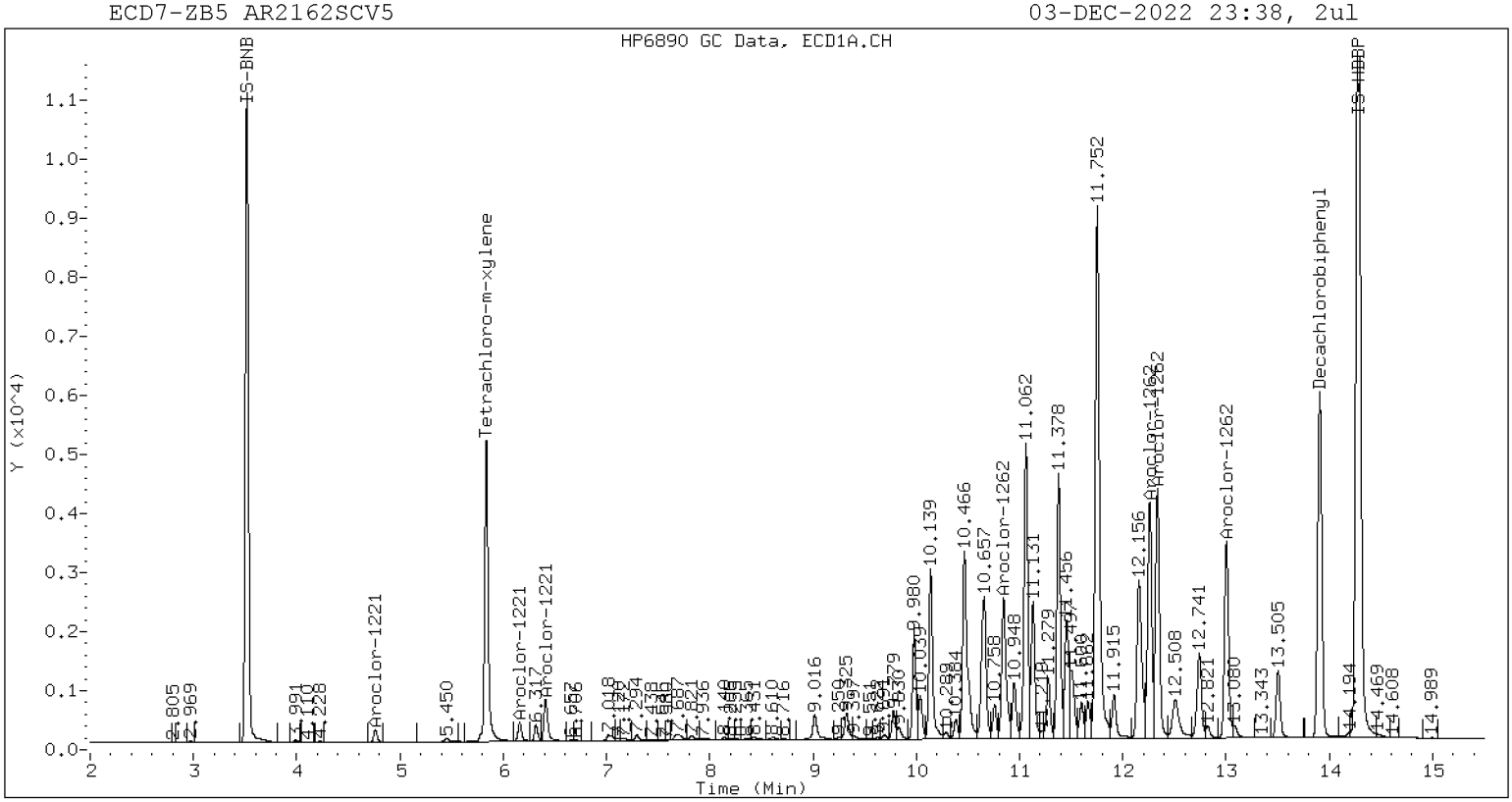
Total PCB Area Col2 (5.936 - 13.808) = 2063978 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

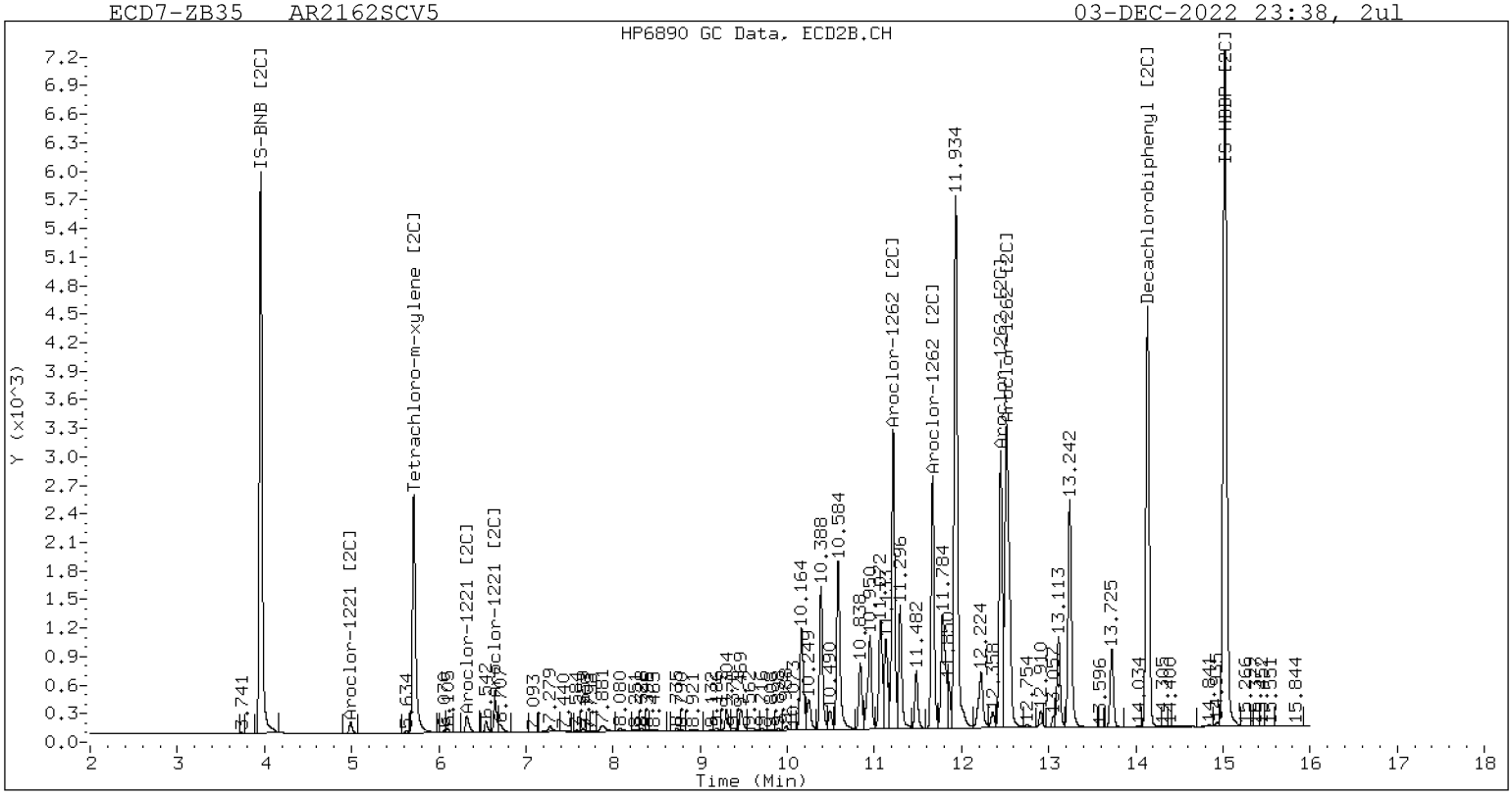
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV5 03-DEC-2022 23:38, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV5 03-DEC-2022 23:38, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032227ECD7.D
Data file 2: /221203.b/221203.b/12032227ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR3268.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV6
Client ID:
Injection Date: 03-DEC-2022 23:59
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.834	-0.002	236120	5.711	-0.002	126782	34.5	34.2	0.7	Tetrachloro-m-xylene
13.907	-0.002	474236	14.136	-0.001	339687	56.2	54.9	2.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	483276	8.0
Hexabromobiphenyl	798898	920878	15.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270175	8.5
Hexabromobiphenyl	362541	435731	20.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	4.758	-0.003	5334	221.8	1	4.986	-0.004	3031	230.7
Aroclor-1232	2	6.158	-0.002	9882	194.6	2	7.276	-0.001	14982	223.3
Aroclor-1232	3	7.684	0.000	51409	225.4	3	7.875	-0.001	29992	228.7
Aroclor-1232	4	8.607	0.001	21710	224.4	4	8.734	0.000	8467	238.1
Total Col1Ave (4 peaks):					216.5	Total Col2Ave (4 peaks):				230.2 RPD = 6
Corrected Ave (3 peaks):					213.6	Corrected Ave (3 peaks):				227.6 RPD = 6
Aroclor-1268	1	12.262	-0.000	296463	230.1	1	12.449	-0.000	189354	230.2
Aroclor-1268	2	12.336	0.001	294353	233.5	2	12.517	0.000	196449	232.9
Aroclor-1268	3	12.715	-0.001	238693	231.1	3	12.909	-0.001	66881	213.9
Aroclor-1268	4	13.506	0.001	725881	230.1	4	13.725	-0.001	525890	233.7
Total Col1Ave (4 peaks):					231.2	Total Col2Ave (4 peaks):				227.7 RPD = 2
Corrected Ave (3 peaks):					230.4	Corrected Ave (3 peaks):				225.7 RPD = 2

Total PCB Area Col1 (5.936 - 13.808) = 2353838 Col1 Total PCB = 0.4 ppm*

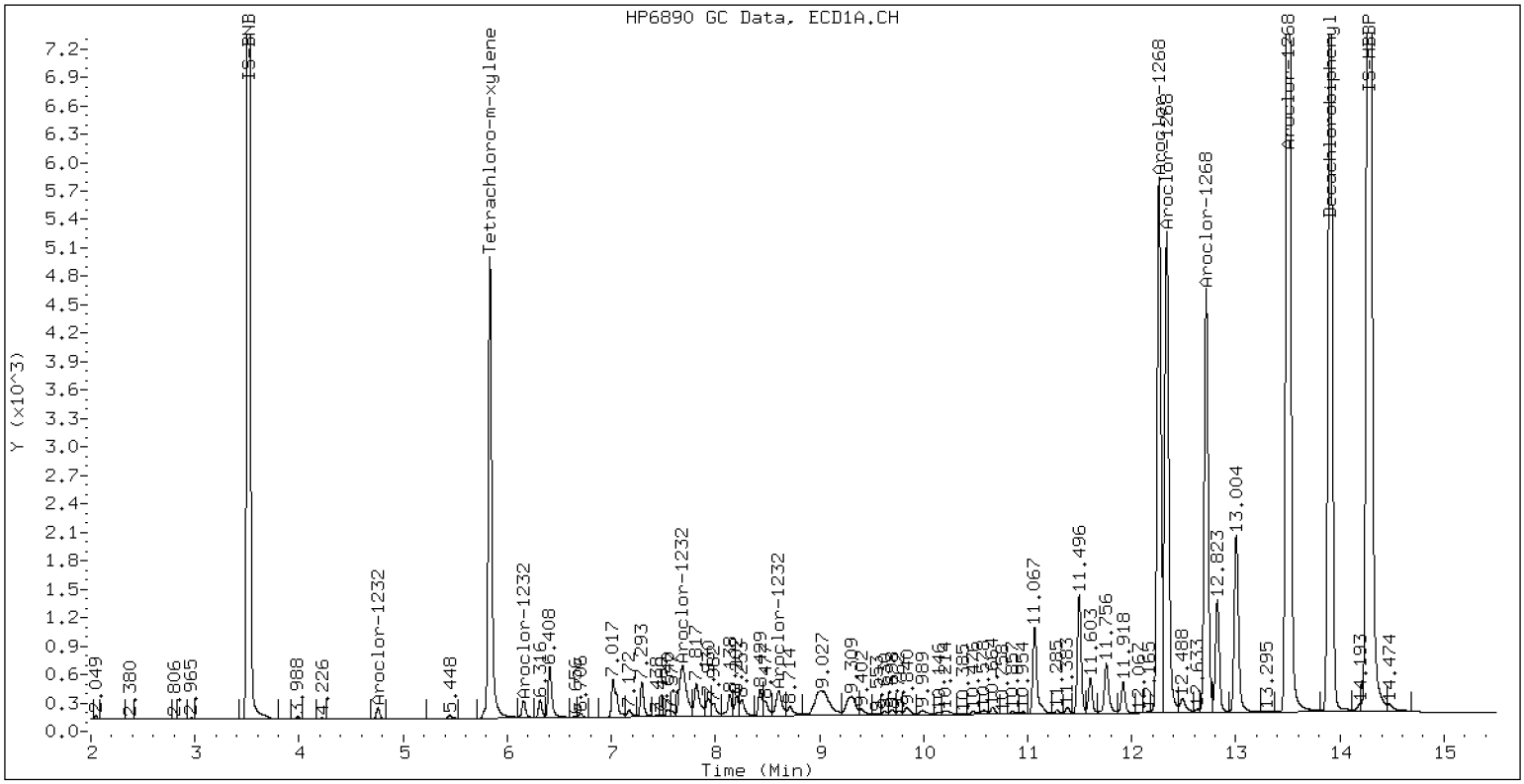
Total PCB Area Col2 (5.936 - 13.808) = 1423323 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

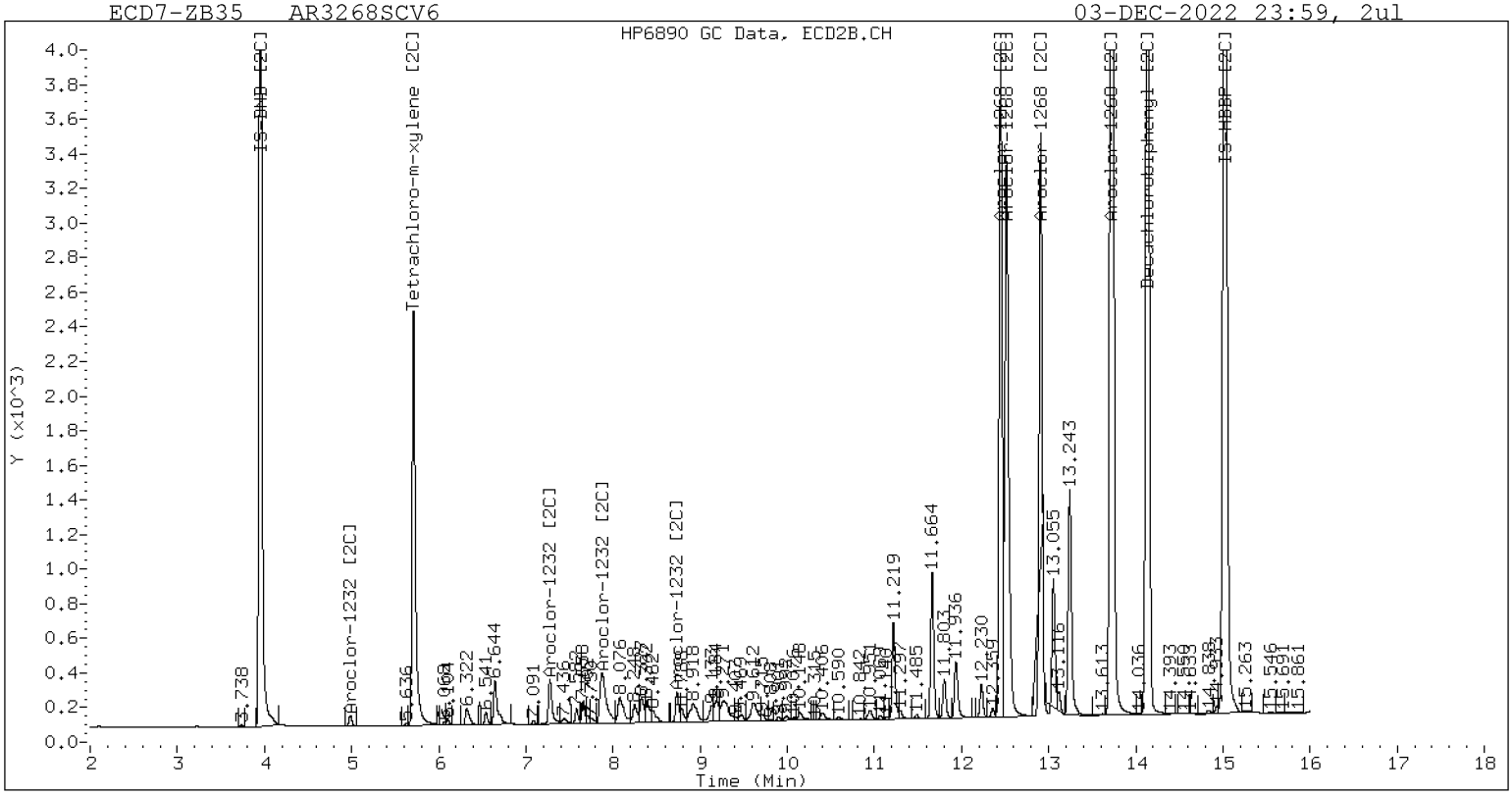
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV6 03-DEC-2022 23:59, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV6 03-DEC-2022 23:59, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: FL00010
Laboratory ID: SKL0048-SCV1
Sequence: SKL0048
Sequence Name: AR1660SCV1
Standard ID: K007655

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1016	250.00	223	-10.7	20.00
Aroclor 1016 [2C]	250.00	216	-13.5	20.00
Aroclor 1260	250.00	285	14.1	20.00
Aroclor 1260 [2C]	250.00	263	5.1	20.00
Decachlorobiphenyl	40.000	39.8	-0.5	20.00
Tetrachlorometaxylene	40.000	36.1	-9.7	20.00
Decachlorobiphenyl [2C]	40.000	38.2	-4.6	20.00
Tetrachlorometaxylene [2C]	40.000	36.1	-9.8	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032222ECD7.D
Data file 2: /221203.b/221203.b/12032222ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV1
Client ID:
Injection Date: 03-DEC-2022 22:13
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.000	247495	5.714	0.000	133904	36.1	36.1	0.2	Tetrachloro-m-xylene
13.909	0.001	325466	14.137	0.000	234467	39.8	38.2	4.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	483506	8.0
Hexabromobiphenyl	798898	892033	11.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270882	8.7
Hexabromobiphenyl	362541	432562	19.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.293	0.001	36100	223.8	1	7.277	0.002	30155	217.7
Aroclor-1016	2	7.681	0.007	113995	218.9	2	7.875	0.004	64468	215.8
Aroclor-1016	3	7.815	0.004	53043	224.8	3	8.074	0.004	27130	211.5
Aroclor-1016	4	8.428	0.004	33958	225.7	4	8.245	0.004	14848	220.1
Total Col1Ave (4 peaks):					223.3	Total Col2Ave (4 peaks):				216.3 RPD = 3
Corrected Ave (3 peaks):					222.5	Corrected Ave (3 peaks):				215.0 RPD = 3
Aroclor-1260	1	11.063	0.001	93173	286.9	1	11.671	0.002	56796	248.7
Aroclor-1260	2	11.380	0.003	95530	284.5	2	11.935	0.002	153247	267.5
Aroclor-1260	3	11.754	0.004	250548	283.9	3	12.452	0.001	41316	270.8
Aroclor-1260	4	12.159	0.005	120399	267.9	4	12.519	0.003	100704	263.7
Aroclor-1260	5	12.263	0.003	55639	302.5	NS	---			----
Total Col1Ave (5 peaks):					285.1	Total Col2Ave (4 peaks):				262.7 RPD = 8
Corrected Ave (4 peaks):					280.8	Corrected Ave (3 peaks):				260.0 RPD = 8

Total PCB Area Col1 (5.936 - 13.808) = 2318083 Col1 Total PCB = 0.4 ppm*

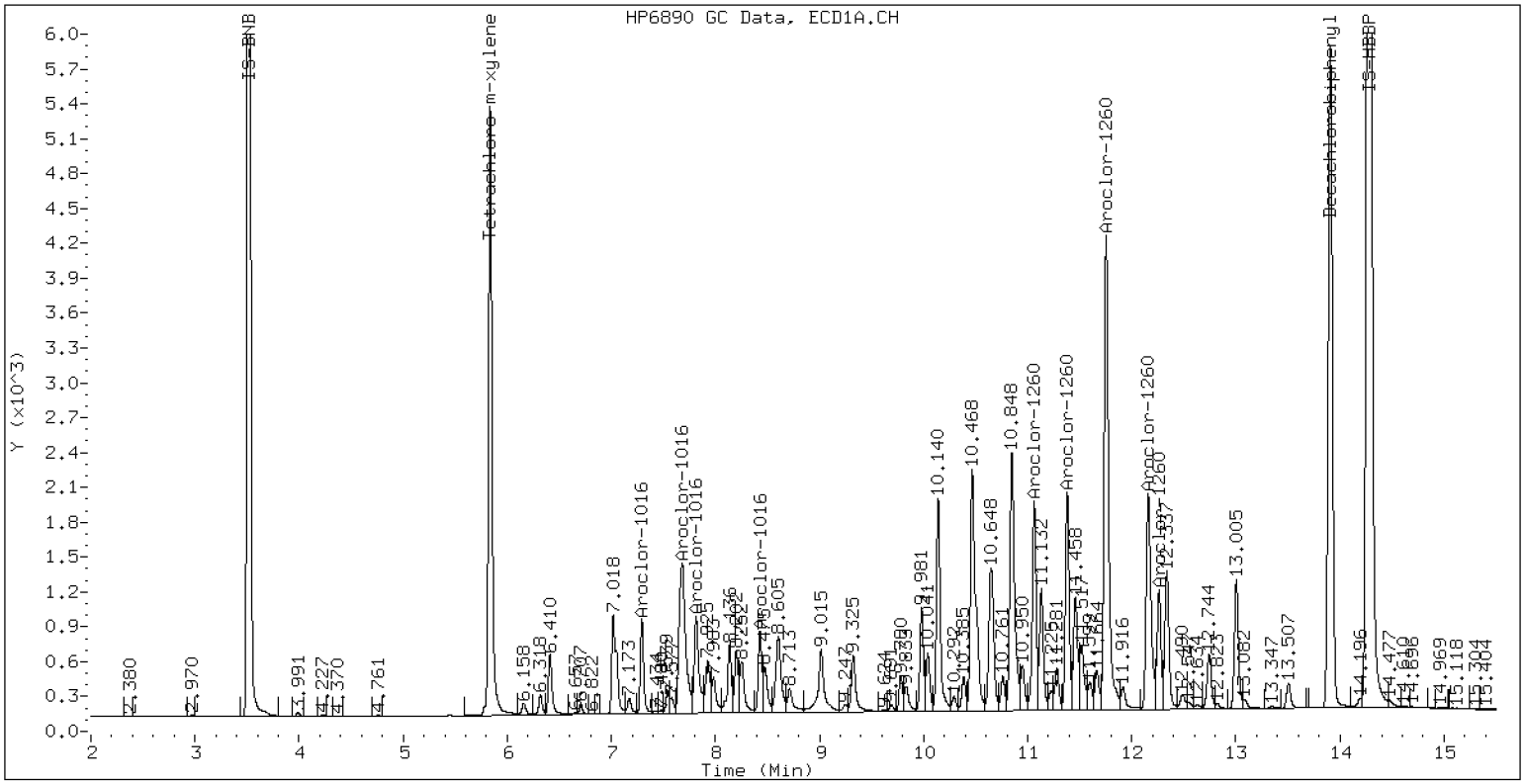
Total PCB Area Col2 (5.936 - 13.808) = 1275603 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

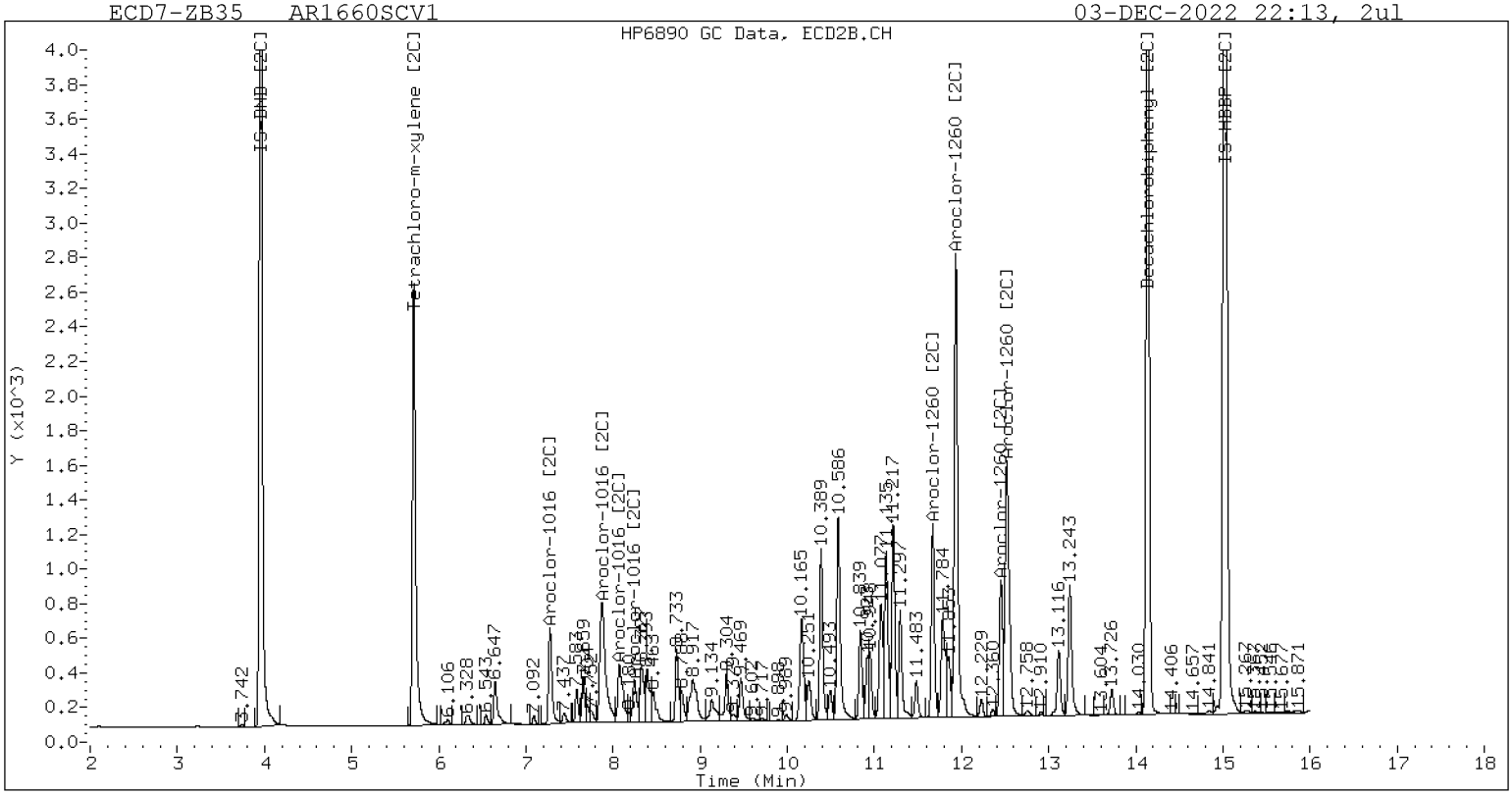
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV1 03-DEC-2022 22:13, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV1 03-DEC-2022 22:13, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: FL00010
Laboratory ID: SKL0048-SCV2
Sequence: SKL0048
Sequence Name: AR1242SCV2
Standard ID: K007656

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1242	250.00	207	-17.3	20.00
Aroclor 1242 [2C]	250.00	225	-10.0	20.00
Decachlorobiphenyl	40.000	39.1	-2.1	20.00
Tetrachlorometaxylene	40.000	35.6	-11.1	20.00
Decachlorobiphenyl [2C]	40.000	38.0	-5.0	20.00
Tetrachlorometaxylene [2C]	40.000	35.8	-10.5	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032223ECD7.D
Data file 2: /221203.b/221203.b/12032223ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV2
Client ID:
Injection Date: 03-DEC-2022 22:34
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.000	242356	5.713	-0.001	132586	35.6	35.8	0.7	Tetrachloro-m-xylene
13.909	0.001	321690	14.136	-0.001	228130	39.1	38.0	2.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	480791	7.4
Hexabromobiphenyl	798898	896515	12.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270117	8.4
Hexabromobiphenyl	362541	422729	16.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.294	0.000	26316	193.1	1	7.277	-0.001	23973	209.7
Aroclor-1242	2	7.677	-0.003	89703	207.3	2	7.873	-0.002	50204	206.9
Aroclor-1242	3	8.427	0.000	26786	215.2	3	9.176	-0.002	19686	251.4
Aroclor-1242	4	9.025	-0.005	54647	211.4	4	9.599	-0.006	21874	232.4
Total Col1Ave (4 peaks):					206.7	Total Col2Ave (4 peaks):				225.1 RPD = 9
Corrected Ave (3 peaks):					203.9	Corrected Ave (3 peaks):				216.3 RPD = 6

Total PCB Area Col1 (5.936 - 13.808) = 731052 Col1 Total PCB = 0.1 ppm*

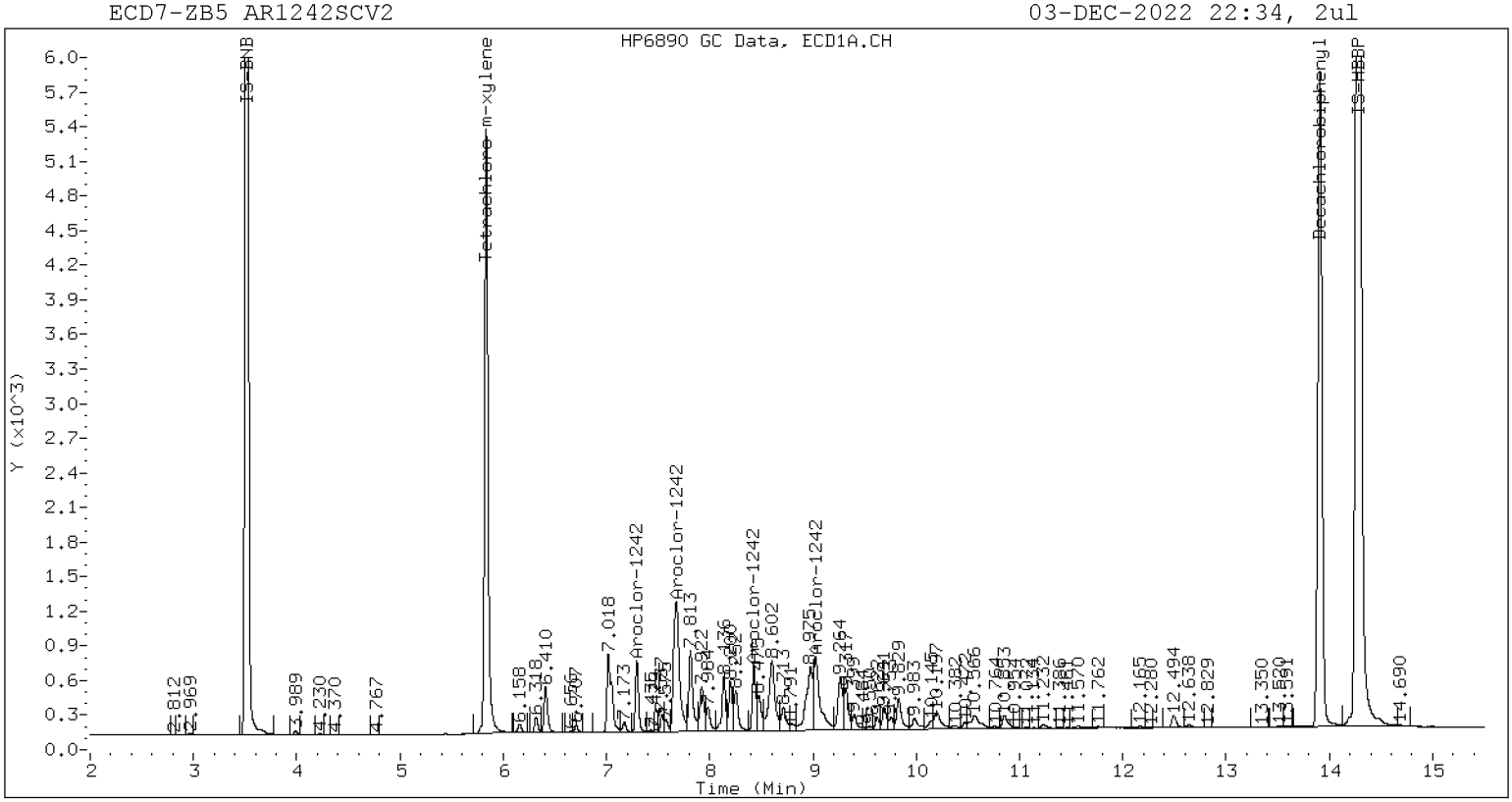
Total PCB Area Col2 (5.936 - 13.808) = 398143 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

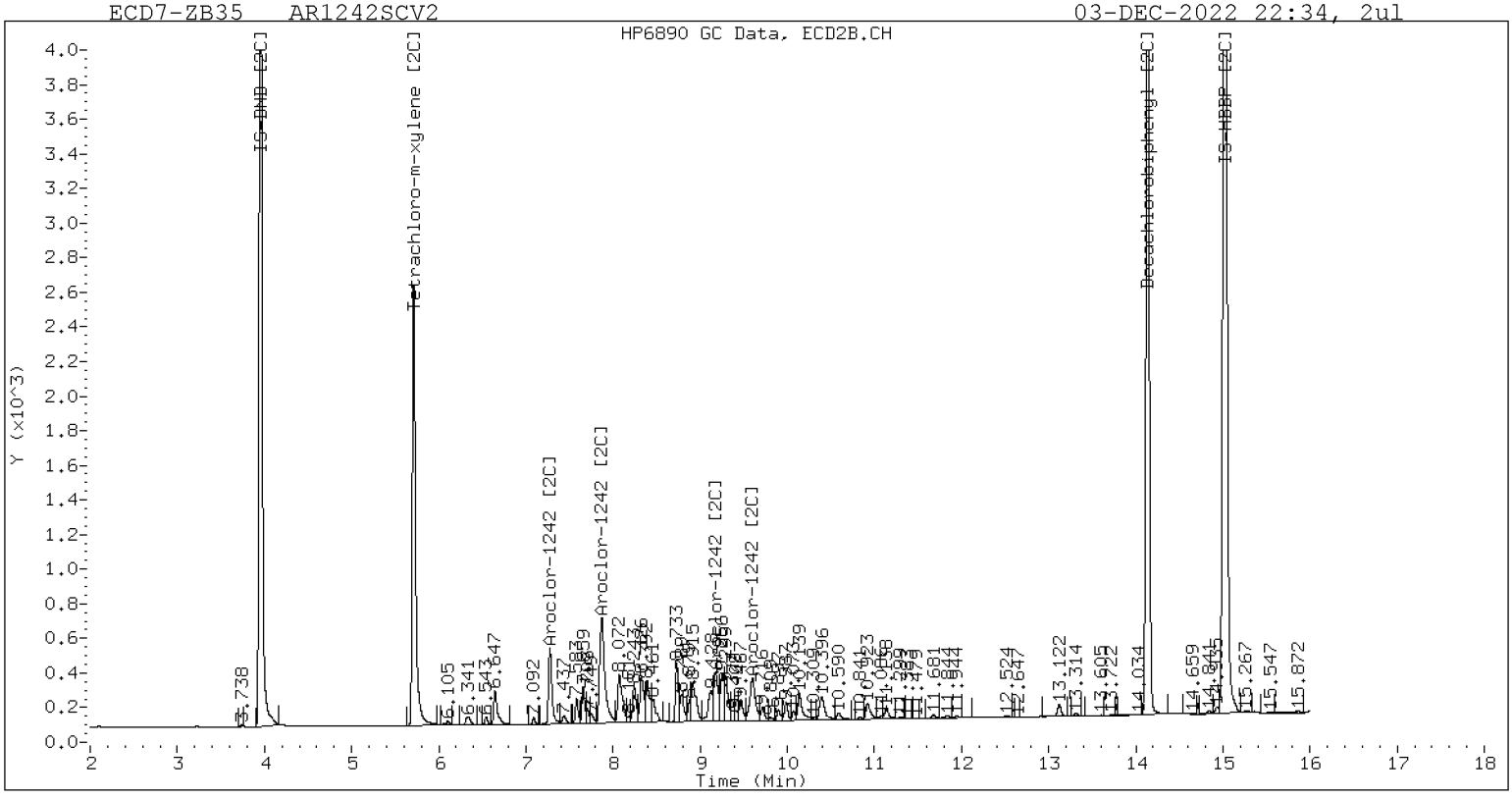
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV2 03-DEC-2022 22:34, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV2 03-DEC-2022 22:34, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: FL00010
Laboratory ID: SKL0048-SCV3
Sequence: SKL0048
Sequence Name: AR1248SCV3
Standard ID: K007657

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1248	250.00	246	-1.8	20.00
Aroclor 1248 [2C]	250.00	230	-7.9	20.00
Decachlorobiphenyl	40.000	39.3	-1.7	20.00
Tetrachlorometaxylene	40.000	34.7	-13.2	20.00
Decachlorobiphenyl [2C]	40.000	38.1	-4.8	20.00
Tetrachlorometaxylene [2C]	40.000	35.1	-12.3	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032224ECD7.D
Data file 2: /221203.b/221203.b/12032224ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV3
Client ID:
Injection Date: 03-DEC-2022 22:55
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.000	238518	5.713	-0.001	130772	34.7	35.1	1.0	Tetrachloro-m-xylene
13.909	0.001	329816	14.137	0.000	230748	39.3	38.1	3.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	484977	8.3
Hexabromobiphenyl	798898	915518	14.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	272055	9.2
Hexabromobiphenyl	362541	426674	17.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.427	-0.000	49184	235.9	1	8.326	0.000	25647	230.8
Aroclor-1248	2	8.604	0.002	62884	236.2	2	8.733	0.000	26944	230.5
Aroclor-1248	3	9.021	-0.002	117065	244.4	3	9.179	0.001	32692	229.9
Aroclor-1248	4	9.315	0.000	62309	265.6	4	9.604	0.002	38342	229.7

Total Col1Ave (4 peaks): 245.5 Total Col2Ave (4 peaks): 230.2 RPD = 6

Corrected Ave (3 peaks): 238.8 Corrected Ave (3 peaks): 230.0 RPD = 4

Total PCB Area Col1 (5.936 - 13.808) = 991353 Col1 Total PCB = 0.2 ppm*

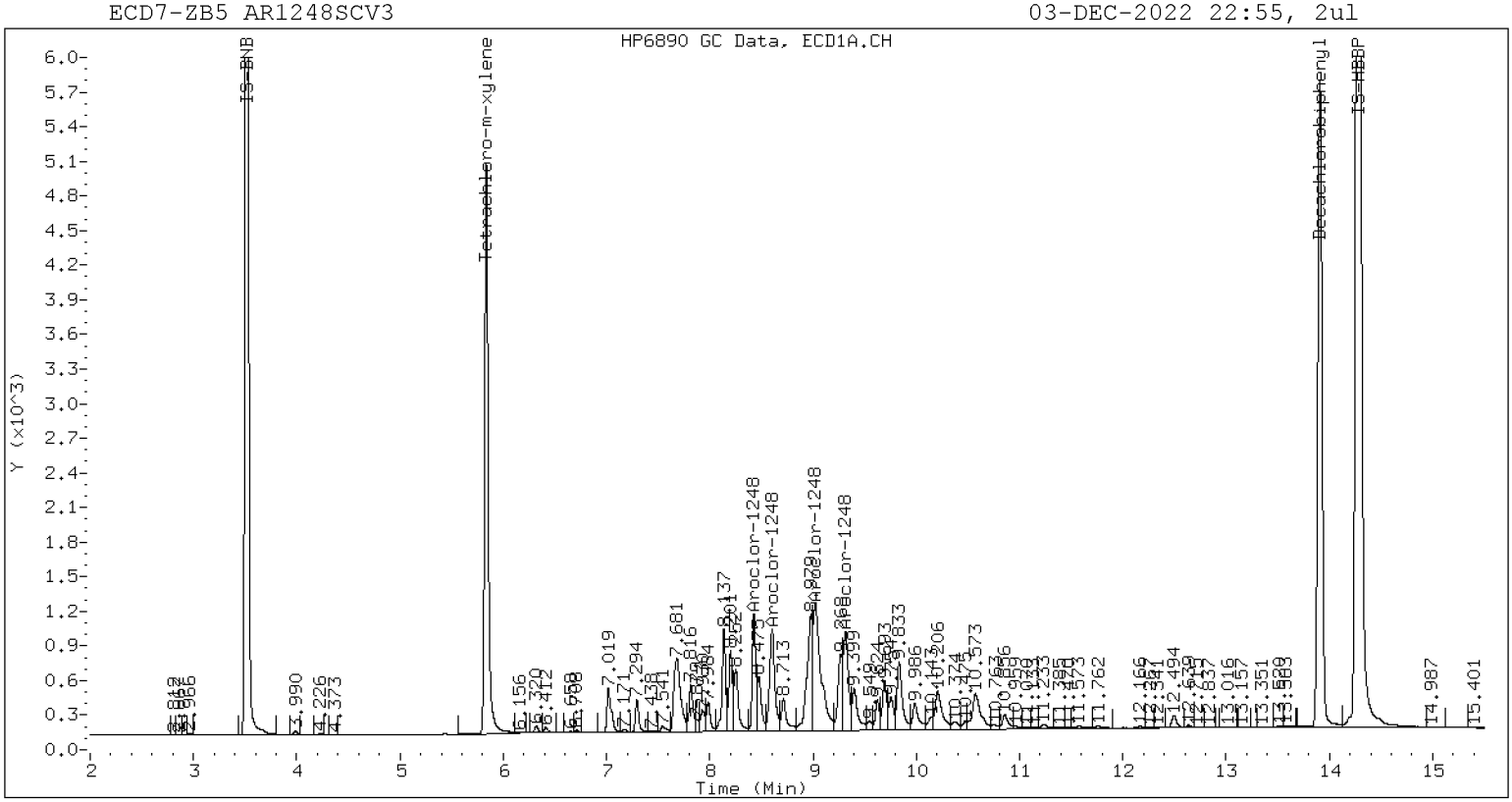
Total PCB Area Col2 (5.936 - 13.808) = 508870 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

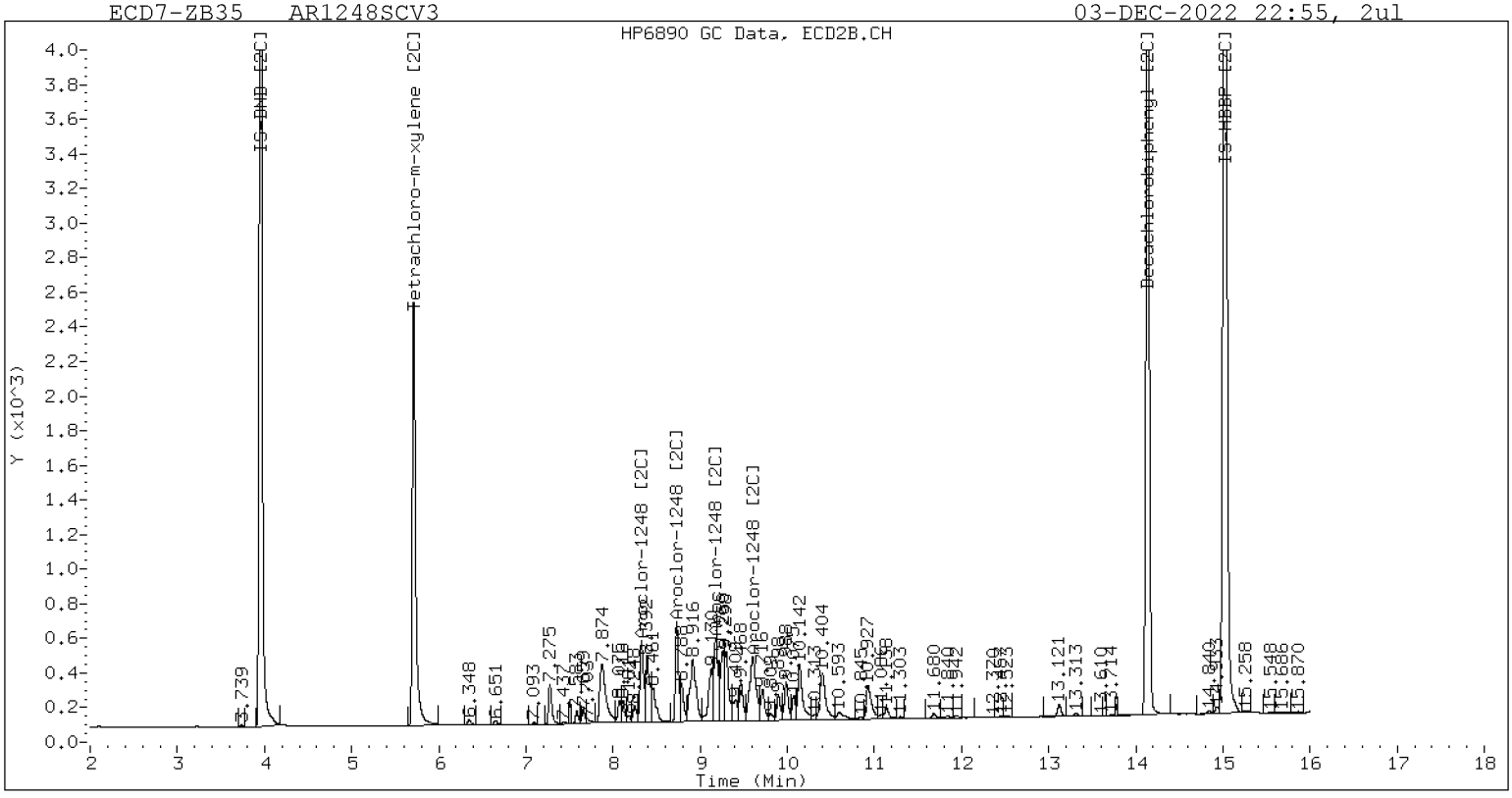
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV3 03-DEC-2022 22:55, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV3 03-DEC-2022 22:55, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: FL00010
Laboratory ID: SKL0048-SCV4
Sequence: SKL0048
Sequence Name: AR1254SCV4
Standard ID: K007658

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1254	250.00	228	-8.8	20.00
Aroclor 1254 [2C]	250.00	231	-7.7	20.00
Decachlorobiphenyl	40.000	39.5	-1.1	20.00
Tetrachlorometaxylene	40.000	35.5	-11.2	20.00
Decachlorobiphenyl [2C]	40.000	38.1	-4.8	20.00
Tetrachlorometaxylene [2C]	40.000	36.0	-10.0	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032225ECD7.D
Data file 2: /221203.b/221203.b/12032225ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV4
Client ID:
Injection Date: 03-DEC-2022 23:17
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.000	243863	5.713	-0.000	133610	35.5	36.0	1.4	Tetrachloro-m-xylene
13.909	0.001	332566	14.137	-0.000	233115	39.5	38.1	3.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	484642	8.3
Hexabromobiphenyl	798898	917405	14.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270782	8.7
Hexabromobiphenyl	362541	431238	18.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.321	0.003	94448	221.3	1	9.469	0.002	39410	225.7
Aroclor-1254	2	9.401	0.003	41171	248.1	2	9.989	0.002	31415	223.8
Aroclor-1254	3	9.692	0.004	60946	226.1	3	10.143	0.004	66244	219.6
Aroclor-1254	4	9.832	0.004	116490	221.7	4	10.392	0.003	70095	224.3
Aroclor-1254	5	10.199	0.005	80050	222.3	5	10.588	0.002	39206	260.2

Total Col1Ave (5 peaks): 227.9 Total Col2Ave (5 peaks): 230.7 RPD = 1

Corrected Ave (4 peaks): 222.9 Corrected Ave (4 peaks): 223.4 RPD = 0

Total PCB Area Col1 (5.936 - 13.808) = 1261470 Col1 Total PCB = 0.2 ppm*

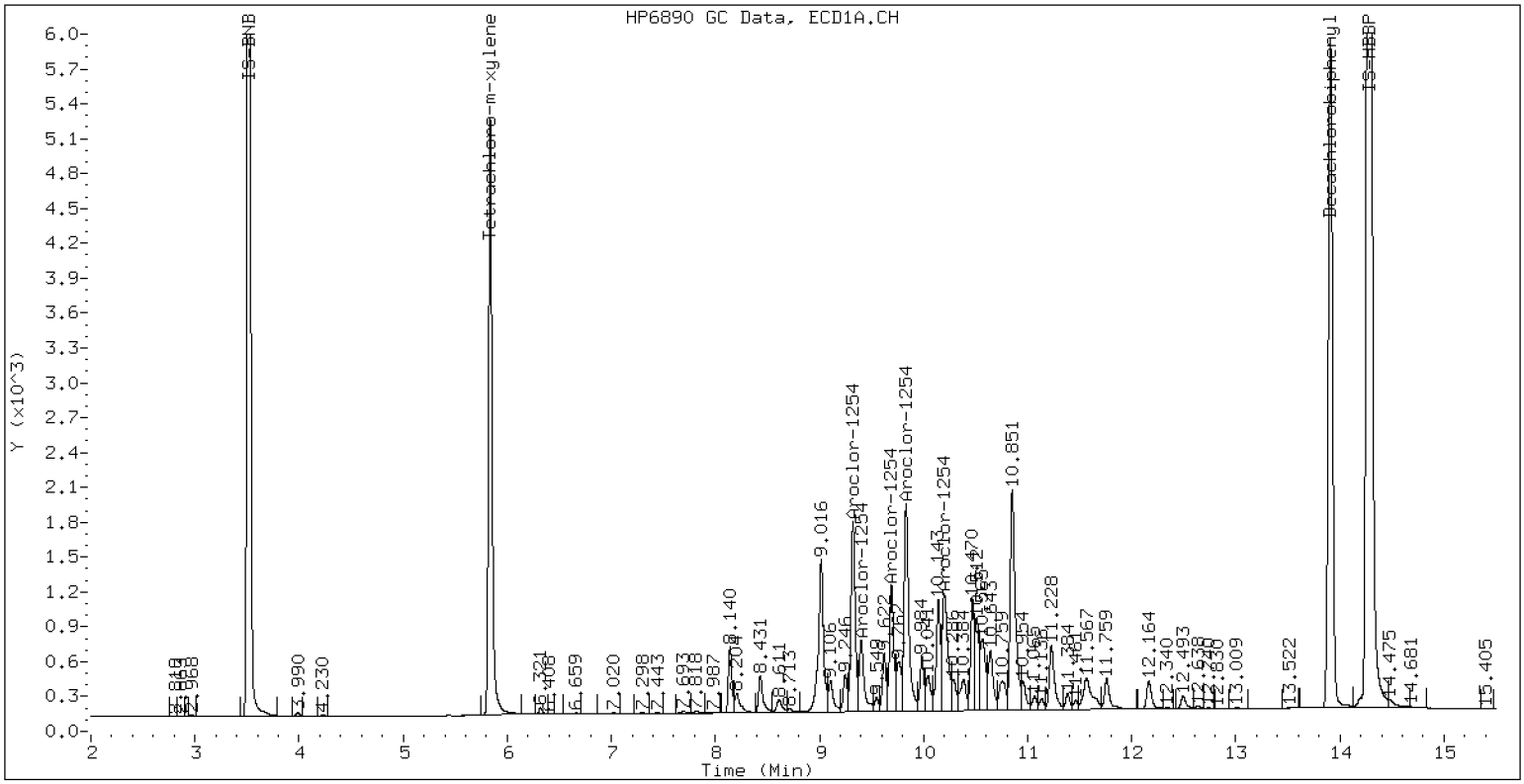
Total PCB Area Col2 (5.936 - 13.808) = 664781 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

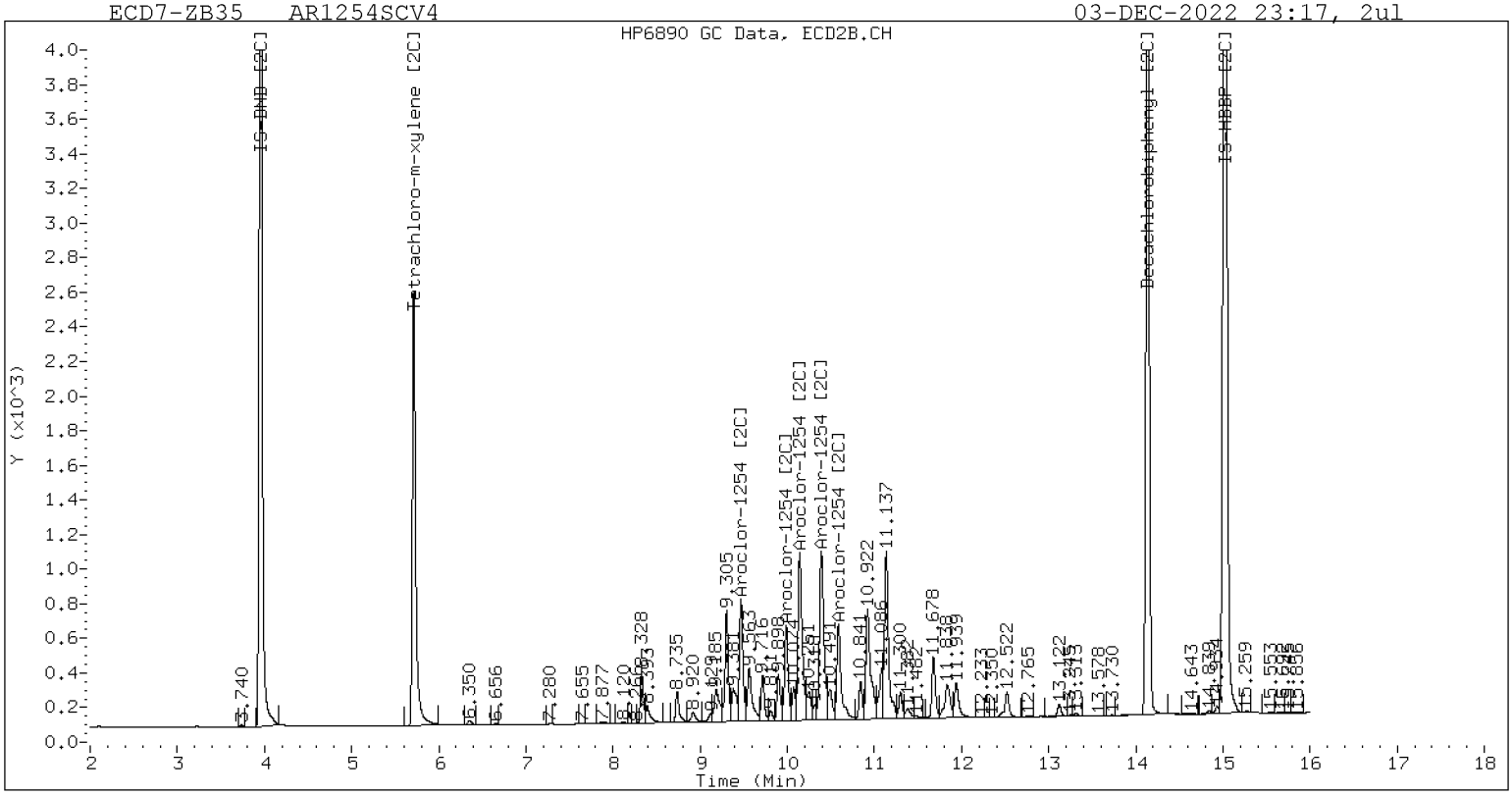
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV4 03-DEC-2022 23:17, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV4 03-DEC-2022 23:17, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: FL00010
Laboratory ID: SKL0048-SCV5
Sequence: SKL0048
Sequence Name: AR2162SCV5
Standard ID: K007659

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1221	250.00	237	-5.3	20.00
Aroclor 1221 [2C]	250.00	236	-5.7	20.00
Decachlorobiphenyl	40.000	40.0	-0.04	20.00
Tetrachlorometaxylene	40.000	36.1	-9.8	20.00
Decachlorobiphenyl [2C]	40.000	38.4	-3.9	20.00
Tetrachlorometaxylene [2C]	40.000	35.7	-10.8	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032226ECD7.D
Data file 2: /221203.b/221203.b/12032226ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR2162.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV5
Client ID:
Injection Date: 03-DEC-2022 23:38
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	0.000	246394	5.713	-0.000	131378	36.1	35.7	1.1	Tetrachloro-m-xylene
13.908	-0.001	334929	14.136	-0.001	237241	40.0	38.4	4.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	482097	7.7
Hexabromobiphenyl	798898	913775	14.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	268757	7.9
Hexabromobiphenyl	362541	434790	19.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	4.761	0.001	9579	240.4	1	4.988	0.001	5527	243.7
Aroclor-1221	2	6.159	0.001	16402	233.6	2	6.323	0.001	10041	232.3
Aroclor-1221	3	6.410	0.001	38315	236.6	3	6.646	0.001	16814	231.1
Total Col1Ave (3 peaks):					236.8	Total Col2Ave (3 peaks):				235.7 RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.845	-0.003	145305	475.5	1	11.216	-0.001	152840	462.3
Aroclor-1262	2	12.261	-0.001	222795	469.0	2	11.668	-0.002	131097	457.9
Aroclor-1262	3	12.336	-0.001	238475	470.0	3	12.449	-0.002	148386	469.8
Aroclor-1262	4	13.004	-0.001	188009	461.7	4	12.518	-0.001	231081	467.1
Total Col1Ave (4 peaks):					469.1	Total Col2Ave (4 peaks):				464.3 RPD = 1
Corrected Ave (3 peaks):					466.9	Corrected Ave (3 peaks):				462.4 RPD = 1

Total PCB Area Col1 (5.936 - 13.808) = 3654831 Col1 Total PCB = 0.7 ppm*

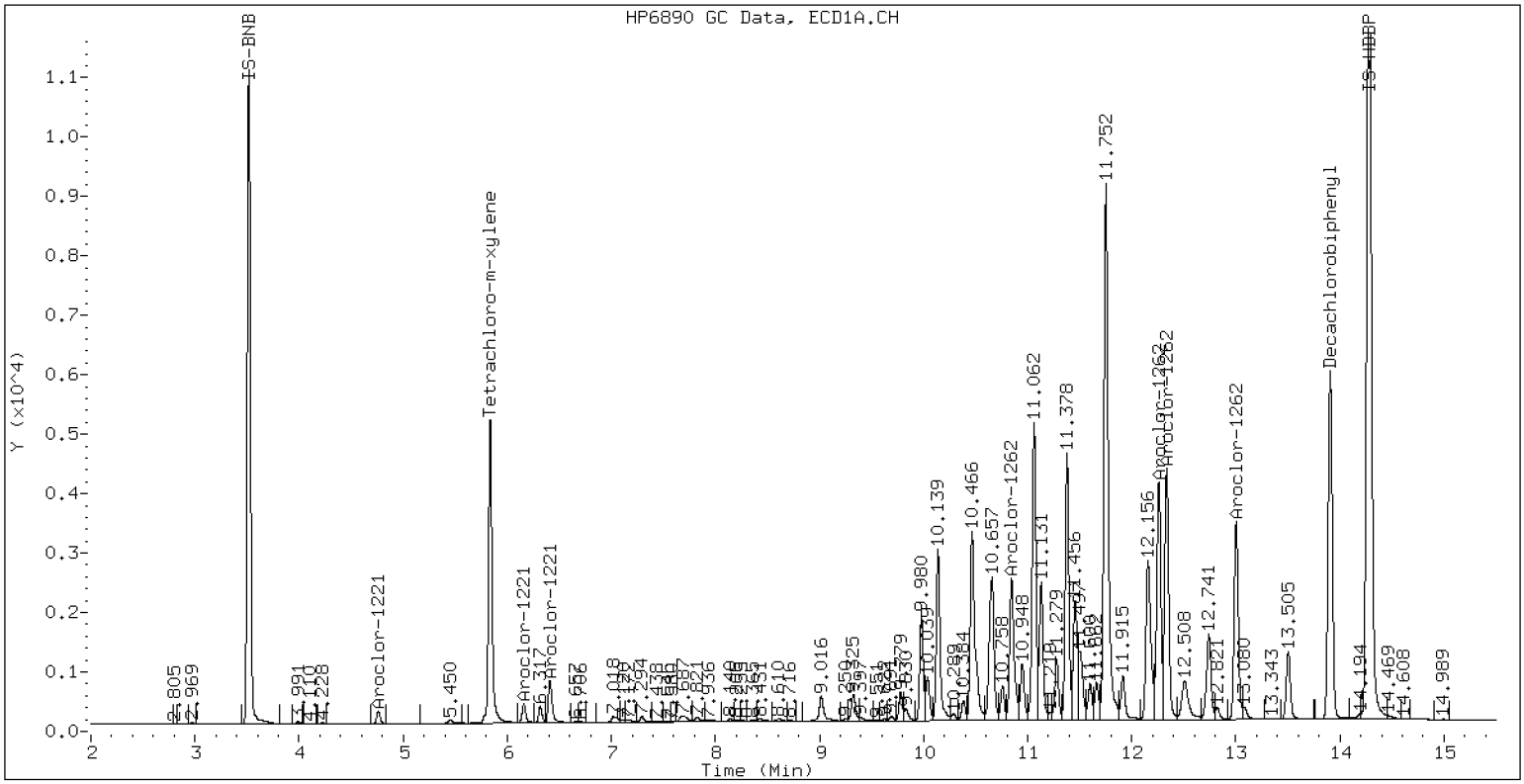
Total PCB Area Col2 (5.936 - 13.808) = 2063978 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

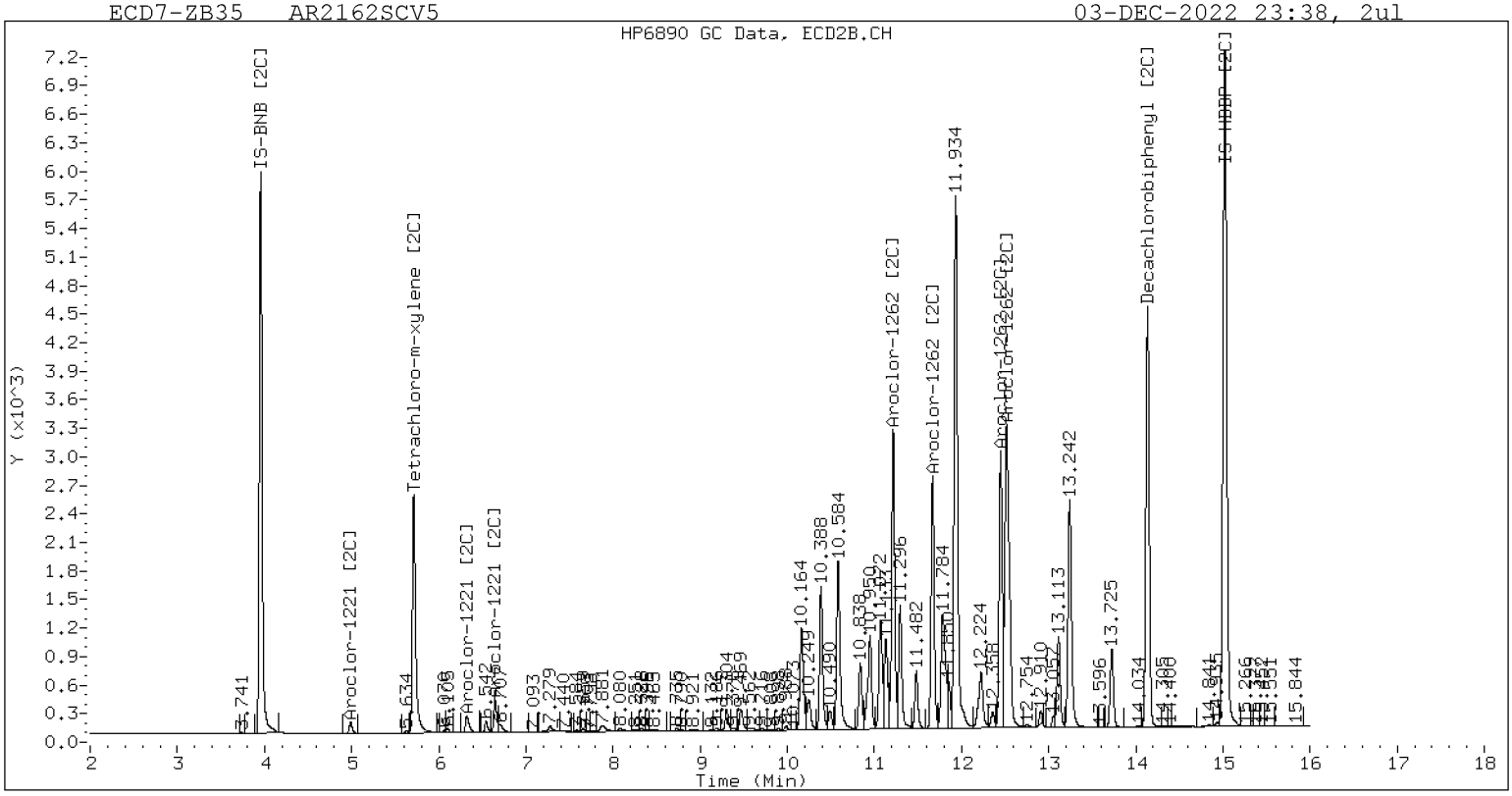
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV5 03-DEC-2022 23:38, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV5 03-DEC-2022 23:38, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: FL00010
Laboratory ID: SKL0048-SCV6
Sequence: SKL0048
Sequence Name: AR3268SCV6
Standard ID: K007660

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1232	250.00	217	-13.4	20.00
Aroclor 1232 [2C]	250.00	230	-7.9	20.00
Decachlorobiphenyl	40.000	56.2	40.4	20.00
Tetrachlorometaxylene	40.000	34.5	-13.8	20.00
Decachlorobiphenyl [2C]	40.000	54.9	37.3	20.00
Tetrachlorometaxylene [2C]	40.000	34.2	-14.4	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032227ECD7.D
Data file 2: /221203.b/221203.b/12032227ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR3268.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV6
Client ID:
Injection Date: 03-DEC-2022 23:59
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.834	-0.002	236120	5.711	-0.002	126782	34.5	34.2	0.7	Tetrachloro-m-xylene
13.907	-0.002	474236	14.136	-0.001	339687	56.2	54.9	2.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	483276	8.0
Hexabromobiphenyl	798898	920878	15.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270175	8.5
Hexabromobiphenyl	362541	435731	20.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	4.758	-0.003	5334	221.8	1	4.986	-0.004	3031	230.7
Aroclor-1232	2	6.158	-0.002	9882	194.6	2	7.276	-0.001	14982	223.3
Aroclor-1232	3	7.684	0.000	51409	225.4	3	7.875	-0.001	29992	228.7
Aroclor-1232	4	8.607	0.001	21710	224.4	4	8.734	0.000	8467	238.1
Total Col1Ave (4 peaks):					216.5	Total Col2Ave (4 peaks):				230.2 RPD = 6
Corrected Ave (3 peaks):					213.6	Corrected Ave (3 peaks):				227.6 RPD = 6
Aroclor-1268	1	12.262	-0.000	296463	230.1	1	12.449	-0.000	189354	230.2
Aroclor-1268	2	12.336	0.001	294353	233.5	2	12.517	0.000	196449	232.9
Aroclor-1268	3	12.715	-0.001	238693	231.1	3	12.909	-0.001	66881	213.9
Aroclor-1268	4	13.506	0.001	725881	230.1	4	13.725	-0.001	525890	233.7
Total Col1Ave (4 peaks):					231.2	Total Col2Ave (4 peaks):				227.7 RPD = 2
Corrected Ave (3 peaks):					230.4	Corrected Ave (3 peaks):				225.7 RPD = 2

Total PCB Area Col1 (5.936 - 13.808) = 2353838 Col1 Total PCB = 0.4 ppm*

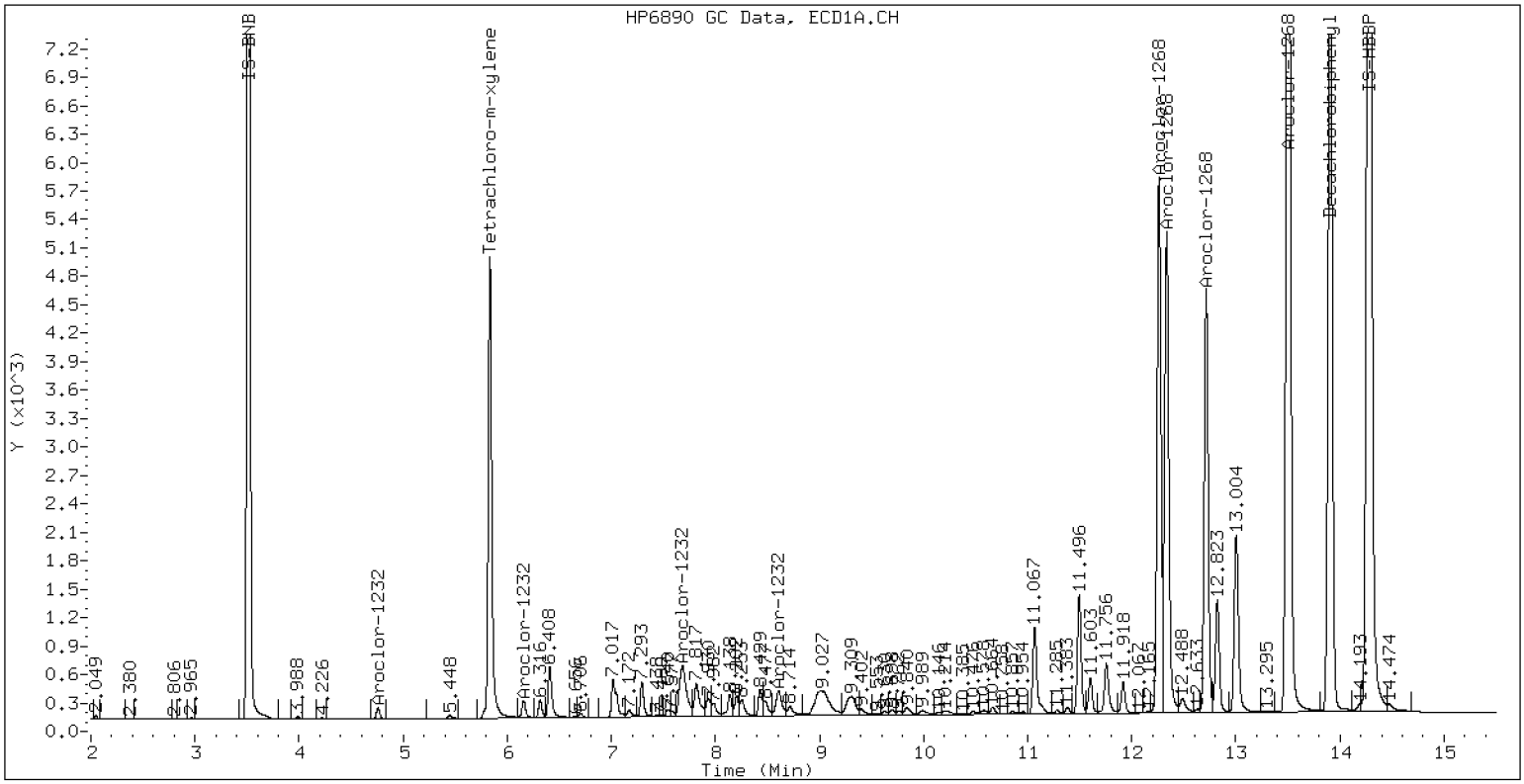
Total PCB Area Col2 (5.936 - 13.808) = 1423323 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

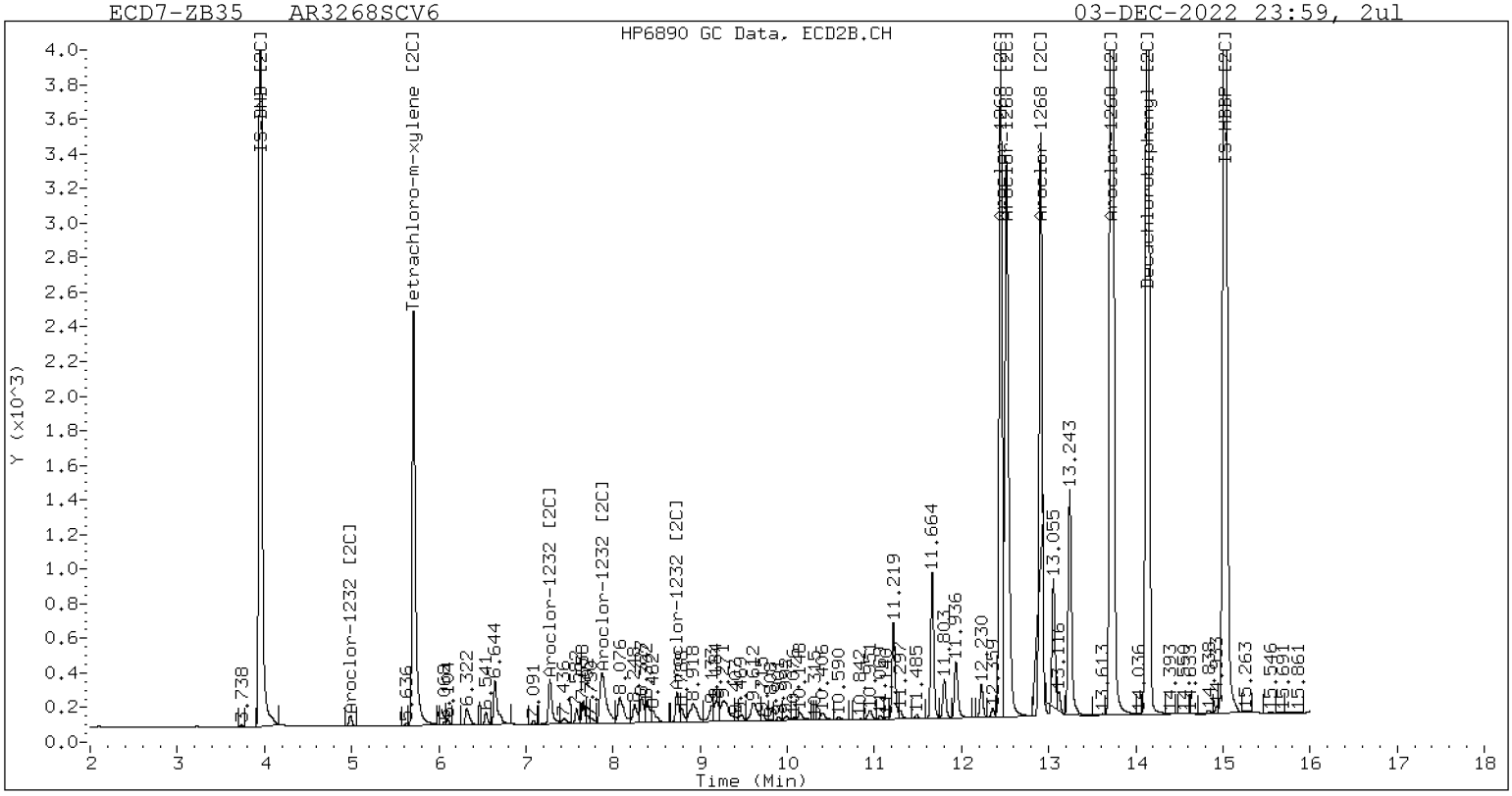
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV6 03-DEC-2022 23:59, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV6 03-DEC-2022 23:59, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12202202ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0304	Injection Date:	12/20/22
Lab Sample ID:	SKL0304-ICV1	Injection Time:	13:07
Sequence Name:	AR1254ICV1		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	252	0.0576965	0.0589776		1.0	+/-20
Aroclor-1254 (1)	A	250.00	252	0.0704377	0.0708737			
Aroclor-1254 (2)	A	250.00	264	0.0273935	0.0289704			
Aroclor-1254 (3)	A	250.00	195	0.0444885	0.0347873			
Aroclor-1254 (4)	A	250.00	268	0.0867185	0.0930140			
Aroclor-1254 (5)	A	250.00	283	0.0594444	0.0672428			
Aroclor 1254 [2C]	A	250.00	233	0.0638047	0.0604370		-6.9	+/-20
Aroclor-1254 (1) [2C]	A	250.00	242	0.0515798	0.0499537			
Aroclor-1254 (2) [2C]	A	250.00	173	0.0414689	0.0287043			
Aroclor-1254 (3) [2C]	A	250.00	228	0.0891370	0.0811284			
Aroclor-1254 (4) [2C]	A	250.00	259	0.0923140	0.0957540			
Aroclor-1254 (5) [2C]	A	250.00	262	0.0445236	0.0466444			
Decachlorobiphenyl	A	40.000	43.8	0.7333327	0.8031294		9.5	+/-20
Tetrachlorometaxylene	A	40.000	36.9	1.1336710	1.0444620		-7.9	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.8	1.1358180	1.1305860		-0.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.6	1.0966080	1.0040770		-8.4	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202202ECD7.D
Data file 2: /221220.b/221220.b/12202202ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV1
Client ID:
Injection Date: 20-DEC-2022 13:07
Report Date: 12/22/2022 09:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.833	-0.003	229111	5.708	-0.005	124859	36.9	36.6	0.6	Tetrachloro-m-xylene
13.906	-0.002	301347	14.133	-0.004	205458	43.8	39.8	9.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	438716	-2.0
Hexabromobiphenyl	798898	750432	-6.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	248704	-0.2
Hexabromobiphenyl	362541	363454	0.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.315	-0.006	97167	251.5	1	9.464	-0.003	38824	242.1
Aroclor-1254	2	9.395	-0.007	39718	264.4	2	9.981	-0.005	22309	173.0
Aroclor-1254	3	9.689	-0.005	47693	195.5	3	10.133	-0.006	63053	227.5
Aroclor-1254	4	9.823	-0.008	127521	268.1	4	10.382	-0.007	74420	259.3
Aroclor-1254	5	10.180	-0.009	92189	282.8	5	10.579	-0.007	36252	261.9

Total Col1Ave (5 peaks): 252.5 Total Col2Ave (5 peaks): 232.8 RPD = 8

Corrected Ave (4 peaks): 244.9 Corrected Ave (4 peaks): 225.5 RPD = 8

Total PCB Area Col1 (5.936 - 13.808) = 1361790 Col1 Total PCB = 0.3 ppm*

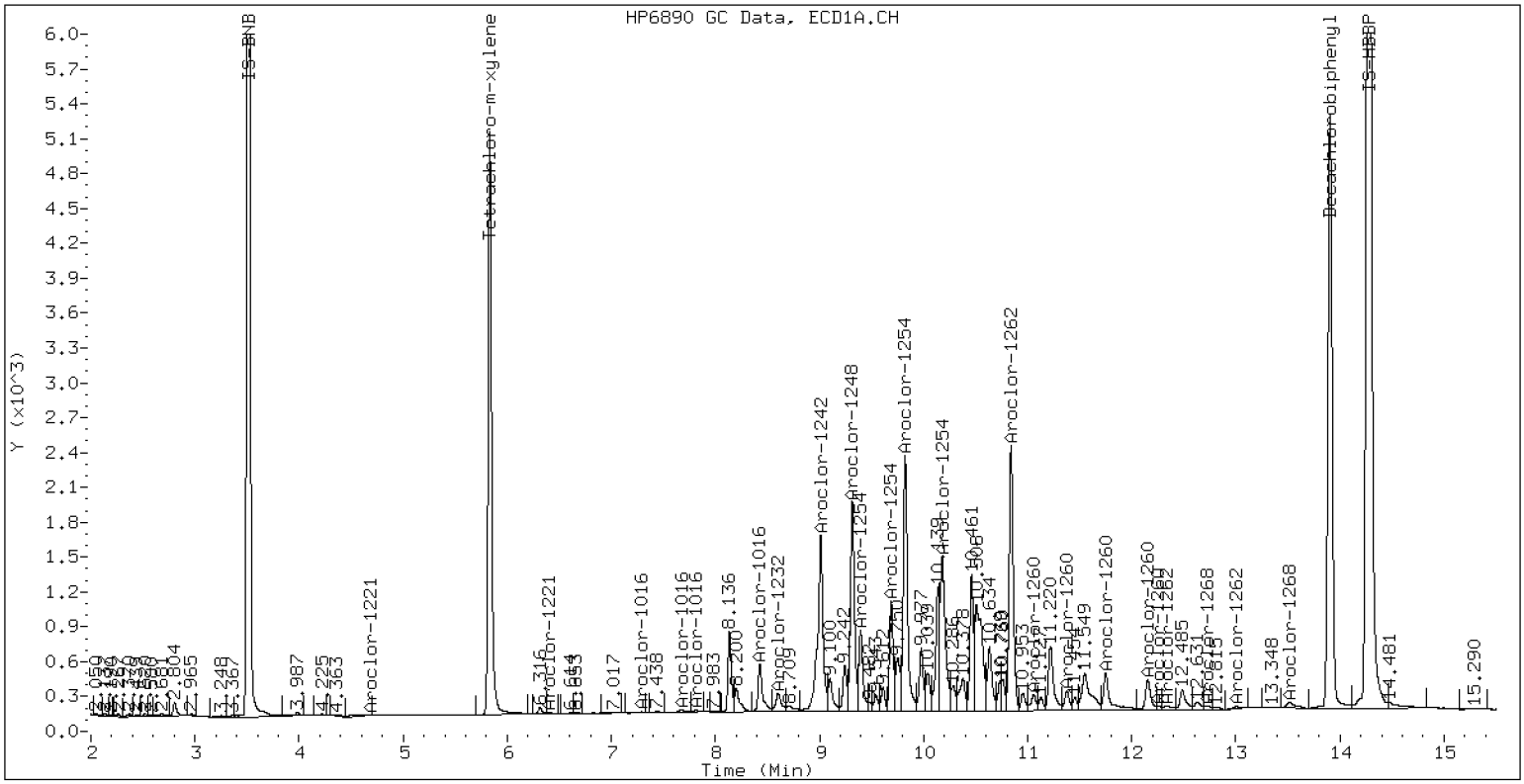
Total PCB Area Col2 (5.936 - 13.808) = 670867 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

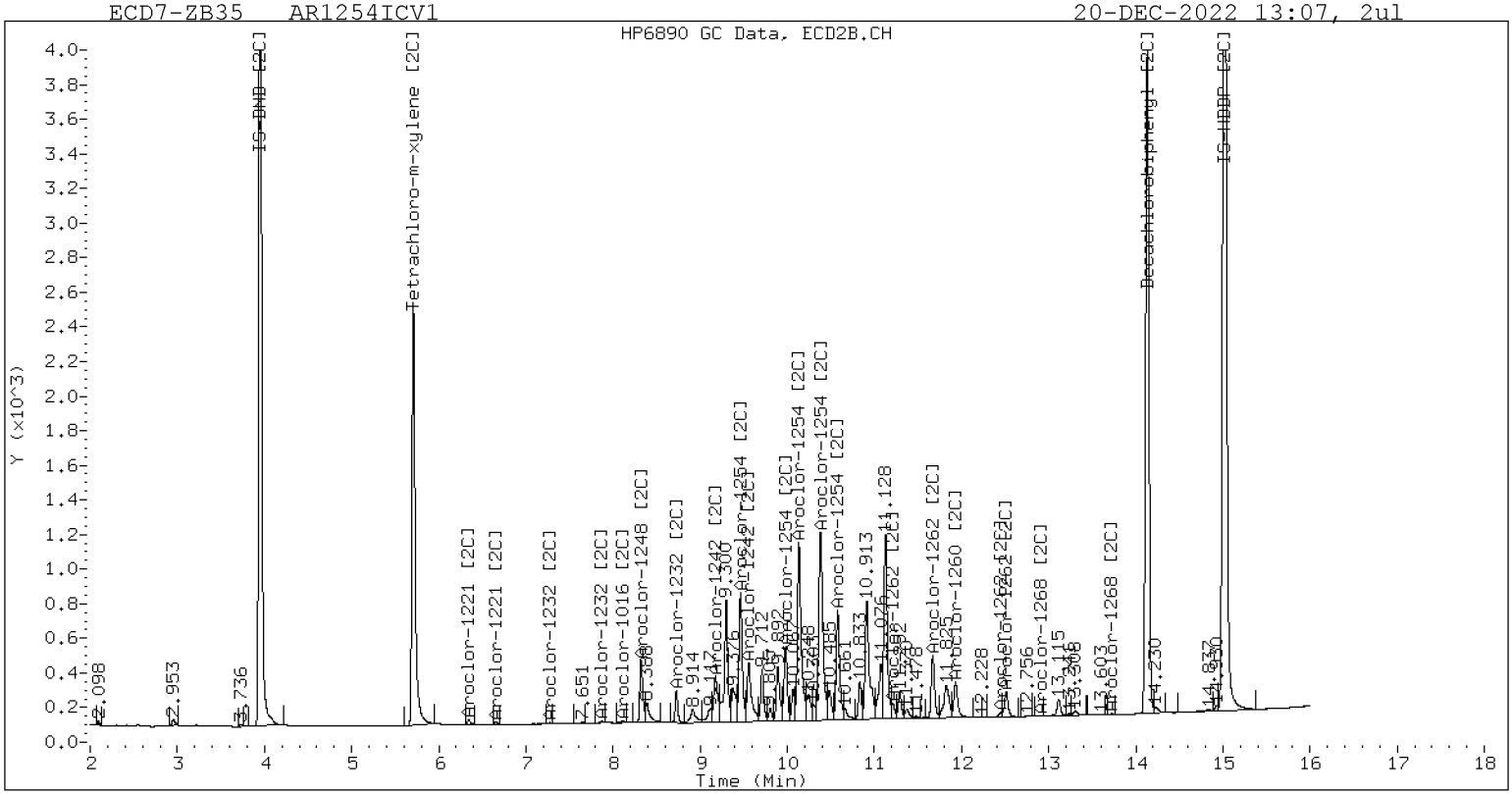
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1 20-DEC-2022 13:07, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254ICV1 20-DEC-2022 13:07, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12202203ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0304	Injection Date:	12/20/22
Lab Sample ID:	SKL0304-ICV2	Injection Time:	13:28
Sequence Name:	AR1660ICV2		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1016	A	250.00	272	0.0441939	0.0476515		8.8	+/-20
Aroclor-1016 (1)	A	250.00	265	0.0266860	0.0283273		6.2	
Aroclor-1016 (2)	A	250.00	265	0.0861572	0.0912591		5.9	
Aroclor-1016 (3)	A	250.00	274	0.0390425	0.0428326		9.7	
Aroclor-1016 (4)	A	250.00	283	0.0248899	0.0281869		13.2	
Aroclor 1016 [2C]	A	250.00	247	0.0467310	0.0449928		-1.2	+/-20
Aroclor-1016 (1) [2C]	A	250.00	254	0.0409030	0.0414828		1.4	
Aroclor-1016 (2) [2C]	A	250.00	229	0.0882154	0.0807540		-8.5	
Aroclor-1016 (3) [2C]	A	250.00	243	0.0378846	0.0368544		-2.7	
Aroclor-1016 (4) [2C]	A	250.00	262	0.0199212	0.0208798		4.8	
Aroclor 1260	A	250.00	279	0.0390342	0.0437775		11.5	+/-20
Aroclor-1260 (1)	A	250.00	275	0.0291201	0.0320603		10.1	
Aroclor-1260 (2)	A	250.00	281	0.0301181	0.0339075		12.6	
Aroclor-1260 (3)	A	250.00	285	0.0791351	0.0903227		14.1	
Aroclor-1260 (4)	A	250.00	275	0.0403003	0.0442830		9.9	
Aroclor-1260 (5)	A	250.00	278	0.0164974	0.0183138		11.0	
Aroclor 1260 [2C]	A	250.00	221	0.0617619	0.0525986		-11.7	+/-20
Aroclor-1260 (1) [2C]	A	250.00	229	0.0422283	0.0387546		-8.2	
Aroclor-1260 (2) [2C]	A	250.00	199	0.1059643	0.0843248		-20.4	
Aroclor-1260 (3) [2C]	A	250.00	242	0.0282173	0.0273623		-3.0	
Aroclor-1260 (4) [2C]	A	250.00	212	0.0706376	0.0599527		-15.1	
Decachlorobiphenyl	A	40.000	44.5	0.7333327	0.8149634		11.1	+/-20
Tetrachlorometaxylene	A	40.000	40.6	1.1336710	1.1517130		1.6	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.8	1.1358180	1.1029810		-2.9	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.8	1.0966080	1.0899580		-0.6	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202203ECD7.D
Data file 2: /221220.b/221220.b/12202203ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV2
Client ID:
Injection Date: 20-DEC-2022 13:28
Report Date: 12/22/2022 09:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.833	-0.003	195513	5.710	-0.003	107084	40.6	39.8	2.2	Tetrachloro-m-xylene
13.905	-0.003	257658	14.132	-0.005	174753	44.5	38.8	13.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	339517	-24.2
Hexabromobiphenyl	798898	632318	-20.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	196492	-21.1
Hexabromobiphenyl	362541	316874	-12.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.291	-0.004	30055	265.4	1	7.274	-0.001	25472	253.5
Aroclor-1016	2	7.680	-0.005	96825	264.8	2	7.873	0.002	49586	228.9
Aroclor-1016	3	7.812	-0.005	45445	274.3	3	8.071	0.001	22630	243.2
Aroclor-1016	4	8.425	-0.004	29906	283.1	4	8.243	0.002	12821	262.0
Total Col1Ave (4 peaks):					271.9	Total Col2Ave (4 peaks):				246.9 RPD = 10
Corrected Ave (3 peaks):					268.1	Corrected Ave (3 peaks):				241.9 RPD = 10
Aroclor-1260	1	11.057	-0.005	63351	275.2	1	11.666	-0.003	38376	229.4
Aroclor-1260	2	11.373	-0.004	67001	281.5	2	11.928	-0.004	83501	198.9
Aroclor-1260	3	11.747	-0.004	178477	285.3	3	12.447	-0.004	27095	242.4
Aroclor-1260	4	12.152	-0.007	87503	274.7	4	12.512	-0.005	59367	212.2
Aroclor-1260	5	12.256	-0.006	36188	277.5	NS	---			----
Total Col1Ave (5 peaks):					278.9	Total Col2Ave (4 peaks):				220.7 RPD = 23
Corrected Ave (4 peaks):					277.2	Corrected Ave (3 peaks):				213.5 RPD = 26

Total PCB Area Col1 (5.936 - 13.808) = 1806544 Col1 Total PCB = 0.5 ppm*

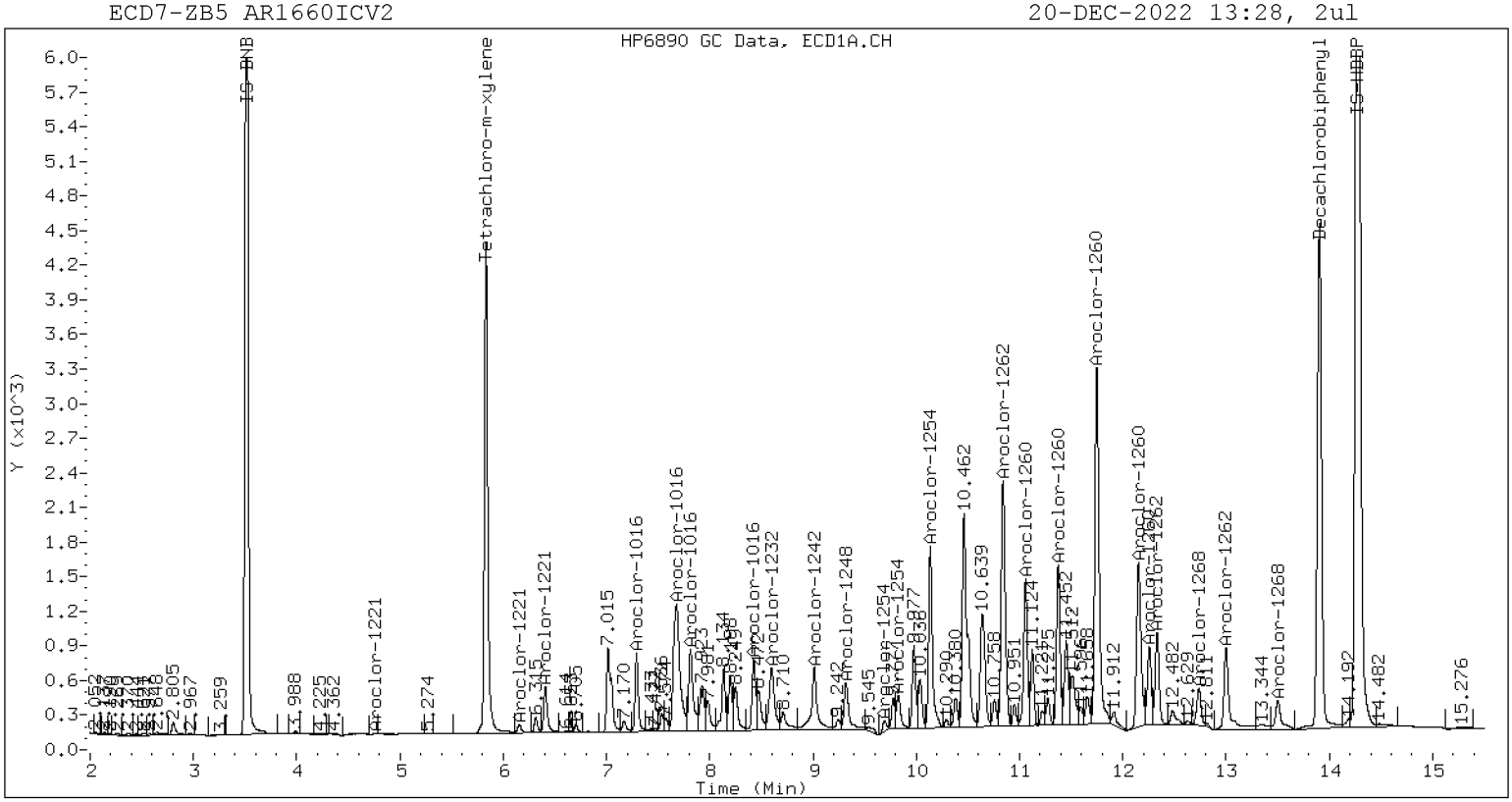
Total PCB Area Col2 (5.936 - 13.808) = 919428 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

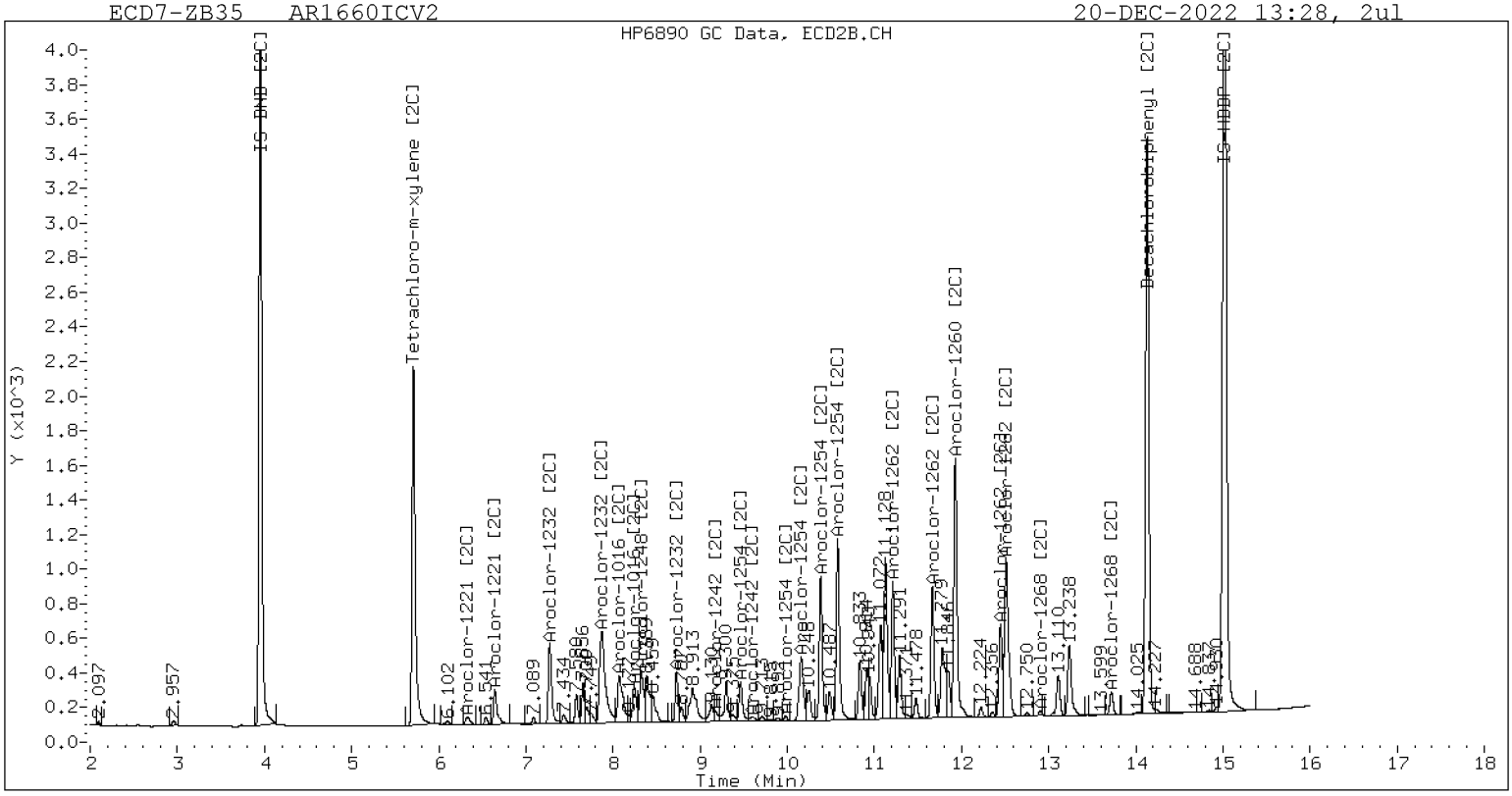
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2 20-DEC-2022 13:28, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1660ICV2 20-DEC-2022 13:28, 2ul

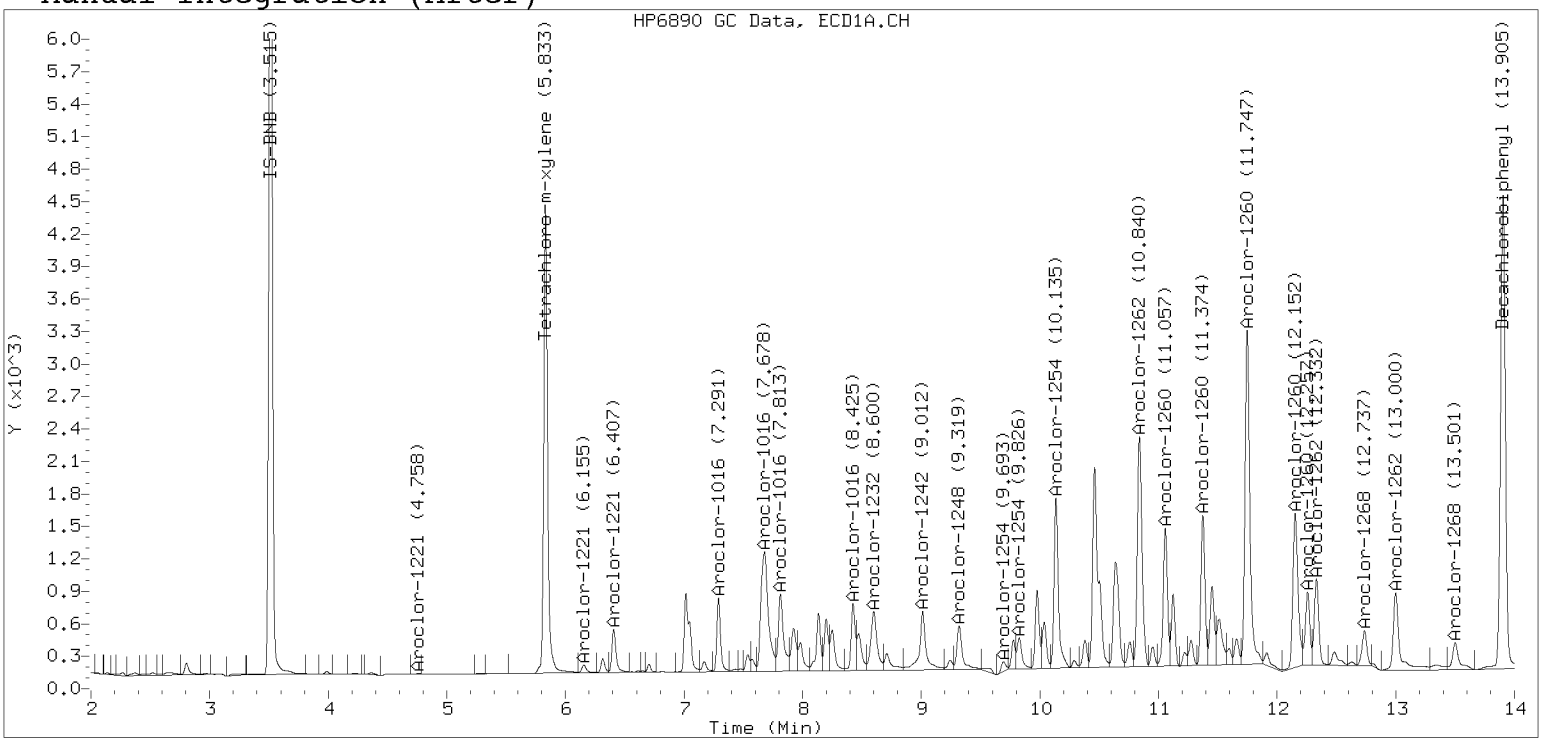


ZB-35 Manual Integration: NO

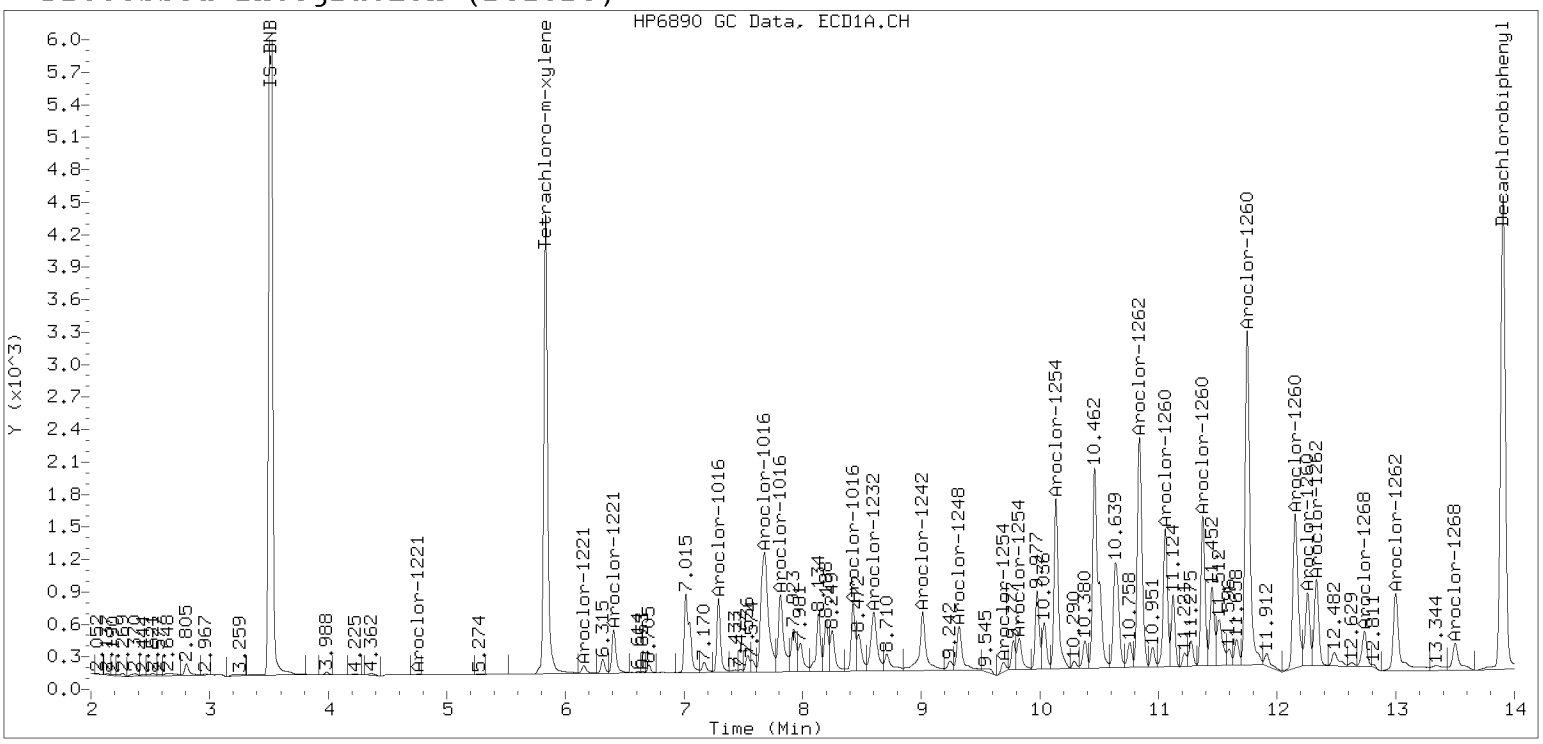
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221220.b/12202203ECD7.D Injection Date: 20-DEC-2022 13:28

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12032222ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0048	Injection Date:	12/03/22
Lab Sample ID:	SKL0048-SCV1	Injection Time:	22:13
Sequence Name:	AR1660SCV1		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	223	0.0441939	0.0392295		-10.7	+/-20
Aroclor 1016 [2C]	A	250.00	216	0.0467310	0.0403426		-13.5	+/-20
Aroclor 1260	A	250.00	285	0.0390342	0.0441447		14.1	+/-20
Aroclor 1260 [2C]	A	250.00	263	0.0617619	0.0651122		5.1	+/-20
Decachlorobiphenyl	A	40.000	39.8	0.7333327	0.7297174		-0.5	+/-20
Tetrachlorometaxylene	A	40.000	36.1	1.1336710	1.0237520		-9.7	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.2	1.1358180	1.0840850		-4.6	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.1	1.0966080	0.9886519		-9.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032222ECD7.D
Data file 2: /221203.b/221203.b/12032222ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV1
Client ID:
Injection Date: 03-DEC-2022 22:13
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.000	247495	5.714	0.000	133904	36.1	36.1	0.2	Tetrachloro-m-xylene
13.909	0.001	325466	14.137	0.000	234467	39.8	38.2	4.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	483506	8.0
Hexabromobiphenyl	798898	892033	11.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270882	8.7
Hexabromobiphenyl	362541	432562	19.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.293	0.001	36100	223.8	1	7.277	0.002	30155	217.7
Aroclor-1016	2	7.681	0.007	113995	218.9	2	7.875	0.004	64468	215.8
Aroclor-1016	3	7.815	0.004	53043	224.8	3	8.074	0.004	27130	211.5
Aroclor-1016	4	8.428	0.004	33958	225.7	4	8.245	0.004	14848	220.1
Total Col1Ave (4 peaks):					223.3	Total Col2Ave (4 peaks):				216.3 RPD = 3
Corrected Ave (3 peaks):					222.5	Corrected Ave (3 peaks):				215.0 RPD = 3
Aroclor-1260	1	11.063	0.001	93173	286.9	1	11.671	0.002	56796	248.7
Aroclor-1260	2	11.380	0.003	95530	284.5	2	11.935	0.002	153247	267.5
Aroclor-1260	3	11.754	0.004	250548	283.9	3	12.452	0.001	41316	270.8
Aroclor-1260	4	12.159	0.005	120399	267.9	4	12.519	0.003	100704	263.7
Aroclor-1260	5	12.263	0.003	55639	302.5	NS	---			----
Total Col1Ave (5 peaks):					285.1	Total Col2Ave (4 peaks):				262.7 RPD = 8
Corrected Ave (4 peaks):					280.8	Corrected Ave (3 peaks):				260.0 RPD = 8

Total PCB Area Col1 (5.936 - 13.808) = 2318083 Col1 Total PCB = 0.4 ppm*

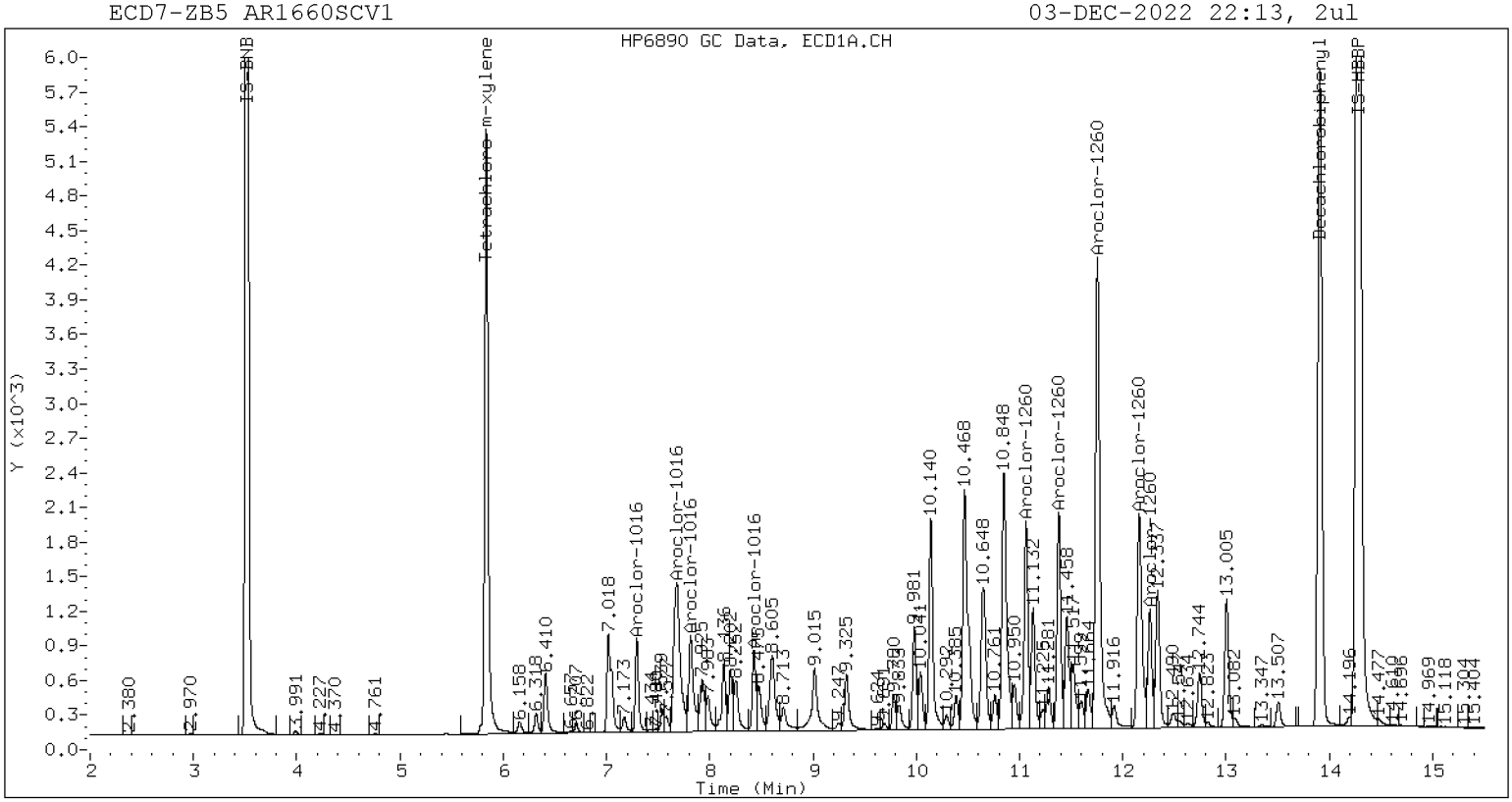
Total PCB Area Col2 (5.936 - 13.808) = 1275603 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

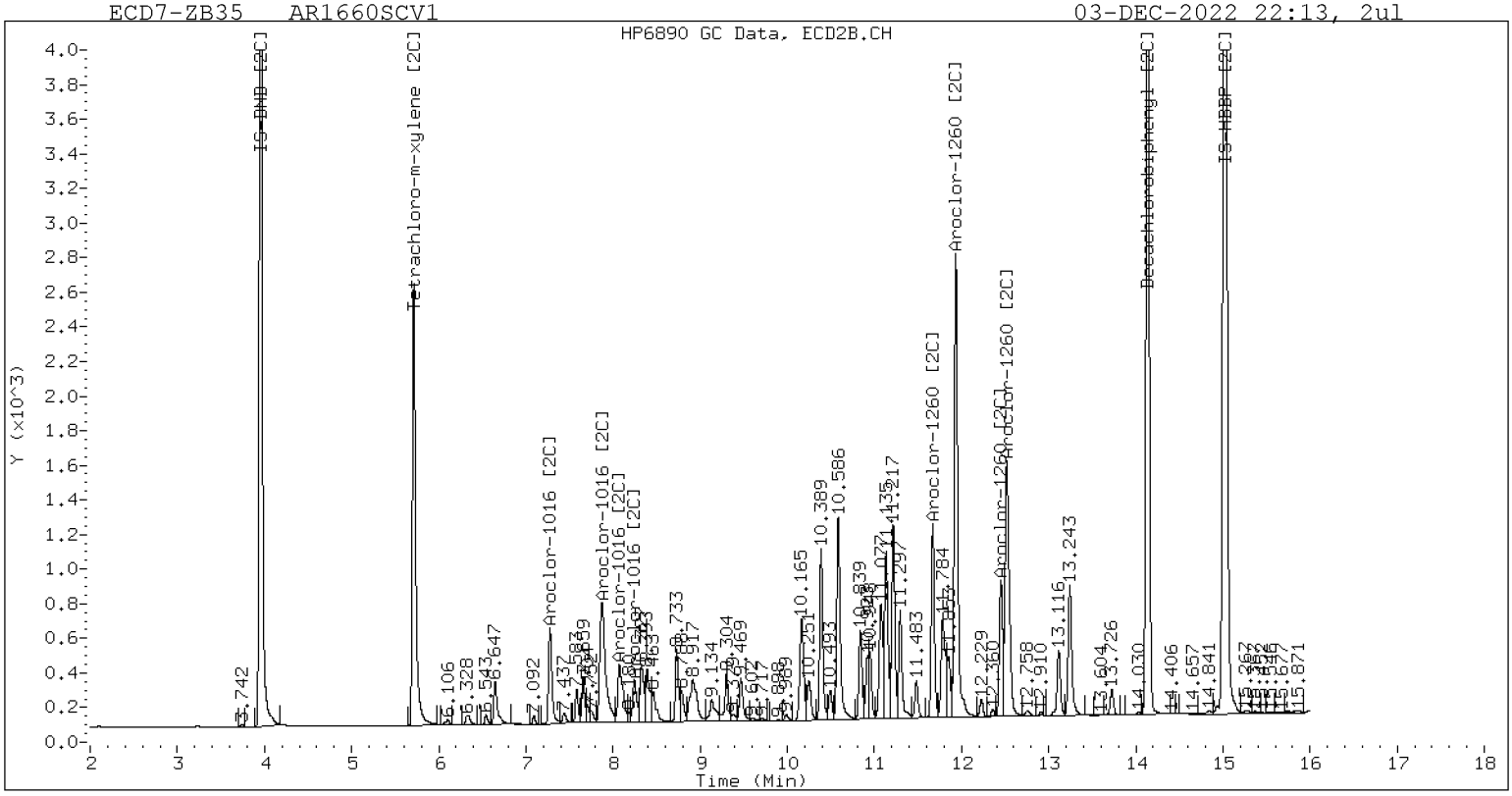
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV1 03-DEC-2022 22:13, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV1 03-DEC-2022 22:13, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12032223ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0048	Injection Date:	12/03/22
Lab Sample ID:	SKL0048-SCV2	Injection Time:	22:34
Sequence Name:	AR1242SCV2		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	207	0.0396000	0.0328545		-17.3	+/-20
Aroclor 1242 [2C]	A	250.00	225	0.0391981	0.0342776		-10.0	+/-20
Decachlorobiphenyl	A	40.000	39.1	0.7333327	0.7176455		-2.1	+/-20
Tetrachlorometaxylene	A	40.000	35.6	1.1336710	1.0081550		-11.1	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.0	1.1358180	1.0793200		-5.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	35.8	1.0966080	0.9816931		-10.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032223ECD7.D
Data file 2: /221203.b/221203.b/12032223ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV2
Client ID:
Injection Date: 03-DEC-2022 22:34
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.000	242356	5.713	-0.001	132586	35.6	35.8	0.7	Tetrachloro-m-xylene
13.909	0.001	321690	14.136	-0.001	228130	39.1	38.0	2.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	480791	7.4
Hexabromobiphenyl	798898	896515	12.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270117	8.4
Hexabromobiphenyl	362541	422729	16.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.294	0.000	26316	193.1	1	7.277	-0.001	23973	209.7
Aroclor-1242	2	7.677	-0.003	89703	207.3	2	7.873	-0.002	50204	206.9
Aroclor-1242	3	8.427	0.000	26786	215.2	3	9.176	-0.002	19686	251.4
Aroclor-1242	4	9.025	-0.005	54647	211.4	4	9.599	-0.006	21874	232.4
Total Col1Ave (4 peaks):					206.7	Total Col2Ave (4 peaks):				225.1 RPD = 9
Corrected Ave (3 peaks):					203.9	Corrected Ave (3 peaks):				216.3 RPD = 6

Total PCB Area Col1 (5.936 - 13.808) = 731052 Col1 Total PCB = 0.1 ppm*

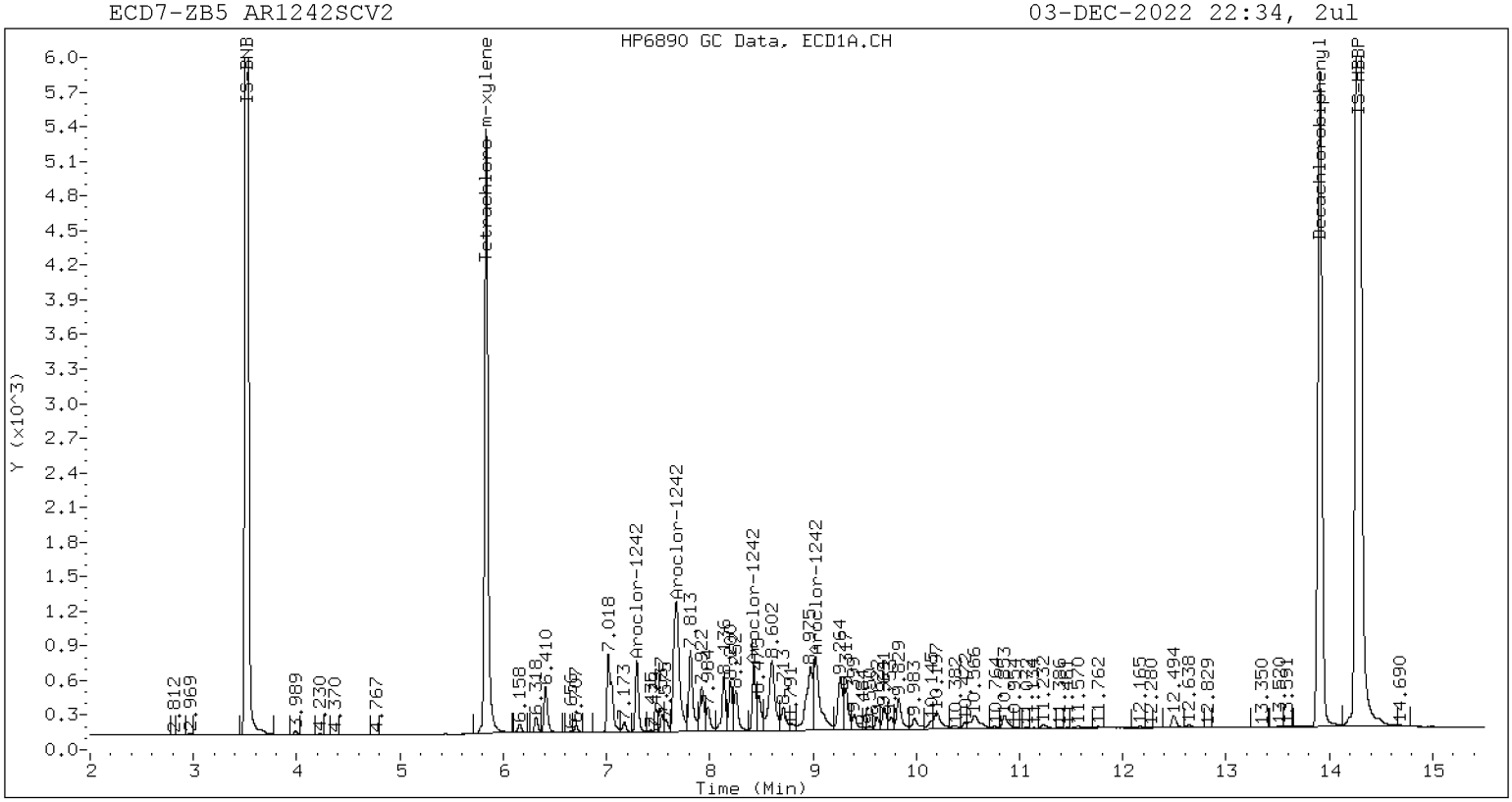
Total PCB Area Col2 (5.936 - 13.808) = 398143 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

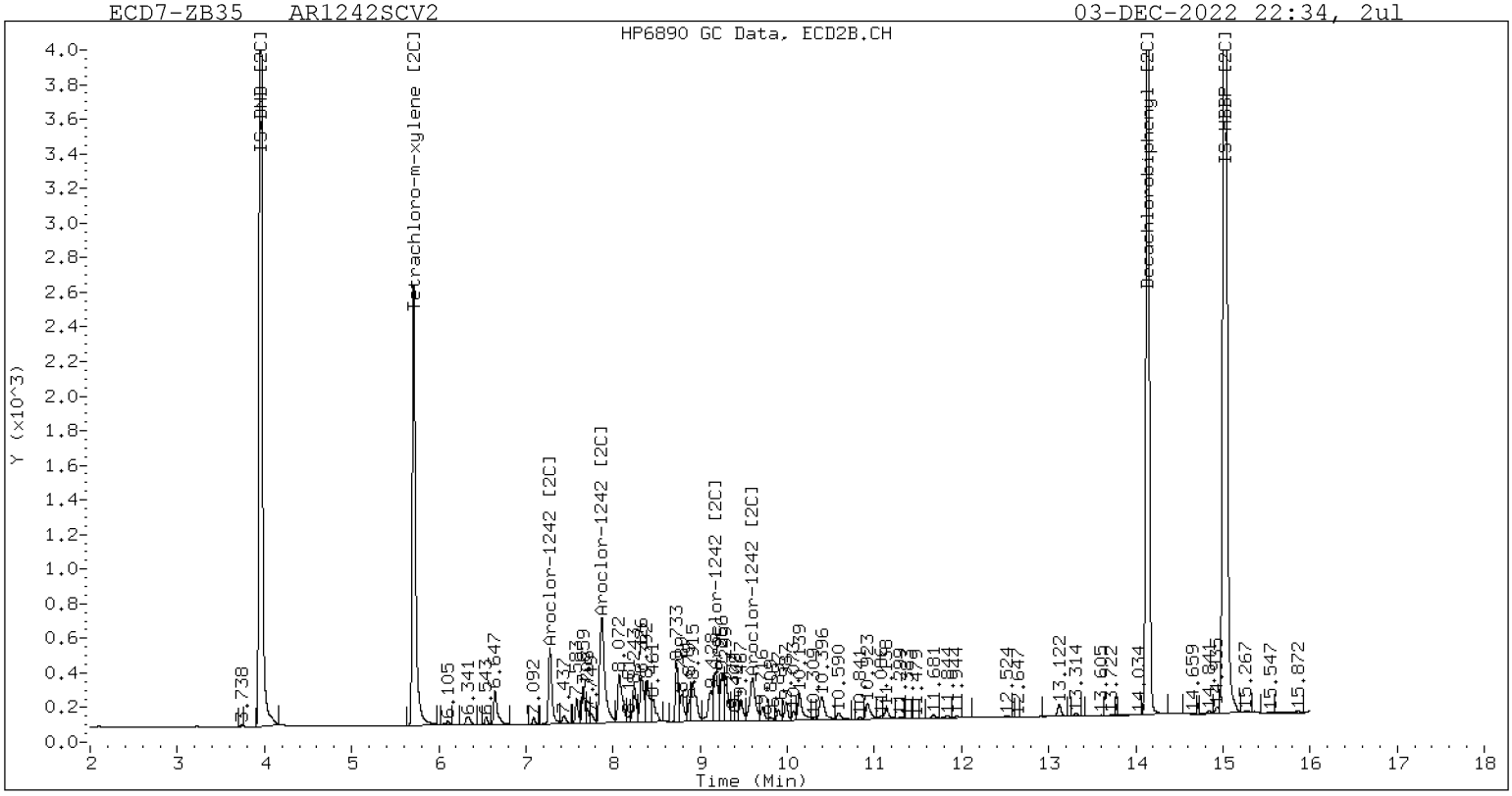
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV2 03-DEC-2022 22:34, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV2 03-DEC-2022 22:34, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12032224ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0048	Injection Date:	12/03/22
Lab Sample ID:	SKL0048-SCV3	Injection Time:	22:55
Sequence Name:	AR1248SCV3		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	246	0.0490062	0.0480752		-1.8	+/-20
Aroclor 1248 [2C]	A	250.00	230	0.0394876	0.0363529		-7.9	+/-20
Decachlorobiphenyl	A	40.000	39.3	0.7333327	0.7205014		-1.7	+/-20
Tetrachlorometaxylene	A	40.000	34.7	1.1336710	0.9836260		-13.2	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.1	1.1358180	1.0816130		-4.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	35.1	1.0966080	0.9613644		-12.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032224ECD7.D
Data file 2: /221203.b/221203.b/12032224ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV3
Client ID:
Injection Date: 03-DEC-2022 22:55
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.000	238518	5.713	-0.001	130772	34.7	35.1	1.0	Tetrachloro-m-xylene
13.909	0.001	329816	14.137	0.000	230748	39.3	38.1	3.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	484977	8.3
Hexabromobiphenyl	798898	915518	14.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	272055	9.2
Hexabromobiphenyl	362541	426674	17.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.427	-0.000	49184	235.9	1	8.326	0.000	25647	230.8
Aroclor-1248	2	8.604	0.002	62884	236.2	2	8.733	0.000	26944	230.5
Aroclor-1248	3	9.021	-0.002	117065	244.4	3	9.179	0.001	32692	229.9
Aroclor-1248	4	9.315	0.000	62309	265.6	4	9.604	0.002	38342	229.7

Total Col1Ave (4 peaks): 245.5 Total Col2Ave (4 peaks): 230.2 RPD = 6

Corrected Ave (3 peaks): 238.8 Corrected Ave (3 peaks): 230.0 RPD = 4

Total PCB Area Col1 (5.936 - 13.808) = 991353 Col1 Total PCB = 0.2 ppm*

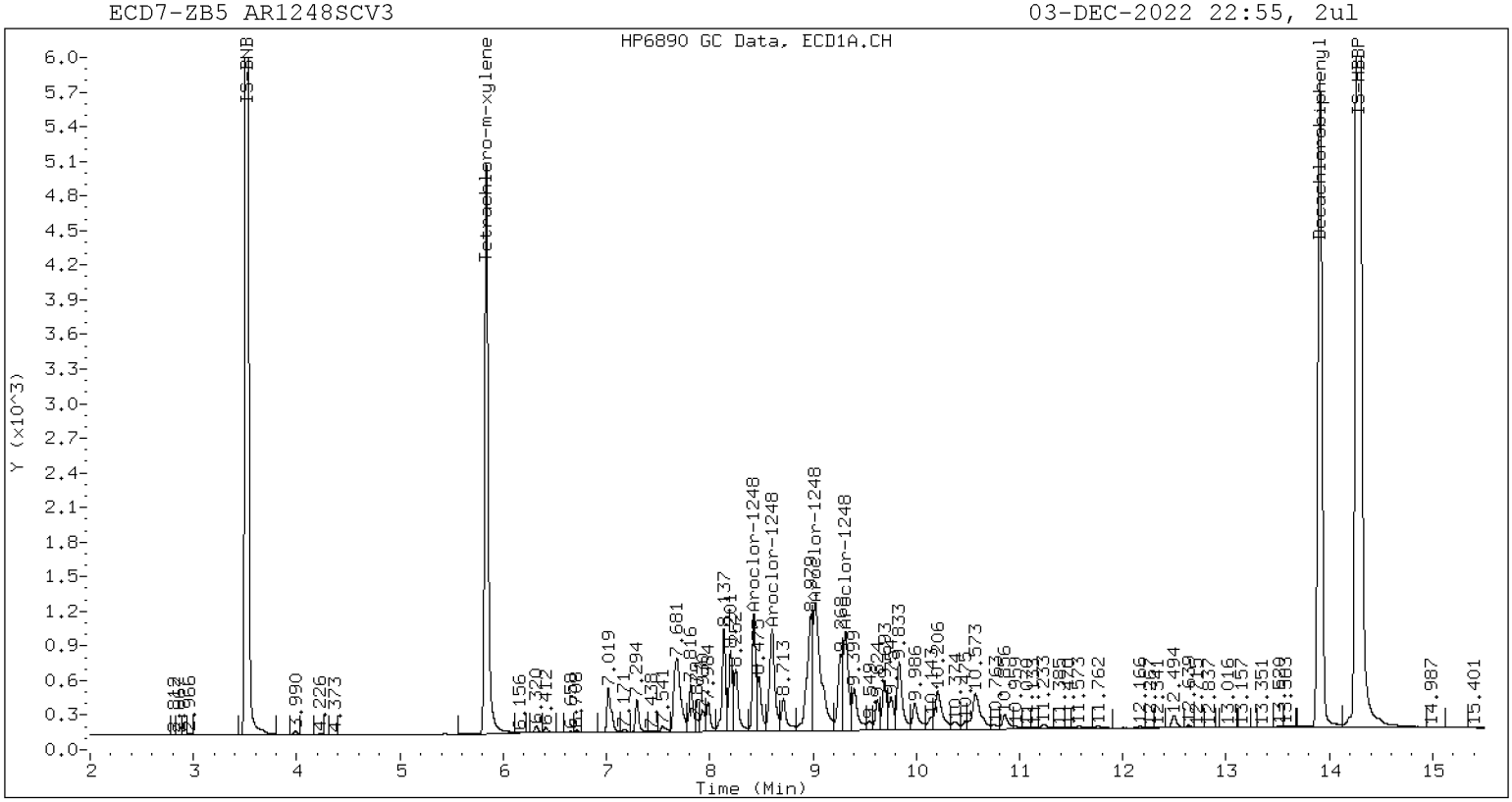
Total PCB Area Col2 (5.936 - 13.808) = 508870 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

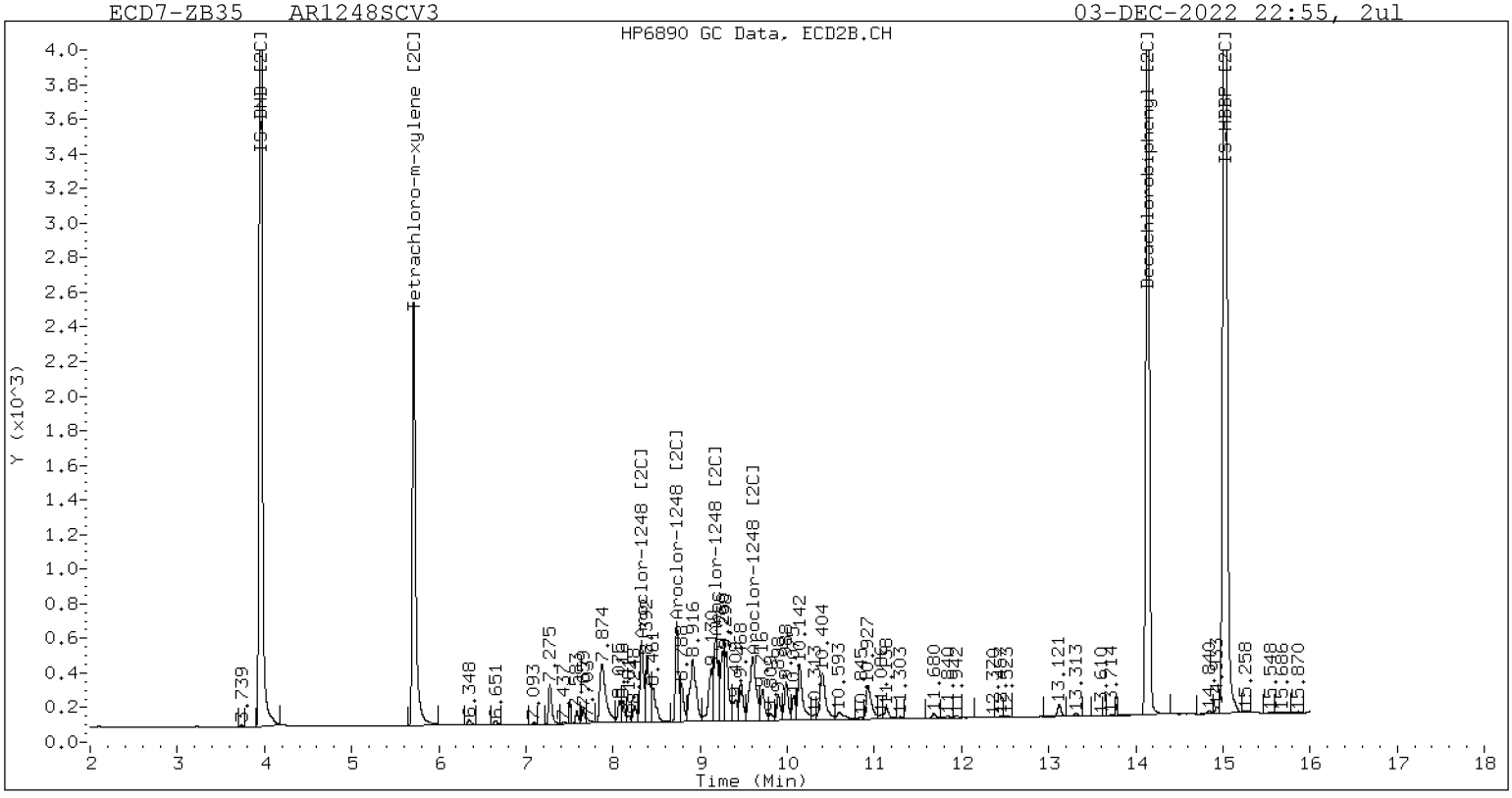
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV3 03-DEC-2022 22:55, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV3 03-DEC-2022 22:55, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12032225ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0048	Injection Date:	12/03/22
Lab Sample ID:	SKL0048-SCV4	Injection Time:	23:17
Sequence Name:	AR1254SCV4		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	228	0.0576965	0.0519120		-8.8	+/-20
Aroclor 1254 [2C]	A	250.00	231	0.0638047	0.0582302		-7.7	+/-20
Decachlorobiphenyl	A	40.000	39.5	0.7333327	0.7250146		-1.1	+/-20
Tetrachlorometaxylene	A	40.000	35.5	1.1336710	1.0063630		-11.2	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.1	1.1358180	1.0811430		-4.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.0	1.0966080	0.9868455		-10.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032225ECD7.D
Data file 2: /221203.b/221203.b/12032225ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV4
Client ID:
Injection Date: 03-DEC-2022 23:17
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.000	243863	5.713	-0.000	133610	35.5	36.0	1.4	Tetrachloro-m-xylene
13.909	0.001	332566	14.137	-0.000	233115	39.5	38.1	3.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	484642	8.3
Hexabromobiphenyl	798898	917405	14.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270782	8.7
Hexabromobiphenyl	362541	431238	18.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.321	0.003	94448	221.3	1	9.469	0.002	39410	225.7
Aroclor-1254	2	9.401	0.003	41171	248.1	2	9.989	0.002	31415	223.8
Aroclor-1254	3	9.692	0.004	60946	226.1	3	10.143	0.004	66244	219.6
Aroclor-1254	4	9.832	0.004	116490	221.7	4	10.392	0.003	70095	224.3
Aroclor-1254	5	10.199	0.005	80050	222.3	5	10.588	0.002	39206	260.2

Total Col1Ave (5 peaks): 227.9 Total Col2Ave (5 peaks): 230.7 RPD = 1

Corrected Ave (4 peaks): 222.9 Corrected Ave (4 peaks): 223.4 RPD = 0

Total PCB Area Col1 (5.936 - 13.808) = 1261470 Col1 Total PCB = 0.2 ppm*

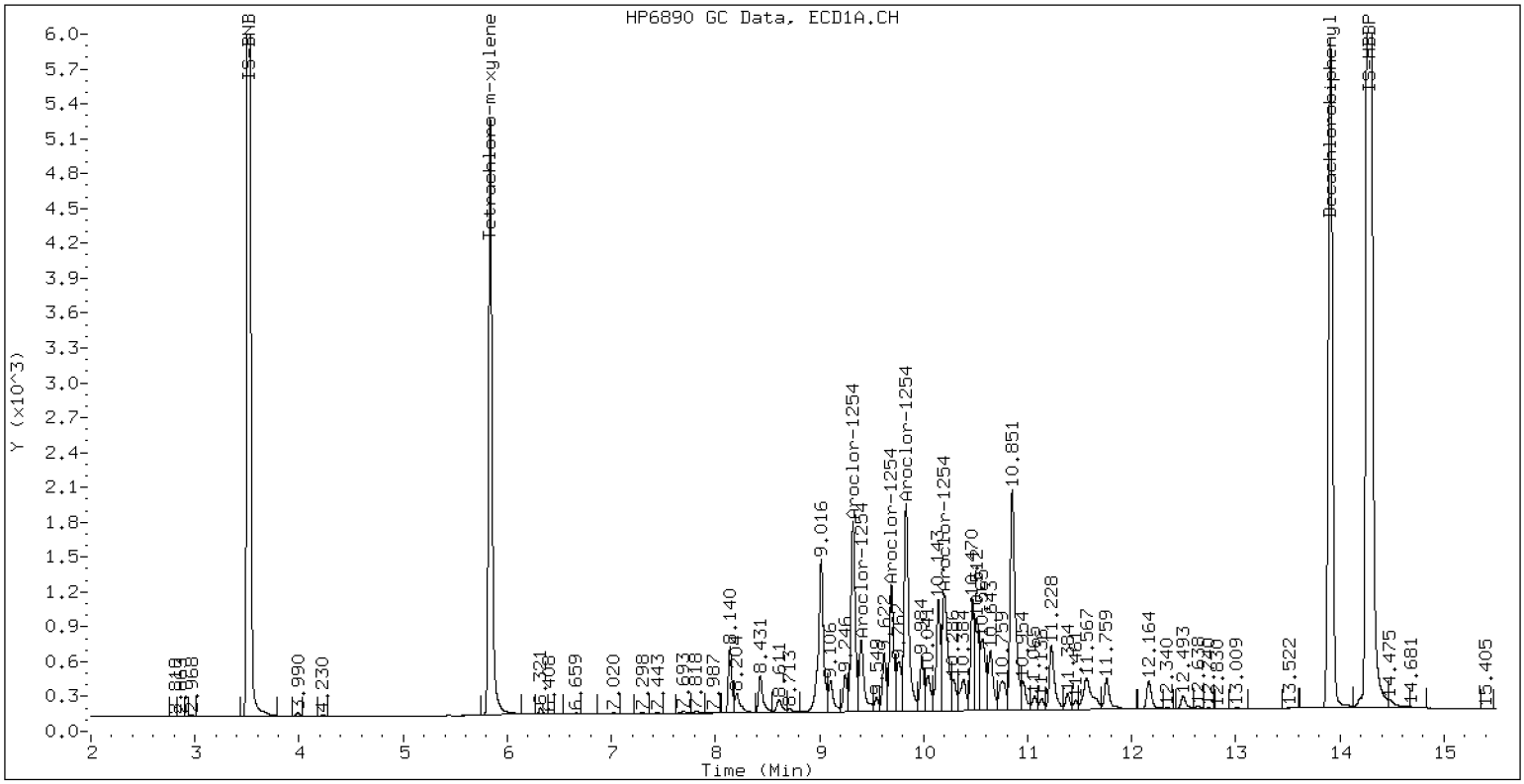
Total PCB Area Col2 (5.936 - 13.808) = 664781 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

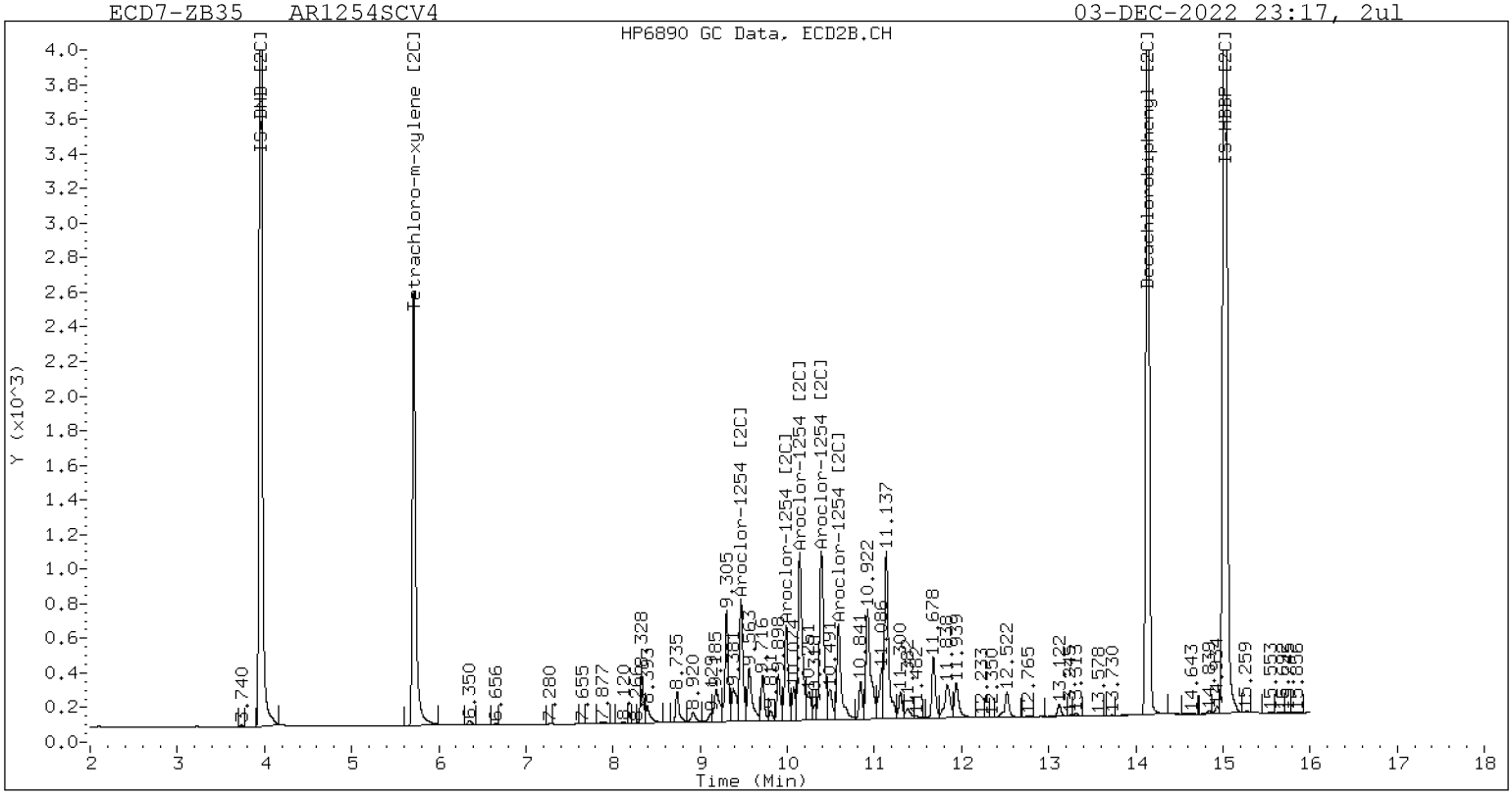
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV4 03-DEC-2022 23:17, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV4 03-DEC-2022 23:17, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12032226ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0048	Injection Date:	12/03/22
Lab Sample ID:	SKL0048-SCV5	Injection Time:	23:38
Sequence Name:	AR2162SCV5		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1221	A	250.00	237	0.0150468	0.0142259		-5.3	+/-20
Aroclor 1221 [2C]	A	250.00	236	0.0137578	0.0128521		-5.7	+/-20
Decachlorobiphenyl	A	40.000	40.0	0.7333327	0.7330667		-0.04	+/-20
Tetrachlorometaxylene	A	40.000	36.1	1.1336710	1.0221760		-9.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.4	1.1358180	1.0912900		-3.9	+/-20
Tetrachlorometaxylene [2C]	A	40.000	35.7	1.0966080	0.9776713		-10.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032226ECD7.D
Data file 2: /221203.b/221203.b/12032226ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR2162.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV5
Client ID:
Injection Date: 03-DEC-2022 23:38
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	0.000	246394	5.713	-0.000	131378	36.1	35.7	1.1	Tetrachloro-m-xylene
13.908	-0.001	334929	14.136	-0.001	237241	40.0	38.4	4.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	482097	7.7
Hexabromobiphenyl	798898	913775	14.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	268757	7.9
Hexabromobiphenyl	362541	434790	19.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	4.761	0.001	9579	240.4	1	4.988	0.001	5527	243.7
Aroclor-1221	2	6.159	0.001	16402	233.6	2	6.323	0.001	10041	232.3
Aroclor-1221	3	6.410	0.001	38315	236.6	3	6.646	0.001	16814	231.1
Total Col1Ave (3 peaks):					236.8	Total Col2Ave (3 peaks):				235.7 RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.845	-0.003	145305	475.5	1	11.216	-0.001	152840	462.3
Aroclor-1262	2	12.261	-0.001	222795	469.0	2	11.668	-0.002	131097	457.9
Aroclor-1262	3	12.336	-0.001	238475	470.0	3	12.449	-0.002	148386	469.8
Aroclor-1262	4	13.004	-0.001	188009	461.7	4	12.518	-0.001	231081	467.1
Total Col1Ave (4 peaks):					469.1	Total Col2Ave (4 peaks):				464.3 RPD = 1
Corrected Ave (3 peaks):					466.9	Corrected Ave (3 peaks):				462.4 RPD = 1

Total PCB Area Col1 (5.936 - 13.808) = 3654831 Col1 Total PCB = 0.7 ppm*

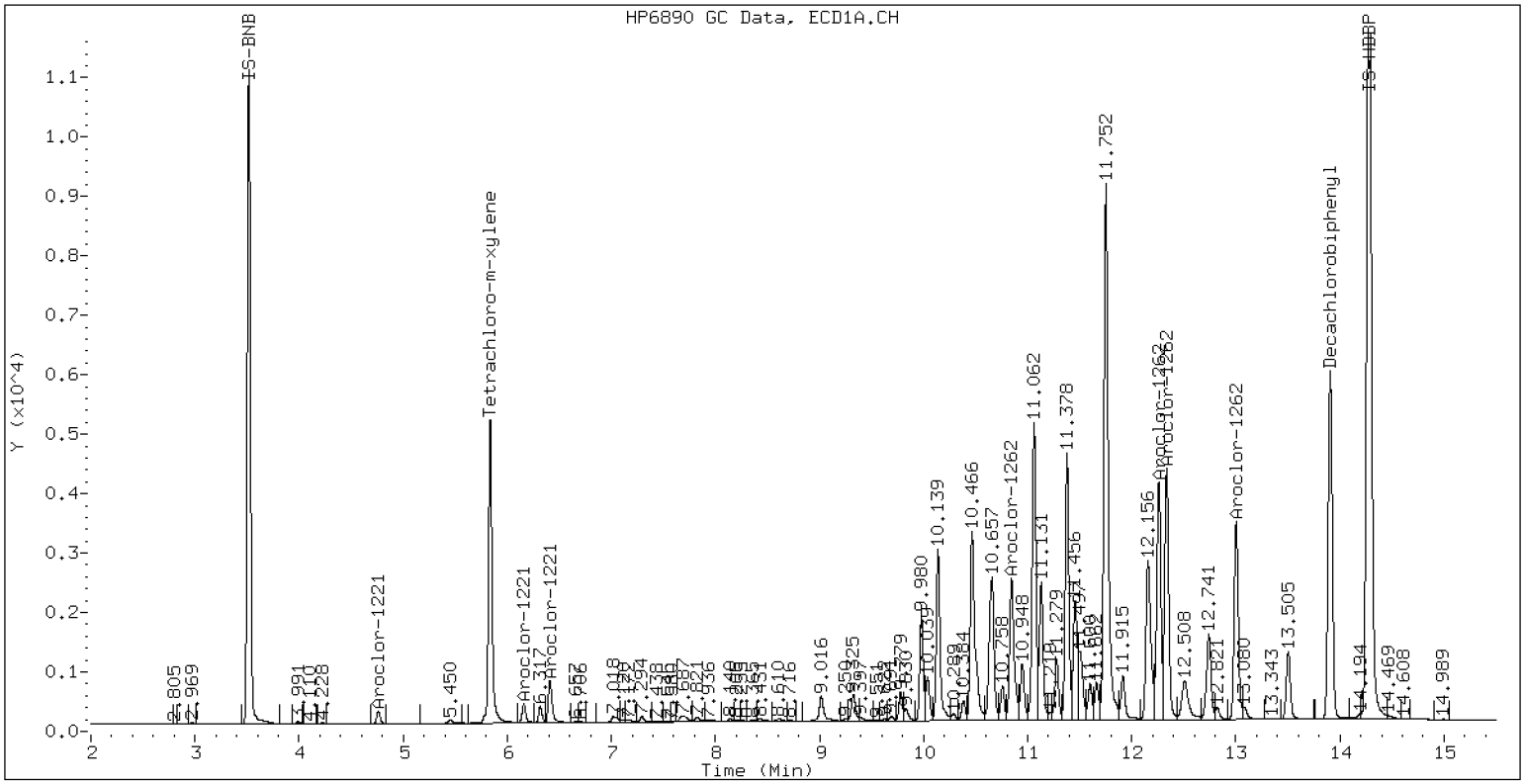
Total PCB Area Col2 (5.936 - 13.808) = 2063978 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

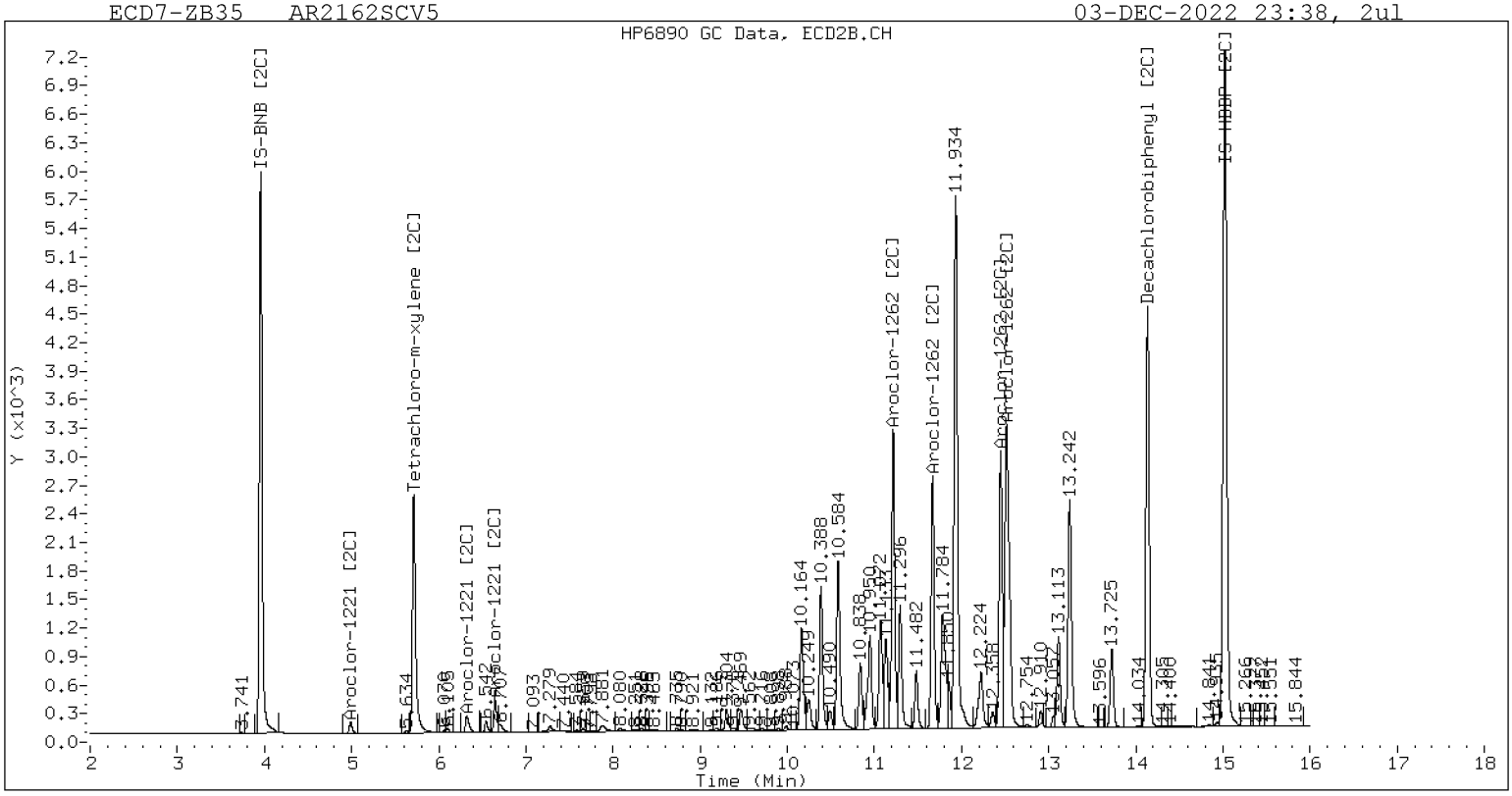
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV5 03-DEC-2022 23:38, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV5 03-DEC-2022 23:38, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12032227ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0048	Injection Date:	12/03/22
Lab Sample ID:	SKL0048-SCV6	Injection Time:	23:59
Sequence Name:	AR3268SCV6		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1232	A	250.00	217	0.0165403	0.0146227		-13.4	+/-20
Aroclor 1232 [2C]	A	250.00	230	0.0182815	0.0167216		-7.9	+/-20
Decachlorobiphenyl	A	40.000	56.2	0.7333327	1.0299650		40.4	+/-20
Tetrachlorometaxylene	A	40.000	34.5	1.1336710	0.9771642		-13.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	54.9	1.1358180	1.5591590		37.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	34.2	1.0966080	0.9385176		-14.4	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032227ECD7.D
Data file 2: /221203.b/221203.b/12032227ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR3268.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV6
Client ID:
Injection Date: 03-DEC-2022 23:59
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.834	-0.002	236120	5.711	-0.002	126782	34.5	34.2	0.7	Tetrachloro-m-xylene
13.907	-0.002	474236	14.136	-0.001	339687	56.2	54.9	2.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	483276	8.0
Hexabromobiphenyl	798898	920878	15.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270175	8.5
Hexabromobiphenyl	362541	435731	20.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	4.758	-0.003	5334	221.8	1	4.986	-0.004	3031	230.7
Aroclor-1232	2	6.158	-0.002	9882	194.6	2	7.276	-0.001	14982	223.3
Aroclor-1232	3	7.684	0.000	51409	225.4	3	7.875	-0.001	29992	228.7
Aroclor-1232	4	8.607	0.001	21710	224.4	4	8.734	0.000	8467	238.1
Total Col1Ave (4 peaks):					216.5	Total Col2Ave (4 peaks):				230.2 RPD = 6
Corrected Ave (3 peaks):					213.6	Corrected Ave (3 peaks):				227.6 RPD = 6
Aroclor-1268	1	12.262	-0.000	296463	230.1	1	12.449	-0.000	189354	230.2
Aroclor-1268	2	12.336	0.001	294353	233.5	2	12.517	0.000	196449	232.9
Aroclor-1268	3	12.715	-0.001	238693	231.1	3	12.909	-0.001	66881	213.9
Aroclor-1268	4	13.506	0.001	725881	230.1	4	13.725	-0.001	525890	233.7
Total Col1Ave (4 peaks):					231.2	Total Col2Ave (4 peaks):				227.7 RPD = 2
Corrected Ave (3 peaks):					230.4	Corrected Ave (3 peaks):				225.7 RPD = 2

Total PCB Area Col1 (5.936 - 13.808) = 2353838 Col1 Total PCB = 0.4 ppm*

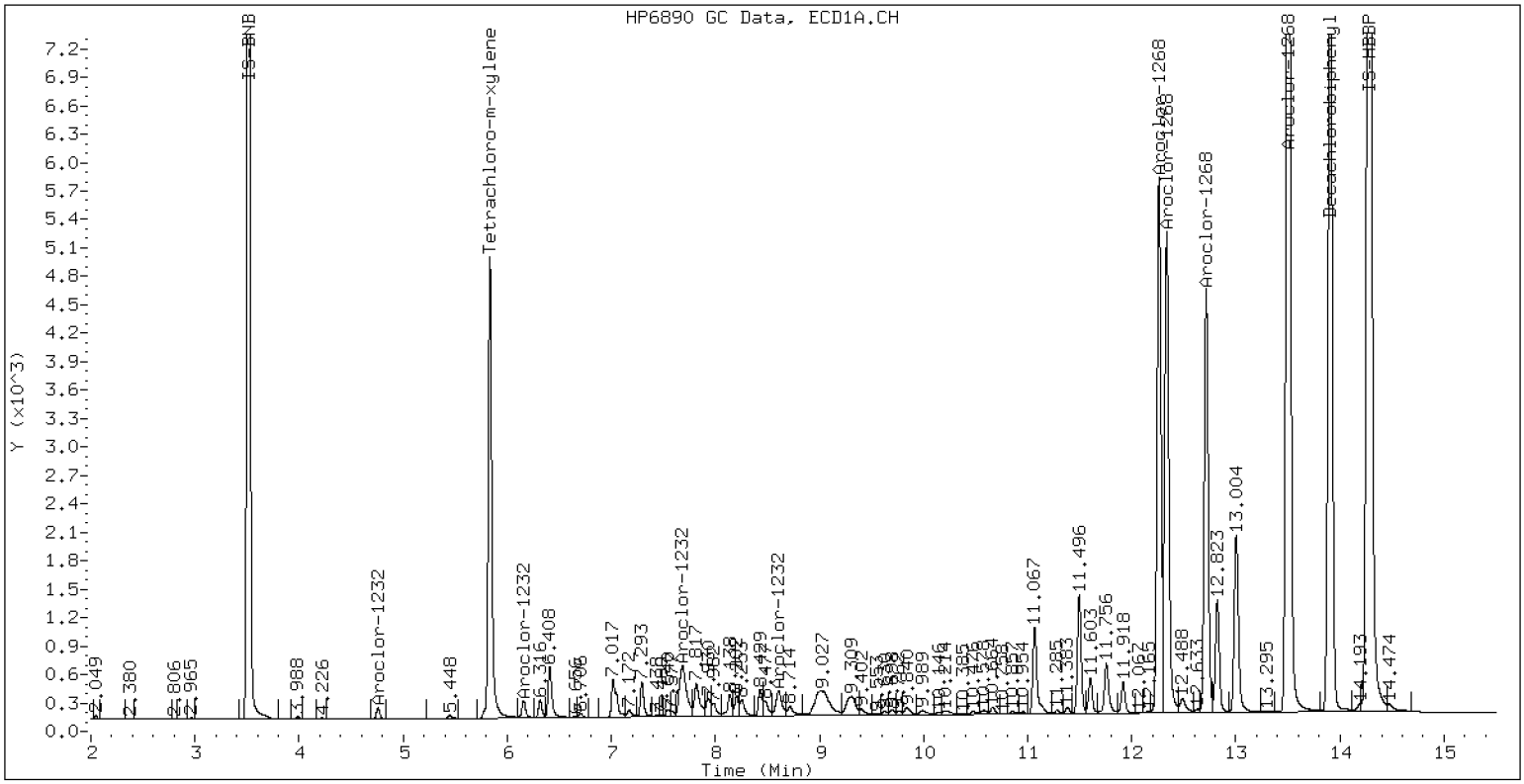
Total PCB Area Col2 (5.936 - 13.808) = 1423323 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

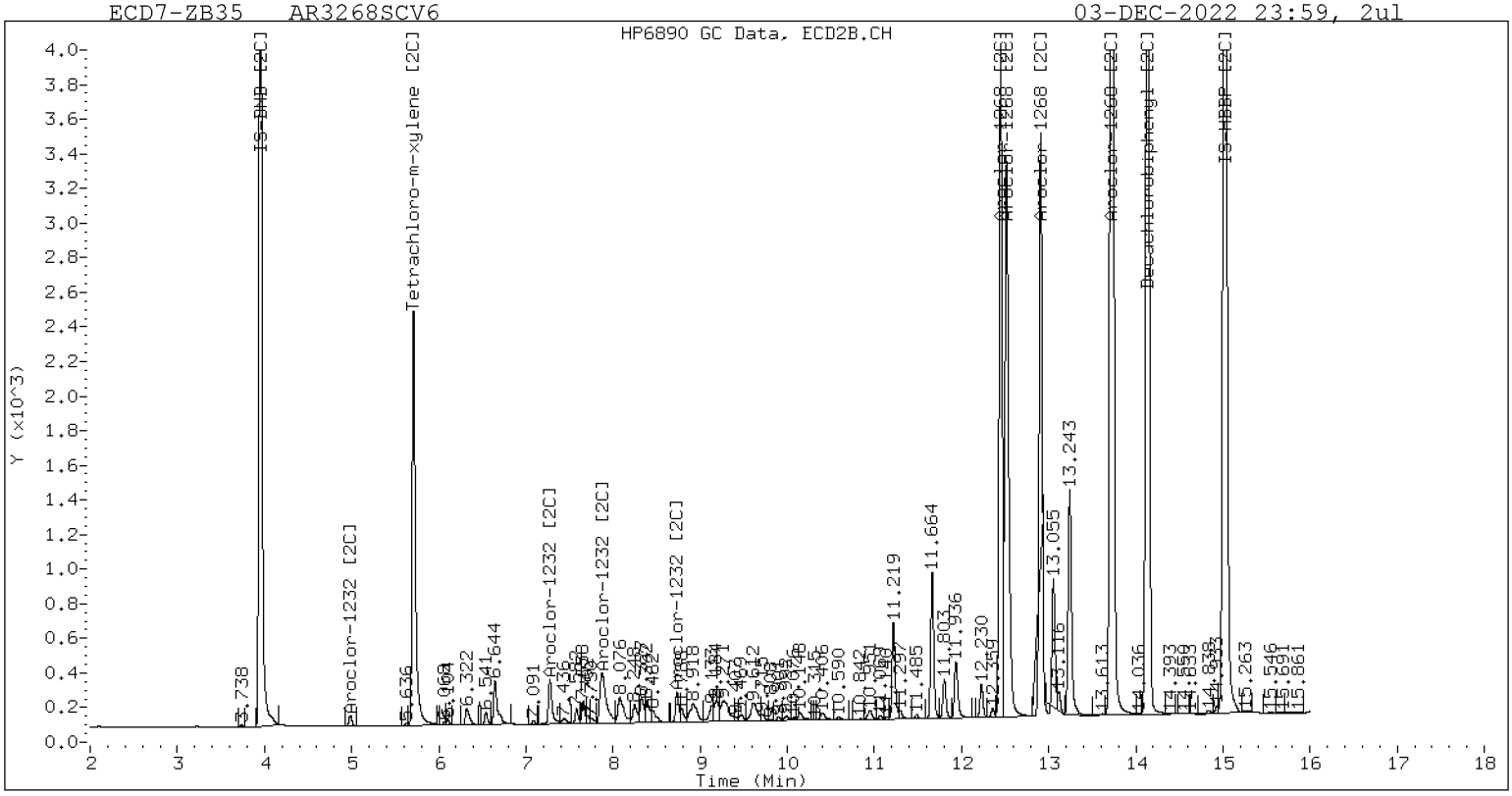
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV6 03-DEC-2022 23:59, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV6 03-DEC-2022 23:59, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12202214ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0304	Injection Date:	12/20/22
Lab Sample ID:	SKL0304-CCV1	Injection Time:	17:21
Sequence Name:	AR1248CCV1		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	249	0.0490062	0.0498480		-0.5	+/-20
Aroclor-1248 (1)	A	250.00	276		0.0379604			
Aroclor-1248 (2)	A	250.00	287		0.0503885			
Aroclor-1248 (3)	A	250.00	274		0.0864344			
Aroclor-1248 (4)	A	250.00	159		0.0246086			
Aroclor 1248 [2C]	A	250.00	240	0.0394876	0.0381304		-4.1	+/-20
Aroclor-1248 (1) [2C]	A	250.00	252		0.0329573			
Aroclor-1248 (2) [2C]	A	250.00	198		0.0272090			
Aroclor-1248 (3) [2C]	A	250.00	264		0.0440724			
Aroclor-1248 (4) [2C]	A	250.00	246		0.0482829			
Decachlorobiphenyl	A	40.000	42.3	0.7333327	0.7752128		5.7	+/-20
Tetrachlorometaxylene	A	40.000	36.5	1.1336710	1.0338230		-8.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.8	1.1358180	1.1030480		-2.9	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.1	1.0966080	1.0174330		-7.2	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202214ECD7.D
Data file 2: /221220.b/221220.b/12202214ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV1
Client ID:
Injection Date: 20-DEC-2022 17:21
Report Date: 12/22/2022 09:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	0.000	219020	5.713	-0.000	127550	36.5	37.1	1.7	Tetrachloro-m-xylene
13.905	-0.003	252862	14.132	-0.005	195251	42.3	38.8	8.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	423709	-5.3
Hexabromobiphenyl	798898	652368	-18.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	250729	0.7
Hexabromobiphenyl	362541	354021	-2.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.425	-0.002	50263	275.9	1	8.325	-0.001	25823	252.1
Aroclor-1248	2	8.600	-0.004	66719	286.8	2	8.730	-0.002	21319	197.9
Aroclor-1248	3	9.019	-0.003	114447	273.5	3	9.175	-0.003	34532	263.5
Aroclor-1248	4	9.310	-0.001	32584	158.9	4	9.596	-0.006	37831	245.9
Total Col1Ave (4 peaks):					248.8	Total Col2Ave (4 peaks):				239.9 RPD = 4
Corrected Ave (3 peaks):					236.1	Corrected Ave (3 peaks):				232.0 RPD = 2

Total PCB Area Col1 (5.936 - 13.808) = 1051898 Col1 Total PCB = 0.2 ppm*

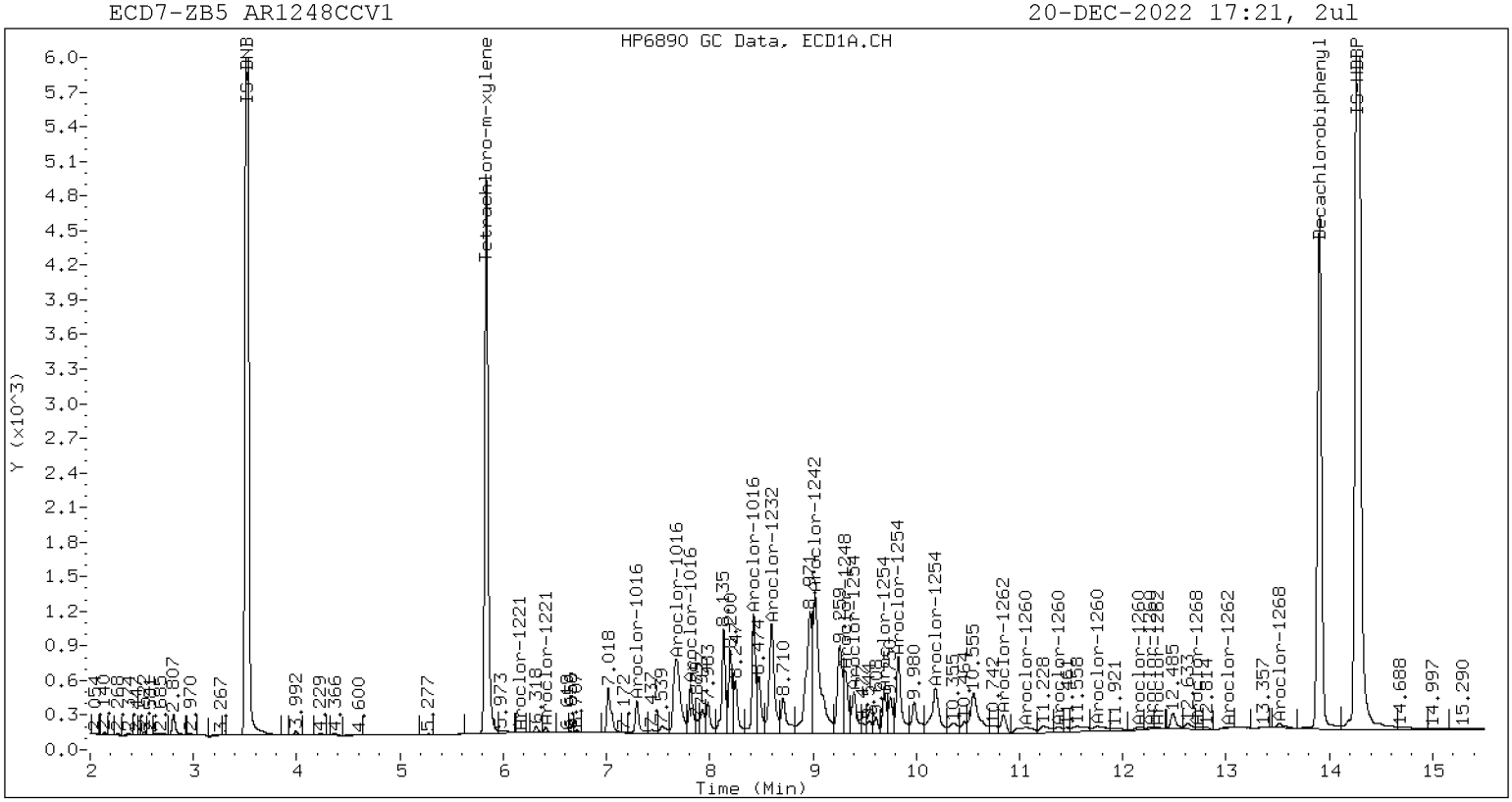
Total PCB Area Col2 (5.936 - 13.808) = 483858 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

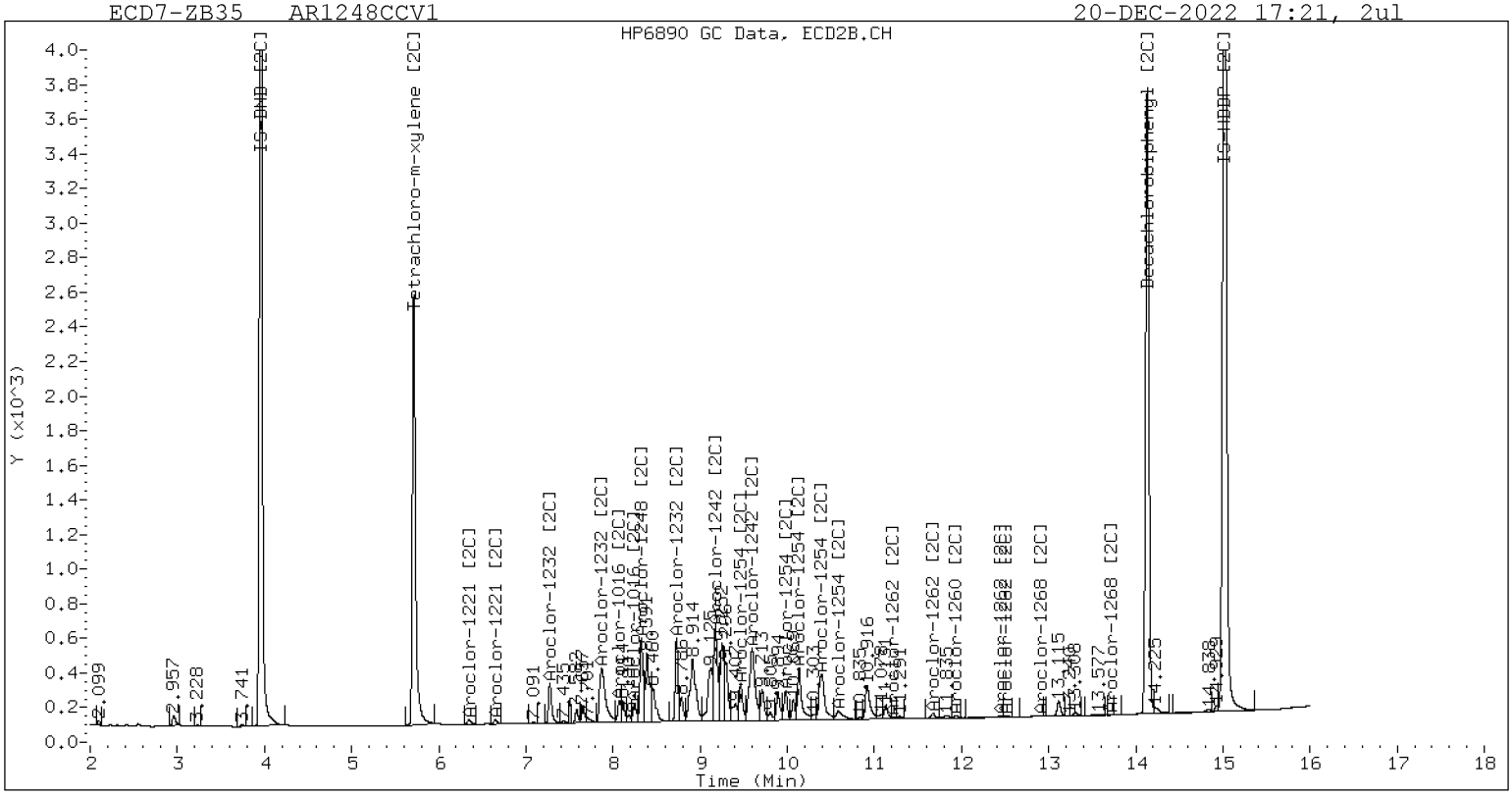
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1 20-DEC-2022 17:21, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV1 20-DEC-2022 17:21, 2ul



ZB-35 Manual Integration: NO

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12202215ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0304	Injection Date:	12/20/22
Lab Sample ID:	SKL0304-CCV2	Injection Time:	17:42
Sequence Name:	AR1660CCV2		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	263	0.0441939	0.0462985		5.2	+/-20
Aroclor-1016 (1)	A	250.00	254	0.0266860	0.0271189		1.6	
Aroclor-1016 (2)	A	250.00	260	0.0861572	0.0895403		3.9	
Aroclor-1016 (3)	A	250.00	264	0.0390425	0.0411900		5.5	
Aroclor-1016 (4)	A	250.00	275	0.0248899	0.0273449		9.9	
Aroclor 1016 [2C]	A	250.00	243	0.0467310	0.0442426		-2.8	+/-20
Aroclor-1016 (1) [2C]	A	250.00	250	0.0409030	0.0409079		0.01	
Aroclor-1016 (2) [2C]	A	250.00	225	0.0882154	0.0794585		-9.9	
Aroclor-1016 (3) [2C]	A	250.00	237	0.0378846	0.0359101		-5.2	
Aroclor-1016 (4) [2C]	A	250.00	260	0.0199212	0.0206936		3.9	
Aroclor 1260	A	250.00	281	0.0390342	0.0440849		12.6	+/-20
Aroclor-1260 (1)	A	250.00	282	0.0291201	0.0328513		12.8	
Aroclor-1260 (2)	A	250.00	283	0.0301181	0.0341193		13.3	
Aroclor-1260 (3)	A	250.00	285	0.0791351	0.0903594		14.2	
Aroclor-1260 (4)	A	250.00	277	0.0403003	0.0446177		10.7	
Aroclor-1260 (5)	A	250.00	280	0.0164974	0.0184770		12.0	
Aroclor 1260 [2C]	A	250.00	226	0.0617619	0.0535899		-9.8	+/-20
Aroclor-1260 (1) [2C]	A	250.00	233	0.0422283	0.0393640		-6.8	
Aroclor-1260 (2) [2C]	A	250.00	202	0.1059643	0.0854916		-19.3	
Aroclor-1260 (3) [2C]	A	250.00	251	0.0282173	0.0283381		0.4	
Aroclor-1260 (4) [2C]	A	250.00	216	0.0706376	0.0611661		-13.4	
Decachlorobiphenyl	A	40.000	45.2	0.7333327	0.8277953		12.9	+/-20
Tetrachlorometaxylene	A	40.000	40.6	1.1336710	1.1493600		1.4	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.0	1.1358180	1.1077230		-2.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.6	1.0966080	1.0861100		-1.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202215ECD7.D
Data file 2: /221220.b/221220.b/12202215ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV2
Client ID:
Injection Date: 20-DEC-2022 17:42
Report Date: 12/22/2022 09:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.000	194470	5.713	-0.001	109841	40.6	39.6	2.3	Tetrachloro-m-xylene
13.905	-0.003	249834	14.133	-0.004	173764	45.2	39.0	14.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	338397	-24.4
Hexabromobiphenyl	798898	603613	-24.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	202265	-18.8
Hexabromobiphenyl	362541	313732	-13.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.292	-0.002	28678	254.1	1	7.275	0.000	25857	250.0
Aroclor-1016	2	7.676	-0.008	94688	259.8	2	7.874	0.004	50224	225.2
Aroclor-1016	3	7.811	-0.006	43558	263.8	3	8.073	0.003	22698	237.0
Aroclor-1016	4	8.424	-0.005	28917	274.7	4	8.244	0.003	13080	259.7
	Total Col1Ave (4 peaks):				263.1		Total Col2Ave (4 peaks):			243.0 RPD = 8
	Corrected Ave (3 peaks):				259.2		Corrected Ave (3 peaks):			237.4 RPD = 9
Aroclor-1260	1	11.059	-0.003	61967	282.0	1	11.667	-0.003	38593	233.0
Aroclor-1260	2	11.375	-0.003	64359	283.2	2	11.929	-0.004	83817	201.7
Aroclor-1260	3	11.748	-0.004	170444	285.5	3	12.448	-0.003	27783	251.1
Aroclor-1260	4	12.151	-0.007	84162	276.8	4	12.513	-0.004	59968	216.5
Aroclor-1260	5	12.256	-0.005	34853	280.0	NS	---			----
	Total Col1Ave (5 peaks):				281.5		Total Col2Ave (4 peaks):			225.6 RPD = 22
	Corrected Ave (4 peaks):				280.5		Corrected Ave (3 peaks):			217.1 RPD = 25

Total PCB Area Col1 (5.936 - 13.808) = 1753486 Col1 Total PCB = 0.4 ppm*

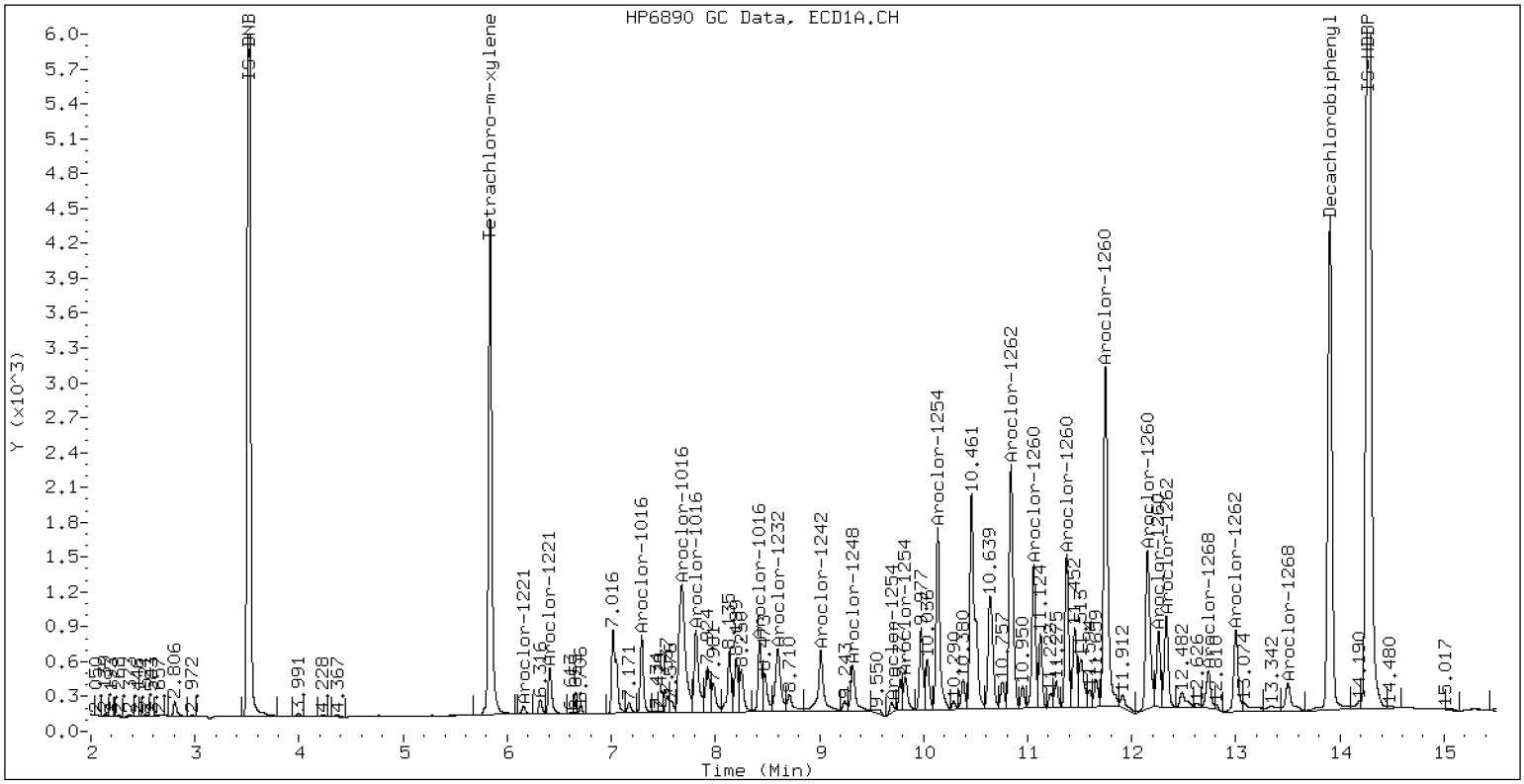
Total PCB Area Col2 (5.936 - 13.808) = 927444 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

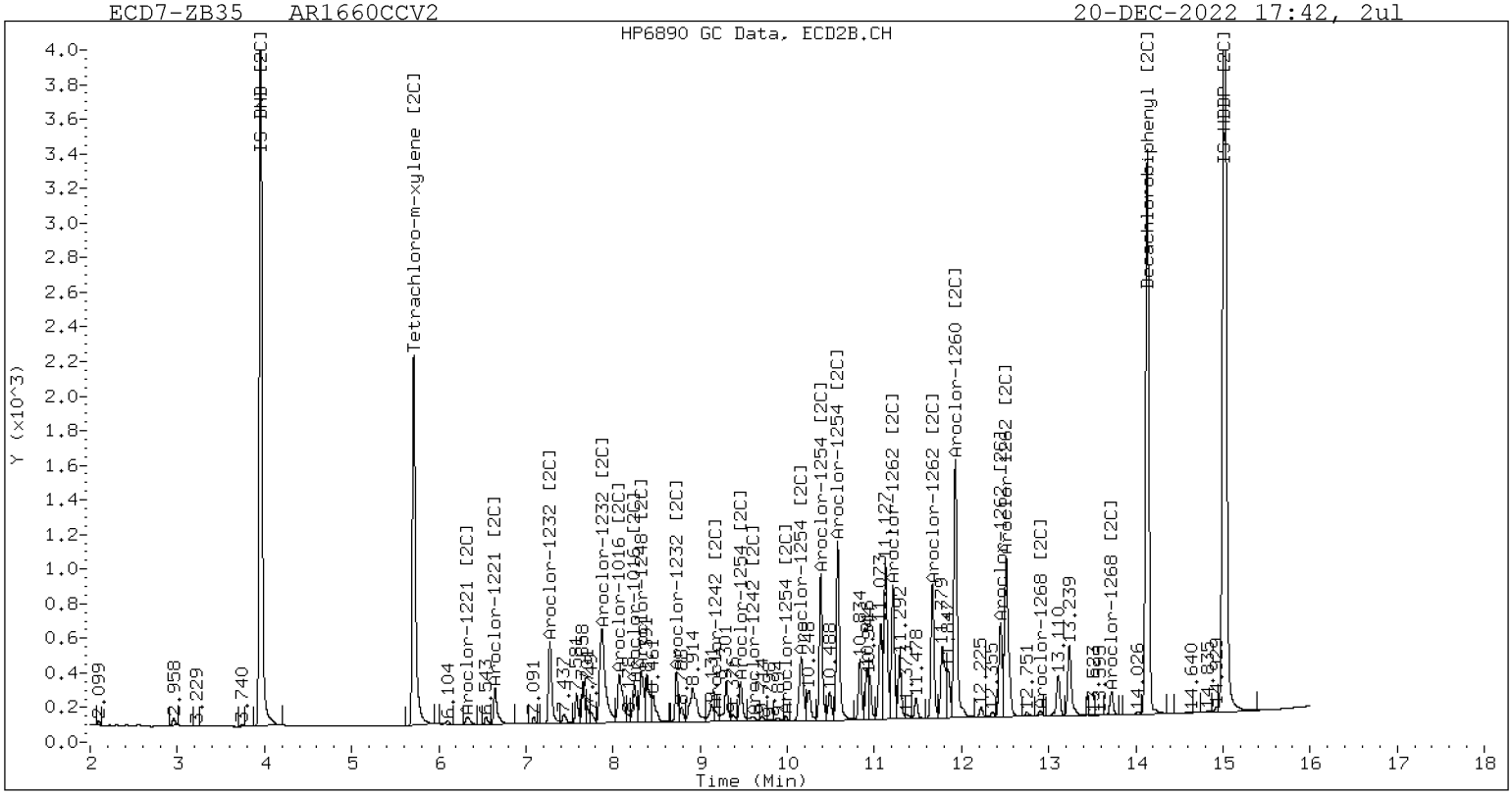
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2 20-DEC-2022 17:42, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1660CCV2 20-DEC-2022 17:42, 2ul

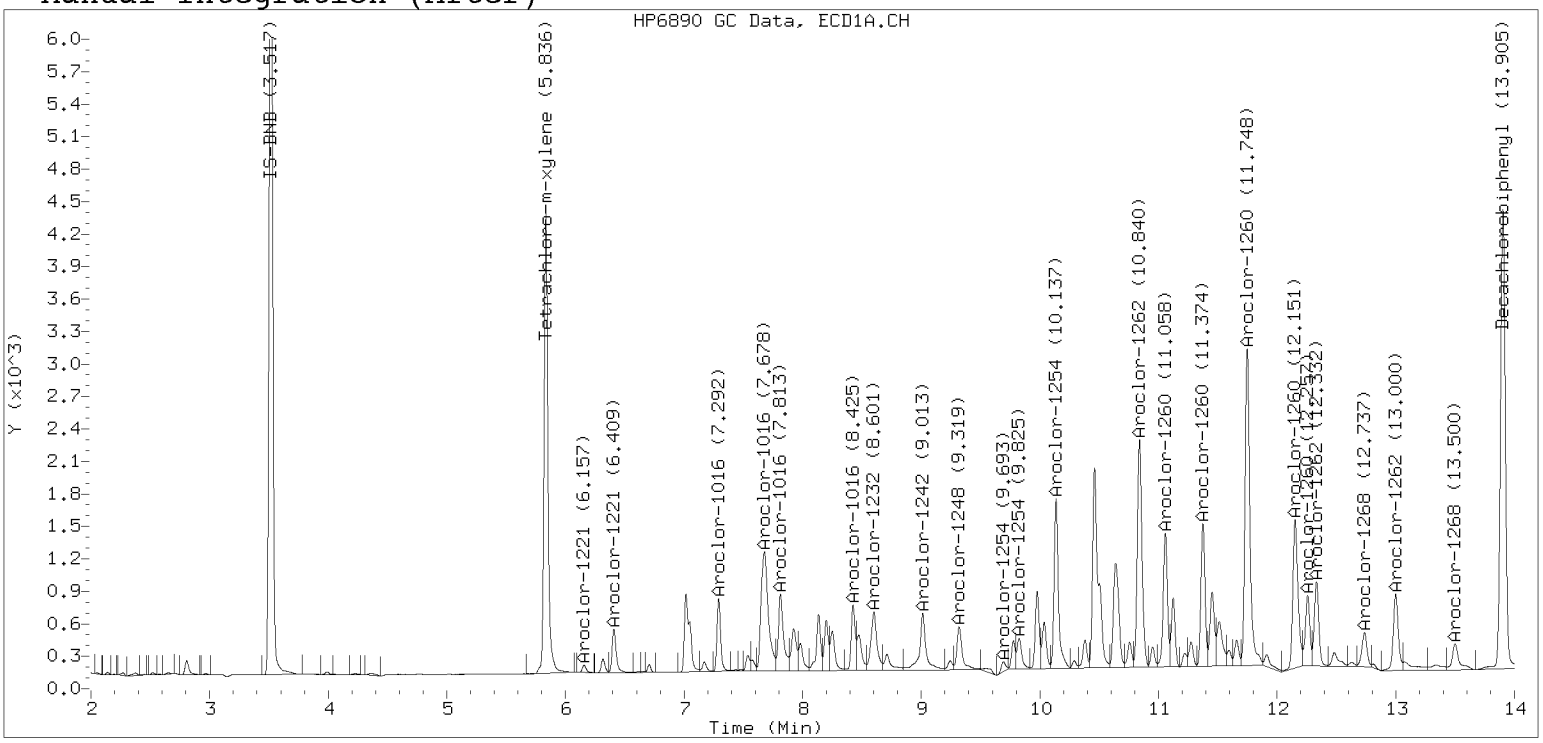


ZB-35 Manual Integration: NO

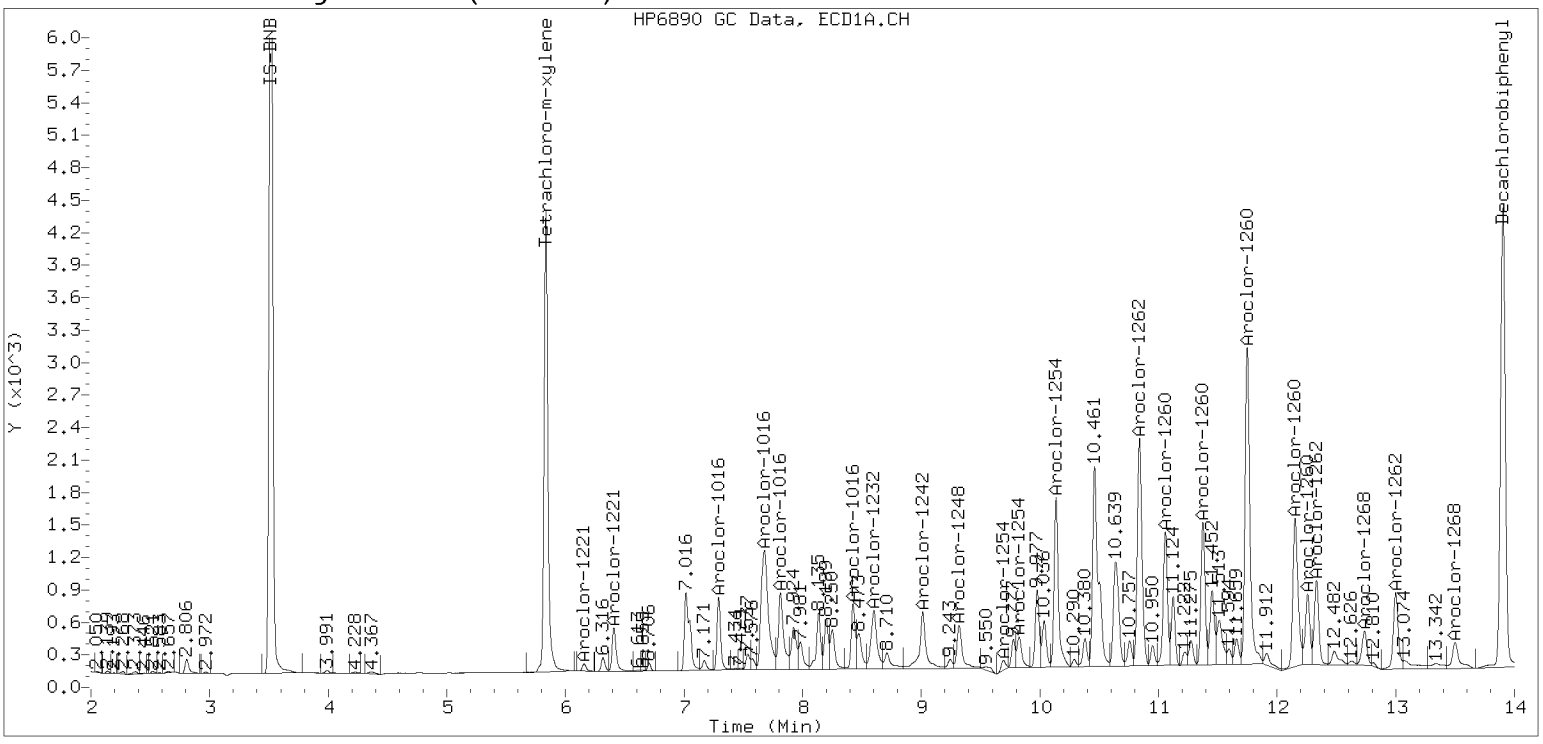
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221220.b/12202215ECD7.D Injection Date: 20-DEC-2022 17:42

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12202223ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0304	Injection Date:	12/20/22
Lab Sample ID:	SKL0304-CCV3	Injection Time:	20:32
Sequence Name:	AR1242CCV3		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	259	0.0396000	0.0408317		3.8	+/-20
Aroclor-1242 (1)	A	250.00	265		0.0240220			
Aroclor-1242 (2)	A	250.00	263		0.0757962			
Aroclor-1242 (3)	A	250.00	271		0.0224428			
Aroclor-1242 (4)	A	250.00	239		0.0410659			
Aroclor 1242 [2C]	A	250.00	246	0.0391981	0.0369079		-1.8	+/-20
Aroclor-1242 (1) [2C]	A	250.00	252		0.0341953			
Aroclor-1242 (2) [2C]	A	250.00	211		0.0605673			
Aroclor-1242 (3) [2C]	A	250.00	268		0.0248235			
Aroclor-1242 (4) [2C]	A	250.00	252		0.0280456			
Decachlorobiphenyl	A	40.000	43.0	0.7333327	0.7890466		7.6	+/-20
Tetrachlorometaxylene	A	40.000	38.4	1.1336710	1.0889810		-3.9	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.2	1.1358180	1.0845800		-4.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.0	1.0966080	1.0430280		-4.9	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202223ECD7.D
Data file 2: /221220.b/221220.b/12202223ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV3
Client ID:
Injection Date: 20-DEC-2022 20:32
Report Date: 12/22/2022 09:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.834	-0.002	220230	5.711	-0.002	126840	38.4	38.0	1.0	Tetrachloro-m-xylene
13.903	-0.004	215620	14.132	-0.005	173105	43.0	38.2	11.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	404470	-9.6
Hexabromobiphenyl	798898	546533	-31.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	243215	-2.4
Hexabromobiphenyl	362541	319211	-12.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.291	-0.004	30363	264.8	1	7.275	-0.003	25990	252.5
Aroclor-1242	2	7.675	-0.010	95804	263.2	2	7.872	-0.002	46034	210.7
Aroclor-1242	3	8.424	-0.005	28367	270.9	3	9.174	-0.004	18867	267.6
Aroclor-1242	4	9.022	-0.009	51906	238.7	4	9.594	-0.011	21316	251.6

Total Col1Ave (4 peaks): 259.4 Total Col2Ave (4 peaks): 245.6 RPD = 5

Corrected Ave (3 peaks): 255.6 Corrected Ave (3 peaks): 238.2 RPD = 7

Total PCB Area Col1 (5.936 - 13.808) = 790206 Col1 Total PCB = 0.2 ppm*

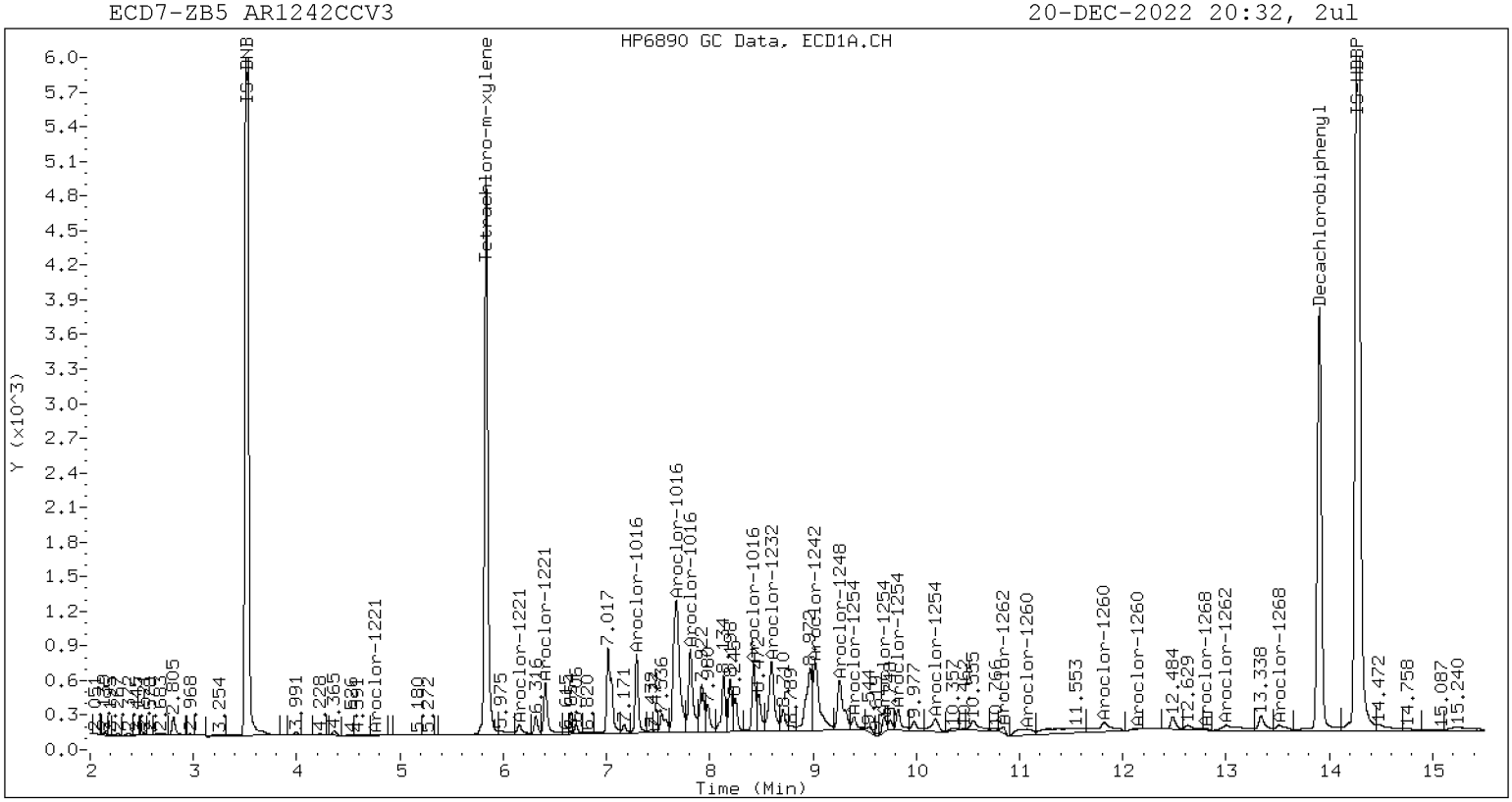
Total PCB Area Col2 (5.936 - 13.808) = 375154 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

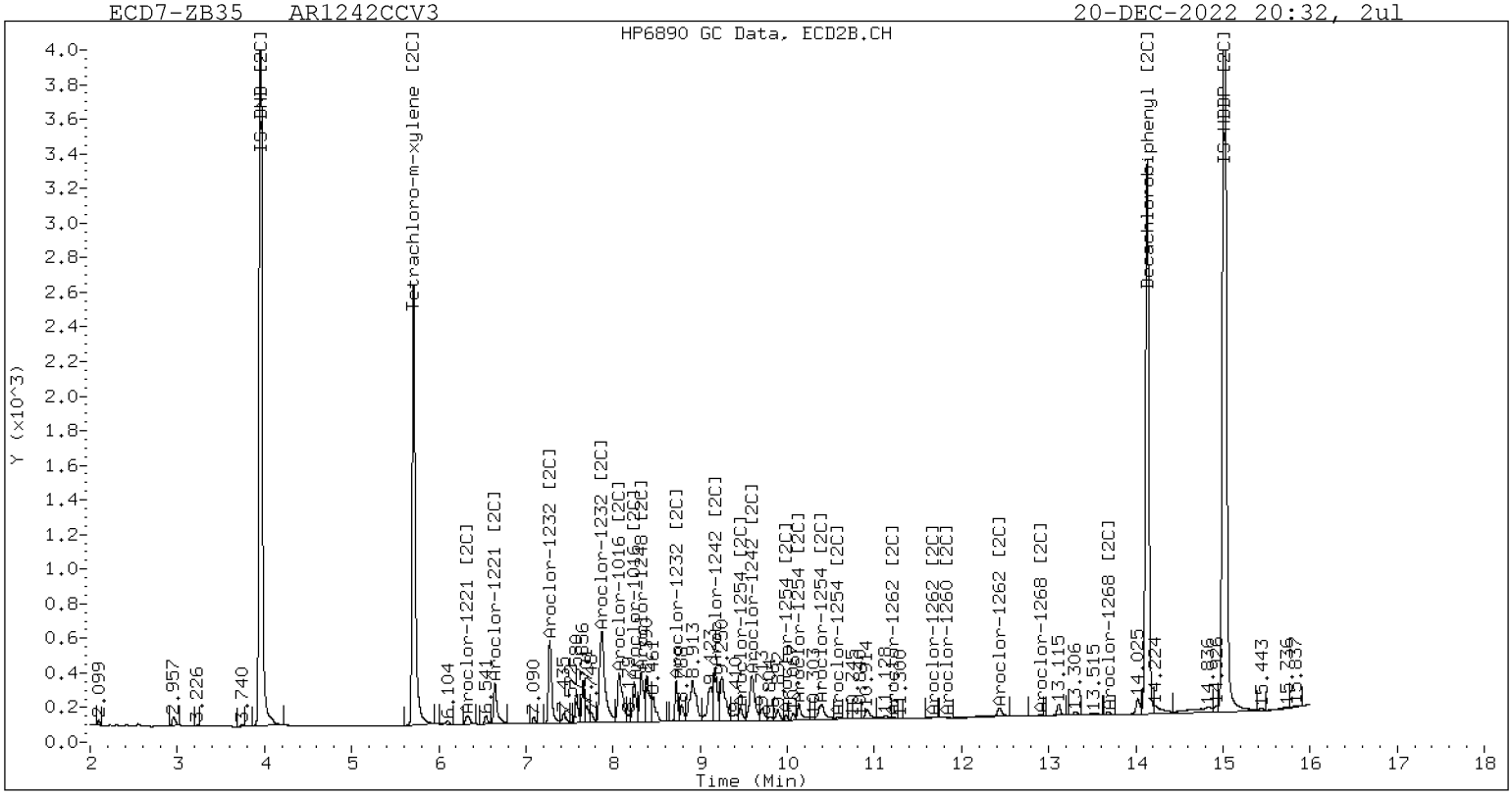
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV3 20-DEC-2022 20:32, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1242CCV3 20-DEC-2022 20:32, 2ul

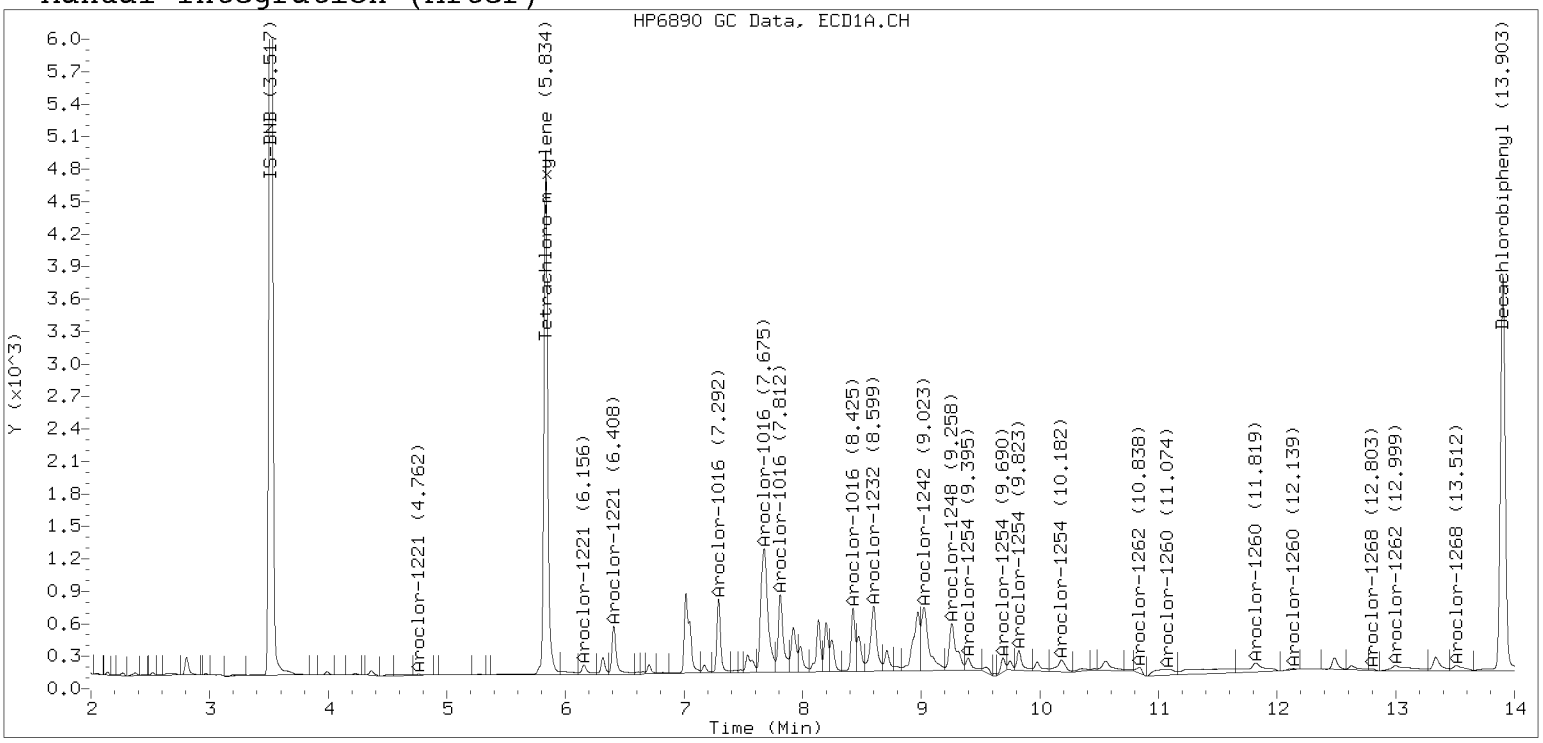


ZB-35 Manual Integration: NO

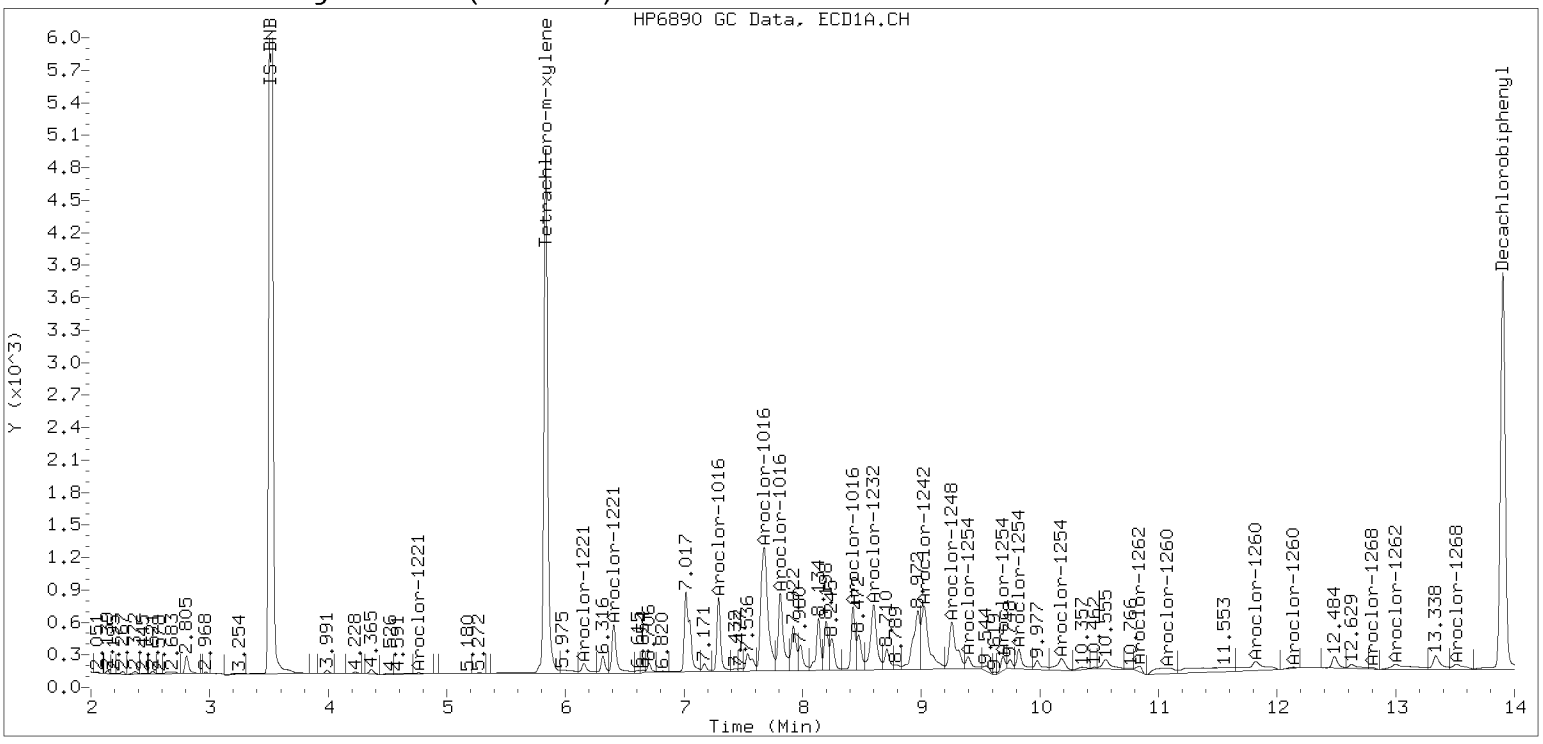
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221220.b/12202223ECD7.D Injection Date: 20-DEC-2022 20:32

Manual Integration (After)



Processed Integration (Before)



CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12202224ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0304	Injection Date:	12/20/22
Lab Sample ID:	SKL0304-CCV4	Injection Time:	20:53
Sequence Name:	AR1660CCV4		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	267	0.0441939	0.0467263		6.7	+/-20
Aroclor-1016 (1)	A	250.00	265	0.0266860	0.0282525		5.9	
Aroclor-1016 (2)	A	250.00	260	0.0861572	0.0894766		3.9	
Aroclor-1016 (3)	A	250.00	268	0.0390425	0.0418960		7.3	
Aroclor-1016 (4)	A	250.00	274	0.0248899	0.0272802		9.6	
Aroclor 1016 [2C]	A	250.00	243	0.0467310	0.0441119		-2.9	+/-20
Aroclor-1016 (1) [2C]	A	250.00	248	0.0409030	0.0406291		-0.7	
Aroclor-1016 (2) [2C]	A	250.00	224	0.0882154	0.0790819		-10.4	
Aroclor-1016 (3) [2C]	A	250.00	237	0.0378846	0.0359333		-5.2	
Aroclor-1016 (4) [2C]	A	250.00	261	0.0199212	0.0208031		4.4	
Aroclor 1260	A	250.00	294	0.0390342	0.0461497		17.8	+/-20
Aroclor-1260 (1)	A	250.00	302	0.0291201	0.0352312		21.0	
Aroclor-1260 (2)	A	250.00	302	0.0301181	0.0364355		21.0	
Aroclor-1260 (3)	A	250.00	297	0.0791351	0.0939932		18.8	
Aroclor-1260 (4)	A	250.00	288	0.0403003	0.0464638		15.3	
Aroclor-1260 (5)	A	250.00	282	0.0164974	0.0186245		12.9	
Aroclor 1260 [2C]	A	250.00	233	0.0617619	0.0554379		-6.8	+/-20
Aroclor-1260 (1) [2C]	A	250.00	242	0.0422283	0.0409464		-3.0	
Aroclor-1260 (2) [2C]	A	250.00	210	0.1059643	0.0888658		-16.1	
Aroclor-1260 (3) [2C]	A	250.00	258	0.0282173	0.0290978		3.1	
Aroclor-1260 (4) [2C]	A	250.00	222	0.0706376	0.0628413		-11.0	
Decachlorobiphenyl	A	40.000	46.4	0.7333327	0.8510787		16.1	+/-20
Tetrachlorometaxylene	A	40.000	40.4	1.1336710	1.1462510		1.1	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.3	1.1358180	1.1172530		-1.6	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.6	1.0966080	1.0859310		-1.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202224ECD7.D
Data file 2: /221220.b/221220.b/12202224ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV4
Client ID:
Injection Date: 20-DEC-2022 20:53
Report Date: 12/22/2022 09:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.001	192024	5.713	0.000	108819	40.4	39.6	2.1	Tetrachloro-m-xylene
13.904	-0.004	224675	14.132	-0.005	162457	46.4	39.3	16.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	335047	-25.2
Hexabromobiphenyl	798898	527977	-33.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	200416	-19.5
Hexabromobiphenyl	362541	290815	-19.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.293	-0.001	29581	264.7	1	7.276	0.001	25446	248.3
Aroclor-1016	2	7.677	-0.008	93684	259.6	2	7.874	0.003	49529	224.1
Aroclor-1016	3	7.813	-0.004	43866	268.3	3	8.073	0.003	22505	237.1
Aroclor-1016	4	8.424	-0.005	28563	274.0	4	8.243	0.002	13029	261.1
Total Col1Ave (4 peaks):					266.6	Total Col2Ave (4 peaks):				242.7 RPD = 9
Corrected Ave (3 peaks):					264.2	Corrected Ave (3 peaks):				236.5 RPD = 11
Aroclor-1260	1	11.058	-0.005	58129	302.5	1	11.666	-0.003	37212	242.4
Aroclor-1260	2	11.373	-0.004	60116	302.4	2	11.929	-0.004	80761	209.7
Aroclor-1260	3	11.748	-0.004	155082	296.9	3	12.448	-0.003	26444	257.8
Aroclor-1260	4	12.154	-0.004	76662	288.2	4	12.512	-0.005	57110	222.4
Aroclor-1260	5	12.259	-0.002	30729	282.2	NS	---			----
Total Col1Ave (5 peaks):					294.5	Total Col2Ave (4 peaks):				233.1 RPD = 23
Corrected Ave (4 peaks):					292.5	Corrected Ave (3 peaks):				224.8 RPD = 26

Total PCB Area Col1 (5.936 - 13.808) = 1655705 Col1 Total PCB = 0.4 ppm*

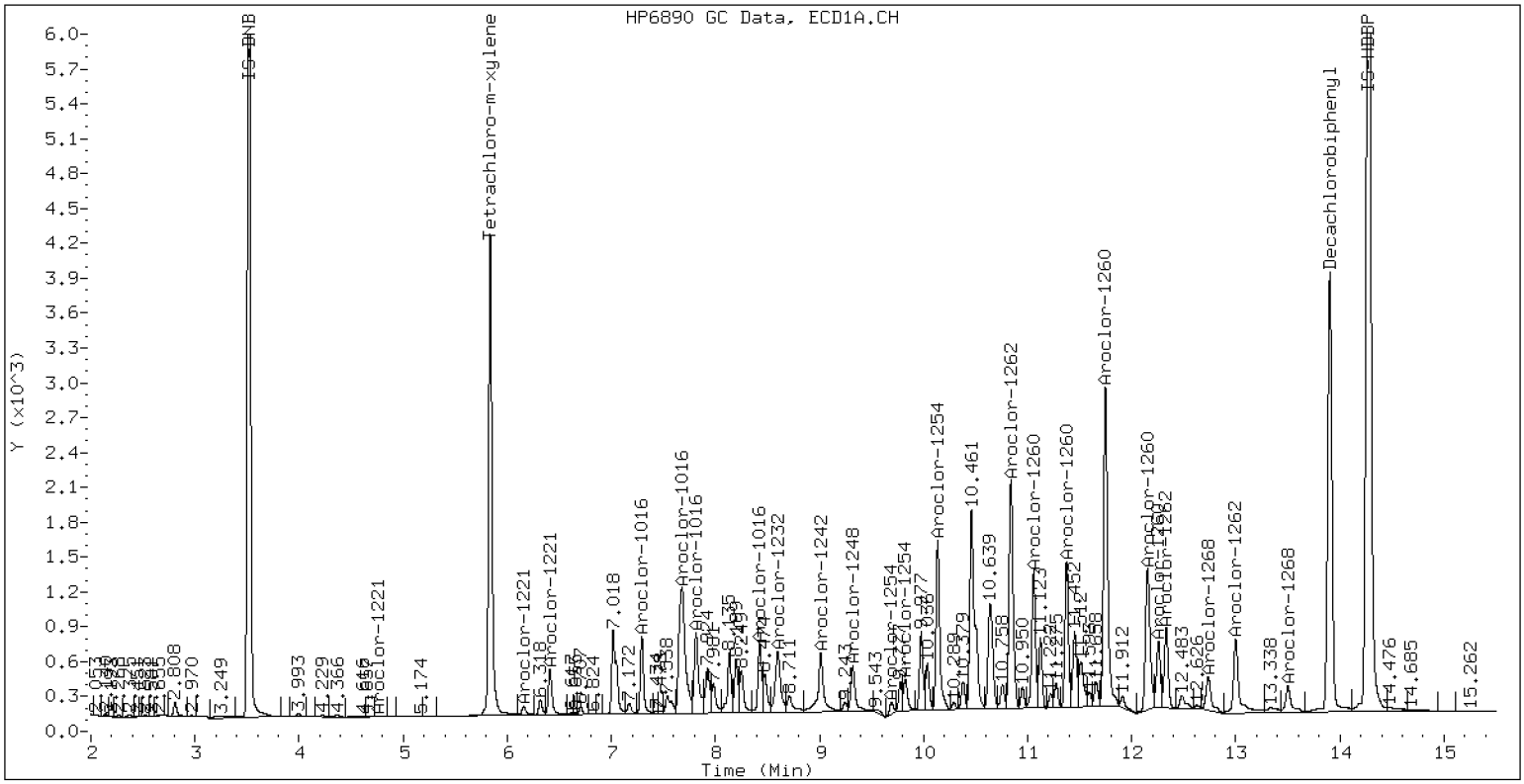
Total PCB Area Col2 (5.936 - 13.808) = 887249 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

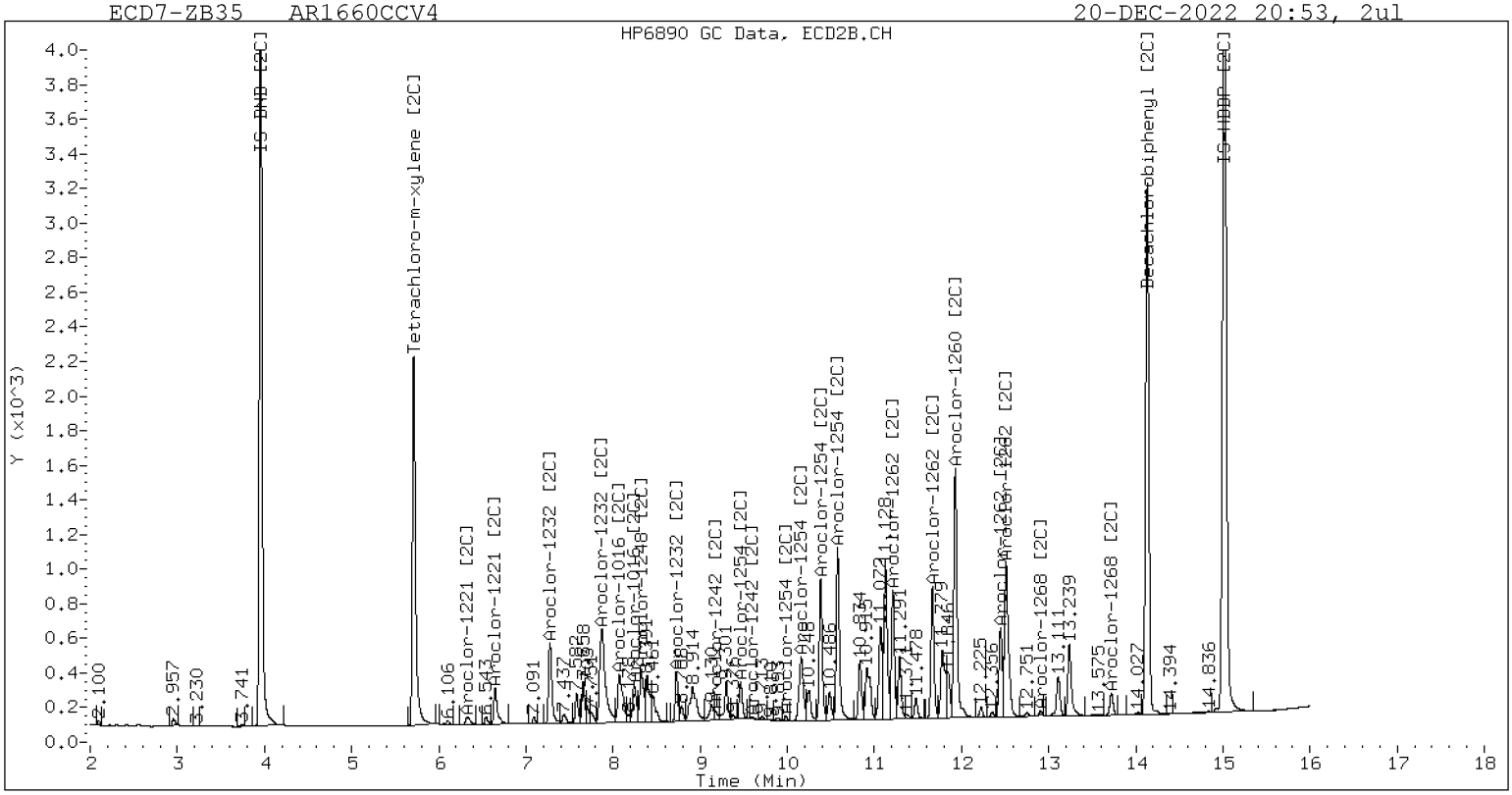
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV4 20-DEC-2022 20:53, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1660CCV4 20-DEC-2022 20:53, 2ul

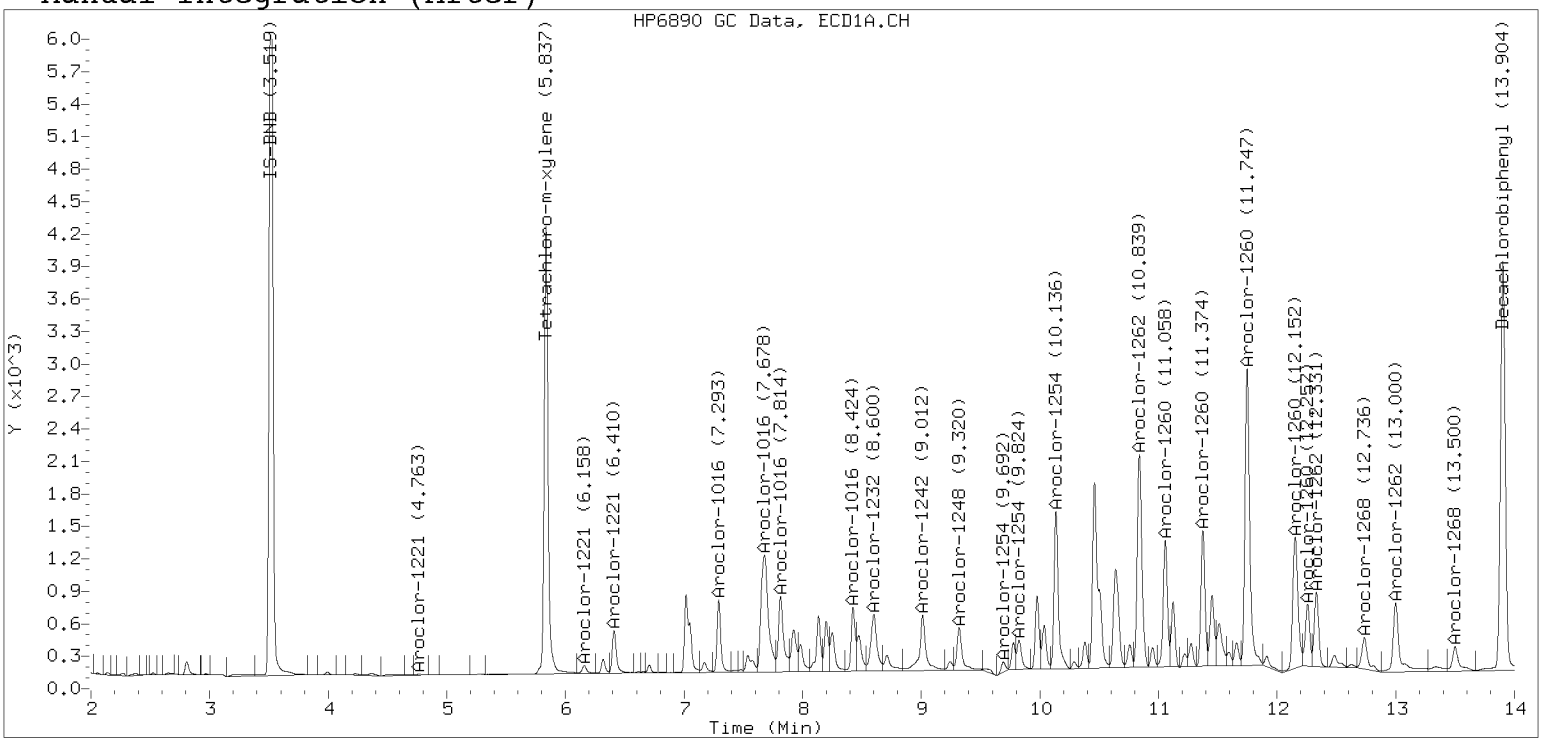


ZB-35 Manual Integration: NO

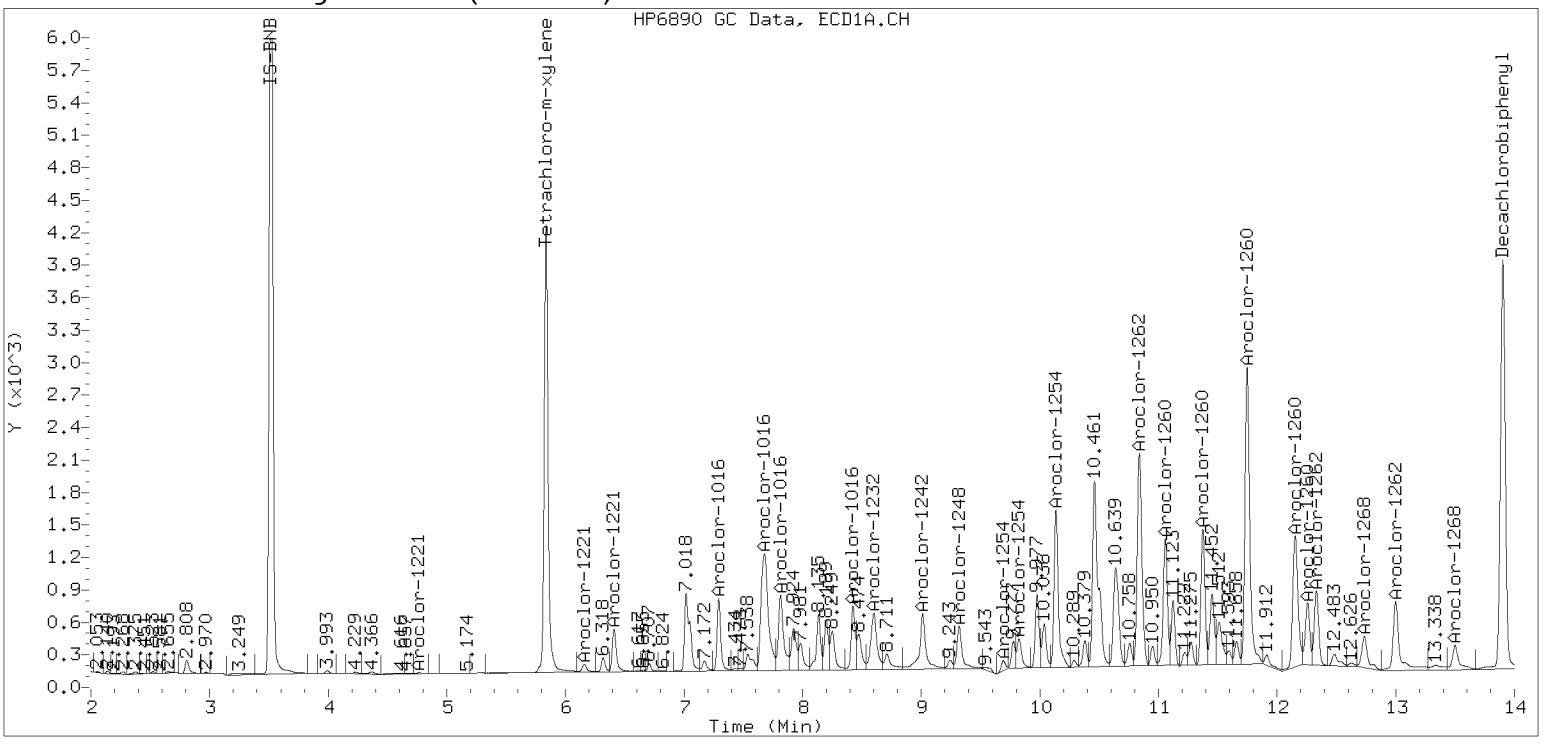
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221220.b/12202224ECD7.D Injection Date: 20-DEC-2022 20:53

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12202242ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0304	Injection Date:	12/21/22
Lab Sample ID:	SKL0304-CCV5	Injection Time:	03:15
Sequence Name:	AR1254CCV5		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	227	0.0576965	0.0526202		-9.1	+/-20
Aroclor-1254 (1)	A	250.00	228		0.0641724			
Aroclor-1254 (2)	A	250.00	239		0.0262352			
Aroclor-1254 (3)	A	250.00	197		0.0350005			
Aroclor-1254 (4)	A	250.00	232		0.0803629			
Aroclor-1254 (5)	A	250.00	241		0.0573303			
Aroclor 1254 [2C]	A	250.00	215	0.0638047	0.0561608		-13.9	+/-20
Aroclor-1254 (1) [2C]	A	250.00	230		0.0474678			
Aroclor-1254 (2) [2C]	A	250.00	156		0.0258546			
Aroclor-1254 (3) [2C]	A	250.00	217		0.0772018			
Aroclor-1254 (4) [2C]	A	250.00	240		0.0885104			
Aroclor-1254 (5) [2C]	A	250.00	235		0.0417693			
Decachlorobiphenyl	A	40.000	42.1	0.7333327	0.7725005		5.3	+/-20
Tetrachlorometaxylene	A	40.000	36.8	1.1336710	1.0419250		-8.1	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.4	1.1358180	1.1458690		0.9	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.4	1.0966080	0.9969926		-9.1	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202242ECD7.D
Data file 2: /221220.b/221220.b/12202242ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254CCV5
Client ID:
Injection Date: 21-DEC-2022 03:15
Report Date: 12/22/2022 09:42
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.835	-0.001	211340	5.712	-0.002	122496	36.8	36.4	1.1	Tetrachloro-m-xylene
13.904	-0.003	174942	14.133	-0.004	161677	42.1	40.4	4.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	405672	-9.4
Hexabromobiphenyl	798898	452924	-43.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	245731	-1.4
Hexabromobiphenyl	362541	282191	-22.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.315	-0.006	81353	227.8	1	9.463	-0.004	36451	230.1
Aroclor-1254	2	9.393	-0.009	33259	239.4	2	9.982	-0.005	19854	155.9
Aroclor-1254	3	9.685	-0.009	44371	196.7	3	10.132	-0.007	59284	216.5
Aroclor-1254	4	9.820	-0.010	101878	231.7	4	10.381	-0.008	67968	239.7
Aroclor-1254	5	10.176	-0.013	72679	241.1	5	10.579	-0.008	32075	234.5

Total Col1Ave (5 peaks): 227.3 Total Col2Ave (5 peaks): 215.3 RPD = 5

Corrected Ave (4 peaks): 223.9 Corrected Ave (4 peaks): 209.2 RPD = 7

Total PCB Area Col1 (5.936 - 13.808) = 1091689 Col1 Total PCB = 0.2 ppm*

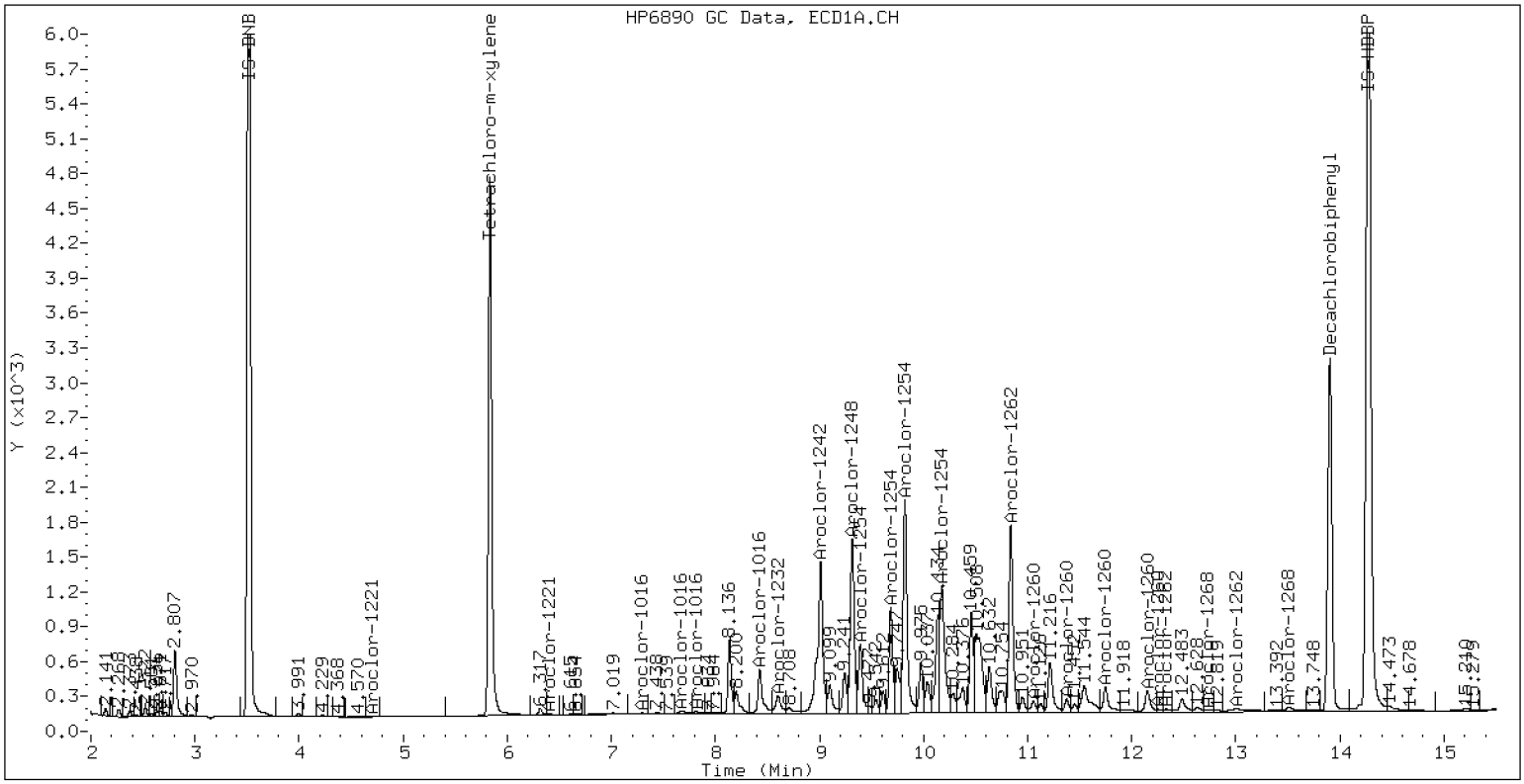
Total PCB Area Col2 (5.936 - 13.808) = 607250 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

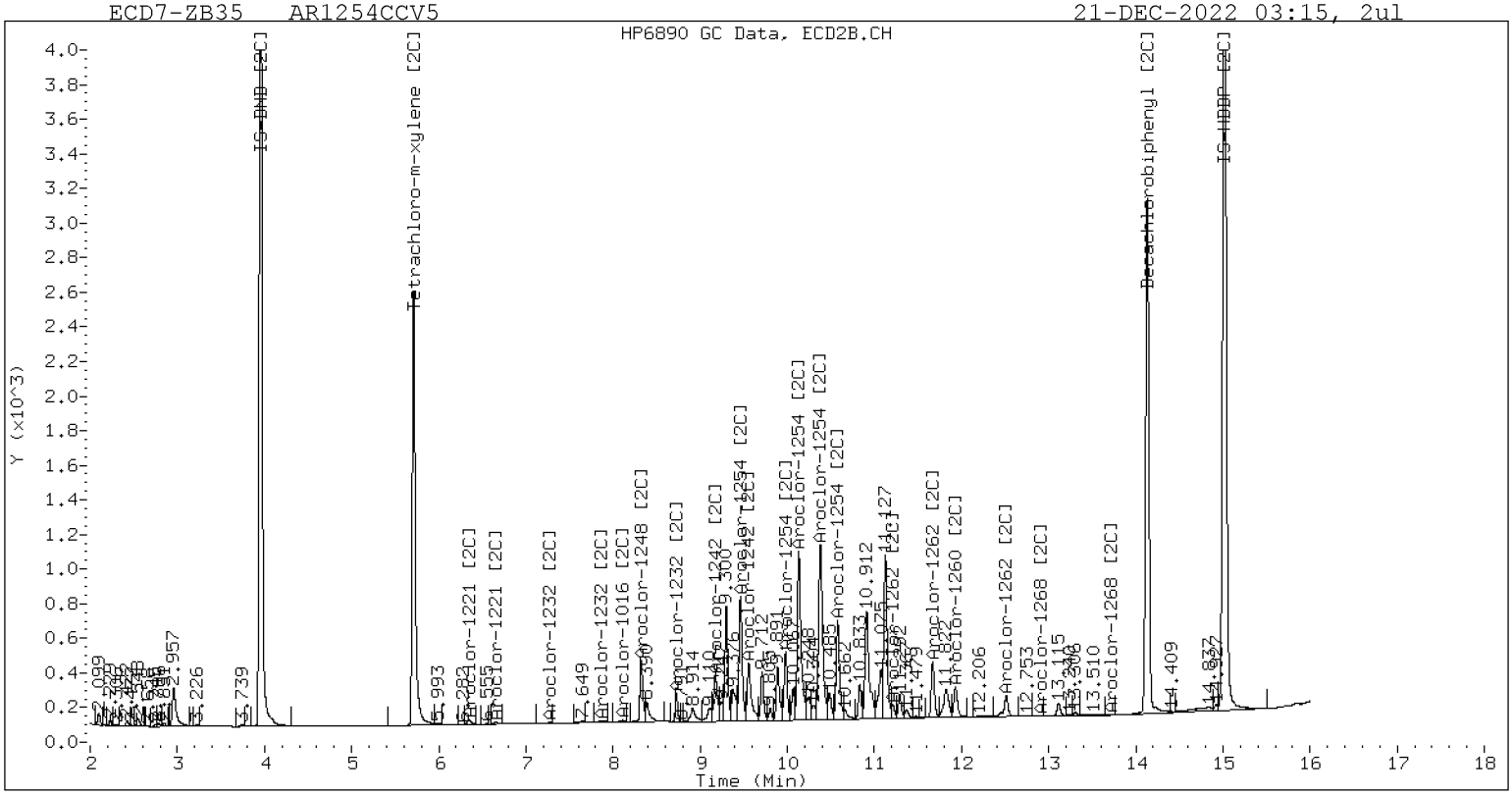
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCV5 21-DEC-2022 03:15, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1254CCV5 21-DEC-2022 03:15, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12202243ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0304	Injection Date:	12/21/22
Lab Sample ID:	SKL0304-CCV6	Injection Time:	03:36
Sequence Name:	AR1660CCV6		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1016	A	250.00	276	0.0441939	0.0481676		10.3	+/-20	
Aroclor-1016 (1)	A	250.00	276	0.0266860	0.0294320		10.3		
Aroclor-1016 (2)	A	250.00	268	0.0861572	0.0922594		7.1		
Aroclor-1016 (3)	A	250.00	270	0.0390425	0.0422140		8.1		
Aroclor-1016 (4)	A	250.00	289	0.0248899	0.0287651		15.6		
Aroclor 1016 [2C]	A	250.00	245	0.0467310	0.0441822		-2.2	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	250	0.0409030	0.0409431		0.1		
Aroclor-1016 (2) [2C]	A	250.00	222	0.0882154	0.0783050		-11.2		
Aroclor-1016 (3) [2C]	A	250.00	239	0.0378846	0.0361438		-4.6		
Aroclor-1016 (4) [2C]	A	250.00	268	0.0199212	0.0213372		7.1		
Aroclor 1260	A	250.00	322	0.0390342	0.0503876		28.9	+/-20	*
Aroclor-1260 (1)	A	250.00	334	0.0291201	0.0388850		33.5		
Aroclor-1260 (2)	A	250.00	328	0.0301181	0.0395718		31.4		
Aroclor-1260 (3)	A	250.00	321	0.0791351	0.1015507		28.3		
Aroclor-1260 (4)	A	250.00	320	0.0403003	0.0515871		28.0		
Aroclor-1260 (5)	A	250.00	308	0.0164974	0.0203432		23.3		
Aroclor 1260 [2C]	A	250.00	251	0.0617619	0.0595963		0.5	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	266	0.0422283	0.0450126		6.6		
Aroclor-1260 (2) [2C]	A	250.00	225	0.1059643	0.0955466		-9.8		
Aroclor-1260 (3) [2C]	A	250.00	278	0.0282173	0.0313551		11.1		
Aroclor-1260 (4) [2C]	A	250.00	235	0.0706376	0.0664710		-5.9		
Decachlorobiphenyl	A	40.000	44.3	0.7333327	0.8128926		10.8	+/-20	
Tetrachlorometaxylene	A	40.000	41.6	1.1336710	1.1800210		4.1	+/-20	
Decachlorobiphenyl [2C]	A	40.000	39.4	1.1358180	1.1192910		-1.5	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	39.7	1.0966080	1.0887540		-0.7	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202243ECD7.D
Data file 2: /221220.b/221220.b/12202243ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV6
Client ID:
Injection Date: 21-DEC-2022 03:36
Report Date: 12/22/2022 09:42
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.835	-0.001	199882	5.712	-0.002	111686	41.6	39.7	4.7	Tetrachloro-m-xylene
13.902	-0.006	185774	14.133	-0.004	150140	44.3	39.4	11.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	338777	-24.3
Hexabromobiphenyl	798898	457069	-42.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	205163	-17.6
Hexabromobiphenyl	362541	268277	-26.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.291	-0.003	31159	275.7	1	7.275	0.000	26250	250.2
Aroclor-1016	2	7.676	-0.009	97673	267.7	2	7.872	0.001	50204	221.9
Aroclor-1016	3	7.811	-0.007	44691	270.3	3	8.071	0.001	23173	238.5
Aroclor-1016	4	8.424	-0.005	30453	288.9	4	8.243	0.002	13680	267.8
Total Col1Ave (4 peaks):					275.7	Total Col2Ave (4 peaks):				244.6 RPD = 12
Corrected Ave (3 peaks):					271.2	Corrected Ave (3 peaks):				236.9 RPD = 14
Aroclor-1260	1	11.057	-0.005	55541	333.8	1	11.667	-0.002	37737	266.5
Aroclor-1260	2	11.373	-0.005	56522	328.5	2	11.929	-0.004	80103	225.4
Aroclor-1260	3	11.745	-0.007	145049	320.8	3	12.448	-0.003	26287	277.8
Aroclor-1260	4	12.149	-0.009	73684	320.0	4	12.512	-0.004	55727	235.3
Aroclor-1260	5	12.254	-0.007	29057	308.3	NS	---			----
Total Col1Ave (5 peaks):					322.3	Total Col2Ave (4 peaks):				251.2 RPD = 25
Corrected Ave (4 peaks):					319.4	Corrected Ave (3 peaks):				242.4 RPD = 27

Total PCB Area Col1 (5.936 - 13.808) = 1675260 Col1 Total PCB = 0.4 ppm*

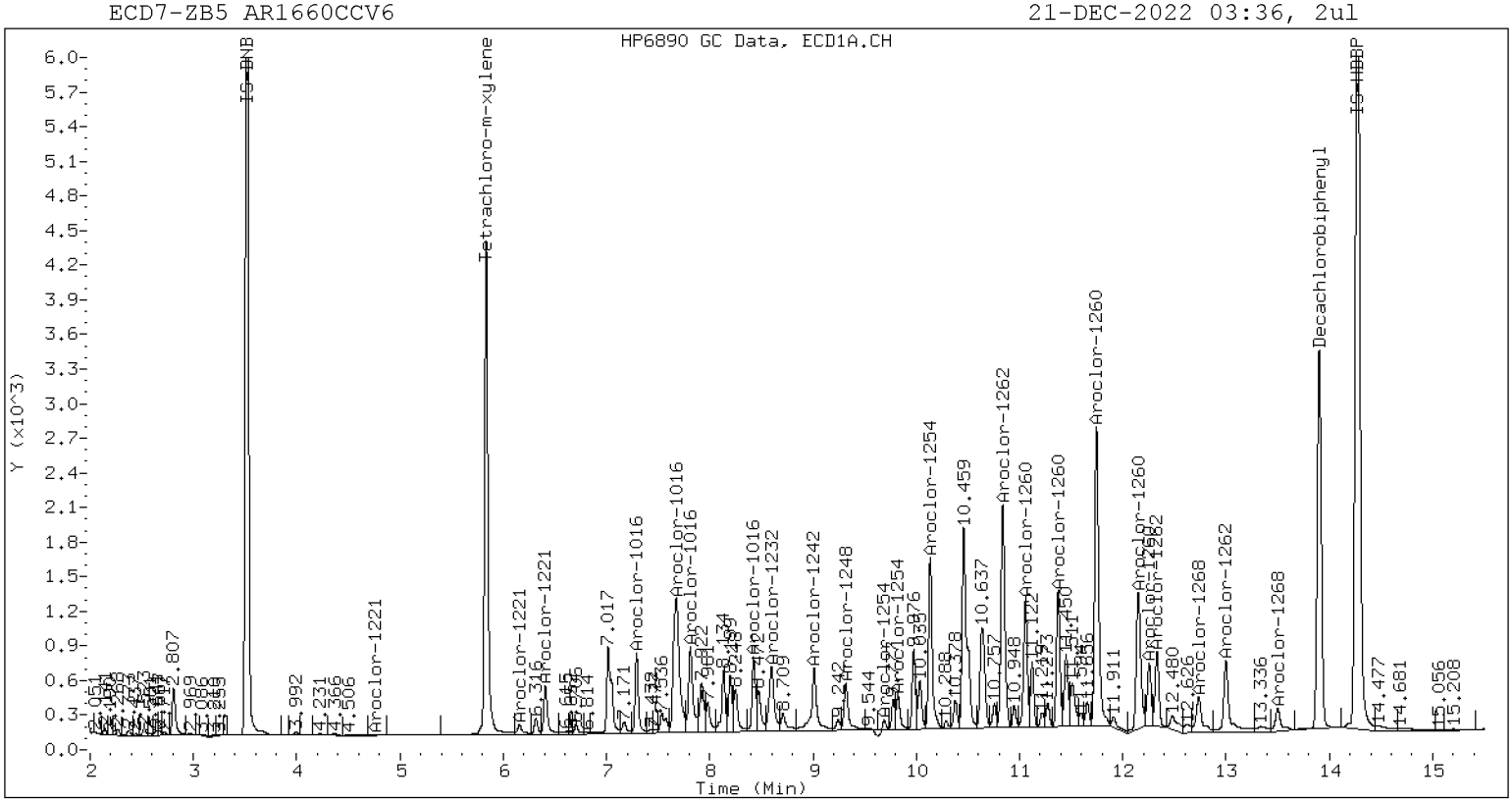
Total PCB Area Col2 (5.936 - 13.808) = 911502 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

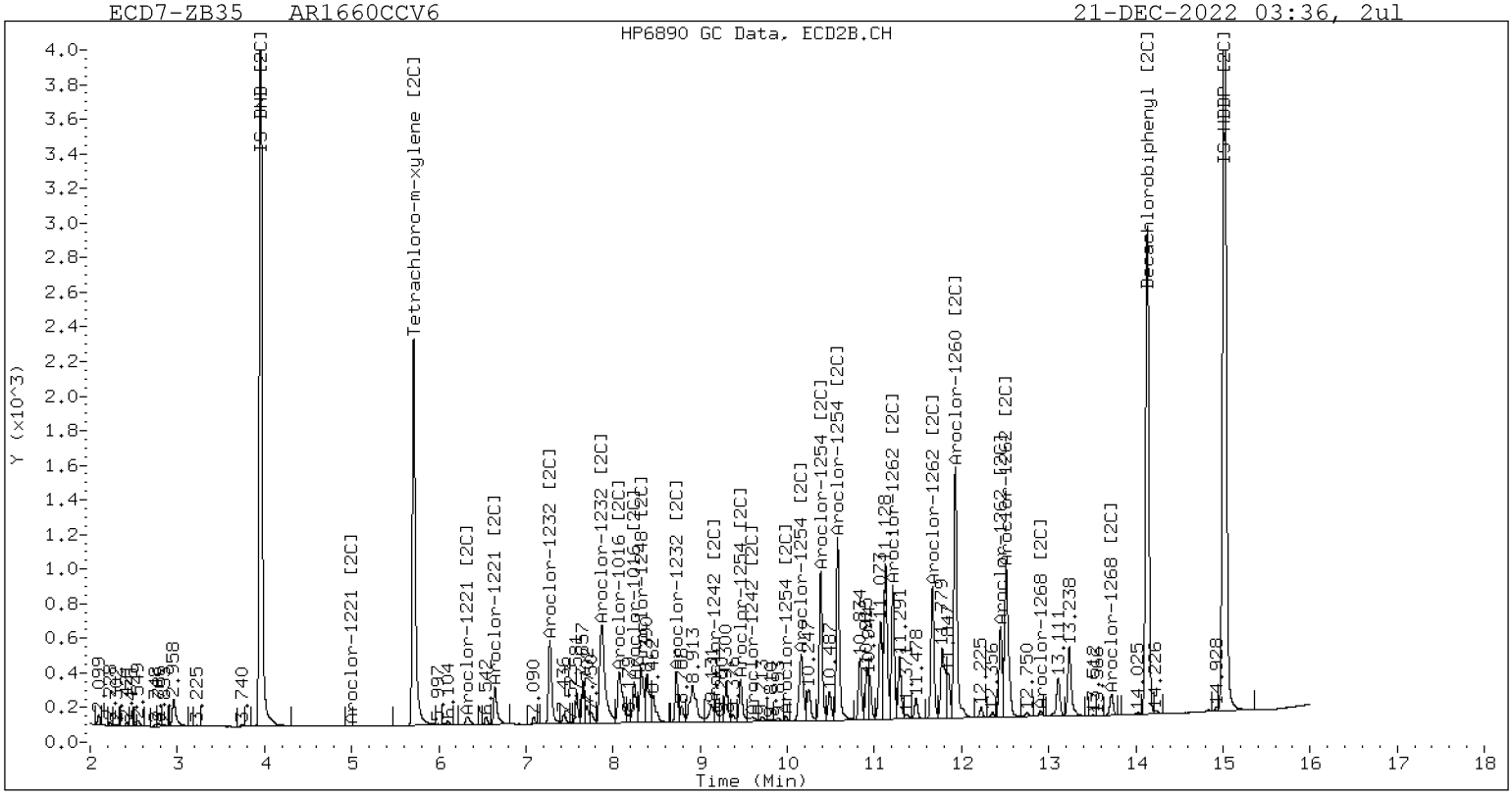
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV6 21-DEC-2022 03:36, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1660CCV6 21-DEC-2022 03:36, 2ul



ZB-35 Manual Integration: NO

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12202259ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0304	Injection Date:	12/21/22
Lab Sample ID:	SKL0304-CCV7	Injection Time:	09:15
Sequence Name:	AR1248CCV7		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	219	0.0490062	0.0421341		-12.5	+/-20
Aroclor-1248 (1)	A	250.00	261		0.0359733			
Aroclor-1248 (2)	A	250.00	266		0.0467717			
Aroclor-1248 (3)	A	250.00	199		0.0628473			
Aroclor-1248 (4)	A	250.00	148		0.0229441			
Aroclor 1248 [2C]	A	250.00	240	0.0394876	0.0382524		-3.9	+/-20
Aroclor-1248 (1) [2C]	A	250.00	253		0.0331176			
Aroclor-1248 (2) [2C]	A	250.00	192		0.0264149			
Aroclor-1248 (3) [2C]	A	250.00	265		0.0442382			
Aroclor-1248 (4) [2C]	A	250.00	251		0.0492390			
Decachlorobiphenyl	A	40.000	41.0	0.7333327	0.7519348		2.5	+/-20
Tetrachlorometaxylene	A	40.000	36.6	1.1336710	1.0379050		-8.4	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.6	1.1358180	1.1235140		-1.1	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.8	1.0966080	1.0094650		-7.9	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202259ECD7.D
Data file 2: /221220.b/221220.b/12202259ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV7
Client ID:
Injection Date: 21-DEC-2022 09:15
Report Date: 12/27/2022 10:35
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.835	-0.001	215209	5.713	-0.001	124412	36.6	36.8	0.5	Tetrachloro-m-xylene
13.904	-0.004	216517	14.133	-0.004	185340	41.0	39.6	3.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	414699	-7.4
Hexabromobiphenyl	798898	575893	-27.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	246491	-1.0
Hexabromobiphenyl	362541	329929	-9.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.425	-0.002	46619	261.5	1	8.325	-0.001	25510	253.3
Aroclor-1248	2	8.598	-0.007	60613	266.2	2	8.730	-0.003	20347	192.1
Aroclor-1248	3	9.017	-0.005	81446	198.9	3	9.174	-0.003	34076	264.5
Aroclor-1248	4	9.313	0.002	29734	148.2	4	9.595	-0.008	37928	250.8
Total Col1Ave (4 peaks):					218.7	Total Col2Ave (4 peaks):				240.2 RPD = 9
Corrected Ave (3 peaks):					202.8	Corrected Ave (3 peaks):				232.1 RPD = 13

Total PCB Area Col1 (5.936 - 13.808) = 881748 Col1 Total PCB = 0.2 ppm*

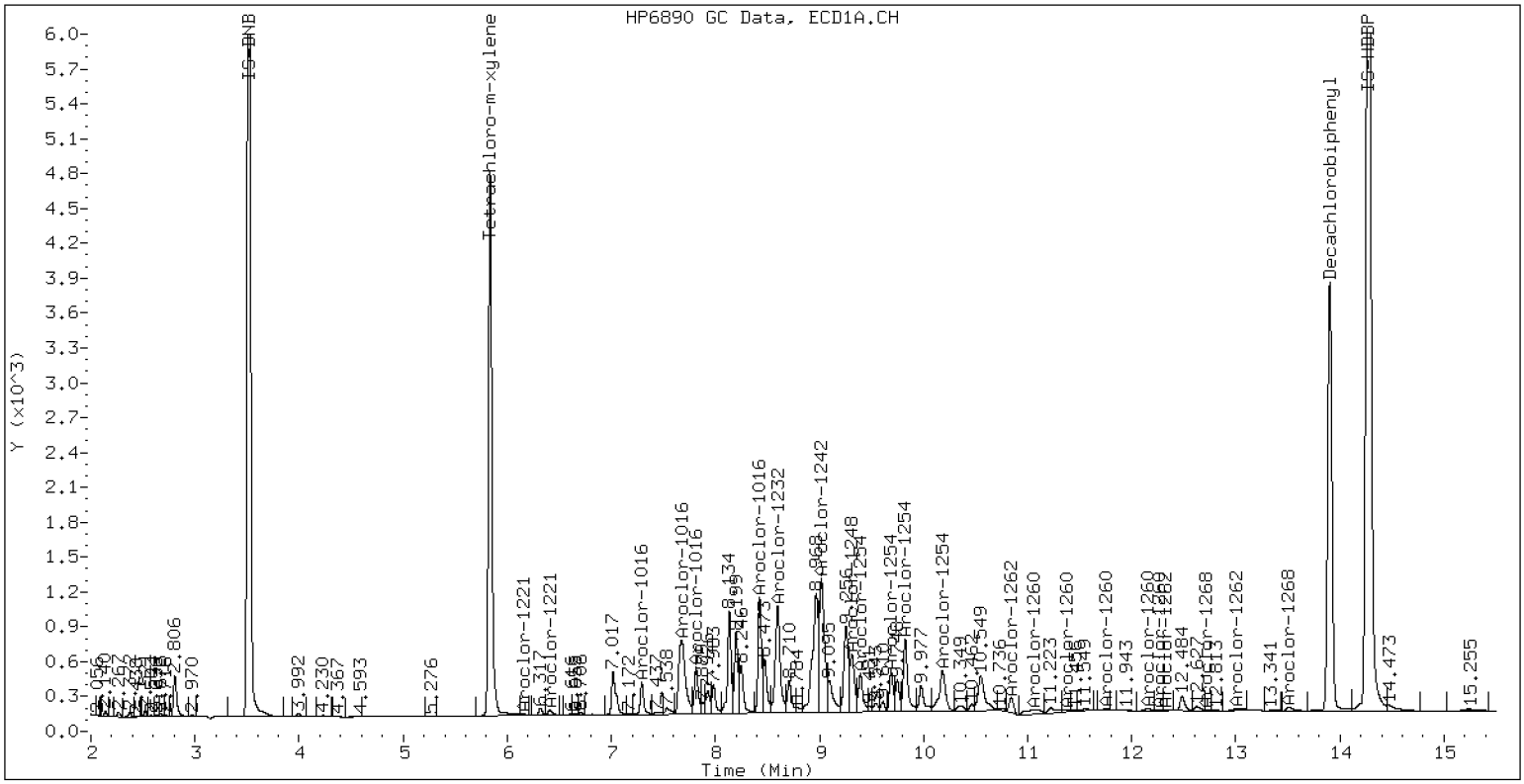
Total PCB Area Col2 (5.813 - 14.037) = 477168 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

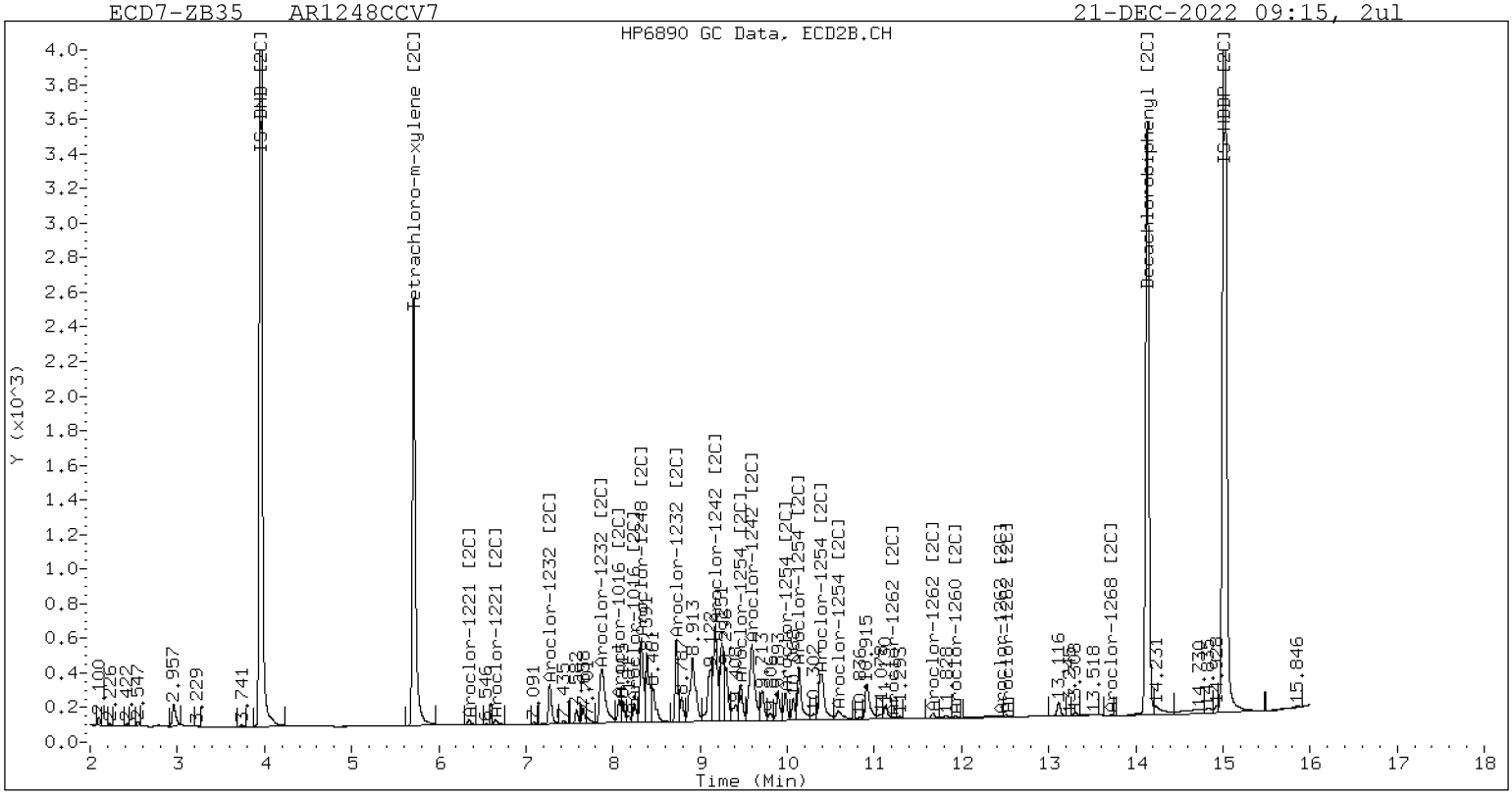
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV7 21-DEC-2022 09:15, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1248CCV7 21-DEC-2022 09:15, 2ul

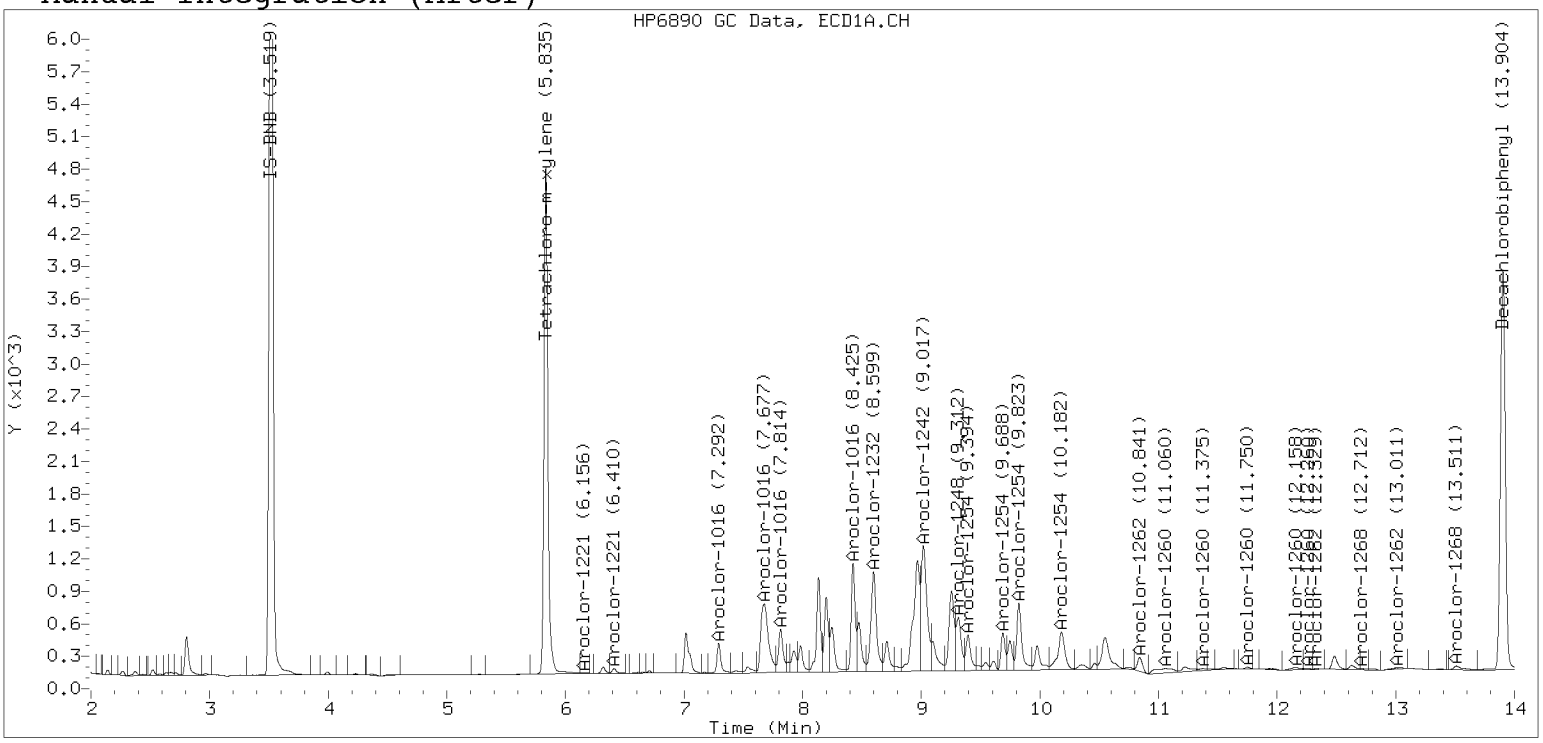


ZB-35 Manual Integration: NO

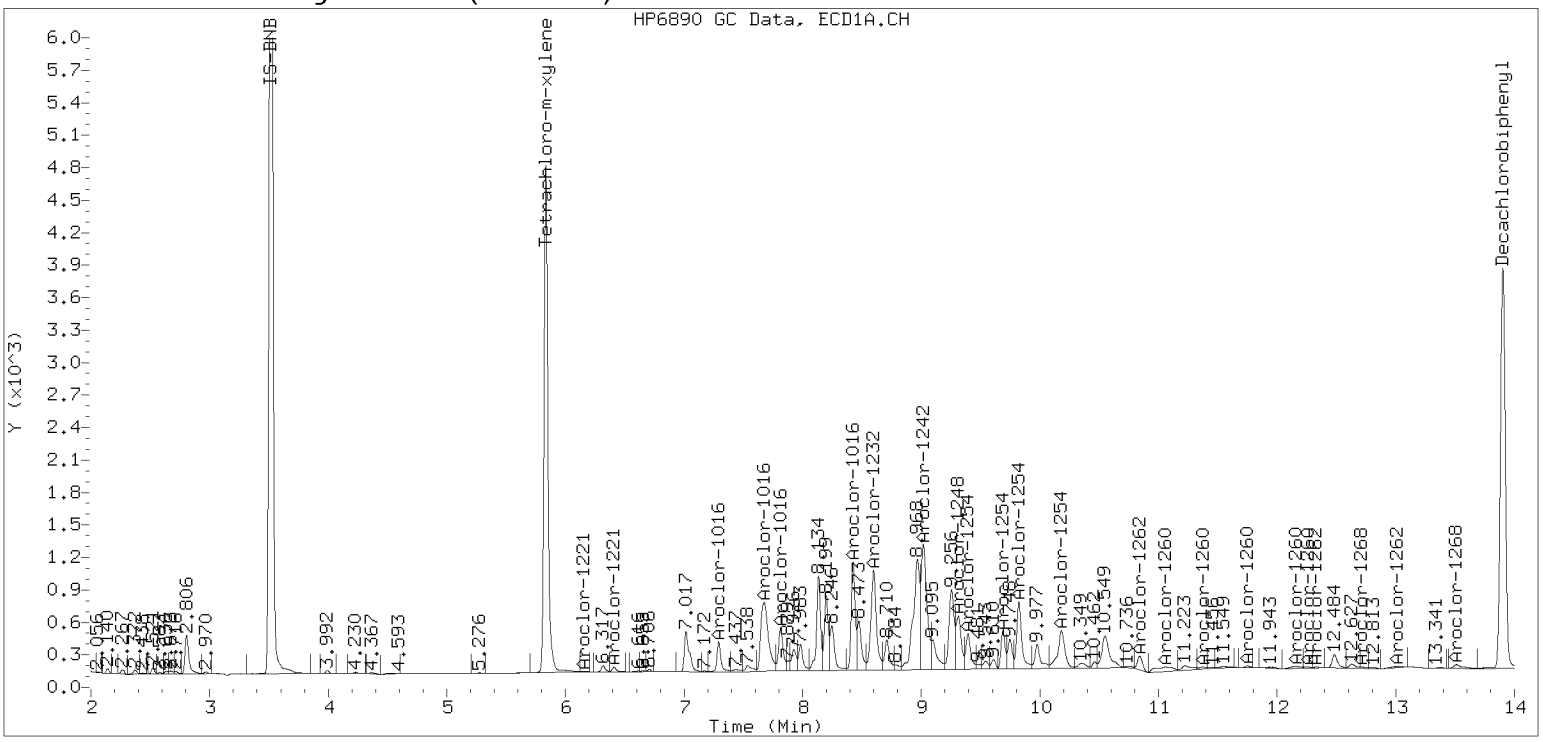
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221220.b/12202259ECD7.D Injection Date: 21-DEC-2022 09:15

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12202260ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0304	Injection Date:	12/21/22
Lab Sample ID:	SKL0304-CCV8	Injection Time:	09:36
Sequence Name:	AR1660CCV8		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	271	0.0441939	0.0475904		8.4	+/-20
Aroclor-1016 (1)	A	250.00	265	0.0266860	0.0283268		6.1	
Aroclor-1016 (2)	A	250.00	267	0.0861572	0.0921213		6.9	
Aroclor-1016 (3)	A	250.00	265	0.0390425	0.0414498		6.2	
Aroclor-1016 (4)	A	250.00	286	0.0248899	0.0284638		14.4	
Aroclor 1016 [2C]	A	250.00	244	0.0467310	0.0441179		-2.4	+/-20
Aroclor-1016 (1) [2C]	A	250.00	254	0.0409030	0.0415195		1.5	
Aroclor-1016 (2) [2C]	A	250.00	221	0.0882154	0.0780718		-11.5	
Aroclor-1016 (3) [2C]	A	250.00	236	0.0378846	0.0358189		-5.5	
Aroclor-1016 (4) [2C]	A	250.00	264	0.0199212	0.0210613		5.7	
Aroclor 1260	A	250.00	297	0.0390342	0.0465721		19.0	+/-20
Aroclor-1260 (1)	A	250.00	302	0.0291201	0.0351951		20.9	
Aroclor-1260 (2)	A	250.00	302	0.0301181	0.0363672		20.7	
Aroclor-1260 (3)	A	250.00	300	0.0791351	0.0948998		19.9	
Aroclor-1260 (4)	A	250.00	293	0.0403003	0.0472566		17.3	
Aroclor-1260 (5)	A	250.00	290	0.0164974	0.0191417		16.0	
Aroclor 1260 [2C]	A	250.00	238	0.0617619	0.0561493		-4.7	+/-20
Aroclor-1260 (1) [2C]	A	250.00	252	0.0422283	0.0425634		0.8	
Aroclor-1260 (2) [2C]	A	250.00	209	0.1059643	0.0885683		-16.4	
Aroclor-1260 (3) [2C]	A	250.00	269	0.0282173	0.0303960		7.7	
Aroclor-1260 (4) [2C]	A	250.00	223	0.0706376	0.0630697		-10.7	
Decachlorobiphenyl	A	40.000	43.5	0.7333327	0.7978181		8.8	+/-20
Tetrachlorometaxylene	A	40.000	41.9	1.1336710	1.1865930		4.7	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.9	1.1358180	1.1333520		-0.2	+/-20
Tetrachlorometaxylene [2C]	A	40.000	40.4	1.0966080	1.1081700		1.1	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202260ECD7.D
Data file 2: /221220.b/221220.b/12202260ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV8
Client ID:
Injection Date: 21-DEC-2022 09:36
Report Date: 12/27/2022 10:35
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.833	-0.003	203817	5.710	-0.003	114367	41.9	40.4	3.5	Tetrachloro-m-xylene
13.904	-0.004	221509	14.132	-0.004	167663	43.5	39.9	8.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	343533	-23.3
Hexabromobiphenyl	798898	555287	-30.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	206407	-17.1
Hexabromobiphenyl	362541	295871	-18.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.290	-0.004	30410	265.4	1	7.275	-0.001	26781	253.8
Aroclor-1016	2	7.674	-0.010	98896	267.3	2	7.872	0.002	50358	221.3
Aroclor-1016	3	7.812	-0.006	44498	265.4	3	8.072	0.001	23104	236.4
Aroclor-1016	4	8.423	-0.006	30557	285.9	4	8.242	0.001	13585	264.3
	Total Col1Ave (4 peaks):				271.0	Total Col2Ave (4 peaks):				243.9 RPD = 11
	Corrected Ave (3 peaks):				266.0	Corrected Ave (3 peaks):				237.1 RPD = 11
Aroclor-1260	1	11.056	-0.006	61073	302.2	1	11.667	-0.003	39354	252.0
Aroclor-1260	2	11.372	-0.005	63107	301.9	2	11.928	-0.005	81890	209.0
Aroclor-1260	3	11.746	-0.006	164677	299.8	3	12.448	-0.003	28104	269.3
Aroclor-1260	4	12.149	-0.010	82003	293.2	4	12.512	-0.005	58314	223.2
Aroclor-1260	5	12.256	-0.005	33216	290.1	NS	---			----
	Total Col1Ave (5 peaks):				297.4	Total Col2Ave (4 peaks):				238.4 RPD = 22
	Corrected Ave (4 peaks):				296.2	Corrected Ave (3 peaks):				228.1 RPD = 26

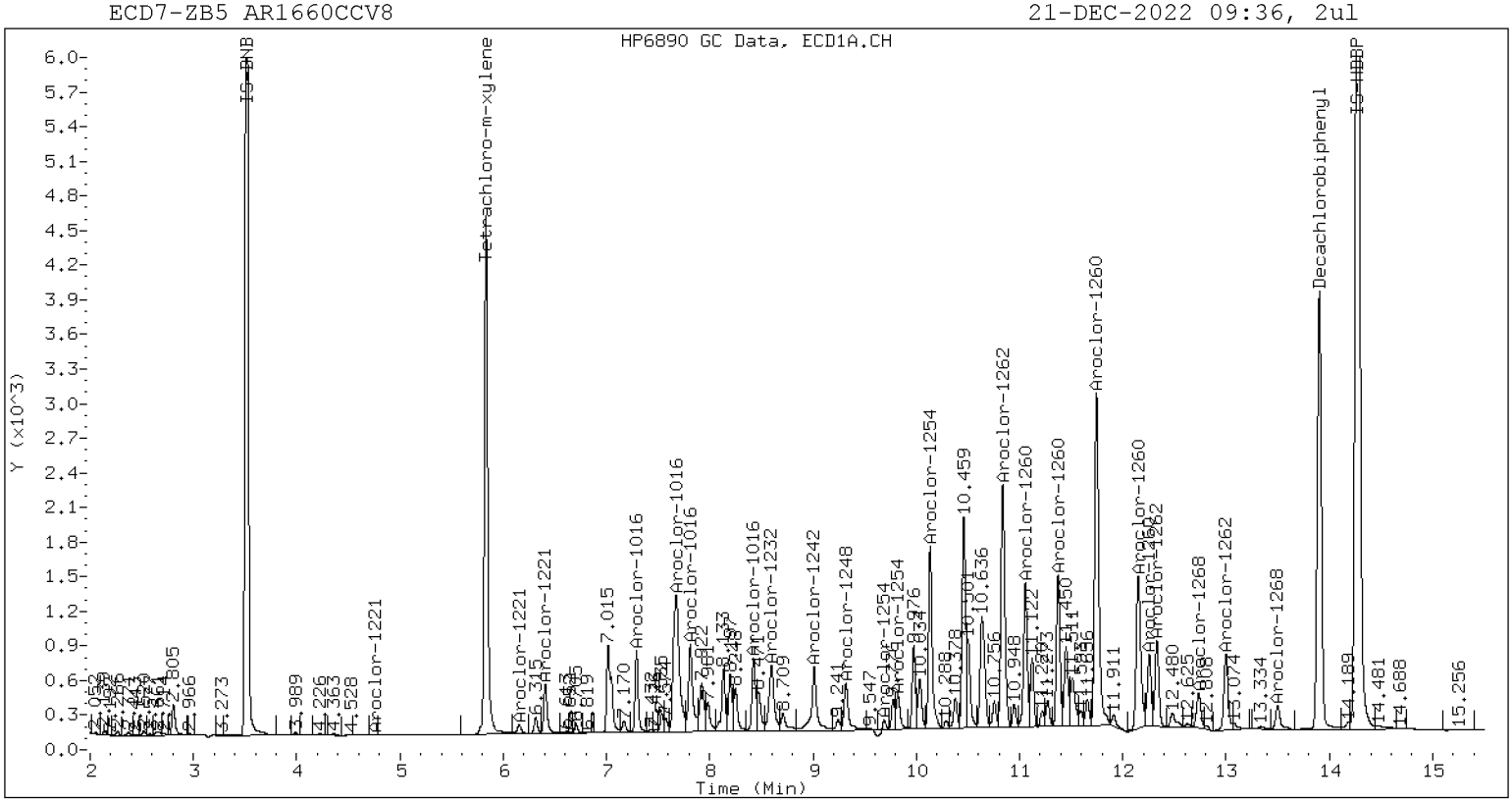
Total PCB Area Col1 (5.936 - 13.808) = 1719175 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.813 - 14.037) = 928066 Col2 Total PCB = 0.5 ppm*

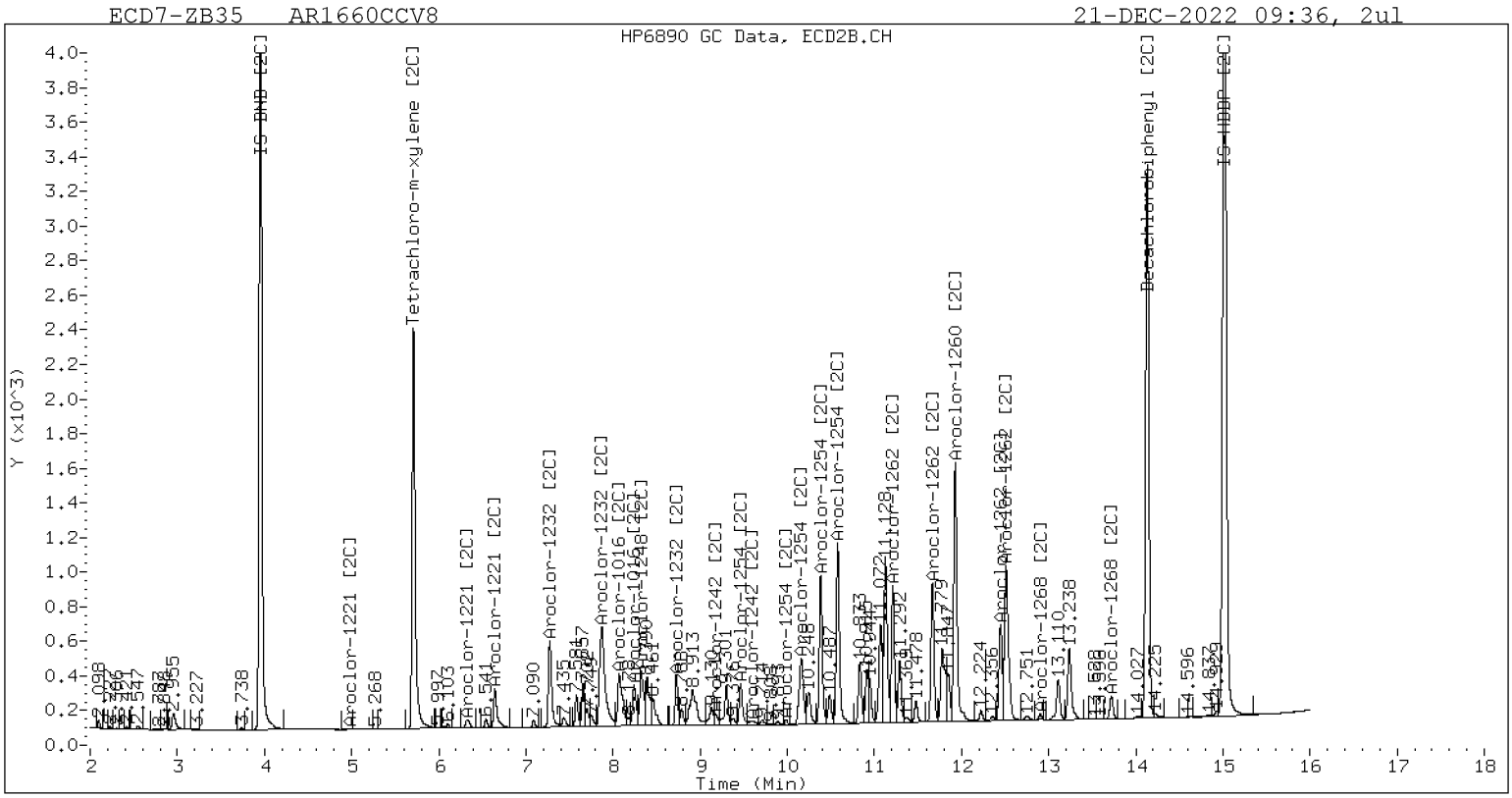
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

PCB Dual Column Chromatograms



ZB-5 Manual Integration: YES

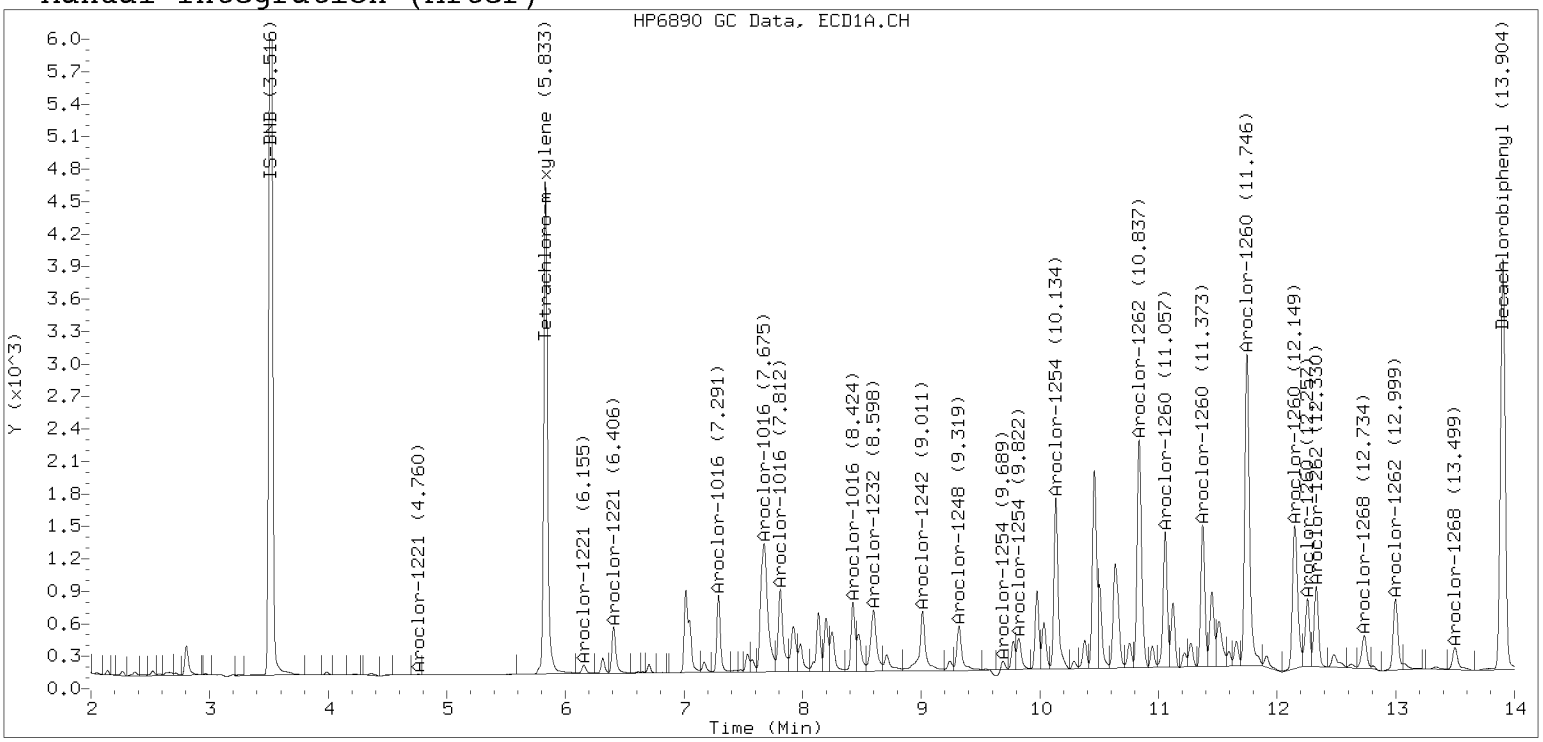


ZB-35 Manual Integration: NO

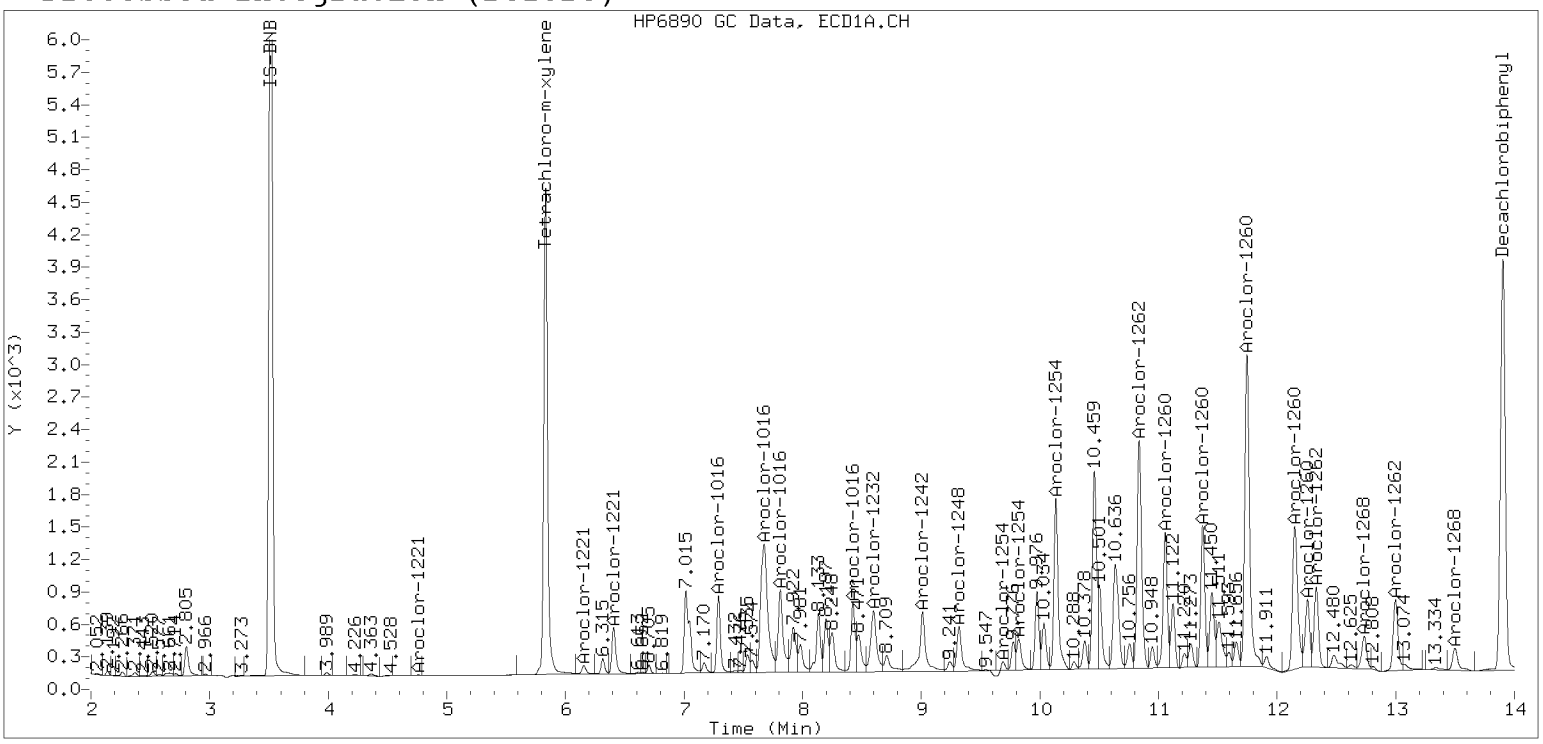
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221220.b/12202260ECD7.D Injection Date: 21-DEC-2022 09:36

Manual Integration (After)



Processed Integration (Before)



CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12202275ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0304	Injection Date:	12/21/22
Lab Sample ID:	SKL0304-CCV9	Injection Time:	14:54
Sequence Name:	AR1242CCV9		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	254	0.0396000	0.0401963		1.4	+/-20
Aroclor-1242 (1)	A	250.00	252		0.0229004			
Aroclor-1242 (2)	A	250.00	261		0.0750485			
Aroclor-1242 (3)	A	250.00	262		0.0217415			
Aroclor-1242 (4)	A	250.00	239		0.0410948			
Aroclor 1242 [2C]	A	250.00	250	0.0391981	0.0371375		0.01	+/-20
Aroclor-1242 (1) [2C]	A	250.00	254		0.0343390			
Aroclor-1242 (2) [2C]	A	250.00	205		0.0590332			
Aroclor-1242 (3) [2C]	A	250.00	276		0.0255729			
Aroclor-1242 (4) [2C]	A	250.00	266		0.0296049			
Decachlorobiphenyl	A	40.000	42.7	0.7333327	0.7836599		6.9	+/-20
Tetrachlorometaxylene	A	40.000	38.3	1.1336710	1.0858910		-4.2	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.3	1.1358180	1.1167160		-1.7	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.6	1.0966080	1.0300020		-6.1	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202275ECD7.D
Data file 2: /221220.b/221220.b/12202275ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV9
Client ID:
Injection Date: 21-DEC-2022 14:54
Report Date: 12/27/2022 10:35
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.834	-0.002	236878	5.712	-0.002	134474	38.3	37.6	2.0	Tetrachloro-m-xylene
13.904	-0.003	249437	14.132	-0.004	201512	42.7	39.3	8.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	436283	-2.5
Hexabromobiphenyl	798898	636595	-20.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	261114	4.8
Hexabromobiphenyl	362541	360901	-0.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.291	-0.004	31222	252.5	1	7.276	-0.001	28020	253.6
Aroclor-1242	2	7.676	-0.009	102320	260.6	2	7.873	-0.002	48170	205.3
Aroclor-1242	3	8.423	-0.006	29642	262.4	3	9.172	-0.006	20867	275.7
Aroclor-1242	4	9.023	-0.008	56028	238.8	4	9.592	-0.013	24157	265.6
Total Col1Ave (4 peaks): 253.6						Total Col2Ave (4 peaks): 250.0			RPD = 1	
Corrected Ave (3 peaks): 250.6						Corrected Ave (3 peaks): 241.5			RPD = 4	

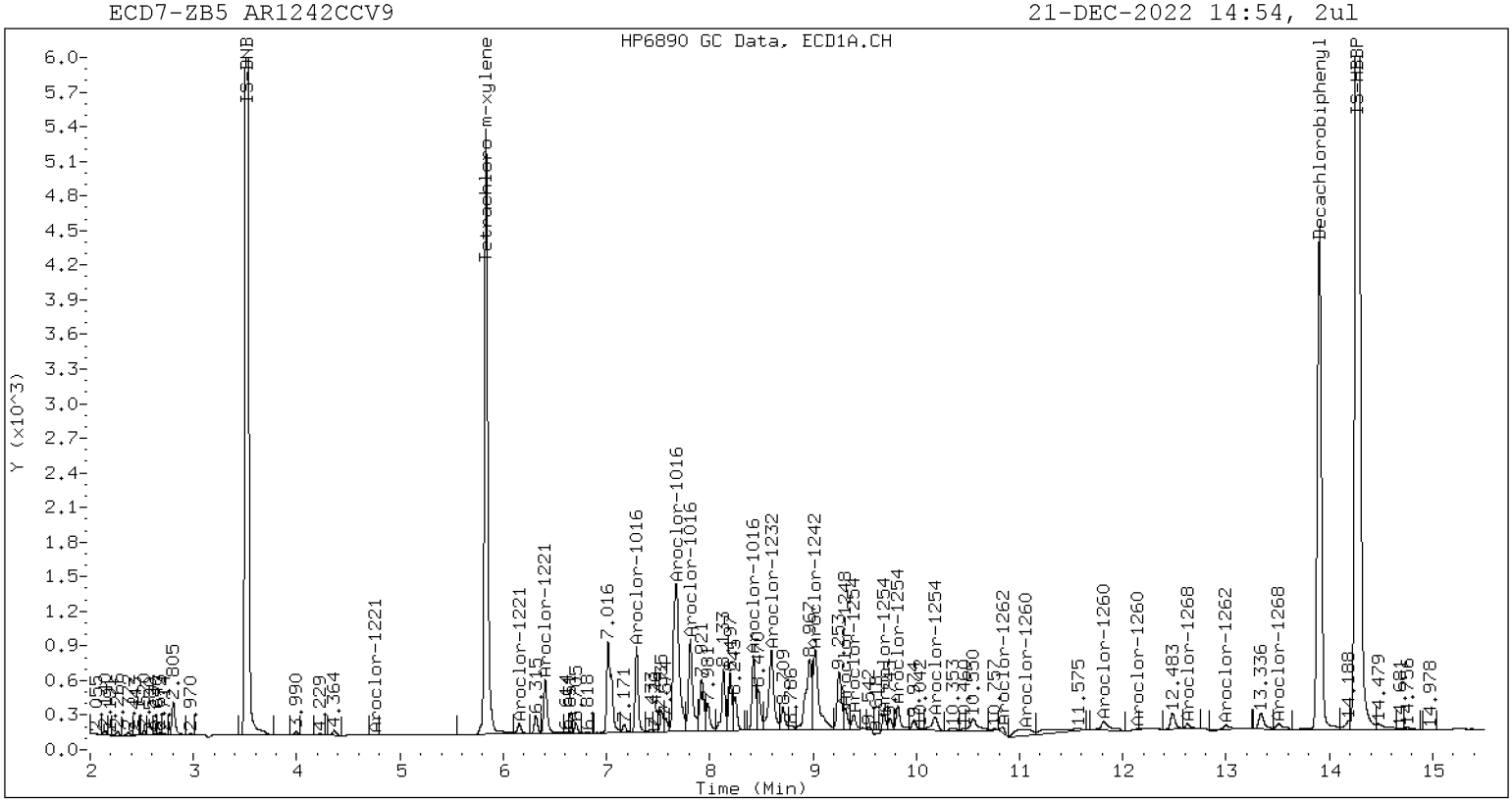
Total PCB Area Col1 (5.936 - 13.808) = 775444 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.813 - 14.037) = 410123 Col2 Total PCB = 0.2 ppm*

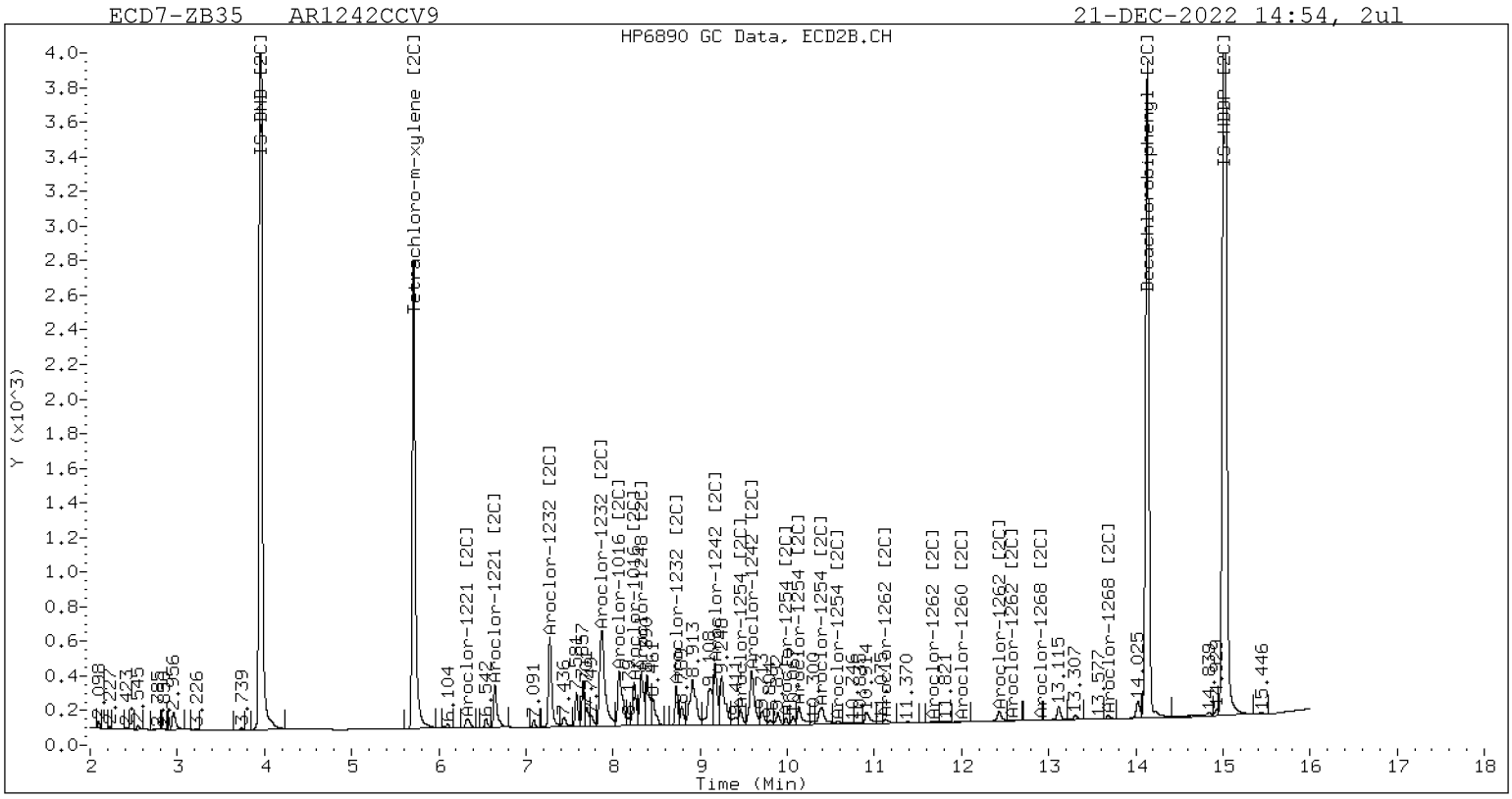
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

PCB Dual Column Chromatograms



ZB-5 Manual Integration: YES

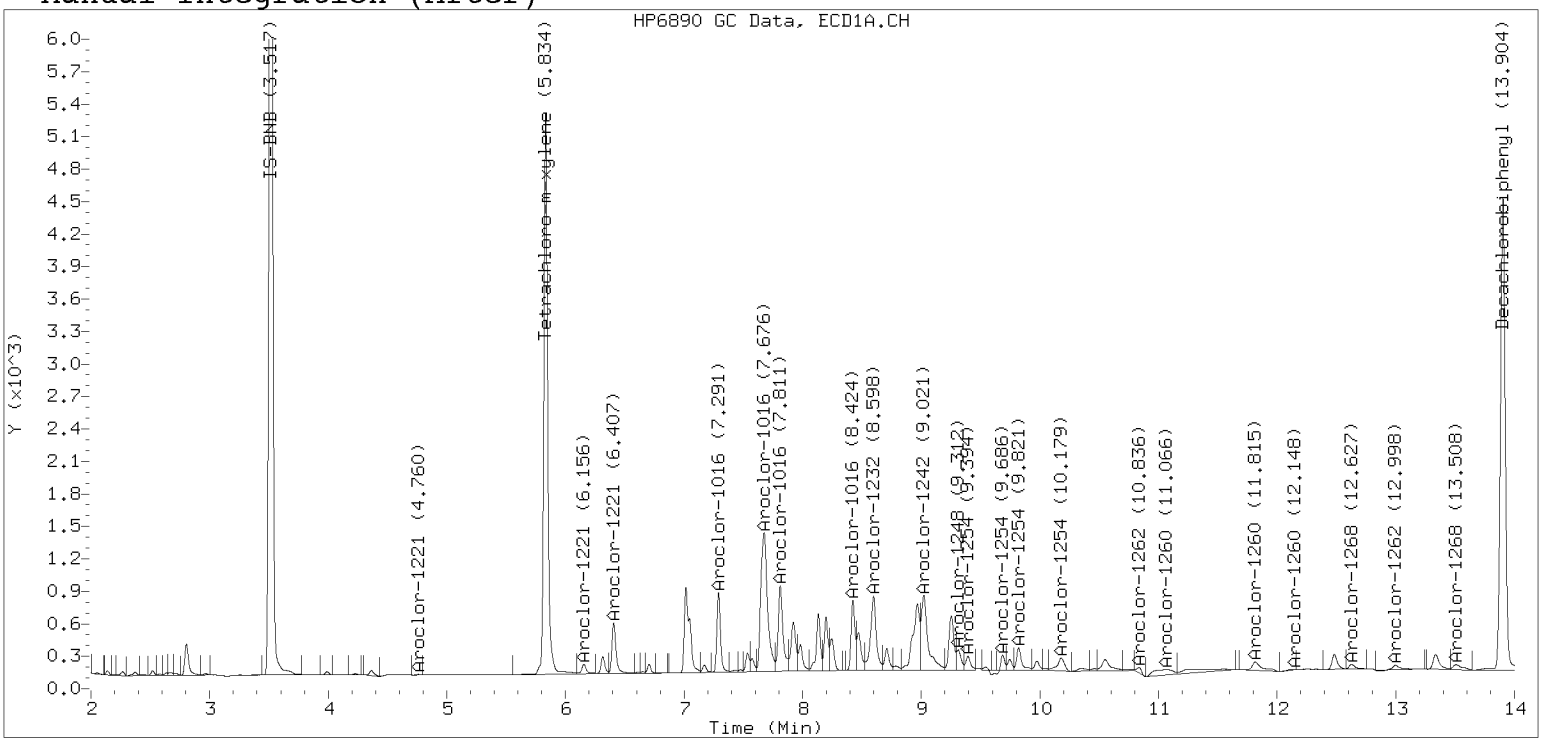


ZB-35 Manual Integration: NO

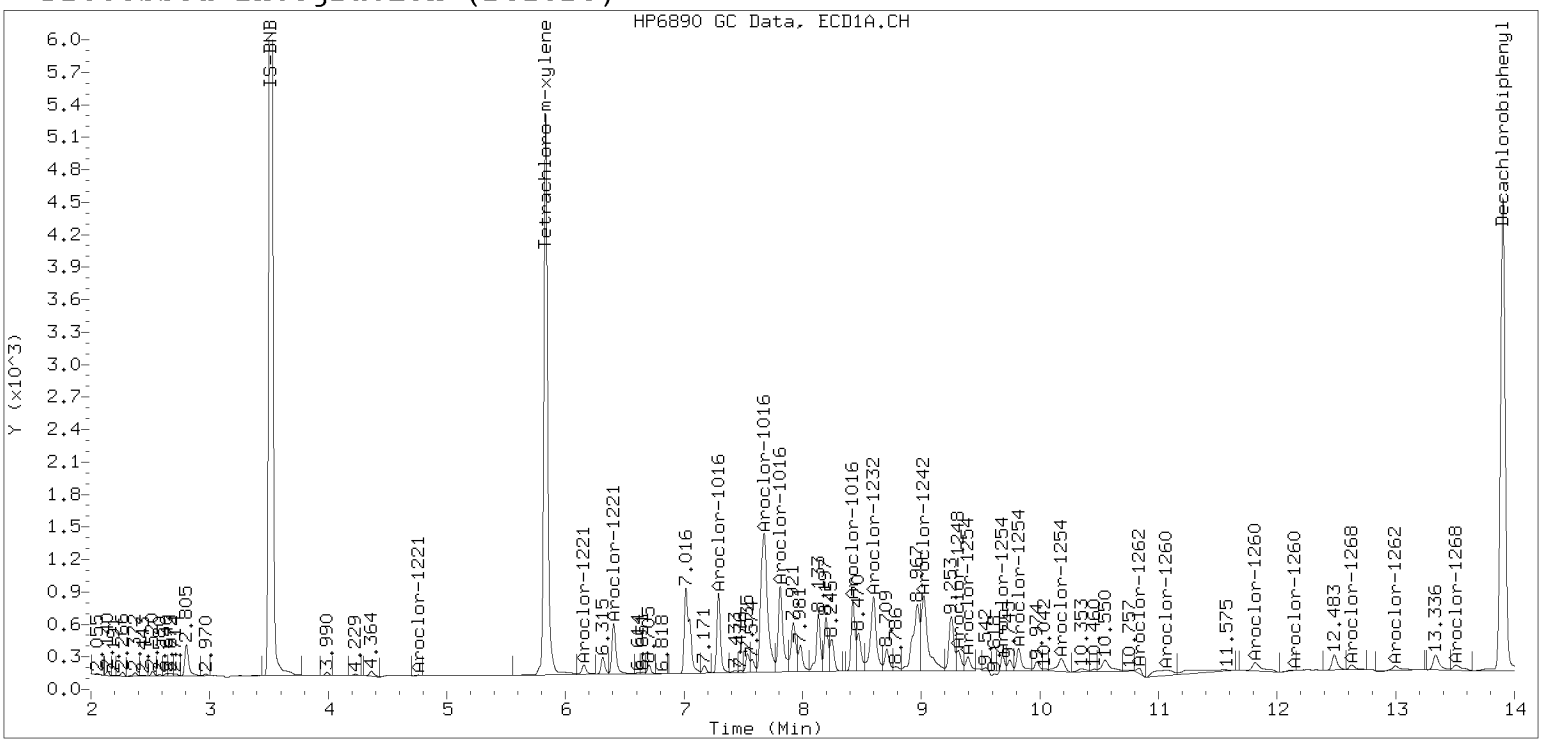
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221220.b/12202275ECD7.D Injection Date: 21-DEC-2022 14:54

Manual Integration (After)



Processed Integration (Before)



CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12202276ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0304	Injection Date:	12/21/22
Lab Sample ID:	SKL0304-CCVA	Injection Time:	15:15
Sequence Name:	AR1660CCVA		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	270	0.0441939	0.0473790		8.1	+/-20
Aroclor-1016 (1)	A	250.00	264	0.0266860	0.0281691		5.6	
Aroclor-1016 (2)	A	250.00	266	0.0861572	0.0916818		6.4	
Aroclor-1016 (3)	A	250.00	262	0.0390425	0.0409591		4.9	
Aroclor-1016 (4)	A	250.00	288	0.0248899	0.0287058		15.3	
Aroclor 1016 [2C]	A	250.00	245	0.0467310	0.0443261		-1.9	+/-20
Aroclor-1016 (1) [2C]	A	250.00	251	0.0409030	0.0411367		0.6	
Aroclor-1016 (2) [2C]	A	250.00	222	0.0882154	0.0785087		-11.0	
Aroclor-1016 (3) [2C]	A	250.00	240	0.0378846	0.0364071		-3.9	
Aroclor-1016 (4) [2C]	A	250.00	267	0.0199212	0.0212519		6.7	
Aroclor 1260	A	250.00	296	0.0390342	0.0465825		18.2	+/-20
Aroclor-1260 (1)	A	250.00	299	0.0291201	0.0348478		19.7	
Aroclor-1260 (2)	A	250.00	300	0.0301181	0.0361830		20.1	
Aroclor-1260 (3)	A	250.00	303	0.0791351	0.0958318		21.1	
Aroclor-1260 (4)	A	250.00	295	0.0403003	0.0475161		17.9	
Aroclor-1260 (5)	A	250.00	281	0.0164974	0.0185339		12.3	
Aroclor 1260 [2C]	A	250.00	228	0.0617619	0.0532304		-8.6	+/-20
Aroclor-1260 (1) [2C]	A	250.00	245	0.0422283	0.0413974		-2.0	
Aroclor-1260 (2) [2C]	A	250.00	192	0.1059643	0.0814875		-23.1	
Aroclor-1260 (3) [2C]	A	250.00	263	0.0282173	0.0296413		5.0	
Aroclor-1260 (4) [2C]	A	250.00	214	0.0706376	0.0603954		-14.5	
Decachlorobiphenyl	A	40.000	46.8	0.7333327	0.8580851		17.0	+/-20
Tetrachlorometaxylene	A	40.000	40.9	1.1336710	1.1602910		2.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.4	1.1358180	1.1180540		-1.6	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.6	1.0966080	1.0845280		-1.1	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221220.b/12202276ECD7.D
Data file 2: /221220.b/221220.b/12202276ECD7.D
Method: \\target\share\chem4\ecd7.i\221220.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCVA
Client ID:
Injection Date: 21-DEC-2022 15:15
Report Date: 12/27/2022 10:35
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.834	-0.002	203051	5.711	-0.002	113479	40.9	39.6	3.4	Tetrachloro-m-xylene
13.903	-0.005	243803	14.132	-0.005	176666	46.8	39.4	17.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	350000	-21.8
Hexabromobiphenyl	798898	568249	-28.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	209269	-16.0
Hexabromobiphenyl	362541	316024	-12.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.291	-0.003	30810	263.9	1	7.276	0.000	26902	251.4
Aroclor-1016	2	7.677	-0.008	100277	266.0	2	7.872	0.001	51342	222.5
Aroclor-1016	3	7.812	-0.006	44799	262.3	3	8.072	0.002	23809	240.3
Aroclor-1016	4	8.424	-0.006	31397	288.3	4	8.242	0.001	13898	266.7
Total Col1Ave (4 peaks):					270.1	Total Col2Ave (4 peaks):				245.2 RPD = 10
Corrected Ave (3 peaks):					264.1	Corrected Ave (3 peaks):				238.1 RPD = 10
Aroclor-1260	1	11.057	-0.005	61882	299.2	1	11.666	-0.003	40883	245.1
Aroclor-1260	2	11.374	-0.004	64253	300.3	2	11.928	-0.005	80475	192.3
Aroclor-1260	3	11.745	-0.007	170176	302.7	3	12.448	-0.003	29273	262.6
Aroclor-1260	4	12.149	-0.009	84378	294.8	4	12.512	-0.005	59645	213.8
Aroclor-1260	5	12.254	-0.007	32912	280.9	NS	---			----
Total Col1Ave (5 peaks):					295.6	Total Col2Ave (4 peaks):				228.4 RPD = 26
Corrected Ave (4 peaks):					293.8	Corrected Ave (3 peaks):				217.0 RPD = 30

Total PCB Area Col1 (5.936 - 13.808) = 1764155 Col1 Total PCB = 0.5 ppm*

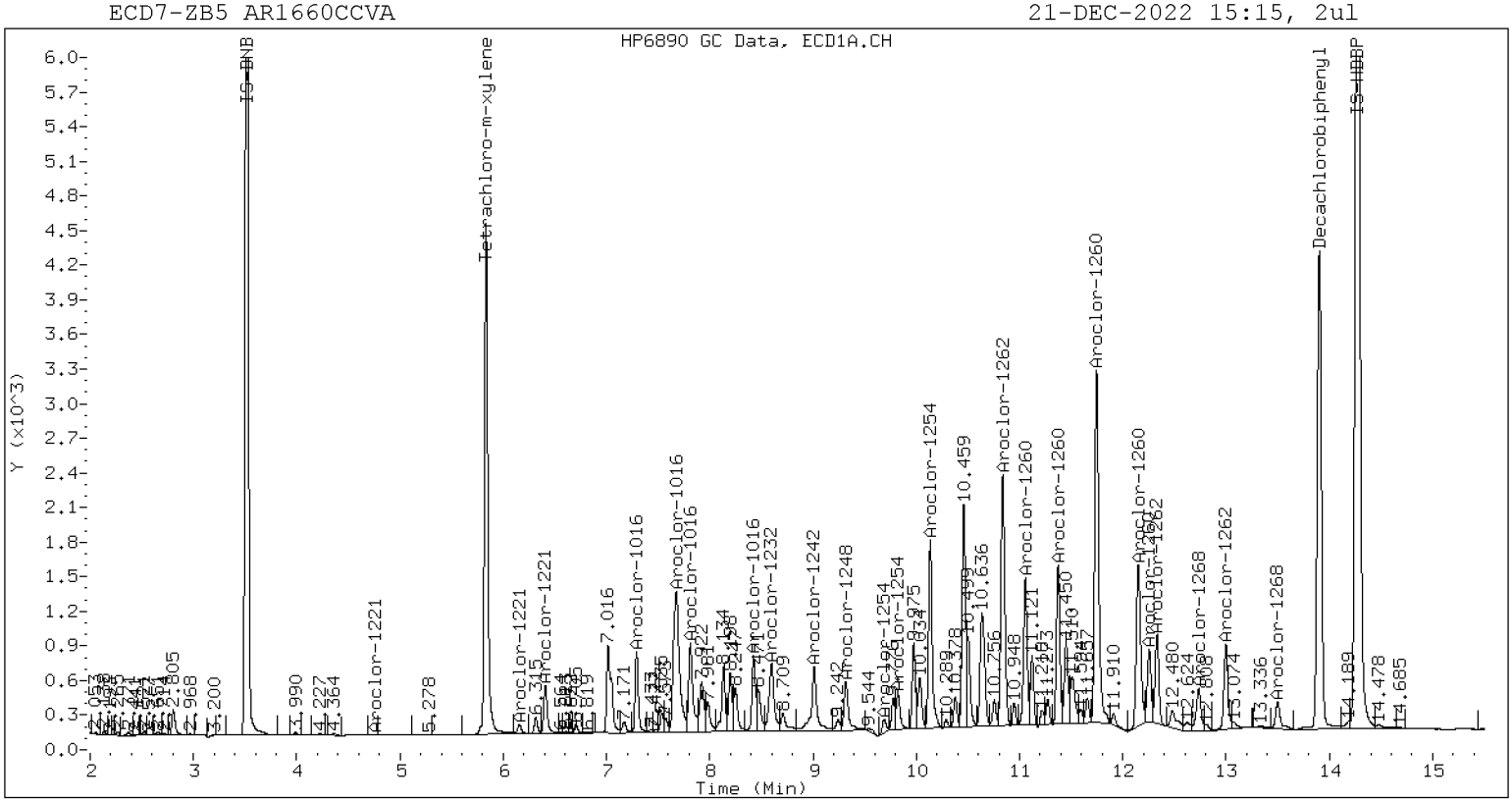
Total PCB Area Col2 (5.813 - 14.037) = 951643 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

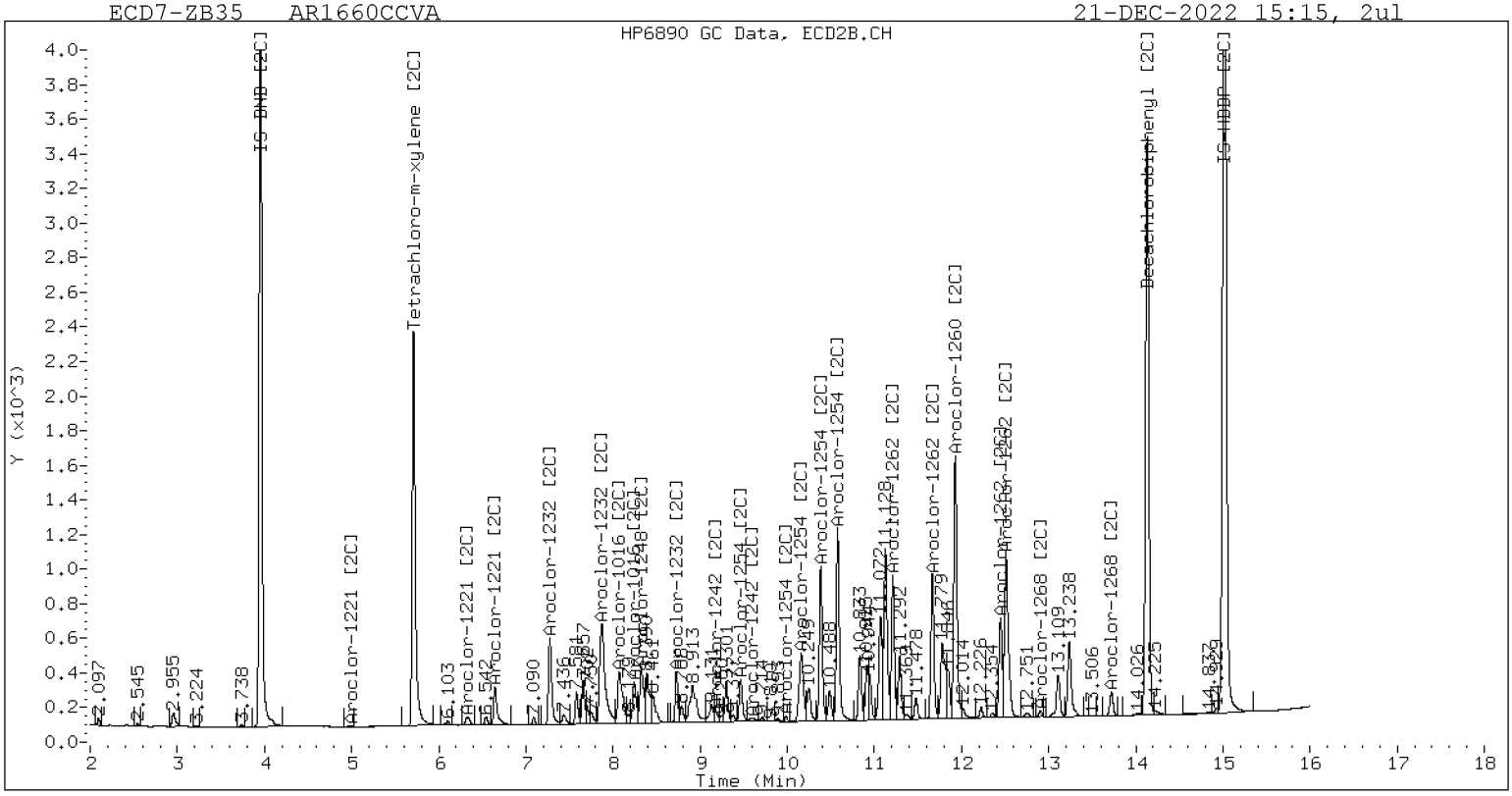
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCVA 21-DEC-2022 15:15, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1660CCVA 21-DEC-2022 15:15, 2ul

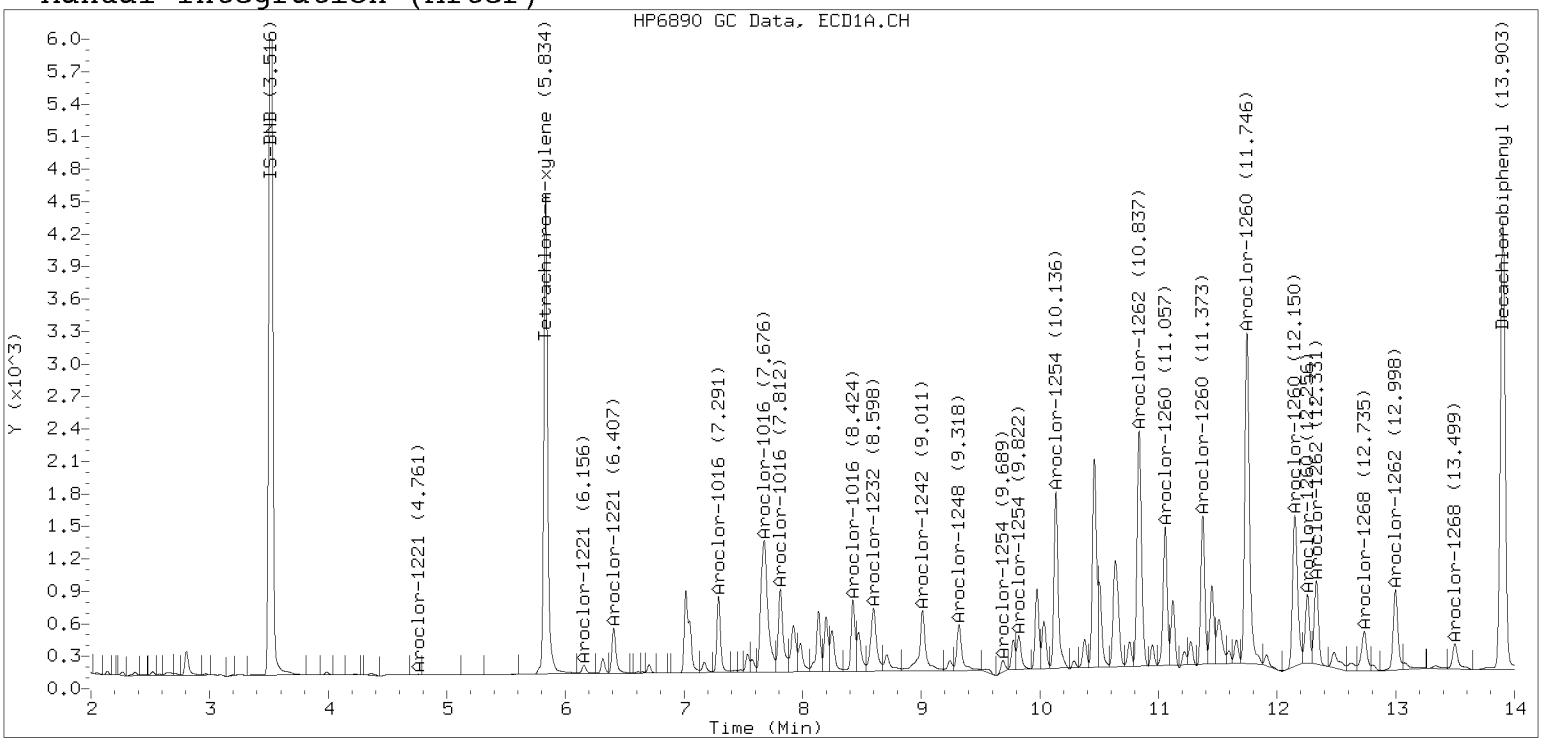


ZB-35 Manual Integration: NO

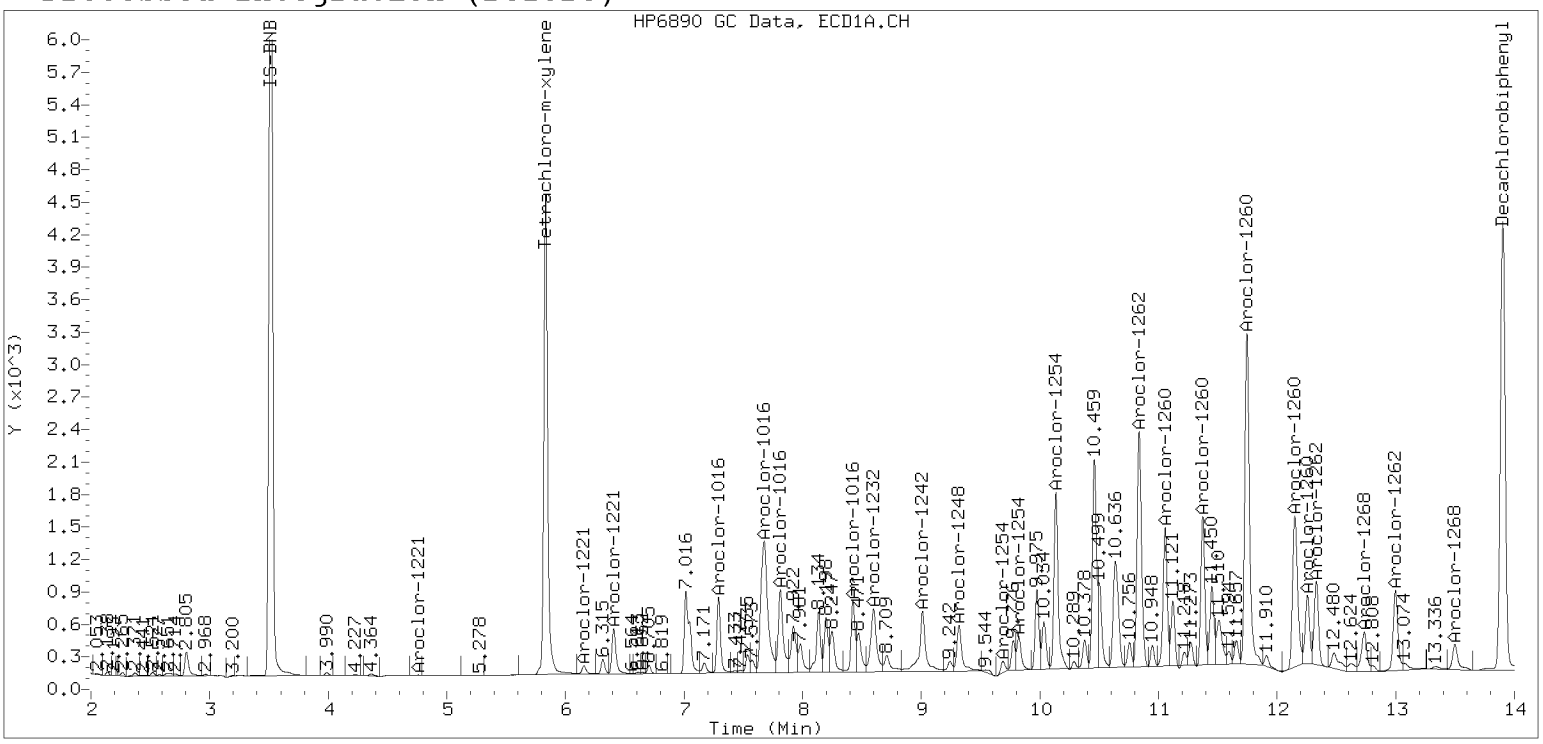
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221220.b/12202276ECD7.D Injection Date: 21-DEC-2022 15:15

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SKL0048
Instrument: ECD7
Calibration: FL00010

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Cal Standard	SKL0048-CAL1	12032211ECD7.D	12032211ECD7.D	NA	12/03/22 18:19
Cal Standard	SKL0048-CAL2	12032212ECD7.D	12032212ECD7.D	NA	12/03/22 18:40
Cal Standard	SKL0048-CAL3	12032213ECD7.D	12032213ECD7.D	NA	12/03/22 19:01
Cal Standard	SKL0048-CAL4	12032214ECD7.D	12032214ECD7.D	NA	12/03/22 19:23
Cal Standard	SKL0048-CAL5	12032215ECD7.D	12032215ECD7.D	NA	12/03/22 19:44
Cal Standard	SKL0048-CAL6	12032216ECD7.D	12032216ECD7.D	NA	12/03/22 20:05
Cal Standard	SKL0048-CAL7	12032217ECD7.D	12032217ECD7.D	NA	12/03/22 20:26
Cal Standard	SKL0048-CAL8	12032218ECD7.D	12032218ECD7.D	NA	12/03/22 20:48
Cal Standard	SKL0048-CAL9	12032219ECD7.D	12032219ECD7.D	NA	12/03/22 21:09
Cal Standard	SKL0048-CALA	12032220ECD7.D	12032220ECD7.D	NA	12/03/22 21:30
Cal Standard	SKL0048-CALB	12032221ECD7.D	12032221ECD7.D	NA	12/03/22 21:52
Secondary Cal Check	SKL0048-SCV1	12032222ECD7.D	12032222ECD7.D	NA	12/03/22 22:13
Secondary Cal Check	SKL0048-SCV2	12032223ECD7.D	12032223ECD7.D	NA	12/03/22 22:34
Secondary Cal Check	SKL0048-SCV3	12032224ECD7.D	12032224ECD7.D	NA	12/03/22 22:55
Secondary Cal Check	SKL0048-SCV4	12032225ECD7.D	12032225ECD7.D	NA	12/03/22 23:17
Secondary Cal Check	SKL0048-SCV5	12032226ECD7.D	12032226ECD7.D	NA	12/03/22 23:38
Secondary Cal Check	SKL0048-SCV6	12032227ECD7.D	12032227ECD7.D	NA	12/03/22 23:59

ANALYSIS SEQUENCE

SKL0048

Instrument: ECD7 Element Column ID:
Calibration ID: FL00010

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0048-CAL1	0.25PPM AR1660	QC		1	K006954	K006953		
SKL0048-CAL2	0.02PPM AR1660	QC		2	K010070	K006953		
SKL0048-CAL3	0.05PPM AR1660	QC		3	K010069	K006953		
SKL0048-CAL4	1PPM AR1660	QC		4	K006741	K006953		
SKL0048-CAL5	0.1PPM AR1660	QC		5	K010068	K006953		
SKL0048-CAL6	0.5PPM AR1660	QC		6	K010067	K006953		
SKL0048-CAL7	0.25PPM AR1242	QC		7	K006955	K006953		
SKL0048-CAL8	0.25PPM AR1248	QC		8	K006956	K006953		
SKL0048-CAL9	0.25PPM AR1254	QC		9	K006957	K006953		
SKL0048-CALA	0.25PPM AR2162	QC		10	K010071	K006953		
SKL0048-CALB	0.25PPM AR3268	QC		11	K010072	K006953		
SKL0048-SCV1	AR1660SCV1	QC		12	K007655	K006953		
SKL0048-SCV2	AR1242SCV2	QC		13	K007656	K006953		
SKL0048-SCV3	AR1248SCV3	QC		14	K007657	K006953		
SKL0048-SCV4	AR1254SCV4	QC		15	K007658	K006953		
SKL0048-SCV5	AR2162SCV5	QC		16	K007659	K006953		
SKL0048-SCV6	AR3268SCV6	QC		17	K007660	K006953		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221203.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	03-DEC-2022 17:58	12032210ECD7.D	1	IB	
2	03-DEC-2022 18:19	12032211ECD7.D	1	0.25PPAR1660	
3	03-DEC-2022 18:40	12032212ECD7.D	1	0.02PPAR1660	
4	03-DEC-2022 19:01	12032213ECD7.D	1	0.05PPAR1660	
5	03-DEC-2022 19:23	12032214ECD7.D	1	1PPMAR1660	
6	03-DEC-2022 19:44	12032215ECD7.D	1	0.1PPMAR1660	
7	03-DEC-2022 20:05	12032216ECD7.D	1	0.5PPMAR1660	
8	03-DEC-2022 20:26	12032217ECD7.D	1	AR1242	
9	03-DEC-2022 20:48	12032218ECD7.D	1	AR1248	
10	03-DEC-2022 21:09	12032219ECD7.D	1	AR1254	
11	03-DEC-2022 21:30	12032220ECD7.D	1	AR2162	
12	03-DEC-2022 21:52	12032221ECD7.D	1	AR3268	
13	03-DEC-2022 22:13	12032222ECD7.D	1	AR1660SCV1	
14	03-DEC-2022 22:34	12032223ECD7.D	1	AR1242SCV2	
15	03-DEC-2022 22:55	12032224ECD7.D	1	AR1248SCV3	
16	03-DEC-2022 23:17	12032225ECD7.D	1	AR1254SCV4	
17	03-DEC-2022 23:38	12032226ECD7.D	1	AR2162SCV5	
18	03-DEC-2022 23:59	12032227ECD7.D	1	AR3268SCV6	
19	04-DEC-2022 00:20	12032228ECD7.D	1	0.1 PPM DDTS	
20	04-DEC-2022 00:42	12032229ECD7.D	1	DDT BD	
21	04-DEC-2022 01:03	12032230ECD7.D	1	AR1254ICV1	
22	04-DEC-2022 01:24	12032231ECD7.D	1	AR1660ICV2	
23	04-DEC-2022 01:46	12032232ECD7.D	1	BKK0834-BLK1	
24	04-DEC-2022 02:07	12032233ECD7.D	1	BKK0834-BS1	
25	04-DEC-2022 02:28	12032234ECD7.D	1	BKK0834-BSD1	
26	04-DEC-2022 02:49	12032235ECD7.D	1	22K0523-01	
27	04-DEC-2022 03:11	12032236ECD7.D	1	22K0525-01	
28	04-DEC-2022 03:32	12032237ECD7.D	1	BKK0374-BLK1	
29	04-DEC-2022 03:53	12032238ECD7.D	1	BKK0374-BS1	
30	04-DEC-2022 04:15	12032239ECD7.D	1	BKK0374-BSD1	
31	04-DEC-2022 04:36	12032240ECD7.D	1	22K0161-01	
32	04-DEC-2022 04:57	12032241ECD7.D	1	AR1248CCV1	
33	04-DEC-2022 05:18	12032242ECD7.D	1	AR1660CCV2	
34	04-DEC-2022 05:40	12032243ECD7.D	1	BKL0017-BLK1	
35	04-DEC-2022 06:01	12032244ECD7.D	1	BKL0017-BS1	
36	04-DEC-2022 06:22	12032245ECD7.D	1	BKL0017-BSD1	
37	04-DEC-2022 06:44	12032246ECD7.D	1	22J0139-01	
38	04-DEC-2022 07:05	12032247ECD7.D	1	BKK0383-BLK1	
39	04-DEC-2022 07:26	12032248ECD7.D	1	BKK0383-BS1	
40	04-DEC-2022 07:47	12032249ECD7.D	1	BKK0383-BSD	
41	04-DEC-2022 08:09	12032250ECD7.D	1	22K0075-01	
42	04-DEC-2022 08:30	12032251ECD7.D	1	BKK00803-BLK1	
43	04-DEC-2022 08:51	12032252ECD7.D	1	BKK00803-BS1	
44	04-DEC-2022 09:13	12032253ECD7.D	1	BKK00803-BSD1	
45	04-DEC-2022 09:34	12032254ECD7.D	1	22K0511-01	
46	04-DEC-2022 09:55	12032255ECD7.D	1	AR1242CCV3	
47	04-DEC-2022 10:17	12032256ECD7.D	1	AR1660CCV4	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221203.b

Instrument: ecd7.i Date: 03-DEC-2022

Time	Filename	LabID	DF	Manually Integrated Compounds
1758	12032210ECD7.D	IB	1	NO MANUAL INTEGRATION
1819	12032211ECD7.D	0.25PPAR1660	1	NO MANUAL INTEGRATION
1840	12032212ECD7.D	0.02PPAR1660	1	NO MANUAL INTEGRATION
1901	12032213ECD7.D	0.05PPAR1660	1	NO MANUAL INTEGRATION
1923	12032214ECD7.D	1PPMAR1660	1	NO MANUAL INTEGRATION
1944	12032215ECD7.D	0.1PPMAR1660	1	NO MANUAL INTEGRATION
2005	12032216ECD7.D	0.5PPMAR1660	1	NO MANUAL INTEGRATION
2026	12032217ECD7.D	AR1242	1	Aroclor-1242,
2048	12032218ECD7.D	AR1248	1	NO MANUAL INTEGRATION
2109	12032219ECD7.D	AR1254	1	NO MANUAL INTEGRATION
2130	12032220ECD7.D	AR2162	1	NO MANUAL INTEGRATION
2152	12032221ECD7.D	AR3268	1	NO MANUAL INTEGRATION
2213	12032222ECD7.D	AR1660SCV1	1	NO MANUAL INTEGRATION
2234	12032223ECD7.D	AR1242SCV2	1	NO MANUAL INTEGRATION
2255	12032224ECD7.D	AR1248SCV3	1	NO MANUAL INTEGRATION
2317	12032225ECD7.D	AR1254SCV4	1	NO MANUAL INTEGRATION
2338	12032226ECD7.D	AR2162SCV5	1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221203.b page 2

Instrument: ecd7.i Date: 03-DEC-2022

Time	Filename	LabID	DF	Manually Integrated Compounds
2359	12032227ECD7.D	AR3268SCV6	1	NO MANUAL INTEGRATION

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SKL0304
Instrument: ECD7
Calibration: FL00010

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SKL0304-ICV1	12202202ECD7.D	12202202ECD7.D	NA	12/20/22 13:07
Initial Cal Check	SKL0304-ICV2	12202203ECD7.D	12202203ECD7.D	NA	12/20/22 13:28
Calibration Check	SKL0304-CCV1	12202214ECD7.D	12202214ECD7.D	NA	12/20/22 17:21
Calibration Check	SKL0304-CCV2	12202215ECD7.D	12202215ECD7.D	NA	12/20/22 17:42
Calibration Check	SKL0304-CCV3	12202223ECD7.D	12202223ECD7.D	NA	12/20/22 20:32
Calibration Check	SKL0304-CCV4	12202224ECD7.D	12202224ECD7.D	NA	12/20/22 20:53
Blank	BKL0377-BLK1	12202225ECD7.D	12202225ECD7.D	Solid	12/20/22 21:15
LCS	BKL0377-BS1	12202226ECD7.D	12202226ECD7.D	Solid	12/20/22 21:36
LCS Dup	BKL0377-BSD1	12202227ECD7.D	12202227ECD7.D	Solid	12/20/22 21:57
MRL Check	BKL0377-MRL1	12202228ECD7.D	12202228ECD7.D	Solid	12/20/22 22:18
Reference	BKL0377-SRM1	12202229ECD7.D	12202229ECD7.D	Solid	12/20/22 22:40
LDW23-SS1253	22L0198-01	12202230ECD7.D	12202230ECD7.D	Solid	12/20/22 23:01
LDW23-SS1254	22L0198-02	12202231ECD7.D	12202231ECD7.D	Solid	12/20/22 23:22
LDW23-SS1255	22L0198-03	12202232ECD7.D	12202232ECD7.D	Solid	12/20/22 23:43
LDW23-SS1257	22L0198-04	12202233ECD7.D	12202233ECD7.D	Solid	12/21/22 00:04
LDW23-SS1258	22L0198-05	12202234ECD7.D	12202234ECD7.D	Solid	12/21/22 00:26
LDW23-SS1259	22L0198-06	12202235ECD7.D	12202235ECD7.D	Solid	12/21/22 00:47
LDW23-SS1262	22L0198-07	12202236ECD7.D	12202236ECD7.D	Solid	12/21/22 01:08
LDW23-SS1260	22L0198-08	12202237ECD7.D	12202237ECD7.D	Solid	12/21/22 01:29
LDW23-SS1263	22L0198-09	12202238ECD7.D	12202238ECD7.D	Solid	12/21/22 01:50
LDW23-SS1245	22L0198-10	12202239ECD7.D	12202239ECD7.D	Solid	12/21/22 02:12
LDW23-SS1245	BKL0377-MS1	12202240ECD7.D	12202240ECD7.D	Solid	12/21/22 02:33
LDW23-SS1245	BKL0377-MSD1	12202241ECD7.D	12202241ECD7.D	Solid	12/21/22 02:54
Calibration Check	SKL0304-CCV5	12202242ECD7.D	12202242ECD7.D	NA	12/21/22 03:15
Calibration Check	SKL0304-CCV6	12202243ECD7.D	12202243ECD7.D	NA	12/21/22 03:36
Calibration Check	SKL0304-CCV7	12202259ECD7.D	12202259ECD7.D	NA	12/21/22 09:15
Calibration Check	SKL0304-CCV8	12202260ECD7.D	12202260ECD7.D	NA	12/21/22 09:36
Calibration Check	SKL0304-CCV9	12202275ECD7.D	12202275ECD7.D	NA	12/21/22 14:54
Calibration Check	SKL0304-CCVA	12202276ECD7.D	12202276ECD7.D	NA	12/21/22 15:15

Printed: 12/22/2022 3:56:09PM

ANALYSIS SEQUENCE

SKL0304

Instrument: ECD7 Element Column ID:
Calibration ID: FL00010

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0304-ICV1	AR1254ICV1	QC		1	K006957	K006953		
SKL0304-ICV2	AR1660ICV2	QC		2	K006954	K006953		
22L0137-24	LDW22-SC785G	8082A PCB Solid 4	B 01	3		K006953		
22L0137-25	LDW22-SC785H	8082A PCB Solid 4	B 01	4		K006953		
22L0137-26	LDW22-SC785I	8082A PCB Solid 4	B 01	5		K006953		
22L0137-27	LDW22-SC785J	8082A PCB Solid 4	B 01	6		K006953		
22L0137-28	LDW22-SC785K	8082A PCB Solid 4	B 01	7		K006953		
22L0137-29	LDW22-SC785L	8082A PCB Solid 4	B 01	8		K006953		
22L0137-30	LDW22-SC785M	8082A PCB Solid 4	B 01	9		K006953		
22L0137-31	LDW22-SC785N	8082A PCB Solid 4	B 01	10		K006953		
22L0137-32	LDW22-SC785A-FD	8082A PCB Solid 4	B 01	11		K006953		
22L0137-33	LDW22-SC776A	8082A PCB Solid 4	B 01	12		K006953		
SKL0304-CCV1	AR1248CCV1	QC		13	K006956	K006953		
SKL0304-CCV2	AR1660CCV2	QC		14	K006954	K006953		
22L0137-35	LDW22-SC776C	8082A PCB Solid 4	B 01	15		K006953		
22L0137-36	LDW22-SC776D	8082A PCB Solid 4	B 01	16		K006953		
22L0137-37	LDW22-SC776E	8082A PCB Solid 4	B 01	17		K006953		
22L0137-38	LDW22-SC776E-FD	8082A PCB Solid 4	B 01	18		K006953		
22L0137-39	LDW22-SC776F	8082A PCB Solid 4	B 01	19		K006953		
22L0137-40	LDW22-SC776G	8082A PCB Solid 4	B 01	20		K006953		
SKL0304-CCV3	AR1242CCV3	QC		21	K006955	K006953		
SKL0304-CCV4	AR1660CCV4	QC		22	K006954	K006953		

Printed: 12/22/2022 3:56:09PM

ANALYSIS SEQUENCE

SKL0304

Instrument: ECD7 Element Column ID:
Calibration ID: FL00010

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
BKL0377-BLK1	Blank	QC		23		K006953		
BKL0377-BS1	LCS	QC		24		K006953		
BKL0377-BSD1	LCS Dup	QC		25		K006953		
BKL0377-MRL1	MRL Check	QC		26		K006953		
BKL0377-SRM1	Reference	QC		27		K006953		
22L0198-01	LDW23-SS1253	8082A PCB Solid 4	A 01	28		K006953		
22L0198-02	LDW23-SS1254	8082A PCB Solid 4	A 01	29		K006953		
22L0198-03	LDW23-SS1255	8082A PCB Solid 4	A 01	30		K006953		
22L0198-04	LDW23-SS1257	8082A PCB Solid 4	A 01	31		K006953		
22L0198-05	LDW23-SS1258	8082A PCB Solid 4	A 01	32		K006953		
22L0198-06	LDW23-SS1259	8082A PCB Solid 4	A 01	33		K006953		
22L0198-07	LDW23-SS1262	8082A PCB Solid 4	A 01	34		K006953		
22L0198-08	LDW23-SS1260	8082A PCB Solid 4	A 01	35		K006953		
22L0198-09	LDW23-SS1263	8082A PCB Solid 4	A 01	36		K006953		
22L0198-10	LDW23-SS1245	8082A PCB Solid 4	A 01	37		K006953		
BKL0377-MS1	Matrix Spike	QC		38		K006953		
BKL0377-MSD1	Matrix Spike Dup	QC		39		K006953		
SKL0304-CCV5	AR1254CCV5	QC		40	K006957	K006953		
SKL0304-CCV6	AR1660CCV6	QC		41	K006954	K006953		
BKL0282-BLK1	Blank	QC		42		K006953		
BKL0282-BS1	LCS	QC		43		K006953		
BKL0282-BSD1	LCS Dup	QC		44		K006953		

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ANALYSIS SEQUENCE

SKL0304

Instrument: ECD7 Element Column ID:
Calibration ID: FL00010

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
BKL0282-SRM1	Reference	QC		45		K006953		
BKL0282-MS1	Matrix Spike	QC		46		K006953		
BKL0282-MSD1	Matrix Spike Dup	QC		47		K006953		
22L0137-61	LDW22-SC769C	8082A PCB Solid 4	B 01	48		K006953		
22L0137-62	LDW22-SC769D	8082A PCB Solid 4	B 01	49		K006953		
22L0137-63	LDW22-SC769E	8082A PCB Solid 4	B 01	50		K006953		
22L0137-64	LDW22-SC769F	8082A PCB Solid 4	B 01	51		K006953		
22L0137-65	LDW22-SC769G	8082A PCB Solid 4	B 01	52		K006953		
22L0137-66	LDW22-SC769H	8082A PCB Solid 4	B 01	53		K006953		
22L0137-67	LDW22-SC769I	8082A PCB Solid 4	B 01	54		K006953		
22L0137-68	LDW22-SC769J	8082A PCB Solid 4	B 01	55		K006953		
22L0137-69	LDW22-SC769K	8082A PCB Solid 4	B 01	56		K006953		
SKL0304-CCV7	AR1248CCV7	QC		57	K006956	K006953		
SKL0304-CCV8	AR1660CCV8	QC		58	K006954	K006953		
BKL0227-BLK1	Blank	QC		59		K006953		
BKL0227-BS1	LCS	QC		60		K006953		
BKL0227-BSD1	LCS Dup	QC		61		K006953		
BKL0227-SRM1	Reference	QC		62		K006953		
BKL0227-MS1	Matrix Spike	QC		63		K006953		
BKL0227-MSD1	Matrix Spike Dup	QC		64		K006953		
22L0137-41	LDW22-SC776H	8082A PCB Solid 4	B 01	65		K006953		
22L0137-42	LDW22-SC776I	8082A PCB Solid 4	B 01	66		K006953		

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ANALYSIS SEQUENCE

SKL0304

Instrument: ECD7 Element Column ID:
Calibration ID: FL00010

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
22L0137-43	LDW22-SC776J	8082A PCB Solid 4	B 01	67		K006953		
22L0137-44	LDW22-SC776K	8082A PCB Solid 4	B 01	68		K006953		
22L0137-45	LDW22-SC776L	8082A PCB Solid 4	B 01	69		K006953		
22L0137-46	LDW22-SC776M	8082A PCB Solid 4	B 01	70		K006953		
22L0137-47	LDW22-SC770A	8082A PCB Solid 4	B 01	71		K006953		
22L0137-48	LDW22-SC770B	8082A PCB Solid 4	B 01	72		K006953		
SKL0304-CCV9	AR1242CCV9	QC		73	K006955	K006953		
SKL0304-CCVA	AR1660CCVA	QC		74	K006954	K006953		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221220.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	20-DEC-2022 13:07	12202202ECD7.D	1	AR1254ICV1	
2	20-DEC-2022 13:28	12202203ECD7.D	1	AR1660ICV2	
3	20-DEC-2022 13:49	12202204ECD7.D	1	22L0137-24	
4	20-DEC-2022 14:10	12202205ECD7.D	1	22L0137-25	
5	20-DEC-2022 14:31	12202206ECD7.D	1	22L0137-26	
6	20-DEC-2022 14:53	12202207ECD7.D	1	22L0137-27	
7	20-DEC-2022 15:14	12202208ECD7.D	1	22L0137-28	
8	20-DEC-2022 15:35	12202209ECD7.D	1	22L0137-29	
9	20-DEC-2022 15:56	12202210ECD7.D	1	22L0137-30	
10	20-DEC-2022 16:17	12202211ECD7.D	1	22L0137-31	
11	20-DEC-2022 16:39	12202212ECD7.D	1	22L0137-32	
12	20-DEC-2022 17:00	12202213ECD7.D	1	22L0137-33	
13	20-DEC-2022 17:21	12202214ECD7.D	1	AR1248CCV1	
14	20-DEC-2022 17:42	12202215ECD7.D	1	AR1660CCV2	
15	20-DEC-2022 18:04	12202216ECD7.D	1	22L0137-34	
16	20-DEC-2022 18:25	12202217ECD7.D	1	22L0137-35	
17	20-DEC-2022 18:46	12202218ECD7.D	1	22L0137-36	
18	20-DEC-2022 19:07	12202219ECD7.D	1	22L0137-37	
19	20-DEC-2022 19:29	12202220ECD7.D	1	22L0137-38	
20	20-DEC-2022 19:50	12202221ECD7.D	1	22L0137-39	
21	20-DEC-2022 20:11	12202222ECD7.D	1	22L0137-40	
22	20-DEC-2022 20:32	12202223ECD7.D	1	AR1242CCV3	
23	20-DEC-2022 20:53	12202224ECD7.D	1	AR1660CCV4	
24	20-DEC-2022 21:15	12202225ECD7.D	1	BKL0377-BLK1	
25	20-DEC-2022 21:36	12202226ECD7.D	1	BKL0377-BS1	
26	20-DEC-2022 21:57	12202227ECD7.D	1	BKL0377-BSD1	
27	20-DEC-2022 22:18	12202228ECD7.D	1	BKL0377-MRL1	
28	20-DEC-2022 22:40	12202229ECD7.D	1	BKL0377-SRM1	
29	20-DEC-2022 23:01	12202230ECD7.D	1	22L0198-01	
30	20-DEC-2022 23:22	12202231ECD7.D	1	22L0198-02	
31	20-DEC-2022 23:43	12202232ECD7.D	1	22L0198-03	
32	21-DEC-2022 00:04	12202233ECD7.D	1	22L0198-04	
33	21-DEC-2022 00:26	12202234ECD7.D	1	22L0198-05	
34	21-DEC-2022 00:47	12202235ECD7.D	1	22L0198-06	
35	21-DEC-2022 01:08	12202236ECD7.D	1	22L0198-07	
36	21-DEC-2022 01:29	12202237ECD7.D	1	22L0198-08	
37	21-DEC-2022 01:50	12202238ECD7.D	1	22L0198-09	
38	21-DEC-2022 02:12	12202239ECD7.D	1	22L0198-10	
39	21-DEC-2022 02:33	12202240ECD7.D	1	BKL0377-MS1	
40	21-DEC-2022 02:54	12202241ECD7.D	1	BKL0377-MSD1	
41	21-DEC-2022 03:15	12202242ECD7.D	1	AR1254CCV5	
42	21-DEC-2022 03:36	12202243ECD7.D	1	AR1660CCV6	
43	21-DEC-2022 03:57	12202244ECD7.D	1	BKL0282-BLK1	
44	21-DEC-2022 04:19	12202245ECD7.D	1	BKL0282-BS1	
45	21-DEC-2022 04:40	12202246ECD7.D	1	BKL0282-BSD1	

46	21-DEC-2022	05:01	12202247ECD7.D	1	BKL0282-SRM1
47	21-DEC-2022	05:22	12202248ECD7.D	1	BKL0282-MS1
48	21-DEC-2022	05:43	12202249ECD7.D	1	BKL0282-MSD1
49	21-DEC-2022	06:04	12202250ECD7.D	1	22L0137-61
50	21-DEC-2022	06:26	12202251ECD7.D	1	22L0137-62

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51	21-DEC-2022 06:47	12202252ECD7.D	1	22L0137-63	
52	21-DEC-2022 07:08	12202253ECD7.D	1	22L0137-64	
53	21-DEC-2022 07:29	12202254ECD7.D	1	22L0137-65	
54	21-DEC-2022 07:50	12202255ECD7.D	1	22L0137-66	
55	21-DEC-2022 08:12	12202256ECD7.D	1	22L0137-67	
56	21-DEC-2022 08:33	12202257ECD7.D	1	22L0137-68	
57	21-DEC-2022 08:54	12202258ECD7.D	1	22L0137-69	
58	21-DEC-2022 09:15	12202259ECD7.D	1	AR1248CCV7	
59	21-DEC-2022 09:36	12202260ECD7.D	1	AR1660CCV8	
60	21-DEC-2022 09:57	12202261ECD7.D	1	BKL0227-BLK1	
61	21-DEC-2022 10:19	12202262ECD7.D	1	BKL0227-BS1	
62	21-DEC-2022 10:40	12202263ECD7.D	1	BKL0227-BSD1	
63	21-DEC-2022 11:01	12202264ECD7.D	1	BKL0227-SRM1	
64	21-DEC-2022 11:22	12202265ECD7.D	1	22L0137-41	
65	21-DEC-2022 11:43	12202266ECD7.D	1	22L0137-42	
66	21-DEC-2022 12:04	12202267ECD7.D	1	BKL0227-MS1	
67	21-DEC-2022 12:26	12202268ECD7.D	1	BKL0227-MSD1	
68	21-DEC-2022 12:47	12202269ECD7.D	1	22L0137-43	
69	21-DEC-2022 13:08	12202270ECD7.D	1	22L0137-44	
70	21-DEC-2022 13:29	12202271ECD7.D	1	22L0137-45	
71	21-DEC-2022 13:50	12202272ECD7.D	1	22L0137-46	
72	21-DEC-2022 14:12	12202273ECD7.D	1	22L0137-47	
73	21-DEC-2022 14:33	12202274ECD7.D	1	22L0137-48	
74	21-DEC-2022 14:54	12202275ECD7.D	1	AR1242CCV9	
75	21-DEC-2022 15:15	12202276ECD7.D	1	AR1660CCVA	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221220.b

Instrument: ecd7.i Date: 20-DEC-2022

Time	Filename	LabID	DF	Manually Integrated Compounds
1307	12202202ECD7.D	AR1254ICV1	1	NO MANUAL INTEGRATION
1328	12202203ECD7.D	AR1660ICV2	1	Aroclor-1016, Aroclor-1260,
1349	12202204ECD7.D	22L0137-24	1	NO MANUAL INTEGRATION
1410	12202205ECD7.D	22L0137-25	1	NO MANUAL INTEGRATION
1431	12202206ECD7.D	22L0137-26	1	NO MANUAL INTEGRATION
1453	12202207ECD7.D	22L0137-27	1	NO MANUAL INTEGRATION
1514	12202208ECD7.D	22L0137-28	1	NO MANUAL INTEGRATION
1535	12202209ECD7.D	22L0137-29	1	NO MANUAL INTEGRATION
1556	12202210ECD7.D	22L0137-30	1	NO MANUAL INTEGRATION
1617	12202211ECD7.D	22L0137-31	1	NO MANUAL INTEGRATION
1639	12202212ECD7.D	22L0137-32	1	NO MANUAL INTEGRATION
1700	12202213ECD7.D	22L0137-33	1	NO MANUAL INTEGRATION
1721	12202214ECD7.D	AR1248CCV1	1	NO MANUAL INTEGRATION
1742	12202215ECD7.D	AR1660CCV2	1	Aroclor-1016, Aroclor-1260,
1804	12202216ECD7.D	22L0137-34	1	NO MANUAL INTEGRATION
1825	12202217ECD7.D	22L0137-35	1	NO MANUAL INTEGRATION
1846	12202218ECD7.D	22L0137-36	1	NO MANUAL INTEGRATION

Instrument: ecd7.i Date: 20-DEC-2022

Time	Filename	LabID	DF	Manually Integrated Compounds
1907	12202219ECD7.D	22L0137-37	1	NO MANUAL INTEGRATION
1929	12202220ECD7.D	22L0137-38	1	NO MANUAL INTEGRATION
1950	12202221ECD7.D	22L0137-39	1	NO MANUAL INTEGRATION
2011	12202222ECD7.D	22L0137-40	1	NO MANUAL INTEGRATION
2032	12202223ECD7.D	AR1242CCV3	1	Aroclor-1242,
2053	12202224ECD7.D	AR1660CCV4	1	Aroclor-1016, Aroclor-1260,
2115	12202225ECD7.D	BKL0377-BLK1	1	NO MANUAL INTEGRATION
2136	12202226ECD7.D	BKL0377-BS1	1	NO MANUAL INTEGRATION
2157	12202227ECD7.D	BKL0377-BSD1	1	NO MANUAL INTEGRATION
2218	12202228ECD7.D	BKL0377-MRL1	1	NO MANUAL INTEGRATION
2240	12202229ECD7.D	BKL0377-SRM1	1	Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268,
2301	12202230ECD7.D	22L0198-01	1	NO MANUAL INTEGRATION
2322	12202231ECD7.D	22L0198-02	1	NO MANUAL INTEGRATION
2343	12202232ECD7.D	22L0198-03	1	NO MANUAL INTEGRATION
0004	12202233ECD7.D	22L0198-04	1	NO MANUAL INTEGRATION
0026	12202234ECD7.D	22L0198-05	1	NO MANUAL INTEGRATION
0047	12202235ECD7.D	22L0198-06	1	NO MANUAL INTEGRATION
0108	12202236ECD7.D	22L0198-07	1	NO MANUAL INTEGRATION

Instrument: ecd7.i Date: 21-DEC-2022

Time	Filename	LabID	DF	Manually Integrated Compounds
0129	12202237ECD7.D	22L0198-08	1	NO MANUAL INTEGRATION
0150	12202238ECD7.D	22L0198-09	1	NO MANUAL INTEGRATION
0212	12202239ECD7.D	22L0198-10	1	NO MANUAL INTEGRATION
0233	12202240ECD7.D	BKL0377-MS1	1	NO MANUAL INTEGRATION
0254	12202241ECD7.D	BKL0377-MSD1	1	NO MANUAL INTEGRATION
0315	12202242ECD7.D	AR1254CCV5	1	Aroclor-1254,
0336	12202243ECD7.D	AR1660CCV6	1	Aroclor-1016, Aroclor-1260, IS-HBBP, Decachlorobiphenyl,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221220.b

Instrument: ecd7.i Date: 20-DEC-2022

Time	Filename	LabID	DF	Manually Integrated Compounds
1307	12202202ECD7.D	AR1254ICV1	1	NO MANUAL INTEGRATION
1328	12202203ECD7.D	AR1660ICV2	1	Aroclor-1016, Aroclor-1260,
1349	12202204ECD7.D	22L0137-24	1	NO MANUAL INTEGRATION
1410	12202205ECD7.D	22L0137-25	1	NO MANUAL INTEGRATION
1431	12202206ECD7.D	22L0137-26	1	NO MANUAL INTEGRATION
1453	12202207ECD7.D	22L0137-27	1	NO MANUAL INTEGRATION
1514	12202208ECD7.D	22L0137-28	1	NO MANUAL INTEGRATION
1535	12202209ECD7.D	22L0137-29	1	NO MANUAL INTEGRATION
1556	12202210ECD7.D	22L0137-30	1	NO MANUAL INTEGRATION
1617	12202211ECD7.D	22L0137-31	1	NO MANUAL INTEGRATION
1639	12202212ECD7.D	22L0137-32	1	NO MANUAL INTEGRATION
1700	12202213ECD7.D	22L0137-33	1	NO MANUAL INTEGRATION
1721	12202214ECD7.D	AR1248CCV1	1	NO MANUAL INTEGRATION
1742	12202215ECD7.D	AR1660CCV2	1	Aroclor-1016, Aroclor-1260,
1804	12202216ECD7.D	22L0137-34	1	NO MANUAL INTEGRATION
1825	12202217ECD7.D	22L0137-35	1	NO MANUAL INTEGRATION
1846	12202218ECD7.D	22L0137-36	1	NO MANUAL INTEGRATION

Instrument: ecd7.i Date: 20-DEC-2022

Time	Filename	LabID	DF	Manually Integrated Compounds
1907	12202219ECD7.D	22L0137-37	1	NO MANUAL INTEGRATION
1929	12202220ECD7.D	22L0137-38	1	NO MANUAL INTEGRATION
1950	12202221ECD7.D	22L0137-39	1	NO MANUAL INTEGRATION
2011	12202222ECD7.D	22L0137-40	1	NO MANUAL INTEGRATION
2032	12202223ECD7.D	AR1242CCV3	1	Aroclor-1242,
2053	12202224ECD7.D	AR1660CCV4	1	Aroclor-1016, Aroclor-1260,
2115	12202225ECD7.D	BKL0377-BLK1	1	NO MANUAL INTEGRATION
2136	12202226ECD7.D	BKL0377-BS1	1	NO MANUAL INTEGRATION
2157	12202227ECD7.D	BKL0377-BSD1	1	NO MANUAL INTEGRATION
2218	12202228ECD7.D	BKL0377-MRL1	1	NO MANUAL INTEGRATION
2240	12202229ECD7.D	BKL0377-SRM1	1	Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268,
2301	12202230ECD7.D	22L0198-01	1	NO MANUAL INTEGRATION
2322	12202231ECD7.D	22L0198-02	1	NO MANUAL INTEGRATION
2343	12202232ECD7.D	22L0198-03	1	NO MANUAL INTEGRATION
0004	12202233ECD7.D	22L0198-04	1	NO MANUAL INTEGRATION
0026	12202234ECD7.D	22L0198-05	1	NO MANUAL INTEGRATION
0047	12202235ECD7.D	22L0198-06	1	NO MANUAL INTEGRATION
0108	12202236ECD7.D	22L0198-07	1	NO MANUAL INTEGRATION

Instrument: ecd7.i Date: 21-DEC-2022

Time	Filename	LabID	DF	Manually Integrated Compounds
0129	12202237ECD7.D	22L0198-08	1	NO MANUAL INTEGRATION
0150	12202238ECD7.D	22L0198-09	1	NO MANUAL INTEGRATION
0212	12202239ECD7.D	22L0198-10	1	NO MANUAL INTEGRATION
0233	12202240ECD7.D	BKL0377-MS1	1	NO MANUAL INTEGRATION
0254	12202241ECD7.D	BKL0377-MSD1	1	NO MANUAL INTEGRATION
0315	12202242ECD7.D	AR1254CCV5	1	Aroclor-1254,
0336	12202243ECD7.D	AR1660CCV6	1	Aroclor-1016, Aroclor-1260, IS-HBBP, Decachlorobiphenyl,
0357	12202244ECD7.D	BKL0282-BLK1	1	NO MANUAL INTEGRATION
0419	12202245ECD7.D	BKL0282-BS1	1	NO MANUAL INTEGRATION
0440	12202246ECD7.D	BKL0282-BSD1	1	NO MANUAL INTEGRATION
0501	12202247ECD7.D	BKL0282-SRM1	1	NO MANUAL INTEGRATION
0522	12202248ECD7.D	BKL0282-MS1	1	NO MANUAL INTEGRATION
0543	12202249ECD7.D	BKL0282-MSD1	1	NO MANUAL INTEGRATION
0604	12202250ECD7.D	22L0137-61	1	NO MANUAL INTEGRATION
0626	12202251ECD7.D	22L0137-62	1	NO MANUAL INTEGRATION
0647	12202252ECD7.D	22L0137-63	1	NO MANUAL INTEGRATION
0708	12202253ECD7.D	22L0137-64	1	NO MANUAL INTEGRATION
0729	12202254ECD7.D	22L0137-65	1	NO MANUAL INTEGRATION

Instrument: ecd7.i Date: 21-DEC-2022

Time	Filename	LabID	DF	Manually Integrated Compounds
0750	12202255ECD7.D	22L0137-66	1	NO MANUAL INTEGRATION
0812	12202256ECD7.D	22L0137-67	1	NO MANUAL INTEGRATION
0833	12202257ECD7.D	22L0137-68	1	NO MANUAL INTEGRATION
0854	12202258ECD7.D	22L0137-69	1	NO MANUAL INTEGRATION
0915	12202259ECD7.D	AR1248CCV7	1	Aroclor-1248,
0936	12202260ECD7.D	AR1660CCV8	1	Aroclor-1016, Aroclor-1260,
0957	12202261ECD7.D	BKL0227-BLK1	1	NO MANUAL INTEGRATION
1019	12202262ECD7.D	BKL0227-BS1	1	NO MANUAL INTEGRATION
1040	12202263ECD7.D	BKL0227-BSD1	1	NO MANUAL INTEGRATION
1101	12202264ECD7.D	BKL0227-SRM1	1	NO MANUAL INTEGRATION
1122	12202265ECD7.D	22L0137-41	1	NO MANUAL INTEGRATION
1143	12202266ECD7.D	22L0137-42	1	NO MANUAL INTEGRATION
1204	12202267ECD7.D	BKL0227-MS1	1	NO MANUAL INTEGRATION
1226	12202268ECD7.D	BKL0227-MSD1	1	NO MANUAL INTEGRATION
1247	12202269ECD7.D	22L0137-43	1	NO MANUAL INTEGRATION
1308	12202270ECD7.D	22L0137-44	1	NO MANUAL INTEGRATION
1329	12202271ECD7.D	22L0137-45	1	NO MANUAL INTEGRATION
1350	12202272ECD7.D	22L0137-46	1	Aroclor-1260, Tetrachloro-m-xylene,

Instrument: ecd7.i Date: 21-DEC-2022

Time	Filename	LabID	DF	Manually Integrated Compounds
1412	12202273ECD7.D	22L0137-47	1	Aroclor-1248, Aroclor-1254, Aroclor-1260, Tetrachloro-m-xylene,
1433	12202274ECD7.D	22L0137-48	1	Aroclor-1248, Aroclor-1254, Aroclor-1260,
1454	12202275ECD7.D	AR1242CCV9	1	Aroclor-1242,
1515	12202276ECD7.D	AR1660CCVA	1	Aroclor-1016, Aroclor-1260,

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SKL0048
Instrument: ECD7
Calibration: FL00010
Calibration Date: 12/03/2022

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SKL0048-SCV1 (Solid)			Lab File ID: 12032222ECD7.D			Analyzed: 12/03/22 22:13		
Decachlorobiphenyl	40.000	99.5	80 - 120	13.909	13.90667	0.0023	N/A	
Tetrachlorometaxylene	40.000	90.3	80 - 120	5.836	5.835333	0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	95.4	80 - 120	14.137	14.13533	0.0017	N/A	
Tetrachlorometaxylene [2C]	40.000	90.2	80 - 120	5.713	5.712333	0.0007	N/A	
SKL0048-SCV2 (Solid)			Lab File ID: 12032223ECD7.D			Analyzed: 12/03/22 22:34		
Decachlorobiphenyl	40.000	97.9	80 - 120	13.909	13.90667	0.0023	N/A	
Tetrachlorometaxylene	40.000	88.9	80 - 120	5.835	5.835333	-0.0003	N/A	
Decachlorobiphenyl [2C]	40.000	95.0	80 - 120	14.136	14.13533	0.0007	N/A	
Tetrachlorometaxylene [2C]	40.000	89.5	80 - 120	5.712	5.712333	-0.0003	N/A	
SKL0048-SCV3 (Solid)			Lab File ID: 12032224ECD7.D			Analyzed: 12/03/22 22:55		
Decachlorobiphenyl	40.000	98.3	80 - 120	13.909	13.90667	0.0023	N/A	
Tetrachlorometaxylene	40.000	86.8	80 - 120	5.836	5.835333	0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	95.2	80 - 120	14.136	14.13533	0.0007	N/A	
Tetrachlorometaxylene [2C]	40.000	87.7	80 - 120	5.712	5.712333	-0.0003	N/A	
SKL0048-SCV4 (Solid)			Lab File ID: 12032225ECD7.D			Analyzed: 12/03/22 23:17		
Decachlorobiphenyl	40.000	98.9	80 - 120	13.909	13.90667	0.0023	N/A	
Tetrachlorometaxylene	40.000	88.8	80 - 120	5.836	5.835333	0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	95.2	80 - 120	14.136	14.13533	0.0007	N/A	
Tetrachlorometaxylene [2C]	40.000	90.0	80 - 120	5.713	5.712333	0.0007	N/A	
SKL0048-SCV5 (Solid)			Lab File ID: 12032226ECD7.D			Analyzed: 12/03/22 23:38		
Decachlorobiphenyl	40.000	100	80 - 120	13.907	13.90667	0.0003	N/A	
Tetrachlorometaxylene	40.000	90.2	80 - 120	5.836	5.835333	0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	96.1	80 - 120	14.136	14.13533	0.0007	N/A	
Tetrachlorometaxylene [2C]	40.000	89.2	80 - 120	5.713	5.712333	0.0007	N/A	
SKL0048-SCV6 (Solid)			Lab File ID: 12032227ECD7.D			Analyzed: 12/03/22 23:59		
Decachlorobiphenyl	40.000	140	80 - 120	13.906	13.90667	-0.0007	N/A	
Tetrachlorometaxylene	40.000	86.2	80 - 120	5.833	5.835333	-0.0023	N/A	
Decachlorobiphenyl [2C]	40.000	137	80 - 120	14.136	14.13533	0.0007	N/A	
Tetrachlorometaxylene [2C]	40.000	85.6	80 - 120	5.711	5.712333	-0.0013	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SKL0304
Instrument: ECD7
Calibration: FL00010
Calibration Date: 12/03/2022

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SKL0304-ICV1 (Solid)			Lab File ID: 12202202ECD7.D			Analyzed: 12/20/22 13:07		
Decachlorobiphenyl	40.000	110	80 - 120	13.905	13.90667	-0.0017	N/A	
Tetrachlorometaxylene	40.000	92.1	80 - 120	5.833	5.835333	-0.0023	N/A	
Decachlorobiphenyl [2C]	40.000	99.5	80 - 120	14.133	14.13533	-0.0023	N/A	
Tetrachlorometaxylene [2C]	40.000	91.6	80 - 120	5.708	5.712333	-0.0043	N/A	
SKL0304-ICV2 (Solid)			Lab File ID: 12202203ECD7.D			Analyzed: 12/20/22 13:28		
Decachlorobiphenyl	40.000	111	80 - 120	13.904	13.90667	-0.0027	N/A	
Tetrachlorometaxylene	40.000	102	80 - 120	5.833	5.835333	-0.0023	N/A	
Decachlorobiphenyl [2C]	40.000	97.1	80 - 120	14.131	14.13533	-0.0043	N/A	
Tetrachlorometaxylene [2C]	40.000	99.4	80 - 120	5.71	5.712333	-0.0023	N/A	
SKL0304-CCV1 (Solid)			Lab File ID: 12202214ECD7.D			Analyzed: 12/20/22 17:21		
Decachlorobiphenyl	40.000	106	80 - 120	13.904	13.90667	-0.0027	N/A	
Tetrachlorometaxylene	40.000	91.2	80 - 120	5.836	5.835333	0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	97.1	80 - 120	14.132	14.13533	-0.0033	N/A	
Tetrachlorometaxylene [2C]	40.000	92.8	80 - 120	5.713	5.712333	0.0007	N/A	
SKL0304-CCV2 (Solid)			Lab File ID: 12202215ECD7.D			Analyzed: 12/20/22 17:42		
Decachlorobiphenyl	40.000	113	80 - 120	13.904	13.90667	-0.0027	N/A	
Tetrachlorometaxylene	40.000	101	80 - 120	5.835	5.835333	-0.0003	N/A	
Decachlorobiphenyl [2C]	40.000	97.5	80 - 120	14.133	14.13533	-0.0023	N/A	
Tetrachlorometaxylene [2C]	40.000	99.0	80 - 120	5.712	5.712333	-0.0003	N/A	
SKL0304-CCV3 (Solid)			Lab File ID: 12202223ECD7.D			Analyzed: 12/20/22 20:32		
Decachlorobiphenyl	40.000	108	80 - 120	13.903	13.90667	-0.0037	N/A	
Tetrachlorometaxylene	40.000	96.1	80 - 120	5.834	5.835333	-0.0013	N/A	
Decachlorobiphenyl [2C]	40.000	95.5	80 - 120	14.132	14.13533	-0.0033	N/A	
Tetrachlorometaxylene [2C]	40.000	95.1	80 - 120	5.711	5.712333	-0.0013	N/A	
SKL0304-CCV4 (Solid)			Lab File ID: 12202224ECD7.D			Analyzed: 12/20/22 20:53		
Decachlorobiphenyl	40.000	116	80 - 120	13.903	13.90667	-0.0037	N/A	
Tetrachlorometaxylene	40.000	101	80 - 120	5.836	5.835333	0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	98.4	80 - 120	14.132	14.13533	-0.0033	N/A	
Tetrachlorometaxylene [2C]	40.000	99.0	80 - 120	5.713	5.712333	0.0007	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG/WO:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SKL0304	Instrument:	ECD7
Calibration:	FL00010	Calibration Date:	12/03/2022

Surrogate Compound	Spike Level ug/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BKL0377-BLK1 (Solid)			Lab File ID: 12202225ECD7.D			Analyzed: 12/20/22 21:15		
Decachlorobiphenyl	8.0000	109	40 - 126	13.903	13.90667	-0.0037	N/A	
Tetrachlorometaxylene	8.0000	87.1	44 - 120	5.834	5.835333	-0.0013	N/A	
Decachlorobiphenyl [2C]	8.0000	102	40 - 126	14.131	14.13533	-0.0043	N/A	
Tetrachlorometaxylene [2C]	8.0000	84.7	44 - 120	5.712	5.712333	-0.0003	N/A	
BKL0377-BS1 (Solid)			Lab File ID: 12202226ECD7.D			Analyzed: 12/20/22 21:36		
Decachlorobiphenyl	8.0000	112	40 - 126	13.903	13.90667	-0.0037	N/A	
Tetrachlorometaxylene	8.0000	93.1	44 - 120	5.834	5.835333	-0.0013	N/A	
Decachlorobiphenyl [2C]	8.0000	106	40 - 126	14.132	14.13533	-0.0033	N/A	
Tetrachlorometaxylene [2C]	8.0000	87.5	44 - 120	5.711	5.712333	-0.0013	N/A	
BKL0377-BSD1 (Solid)			Lab File ID: 12202227ECD7.D			Analyzed: 12/20/22 21:57		
Decachlorobiphenyl	8.0000	108	40 - 126	13.903	13.90667	-0.0037	N/A	
Tetrachlorometaxylene	8.0000	91.3	44 - 120	5.833	5.835333	-0.0023	N/A	
Decachlorobiphenyl [2C]	8.0000	103	40 - 126	14.131	14.13533	-0.0043	N/A	
Tetrachlorometaxylene [2C]	8.0000	87.1	44 - 120	5.71	5.712333	-0.0023	N/A	
BKL0377-MRL1 (Solid)			Lab File ID: 12202228ECD7.D			Analyzed: 12/20/22 22:18		
Decachlorobiphenyl	8.0000	114	40 - 126	13.902	13.90667	-0.0047	N/A	
Tetrachlorometaxylene	8.0000	95.0	44 - 120	5.835	5.835333	-0.0003	N/A	
Decachlorobiphenyl [2C]	8.0000	109	40 - 126	14.132	14.13533	-0.0033	N/A	
Tetrachlorometaxylene [2C]	8.0000	91.9	44 - 120	5.713	5.712333	0.0007	N/A	
BKL0377-SRM1 (Solid)			Lab File ID: 12202229ECD7.D			Analyzed: 12/20/22 22:40		
Decachlorobiphenyl	40.000	106	40 - 126	13.899	13.90667	-0.0077	N/A	
Tetrachlorometaxylene	40.000	82.0	44 - 120	5.833	5.835333	-0.0023	N/A	
Decachlorobiphenyl [2C]	40.000	93.0	40 - 126	14.128	14.13533	-0.0073	N/A	
Tetrachlorometaxylene [2C]	40.000	86.6	44 - 120	5.71	5.712333	-0.0023	N/A	
22L0198-01 (Solid)			Lab File ID: 12202230ECD7.D			Analyzed: 12/20/22 23:01		
Decachlorobiphenyl	7.9888	101	40 - 126	13.897	13.90667	-0.0097	N/A	
Tetrachlorometaxylene	7.9888	69.5	44 - 120	5.831	5.835333	-0.0043	N/A	
Decachlorobiphenyl [2C]	7.9888	91.2	40 - 126	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	7.9888	75.0	44 - 120	5.708	5.712333	-0.0043	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SKL0304
Instrument: ECD7
Calibration: FL00010
Calibration Date: 12/03/2022

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
22L0198-02 (Solid)			Lab File ID: 12202231ECD7.D			Analyzed: 12/20/22 23:22		
Decachlorobiphenyl	7.9928	99.5	40 - 126	13.897	13.90667	-0.0097	N/A	
Tetrachlorometaxylene	7.9928	69.2	44 - 120	5.831	5.835333	-0.0043	N/A	
Decachlorobiphenyl [2C]	7.9928	90.6	40 - 126	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	7.9928	76.4	44 - 120	5.708	5.712333	-0.0043	N/A	
22L0198-03 (Solid)			Lab File ID: 12202232ECD7.D			Analyzed: 12/20/22 23:43		
Decachlorobiphenyl	7.9830	109	40 - 126	13.896	13.90667	-0.0107	N/A	
Tetrachlorometaxylene	7.9830	74.5	44 - 120	5.829	5.835333	-0.0063	N/A	
Decachlorobiphenyl [2C]	7.9830	100	40 - 126	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	7.9830	83.3	44 - 120	5.706	5.712333	-0.0063	N/A	
22L0198-04 (Solid)			Lab File ID: 12202233ECD7.D			Analyzed: 12/21/22 00:04		
Decachlorobiphenyl	7.9951	105	40 - 126	13.897	13.90667	-0.0097	N/A	
Tetrachlorometaxylene	7.9951	73.1	44 - 120	5.83	5.835333	-0.0053	N/A	
Decachlorobiphenyl [2C]	7.9951	95.8	40 - 126	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	7.9951	78.3	44 - 120	5.707	5.712333	-0.0053	N/A	
22L0198-05 (Solid)			Lab File ID: 12202234ECD7.D			Analyzed: 12/21/22 00:26		
Decachlorobiphenyl	7.9986	105	40 - 126	13.895	13.90667	-0.0117	N/A	
Tetrachlorometaxylene	7.9986	70.8	44 - 120	5.83	5.835333	-0.0053	N/A	
Decachlorobiphenyl [2C]	7.9986	96.0	40 - 126	14.126	14.13533	-0.0093	N/A	
Tetrachlorometaxylene [2C]	7.9986	78.9	44 - 120	5.708	5.712333	-0.0043	N/A	
22L0198-06 (Solid)			Lab File ID: 12202235ECD7.D			Analyzed: 12/21/22 00:47		
Decachlorobiphenyl	7.9852	101	40 - 126	13.895	13.90667	-0.0117	N/A	
Tetrachlorometaxylene	7.9852	68.5	44 - 120	5.831	5.835333	-0.0043	N/A	
Decachlorobiphenyl [2C]	7.9852	90.5	40 - 126	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	7.9852	74.9	44 - 120	5.708	5.712333	-0.0043	N/A	
22L0198-07 (Solid)			Lab File ID: 12202236ECD7.D			Analyzed: 12/21/22 01:08		
Decachlorobiphenyl	8.0005	111	40 - 126	13.897	13.90667	-0.0097	N/A	
Tetrachlorometaxylene	8.0005	75.5	44 - 120	5.83	5.835333	-0.0053	N/A	
Decachlorobiphenyl [2C]	8.0005	101	40 - 126	14.128	14.13533	-0.0073	N/A	
Tetrachlorometaxylene [2C]	8.0005	83.4	44 - 120	5.707	5.712333	-0.0053	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SKL0304
Instrument: ECD7
Calibration: FL00010
Calibration Date: 12/03/2022

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
22L0198-08 (Solid)			Lab File ID: 12202237ECD7.D			Analyzed: 12/21/22 01:29		
Decachlorobiphenyl	7.9905	105	40 - 126	13.895	13.90667	-0.0117	N/A	
Tetrachlorometaxylene	7.9905	70.4	44 - 120	5.83	5.835333	-0.0053	N/A	
Decachlorobiphenyl [2C]	7.9905	97.0	40 - 126	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	7.9905	78.7	44 - 120	5.707	5.712333	-0.0053	N/A	
22L0198-09 (Solid)			Lab File ID: 12202238ECD7.D			Analyzed: 12/21/22 01:50		
Decachlorobiphenyl	7.9950	98.2	40 - 126	13.896	13.90667	-0.0107	N/A	
Tetrachlorometaxylene	7.9950	68.9	44 - 120	5.83	5.835333	-0.0053	N/A	
Decachlorobiphenyl [2C]	7.9950	91.2	40 - 126	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	7.9950	75.8	44 - 120	5.707	5.712333	-0.0053	N/A	
22L0198-10 (Solid)			Lab File ID: 12202239ECD7.D			Analyzed: 12/21/22 02:12		
Decachlorobiphenyl	7.9926	97.4	40 - 126	13.897	13.90667	-0.0097	N/A	
Tetrachlorometaxylene	7.9926	72.4	44 - 120	5.83	5.835333	-0.0053	N/A	
Decachlorobiphenyl [2C]	7.9926	89.3	40 - 126	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	7.9926	77.2	44 - 120	5.707	5.712333	-0.0053	N/A	
BKL0377-MS1 (Solid)			Lab File ID: 12202240ECD7.D			Analyzed: 12/21/22 02:33		
Decachlorobiphenyl	7.9926	88.2	40 - 126	13.896	13.90667	-0.0107	N/A	
Tetrachlorometaxylene	7.9926	64.5	44 - 120	5.829	5.835333	-0.0063	N/A	
Decachlorobiphenyl [2C]	7.9926	81.2	40 - 126	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	7.9926	69.6	44 - 120	5.706	5.712333	-0.0063	N/A	
BKL0377-MSD1 (Solid)			Lab File ID: 12202241ECD7.D			Analyzed: 12/21/22 02:54		
Decachlorobiphenyl	7.9926	95.4	40 - 126	13.897	13.90667	-0.0097	N/A	
Tetrachlorometaxylene	7.9926	68.1	44 - 120	5.83	5.835333	-0.0053	N/A	
Decachlorobiphenyl [2C]	7.9926	86.4	40 - 126	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	7.9926	76.4	44 - 120	5.707	5.712333	-0.0053	N/A	
SKL0304-CCV5 (Solid)			Lab File ID: 12202242ECD7.D			Analyzed: 12/21/22 03:15		
Decachlorobiphenyl	40.000	105	80 - 120	13.904	13.90667	-0.0027	N/A	
Tetrachlorometaxylene	40.000	91.9	80 - 120	5.834	5.835333	-0.0013	N/A	
Decachlorobiphenyl [2C]	40.000	101	80 - 120	14.132	14.13533	-0.0033	N/A	
Tetrachlorometaxylene [2C]	40.000	90.9	80 - 120	5.711	5.712333	-0.0013	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SKL0304
Instrument: ECD7
Calibration: FL00010
Calibration Date: 12/03/2022

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SKL0304-CCV6 (Solid)			Lab File ID: 12202243ECD7.D			Analyzed: 12/21/22 03:36		
Decachlorobiphenyl	40.000	111	80 - 120	13.901	13.90667	-0.0057	N/A	
Tetrachlorometaxylene	40.000	104	80 - 120	5.834	5.835333	-0.0013	N/A	
Decachlorobiphenyl [2C]	40.000	98.5	80 - 120	14.133	14.13533	-0.0023	N/A	
Tetrachlorometaxylene [2C]	40.000	99.3	80 - 120	5.711	5.712333	-0.0013	N/A	
SKL0304-CCV7 (Solid)			Lab File ID: 12202259ECD7.D			Analyzed: 12/21/22 09:15		
Decachlorobiphenyl	40.000	103	80 - 120	13.903	13.90667	-0.0037	N/A	
Tetrachlorometaxylene	40.000	91.6	80 - 120	5.835	5.835333	-0.0003	N/A	
Decachlorobiphenyl [2C]	40.000	98.9	80 - 120	14.132	14.13533	-0.0033	N/A	
Tetrachlorometaxylene [2C]	40.000	92.1	80 - 120	5.712	5.712333	-0.0003	N/A	
SKL0304-CCV8 (Solid)			Lab File ID: 12202260ECD7.D			Analyzed: 12/21/22 09:36		
Decachlorobiphenyl	40.000	109	80 - 120	13.903	13.90667	-0.0037	N/A	
Tetrachlorometaxylene	40.000	105	80 - 120	5.833	5.835333	-0.0023	N/A	
Decachlorobiphenyl [2C]	40.000	99.8	80 - 120	14.132	14.13533	-0.0033	N/A	
Tetrachlorometaxylene [2C]	40.000	101	80 - 120	5.71	5.712333	-0.0023	N/A	
SKL0304-CCV9 (Solid)			Lab File ID: 12202275ECD7.D			Analyzed: 12/21/22 14:54		
Decachlorobiphenyl	40.000	107	80 - 120	13.904	13.90667	-0.0027	N/A	
Tetrachlorometaxylene	40.000	95.8	80 - 120	5.833	5.835333	-0.0023	N/A	
Decachlorobiphenyl [2C]	40.000	98.3	80 - 120	14.132	14.13533	-0.0033	N/A	
Tetrachlorometaxylene [2C]	40.000	93.9	80 - 120	5.711	5.712333	-0.0013	N/A	
SKL0304-CCVA (Solid)			Lab File ID: 12202276ECD7.D			Analyzed: 12/21/22 15:15		
Decachlorobiphenyl	40.000	117	80 - 120	13.902	13.90667	-0.0047	N/A	
Tetrachlorometaxylene	40.000	102	80 - 120	5.833	5.835333	-0.0023	N/A	
Decachlorobiphenyl [2C]	40.000	98.4	80 - 120	14.132	14.13533	-0.0033	N/A	
Tetrachlorometaxylene [2C]	40.000	98.9	80 - 120	5.711	5.712333	-0.0013	N/A	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SKL0048	Instrument:	ECD7
		Calibration:	FL00010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SKL0048-SCV1)		(Solid)	Lab File ID: 12032222ECD7.D				Analyzed: 12/03/22 22:13		
1-Bromo-2-Nitrobenzene	483506	3.518	457669	3.516	106	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl	892033	14.281	837264	14.278	107	50 - 200	0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	270882	3.956	254712	3.955	106	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	432562	15.023	387892	15.021	112	50 - 200	0.002	+/-0.50	
Secondary Cal Check (SKL0048-SCV2)		(Solid)	Lab File ID: 12032223ECD7.D				Analyzed: 12/03/22 22:34		
1-Bromo-2-Nitrobenzene	480791	3.515	457669	3.516	105	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	896515	14.281	837264	14.278	107	50 - 200	0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	270117	3.955	254712	3.955	106	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	422729	15.023	387892	15.021	109	50 - 200	0.002	+/-0.50	
Secondary Cal Check (SKL0048-SCV3)		(Solid)	Lab File ID: 12032224ECD7.D				Analyzed: 12/03/22 22:55		
1-Bromo-2-Nitrobenzene	484977	3.515	457669	3.516	106	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	915518	14.281	837264	14.278	109	50 - 200	0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	272055	3.955	254712	3.955	107	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	426674	15.023	387892	15.021	110	50 - 200	0.002	+/-0.50	
Secondary Cal Check (SKL0048-SCV4)		(Solid)	Lab File ID: 12032225ECD7.D				Analyzed: 12/03/22 23:17		
1-Bromo-2-Nitrobenzene	484642	3.516	457669	3.516	106	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	917405	14.28	837264	14.278	110	50 - 200	0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	270782	3.955	254712	3.955	106	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	431238	15.024	387892	15.021	111	50 - 200	0.003	+/-0.50	
Secondary Cal Check (SKL0048-SCV5)		(Solid)	Lab File ID: 12032226ECD7.D				Analyzed: 12/03/22 23:38		
1-Bromo-2-Nitrobenzene	482097	3.517	457669	3.516	105	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	913775	14.28	837264	14.278	109	50 - 200	0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	268757	3.956	254712	3.955	106	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	434790	15.024	387892	15.021	112	50 - 200	0.003	+/-0.50	
Secondary Cal Check (SKL0048-SCV6)		(Solid)	Lab File ID: 12032227ECD7.D				Analyzed: 12/03/22 23:59		
1-Bromo-2-Nitrobenzene	483276	3.514	457669	3.516	106	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	920878	14.281	837264	14.278	110	50 - 200	0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	270175	3.953	254712	3.955	106	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	435731	15.023	387892	15.021	112	50 - 200	0.002	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SKL0304
Instrument: ECD7
Calibration: FL00010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SKL0304-ICV1)		(Solid)	Lab File ID: 12202202ECD7.D				Analyzed: 12/20/22 13:07		
1-Bromo-2-Nitrobenzene	438716	3.514	339517	3.514	129	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	750432	14.279	632318	14.275	119	50 - 200	0.004	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	248704	3.95	196492	3.952	127	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	363454	15.019	316874	15.019	115	50 - 200	0.000	+/-0.50	
Initial Cal Check (SKL0304-ICV2)		(Solid)	Lab File ID: 12202203ECD7.D				Analyzed: 12/20/22 13:28		
1-Bromo-2-Nitrobenzene	339517	3.514	339517	3.514	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	632318	14.275	632318	14.275	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	196492	3.952	196492	3.952	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	316874	15.019	316874	15.019	100	50 - 200	0.000	+/-0.50	
Blank (BKL0377-BLK1)		(Solid)	Lab File ID: 12202225ECD7.D				Analyzed: 12/20/22 21:15		
1-Bromo-2-Nitrobenzene	484753	3.518	339517	3.514	143	50 - 200	0.004	+/-0.50	
Hexabromobiphenyl	766785	14.274	632318	14.275	121	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	287479	3.956	196492	3.952	146	50 - 200	0.004	+/-0.50	
Hexabromobiphenyl [2C]	405921	15.017	316874	15.019	128	50 - 200	-0.002	+/-0.50	
LCS (BKL0377-BS1)		(Solid)	Lab File ID: 12202226ECD7.D				Analyzed: 12/20/22 21:36		
1-Bromo-2-Nitrobenzene	512409	3.518	339517	3.514	151	50 - 200	0.004	+/-0.50	
Hexabromobiphenyl	839760	14.274	632318	14.275	133	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	301393	3.955	196492	3.952	153	50 - 200	0.003	+/-0.50	
Hexabromobiphenyl [2C]	434825	15.019	316874	15.019	137	50 - 200	0.000	+/-0.50	
LCS Dup (BKL0377-BSD1)		(Solid)	Lab File ID: 12202227ECD7.D				Analyzed: 12/20/22 21:57		
1-Bromo-2-Nitrobenzene	524969	3.518	339517	3.514	155	50 - 200	0.004	+/-0.50	
Hexabromobiphenyl	885901	14.273	632318	14.275	140	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	308454	3.955	196492	3.952	157	50 - 200	0.003	+/-0.50	
Hexabromobiphenyl [2C]	453119	15.018	316874	15.019	143	50 - 200	-0.001	+/-0.50	
MRL Check (BKL0377-MRL1)		(Solid)	Lab File ID: 12202228ECD7.D				Analyzed: 12/20/22 22:18		
1-Bromo-2-Nitrobenzene	522588	3.52	339517	3.514	154	50 - 200	0.006	+/-0.50	
Hexabromobiphenyl	903713	14.273	632318	14.275	143	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	304940	3.957	196492	3.952	155	50 - 200	0.005	+/-0.50	
Hexabromobiphenyl [2C]	459897	15.018	316874	15.019	145	50 - 200	-0.001	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SKL0304
SDG: 22L0198
Project: AOC5 MR Phase 1
Instrument: ECD7
Calibration: FL00010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Reference (BKL0377-SRM1)		(Solid)	Lab File ID: 12202229ECD7.D				Analyzed: 12/20/22 22:40		
1-Bromo-2-Nitrobenzene	509892	3.519	339517	3.514	150	50 - 200	0.005	+/-0.50	
Hexabromobiphenyl	703686	14.265	632318	14.275	111	50 - 200	-0.010	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	291989	3.956	196492	3.952	149	50 - 200	0.004	+/-0.50	
Hexabromobiphenyl [2C]	406268	15.012	316874	15.019	128	50 - 200	-0.007	+/-0.50	
LDW23-SS1253 (22L0198-01)		(Solid)	Lab File ID: 12202230ECD7.D				Analyzed: 12/20/22 23:01		
1-Bromo-2-Nitrobenzene	481726	3.52	339517	3.514	142	50 - 200	0.006	+/-0.50	
Hexabromobiphenyl	453788	14.259	632318	14.275	72	50 - 200	-0.016	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	277886	3.956	196492	3.952	141	50 - 200	0.004	+/-0.50	
Hexabromobiphenyl [2C]	321551	15.01	316874	15.019	101	50 - 200	-0.009	+/-0.50	
LDW23-SS1254 (22L0198-02)		(Solid)	Lab File ID: 12202231ECD7.D				Analyzed: 12/20/22 23:22		
1-Bromo-2-Nitrobenzene	473325	3.519	339517	3.514	139	50 - 200	0.005	+/-0.50	
Hexabromobiphenyl	438662	14.26	632318	14.275	69	50 - 200	-0.015	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	270396	3.955	196492	3.952	138	50 - 200	0.003	+/-0.50	
Hexabromobiphenyl [2C]	312863	15.01	316874	15.019	99	50 - 200	-0.009	+/-0.50	
LDW23-SS1255 (22L0198-03)		(Solid)	Lab File ID: 12202232ECD7.D				Analyzed: 12/20/22 23:43		
1-Bromo-2-Nitrobenzene	466610	3.516	339517	3.514	137	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl	433475	14.258	632318	14.275	69	50 - 200	-0.017	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	264933	3.954	196492	3.952	135	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl [2C]	308127	15.01	316874	15.019	97	50 - 200	-0.009	+/-0.50	
LDW23-SS1257 (22L0198-04)		(Solid)	Lab File ID: 12202233ECD7.D				Analyzed: 12/21/22 00:04		
1-Bromo-2-Nitrobenzene	454626	3.518	339517	3.514	134	50 - 200	0.004	+/-0.50	
Hexabromobiphenyl	416614	14.259	632318	14.275	66	50 - 200	-0.016	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	269505	3.955	196492	3.952	137	50 - 200	0.003	+/-0.50	
Hexabromobiphenyl [2C]	302634	15.01	316874	15.019	96	50 - 200	-0.009	+/-0.50	
LDW23-SS1258 (22L0198-05)		(Solid)	Lab File ID: 12202234ECD7.D				Analyzed: 12/21/22 00:26		
1-Bromo-2-Nitrobenzene	473044	3.52	339517	3.514	139	50 - 200	0.006	+/-0.50	
Hexabromobiphenyl	418064	14.26	632318	14.275	66	50 - 200	-0.015	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	276924	3.956	196492	3.952	141	50 - 200	0.004	+/-0.50	
Hexabromobiphenyl [2C]	301232	15.01	316874	15.019	95	50 - 200	-0.009	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SKL0304
Instrument: ECD7
Calibration: FL00010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SS1259 (22L0198-06)		(Solid)	Lab File ID: 12202235ECD7.D				Analyzed: 12/21/22 00:47		
1-Bromo-2-Nitrobenzene	456292	3.52	339517	3.514	134	50 - 200	0.006	+/-0.50	
Hexabromobiphenyl	415465	14.26	632318	14.275	66	50 - 200	-0.015	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	270183	3.956	196492	3.952	138	50 - 200	0.004	+/-0.50	
Hexabromobiphenyl [2C]	299597	15.01	316874	15.019	95	50 - 200	-0.009	+/-0.50	
LDW23-SS1262 (22L0198-07)		(Solid)	Lab File ID: 12202236ECD7.D				Analyzed: 12/21/22 01:08		
1-Bromo-2-Nitrobenzene	438254	3.518	339517	3.514	129	50 - 200	0.004	+/-0.50	
Hexabromobiphenyl	413327	14.259	632318	14.275	65	50 - 200	-0.016	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	256997	3.955	196492	3.952	131	50 - 200	0.003	+/-0.50	
Hexabromobiphenyl [2C]	294047	15.01	316874	15.019	93	50 - 200	-0.009	+/-0.50	
LDW23-SS1260 (22L0198-08)		(Solid)	Lab File ID: 12202237ECD7.D				Analyzed: 12/21/22 01:29		
1-Bromo-2-Nitrobenzene	462540	3.519	339517	3.514	136	50 - 200	0.005	+/-0.50	
Hexabromobiphenyl	413113	14.26	632318	14.275	65	50 - 200	-0.015	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	264386	3.956	196492	3.952	135	50 - 200	0.004	+/-0.50	
Hexabromobiphenyl [2C]	295728	15.009	316874	15.019	93	50 - 200	-0.010	+/-0.50	
LDW23-SS1263 (22L0198-09)		(Solid)	Lab File ID: 12202238ECD7.D				Analyzed: 12/21/22 01:50		
1-Bromo-2-Nitrobenzene	456278	3.518	339517	3.514	134	50 - 200	0.004	+/-0.50	
Hexabromobiphenyl	415963	14.26	632318	14.275	66	50 - 200	-0.015	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	264991	3.955	196492	3.952	135	50 - 200	0.003	+/-0.50	
Hexabromobiphenyl [2C]	296496	15.01	316874	15.019	94	50 - 200	-0.009	+/-0.50	
LDW23-SS1245 (22L0198-10)		(Solid)	Lab File ID: 12202239ECD7.D				Analyzed: 12/21/22 02:12		
1-Bromo-2-Nitrobenzene	446057	3.518	339517	3.514	131	50 - 200	0.004	+/-0.50	
Hexabromobiphenyl	428205	14.26	632318	14.275	68	50 - 200	-0.015	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	270802	3.955	196492	3.952	138	50 - 200	0.003	+/-0.50	
Hexabromobiphenyl [2C]	299889	15.009	316874	15.019	95	50 - 200	-0.010	+/-0.50	
Matrix Spike (BKL0377-MS1)		(Solid)	Lab File ID: 12202240ECD7.D				Analyzed: 12/21/22 02:33		
1-Bromo-2-Nitrobenzene	450949	3.518	339517	3.514	133	50 - 200	0.004	+/-0.50	
Hexabromobiphenyl	437470	14.26	632318	14.275	69	50 - 200	-0.015	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	265240	3.955	196492	3.952	135	50 - 200	0.003	+/-0.50	
Hexabromobiphenyl [2C]	304309	15.01	316874	15.019	96	50 - 200	-0.009	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SKL0304	Instrument:	ECD7
		Calibration:	FL00010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike Dup (BKL0377-MSD1)		(Solid)		Lab File ID: 12202241ECD7.D				Analyzed: 12/21/22 02:54	
1-Bromo-2-Nitrobenzene	468686	3.518	339517	3.514	138	50 - 200	0.004	+/-0.50	
Hexabromobiphenyl	435994	14.26	632318	14.275	69	50 - 200	-0.015	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	271064	3.955	196492	3.952	138	50 - 200	0.003	+/-0.50	
Hexabromobiphenyl [2C]	308279	15.009	316874	15.019	97	50 - 200	-0.010	+/-0.50	

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	22L0198-01	File ID:	12202230ECD7.D
Sampled:	12/08/22 08:16	Prepared:	12/16/22 17:27	Analyzed:	12/20/22 23:01
Solids:	40.84	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BKL0377	Sequence:	SKL0304		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.413	8.427	0.014	65705.75	32.6	28.2
	2	8.316	8.326	0.01	35225.25	43.3	
Aroclor 1254	* 1	9.301	9.318	0.017	106948.4	44.9	38.8
	2	9.453	9.466	0.013	85441.8	66.5	
Aroclor 1260	* 1	11.046	11.0625	0.0165	68975.8	63.0	8.1
	2	11.657	11.66983	0.0128	66299.25	58.1	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	22L0198-02	File ID:	12202231ECD7.D
Sampled:	12/08/22 08:39	Prepared:	12/16/22 17:27	Analyzed:	12/20/22 23:22
Solids:	39.87	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BKL0377	Sequence:	SKL0304		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.413	8.427	0.014	58451.75	29.4	32.5
	2	8.316	8.326	0.01	31724.25	40.8	
Aroclor 1254	* 1	9.3	9.318	0.018	95366.8	52.4	16.6
	2	9.453	9.466	0.013	75871.2	61.9	
Aroclor 1260	* 1	11.045	11.0625	0.0175	56048.2	52.9	5.2
	2	11.657	11.66983	0.0128	54969.25	50.2	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	22L0198-03	File ID:	12202232ECD7.D
Sampled:	12/08/22 08:57	Prepared:	12/16/22 17:27	Analyzed:	12/20/22 23:43
Solids:	41.52	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BKL0377	Sequence:	SKL0304		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.412	8.427	0.015	58876.5	31.1	31.4
	2	8.316	8.326	0.01	32235.75	42.7	
Aroclor 1254	* 1	9.301	9.318	0.017	92350.2	51.1	18.8
	2	9.453	9.466	0.013	74770.8	61.7	
Aroclor 1260	* 1	11.045	11.0625	0.0175	57279.6	54.9	5.2
	2	11.657	11.66983	0.0128	56521.5	52.1	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	22L0198-04	File ID:	12202233ECD7.D
Sampled:	12/08/22 09:16	Prepared:	12/16/22 17:27	Analyzed:	12/21/22 00:04
Solids:	38.88	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BKL0377	Sequence:	SKL0304		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.413	8.427	0.014	63199.25	33.2	28.9
	2	8.316	8.326	0.01	35091.75	44.4	
Aroclor 1254	* 1	9.301	9.318	0.017	102833.8	58.2	15.8
	2	9.453	9.466	0.013	83976	68.2	
Aroclor 1260	* 1	11.045	11.0625	0.0175	64337.8	64.1	5.9
	2	11.656	11.66983	0.0138	64667.75	60.4	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	22L0198-05	File ID:	12202234ECD7.D
Sampled:	12/08/22 09:35	Prepared:	12/16/22 17:27	Analyzed:	12/21/22 00:26
Solids:	40.87	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BKL0377	Sequence:	SKL0304		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.413	8.427	0.014	64306.75	32.0	32.5
	2	8.316	8.326	0.01	35056.25	44.4	
Aroclor 1254	* 1	9.3	9.318	0.018	104854	56.7	18.4
	2	9.453	9.466	0.013	86437	68.2	
Aroclor 1260	* 1	11.045	11.0625	0.0175	67950	66.9	4.
	2	11.656	11.66983	0.0138	69092.5	64.3	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	22L0198-06	File ID:	12202235ECD7.D
Sampled:	12/08/22 09:54	Prepared:	12/16/22 17:27	Analyzed:	12/21/22 00:47
Solids:	39.87	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BKL0377	Sequence:	SKL0304		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.413	8.427	0.014	54736.75	29.1	29.8
	2	8.317	8.326	0.009	31114.25	39.3	
Aroclor 1254	* 1	9.301	9.318	0.017	88498.4	49.9	16.2
	2	9.453	9.466	0.013	72575.8	58.7	
Aroclor 1260	* 1	11.046	11.0625	0.0165	58509	59.4	10.3
	2	11.657	11.66983	0.0128	56725	53.6	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	22L0198-07	File ID:	12202236ECD7.D
Sampled:	12/08/22 10:36	Prepared:	12/16/22 17:27	Analyzed:	12/21/22 01:08
Solids:	39.06	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BKL0377	Sequence:	SKL0304		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.413	8.427	0.014	60571.25	33.8	32.3
	2	8.316	8.326	0.01	34508.75	46.8	
Aroclor 1254	* 1	9.301	9.318	0.017	96182.6	56.5	17.9
	2	9.453	9.466	0.013	79188	67.6	
Aroclor 1260	* 1	11.046	11.0625	0.0165	60233.6	60.1	2.5
	2	11.657	11.66983	0.0128	59881	58.6	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	22L0198-08	File ID:	12202237ECD7.D
Sampled:	12/08/22 10:12	Prepared:	12/16/22 17:27	Analyzed:	12/21/22 01:29
Solids:	40.58	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BKL0377	Sequence:	SKL0304		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.413	8.427	0.014	62706.75	32.4	31.
	2	8.317	8.326	0.009	34093.75	44.3	
Aroclor 1254	* 1	9.301	9.318	0.017	100822	55.7	20.3
	2	9.453	9.466	0.013	83046.8	68.3	
Aroclor 1260	* 1	11.046	11.0625	0.0165	64486.2	65.6	5.8
	2	11.656	11.66983	0.0138	65402.25	61.9	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	22L0198-09	File ID:	12202238ECD7.D
Sampled:	12/08/22 10:54	Prepared:	12/16/22 17:27	Analyzed:	12/21/22 01:50
Solids:	38.18	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BKL0377	Sequence:	SKL0304		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.413	8.427	0.014	54666.25	28.8	30.6
	2	8.317	8.326	0.009	30381.75	39.2	
Aroclor 1254	* 1	9.3	9.318	0.018	88743.4	50.1	19.
	2	9.453	9.466	0.013	73504.6	60.6	
Aroclor 1260	* 1	11.045	11.0625	0.0175	57784.4	57.1	.3
	2	11.657	11.66983	0.0128	58191.25	57.3	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	22L0198
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	22L0198-10	File ID:	12202239ECD7.D
Sampled:	12/08/22 11:14	Prepared:	12/16/22 17:27	Analyzed:	12/21/22 02:12
Solids:	43.64	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BKL0377	Sequence:	SKL0304		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.413	8.427	0.014	36231.5	19.2	26.2
	2	8.316	8.326	0.01	19856.25	25.0	
Aroclor 1254	* 1	9.301	9.318	0.017	59468.2	34.5	14.8
	2	9.454	9.466	0.012	49224.8	40.0	
Aroclor 1260	* 1	11.045	11.0625	0.0175	35181.2	34.5	1.8
	2	11.657	11.66983	0.0128	35335.75	33.9	

* Column used for quantitation

HOLDING TIME SUMMARY

Analysis: EPA 8082A

Laboratory: Analytical Resources, LLC SDG: 22L0198

Client: Anchor QEA, LLC Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1253 22L0198-01	12/08/22 08:16	12/08/22 17:18	12/16/22 17:27	8	365	12/20/22 23:01	4	40	
LDW23-SS1254 22L0198-02	12/08/22 08:39	12/08/22 17:18	12/16/22 17:27	8	365	12/20/22 23:22	4	40	
LDW23-SS1255 22L0198-03	12/08/22 08:57	12/08/22 17:18	12/16/22 17:27	8	365	12/20/22 23:43	4	40	
LDW23-SS1257 22L0198-04	12/08/22 09:16	12/08/22 17:18	12/16/22 17:27	8	365	12/21/22 00:04	4	40	
LDW23-SS1258 22L0198-05	12/08/22 09:35	12/08/22 17:18	12/16/22 17:27	8	365	12/21/22 00:26	4	40	
LDW23-SS1259 22L0198-06	12/08/22 09:54	12/08/22 17:18	12/16/22 17:27	8	365	12/21/22 00:47	4	40	
LDW23-SS1262 22L0198-07	12/08/22 10:36	12/08/22 17:18	12/16/22 17:27	8	365	12/21/22 01:08	4	40	
LDW23-SS1260 22L0198-08	12/08/22 10:12	12/08/22 17:18	12/16/22 17:27	8	365	12/21/22 01:29	4	40	
LDW23-SS1263 22L0198-09	12/08/22 10:54	12/08/22 17:18	12/16/22 17:27	8	365	12/21/22 01:50	4	40	
LDW23-SS1245 22L0198-10	12/08/22 11:14	12/08/22 17:18	12/16/22 17:27	8	365	12/21/22 02:12	4	40	
Matrix Spike BKL0377-MS1	12/08/22 11:14	12/08/22 17:18	12/16/22 17:27	8	365	12/21/22 02:33	4	40	
Matrix Spike Dup BKL0377-MSD1	12/08/22 11:14	12/08/22 17:18	12/16/22 17:27	8	365	12/21/22 02:54	4	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ECD7

Analyte	MDL	RL	Units
Aroclor 1016	1.6	4.0	ug/kg
Aroclor 1016 [2C]	1.6	4.0	ug/kg
Aroclor 1221	1.6	4.0	ug/kg
Aroclor 1221 [2C]	1.6	4.0	ug/kg
Aroclor 1232	1.6	4.0	ug/kg
Aroclor 1232 [2C]	1.6	4.0	ug/kg
Aroclor 1242	1.6	4.0	ug/kg
Aroclor 1242 [2C]	1.6	4.0	ug/kg
Aroclor 1248	1.6	4.0	ug/kg
Aroclor 1248 [2C]	1.6	4.0	ug/kg
Aroclor 1254	1.6	4.0	ug/kg
Aroclor 1254 [2C]	1.6	4.0	ug/kg
Aroclor 1260	0.6	4.0	ug/kg
Aroclor 1260 [2C]	0.6	4.0	ug/kg

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: S-279N
Description: Tetrachloro-m-xylene
Lot: 0052481B-1
Solvent: N/A
Hazards: *Refer to SDS for complete safety information*

Signal Word: Warning

Date Certified: Jul 28, 2005
Expiration: Jul 28, 2015
Sample Size: 100 mg
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

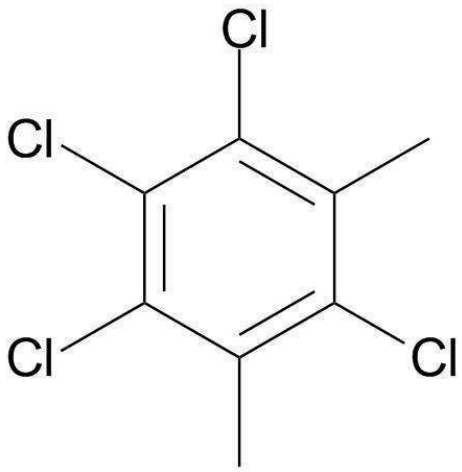
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/FID)	Prepared Concentration	Certified Analyte Concentration[1]
Tetrachloro-meta-xylene	877-09-8	96.0	N/A	N/A

Identification:

Molecular formula: C8H6Cl4
Molecular weight: 243.94



C000147
tetrachlormetaxylene
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] The Uncertainty calculated for this product is ±2.4%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Metrological traceability is established through in-house validated methods.

Purity, if stated, is equal to 100% minus found impurity components. Impurity components have not been identified.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 5/18

AccuStandard
125 Market Street
New Haven, CT 06513
(203) 786-5290

CERTIFICATE OF PRODUCT DATA

PRODUCT: C-209N
DESCRIPTION: 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl
LOT #: 990521LB-AC
SOLVENT: N/A

EXPIRATION: Jul 28, 2015

This product is guaranteed accurate to ±0.5% of the Certified Analyte concentration through the Expiration Date on the Label.

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1]	Certified Analyte Concentration[2]
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	100	N/A	N/A

C000148
decachlorbiphenyl
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

* I1768A

Certified by: R. Cooper

1. All weights are traceable through National Institute of Standards & Technology, Test No. 822/254480
2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty calculated for this product is ±4% which is the Combined Uncertainty uc(y). It represents an estimated standard deviation equal to the positive square root of the total variance of the uncertainty of components. The Expanded Uncertainty is U which is Uc(y) *K where K is the coverage factor at the 95% confidence level (K=2).
3. A product with a suffix (-1A, -2B, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

Please note: AccuStandard follows the U.S. conventions in reporting numerical values, on both certificates and labels.

A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

This product was manufactured in accordance to quality system requirements of ISO 9001:2000 and ISO 17025

* Recertified 2 4-6-09 JS

Analytical Standard Record

Standard ID: C000148 **Printed: 4/23/2015 11:54:44AM**

Description:	decachlorbiphenyl	Expires:	15-Jan-2020
Standard Type:	Other	Prepared:	15-Jan-2014
Solvent:	na/a	Prepared By:	Joshua Rains
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	27-Feb-2015 13:03 by JGR
Vendor:	Accustandard	Lot #:	990521lb-ac
Vendor Catalog #:			

Comments

see i1768a
SOM calibrations added 06/12/14 sdrd

Analyte	CAS Number	Concentration	Units
Decachlorobiphenyl [2C]	2051-24-3	1000000	ug/mL
Decachlorobiphenyl	2051-24-3	1000000	ug/mL
DCB 1660 [2C]	2051-24-3	1000000	ug/mL
DCB 1660	2051-24-3	1000000	ug/mL
DCB [2C]	2051-24-3	1000000	ug/mL
DCB (A) [2C]	2051-24-3	1000000	ug/mL
DCB (A)	2051-24-3	1000000	ug/mL
DCB	2051-24-3	1000000	ug/mL

Reviewed By Date

Certificate of Analysis

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Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101468
Description: Aroclor 1221
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL14017
Certification Date: August 20, 2019
Expiration Date: August 31, 2027

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1221	11104-28-2	1000	± 0.553%

I 10155

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018_us

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Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101469
Description: Aroclor 1232
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL14914
Certification Date: January 31, 2020
Expiration Date: January 31, 2028

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1232	11141-16-5	1000	± 0.738%

I 010156

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

phenova Certified Reference Materials | A Phenomenex Company

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018_us

Certificate of Analysis

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Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101470
Description: Aroclor 1242
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL14018
Certification Date: August 20, 2019
Expiration Date: August 31, 2027

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1242	53469-21-9	1000	± 0.553%

I 010157

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Reference Material Producer
Certicate No. 2427.02

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Certicate No. 2427.03

tL6469101B_us

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101471
Description: Aroclor 1248
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL15384
Certification Date: June 19, 2020
Expiration Date: June 30, 2028

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1248	12672-29-6	1000	± 0.520%

I 010158

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

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[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
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[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101472
Description: Aroclor 1254
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL13055
Certification Date: November 29, 2018
Expiration Date: November 30, 2026

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1254	11097-69-1	1000	± 0.247%

I 010159

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2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

   $$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.:	AL0-101474	**Lot Number:**	CL11330
Description:	Aroclor 1262	**Certification Date:**	May 15, 2015
Storage:	4 °C	**Expiration Date:**	April 30, 2023
Provided As:	1 mL in 2 mL Ampoule in Isooctane	**Revision Date:**	April 2, 2018

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1262	37324-23-5	1000	± 0.516%

I 10160

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2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

   $$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.:	AL0-101475	**Lot Number:**	CL11331
Description:	Aroclor 1268	**Certification Date:**	May 15, 2015
Storage:	4 °C	**Expiration Date:**	April 30, 2023
Provided As:	1 mL in 2 mL Ampoule in Isooctane	**Revision Date:**	April 2, 2018

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1268	11100-14-4	1000	± 0.516%

I 012161

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2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
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[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
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Certified Reference Material

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Catalog No.: AL0-101462
Description: Aroclor 1260
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL16516
Certification Date: March 4, 2021
Expiration Date: February 28, 2029

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1260	11096-82-5	1000	± 0.553%

J 006465

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101467
Description: Aroclor 1016
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL16555
Certification Date: June 22, 2021
Expiration Date: February 28, 2029

J012591
AROCLOR 1016
Expires 2/28/2029
Prepared By Joshua Rains 11/26/2021

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1016	12674-11-2	1000	± 0.310%

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

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Chemical Testing Laboratory
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2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101462
Description: Aroclor 1260
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL16516
Certification Date: March 4, 2021
Expiration Date: February 28, 2029

J012592
AROCLOR 1260
Expires 2/28/2029
Prepared By Joshua Rains 11/26/2021

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1260	11096-82-5	1000	± 0.553%

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

Agilent

Aroclor 1016 Solution

Product Number: PP-282 **Page:** 1 of 1

Lot Number: CR-0761 **Lot Issue Date:** 28-Feb-2017 **Expiration Date:** 31-Mar-2025

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1016	012674-11-2	NT01016	100.2 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1254 Reed JR 02/05/22

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 9001
Registered
TUV USA, Inc.

Agilent

Certificate of Analysis

Product Name: Aroclor 1260 Standard

Product Number: PP-362-1 **Lot Issue Date:** 20-Jan-2021

Lot Number: 0006582048 **Expiration Date:** 28-Feb-2025

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1260	011096-82-5	NT01023	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K 1255

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

MJBourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert
No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert
No. AT-1937

Agilent

Certificate of Analysis
ISO Guide 34

Aroclor 1242 Solution

Product Number: PP-312 **Page:** 1 of 1

Lot Number: CS-6293 **Lot Issue Date:** 04-Jan-2019 **Expiration Date:** 31-Jan-2023

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1242	053469-21-9	NT01020	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1256

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER
ISO Guide 34 Cert No.
AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026
registered ISO 9001 Quality Management System

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO17025 Cert No.
AT-1937

ISO 17034

Agilent
Trusted Answers

Reference Material Certificate

Product Name:	Aroclor 1248 Standard	**Lot Number:**	0006626997
Product Number:	PP-342-1	**Lot Issue Date:**	17-Aug-2021
Storage Conditions:	Store at Room Temperature (15° to 30°C).	**Expiration Date:**	30-Sep-2025

	CERTIFIED VALUES				
Component Name	Concentration		Expanded Uncertainty	CAS#	Analyte Lot
Aroclor 1248	100.3	±	0.5 µg/mL	012672-29-6	NT01582

Matrix: isooctane (2,2,4-trimethylpentane)

K1257

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:
The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

Certificate of Analysis

Agilent

Aroclor 1254 Solution

Product Number: PP-352 **Page:** 1 of 1

Lot Number: CS-2321 **Lot Issue Date:** 04-May-2018 **Expiration Date:** 31-May-2026

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1254	011097-69-1	RM00922	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1258

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 9001
Registered
TUV USA, Inc.

Agilent

Certificate of Analysis

Product Name: Aroclor 1221 Standard

Product Number: PP-292-1 **Lot Issue Date:** 28-Apr-2020

Lot Number: 0006535333 **Expiration Date:** 31-May-2024

Description:

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1221	011104-28-2	RM04278	100.2 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K1259

Traceability:

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:

This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:

This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:

Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:

The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

MBourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert No. AT-1937

Agilent

Certificate of Analysis
ISO 17034

Aroclor 1262 Standard

Product Number: PP-372-1 **Page:** 1 of 1

Lot Number: 0006499800 **Lot Issue Date:** 04-Nov-2019 **Expiration Date:** 30-Nov-2023

This ISO 17034 Reference Material (RM) was manufactured and verified in accordance with Agilent Technologies ISO 9001 registered quality system. A review of the gravimetric preparation data by our ISO 17025 accredited laboratory serves to verify the concentration of each analyte. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1262	037324-23-5	RM14263	100.0 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1260

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026 registered ISO 9001 Quality Management System

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

Agilent

Certificate of Analysis
ISO 17034

Aroclor 1232 Standard

Product Number: PP-302-1 **Page:** 1 of 1

Lot Number: CF-2197A **Lot Issue Date:** 05-Jul-2016 **Expiration Date:** 31-Aug-2023

This ISO 17034 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1232	011141-16-5	NT01717	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1261

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026 registered ISO 9001 Quality Management System

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO17025 Cert No. AT-1937

Agilent

Certificate of Analysis

Product Name: Aroclor 1268 Standard

Product Number: PP-382-1 **Lot Issue Date:** 09-Feb-2021

Lot Number: 0006587800 **Expiration Date:** 31-Mar-2029

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1268	011100-14-4	RM00937	100.0 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K1262

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026
Page: 1 of 1
www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

Recipient Copy

CHAIN-OF-CUSTODY RECORD

COC No. 15350

Order Number: CB014765

Date Shipped: 4/11/2022

AirBill No(s): 519204140444

From: QATS LABORATORY
2700 CHANDLER AVENUE, BLDG. B
LAS VEGAS, NV 89120
PHONE: 1-702-895-8712

To: Kelly Bottem
Analytical Resources, Inc.
4611 S. 134th Place SUITE 100
Tukwila WA 98168
206-695-6211

K003525
K003528

Sample ID	Qty	Description/Remarks	→ Catalogue Number
PSRM0148	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0149	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0150	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0151	1	PUGET SOUND SEDIMENT RM	PS-SRM

4/11/2022

BOEING PLANT 2

Please use the enclosed Sample Preparation Instructions. If catalogue number(s) are listed at the top of the Sample Preparation Instructions use the Sample Preparation Instructions with catalogue number(s) matching the catalogue number(s) of each of the samples listed above.

Relinquished by: (Signature)	Date/Time 1400 4/11/2022	Received by: (Signature)	Date/Time 0955 04/12/22
Custody Seal(s): Present/Absent PRESENT	Remarks:		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

PUGET SOUND SEDIMENT REFERENCE MATERIAL
QATS LABORATORY INSTRUCTIONS FOR
HRGC/HRMS CDD/CDF/CB CONGENER AND GC/ECD AROCLOR ANALYSIS

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocols or your contract, disregard these instructions.

APPLICATION: For the analysis of CDD/CDF and CB Congener analytes using project-specified HRGC/HRMS methods, and Aroclors using project-specified GC/ECD methods.

CAUTION: Read instructions carefully before opening bottles and proceeding with the analyses.

Contains CDD/CDF, CB Congener, and/or Aroclors
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a Puget Sound (Washington State) Sediment Reference Material (SRM) set for chlorinated dibenzo-p-dioxins/chlorinated dibenzofurans (CDD/CDF), and/or chlorinated biphenyl (CB) congener analysis using project-specified high resolution gas chromatography/ high resolution mass spectrometry (HRGC/HRMS) methods. This SRM is also suitable for Aroclors analysis using project-specified gas chromatography/electron capture detection (GC/ECD) methods. This set consists of one (1) or more bottles, each with approximately 30 grams of Puget Sound SRM containing CDD/CDF, CB Congener, and/or Aroclor analytes. Check the chain-of-custody record to determine the number of bottles provided for CDD/CDF, CB Congener, and/or Aroclor analysis. None of the bottles are to be opened until SRM preparation/analysis is to occur.

CAUTION: The SRM could contain compounds that are light sensitive and should be protected from light during storage. Store the SRM at ≤ 6° C, preferably at < 0° C, until SRM preparation and analysis is to occur. Allow the bottle(s) to reach ambient temperature before opening.

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Refer to the enclosed chain-of-custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS REQUIREMENTS*

The SRM is to be analyzed as described in the project-specified methods employed for the analysis of CDD/CDF and/or CB Congener analytes using HRGC/HRMS instrumentation and/or Aroclors using GC/ECD instrumentation. These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the project-specified methods, or your contract, disregard these instructions.

(D) *SAMPLE ANALYSIS*

General Instructions

The SRM contains CDD/CDF, CB Congener, and Aroclor analytes which are known or suspected to have severe health effects. Employing appropriate safety precautions, this SRM is to be handled, prepared, and analyzed exactly as you would process samples received from a known or suspected hazardous waste site. The SRM should be handled only by trained and experienced analysts in facilities expressly designed to handle such materials. When calculating the concentrations of analytes, use 0% as the soil moisture content.

Allow the bottle(s) to reach ambient temperature before opening and removing gravimetric amounts for sample preparation. To begin the extraction and analysis procedure, break the seal and open the bottle carefully. Weigh out the appropriate aliquot for extraction and analysis as prescribed in the project-specified methods (typically 10 grams for HRGC/HRMS methods and 30 grams for GC/ECD methods), or in accordance with your contract.

Proceed immediately with the extraction and analysis as described in the project-specified methods or your contract.

(E) *REPORTING*

Report the results for the prepared SRM as received.

Report the analytical results for the SRM to EPA or other appropriate Agency, using the format and other instructions for submission of data packages as specified in your contract.

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101467
Description: Aroclor 1016
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL12975
Certification Date: November 19, 2018
Expiration Date: October 31, 2026

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1016	12674-11-2	1000	± 0.553%

K5829

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL11110613_us

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

   $$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.
Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL111106I3_US

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101462
Description: Aroclor 1260
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL18021
Certification Date: February 14, 2022
Expiration Date: February 28, 2030

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1260	11096-82-5	1000	± 0.553%

K005830

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1253

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	22L0198-01 C	SDG:	22L0198
Sampled:	12/08/22 08:16	Prepared:	12/10/22 10:00	File ID:	CubeData_12272022@1337-190
% Solids:	36.84	Preparation:	Plumb 1981	Analyzed:	12/12/22 19:20
Batch:	BKL0237	Sequence:	SKL0152	Initial/Final:	0.5029 g Wet / 0.5029 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	3.03	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1254

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	22L0198-02 C	SDG:	22L0198
Sampled:	12/08/22 08:39	Prepared:	12/10/22 10:00	File ID:	CubeData_12272022@1337-209
% Solids:	36.72	Preparation:	Plumb 1981	Analyzed:	12/12/22 20:51
Batch:	BKL0237	Sequence:	SKL0152	Initial/Final:	0.5313 g Wet / 0.5313 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.71	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1255

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	22L0198-03 C	SDG:	22L0198
Sampled:	12/08/22 08:57	Prepared:	12/10/22 10:00	File ID:	CubeData_12272022@1337-215
% Solids:	36.83	Preparation:	Plumb 1981	Analyzed:	12/12/22 21:21
Batch:	BKL0237	Sequence:	SKL0152	Initial/Final:	0.3145 g Wet / 0.3145 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	3.04	1	0.02	0.02	

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Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1257

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	22L0198-04 C	SDG:	22L0198
Sampled:	12/08/22 09:16	Prepared:	12/10/22 10:00	File ID:	CubeData_12272022@1337-222
% Solids:	33.96	Preparation:	Plumb 1981	Analyzed:	12/12/22 21:52
Batch:	BKL0237	Sequence:	SKL0152	Initial/Final:	0.2315 g Wet / 0.2315 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.89	1	0.02	0.02	

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Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1258

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	22L0198-05 C	SDG:	22L0198
Sampled:	12/08/22 09:35	Prepared:	12/10/22 10:00	File ID:	CubeData_12272022@1337-228
% Solids:	36.92	Preparation:	Plumb 1981	Analyzed:	12/12/22 22:22
Batch:	BKL0237	Sequence:	SKL0152	Initial/Final:	0.2199 g Wet / 0.2199 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.26	1	0.02	0.02	

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Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1259

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	22L0198-06 C	SDG:	22L0198
Sampled:	12/08/22 09:54	Prepared:	12/10/22 10:00	File ID:	CubeData_12272022@1337-247
% Solids:	35.96	Preparation:	Plumb 1981	Analyzed:	12/12/22 23:53
Batch:	BKL0237	Sequence:	SKL0152	Initial/Final:	0.2344 g Wet / 0.2344 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	3.00	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1262

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	22L0198-07 C	SDG:	22L0198
Sampled:	12/08/22 10:36	Prepared:	12/10/22 10:00	File ID:	CubeData_12272022@1337-255
% Solids:	35.53	Preparation:	Plumb 1981	Analyzed:	12/13/22 00:24
Batch:	BKL0237	Sequence:	SKL0152	Initial/Final:	0.1404 g Wet / 0.1404 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	3.50	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1260

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	22L0198-08 C	SDG:	22L0198
Sampled:	12/08/22 10:12	Prepared:	12/10/22 10:00	File ID:	CubeData_12272022@1337-261
% Solids:	36.88	Preparation:	Plumb 1981	Analyzed:	12/13/22 00:54
Batch:	BKL0237	Sequence:	SKL0152	Initial/Final:	0.2356 g Wet / 0.2356 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.78	1	0.02	0.02	

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Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1263

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	22L0198-09 C	SDG:	22L0198
Sampled:	12/08/22 10:54	Prepared:	12/10/22 10:00	File ID:	CubeData_12272022@1337-267
% Solids:	34.08	Preparation:	Plumb 1981	Analyzed:	12/13/22 01:25
Batch:	BKL0237	Sequence:	SKL0152	Initial/Final:	0.2265 g Wet / 0.2265 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.96	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1245

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	22L0198-10 C	SDG:	22L0198
Sampled:	12/08/22 11:14	Prepared:	12/10/22 10:00	File ID:	CubeData_12272022@1337-273
% Solids:	38.50	Preparation:	Plumb 1981	Analyzed:	12/13/22 01:55
Batch:	BKL0237	Sequence:	SKL0152	Initial/Final:	0.2281 g Wet / 0.2281 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.52	1	0.02	0.02	

PREPARATION BATCH SUMMARY

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BKL0237 Batch Matrix: Solid
Preparation: Plumb 1981

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1253	22L0198-01	eData_12272022@1337-	12/10/22 10:00	
LDW23-SS1254	22L0198-02	eData_12272022@1337-	12/10/22 10:00	
LDW23-SS1255	22L0198-03	eData_12272022@1337-	12/10/22 10:00	
LDW23-SS1257	22L0198-04	eData_12272022@1337-	12/10/22 10:00	
LDW23-SS1258	22L0198-05	eData_12272022@1337-	12/10/22 10:00	
LDW23-SS1259	22L0198-06	eData_12272022@1337-	12/10/22 10:00	
LDW23-SS1262	22L0198-07	eData_12272022@1337-	12/10/22 10:00	
LDW23-SS1260	22L0198-08	eData_12272022@1337-	12/10/22 10:00	
LDW23-SS1263	22L0198-09	eData_12272022@1337-	12/10/22 10:00	
LDW23-SS1245	22L0198-10	eData_12272022@1337-	12/10/22 10:00	
Blank	BKL0237-BLK1	eData_12272022@1337-	12/10/22 10:00	
LCS	BKL0237-BS1	eData_12272022@1337-	12/10/22 10:00	
LDW23-SS1253	BKL0237-DUP3	eData_12272022@1337-	12/10/22 10:00	
MRL Check	BKL0237-MRL1	eData_12272022@1337-	12/10/22 10:00	
LDW23-SS1253	BKL0237-MS3	eData_12272022@1337-	12/10/22 10:00	
Reference	BKL0237-SRM1	eData_12272022@1337-	12/10/22 10:00	

Form I

METHOD BLANK DATA SHEET

EPA 9060A m

TotalAnalytes

Blank

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BKL0237
Laboratory ID: BKL0237-BLK1
Prepared: 12/10/22 10:00
Matrix: Solid
Preparation: Plumb 1981
Analyzed: 12/12/22 12:16
Sequence: SKL0152
Calibration: FD00070
Instrument: TOC Cube

CAS NO.	Analyte	Concentration (% wet)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	ND	1	0.02	0.02	U

LCS / LCS DUPLICATE RECOVERY

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	12/12/22 12:46
Batch:	BKL0237	Laboratory ID:	BKL0237-BS1
Preparation:	Plumb 1981	Sequence Name:	LCS
Initial/Final:	0.0261 g / 0.0261 g		

COMPOUND	SPIKE ADDED (% wet)	LCS CONCENTRATION (% wet)	Q	LCS % REC. #	QC LIMITS REC.
Total Organic Carbon	44.4	46.0		104	80 - 120

* Indicates values outside of QC limits

DUPLICATES

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BKL0237-DUP3
Batch: BKL0237
Lab Source ID: 22L0198-01
Preparation: Plumb 1981
Initial/Final: 0.5234 g / 0.5234 g
Source Sample Name: LDW23-SS1253
% Solids: 36.84

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Total Organic Carbon	20	3.03	2.93	3.46	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

MS / MS DUPLICATE RECOVERY
EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	12/12/22 20:21
Batch:	BKL0237	Laboratory ID:	BKL0237-MS3
Preparation:	Plumb 1981	Sequence Name:	Matrix Spike
Initial/Final:	0.5391 g / 0.5391 g	Source Sample:	LDW23-SS1253

COMPOUND	SPIKE ADDED (% dry)	SAMPLE CONCENTRATION (% dry)	Q	MS CONCENTRATION (% dry)	Q	MS % REC. #	QC LIMITS REC.
Total Organic Carbon	2.44	3.03		5.89		117	75 - 125

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SKD0371

SDG: 22L0198
Project: AOC5 MR Phase 1
Instrument: TOC Cube
Calibration: FD00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Cal Standard	SKD0371-CAL1	CubeData_04272022@1136-001	NA	04/26/22 12:30
Cal Standard	SKD0371-CAL2	CubeData_04272022@1136-002	NA	04/26/22 13:00
Cal Standard	SKD0371-CAL3	CubeData_04272022@1136-003	NA	04/26/22 13:30
Cal Standard	SKD0371-CAL4	CubeData_04272022@1136-004	NA	04/26/22 14:00
Cal Standard	SKD0371-CAL5	CubeData_04272022@1136-005	NA	04/26/22 14:30
Cal Standard	SKD0371-CAL6	CubeData_04272022@1136-006	NA	04/26/22 15:00
Cal Standard	SKD0371-CAL7	CubeData_04272022@1136-007	NA	04/26/22 15:30
Cal Standard	SKD0371-CAL8	CubeData_04272022@1136-008	NA	04/26/22 16:00
Cal Standard	SKD0371-CAL9	CubeData_04272022@1136-009	NA	04/26/22 16:30
Cal Standard	SKD0371-CALA	CubeData_04272022@1136-010	NA	04/26/22 17:00
Cal Standard	SKD0371-CALB	CubeData_04272022@1136-011	NA	04/26/22 17:30
Cal Standard	SKD0371-CALC	CubeData_04272022@1136-012	NA	04/26/22 18:00
Cal Standard	SKD0371-CALD	CubeData_04272022@1136-013	NA	04/26/22 18:30
Cal Standard	SKD0371-CALE	CubeData_04272022@1136-014	NA	04/26/22 19:00
Cal Standard	SKD0371-CALF	CubeData_04272022@1136-015	NA	04/26/22 19:31
Cal Standard	SKD0371-CALG	CubeData_04272022@1136-016	NA	04/26/22 20:01
Cal Standard	SKD0371-CALH	CubeData_04272022@1136-017	NA	04/26/22 20:31
Cal Standard	SKD0371-CALI	CubeData_04272022@1136-018	NA	04/26/22 21:01
Cal Standard	SKD0371-CALJ	CubeData_04272022@1136-019	NA	04/26/22 21:31
Cal Standard	SKD0371-CALK	CubeData_04272022@1136-020	NA	04/26/22 22:01
Initial Cal Check	SKD0371-ICV1	CubeData_04272022@1136-027	NA	04/27/22 02:03
Initial Cal Blank	SKD0371-ICB1	CubeData_04272022@1136-028	NA	04/27/22 02:33
Cal Standard	SKD0371-CALL	CubeData_04272022@1136-021	NA	04/27/22 11:08
Cal Standard	SKD0371-CALM	CubeData_04272022@1136-022	NA	04/27/22 11:08
Cal Standard	SKD0371-CALN	CubeData_04272022@1136-023	NA	04/27/22 11:09
Cal Standard	SKD0371-CALO	CubeData_04272022@1136-024	NA	04/27/22 11:09

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SKL0152
Instrument: TOC Cube
Calibration: FD00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Initial Cal Check	SKL0152-ICV1	CubeData_12272022@1337-039	NA	12/12/22 10:45
Initial Cal Blank	SKL0152-ICB1	CubeData_12272022@1337-051	NA	12/12/22 11:15
MRL Check	BKL0237-MRL1	CubeData_12272022@1337-061	Solid	12/12/22 11:45
Blank	BKL0237-BLK1	CubeData_12272022@1337-074	Solid	12/12/22 12:16
LCS	BKL0237-BS1	CubeData_12272022@1337-080	Solid	12/12/22 12:46
Reference	BKL0237-SRM1	CubeData_12272022@1337-092	Solid	12/12/22 13:16
Calibration Check	SKL0152-CCV1	CubeData_12272022@1337-156	NA	12/12/22 16:48
Calibration Blank	SKL0152-CCB1	CubeData_12272022@1337-162	NA	12/12/22 17:19
LDW23-SS1253	22L0198-01	CubeData_12272022@1337-190	Solid	12/12/22 19:20
LDW23-SS1253	BKL0237-DUP3	CubeData_12272022@1337-195	Solid	12/12/22 19:50
LDW23-SS1253	BKL0237-MS3	CubeData_12272022@1337-202	Solid	12/12/22 20:21
LDW23-SS1254	22L0198-02	CubeData_12272022@1337-209	Solid	12/12/22 20:51
LDW23-SS1255	22L0198-03	CubeData_12272022@1337-215	Solid	12/12/22 21:21
LDW23-SS1257	22L0198-04	CubeData_12272022@1337-222	Solid	12/12/22 21:52
LDW23-SS1258	22L0198-05	CubeData_12272022@1337-228	Solid	12/12/22 22:22
Calibration Check	SKL0152-CCV2	CubeData_12272022@1337-234	NA	12/12/22 22:53
Calibration Blank	SKL0152-CCB2	CubeData_12272022@1337-240	NA	12/12/22 23:23
LDW23-SS1259	22L0198-06	CubeData_12272022@1337-247	Solid	12/12/22 23:53
LDW23-SS1262	22L0198-07	CubeData_12272022@1337-255	Solid	12/13/22 00:24
LDW23-SS1260	22L0198-08	CubeData_12272022@1337-261	Solid	12/13/22 00:54
LDW23-SS1263	22L0198-09	CubeData_12272022@1337-267	Solid	12/13/22 01:25
LDW23-SS1245	22L0198-10	CubeData_12272022@1337-273	Solid	12/13/22 01:55
Calibration Check	SKL0152-CCV3	CubeData_12272022@1337-313	NA	12/13/22 04:57
Calibration Blank	SKL0152-CCB3	CubeData_12272022@1337-318	NA	12/13/22 05:28
Calibration Check	SKL0152-CCV4	CubeData_12272022@1337-384	NA	12/13/22 11:03
Calibration Blank	SKL0152-CCB4	CubeData_12272022@1337-388	NA	12/13/22 11:33
Calibration Check	SKL0152-CCV5	CubeData_12272022@1337-457	NA	12/13/22 17:07
Calibration Blank	SKL0152-CCB5	CubeData_12272022@1337-461	NA	12/13/22 17:37
Calibration Check	SKL0152-CCV6	CubeData_12272022@1337-530	NA	12/13/22 23:11

ANALYSIS BATCH (SEQUENCE) SUMMARY

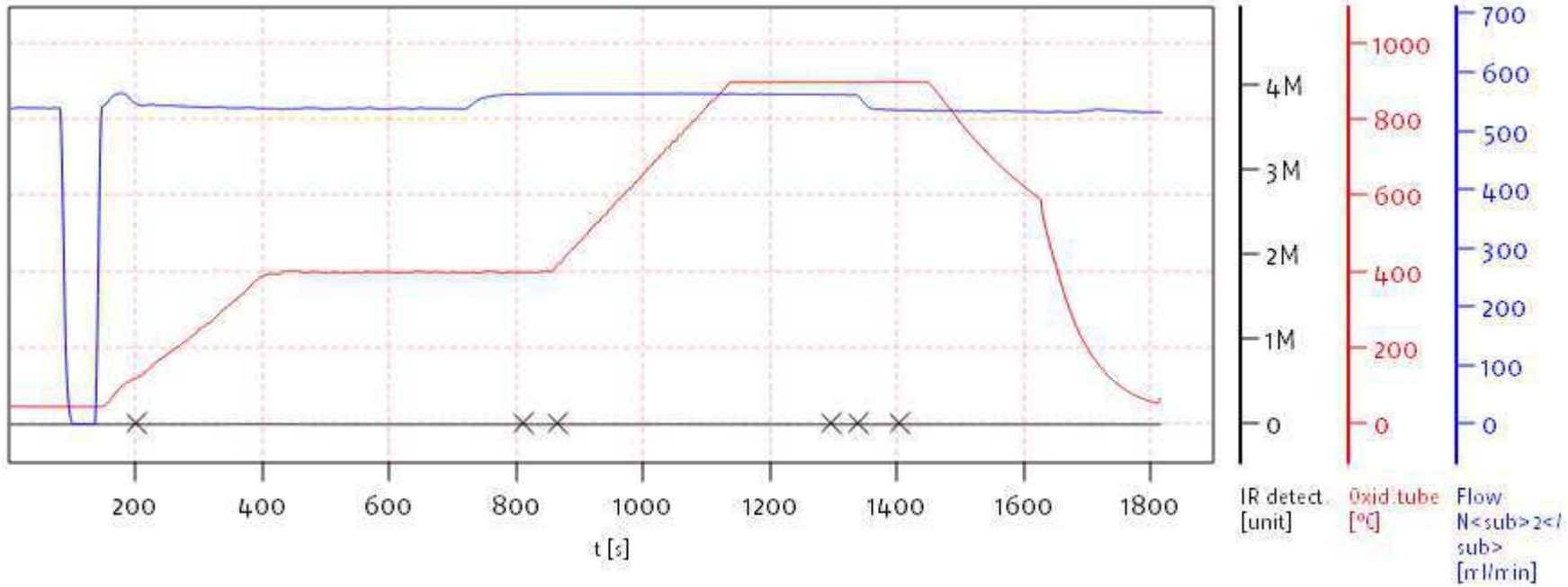
EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SKL0152	Instrument:	TOC Cube
		Calibration:	FD00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SKL0152-CCB6	CubeData_12272022@1337-539	NA	12/13/22 23:42
Calibration Check	SKL0152-CCV7	CubeData_12272022@1337-610	NA	12/14/22 05:17
Calibration Blank	SKL0152-CCB7	CubeData_12272022@1337-616	NA	12/14/22 05:47
Calibration Check	SKL0152-CCV8	CubeData_12272022@1337-113	NA	12/14/22 11:20
Calibration Blank	SKL0152-CCB8	CubeData_12272022@1337-126	NA	12/14/22 11:50
Calibration Check	SKL0152-CCV9	CubeData_12272022@1337-201	NA	12/14/22 17:24
Calibration Blank	SKL0152-CCB9	CubeData_12272022@1337-208	NA	12/14/22 17:55
Calibration Check	SKL0152-CCVA	CubeData_12272022@1337-280	NA	12/14/22 23:30
Calibration Blank	SKL0152-CCBA	CubeData_12272022@1337-286	NA	12/15/22 00:01
Calibration Check	SKL0152-CCVB	CubeData_12272022@1337-358	NA	12/15/22 05:35
Calibration Blank	SKL0152-CCBB	CubeData_12272022@1337-365	NA	12/15/22 06:06
Calibration Check	SKL0152-CCVC	CubeData_12272022@1337-424	NA	12/15/22 11:40
Calibration Blank	SKL0152-CCBC	CubeData_12272022@1337-430	NA	12/15/22 12:10
Calibration Check	SKL0152-CCVD	CubeData_12272022@1337-498	NA	12/15/22 17:44
Calibration Blank	SKL0152-CCBD	CubeData_12272022@1337-504	NA	12/15/22 18:15
Calibration Check	SKL0152-CCVE	CubeData_12272022@1337-578	NA	12/15/22 23:50
Calibration Blank	SKL0152-CCBE	CubeData_12272022@1337-585	NA	12/16/22 00:20
Calibration Check	SKL0152-CCVF	CubeData_12272022@1337-062	NA	12/16/22 05:54
Calibration Blank	SKL0152-CCBF	CubeData_12272022@1337-073	NA	12/16/22 06:24
Calibration Check	SKL0152-CCVG	CubeData_12272022@1337-125	NA	12/16/22 08:56
Calibration Blank	SKL0152-CCBG	CubeData_12272022@1337-136	NA	12/16/22 09:26

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
1	1	BLANK	1.00		CARBON	12/12/2022 9:14 AM	bl	0.000	14 067	0.000	0.000	649	8 531	0.000	0.000	1.0000	1.0000



Name:

Access: soliTOC superuser

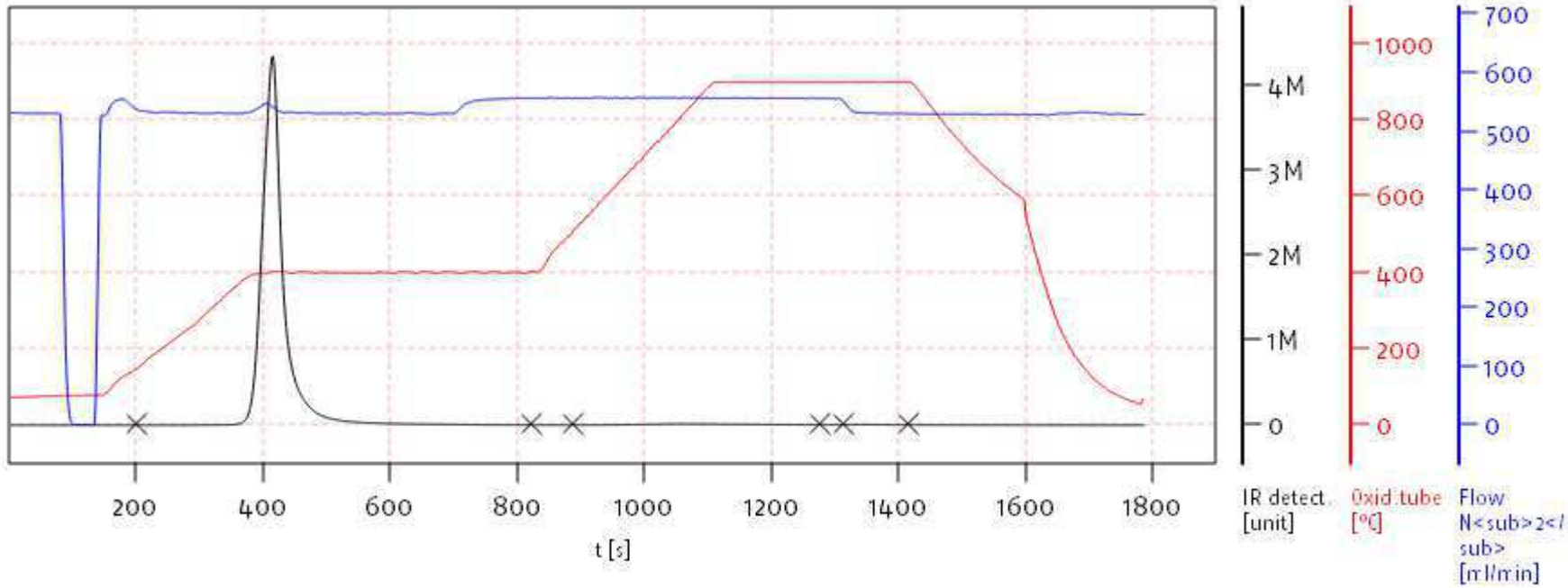
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
2	2	Dfactor	20.20		CARBON	12/12/2022 9:44 AM	bl	44.446	6 166 884	45.100	0.000	19 284	111 863	44.446	0.654	0.9445	1.0000



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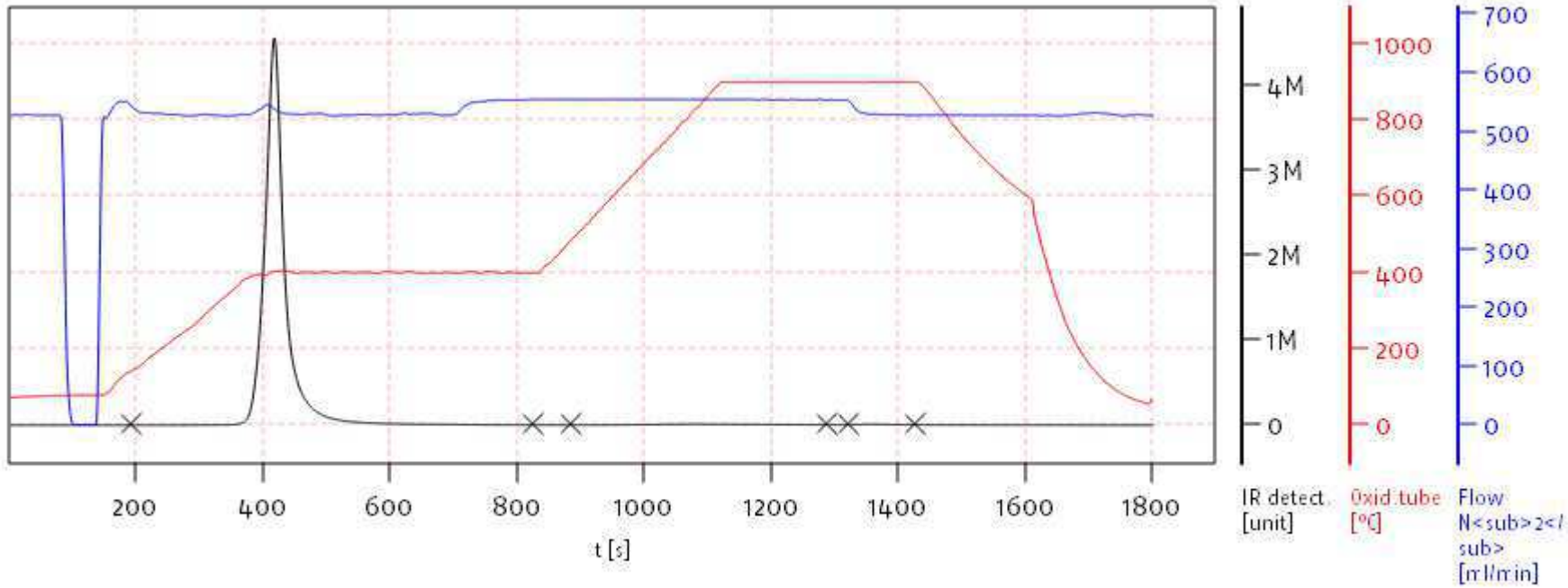
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
3	3	Dfactor	20.30		CARBON	12/12/2022 10:14 AM	bl	44.446	6 242 375	45.014	0.000	26 336	101 084	44.446	0.569	0.9377	1.0000



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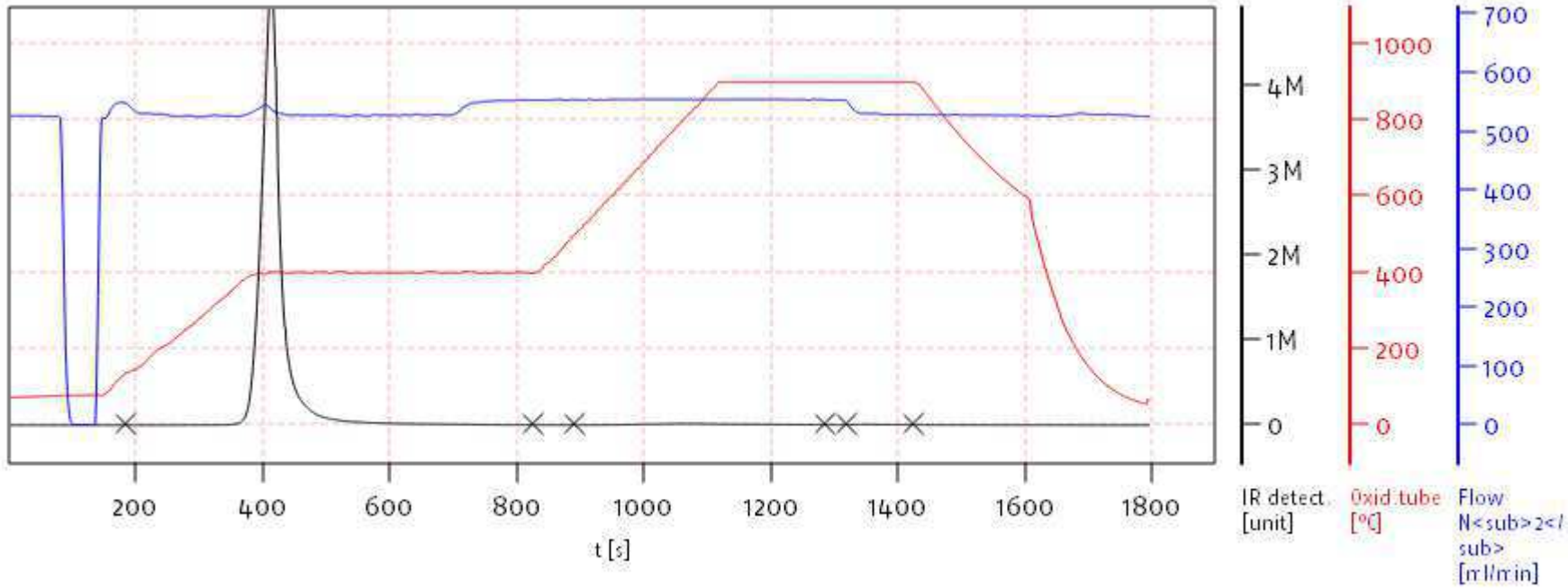
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
4	4	SKL0152-ICV1	22.20		CARBON	12/12/2022 10:45 AM	bl	44.994	6 883 003	45.728	0.000	24 484	131 742	44.994	0.734	0.9411	1.0000



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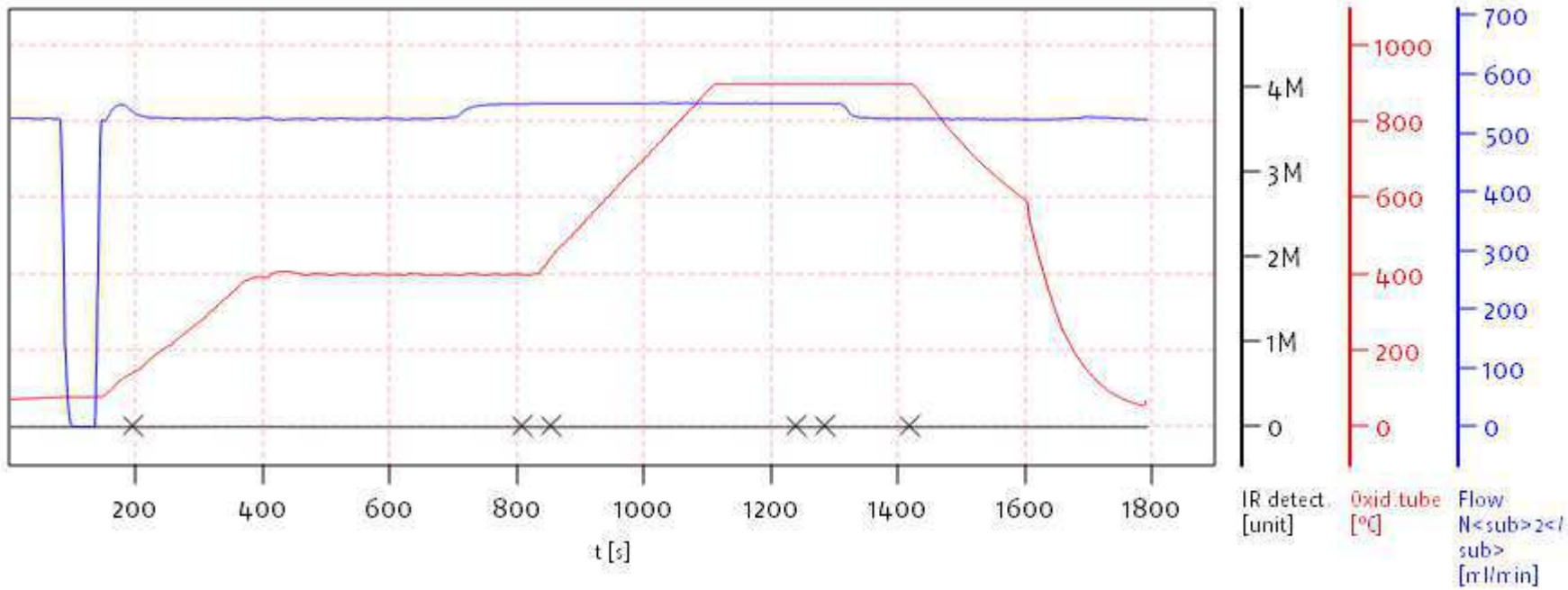
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
5	5	SKL0152-ICB1	518.20		CARBON	12/12/2022 11:15 AM	bl,C3u,C2u	0.000	7 810	0.000	0.000	945	205	0.000	0.000	0.9411	1.0000



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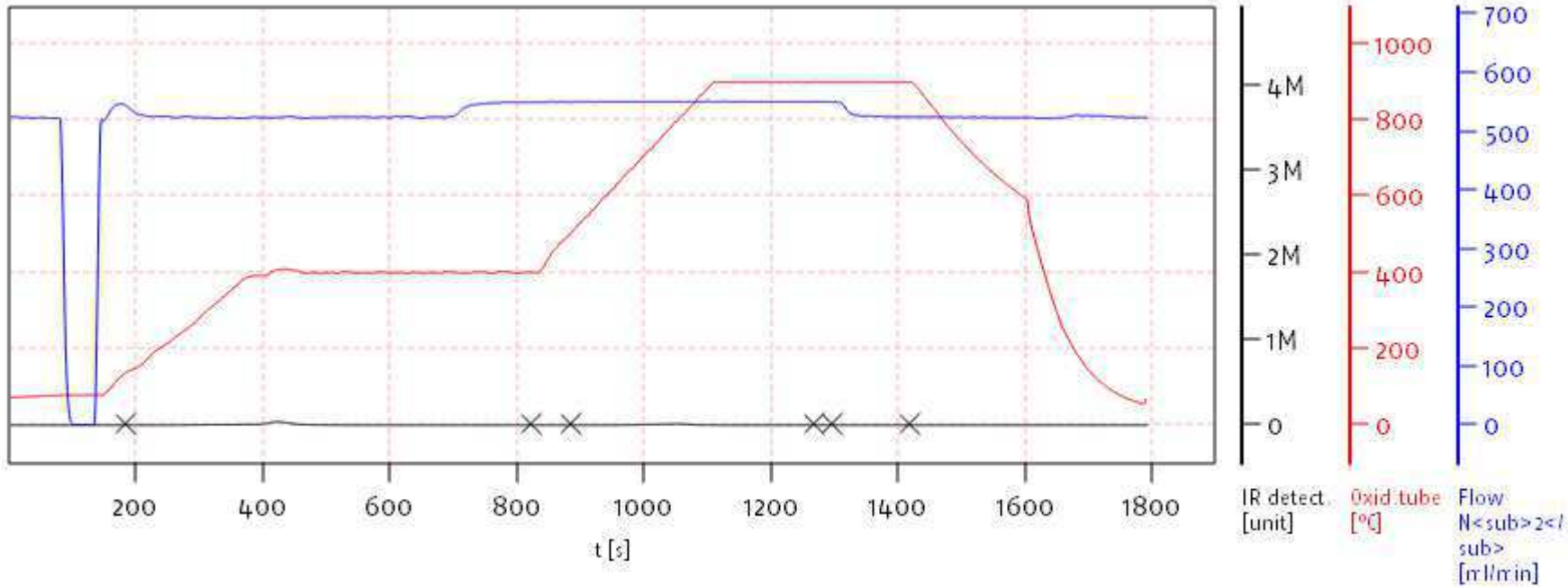
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
6	6	BKL0237-MRL1	528.80		CARBON	12/12/2022 11:45 AM	bl,C2u	0.019	96 343	0.023	0.000	1 010	38 216	0.019	0.003	0.9411	1.0000



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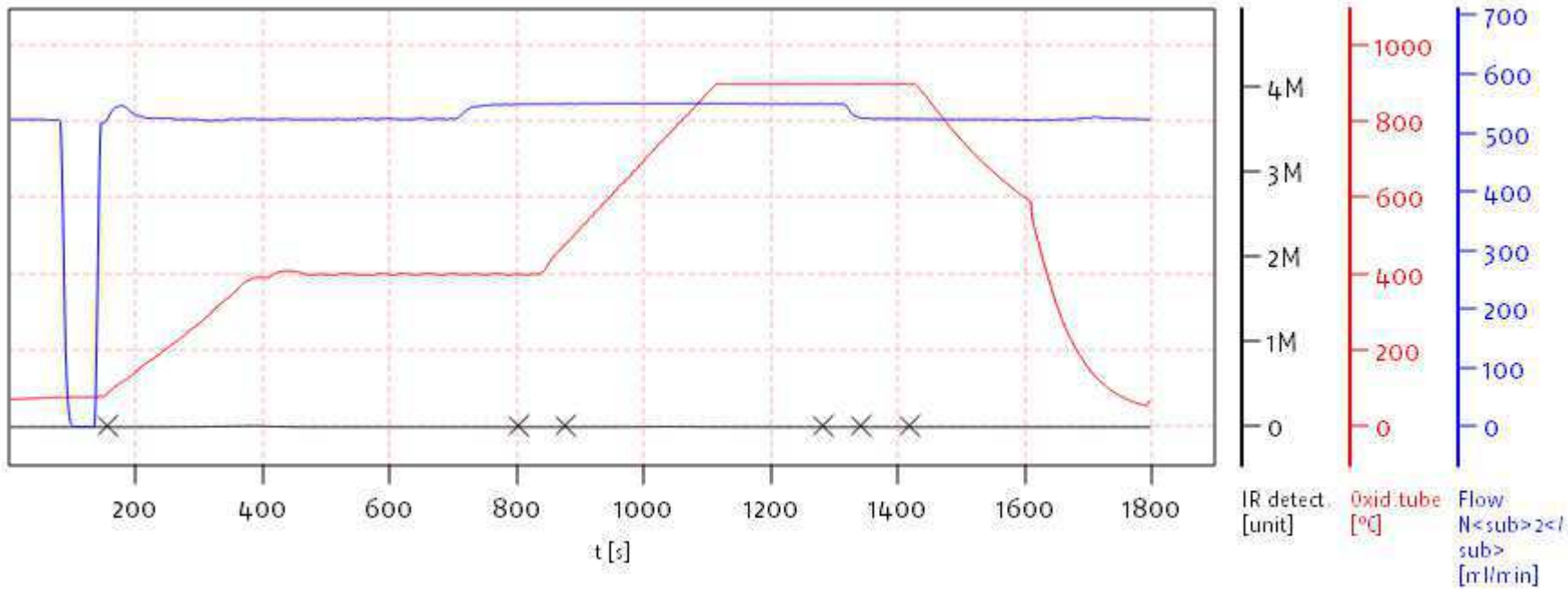
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
7	7	BKL0237-BLK1	515.10		CARBON	12/12/2022 12:16 PM	bl,C2u	0.006	47 028	0.006	0.000	446	21 295	0.006	0.000	0.9411	1.0000



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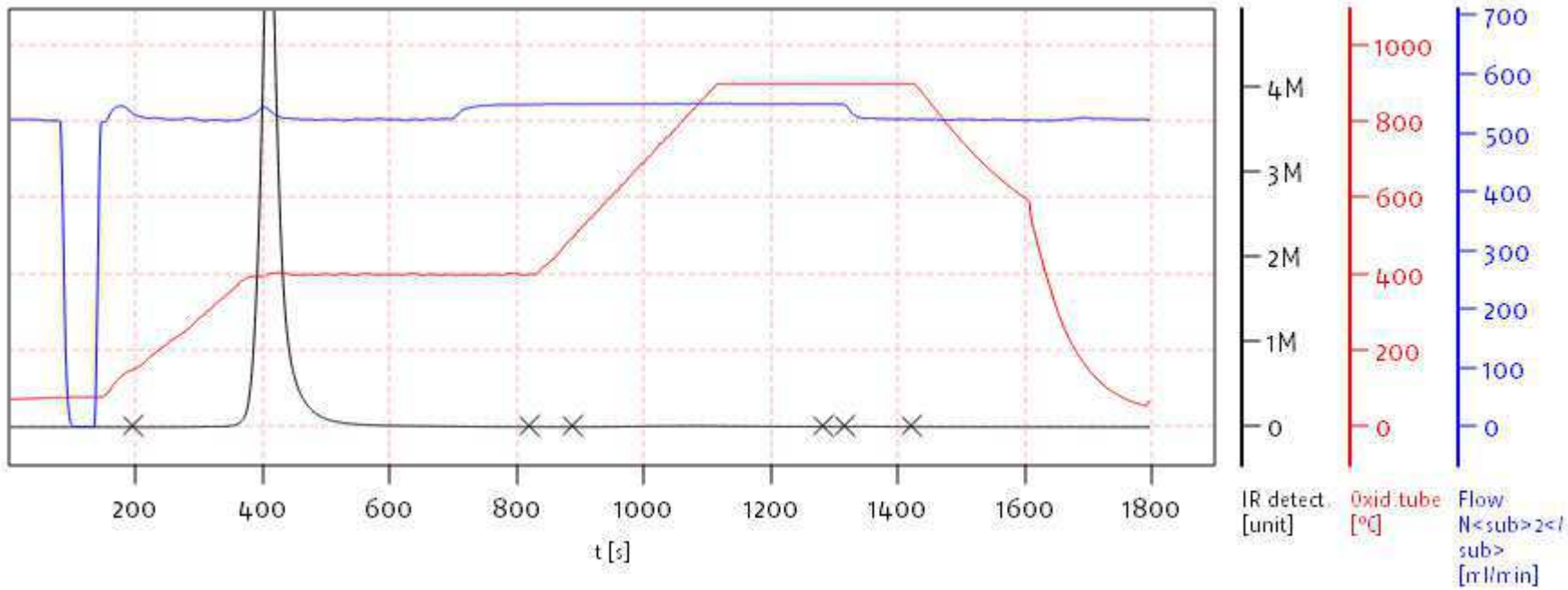
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
8	8	BKL0237-BS1	26.10		CARBON	12/12/2022 12:46 PM	bl	46.013	8 270 115	46.547	0.000	21 069	116 454	46.013	0.533	0.9411	1.0000



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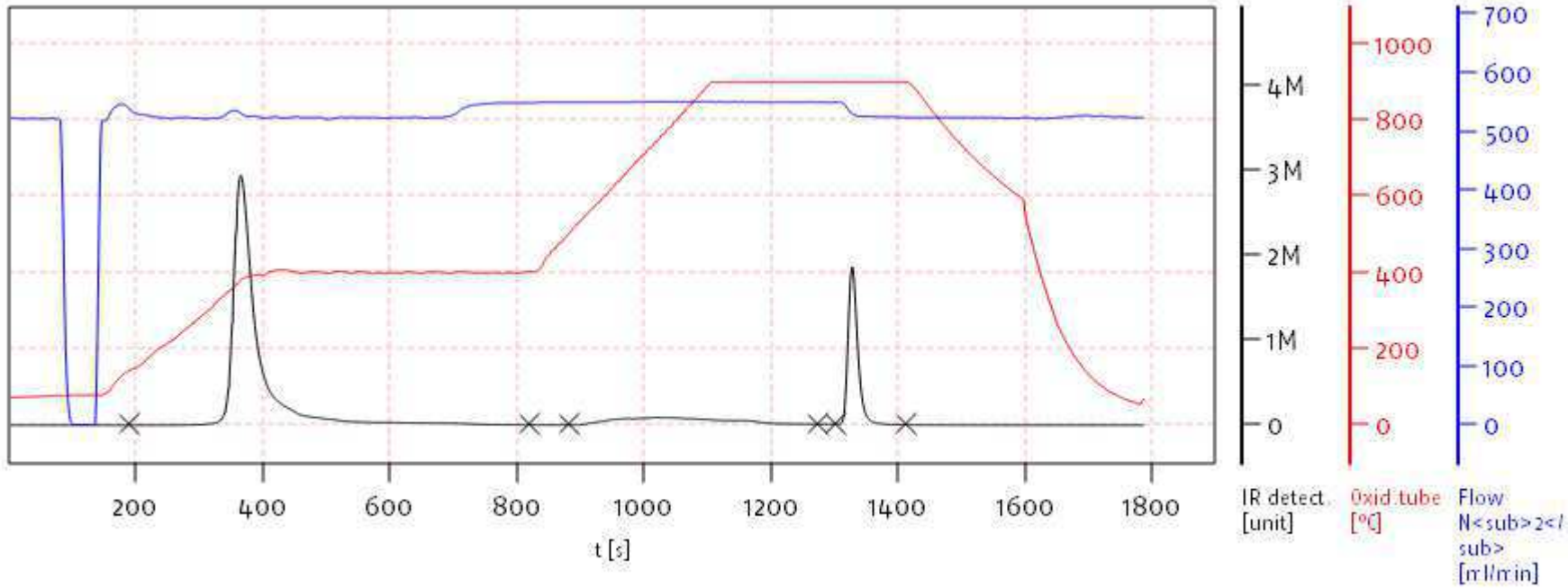
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
9	9	BKL0237-SRM1	293.40		CARBON	12/12/2022 1:16 PM	bl	2.967	4 696 975	3.341	0.648	1 254 063	736 550	2.319	0.375	0.9411	1.0000



Name:

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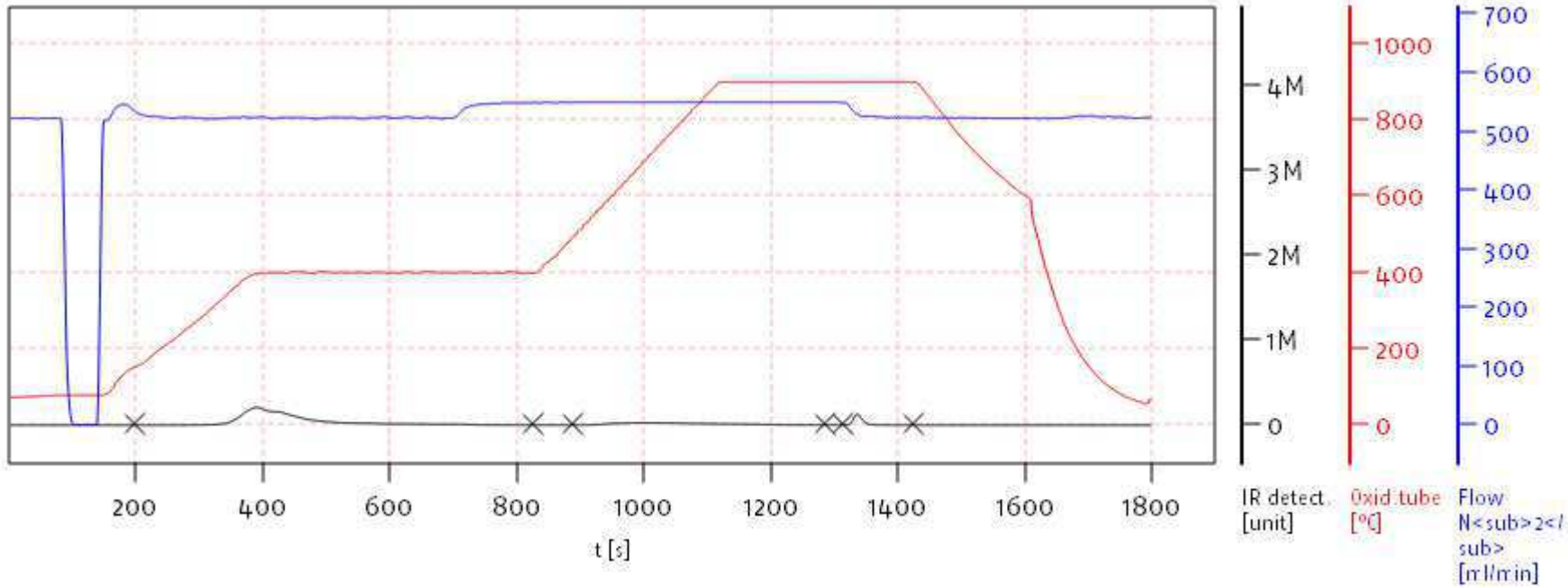
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
10	10	22K0361-02	189.40		CARBON	12/12/2022 1:46 PM	bl	0.688	862 905	0.830	0.045	81 318	199 848	0.643	0.142	0.9411	1.0000



Name:

Access: soliTOC superuser

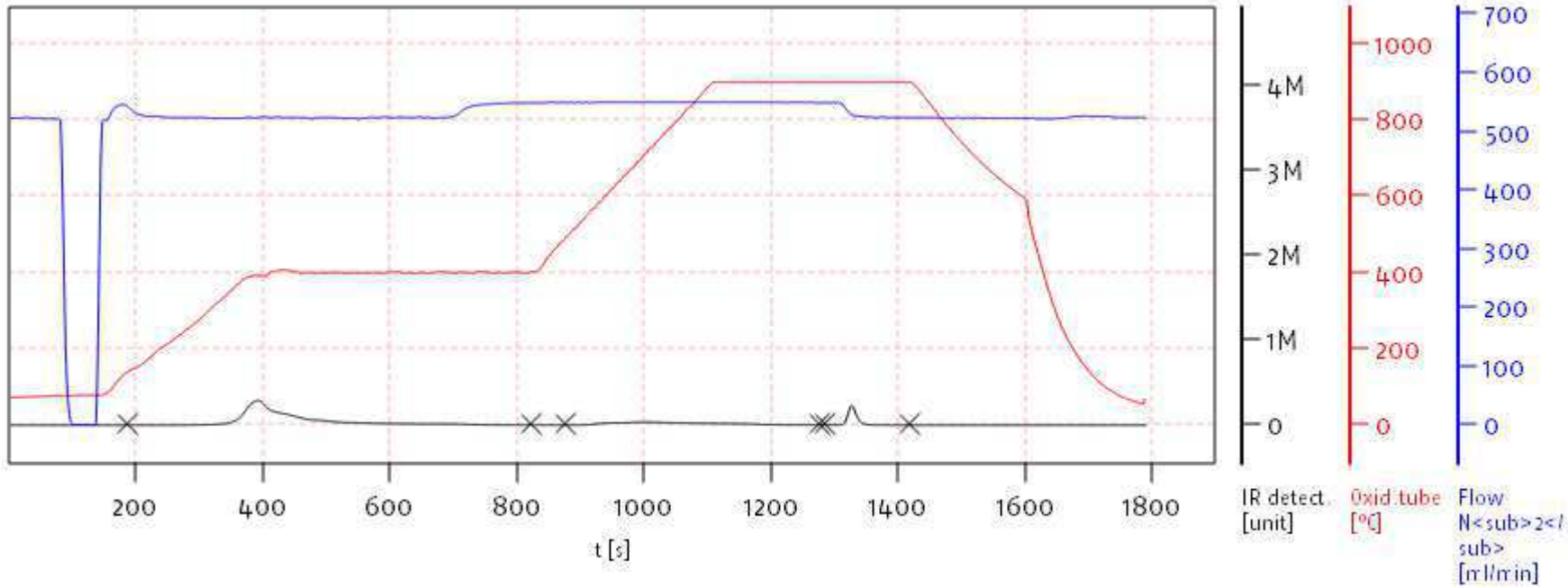
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
11	11	BKL0237-DUP1	206.60		CARBON	12/12/2022 2:17 PM	bl	0.752	971 122	0.923	0.086	141 685	254 112	0.666	0.171	0.9411	1.0000



Name:

Access: soliTOC superuser

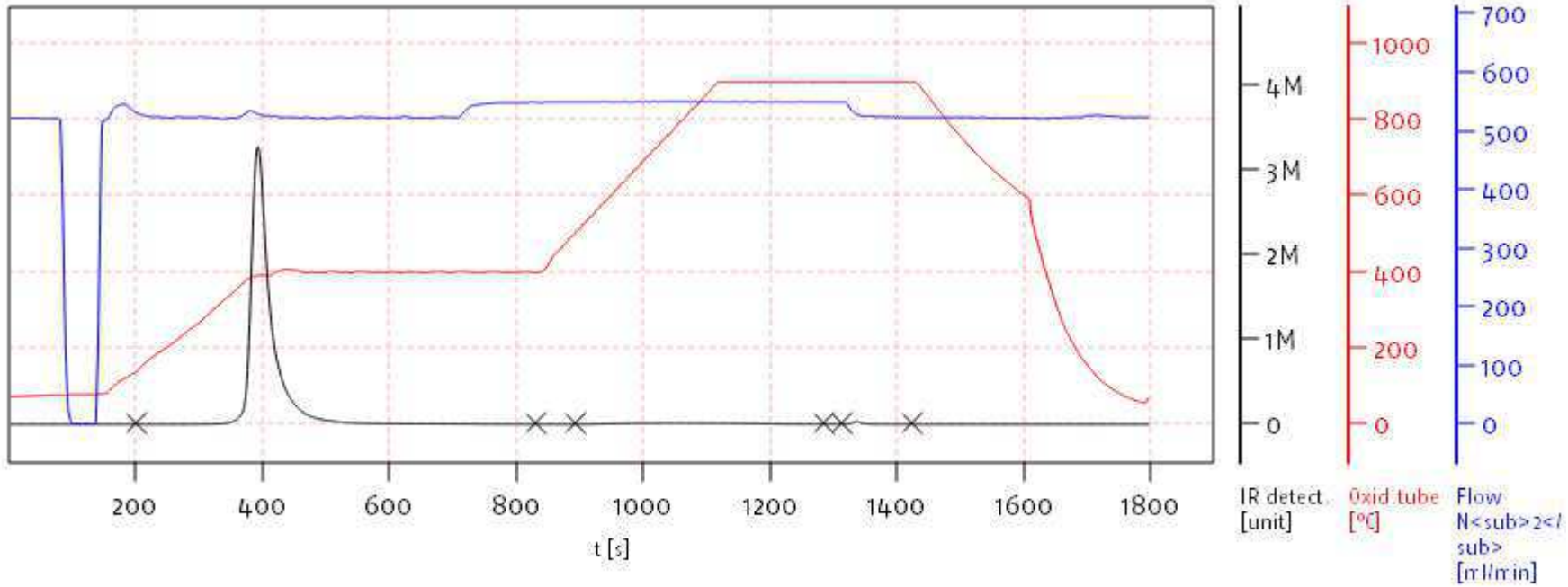
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
12	12	BKL0237-MS1	188.00	0.0104	CARBON	12/12/2022 2:47 PM	bl	3.381	4 389 710	3.476	0.000	23 846	141 512	3.381	0.095	0.9411	1.0000



Name:

Access: soliTOC superuser

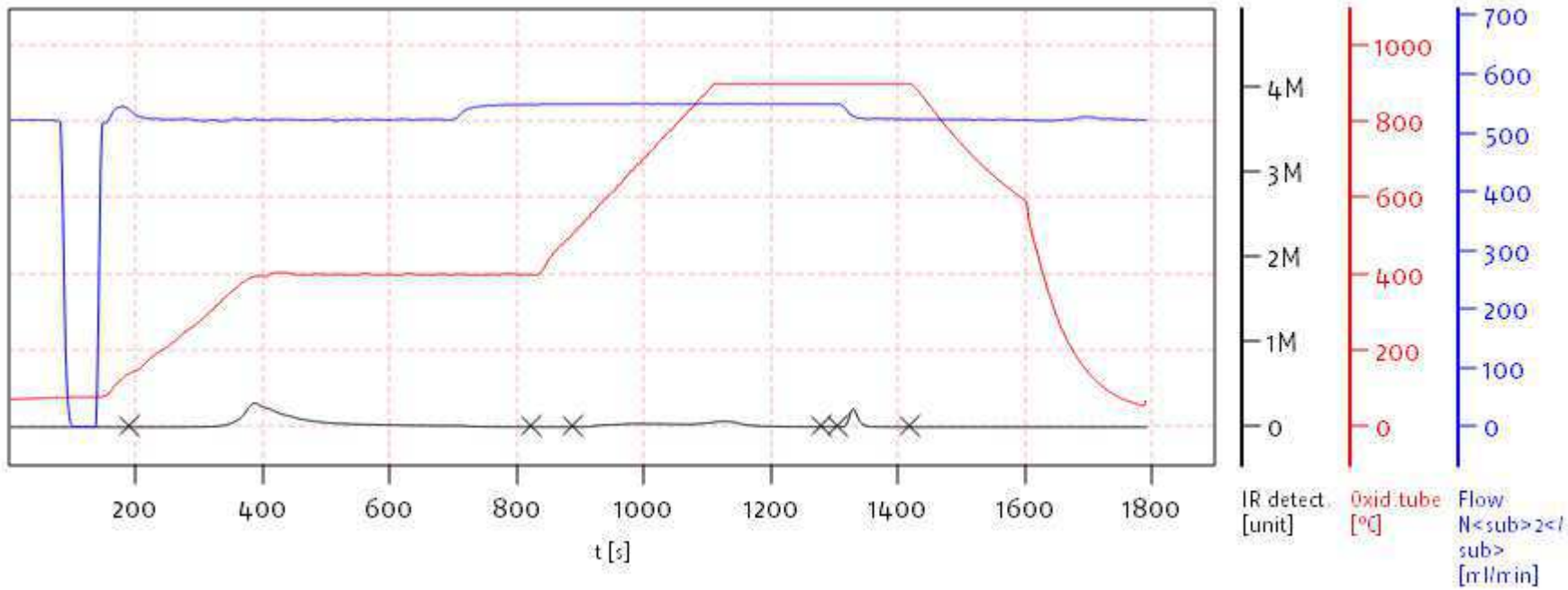
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
13	13	22K0361-03	214.90		CARBON	12/12/2022 3:17 PM	bl	0.781	1 064 322	1.045	0.077	133 704	393 328	0.704	0.264	0.9411	1.0000



Name:

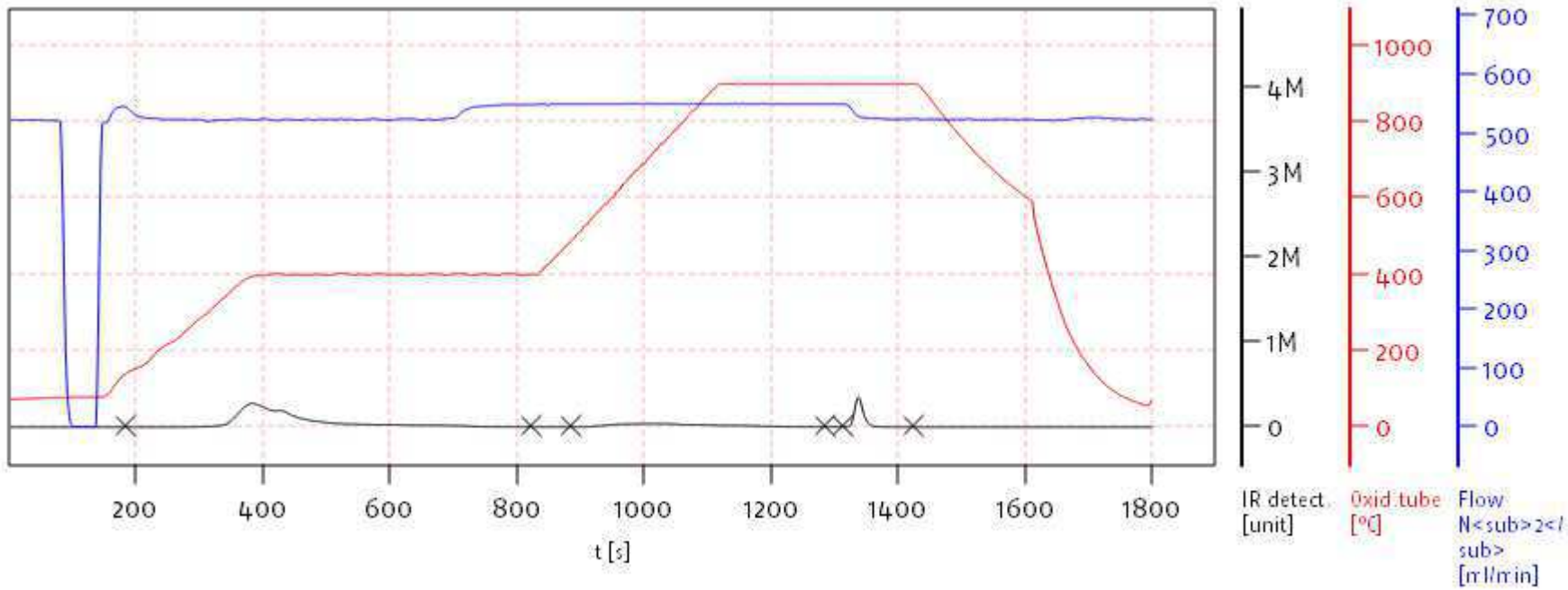
Access: soliTOC superuser

Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
14	14	22K0361-04	240.10		CARBON	12/12/2022 3:48 PM	bl	0.829	1 194 262	0.998	0.120	213 233	288 220	0.709	0.169	0.9411	1.0000



Name:

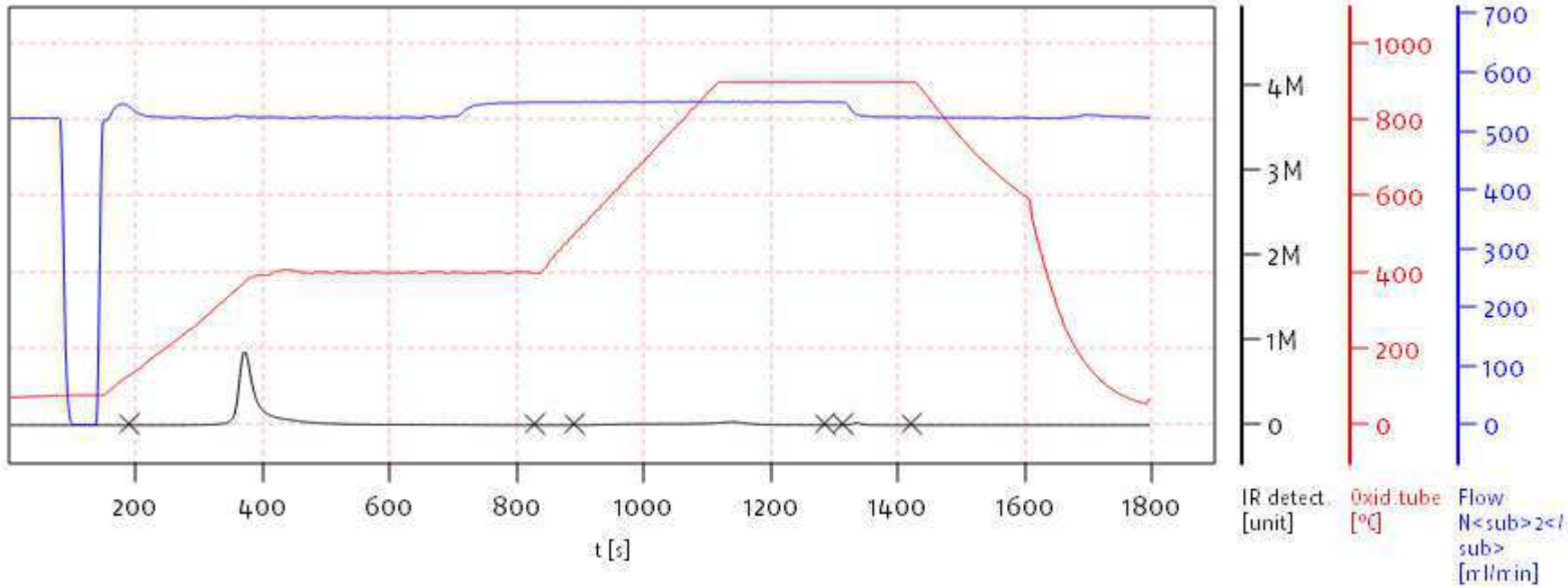
Access: soliTOC superuser

Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
15	15	22L0104-01	139.40		CARBON	12/12/2022 4:18 PM	bl	1.183	1 158 111	1.343	0.000	16 879	171 223	1.183	0.161	0.9411	1.0000



Name:

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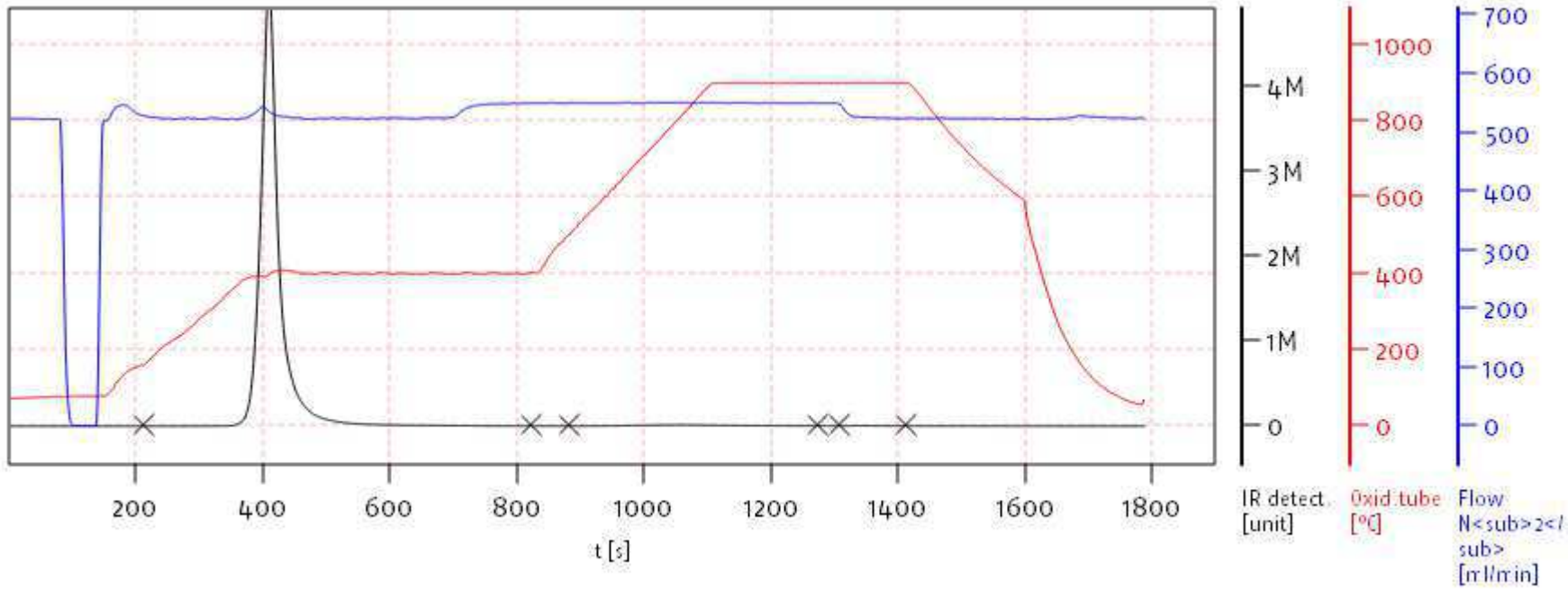
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
16	16	SKL0152-CCV1	21.00		CARBON	12/12/2022 4:48 PM	bl	44.768	6 479 730	45.322	0.000	14 687	101 675	44.768	0.554	0.9411	1.0000



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Access: soliTOC superuser

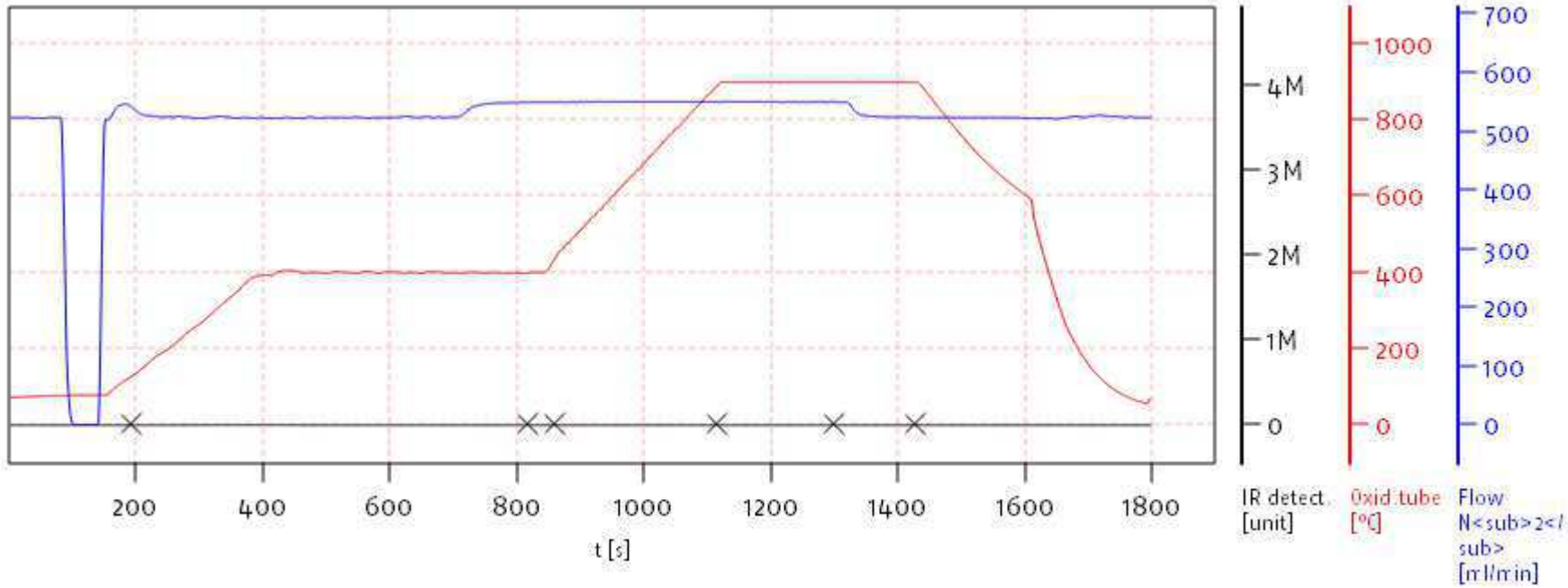
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
17	17	SKL0152-CCB1	533.30		CARBON	12/12/2022 5:19 PM	bl,C3u,C2u	0.000	12 032	0.000	0.000	285	521	0.000	0.000	0.9411	1.0000



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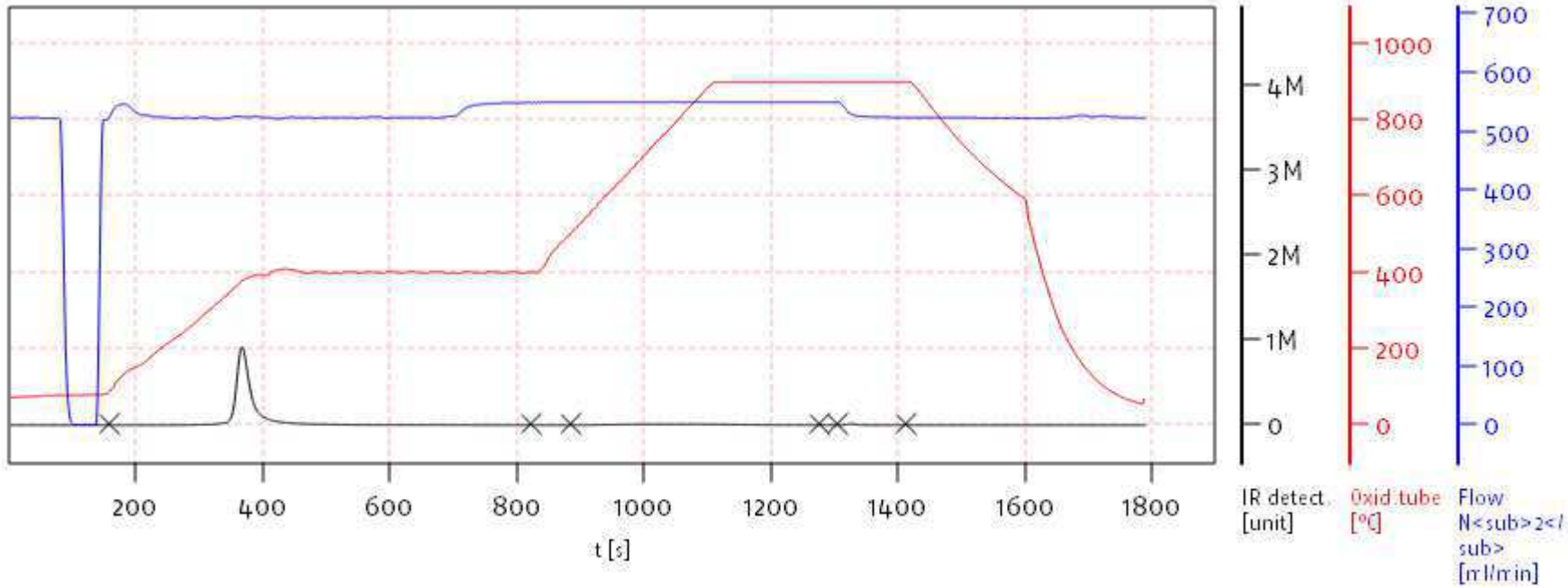
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
18	18	BKL0237-DUP2	124.10		CARBON	12/12/2022 5:49 PM	bl	1.149	1 004 999	1.228	0.000	10 630	89 814	1.149	0.079	0.9411	1.0000



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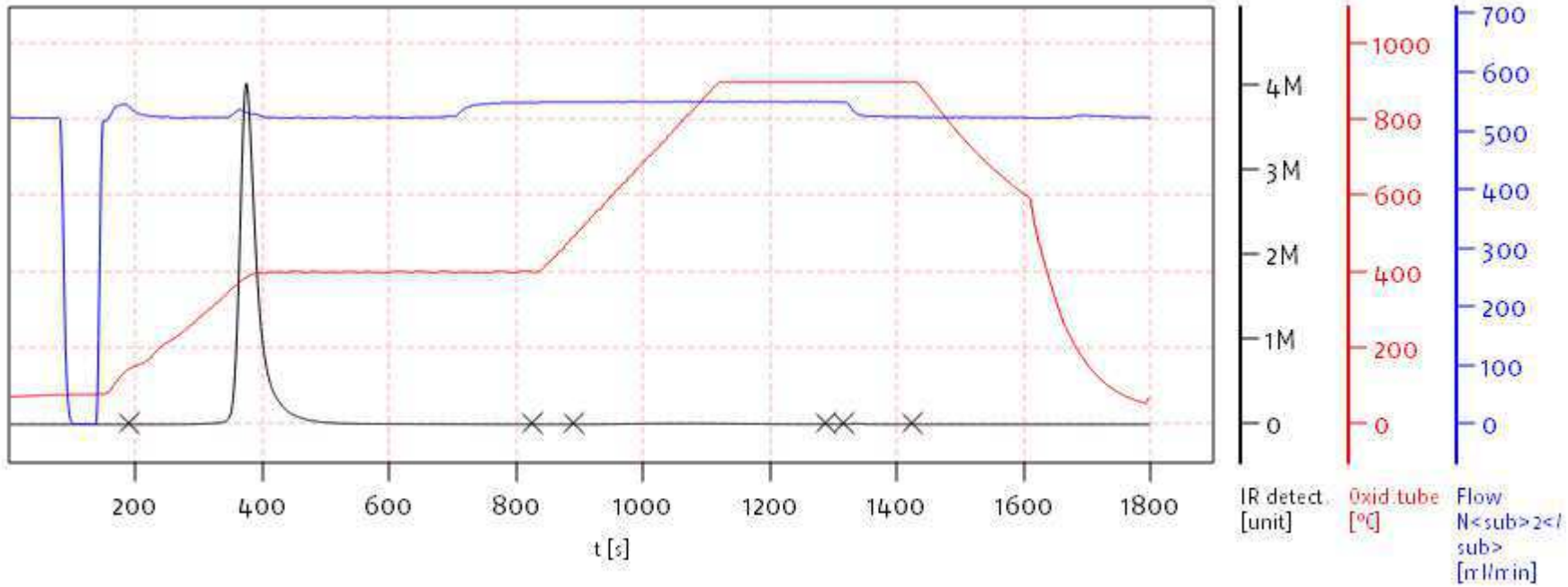
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
19	19	BKL0237-MS2	195.40	0.0108	CARBON	12/12/2022 6:19 PM	bl	3.678	4 959 747	3.726	0.000	8 557	87 282	3.678	0.048	0.9411	1.0000



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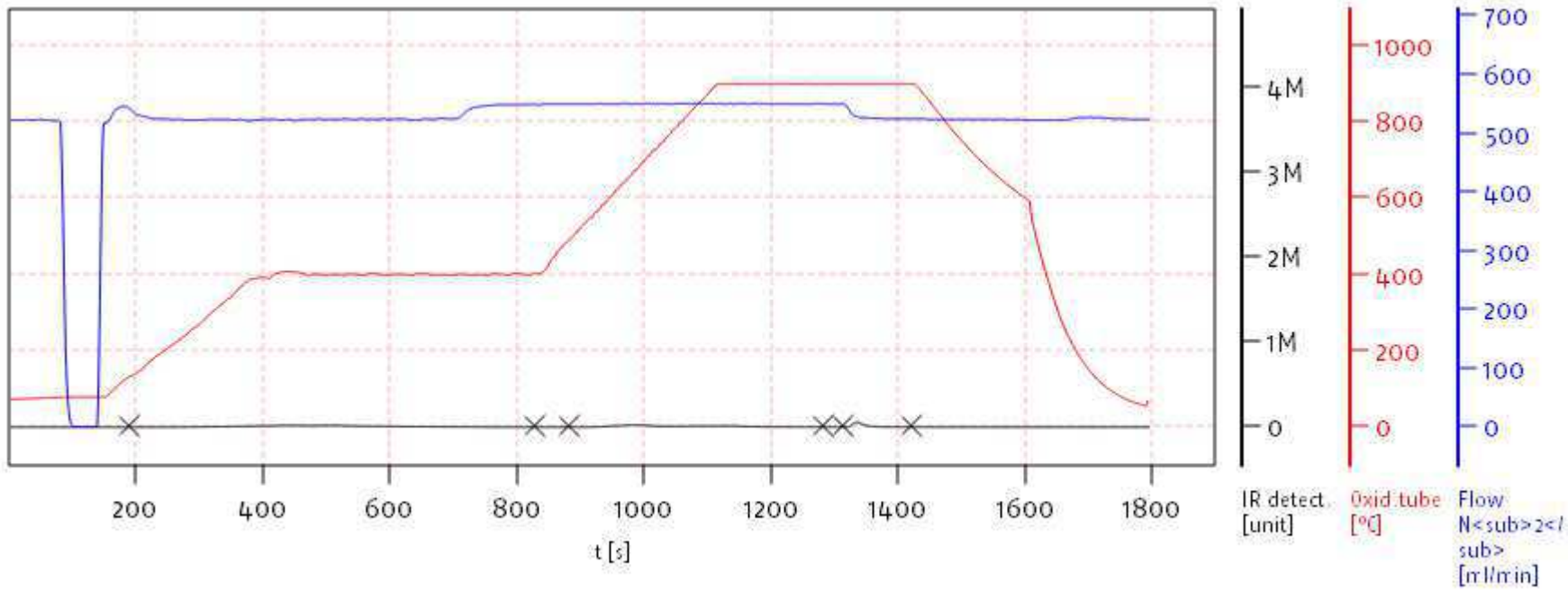
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
20	20	22L0104-02	504.20		CARBON	12/12/2022 6:49 PM	bl	0.050	176 947	0.082	0.006	47 437	130 635	0.043	0.032	0.9411	1.0000



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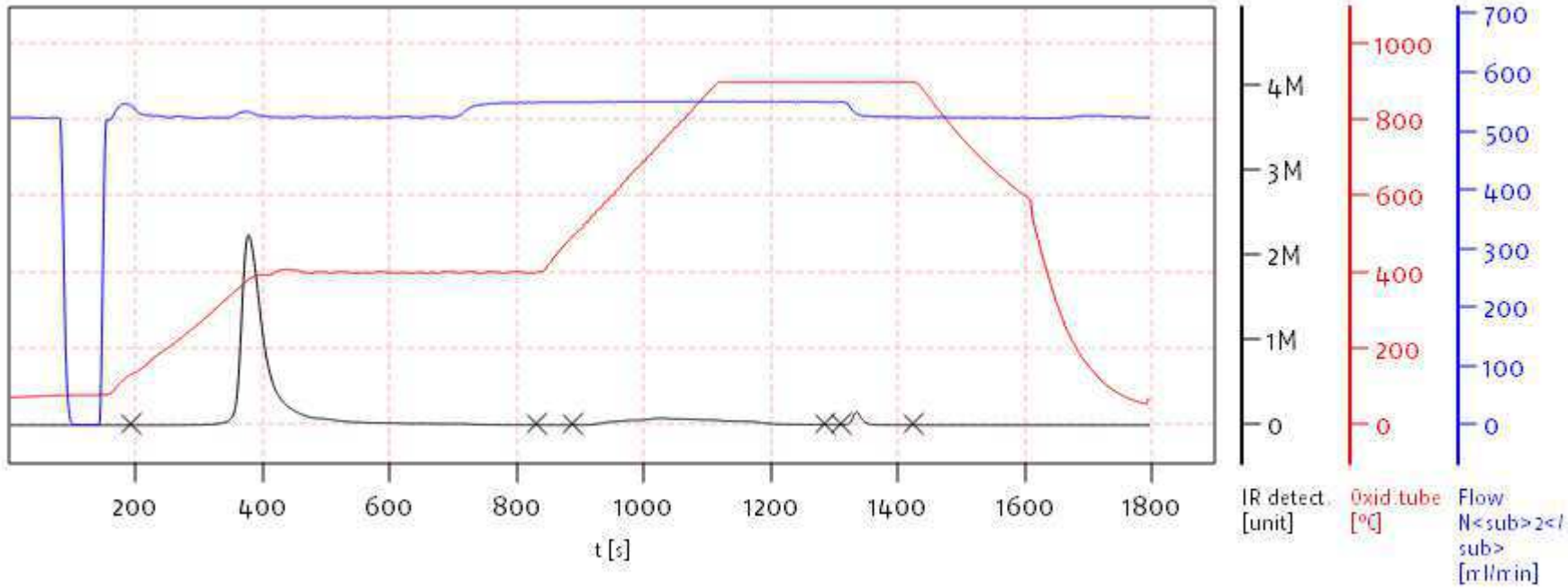
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
21	21	22L0198-01	502.90		CARBON	12/12/2022 7:20 PM	bl	1.117	3 803 866	1.291	0.023	101 038	591 586	1.094	0.174	0.9411	1.0000



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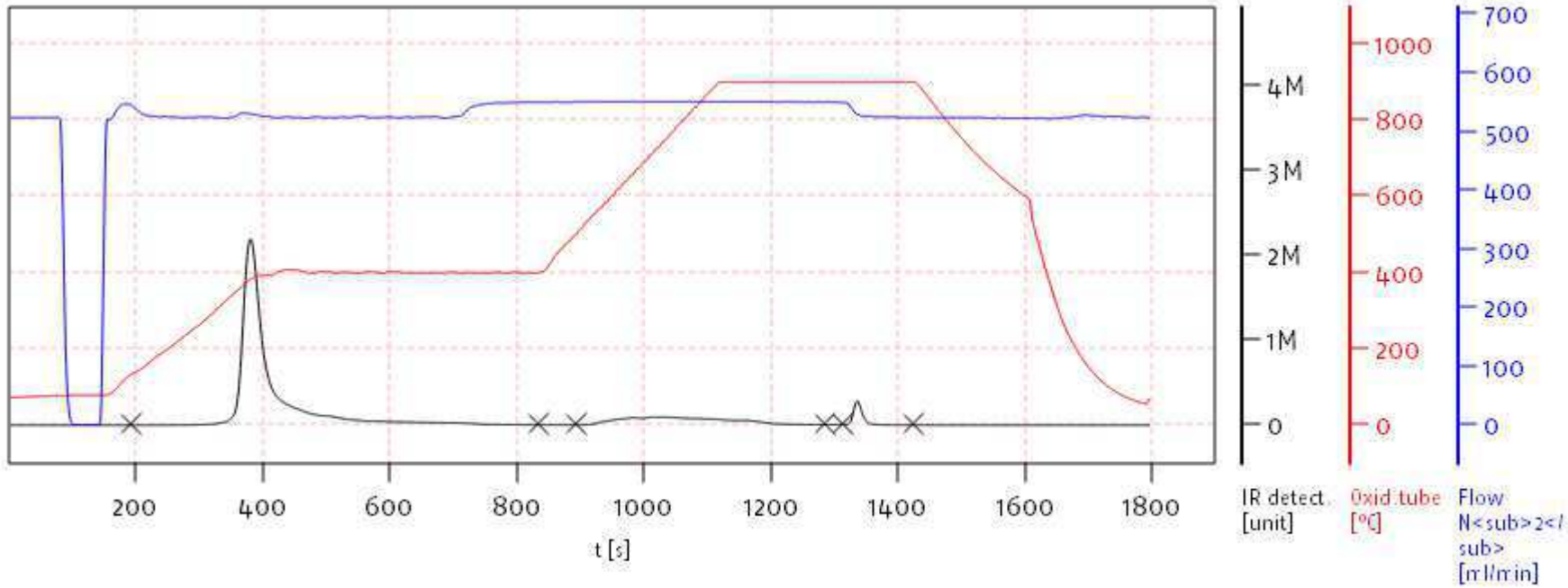
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
22	22	BKL0237-DUP3	523.40		CARBON	12/12/2022 7:50 PM	bl	1.079	3 743 847	1.292	0.045	177 354	745 408	1.035	0.213	0.9411	1.0000



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elementar
EXCELLENCE IN ELEMENTS

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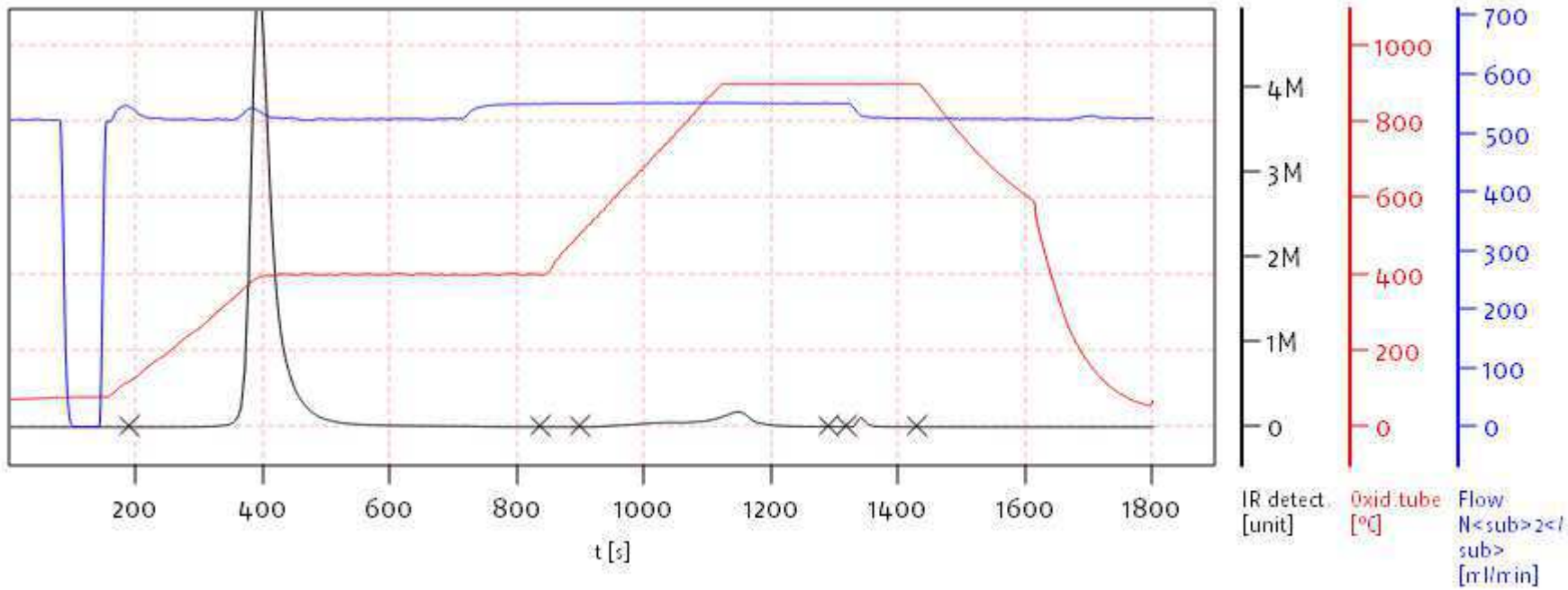
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
23	23	BKL0237-MS3	539.10	0.0109	CARBON	12/12/2022 8:21 PM	bl	2.171	8 009 333	2.364	0.014	75 327	696 712	2.157	0.192	0.9411	1.0000



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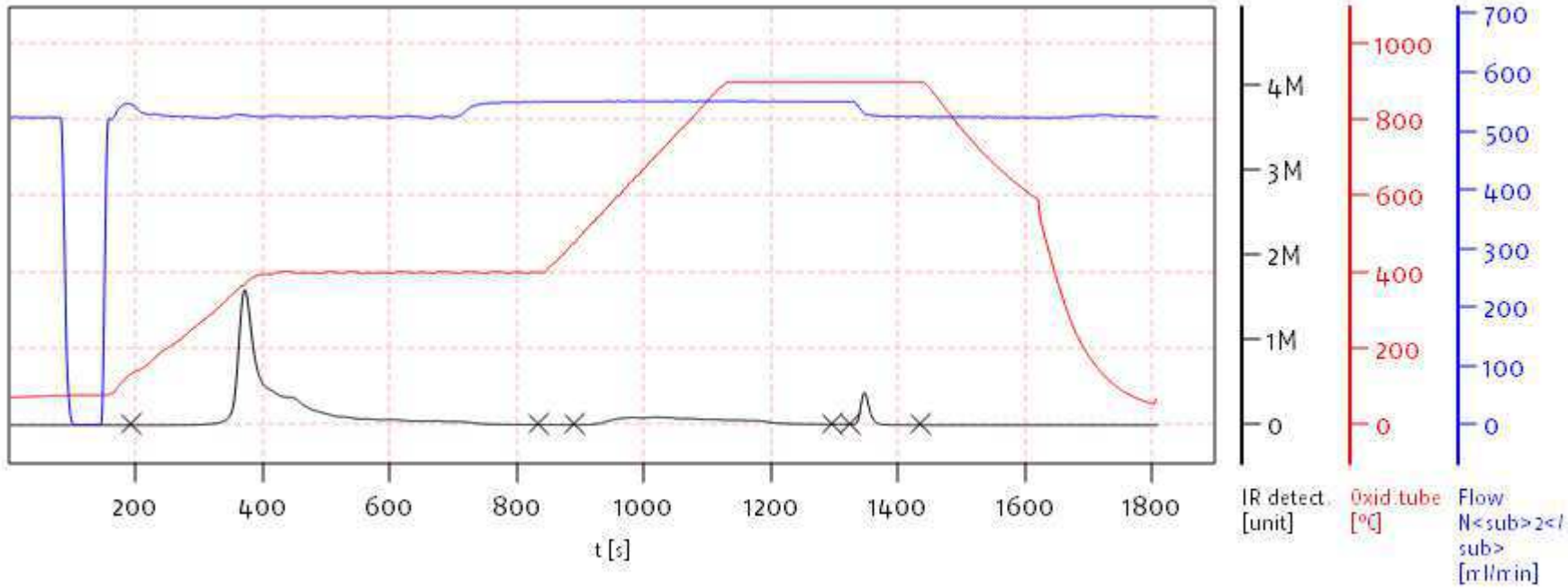
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
24	24	22L0198-02	531.30		CARBON	12/12/2022 8:51 PM	bl	0.996	3 435 898	1.213	0.061	236 546	771 541	0.935	0.217	0.9411	1.0000



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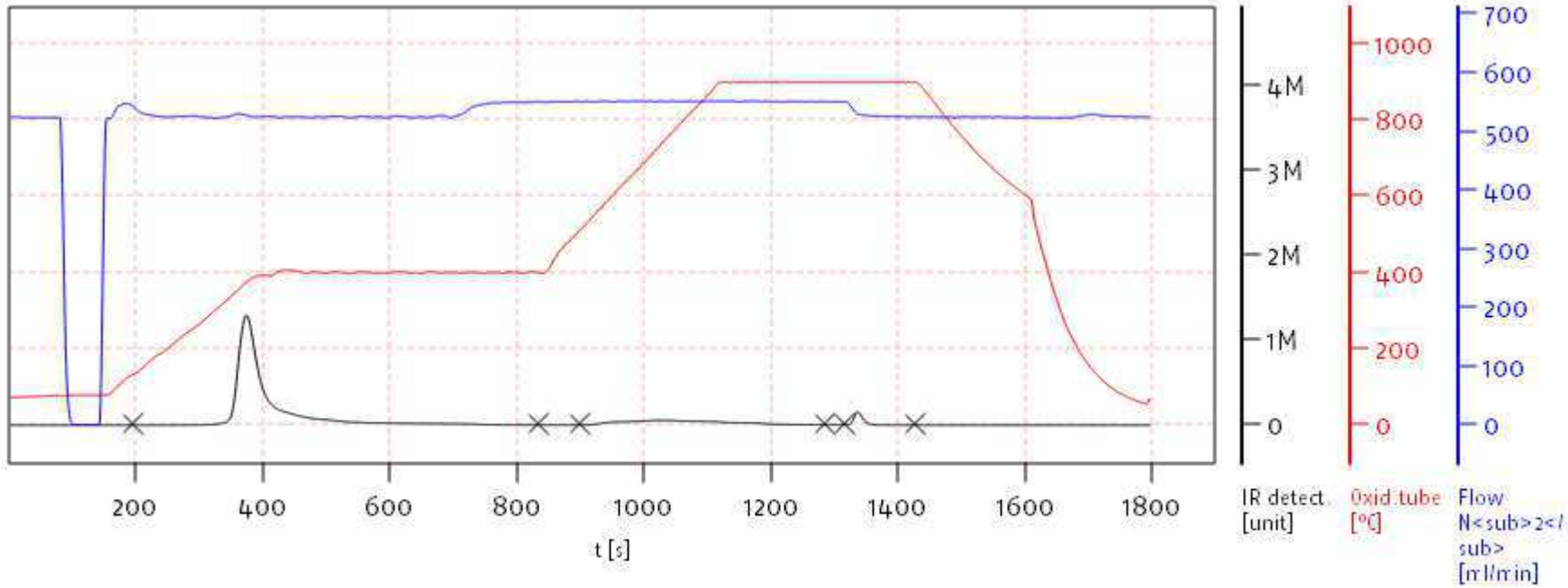
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
25	25	22L0198-03	314.50		CARBON	12/12/2022 9:21 PM	bl	1.119	2 366 968	1.316	0.034	96 577	428 001	1.084	0.198	0.9411	1.0000



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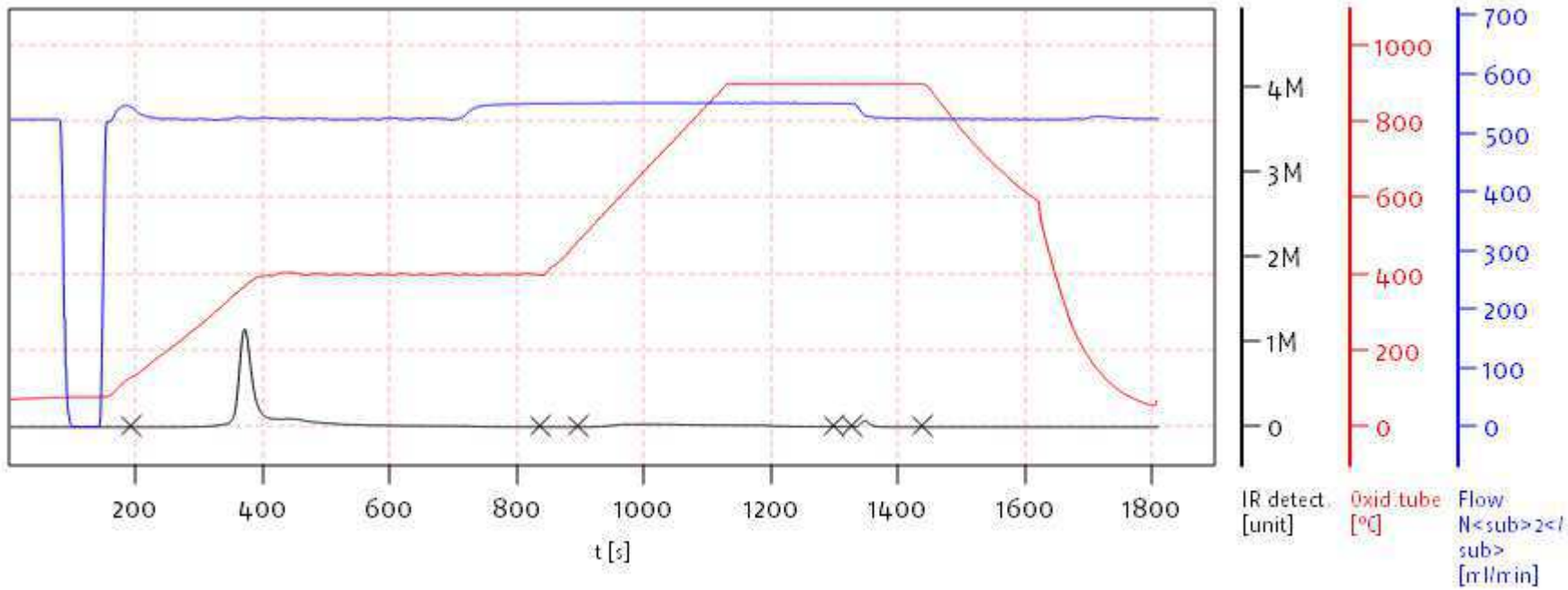
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
26	26	22L0198-04	231.50		CARBON	12/12/2022 9:52 PM	bl	0.981	1 563 261	1.151	0.014	47 900	279 681	0.967	0.169	0.9411	1.0000



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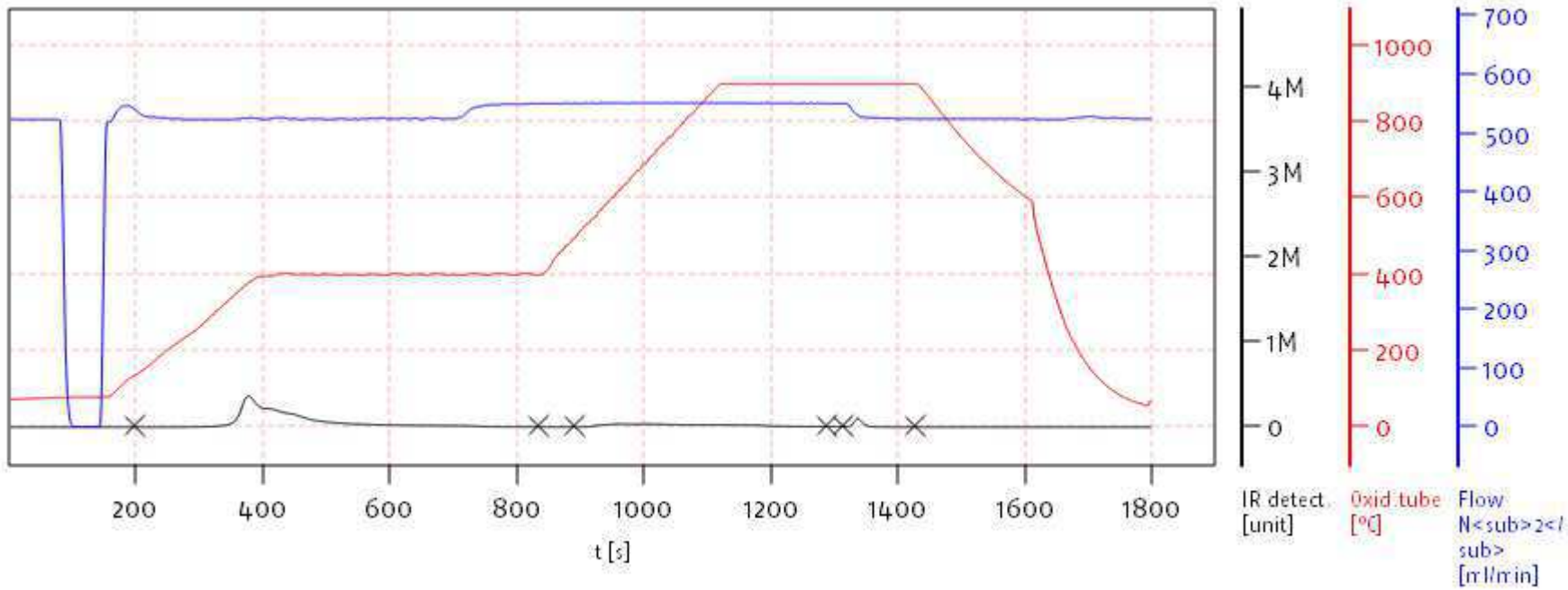
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
27	27	22L0198-05	219.90		CARBON	12/12/2022 10:22 PM	bl	0.834	1 244 901	1.039	0.027	64 935	316 824	0.807	0.204	0.9411	1.0000



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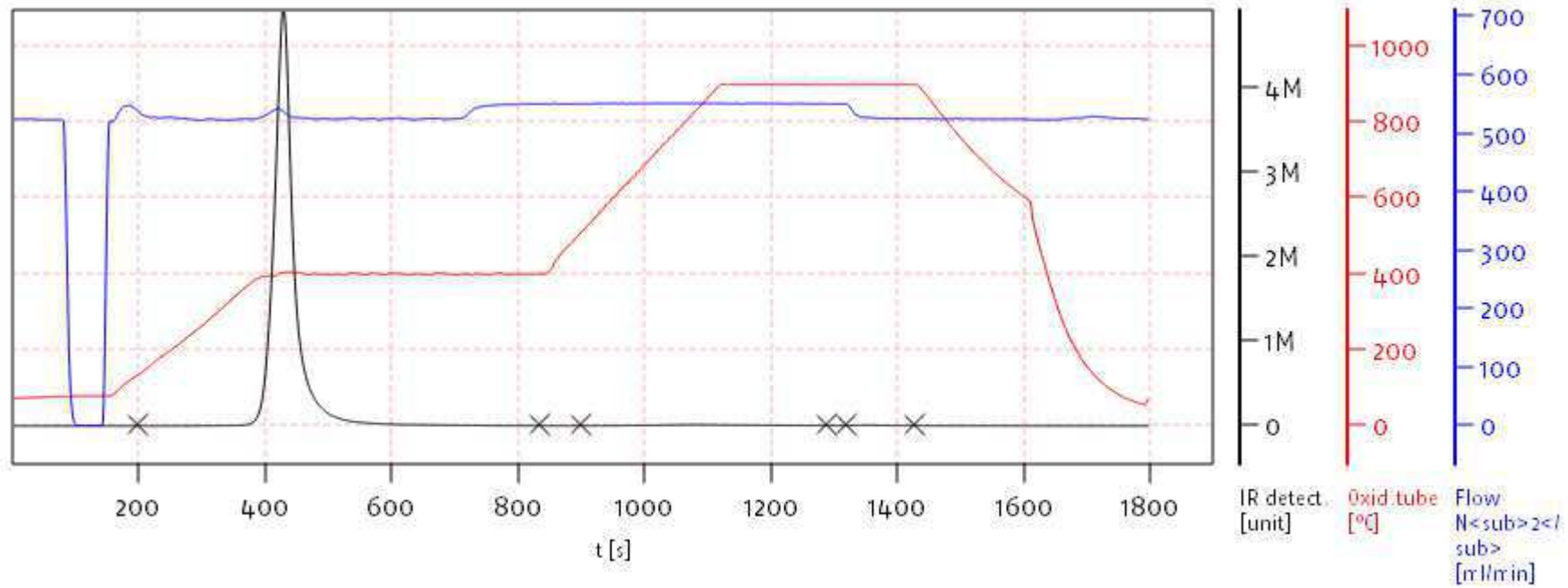
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
28	28	SKL0152-CCV2	22.00		CARBON	12/12/2022 10:53 PM	bl	44.623	6 765 118	45.198	0.000	23 370	108 350	44.623	0.576	0.9411	1.0000



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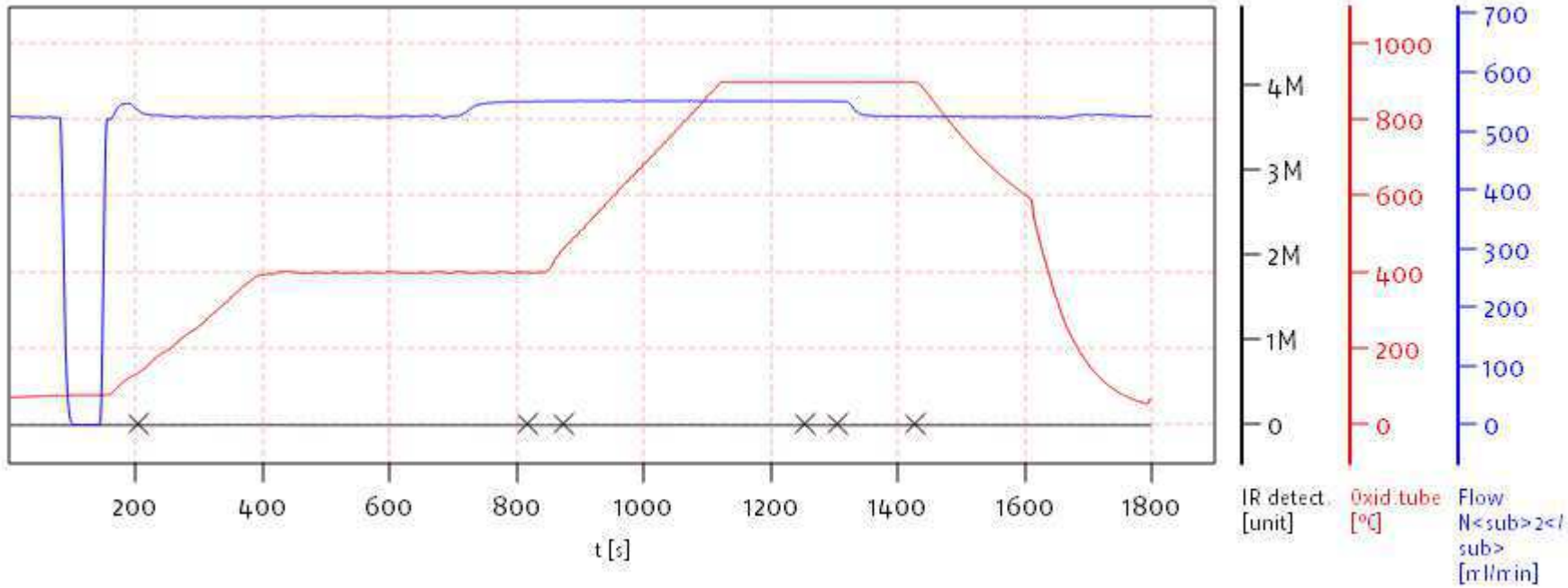
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
29	29	SKL0152-CCB2	550.80		CARBON	12/12/2022 11:23 PM	bl,C3u,C2u	0.000	8 348	0.000	0.000	260	2 327	0.000	0.000	0.9411	1.0000



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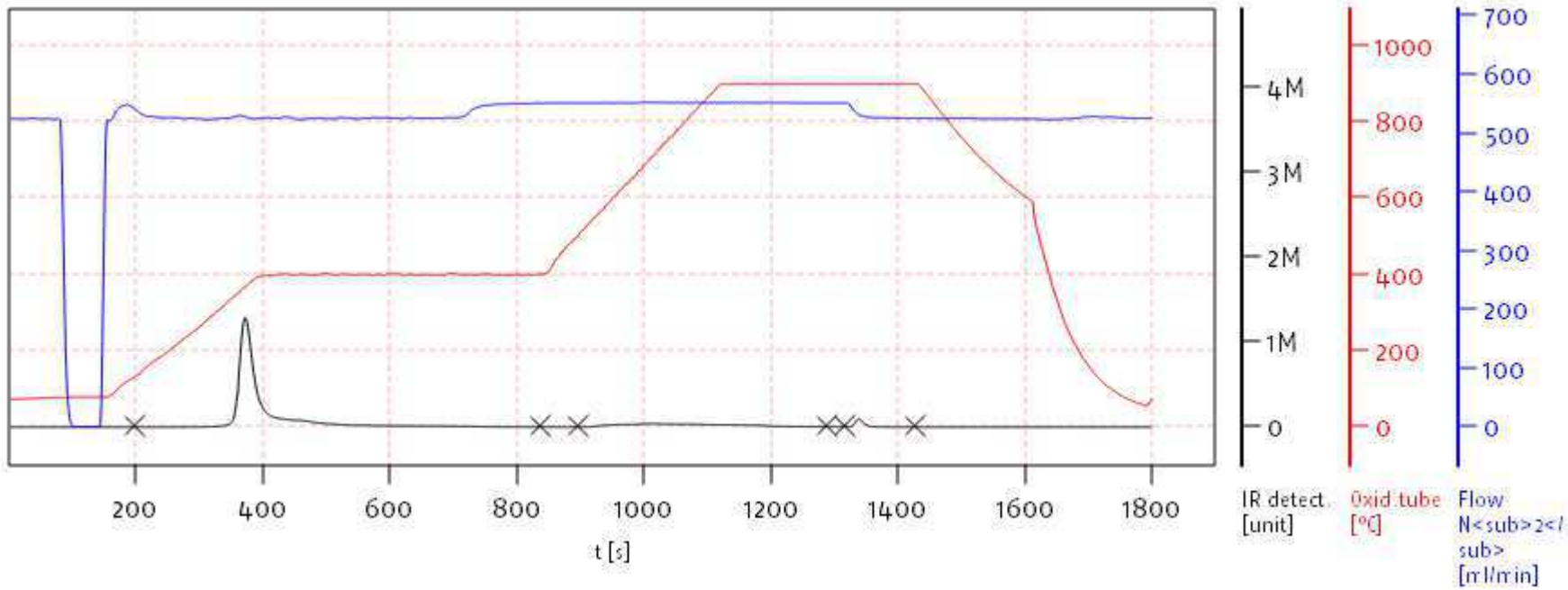
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
30	30	22L0198-06	234.40		CARBON	12/12/2022 11:53 PM	bl	1.080	1 728 861	1.272	0.022	59 390	317 900	1.058	0.192	0.9411	1.0000



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Balance: BAL3
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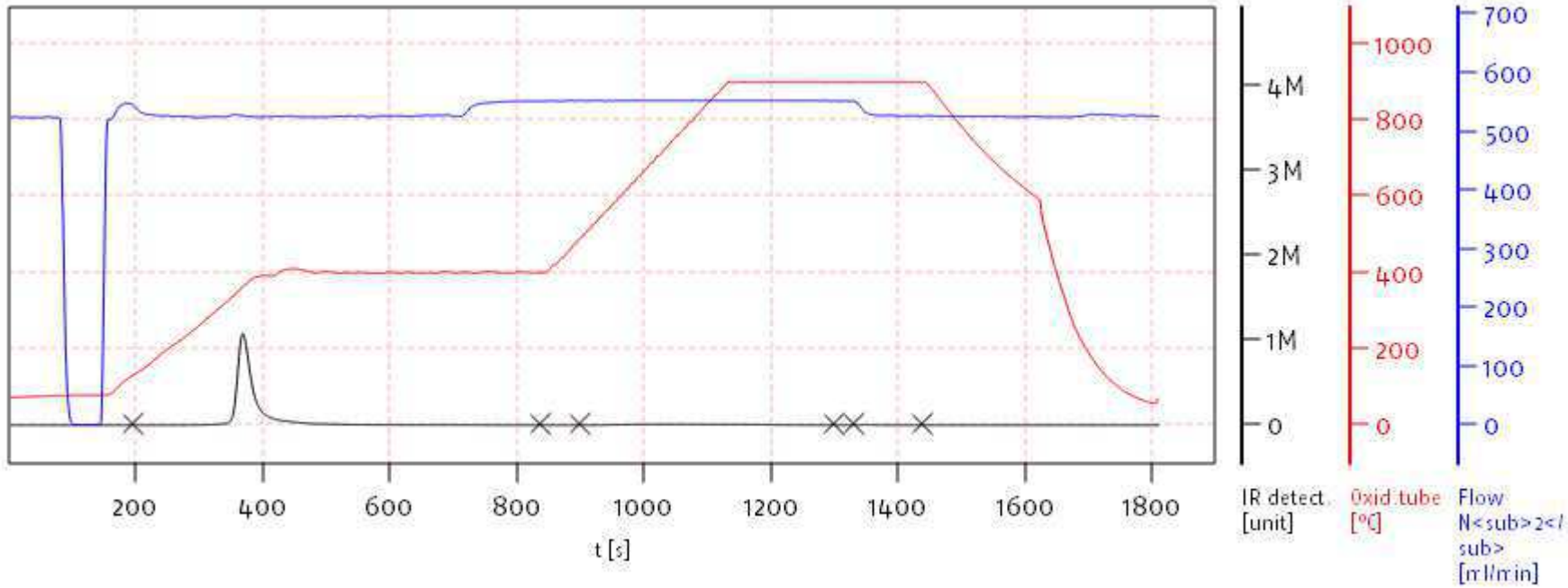
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
31	31	22L0198-07	140.40		CARBON	12/13/2022 12:24 AM	bl	1.244	1 225 795	1.309	0.000	4 587	85 204	1.244	0.065	0.9411	1.0000



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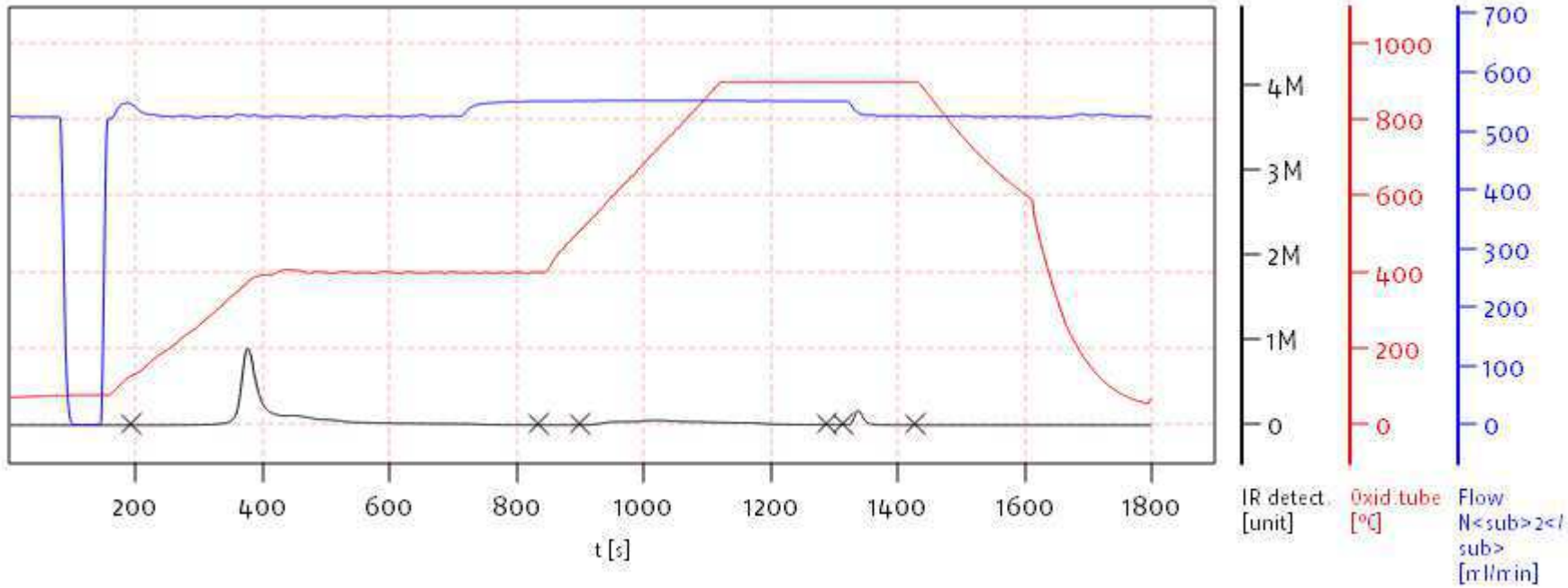
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
32	32	22L0198-08	235.60		CARBON	12/13/2022 12:54 AM	bl	1.024	1 594 778	1.271	0.055	109 865	401 866	0.970	0.247	0.9411	1.0000



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Balance: BAL3
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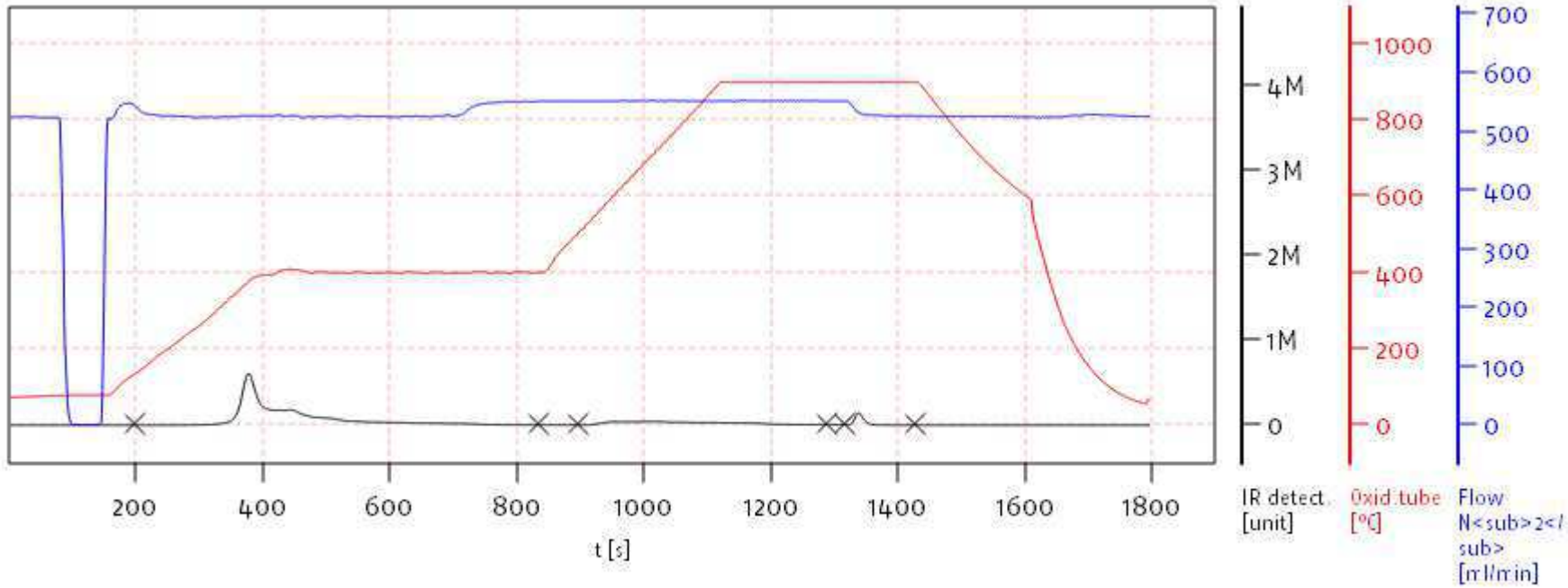
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
33	33	22L0198-09	226.50		CARBON	12/13/2022 1:25 AM	bl	1.009	1 527 826	1.232	0.044	90 309	352 268	0.966	0.223	0.9411	1.0000



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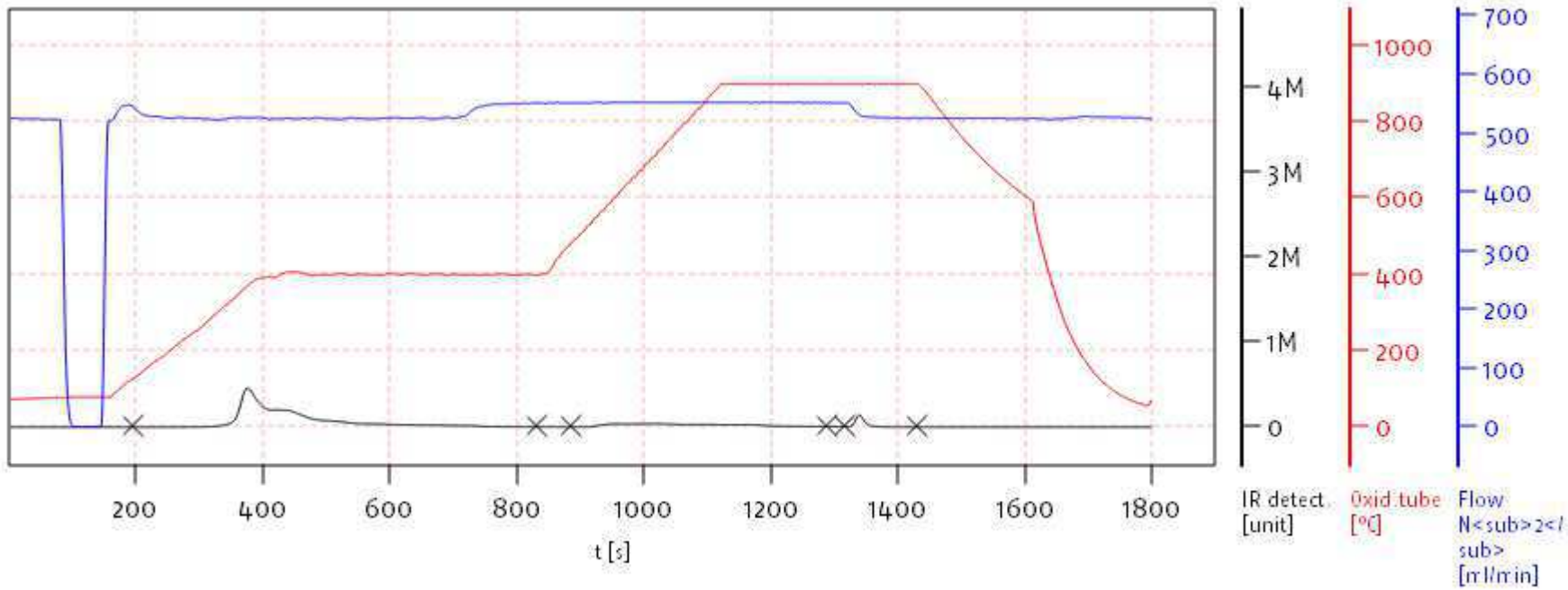
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
34	34	22L0198-10	228.10		CARBON	12/13/2022 1:55 AM	bl	0.971	1 476 714	1.192	0.045	92 967	352 033	0.926	0.221	0.9411	1.0000



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Balance: BAL3
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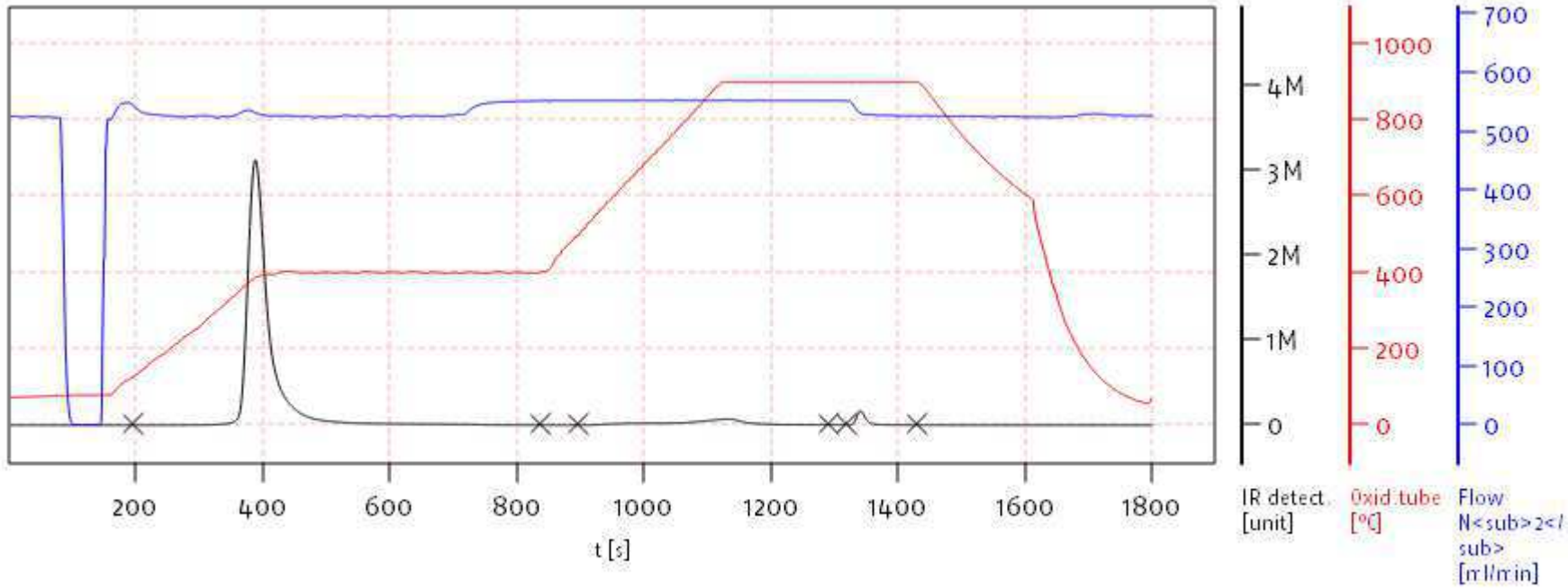
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
35	35	22K0399-05RE1	199.30		CARBON	12/13/2022 2:26 AM	bl	3.296	4 447 439	3.535	0.065	109 615	333 833	3.232	0.239	0.9411	1.0000



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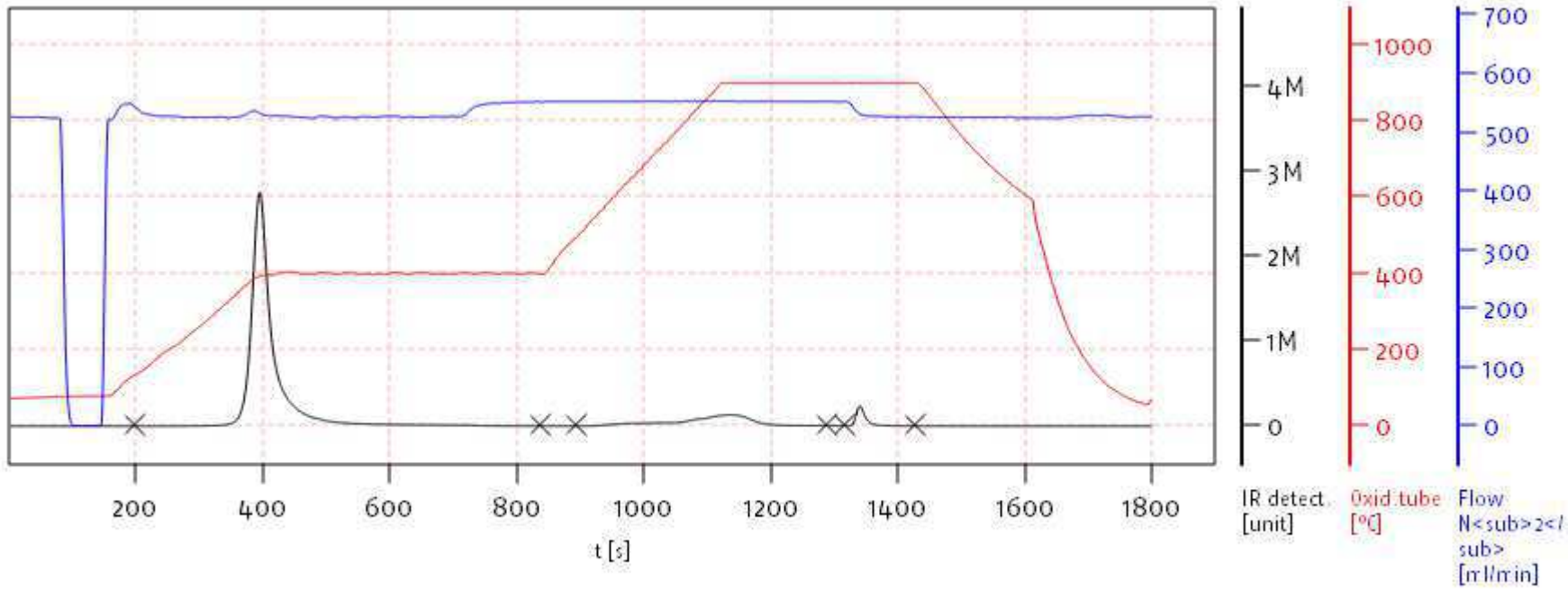
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
36	36	22K0399-06RE1	253.90		CARBON	12/13/2022 2:56 AM	bl	2.323	3 935 637	2.697	0.080	157 290	639 836	2.243	0.374	0.9411	1.0000



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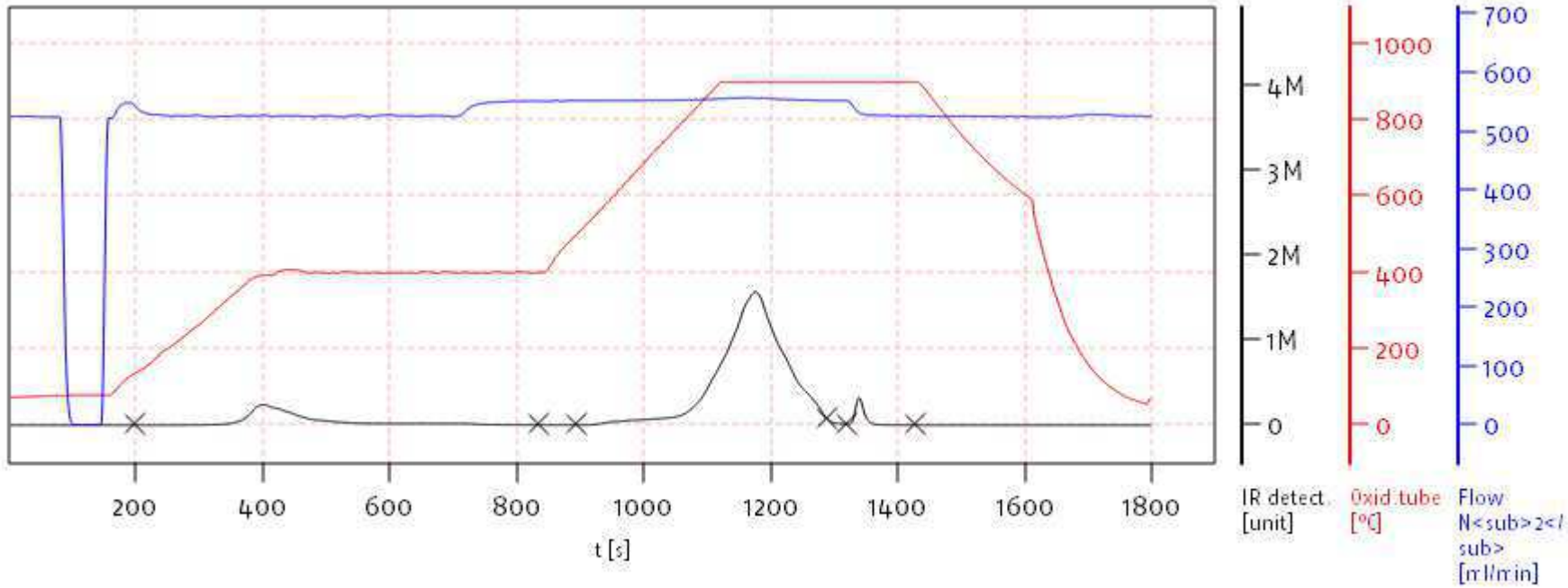
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
37	37	22K0399-07RE1	209.60		CARBON	12/13/2022 3:26 AM	bl	0.766	946 104	5.657	0.126	197 652	6 649 996	0.639	4.892	0.9411	1.0000



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Access: soliTOC superuser

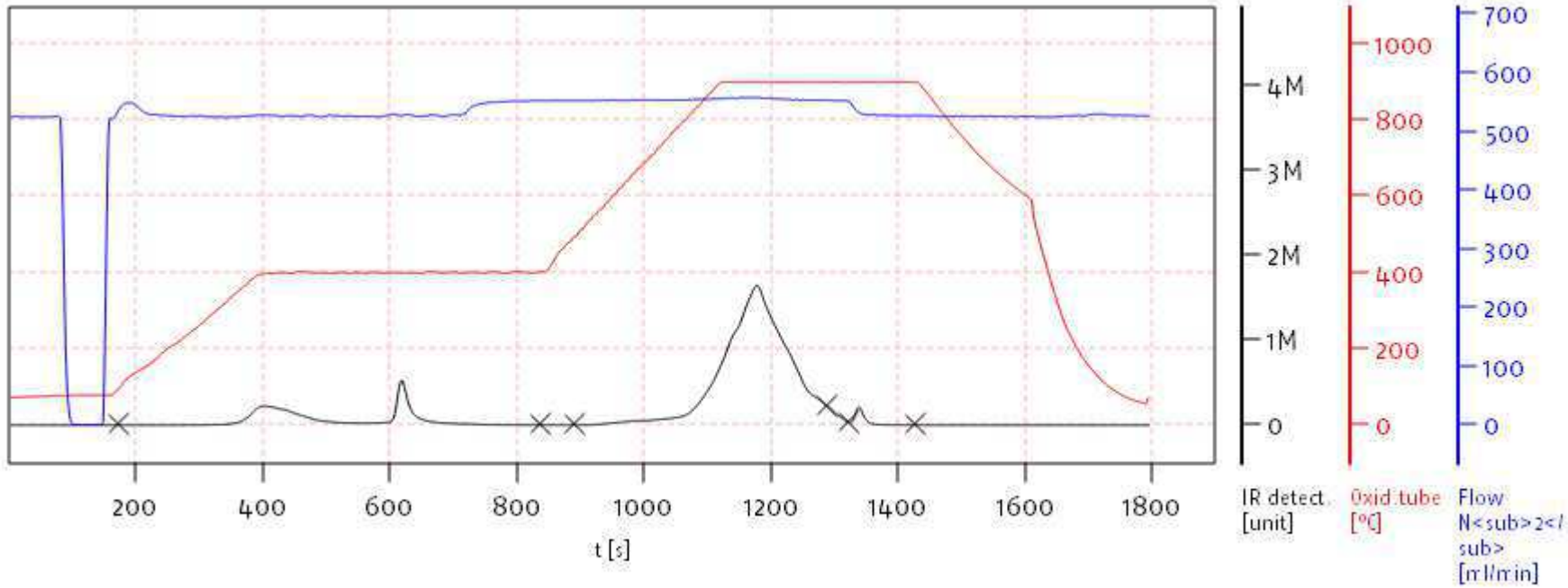
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
38	38	22K0399-09RE1	214.00		CARBON	12/13/2022 3:57 AM	bl	0.993	1 364 916	6.020	0.081	139 161	6 976 495	0.911	5.027	0.9411	1.0000



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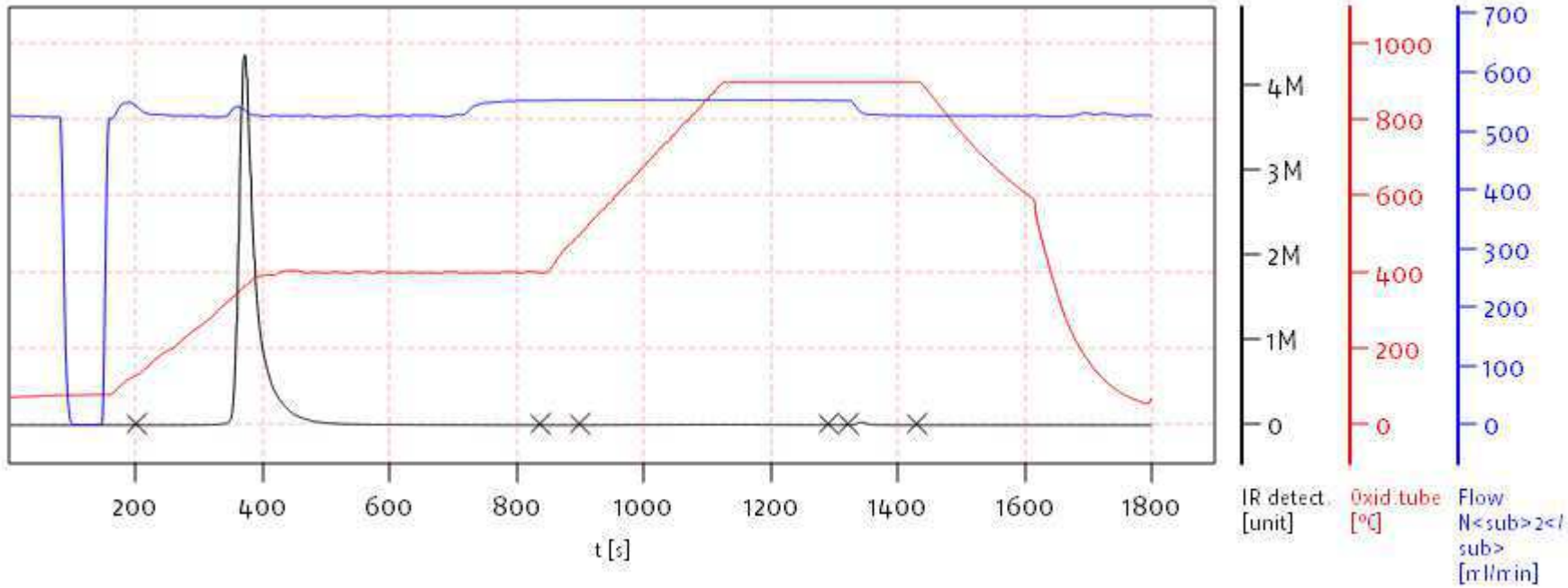
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
39	39	22K0399-11RE1	114.20		CARBON	12/13/2022 4:27 AM	bl	6.417	5 057 111	6.454	0.000	24 419	53 588	6.417	0.037	0.9411	1.0000



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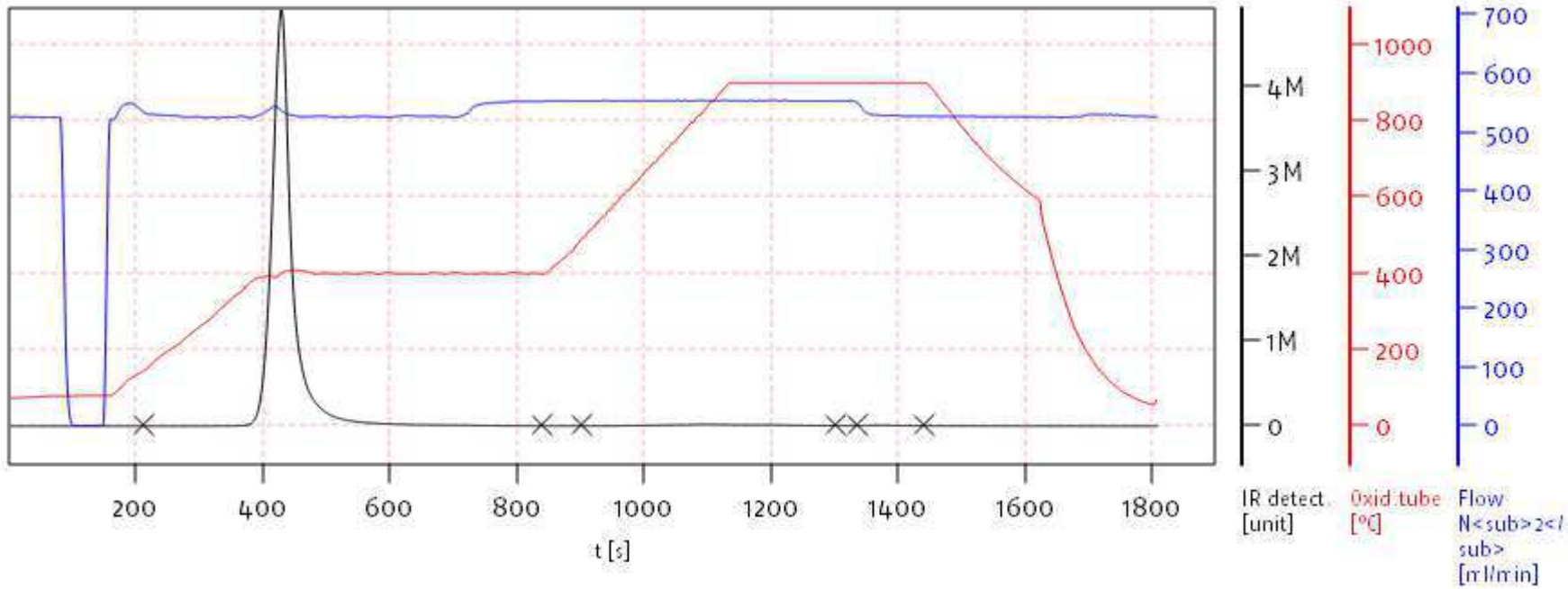
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
40	40	SKL0152-CCV3	22.40		CARBON	12/13/2022 4:57 AM	bl	44.066	6 802 011	44.920	0.000	25 432	150 099	44.066	0.854	0.9411	1.0000



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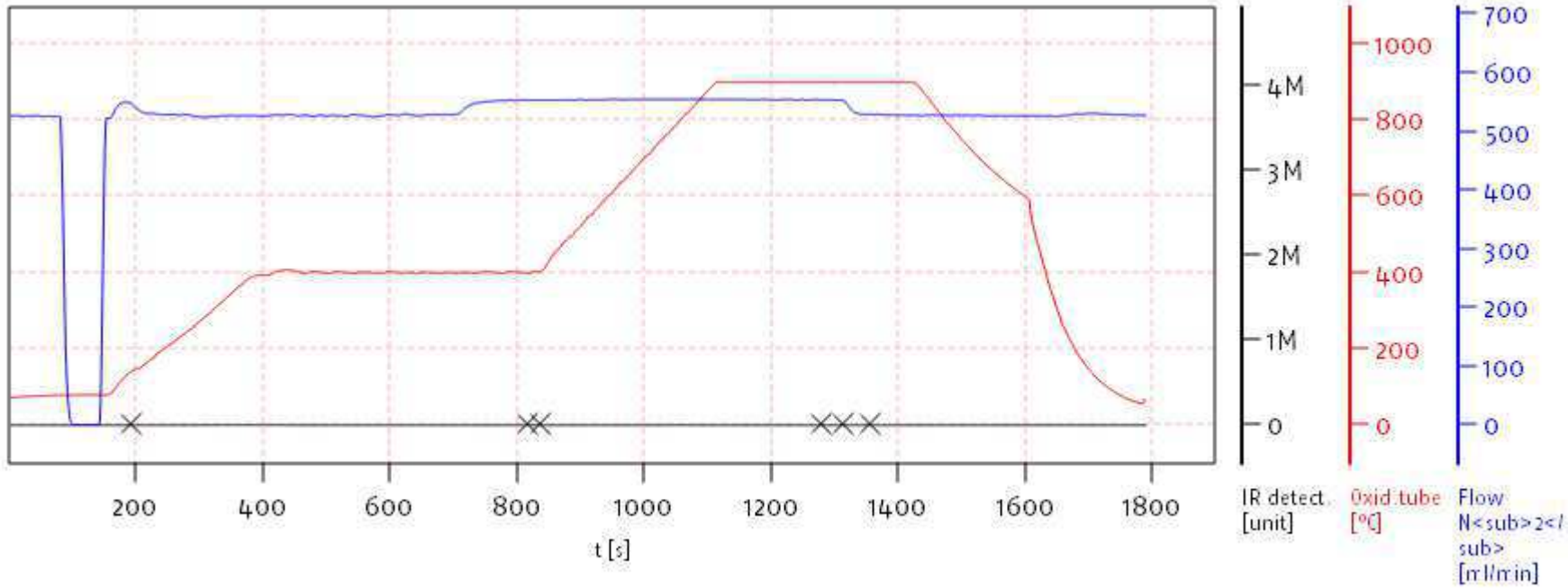
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
41	41	SKL0152-CCB3	512.70		CARBON	12/13/2022 5:28 AM	bl,C2u	0.000	9 397	0.000	0.000	267	2 995	0.000	0.000	0.9411	1.0000



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Soli TOC Cube, Carbon
Balance: BAL3
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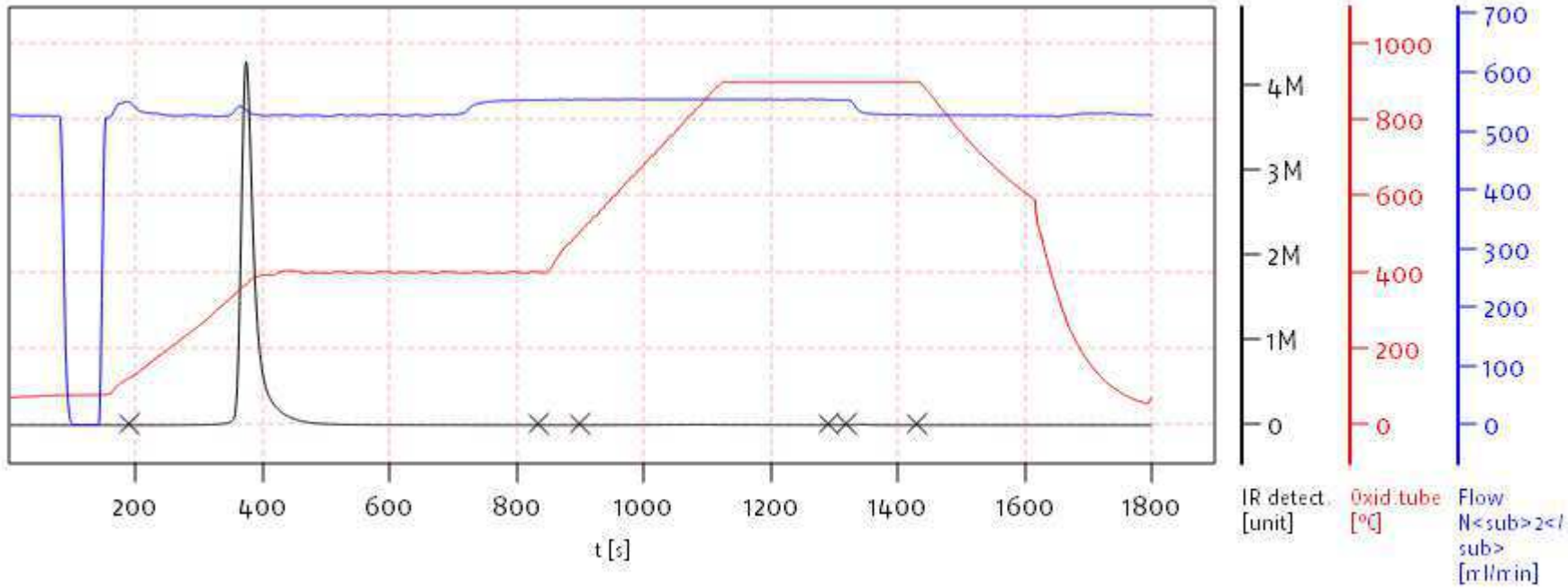
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
42	42	22K0399-19RE1	91.20		CARBON	12/13/2022 5:58 AM	bl	6.432	4 052 944	6.460	0.000	8 496	42 928	6.432	0.028	0.9411	1.0000



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EXCELLENCE IN ELEMENTS

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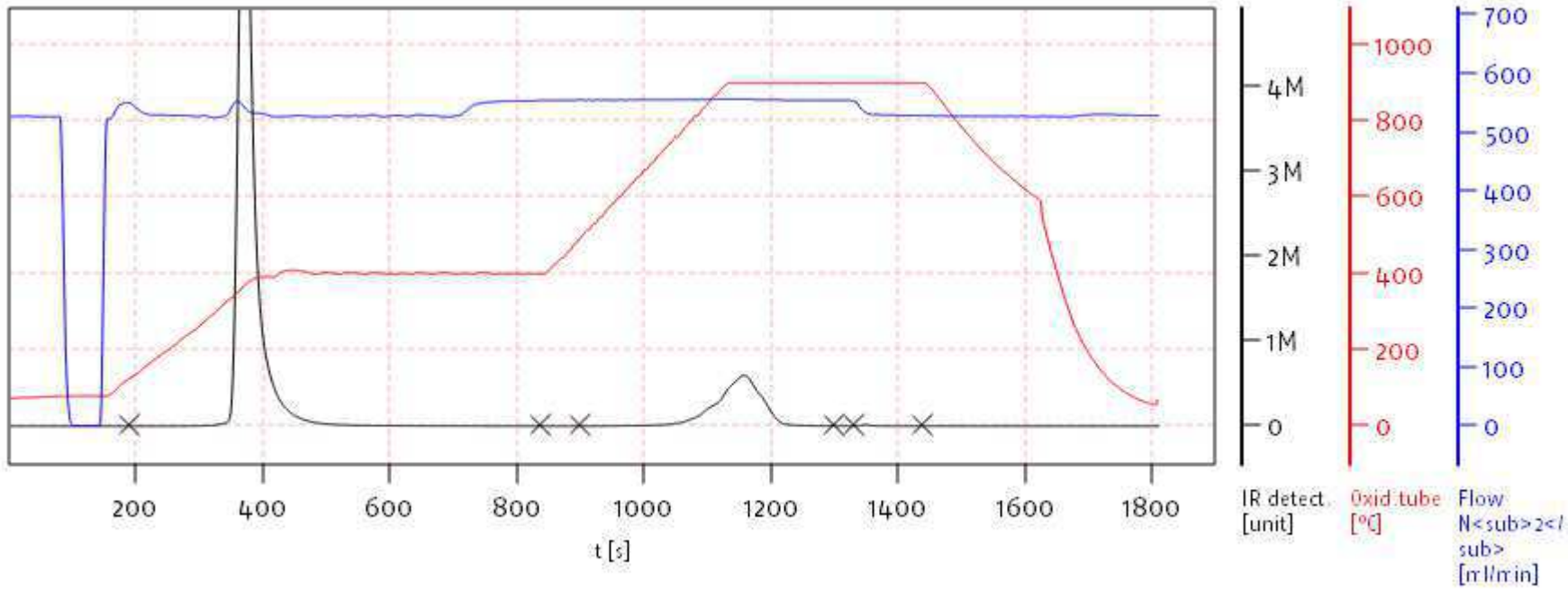
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
43	43	22K0399-22RE1	195.00		CARBON	12/13/2022 6:29 AM	bl	5.918	7 948 561	7.335	0.000	13 399	1 810 269	5.918	1.416	0.9411	1.0000



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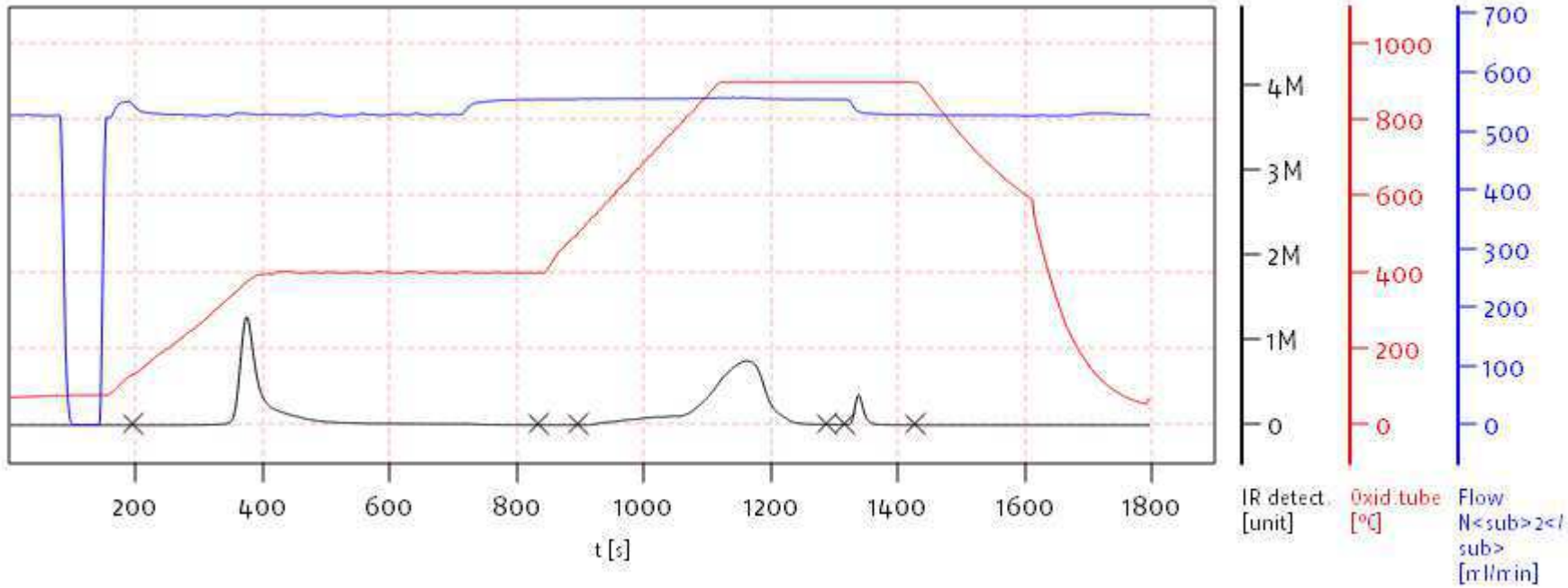
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
44	44	22K0399-24RE1	184.20		CARBON	12/13/2022 6:59 AM	bl	1.691	1 959 436	4.217	0.162	219 741	3 032 263	1.529	2.526	0.9411	1.0000



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Balance: BAL3
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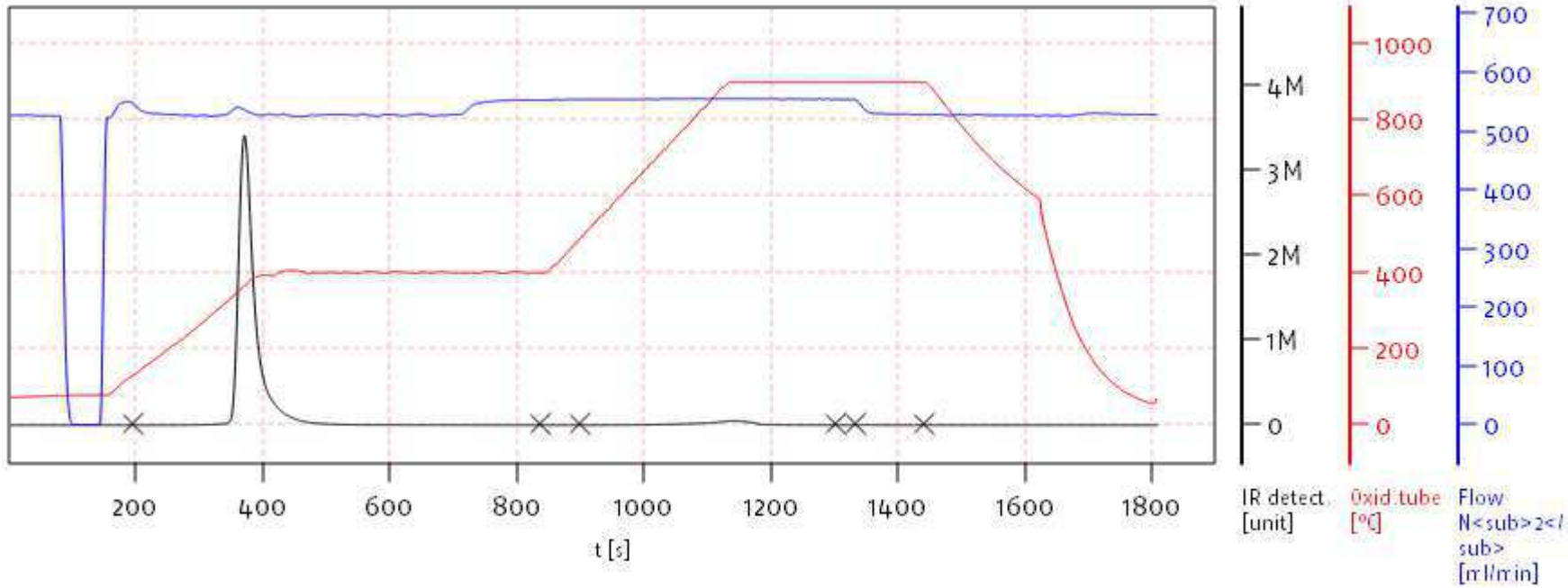
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
45	45	22K0399-25RE1	113.00		CARBON	12/13/2022 7:30 AM	bl	4.953	3 868 061	5.160	0.000	4 296	177 838	4.953	0.207	0.9411	1.0000



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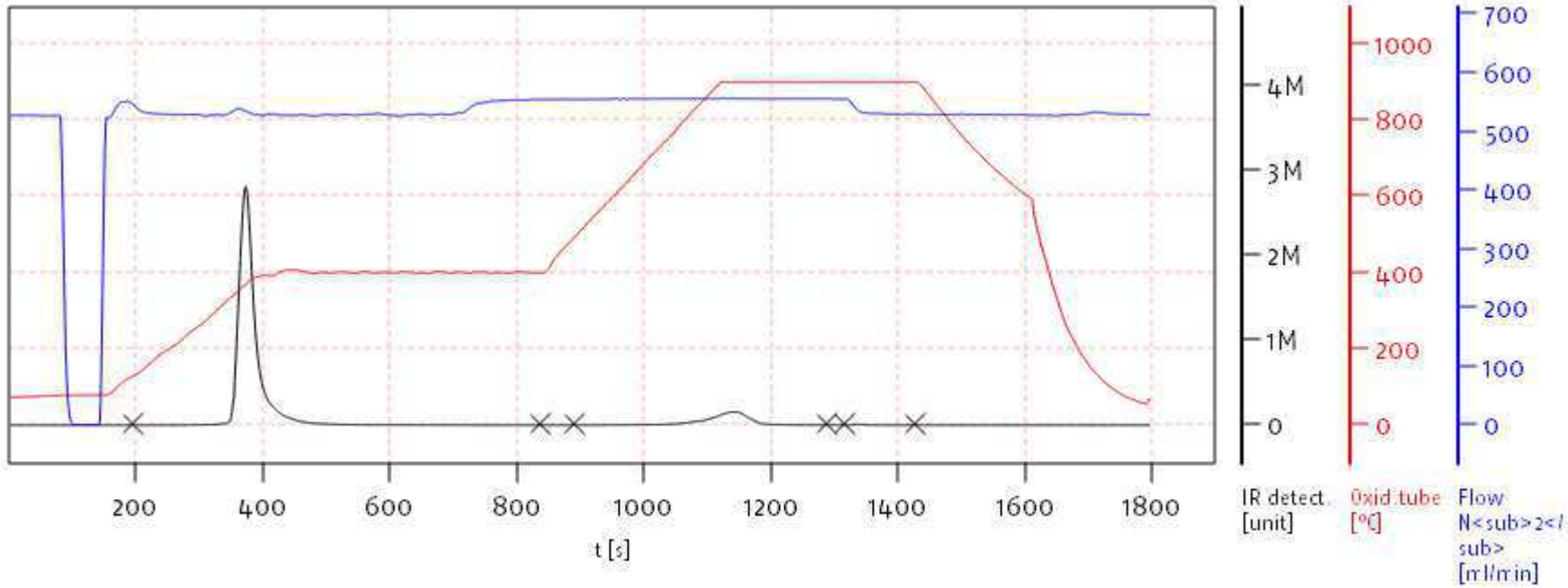
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
46	46	BKL0147-DUP2	101.70		CARBON	12/13/2022 8:00 AM	bl	4.550	3 203 034	5.184	0.000	7 464	442 716	4.550	0.633	0.9411	1.0000



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Soli TOC Cube, Carbon
Balance: BAL3
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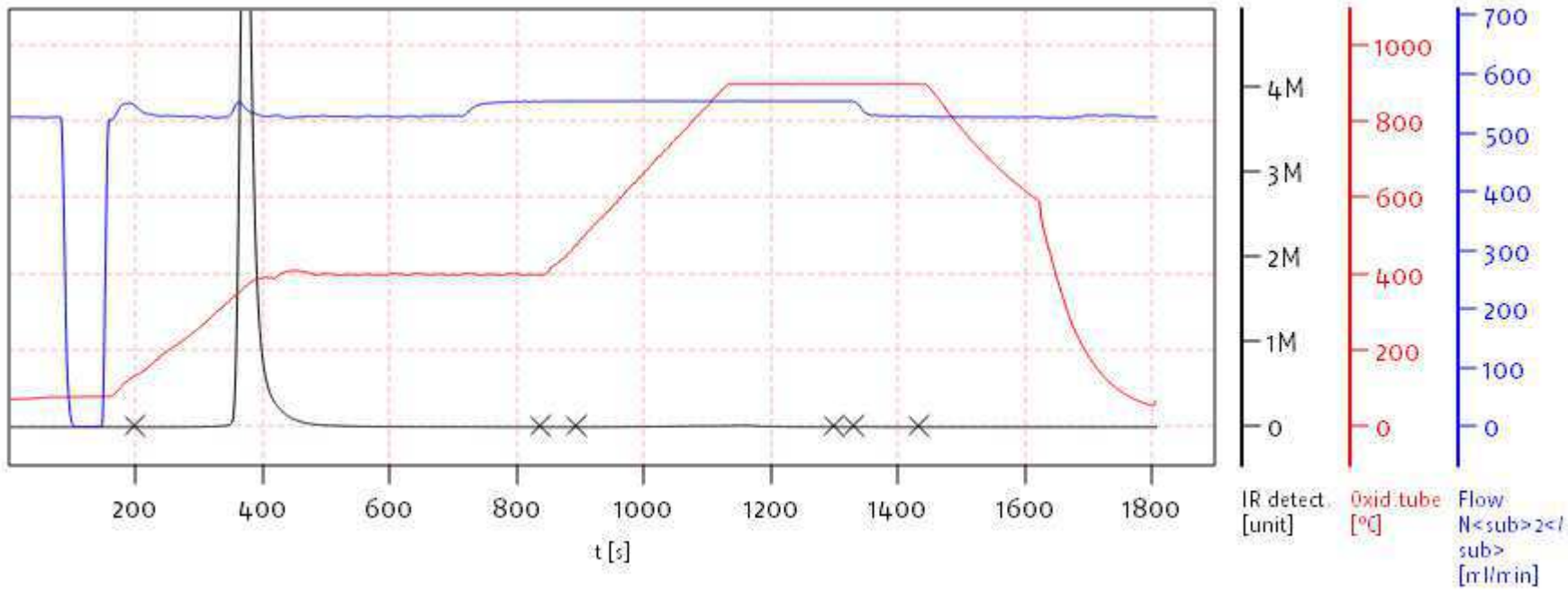
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
47	47	BKL0147-MS2	95.20	0.0106	CARBON	12/13/2022 8:30 AM	bl	10.323	6 772 154	10.442	0.000	3 703	99 644	10.323	0.119	0.9411	1.0000



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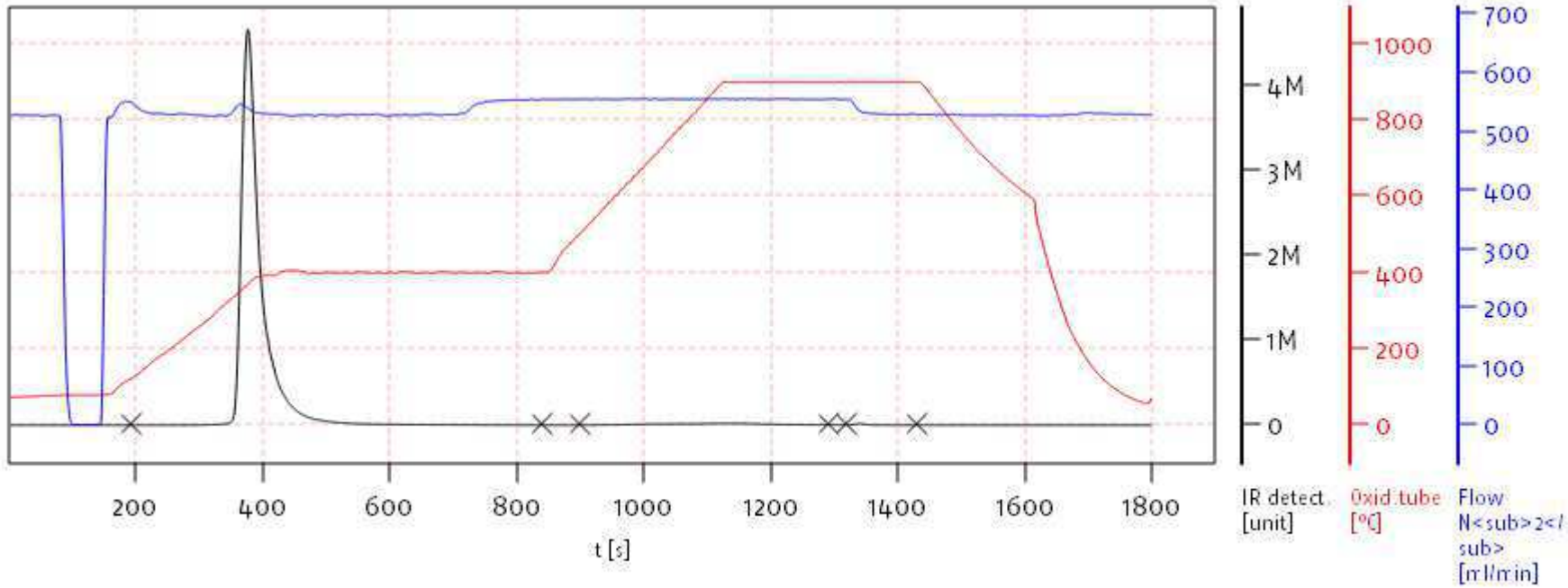
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
48	48	BKL0147-MSD2	97.90	0.0096	CARBON	12/13/2022 9:01 AM	bl	8.995	6 071 376	9.193	0.000	14 293	151 837	8.995	0.198	0.9411	1.0000



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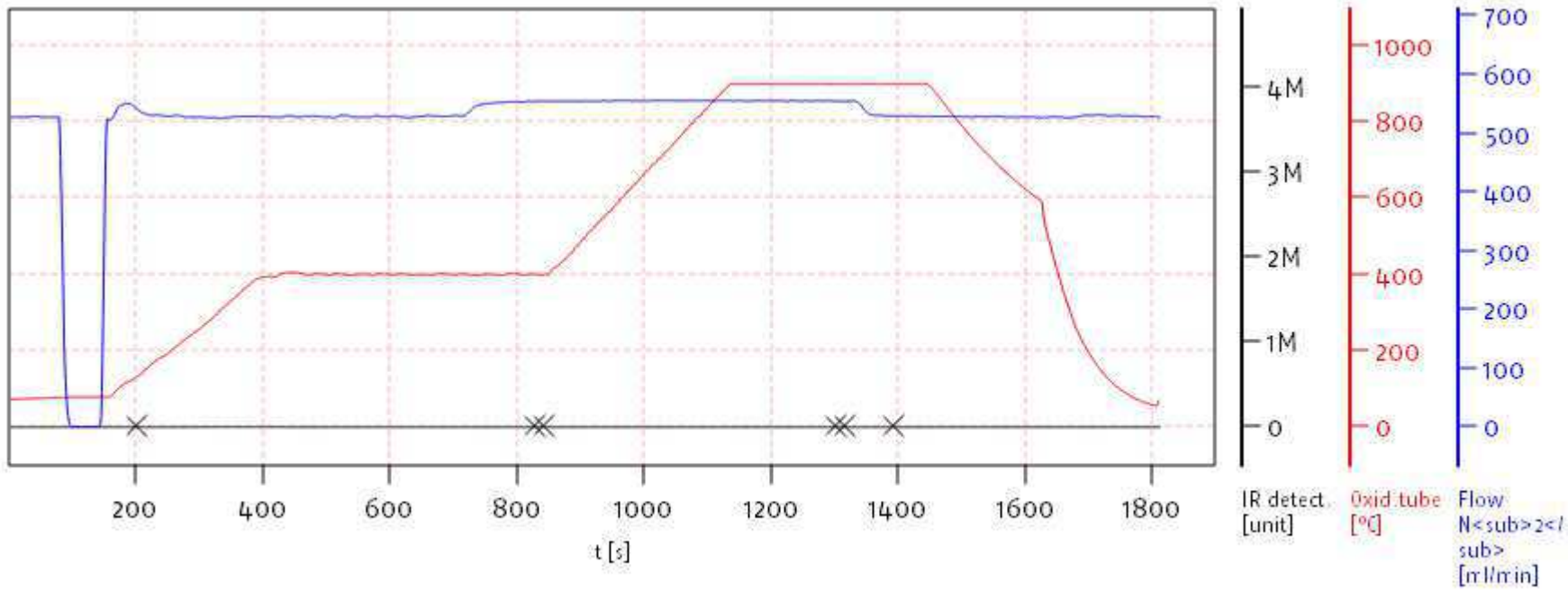
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
49	49	BLANK	1.00		CARBON	12/13/2022 9:31 AM	bl	0.000	8 328	0.000	0.000	206	987	0.000	0.000	0.9411	1.0000



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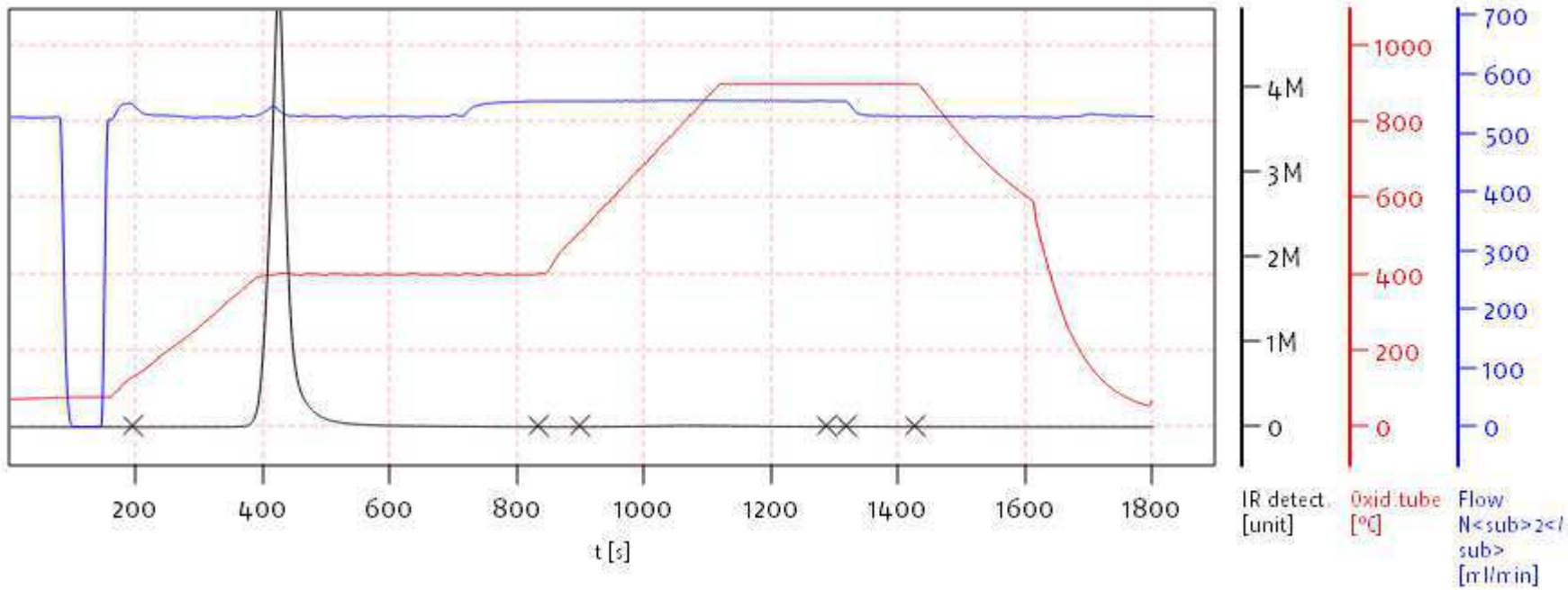
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
50	50	Dfactor	20.20		CARBON	12/13/2022 10:02 AM	bl	44.446	6 237 290	45.222	0.000	14 050	127 836	44.446	0.776	0.9338	1.0000



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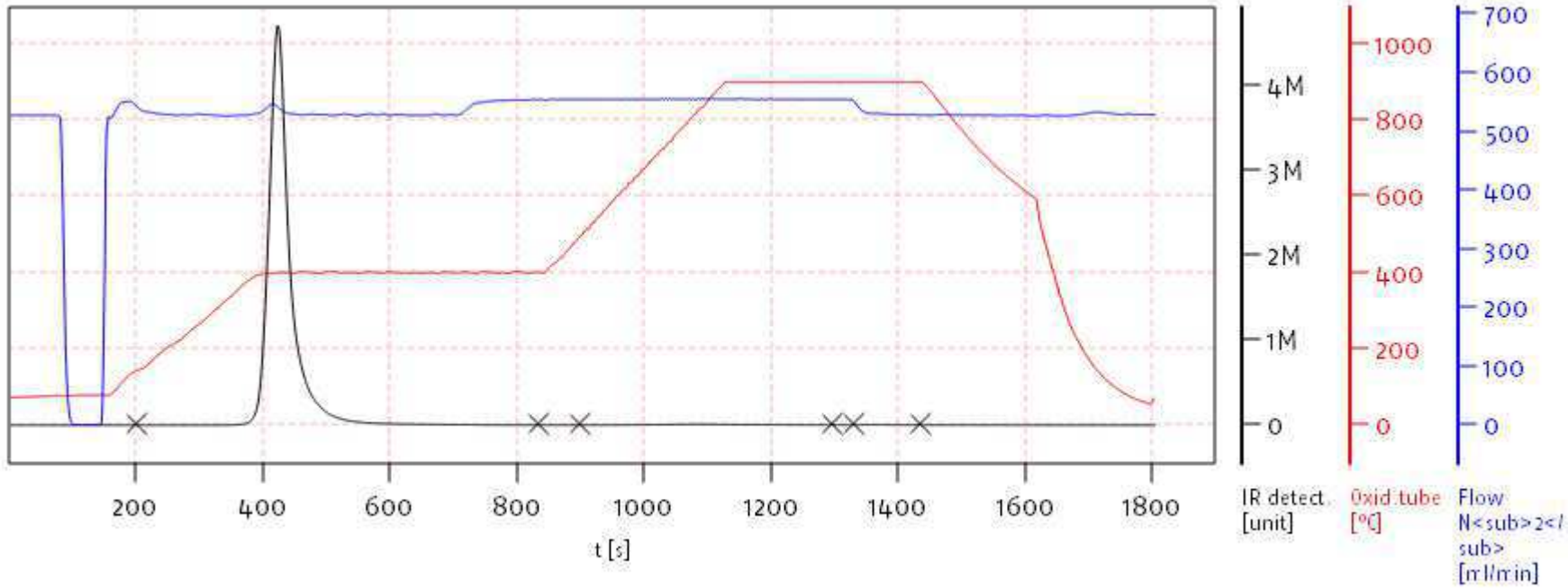
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
51	51	Dfactor	21.80		CARBON	12/13/2022 10:32 AM	bl	44.446	6 815 810	44.809	0.000	13 499	77 749	44.446	0.364	0.9219	1.0000



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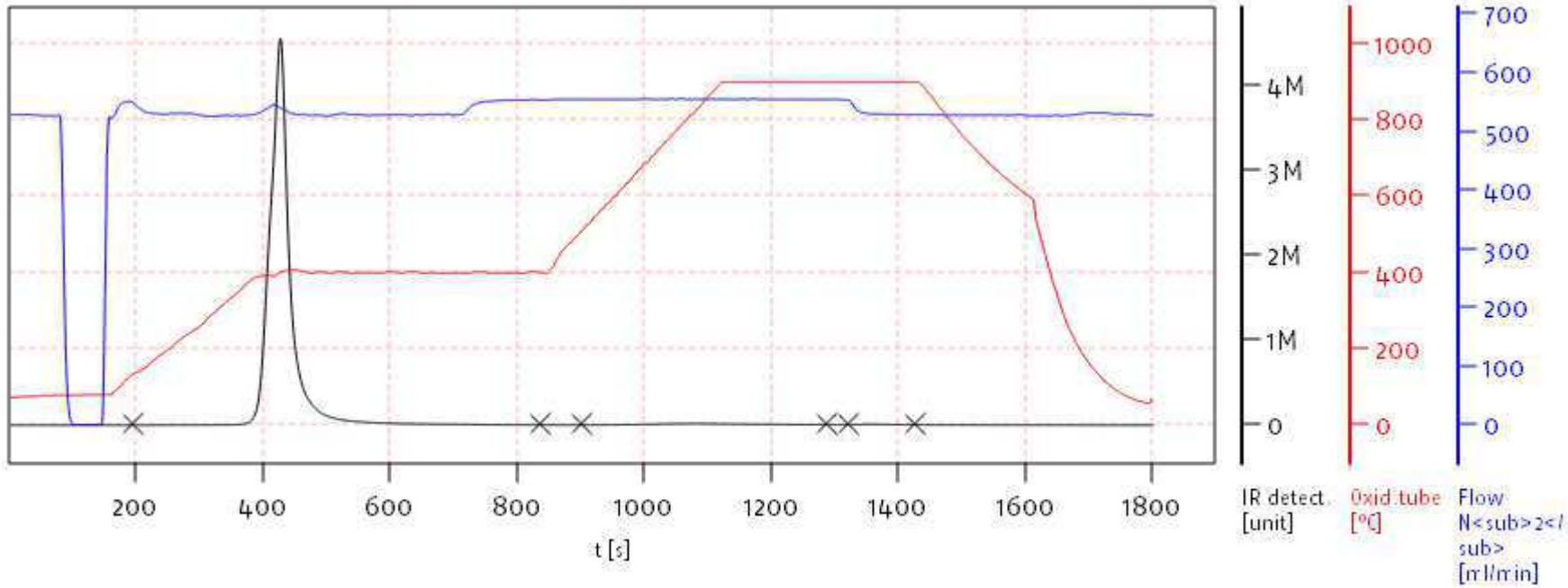
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
52	52	SKL0152-CCV4	20.60		CARBON	12/13/2022 11:03 AM	bl	43.020	6 194 795	43.885	0.011	28 040	141 694	43.008	0.865	0.9279	1.0000



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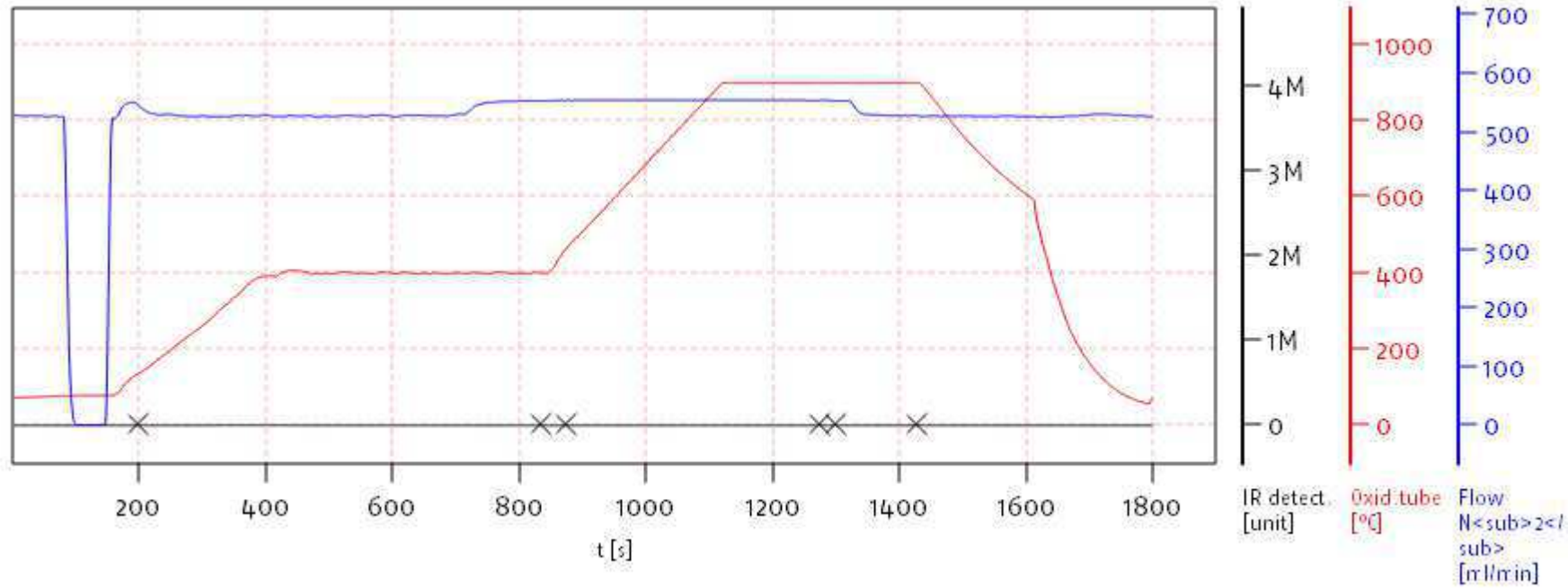
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
53	53	SKL0152-CCB4	501.40		CARBON	12/13/2022 11:33 AM	bl,C3u,C2u	0.000	8 113	0.000	0.000	476	175	0.000	0.000	0.9279	1.0000



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Balance: BAL3
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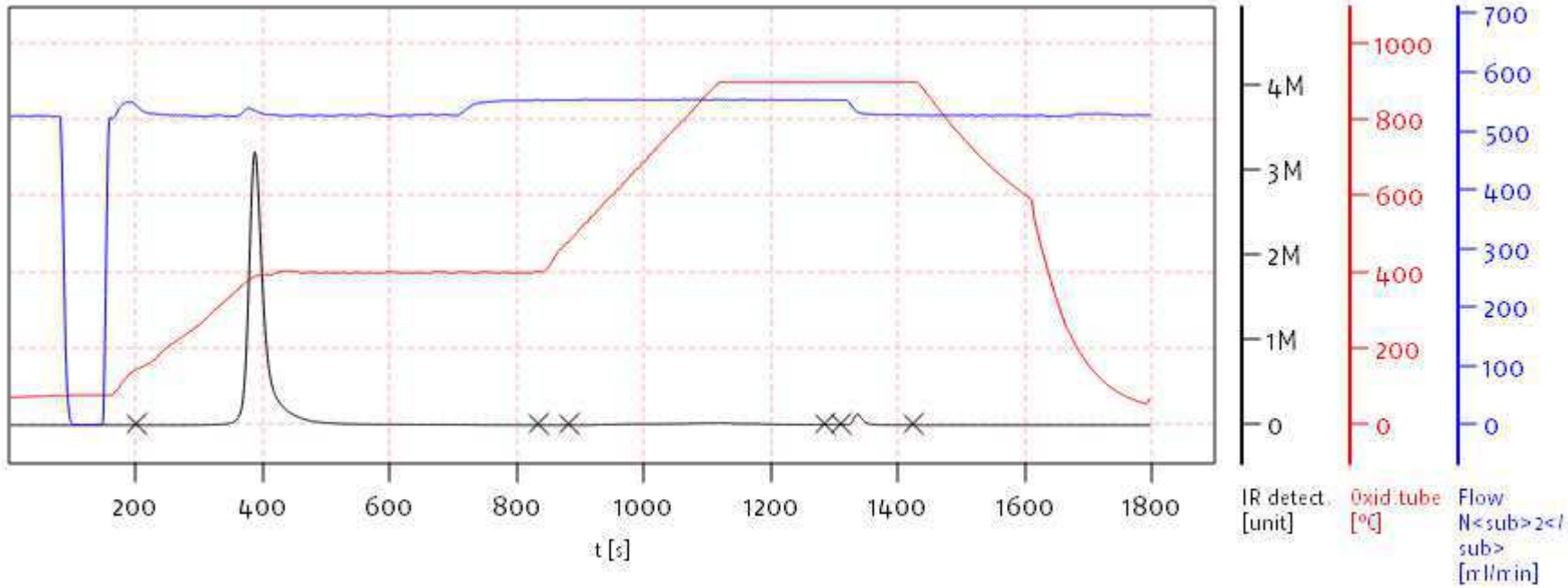
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
54	54	22K0399-32RE1	187.50		CARBON	12/13/2022 12:03 PM	bl	2.717	3 507 793	2.845	0.050	87 080	181 882	2.667	0.128	0.9279	1.0000



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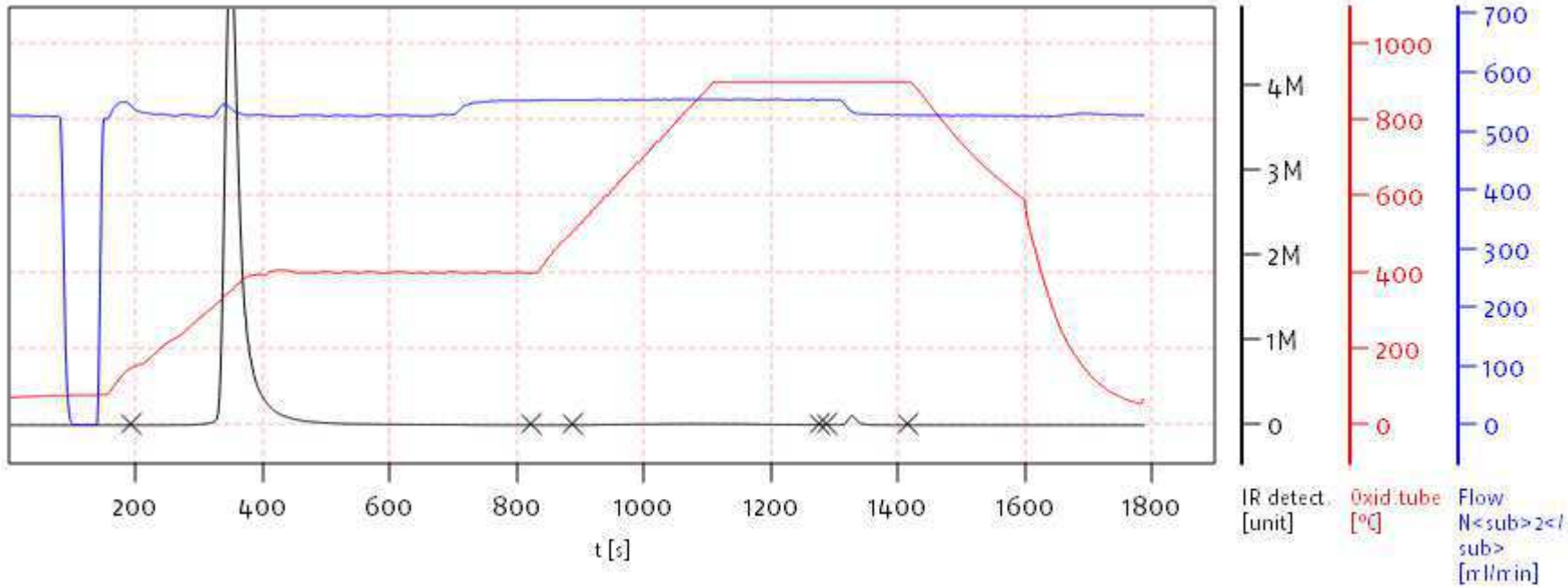
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
55	55	22K0399-40RE1	182.80		CARBON	12/13/2022 12:34 PM	bl	4.886	6 191 655	4.973	0.042	75 618	129 392	4.844	0.087	0.9279	1.0000



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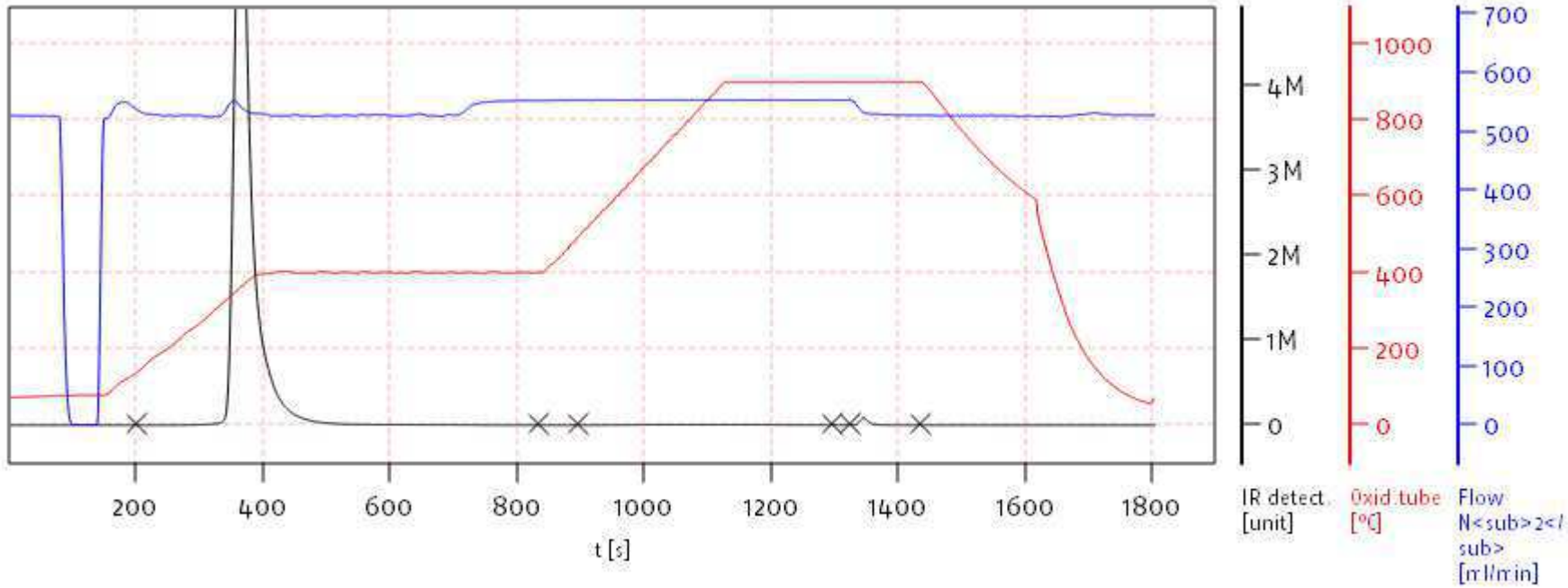
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
56	56	22K0399-41RE1	95.00		CARBON	12/13/2022 1:04 PM	bl	12.247	8 099 185	12.299	0.042	52 172	58 632	12.205	0.052	0.9279	1.0000



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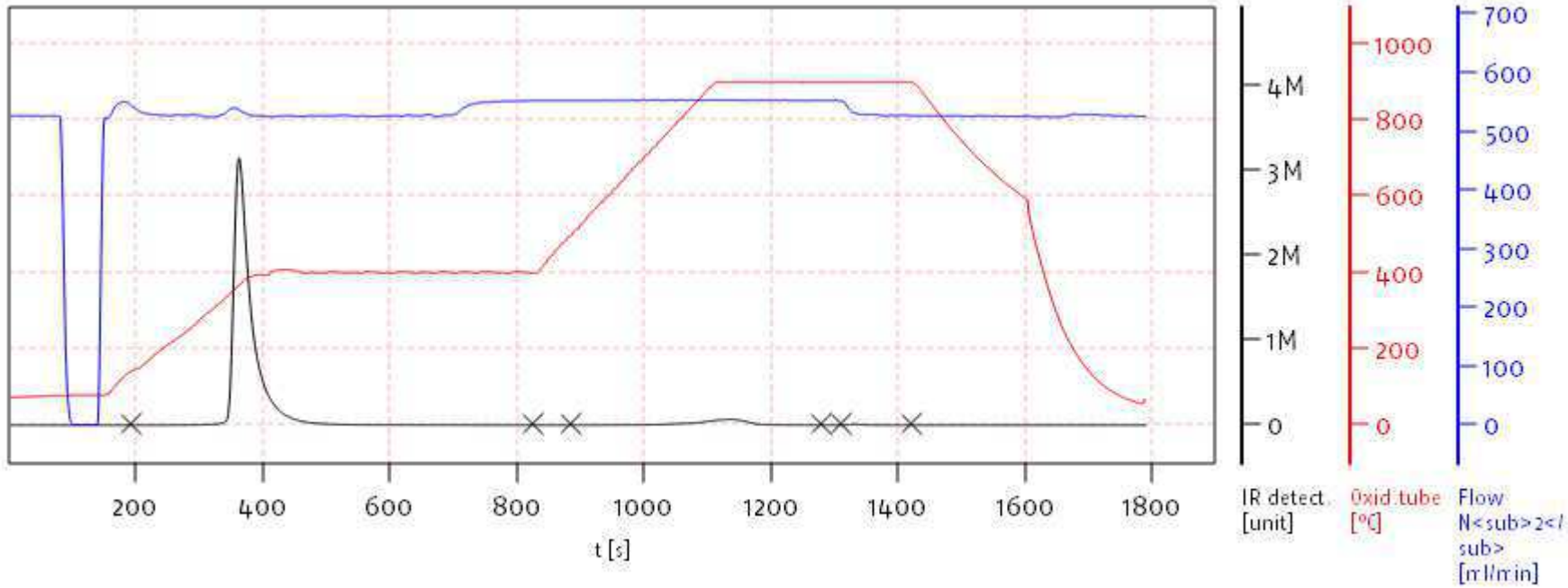
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
57	57	22K0399-44RE1	92.60		CARBON	12/13/2022 1:34 PM	bl	5.887	3 821 678	6.230	0.000	10 629	231 874	5.887	0.343	0.9279	1.0000



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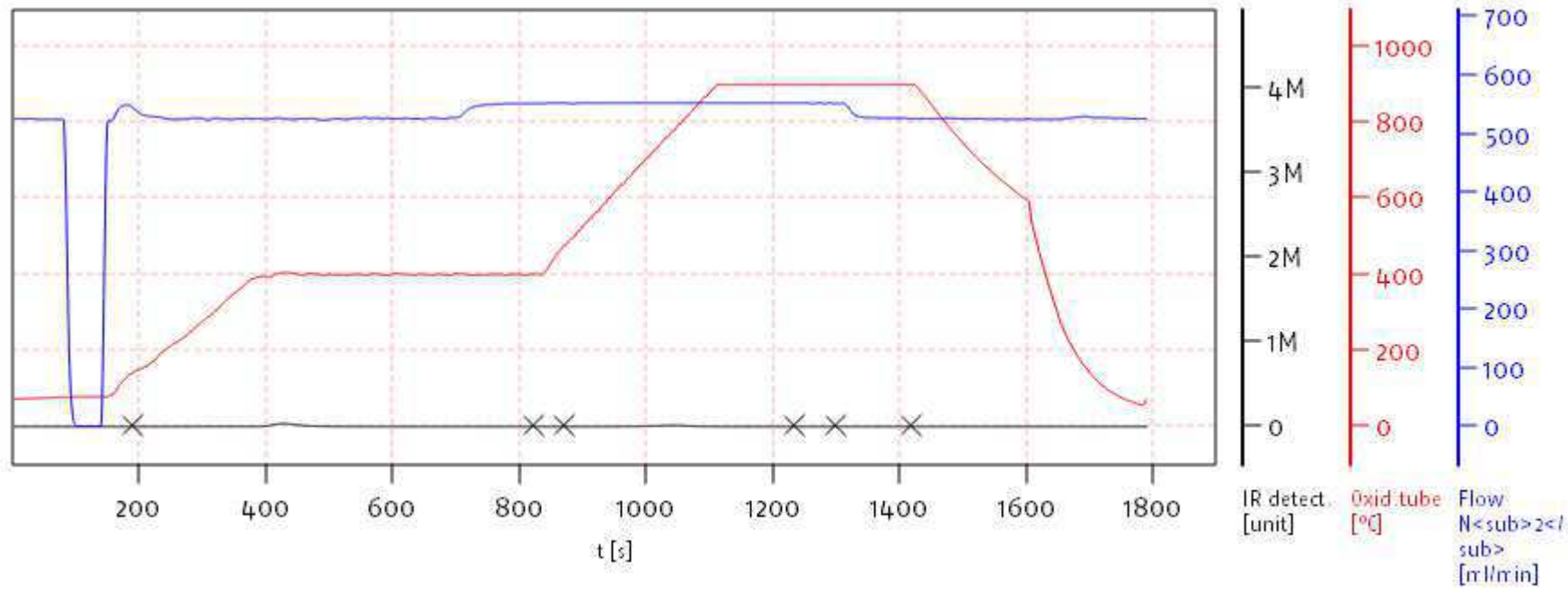
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
58	58	BKL0266-MRL1	500.90		CARBON	12/13/2022 2:05 PM	bl,C2u	0.013	73 336	0.016	0.000	439	35 609	0.013	0.003	0.9279	1.0000



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elementar
EXCELLENCE IN ELEMENTS

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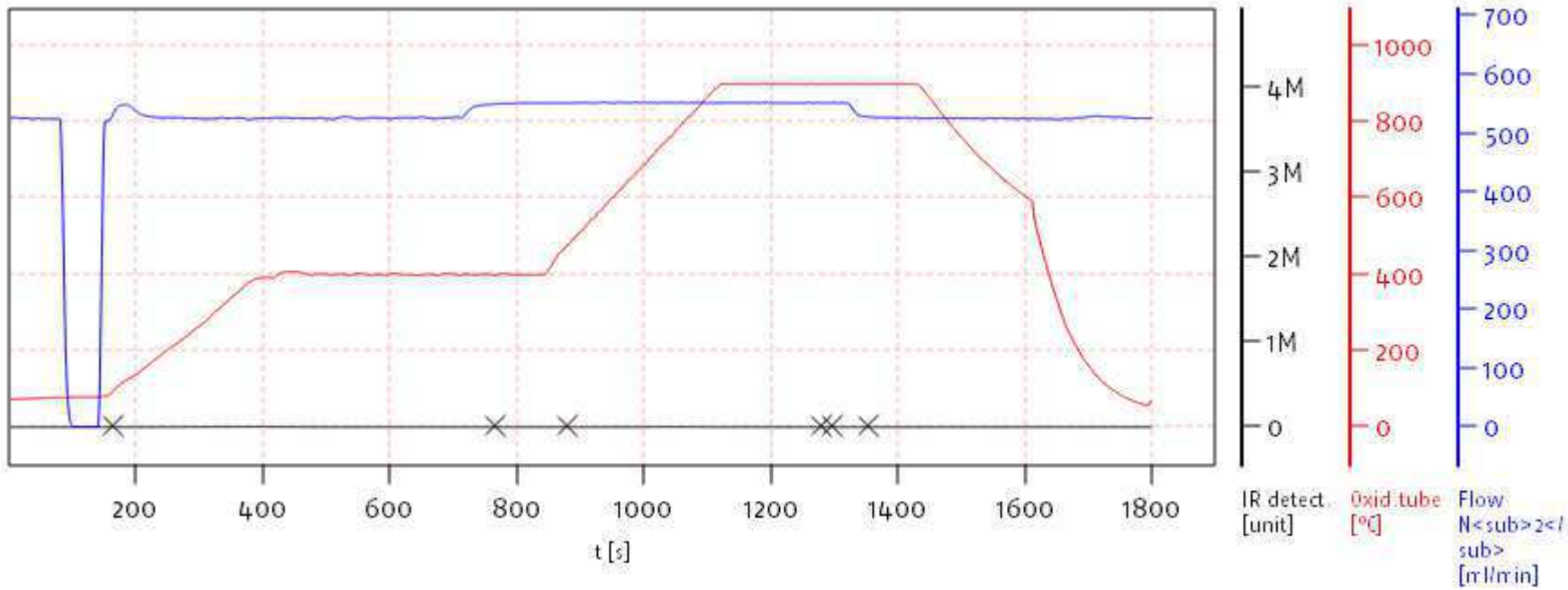
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
59	59	BKL0266-BLK1	503.50		CARBON	12/13/2022 2:35 PM	bl,C2u	0.000	23 606	0.000	0.000	243	11 950	0.000	0.000	0.9279	1.0000



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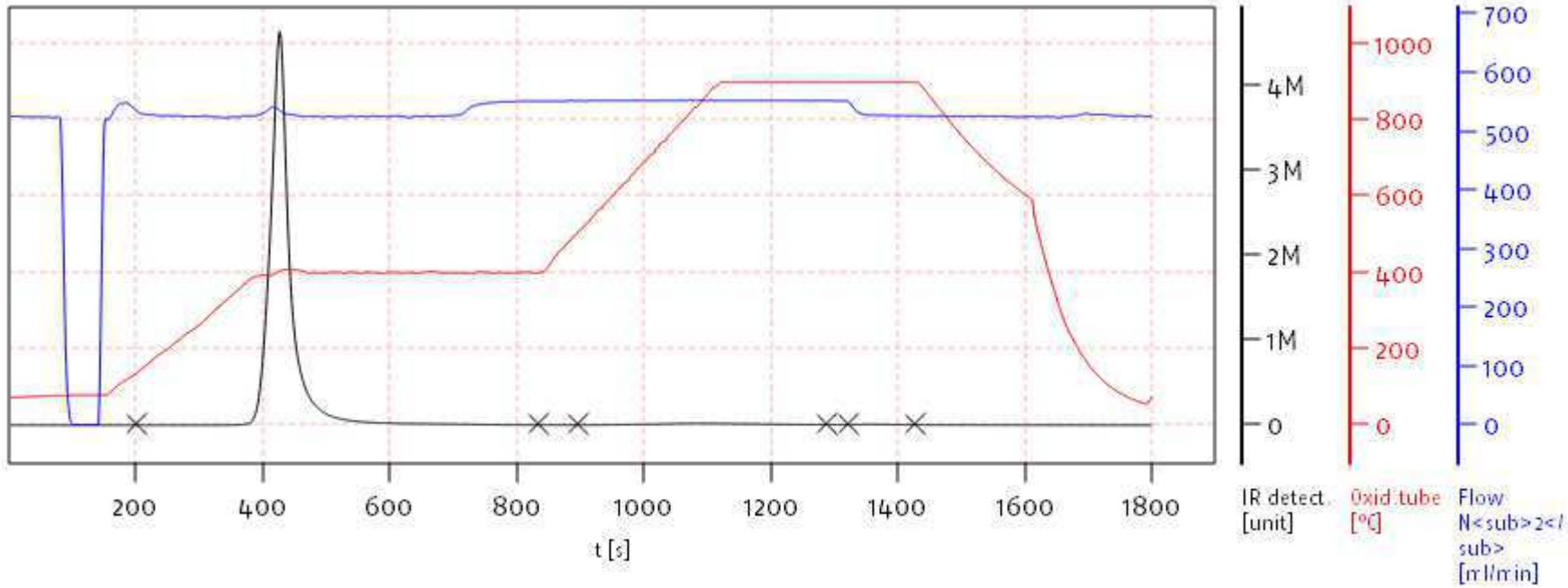
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
60	60	BKL0266-BS1	21.00		CARBON	12/13/2022 3:05 PM	bl	43.001	6 313 418	43.974	0.000	26 142	158 539	43.001	0.973	0.9279	1.0000



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Balance: BAL3
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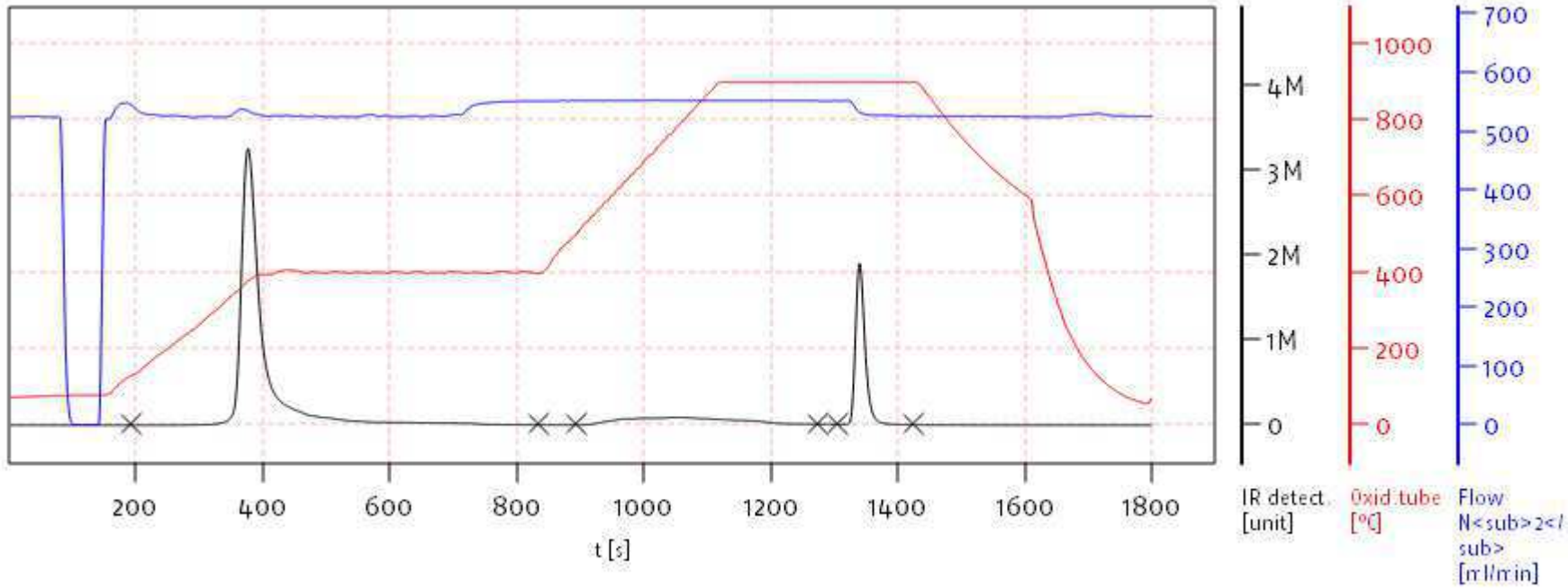
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
61	61	BKL0266-SRM1	293.50		CARBON	12/13/2022 3:36 PM	bl	2.910	4 644 123	3.292	0.650	1 259 513	750 304	2.260	0.382	0.9279	1.0000



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Balance: BAL3
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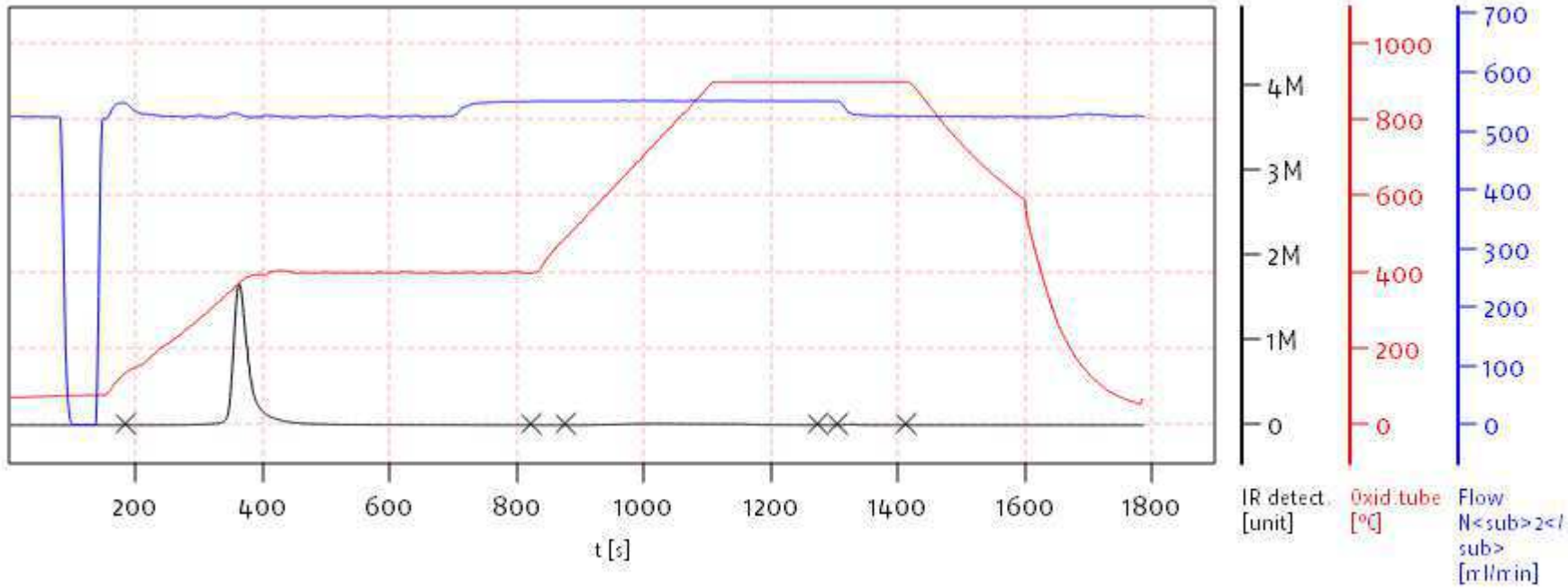
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
62	62	22L0105-01	193.40		CARBON	12/13/2022 4:06 PM	bl	1.359	1 856 443	1.440	0.000	8 254	127 336	1.359	0.081	0.9279	1.0000



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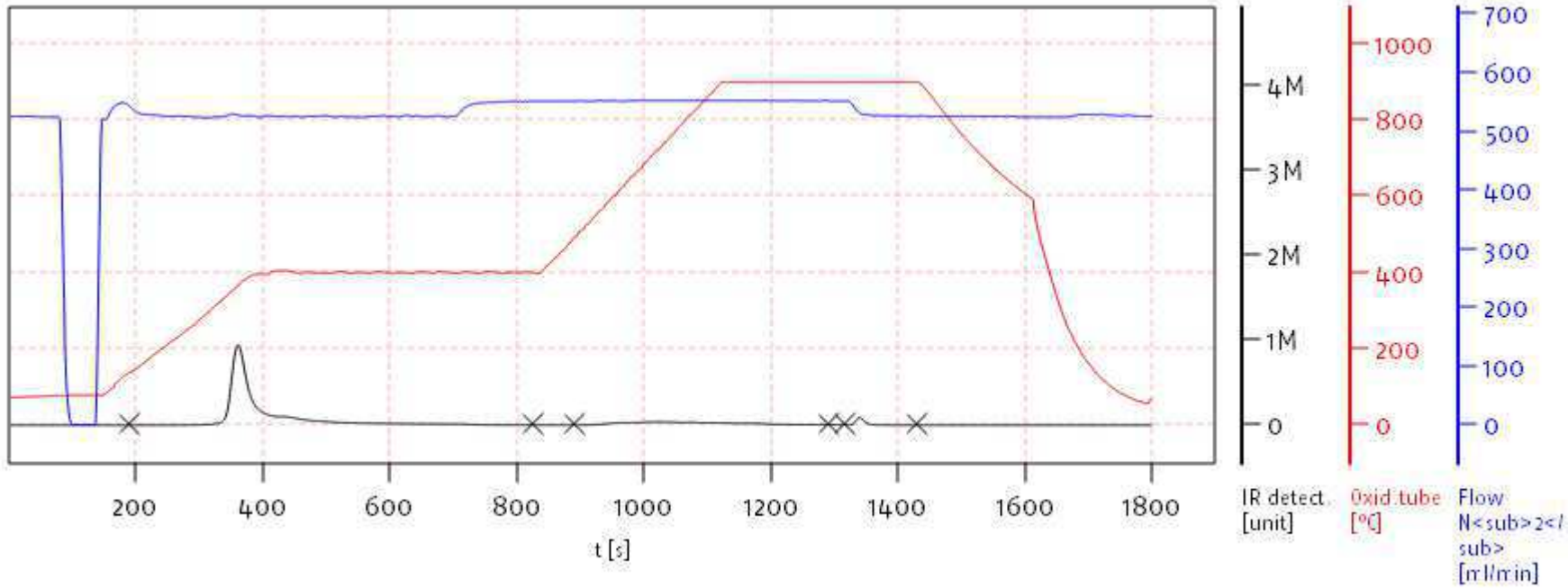
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
63	63	BKL0266-DUP1	198.60		CARBON	12/13/2022 4:36 PM	bl	1.136	1 566 177	1.349	0.022	55 208	300 102	1.114	0.213	0.9279	1.0000



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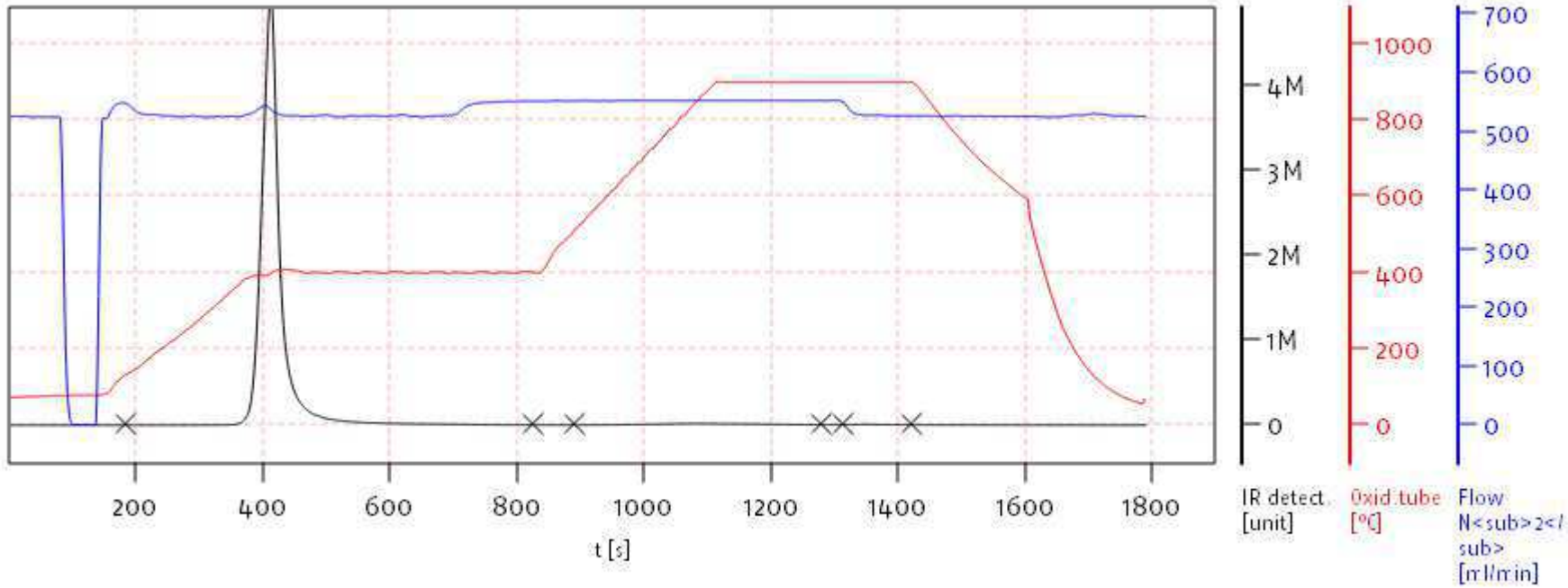
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
64	64	SKL0152-CCV5	21.00		CARBON	12/13/2022 5:07 PM	bl	42.980	6 310 370	43.848	0.000	24 771	144 332	42.980	0.868	0.9279	1.0000



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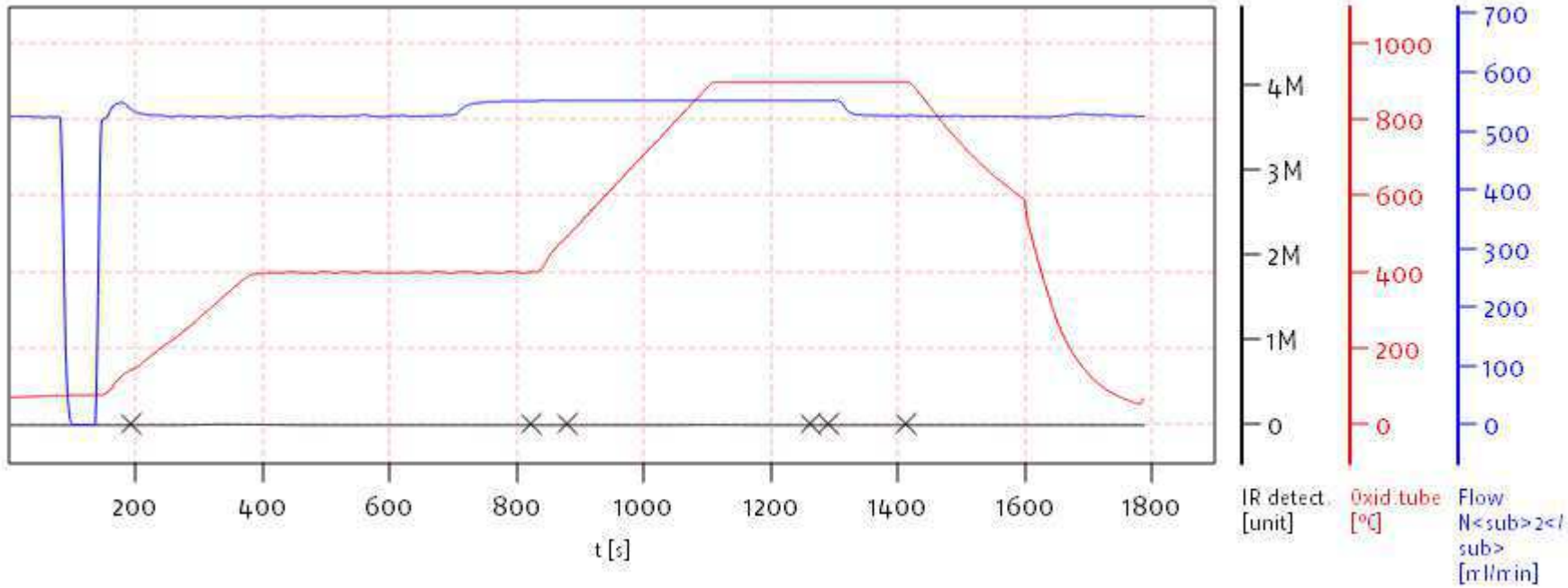
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
65	65	SKL0152-CCB5	522.60		CARBON	12/13/2022 5:37 PM	bl,C2u	0.003	38 996	0.003	0.000	319	9 987	0.003	0.000	0.9279	1.0000



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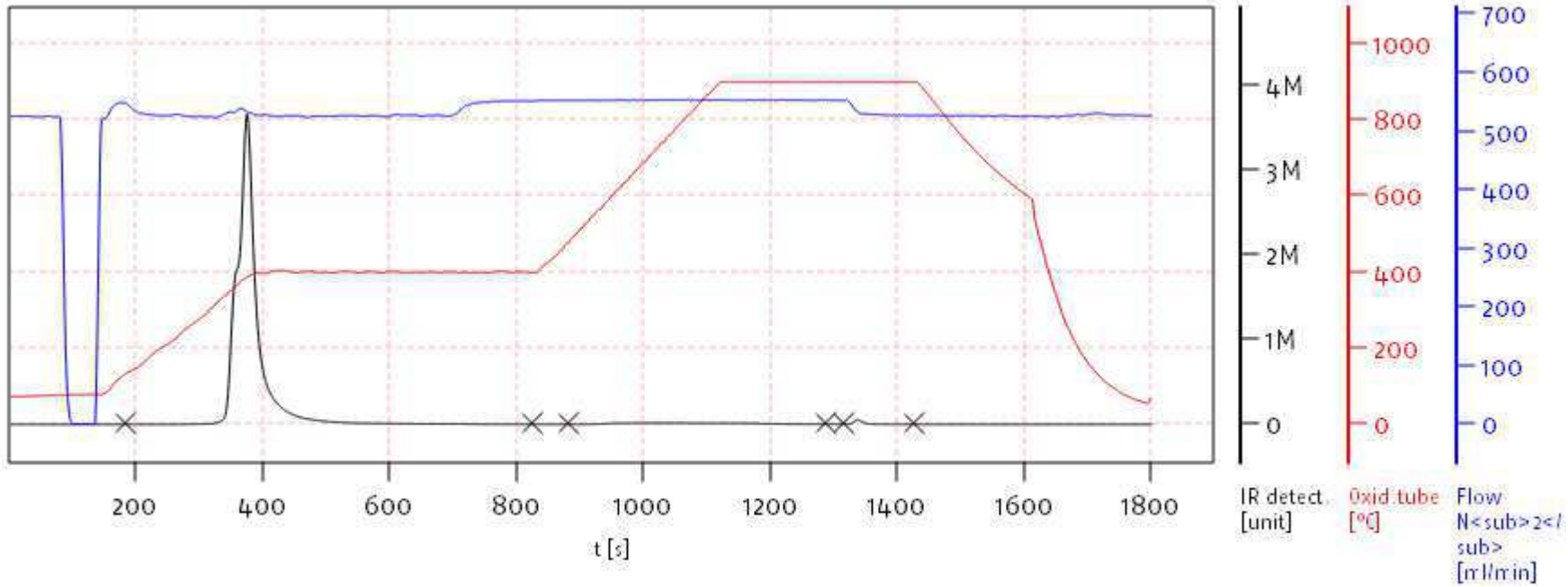
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
66	66	BKL0266-MS1	185.10	0.0100	CARBON	12/13/2022 6:07 PM	bl	3.723	4 813 657	3.833	0.008	36 039	159 030	3.715	0.111	0.9279	1.0000



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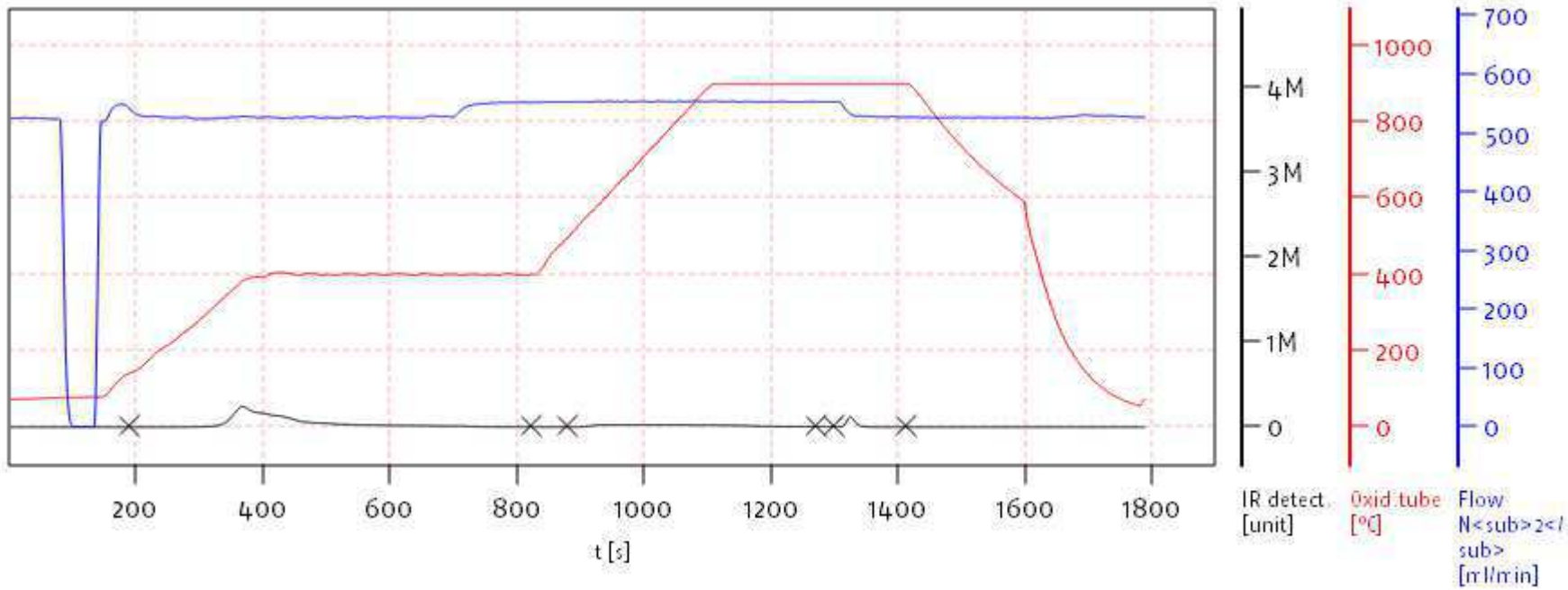
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
67	67	22L0105-02	153.00		CARBON	12/13/2022 6:37 PM	bl	0.914	948 045	1.141	0.049	75 321	250 399	0.865	0.227	0.9279	1.0000



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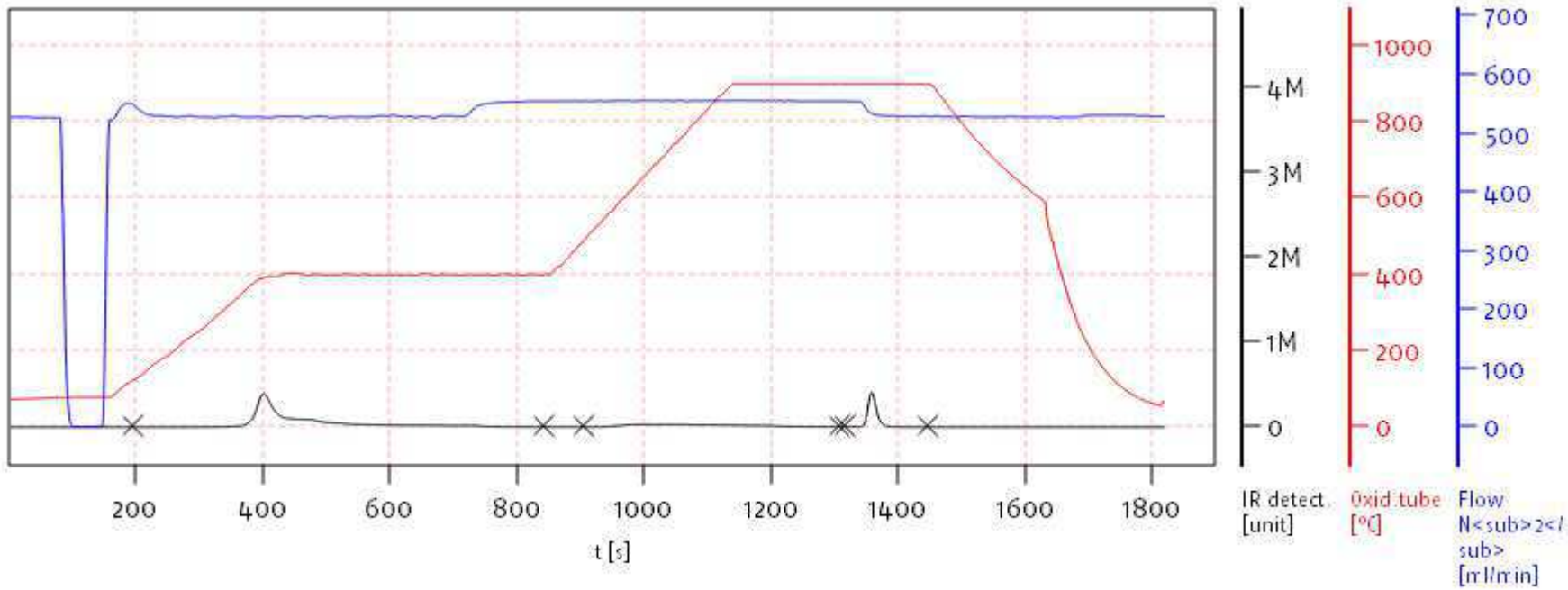
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
68	68	22L0105-03	158.00		CARBON	12/13/2022 7:08 PM	bl	1.054	952 484	1.282	0.212	243 266	259 587	0.842	0.228	0.9279	1.0000



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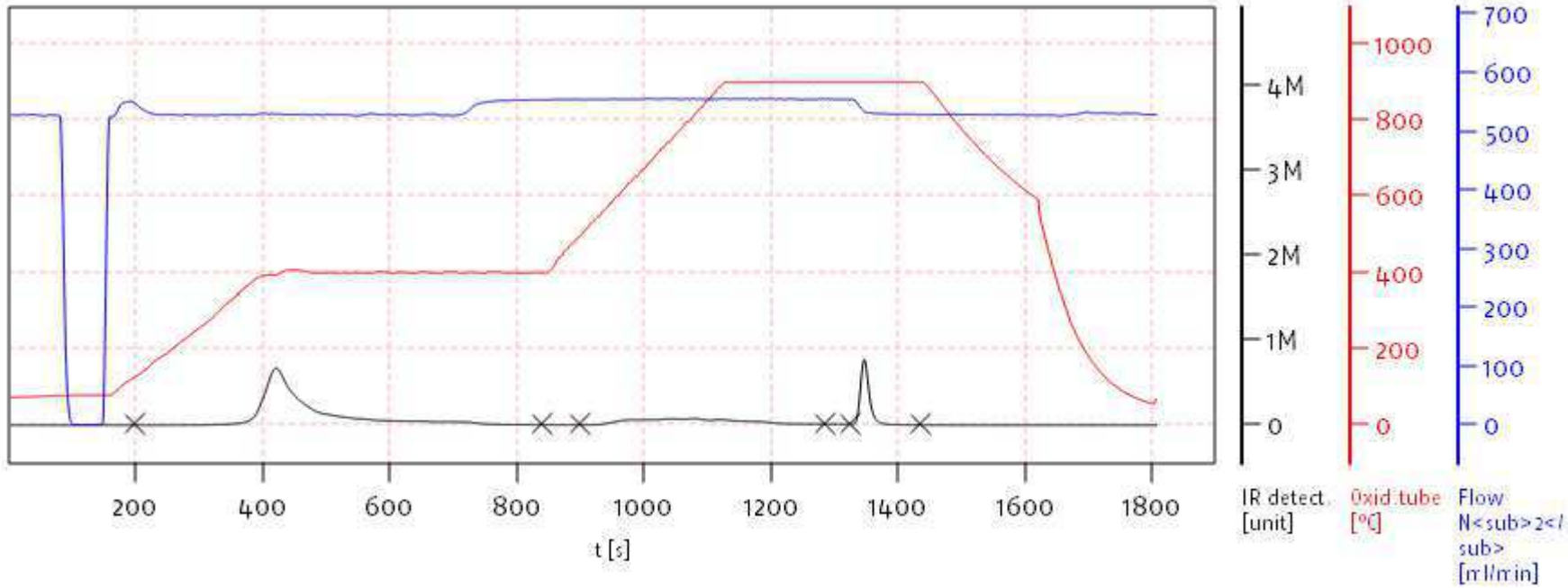
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
69	69	22L0105-04	502.60		CARBON	12/13/2022 7:39 PM	bl	0.725	2 078 009	0.910	0.139	477 100	625 950	0.586	0.185	0.9279	1.0000



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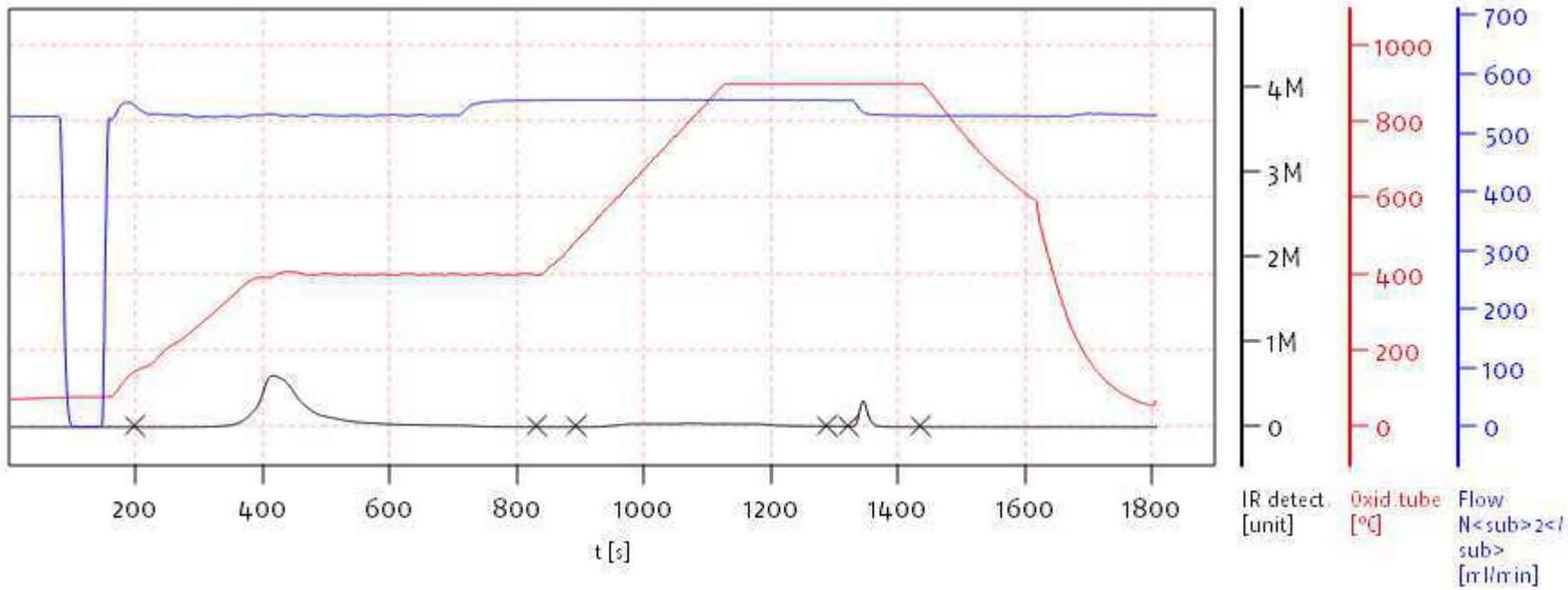
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
70	70	22L0105-05	516.10		CARBON	12/13/2022 8:09 PM	bl	0.621	2 084 158	0.732	0.049	189 293	393 909	0.573	0.110	0.9279	1.0000



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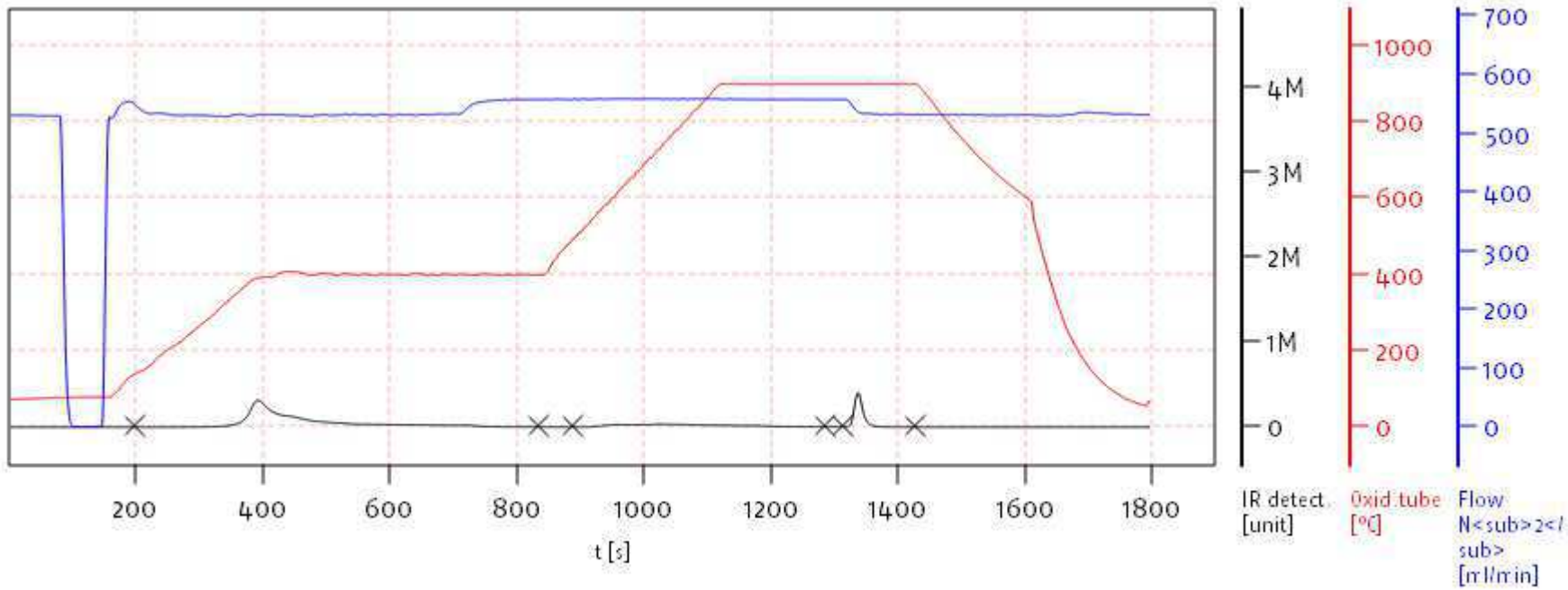
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
71	71	22L0105-06	210.00		CARBON	12/13/2022 8:39 PM	bl	0.864	1 057 629	1.040	0.159	242 577	264 314	0.705	0.175	0.9279	1.0000



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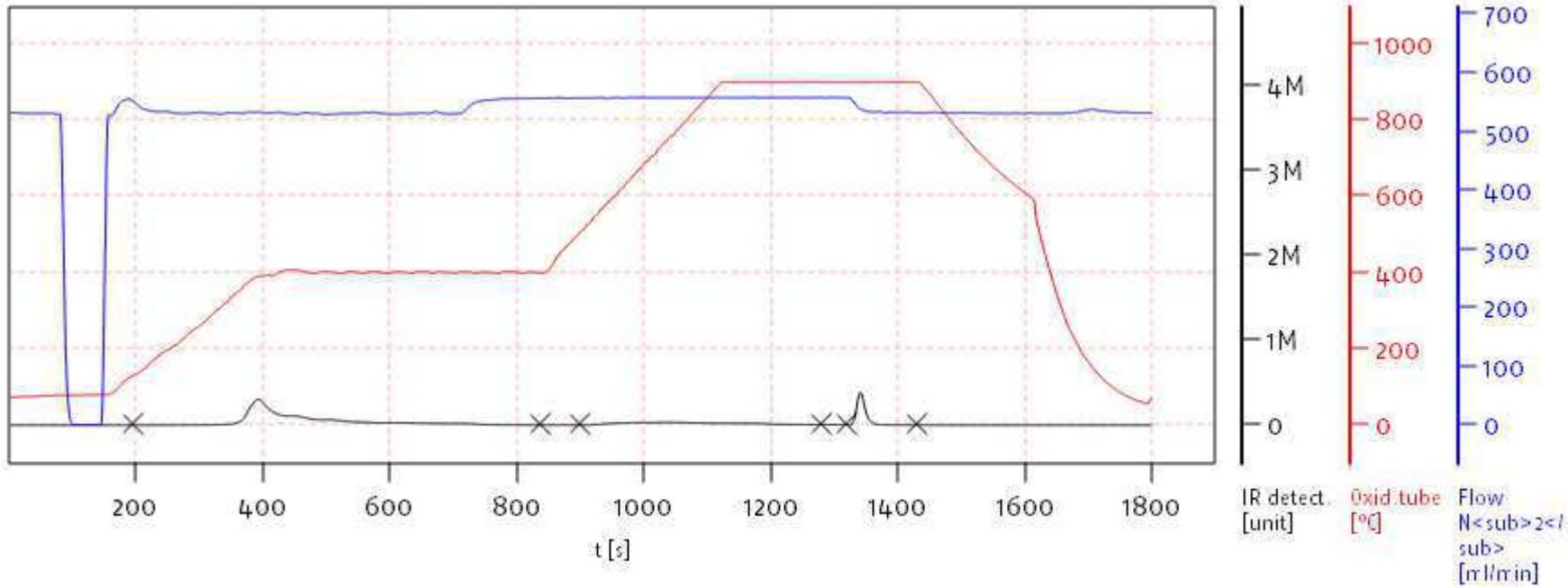
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
72	72	22L0105-07	170.50		CARBON	12/13/2022 9:10 PM	bl	1.011	1 005 427	1.239	0.187	232 322	276 882	0.825	0.227	0.9279	1.0000



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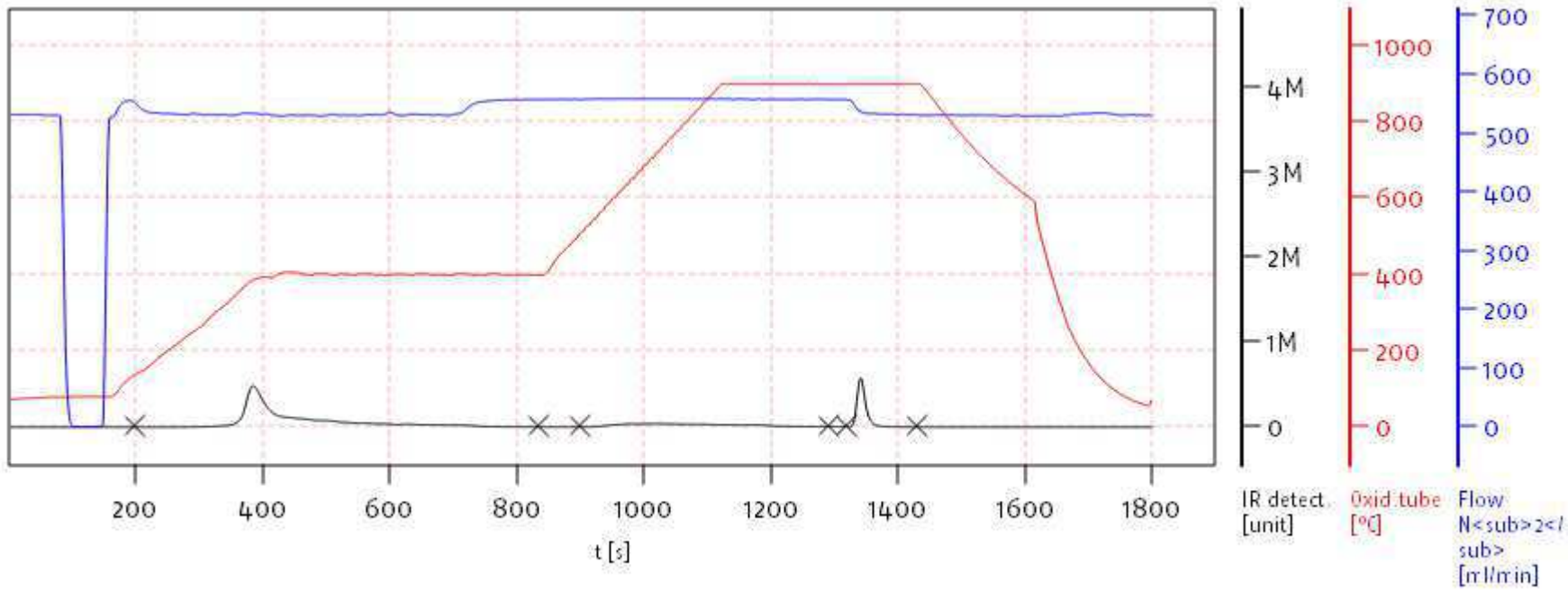
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
73	73	22L0105-08	168.30		CARBON	12/13/2022 9:40 PM	bl	1.397	1 317 992	1.681	0.295	347 081	334 917	1.102	0.284	0.9279	1.0000



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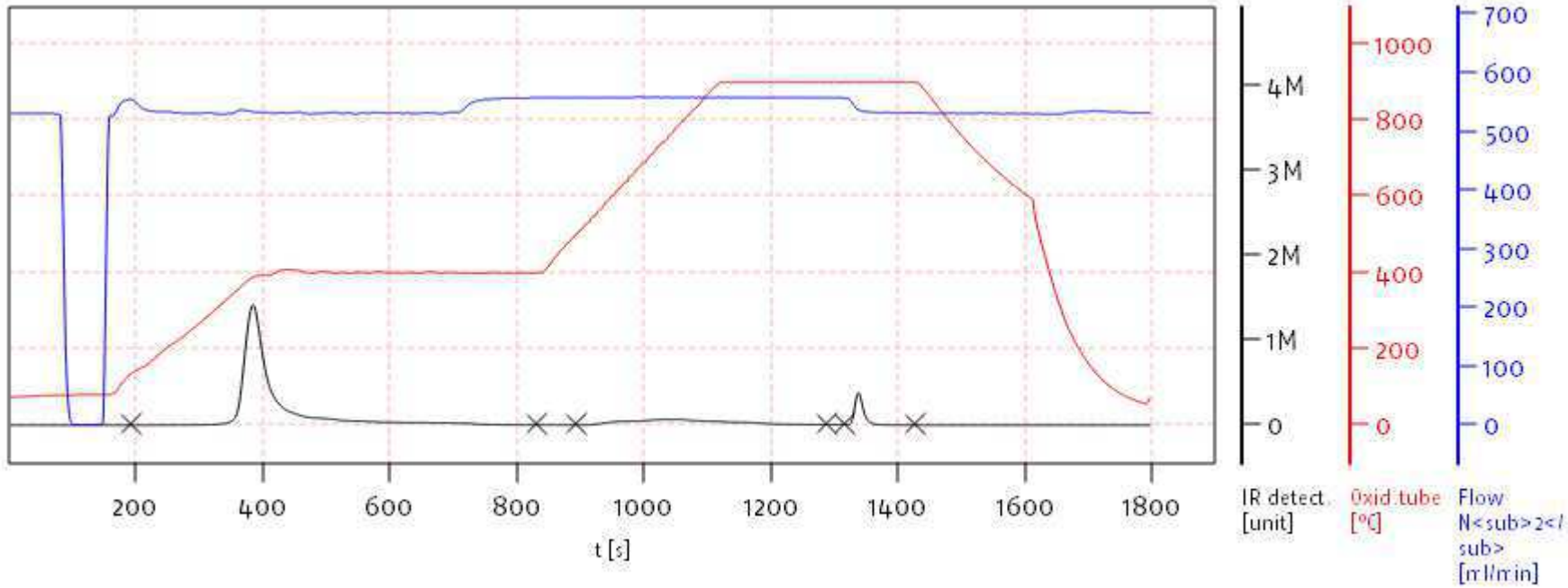
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
74	74	22L0105-09	293.50		CARBON	12/13/2022 10:11 PM	bl	1.379	2 626 316	1.623	0.107	229 177	488 314	1.272	0.244	0.9279	1.0000



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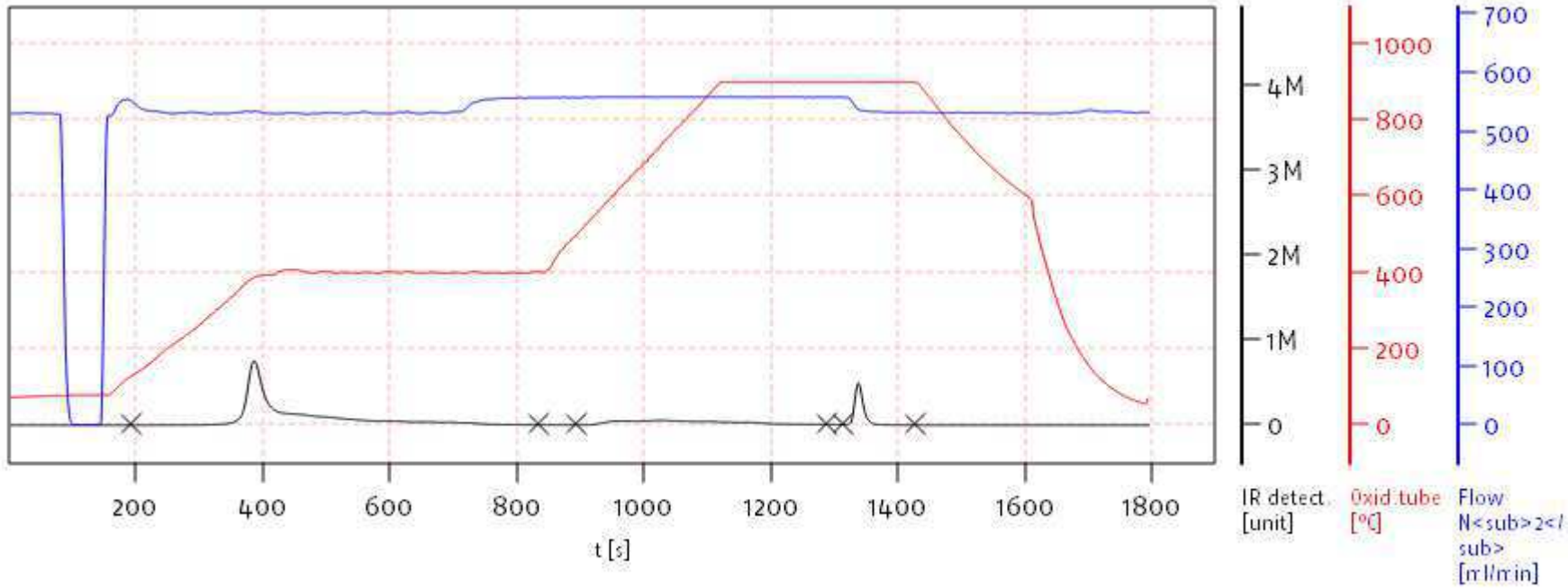
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
75	75	22L0105-10	225.90		CARBON	12/13/2022 10:41 PM	bl	1.258	1 716 395	1.553	0.183	293 693	456 982	1.074	0.295	0.9279	1.0000



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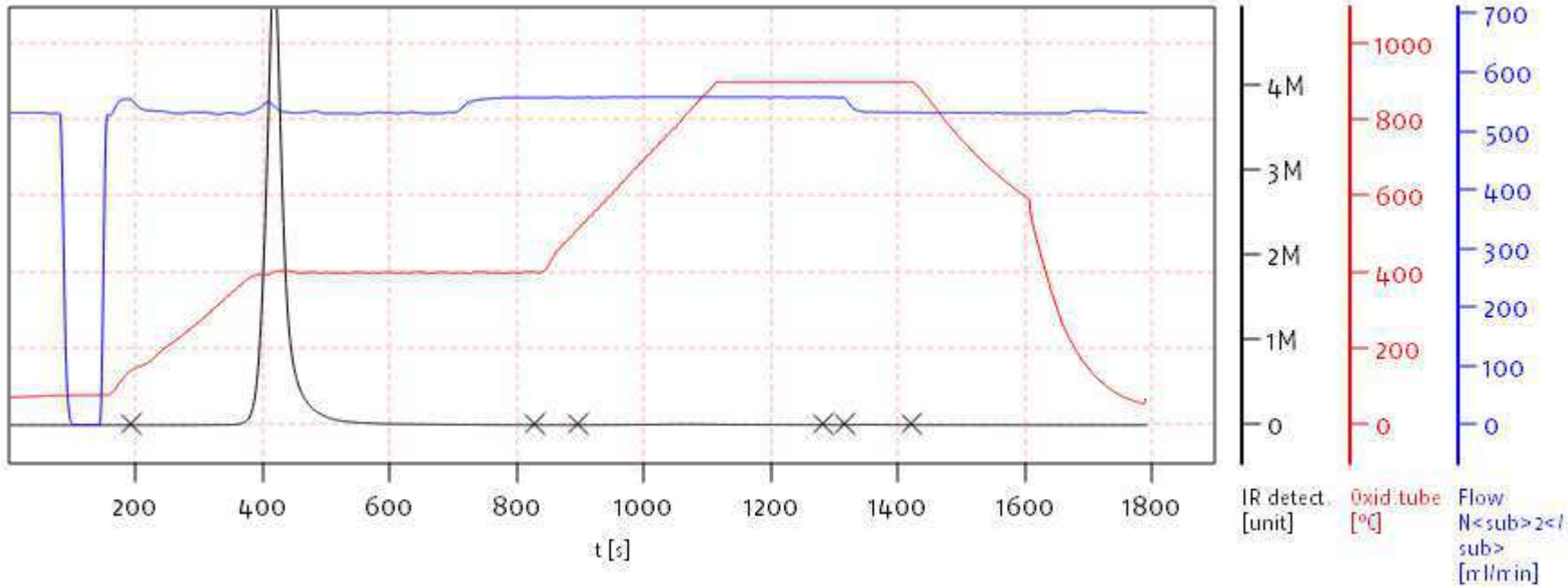
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
76	76	SKL0152-CCV6	21.70		CARBON	12/13/2022 11:11 PM	bl	44.465	6 744 270	44.826	0.000	16 317	77 150	44.465	0.361	0.9279	1.0000



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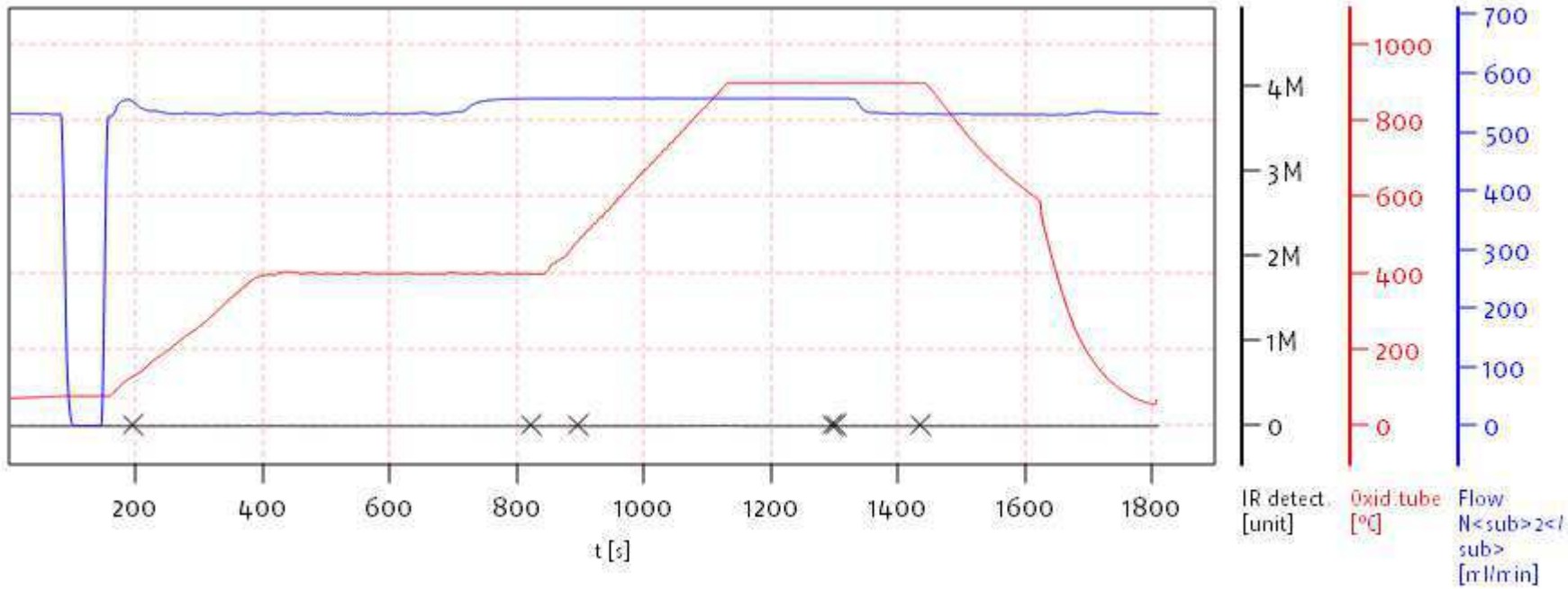
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
77	77	SKL0152-CCB6	519.30		CARBON	12/13/2022 11:42 PM	bl,C2u	0.000	5 705	0.000	0.000	298	9 452	0.000	0.000	0.9279	1.0000



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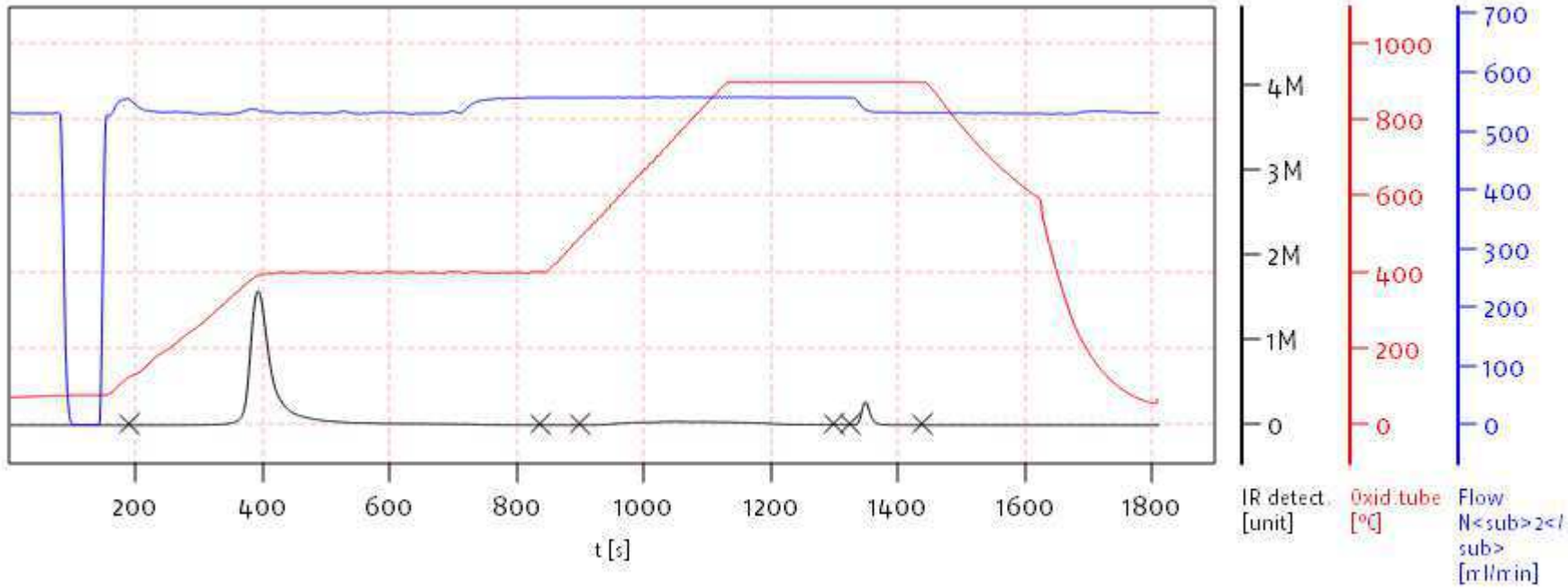
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
78	78	22L0105-11	226.70		CARBON	12/14/2022 12:12 AM	bl	1.665	2 505 947	1.876	0.094	163 798	336 128	1.571	0.211	0.9279	1.0000



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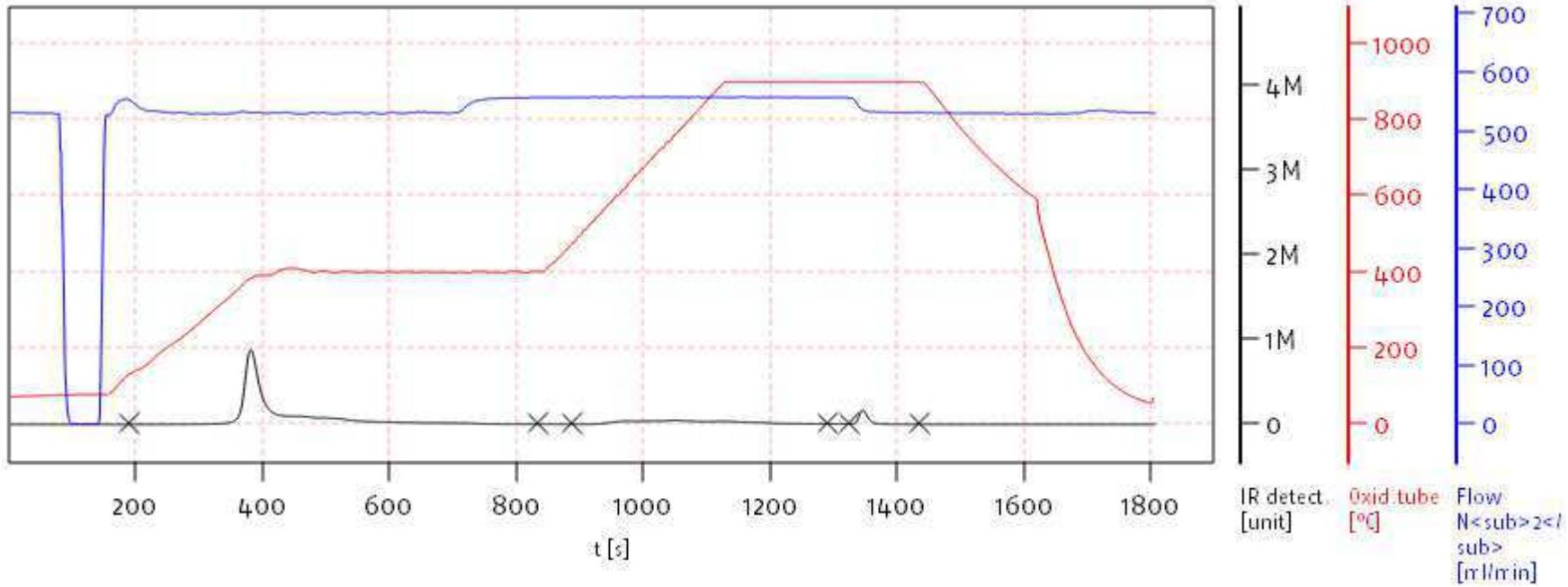
Access: soliTOC superuser

Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
79	79	22L0105-12	204.60		CARBON	12/14/2022 12:43 AM	bl	1.117	1 531 132	1.379	0.061	107 014	372 254	1.056	0.262	0.9279	1.0000



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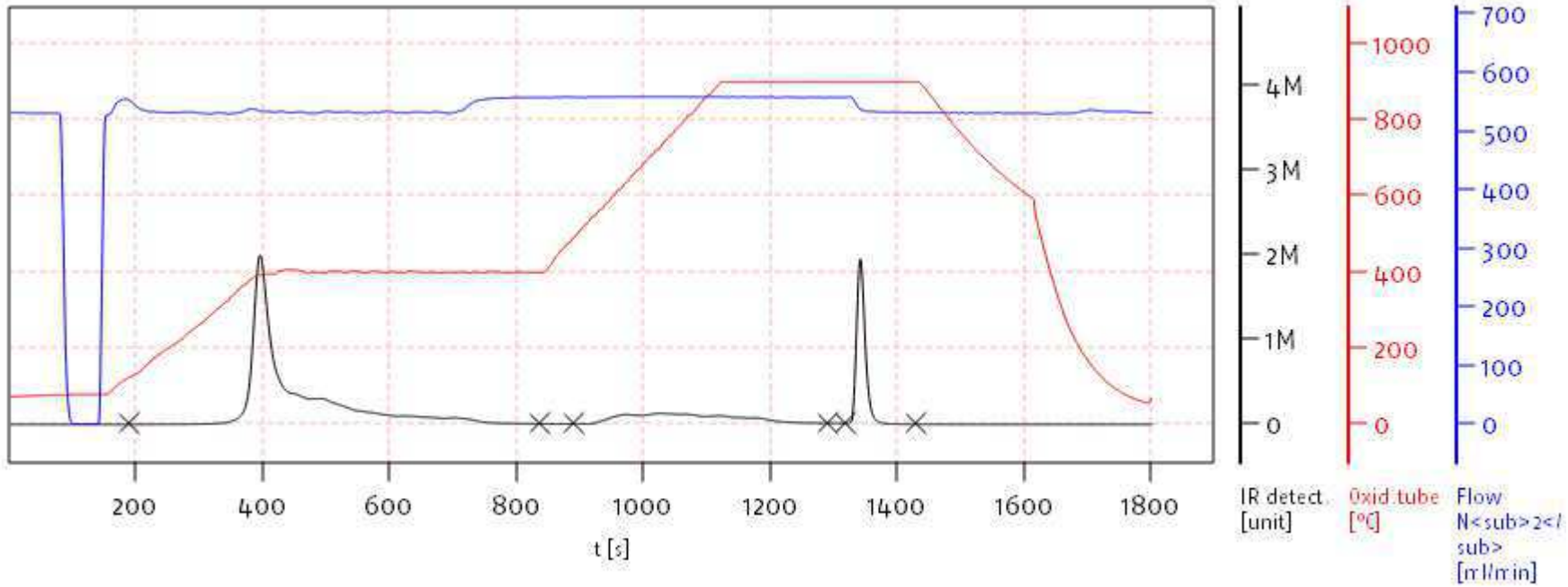
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
80	80	22L0105-13	537.90		CARBON	12/14/2022 1:13 AM	bl	1.508	4 440 859	1.814	0.329	1 169 123	1 091 294	1.179	0.306	0.9279	1.0000



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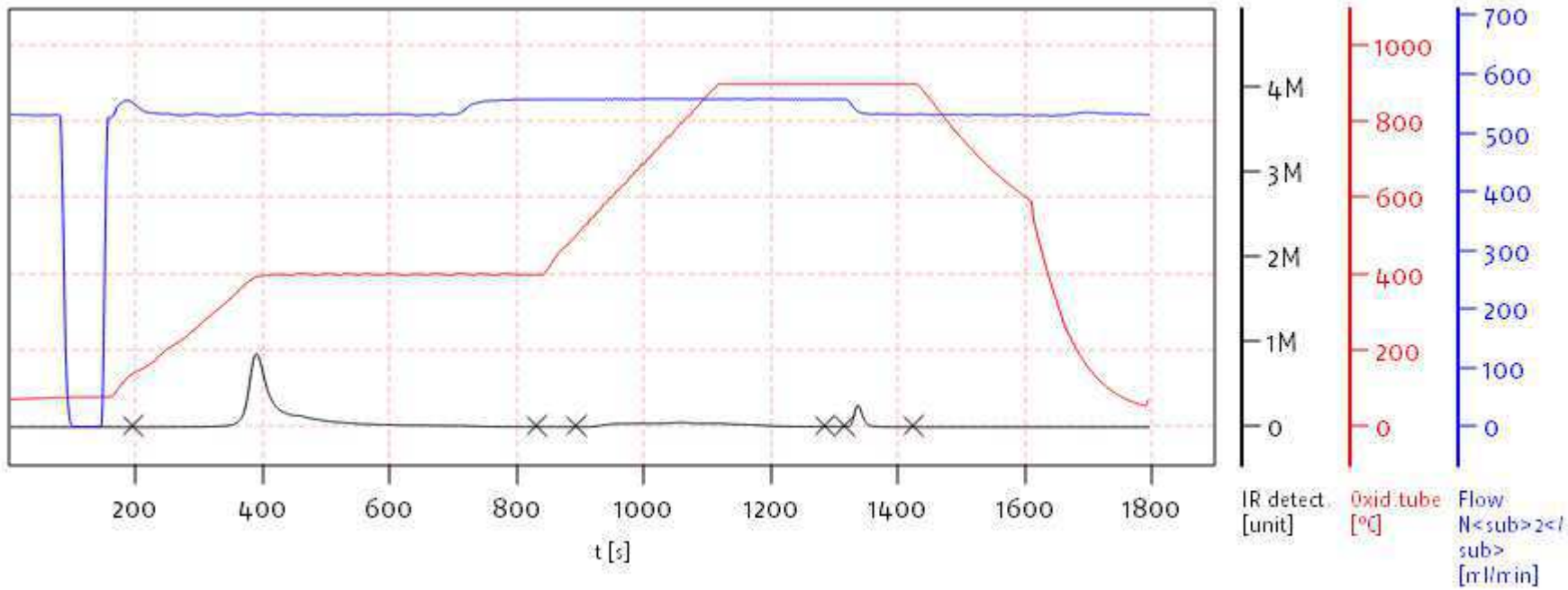
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
81	81	22L0105-14	230.80		CARBON	12/14/2022 1:44 AM	bl	1.154	1 740 876	1.415	0.087	156 265	416 157	1.067	0.261	0.9279	1.0000



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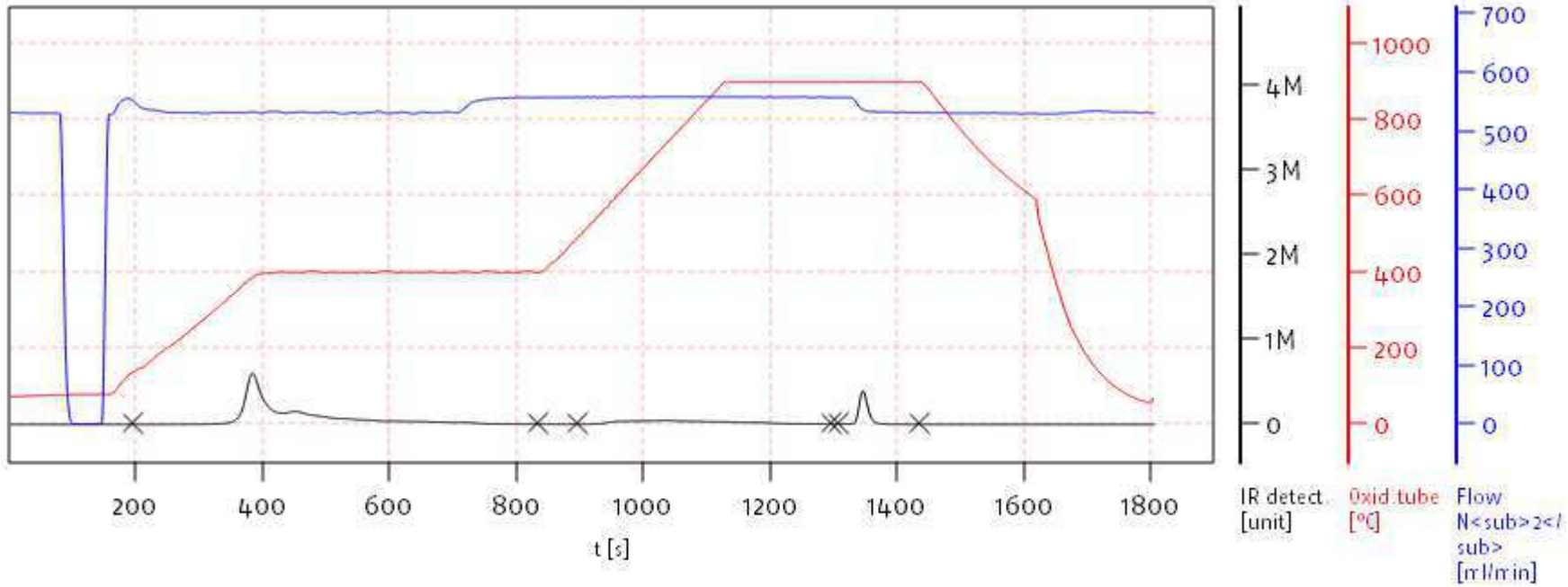
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
82	82	22L0105-15	217.30		CARBON	12/14/2022 2:14 AM	bl	1.147	1 526 037	1.386	0.156	244 842	362 356	0.991	0.239	0.9279	1.0000



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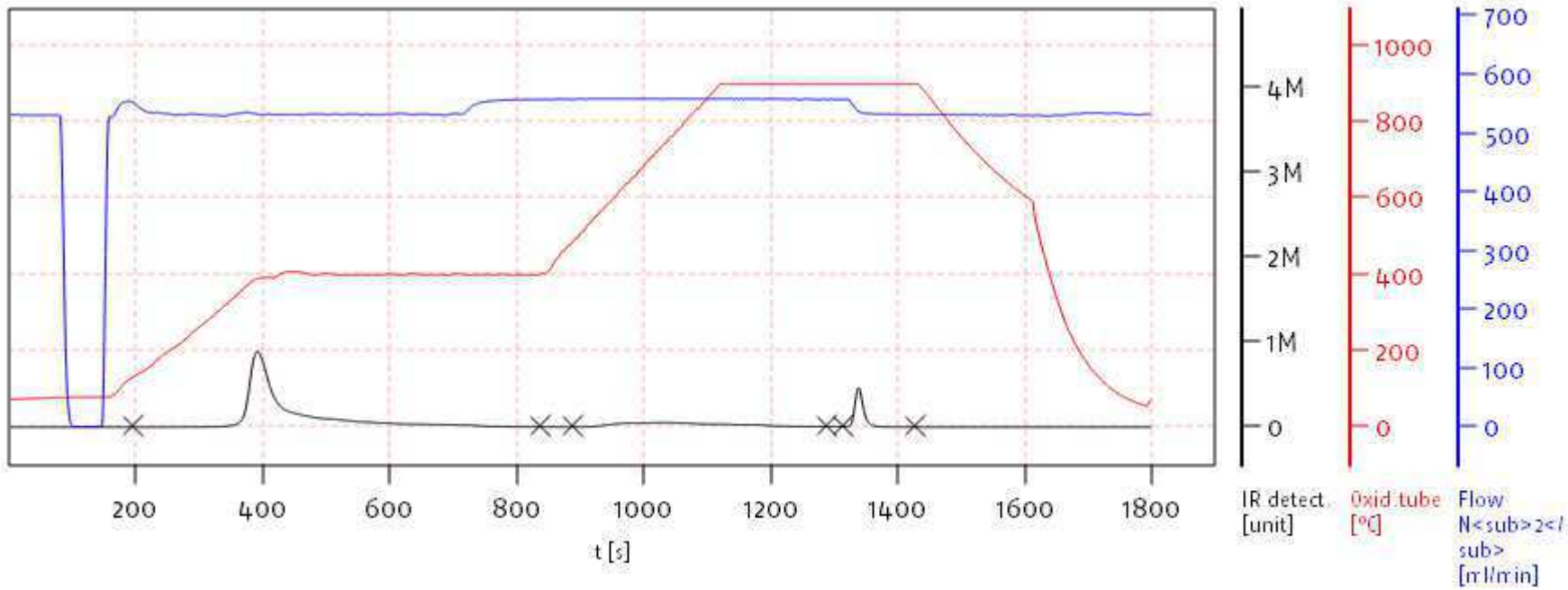
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
83	83	22L0105-16	224.80		CARBON	12/14/2022 2:44 AM	bl	1.480	2 078 047	1.748	0.170	272 683	415 174	1.311	0.268	0.9279	1.0000



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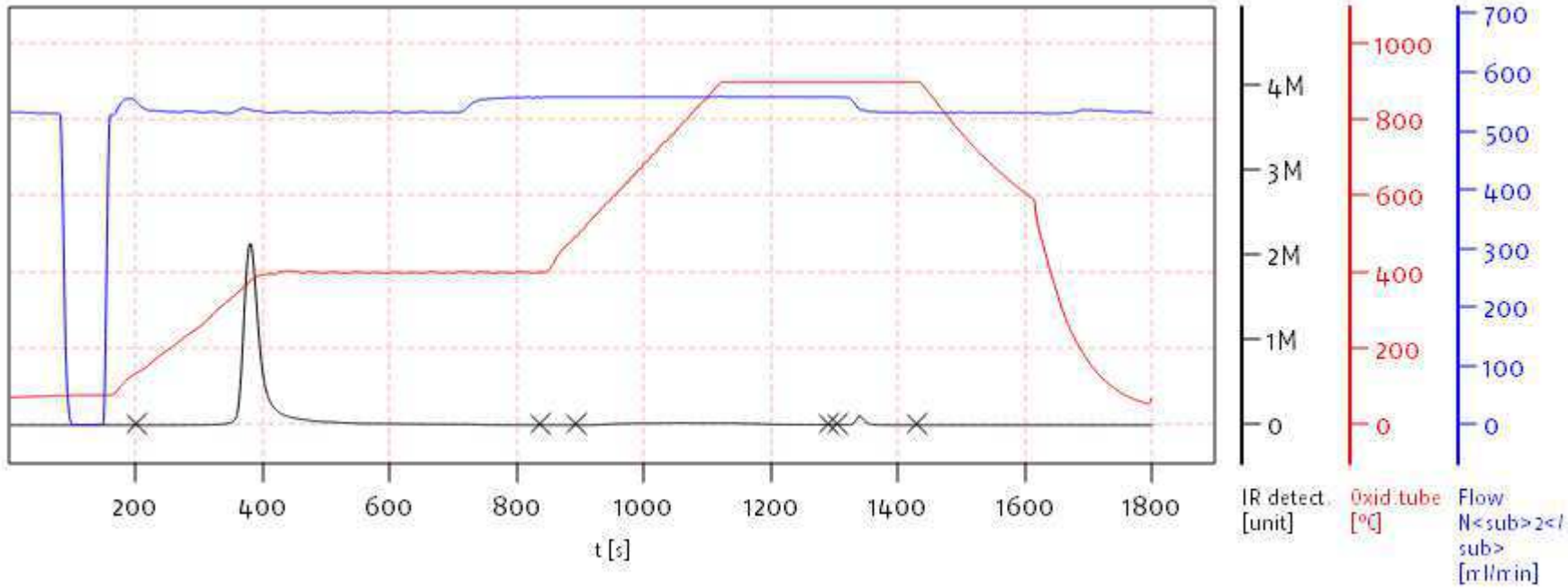
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
84	84	22L0105-17	178.00		CARBON	12/14/2022 3:15 AM	bl	2.162	2 659 781	2.330	0.037	68 712	220 145	2.125	0.168	0.9279	1.0000



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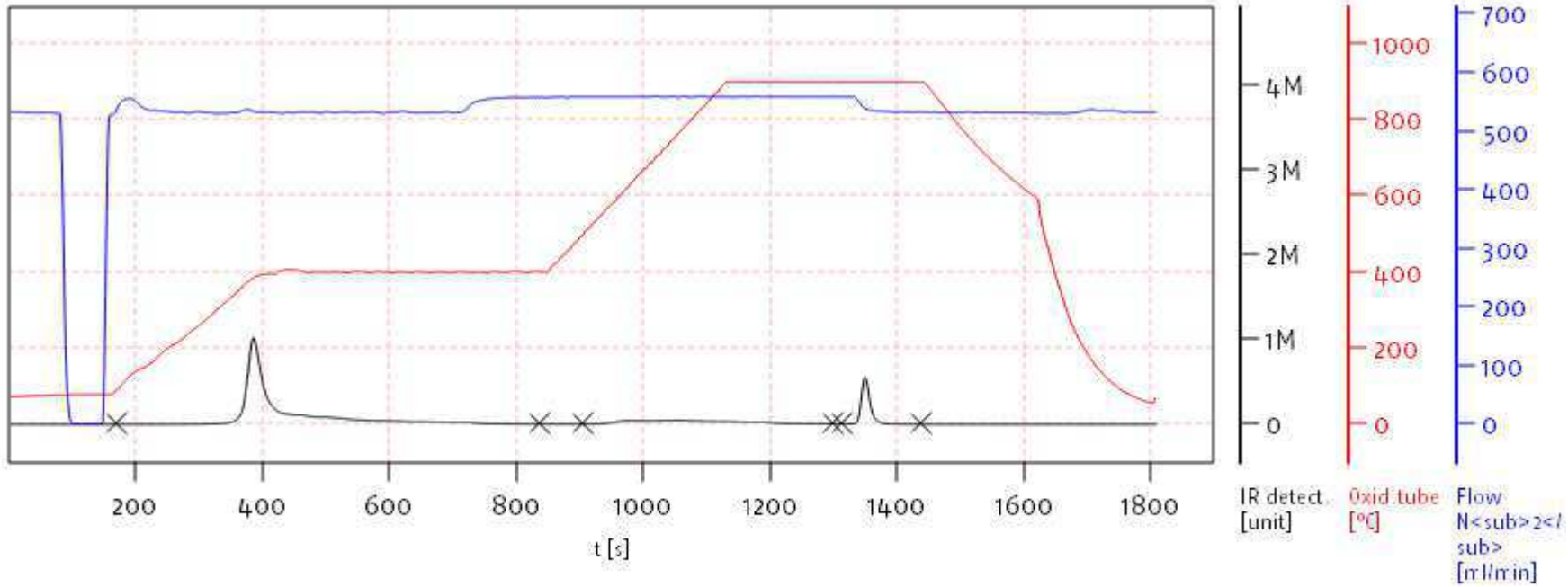
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
85	85	22L0105-18	193.70		CARBON	12/14/2022 3:45 AM	bl	1.588	1 833 699	1.885	0.248	336 682	398 219	1.340	0.297	0.9279	1.0000



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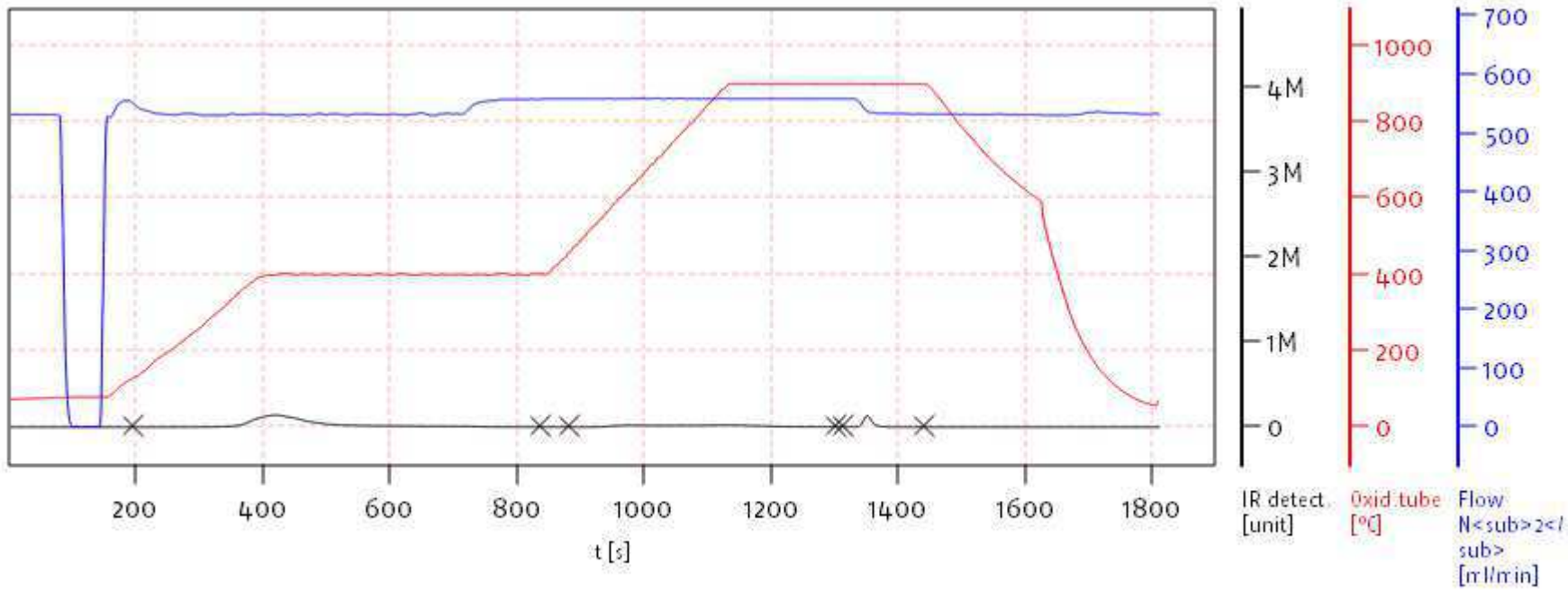
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
86	86	22L0105-19	172.30		CARBON	12/14/2022 4:16 AM	bl	0.547	620 419	0.703	0.052	84 301	200 301	0.495	0.156	0.9279	1.0000



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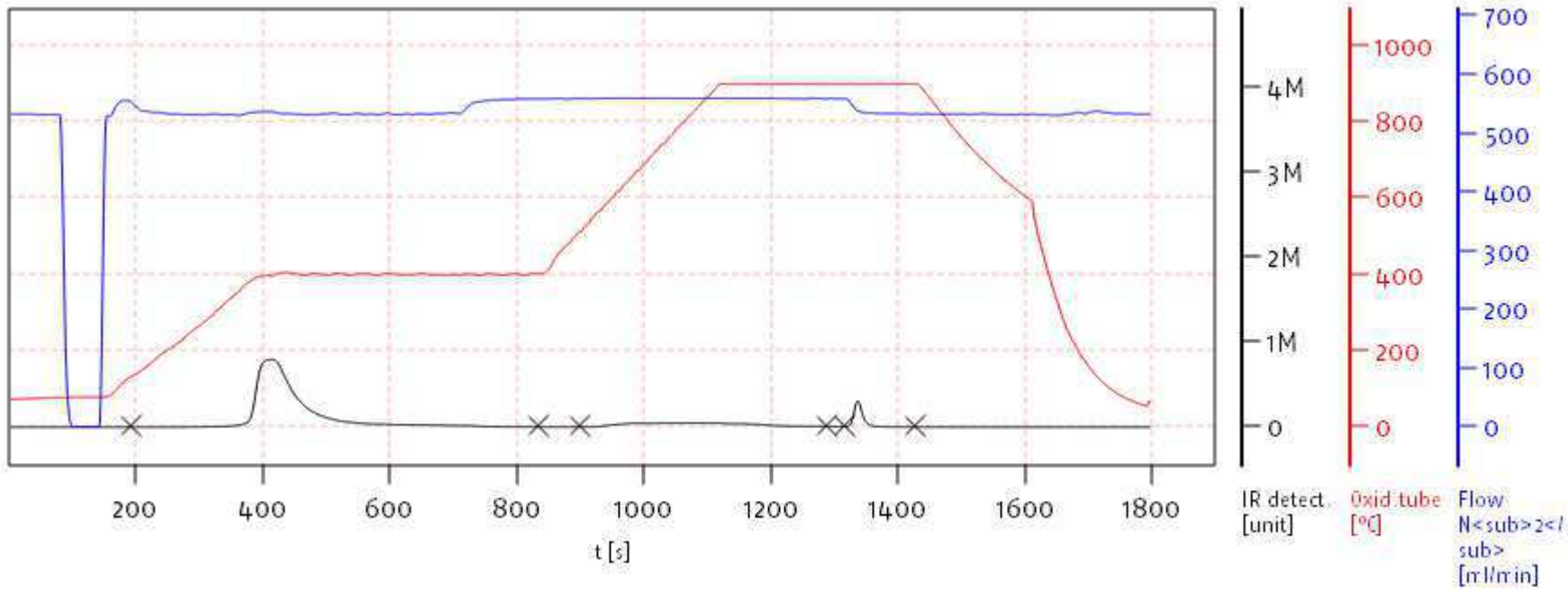
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
87	87	22L0105-20	505.90		CARBON	12/14/2022 4:46 AM	bl	0.717	2 376 096	0.844	0.050	189 425	441 919	0.667	0.127	0.9279	1.0000



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Serial No: 0300.181017
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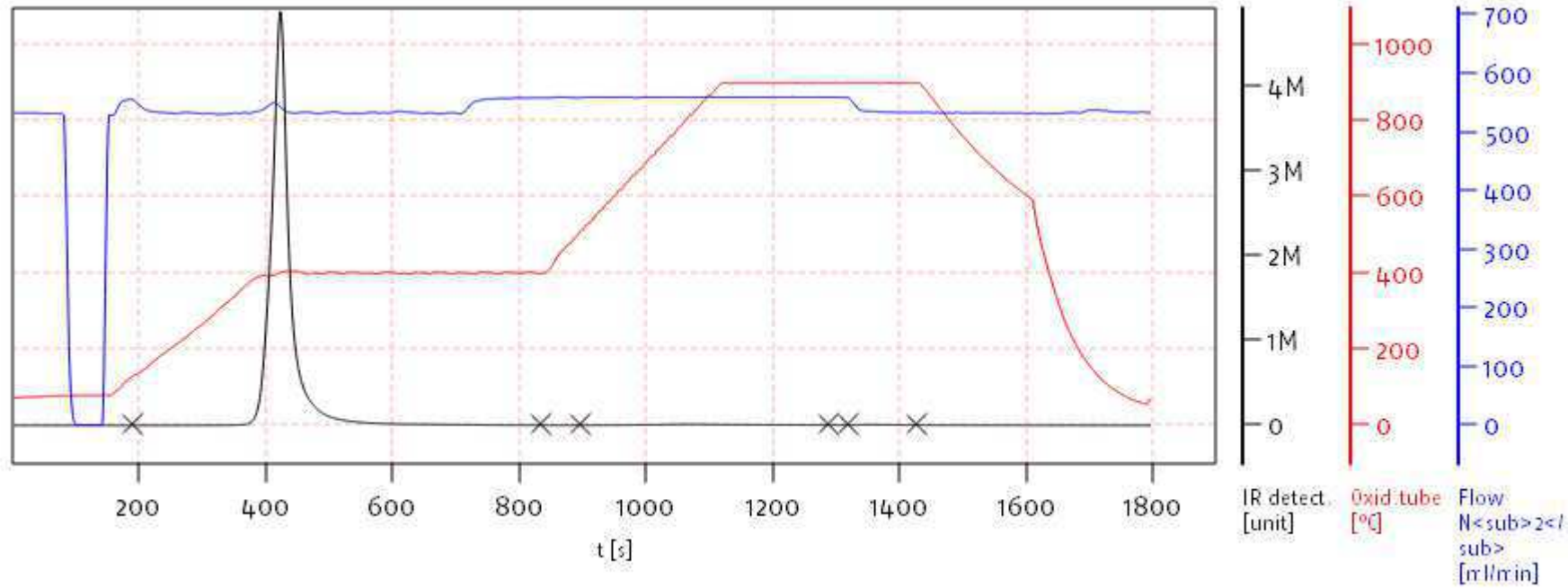
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
88	88	SKL0152-CCV7	20.40		CARBON	12/14/2022 5:17 AM	bl	43.135	6 152 890	43.675	0.000	23 801	97 655	43.135	0.540	0.9279	1.0000



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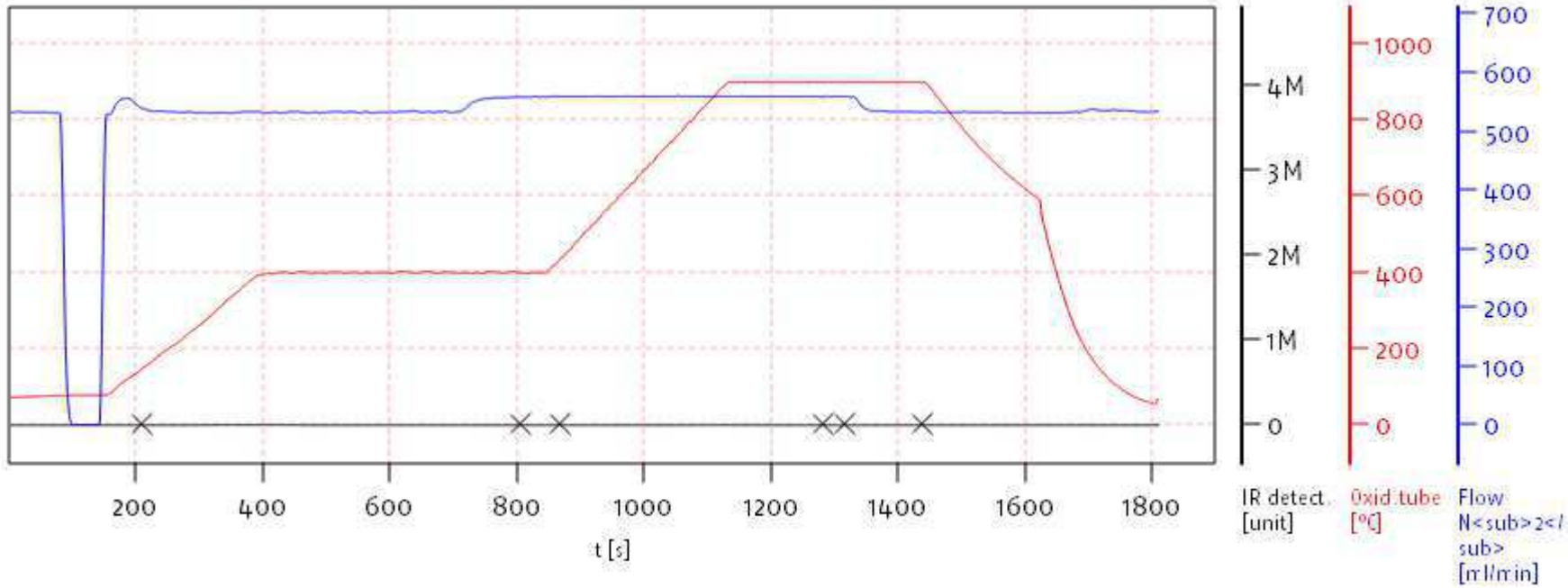
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
89	89	SKL0152-CCB7	519.00		CARBON	12/14/2022 5:47 AM	bl,C2u	0.000	13 112	0.000	0.000	282	5 125	0.000	0.000	0.9279	1.0000



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Date: Fri Dec 16 09:43:23 2022

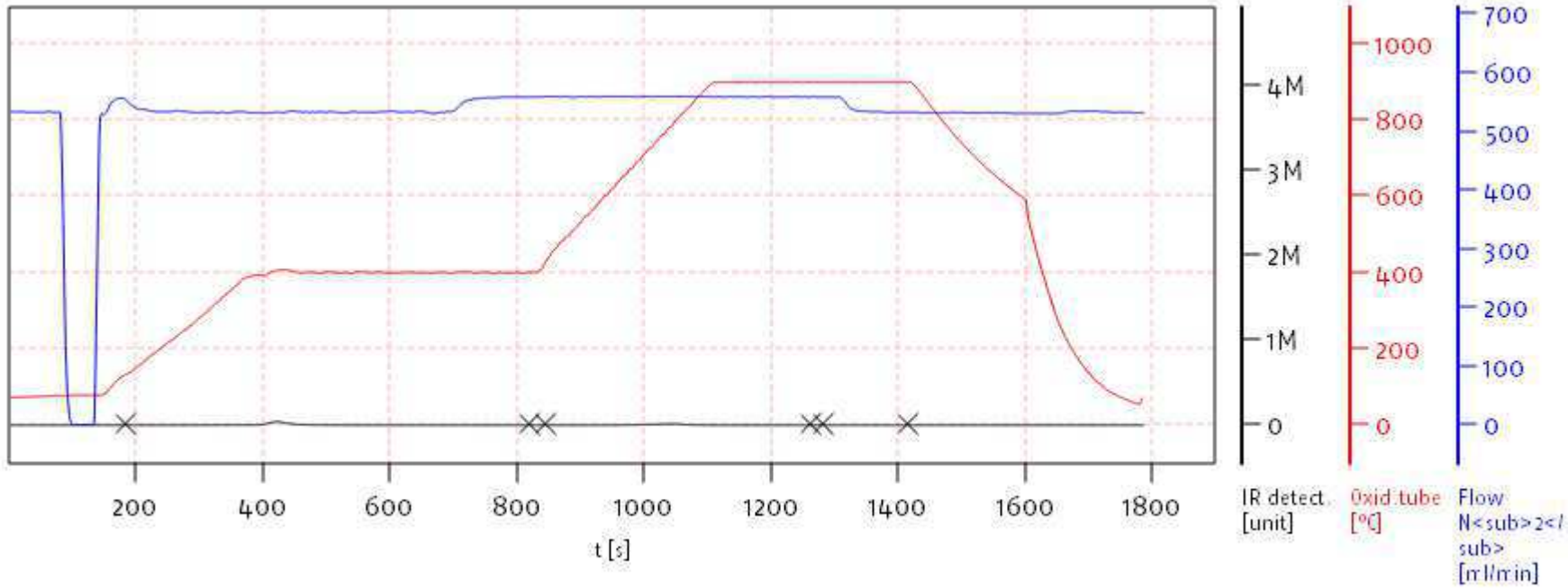
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
90	1	BKL0268-MRL1	506.20		CARBON	12/14/2022 6:17 AM	bl,C2u	0.012	67 645	0.014	0.000	647	35 302	0.012	0.003	0.9279	1.0000



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Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
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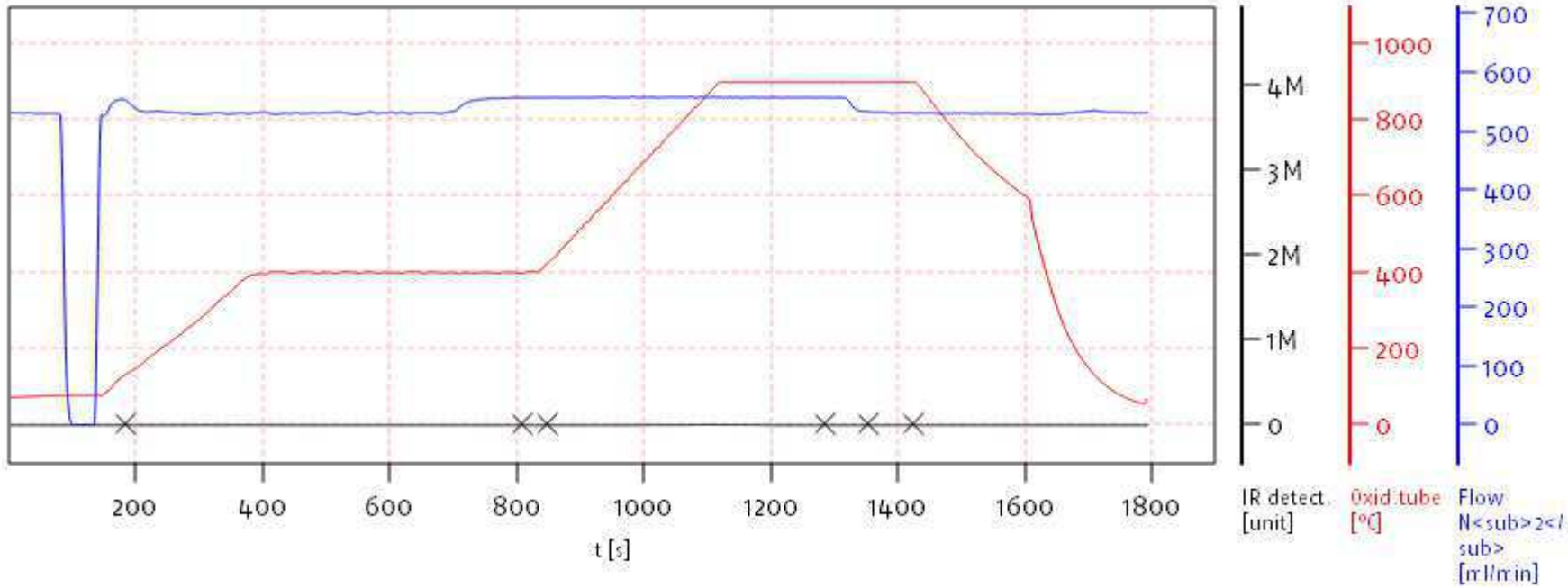
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
91	2	BKL0268-BLK1	504.80		CARBON	12/14/2022 6:48 AM	bl,C2u	0.000	8 543	0.001	0.000	283	30 798	0.000	0.001	0.9279	1.0000



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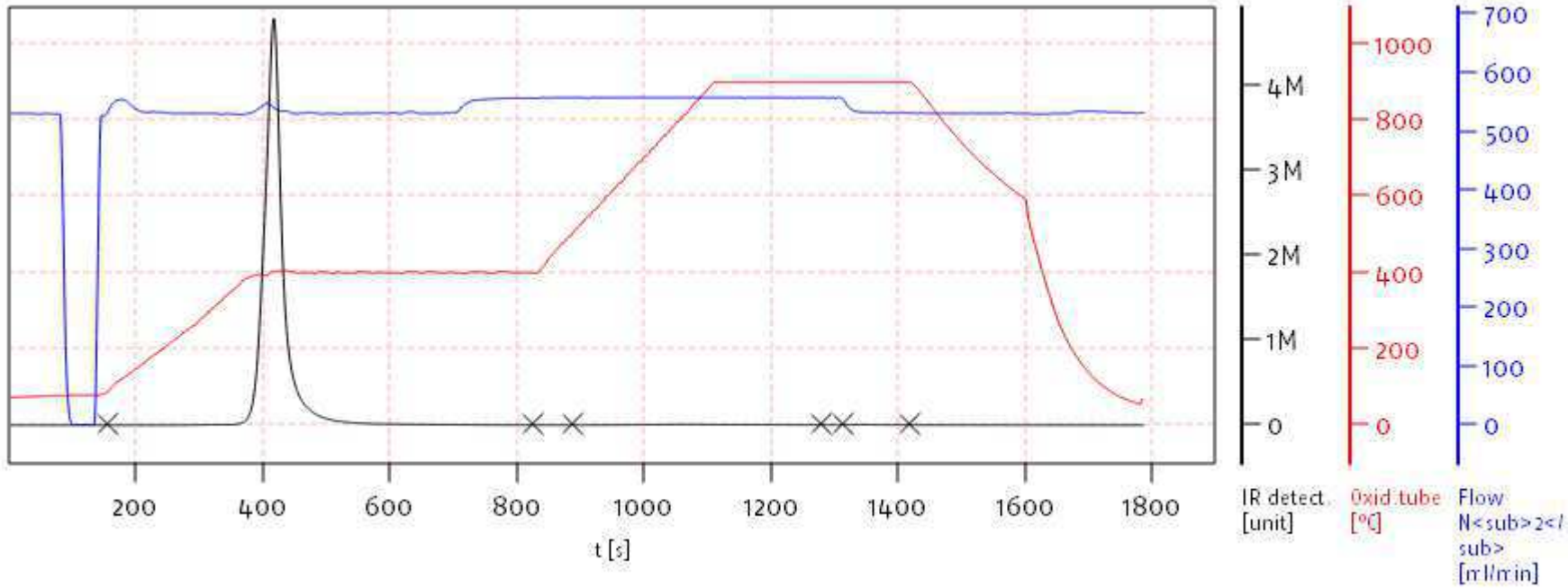
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
92	3	BKL0268-BS1	19.60		CARBON	12/14/2022 7:18 AM	bl	44.046	6 036 981	44.427	0.000	15 508	74 741	44.046	0.381	0.9279	1.0000



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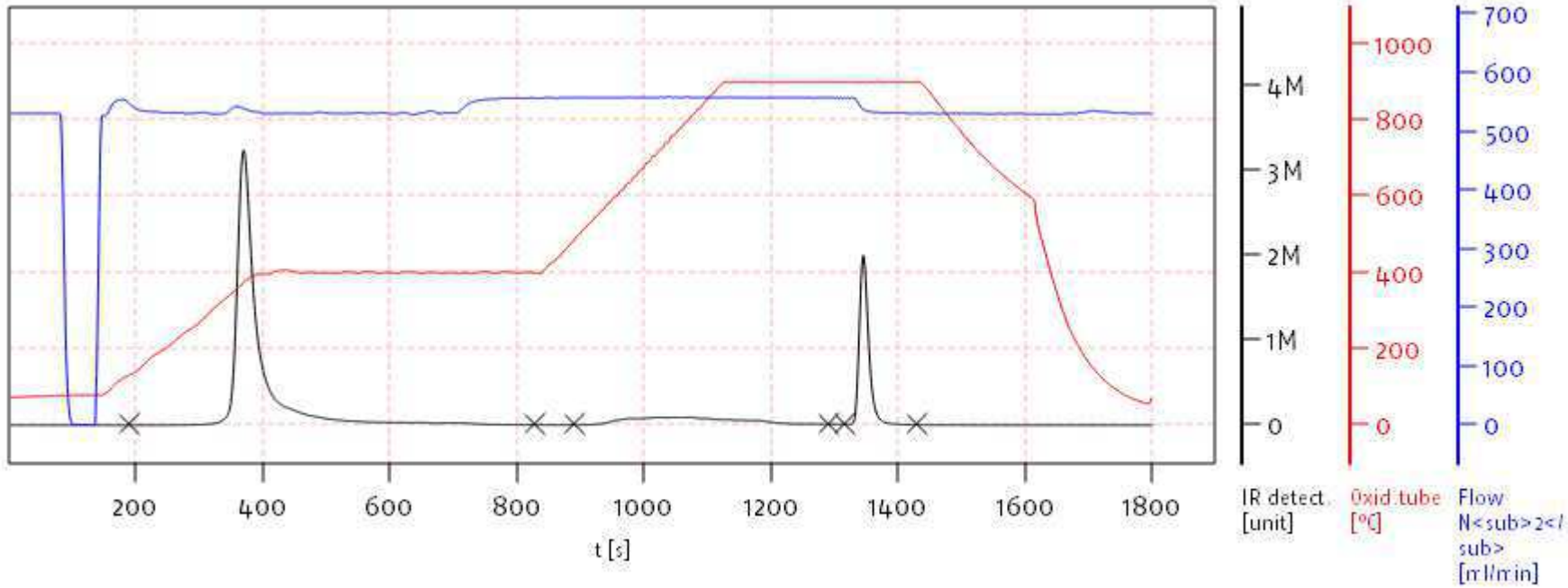
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
93	4	BKL0268-SRM1	294.80		CARBON	12/14/2022 7:48 AM	bl	2.886	4 578 426	3.276	0.668	1 298 849	768 664	2.218	0.390	0.9279	1.0000



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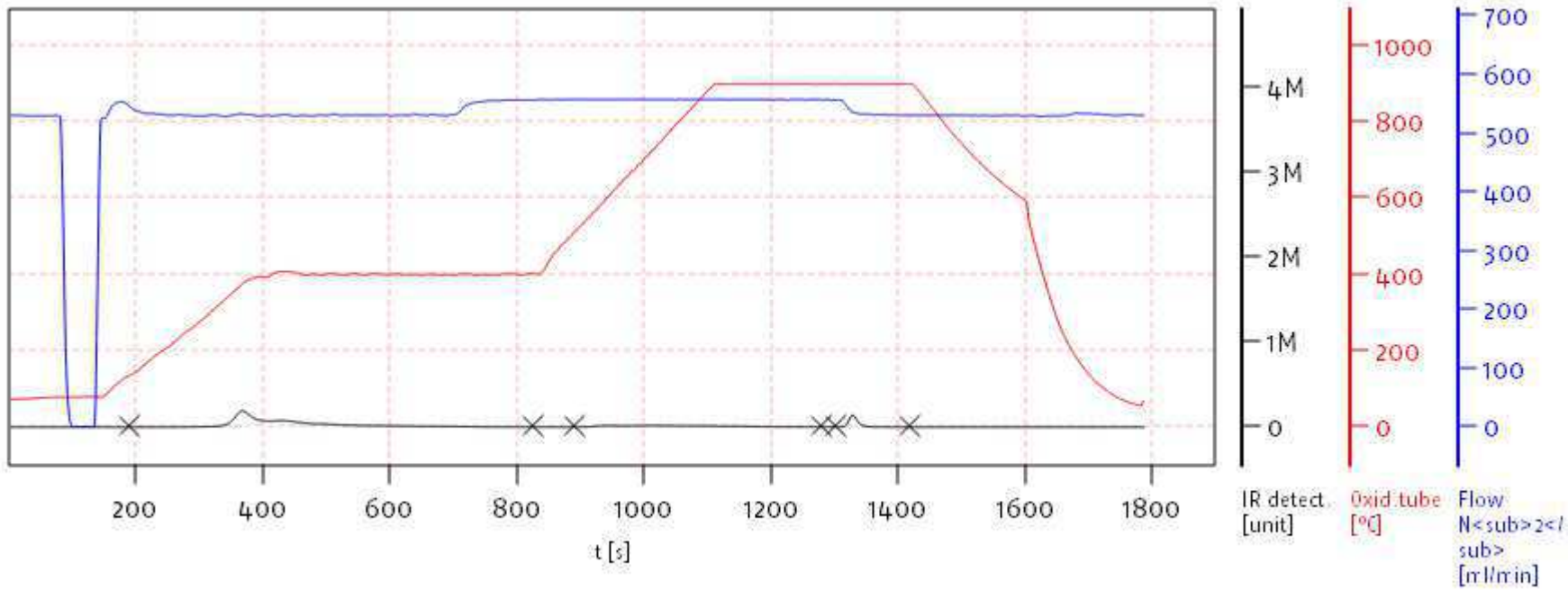
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
94	5	22L0105-21	103.60		CARBON	12/14/2022 8:18 AM	bl	0.922	627 041	1.107	0.090	86 709	150 210	0.833	0.185	0.9279	1.0000



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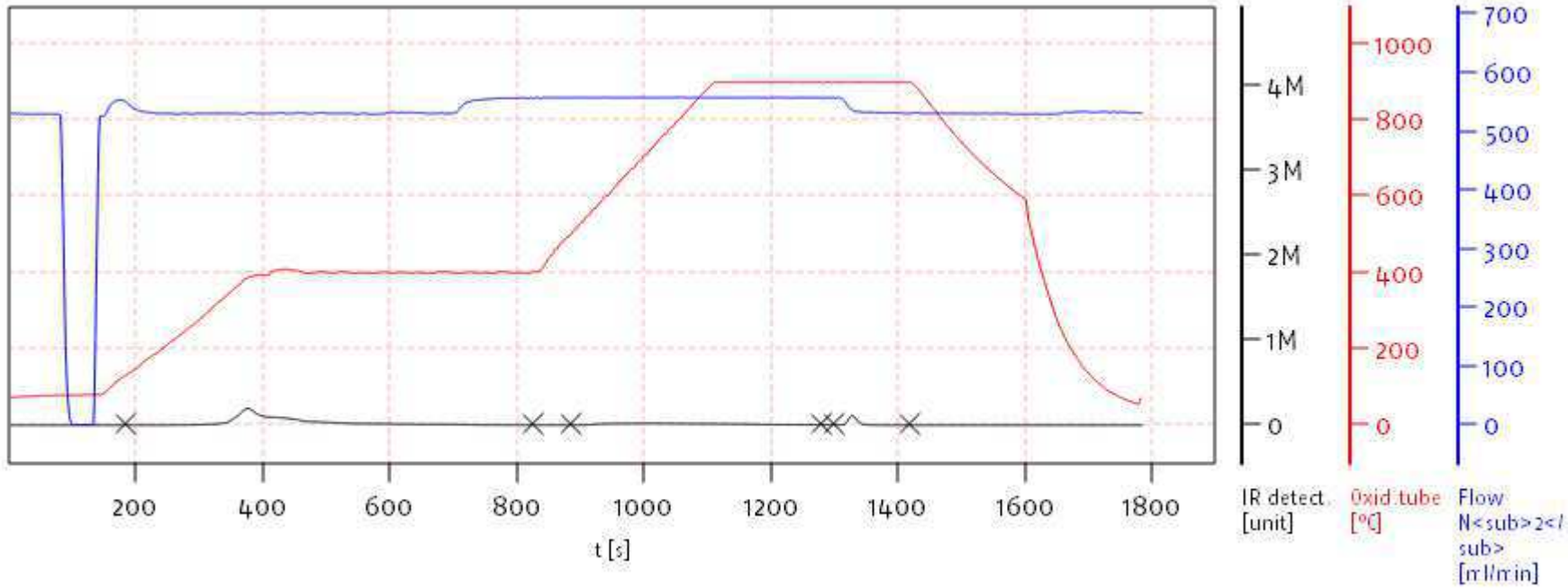
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
95	6	BKL0268-DUP1	112.70		CARBON	12/14/2022 8:49 AM	bl	0.902	686 956	1.123	0.060	70 088	187 794	0.842	0.222	0.9279	1.0000



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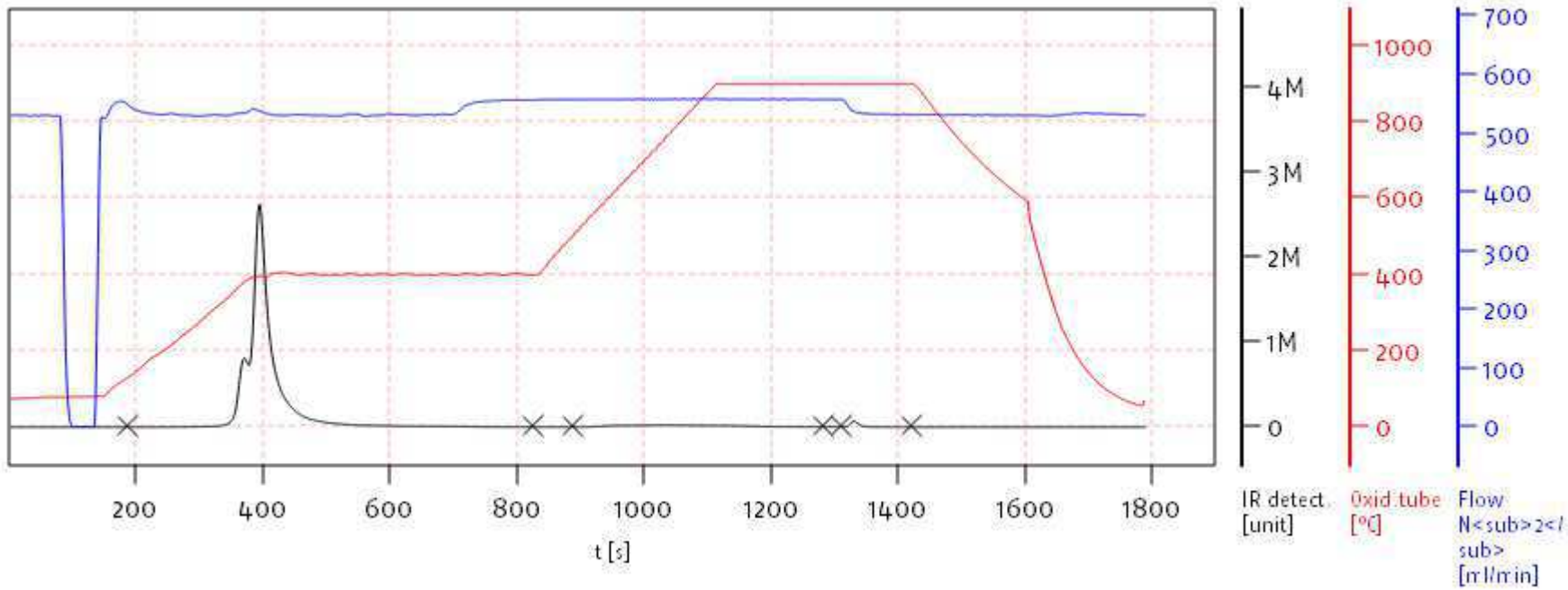
elementar
EXCELLENCE IN ELEMENTS

Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
96	7	BKL0268-MS1	103.10	0.0097	CARBON	12/14/2022 9:19 AM	bl	5.184	3 730 640	5.426	0.023	42 088	187 675	5.160	0.242	0.9279	1.0000



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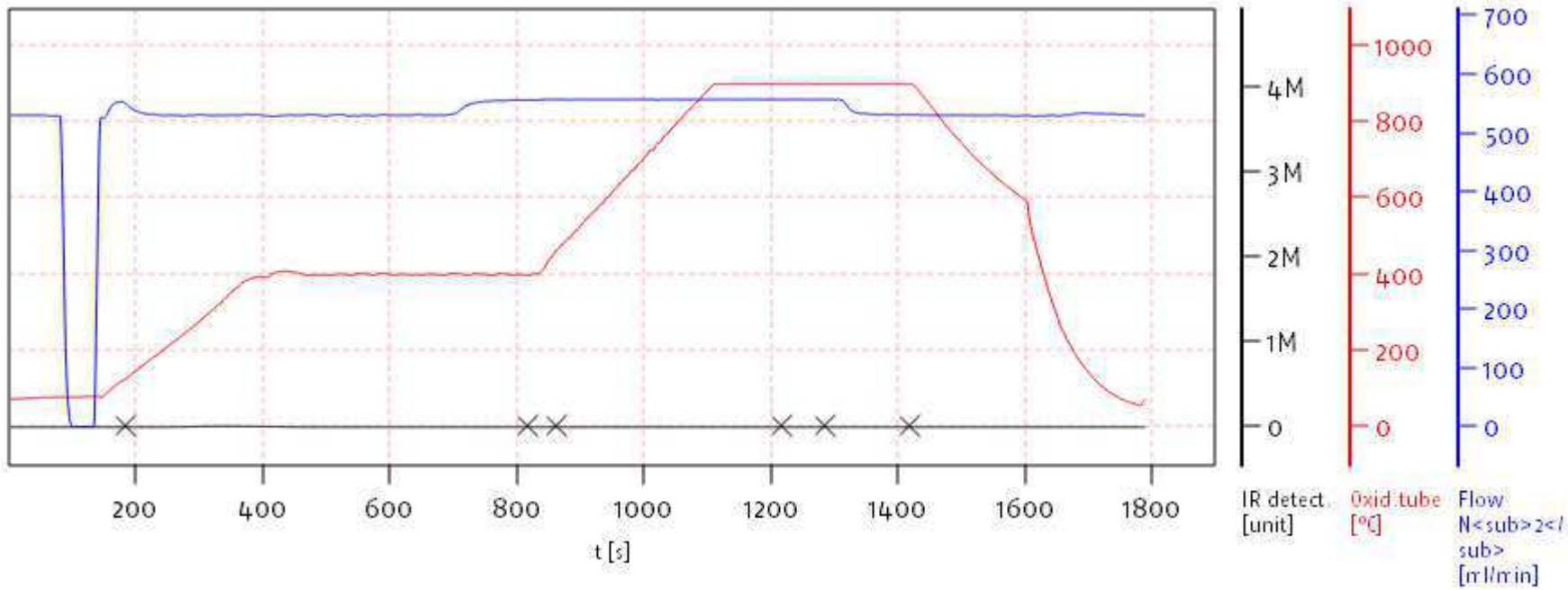
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
97	8	BLANK	1.00		CARBON	12/14/2022 9:49 AM	bl	0.000	52 948	0.000	0.000	362	2 050	0.000	0.000	0.9279	1.0000



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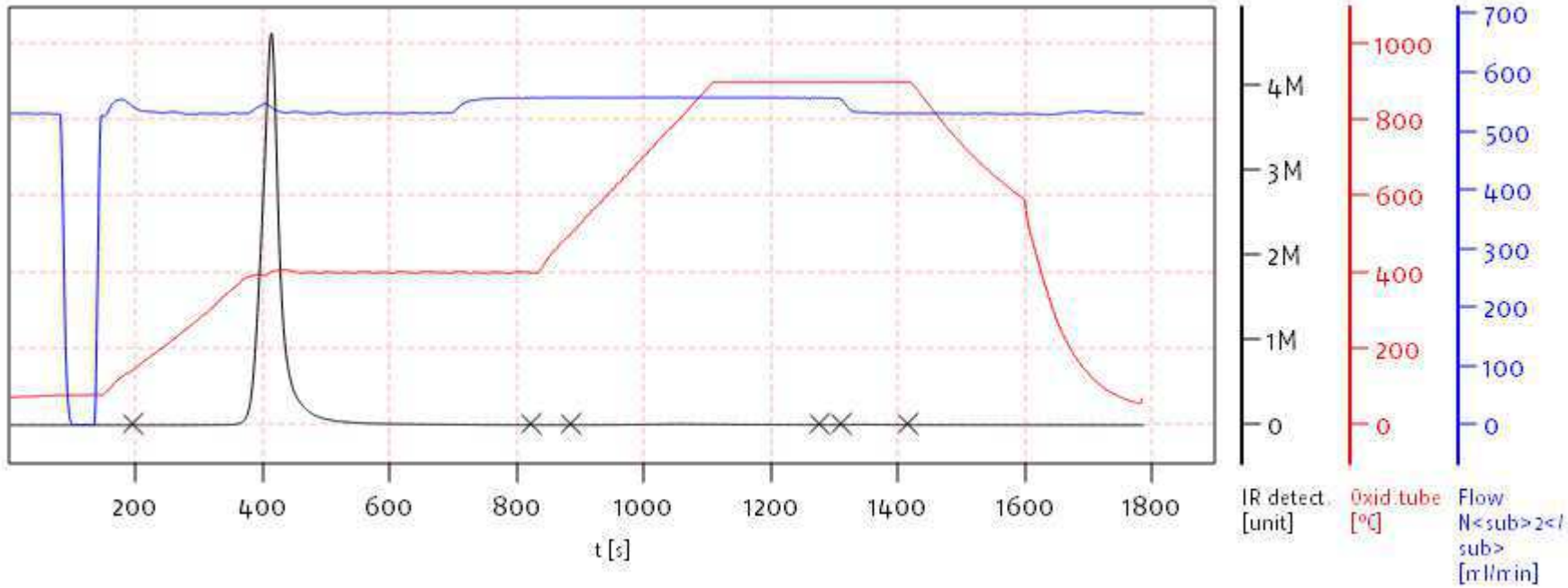
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
98	9	Dfactor	19.40		CARBON	12/14/2022 10:19 AM	bl	44.446	5 888 489	44.963	0.000	19 890	91 365	44.446	0.517	0.9502	1.0000



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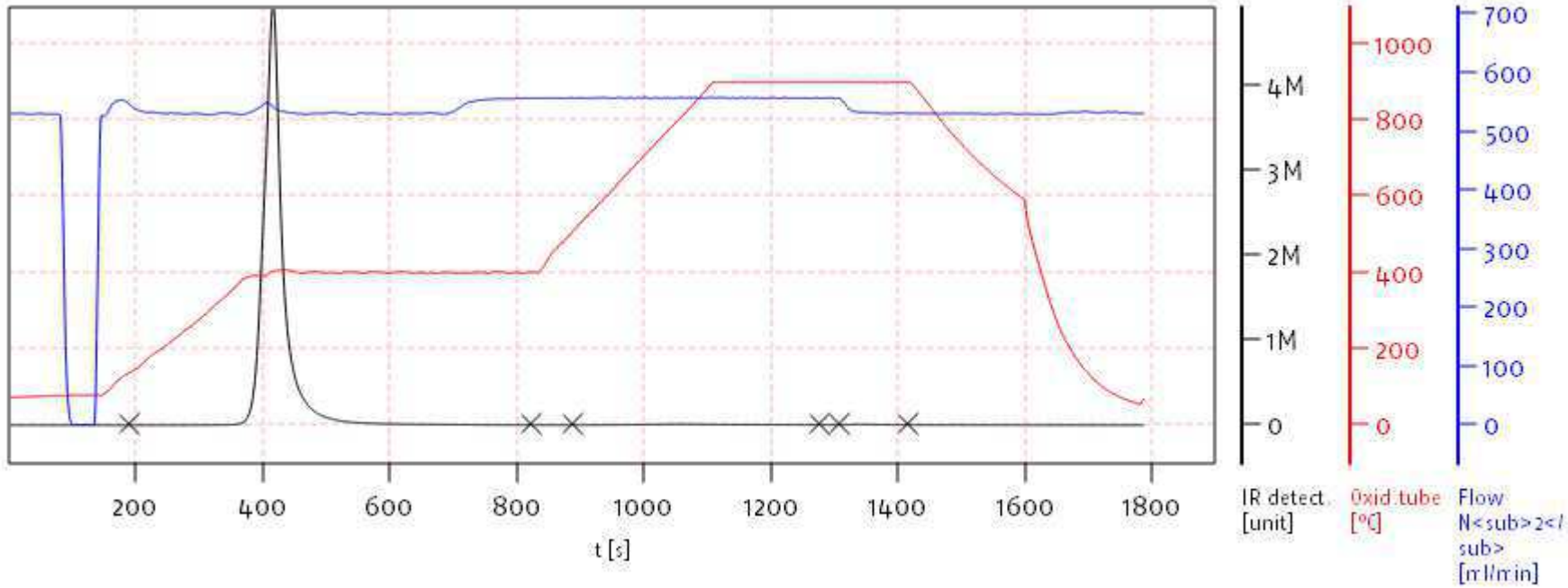
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
99	10	Dfactor	21.20		CARBON	12/14/2022 10:49 AM	bl	44.446	6 456 981	44.894	0.000	22 257	87 979	44.446	0.449	0.9466	1.0000



Name:

Access: soliTOC superuser

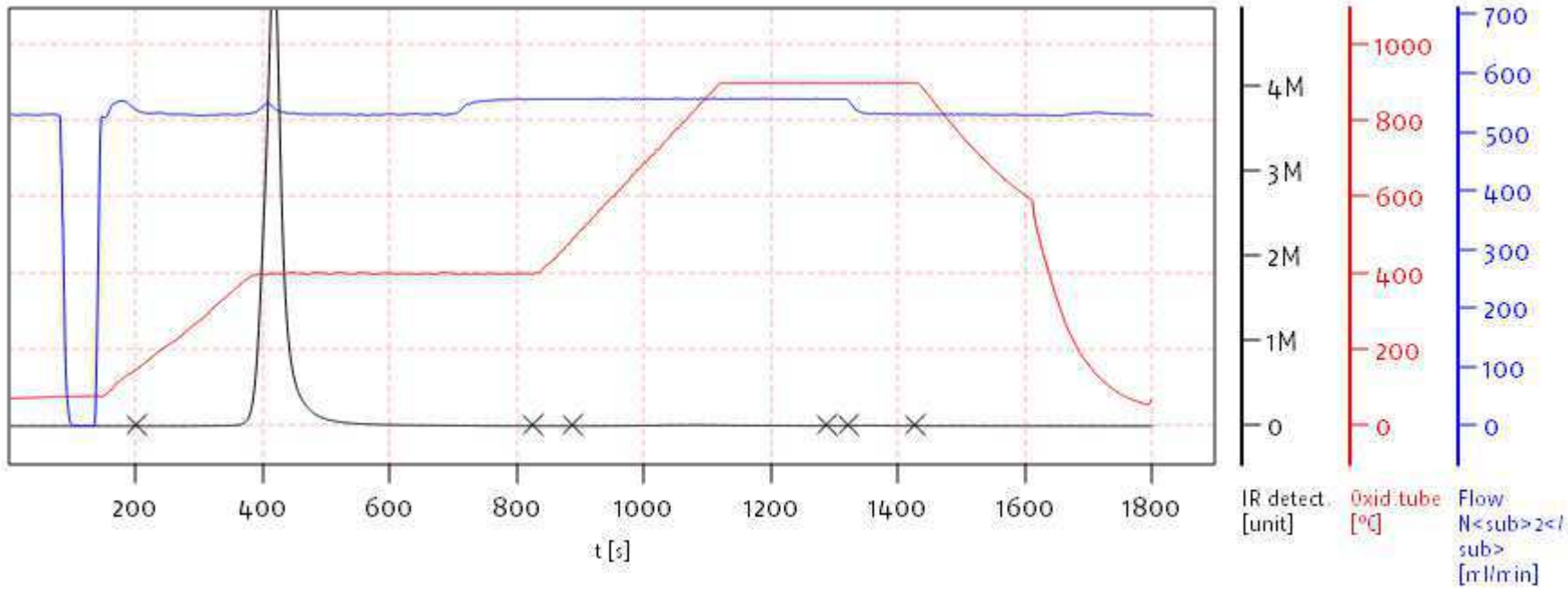
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
100	11	SKL0152-CCV8	22.10		CARBON	12/14/2022 11:20 AM	bl	45.244	6 837 349	45.698	0.000	19 529	91 275	45.244	0.453	0.9484	1.0000



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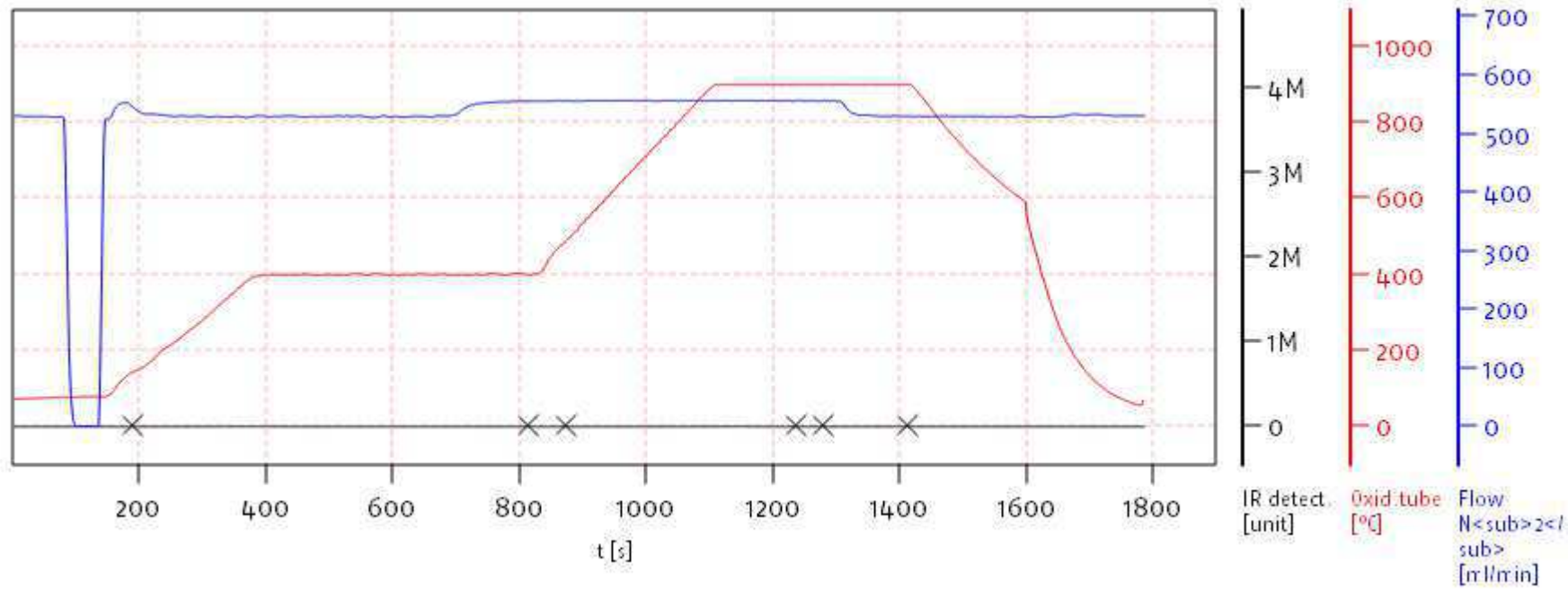
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
101	12	SKL0152-CCB8	510.30		CARBON	12/14/2022 11:50 AM	bl,C2u	0.000	6 811	0.000	0.000	573	5 797	0.000	0.000	0.9484	1.0000



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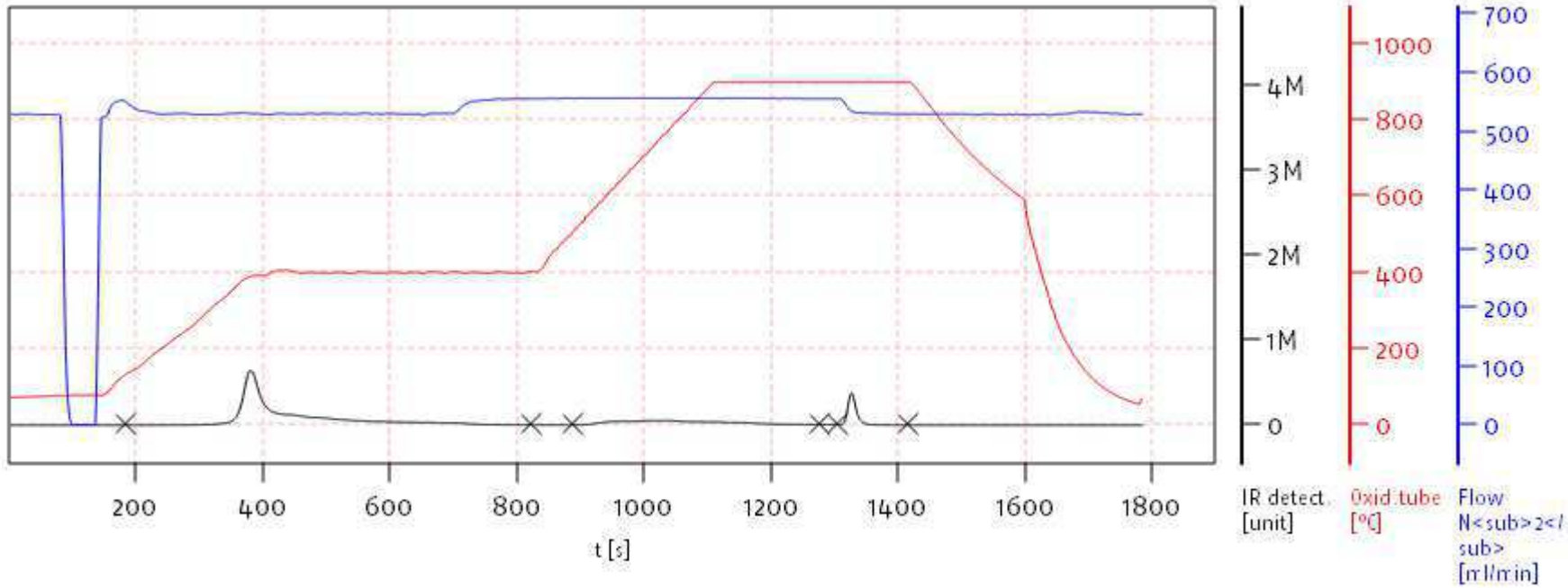
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
102	13	22L0105-22	262.90		CARBON	12/14/2022 12:20 PM	bl	0.964	1 542 962	1.203	0.117	225 347	433 285	0.847	0.240	0.9484	1.0000



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Date: Fri Dec 16 09:43:23 2022

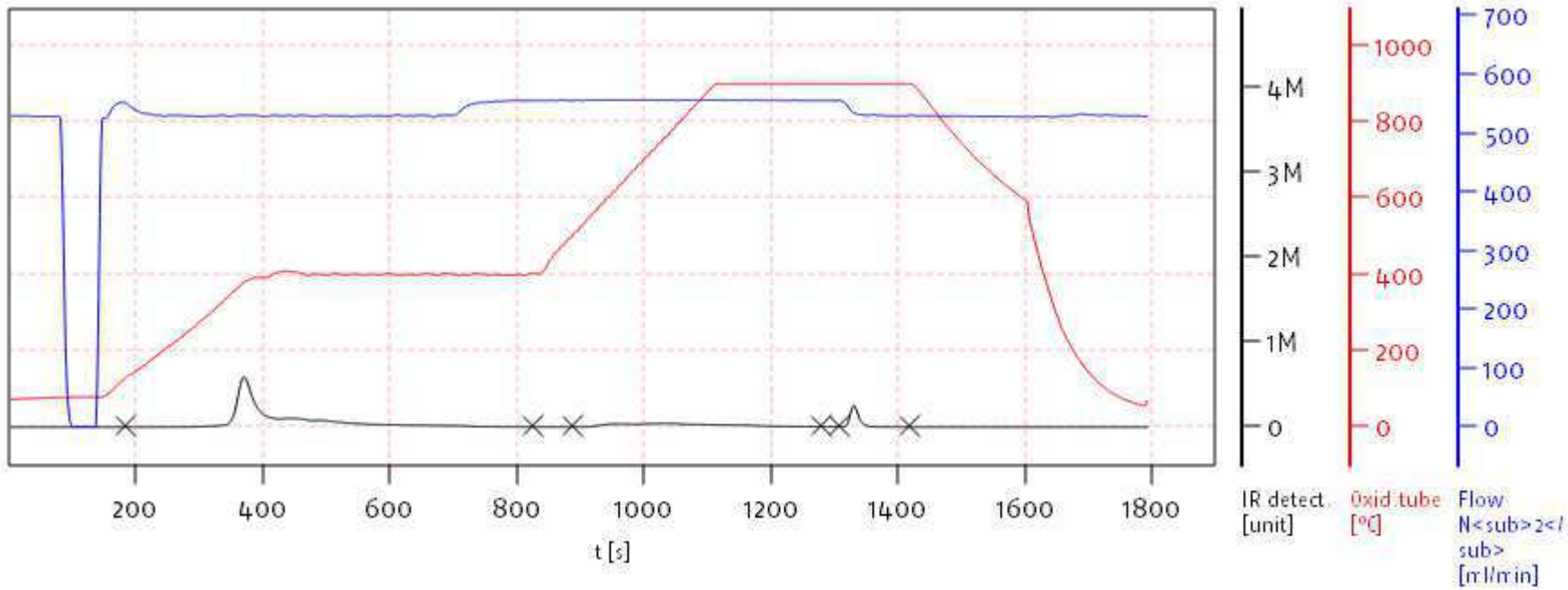
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
103	14	22L0105-23	193.70		CARBON	12/14/2022 12:51 PM	bl	1.084	1 322 391	1.334	0.102	154 473	338 359	0.982	0.249	0.9484	1.0000



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Access: soliTOC superuser

Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
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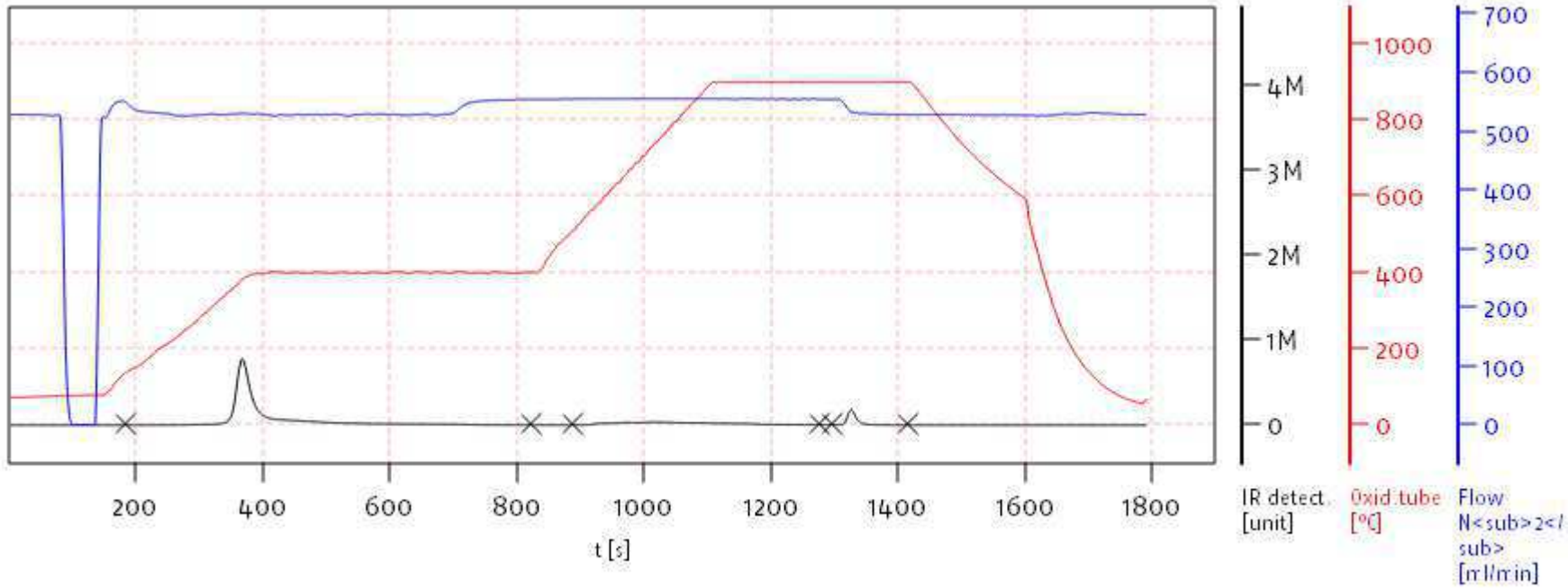
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
104	15	22L0105-24	144.60		CARBON	12/14/2022 1:21 PM	bl	1.251	1 164 109	1.513	0.096	115 877	271 280	1.155	0.262	0.9484	1.0000



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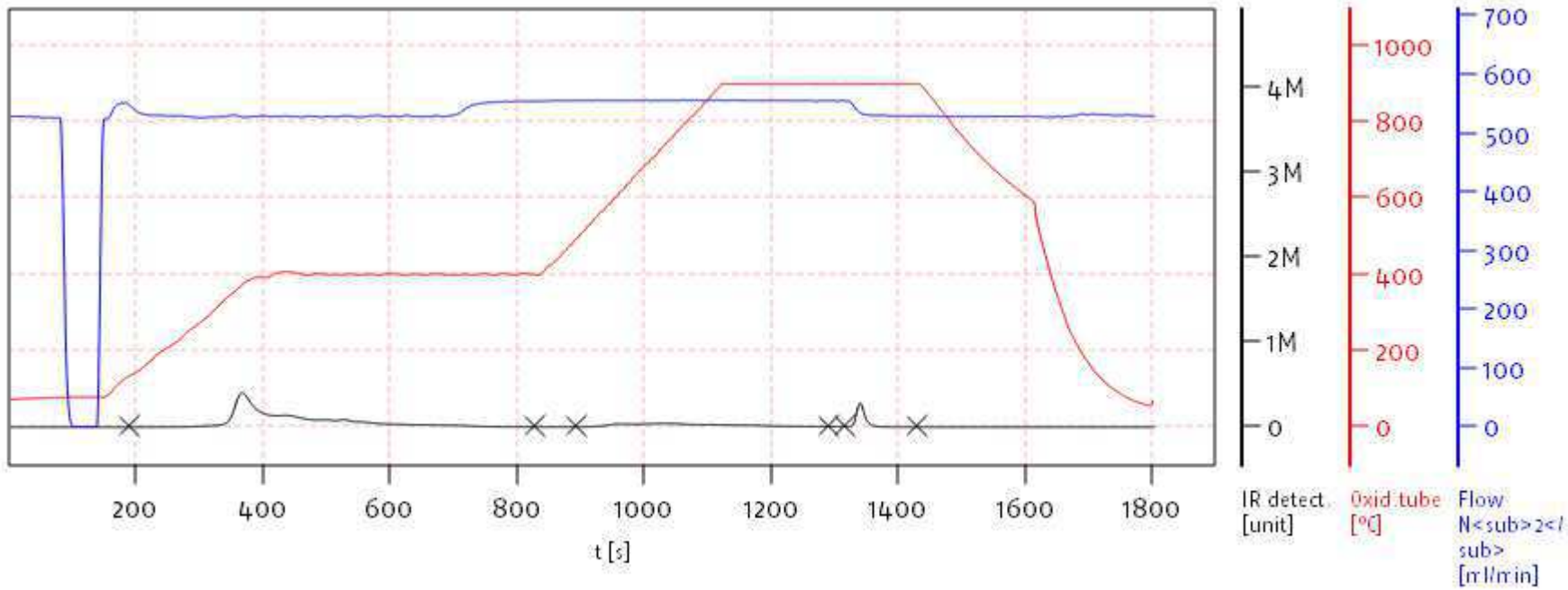
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
105	16	22L0105-25	160.10		CARBON	12/14/2022 1:51 PM	bl	1.385	1 386 576	1.681	0.138	168 763	333 476	1.247	0.297	0.9484	1.0000



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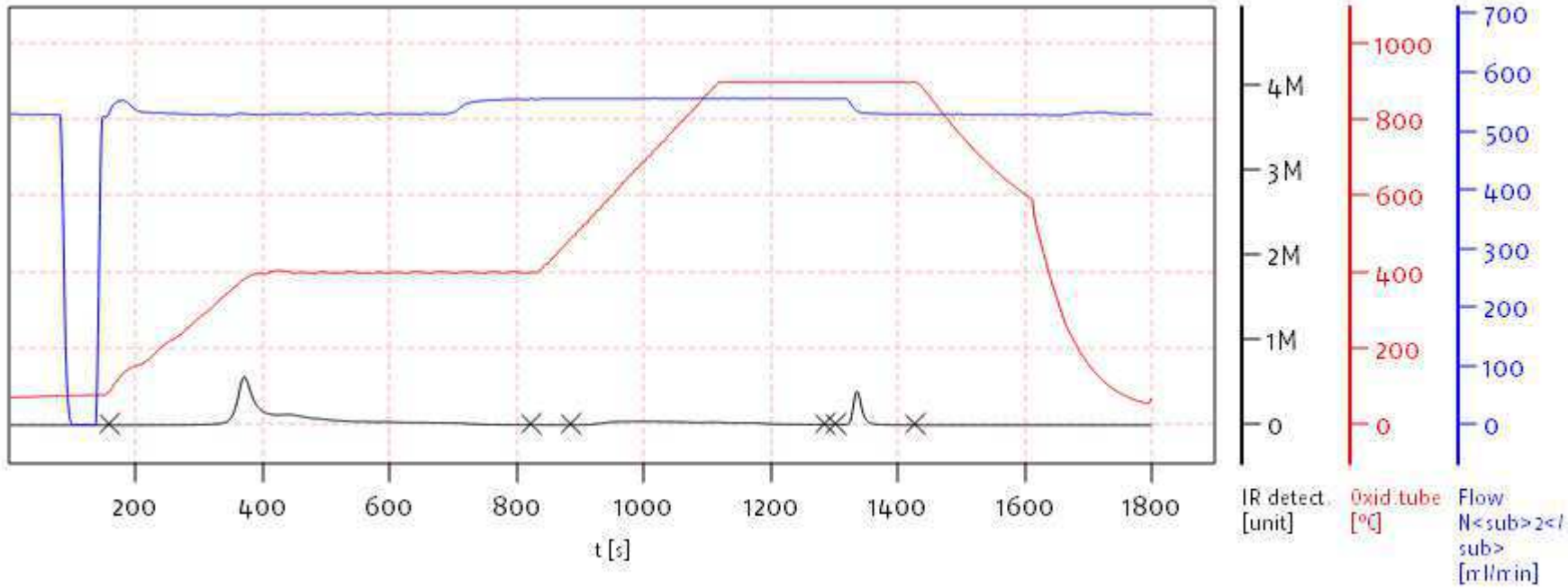
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
106	17	22L0105-26	191.60		CARBON	12/14/2022 2:22 PM	bl	1.223	1 389 902	1.505	0.178	246 736	375 985	1.045	0.282	0.9484	1.0000



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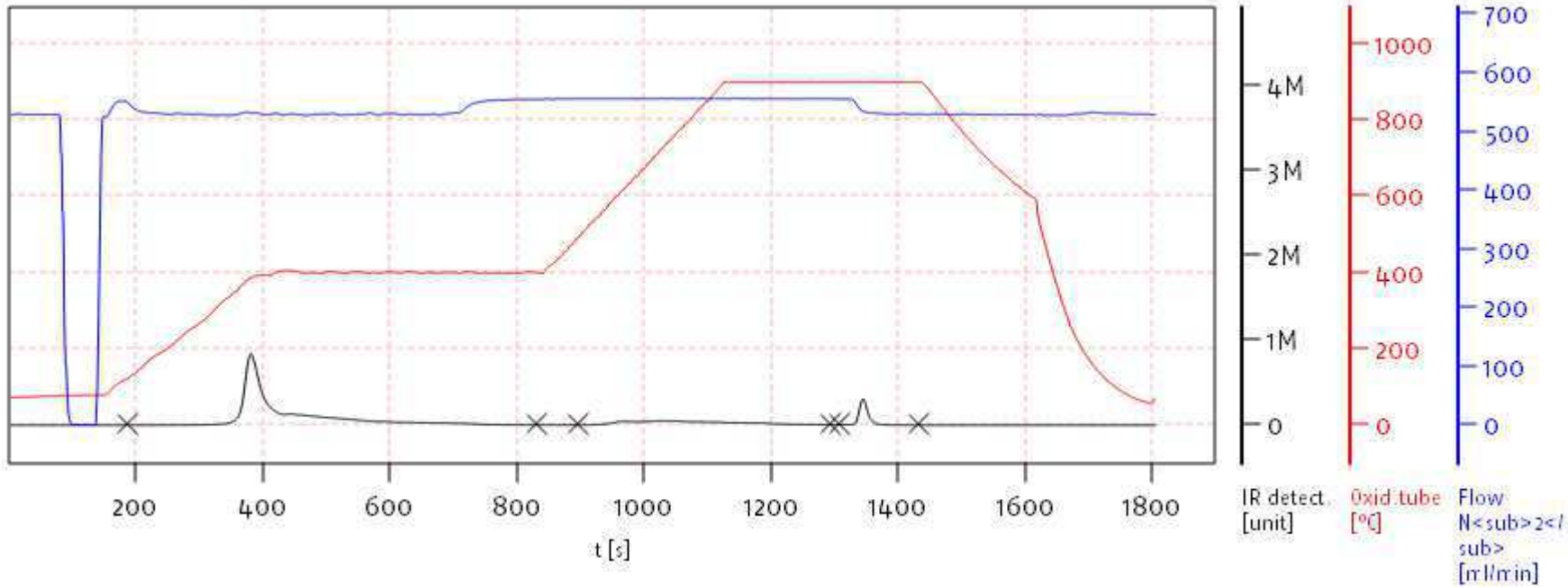
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
107	18	22L0105-27	221.50		CARBON	12/14/2022 2:52 PM	bl	1.249	1 739 346	1.508	0.114	189 458	396 344	1.135	0.258	0.9484	1.0000



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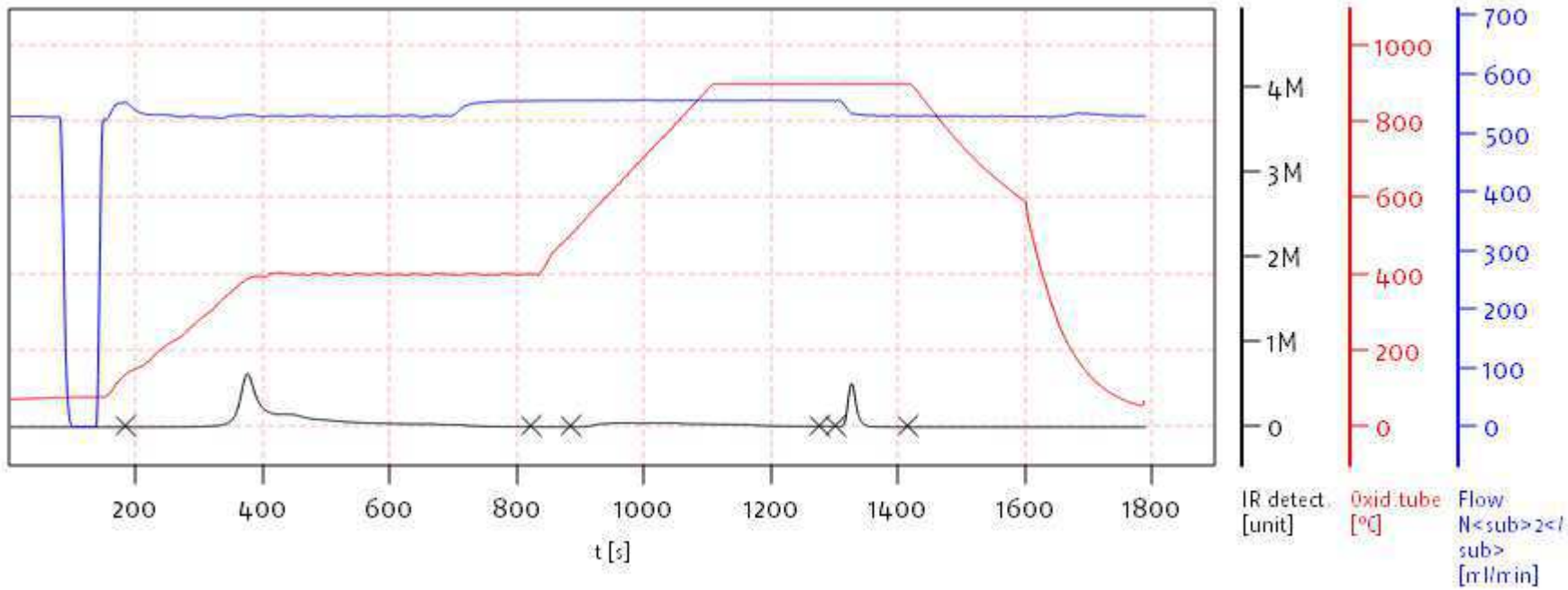
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
108	19	22L0105-28	228.70		CARBON	12/14/2022 3:22 PM	bl	1.212	1 624 005	1.481	0.187	302 472	423 172	1.025	0.268	0.9484	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
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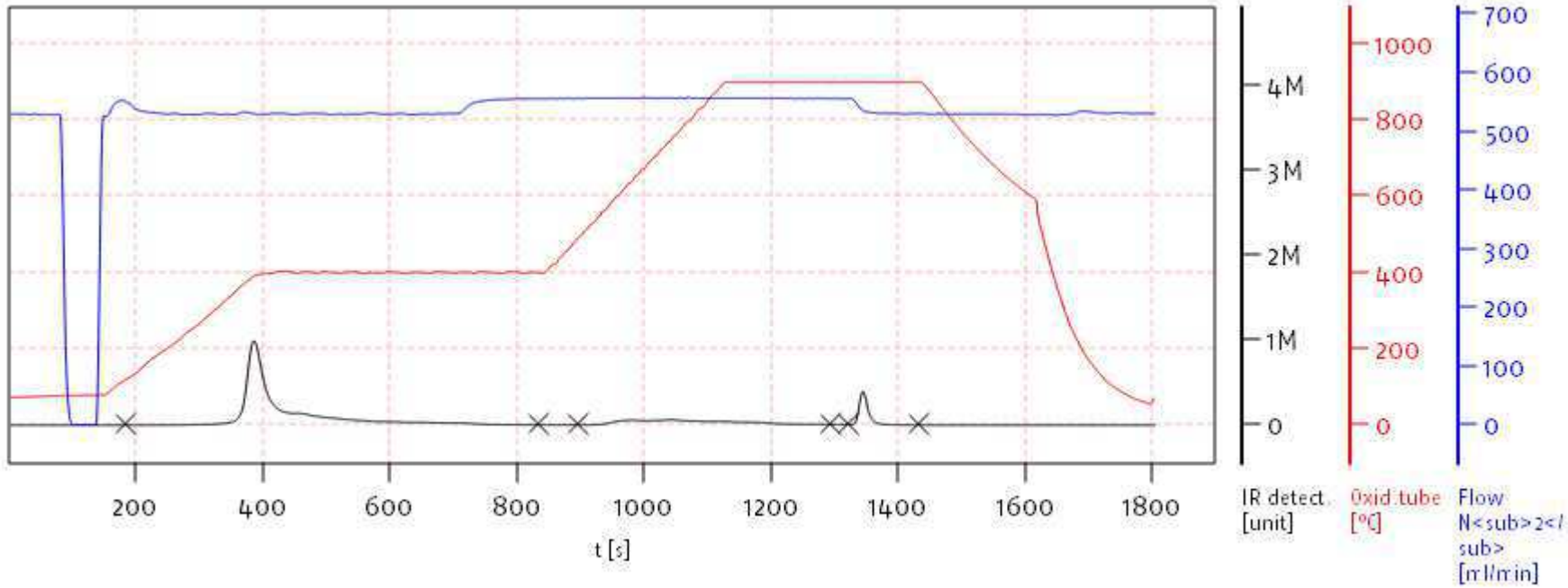
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
109	20	22L0105-29	255.30		CARBON	12/14/2022 3:53 PM	bl	1.270	1 999 816	1.555	0.135	249 281	496 196	1.135	0.285	0.9484	1.0000



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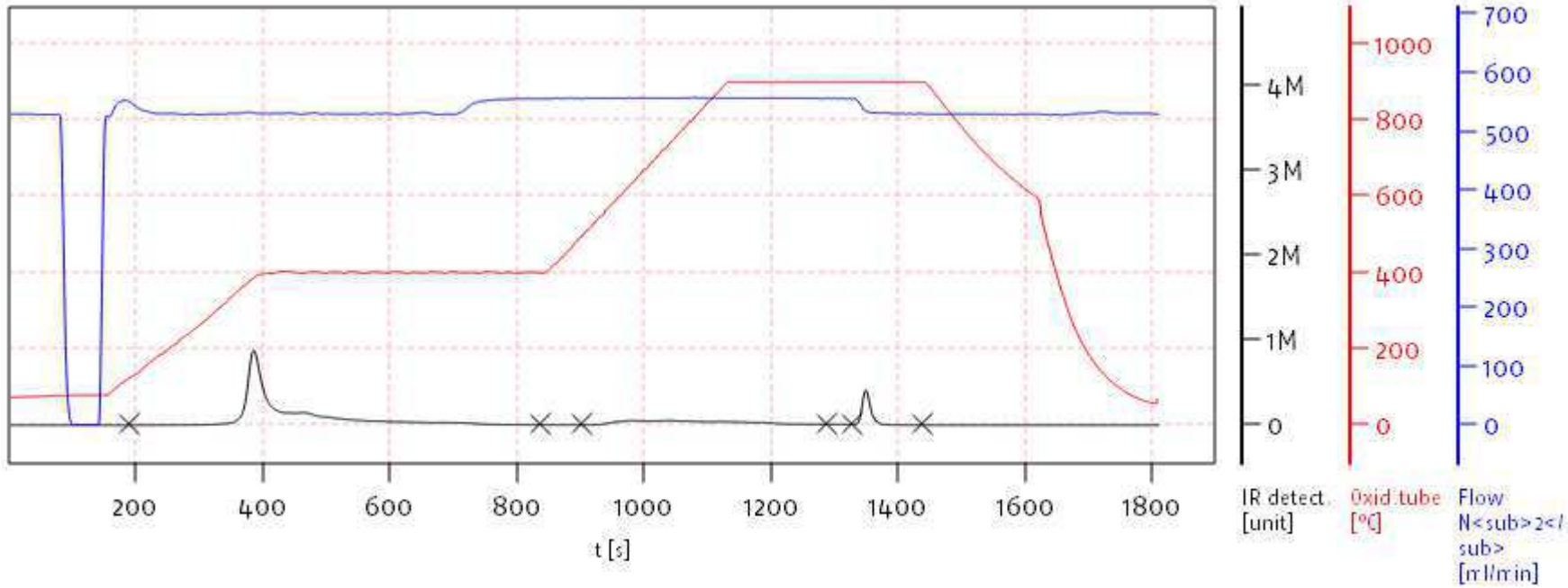
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
110	21	22L0105-30	234.00		CARBON	12/14/2022 4:23 PM	bl	1.260	1 804 148	1.546	0.145	245 035	459 068	1.115	0.286	0.9484	1.0000



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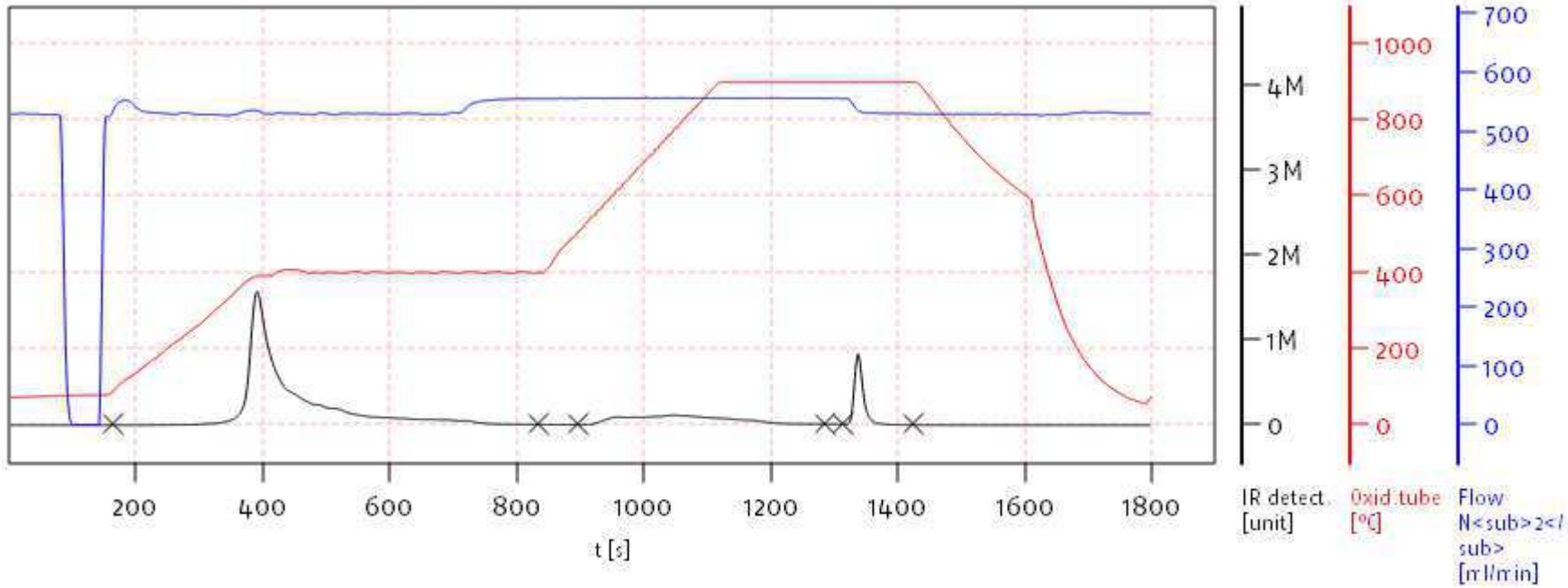
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
111	22	22L0105-31	534.70		CARBON	12/14/2022 4:54 PM	bl	1.217	3 941 826	1.477	0.142	518 699	923 282	1.075	0.260	0.9484	1.0000



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Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
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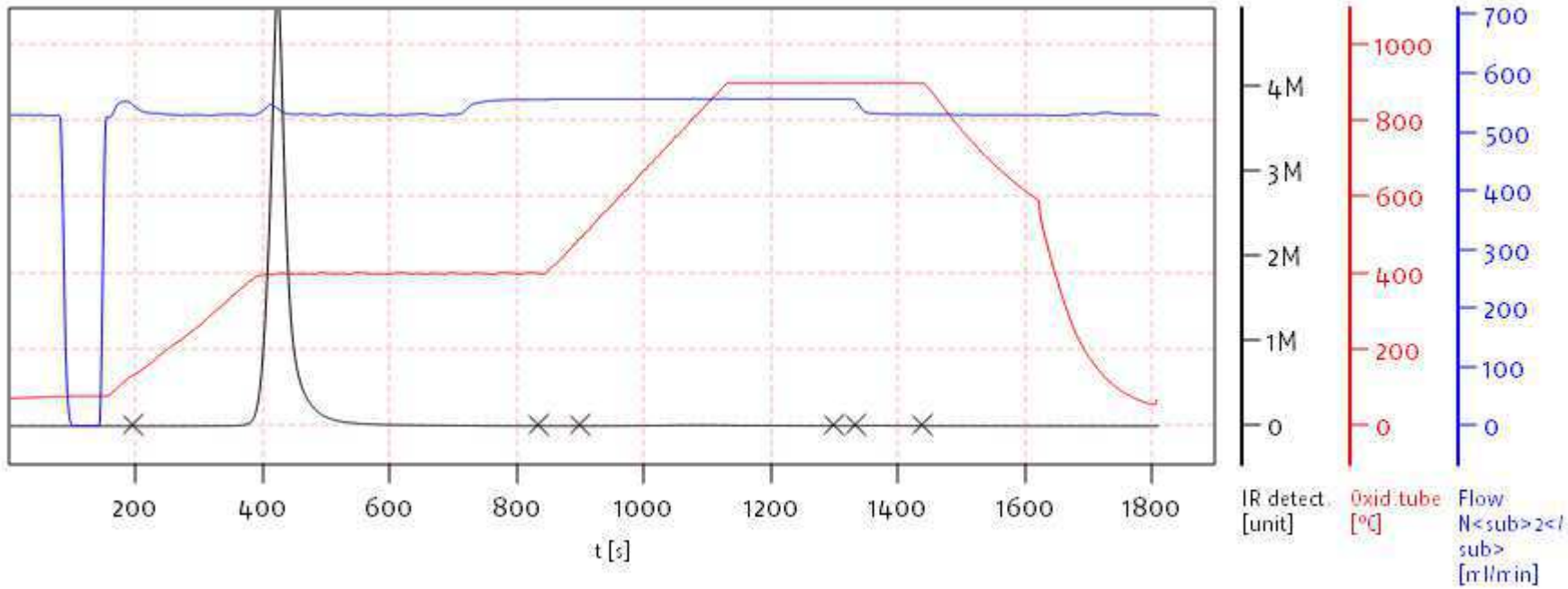
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
112	23	SKL0152-CCV9	20.30		CARBON	12/14/2022 5:24 PM	bl	44.994	6 247 971	45.442	0.000	16 759	85 385	44.994	0.449	0.9484	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
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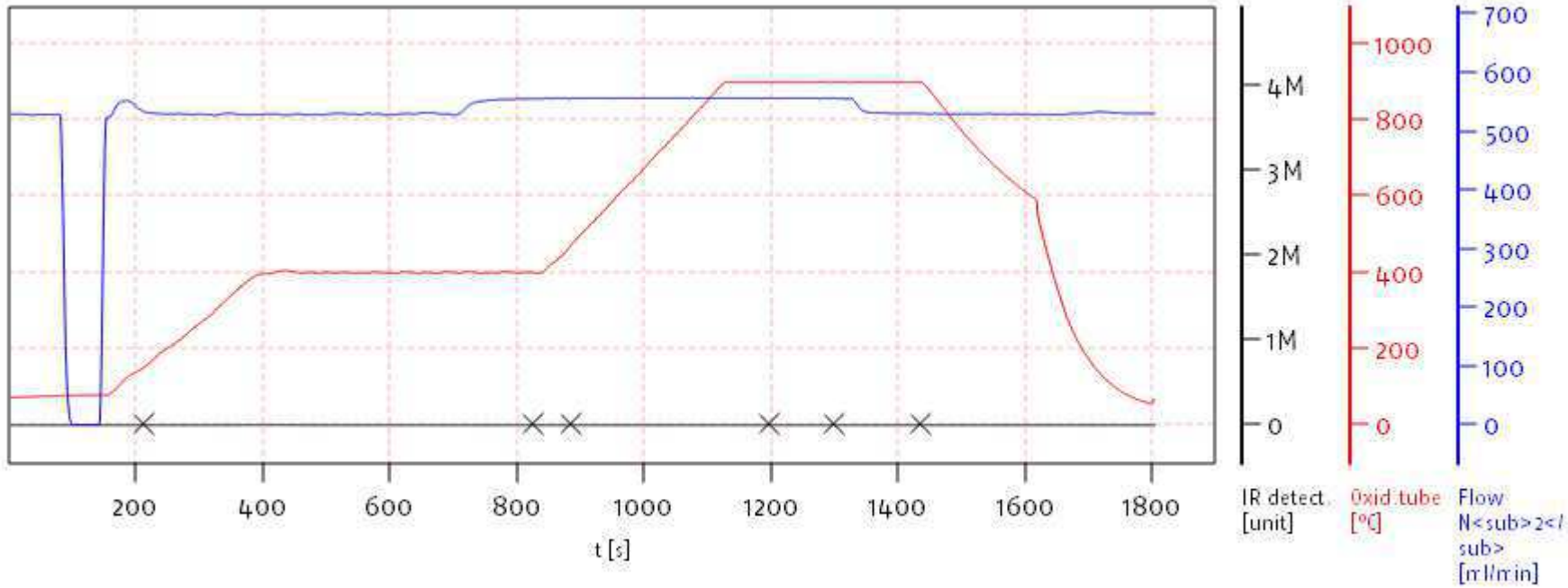
elementar
EXCELLENCE IN ELEMENTS

Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
113	24	SKL0152-CCB9	500.50		CARBON	12/14/2022 5:55 PM	bl,C3u,C2u	0.000	7 661	0.000	0.000	300	156	0.000	0.000	0.9484	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
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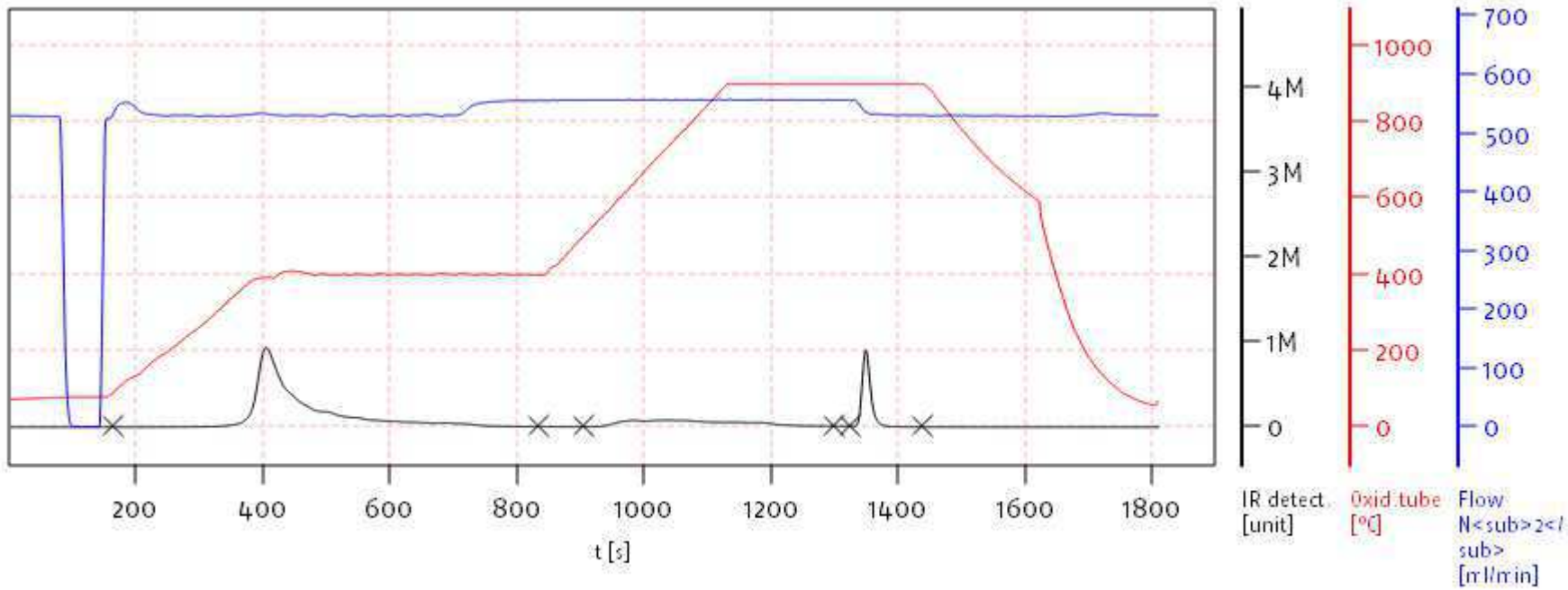
EXCELLENCE IN ELEMENTS

Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
114	25	22L0105-32	523.40		CARBON	12/14/2022 6:25 PM	bl	0.924	2 779 605	1.124	0.152	538 972	702 108	0.772	0.200	0.9484	1.0000



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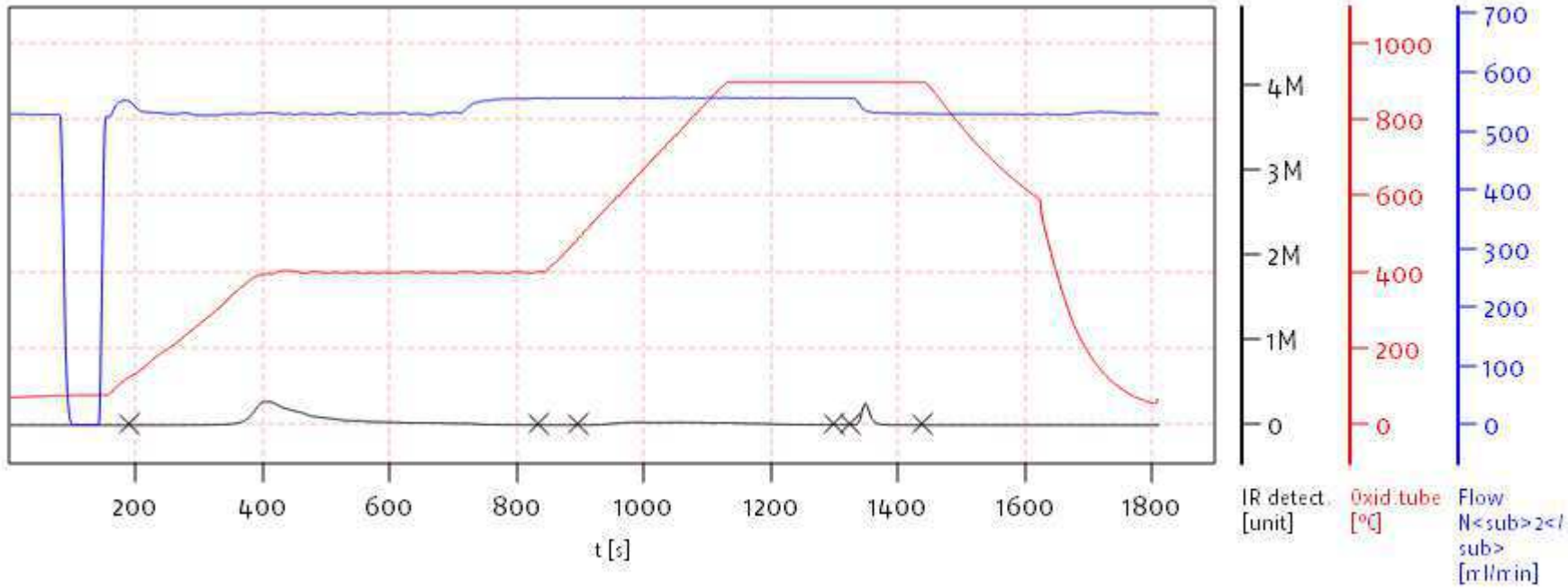
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
115	26	22L0105-33	301.00		CARBON	12/14/2022 6:56 PM	bl	0.636	1 196 714	0.769	0.065	153 681	285 003	0.571	0.133	0.9484	1.0000



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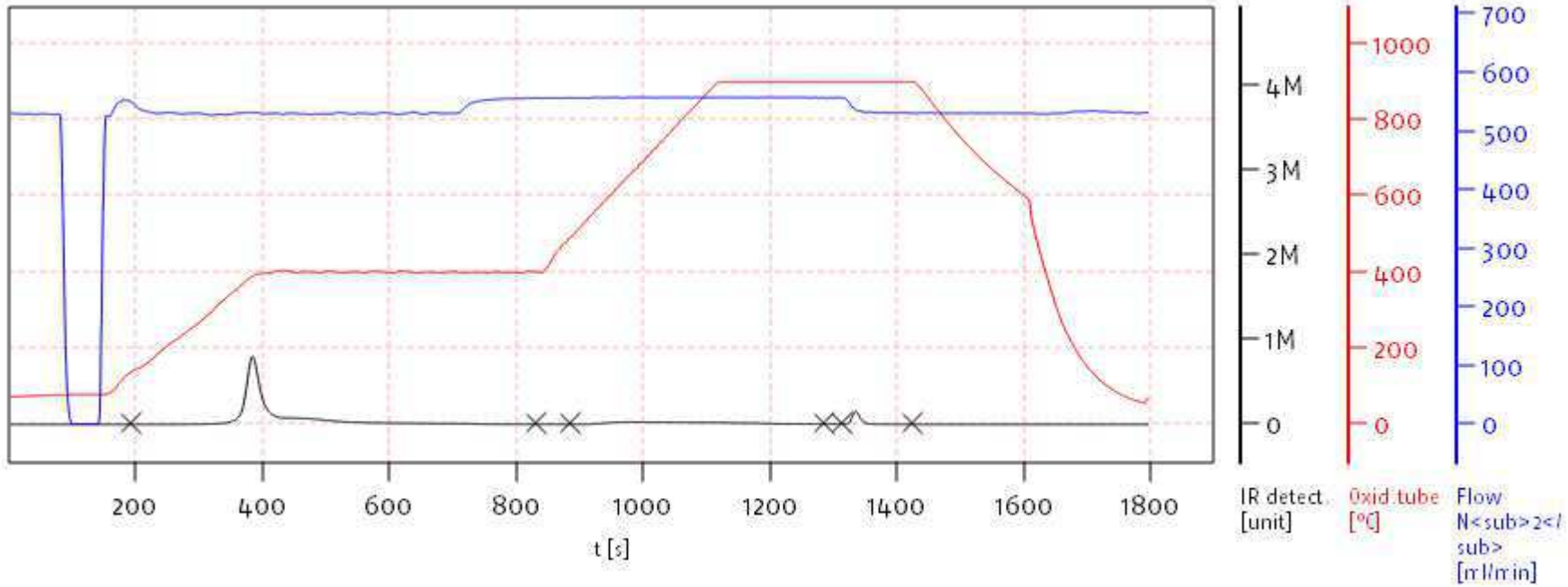
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
116	27	22L0136-01	183.50		CARBON	12/14/2022 7:26 PM	bl	1.018	1 230 781	1.200	0.055	91 208	242 298	0.963	0.182	0.9484	1.0000



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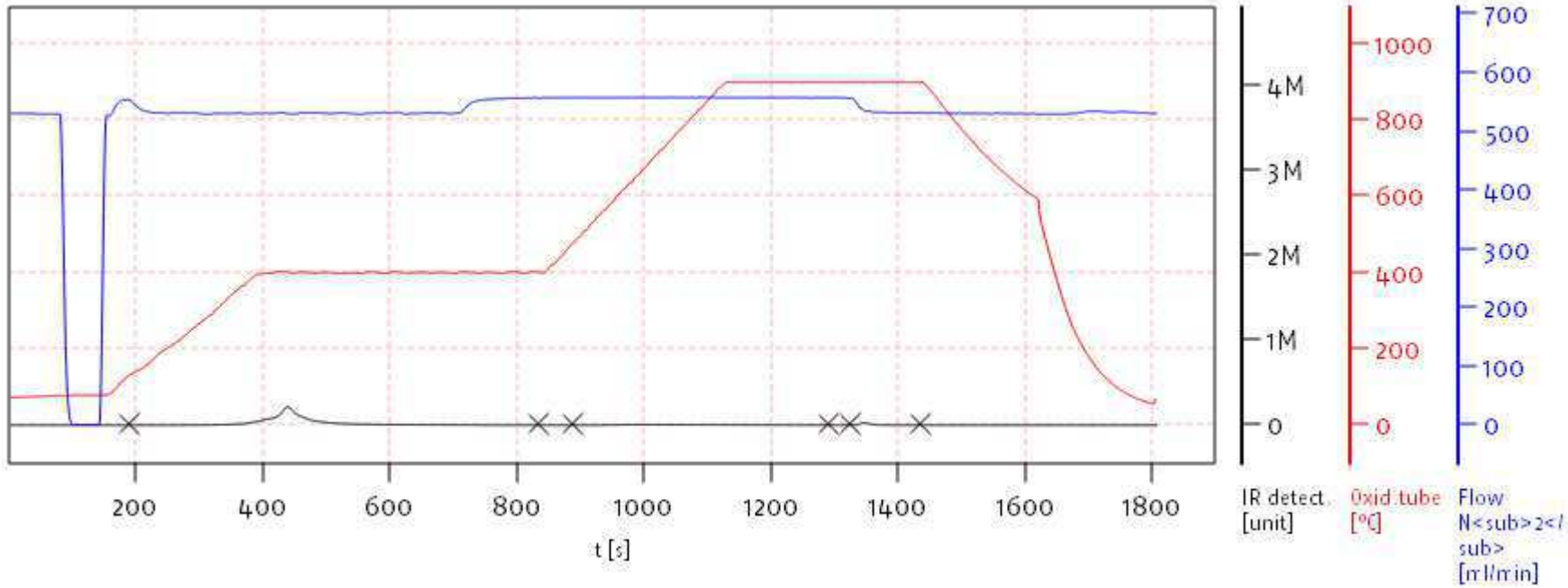
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
117	28	22L0136-02	540.40		CARBON	12/14/2022 7:57 PM	bl	0.132	512 260	0.138	0.000	20 650	46 442	0.132	0.006	0.9484	1.0000



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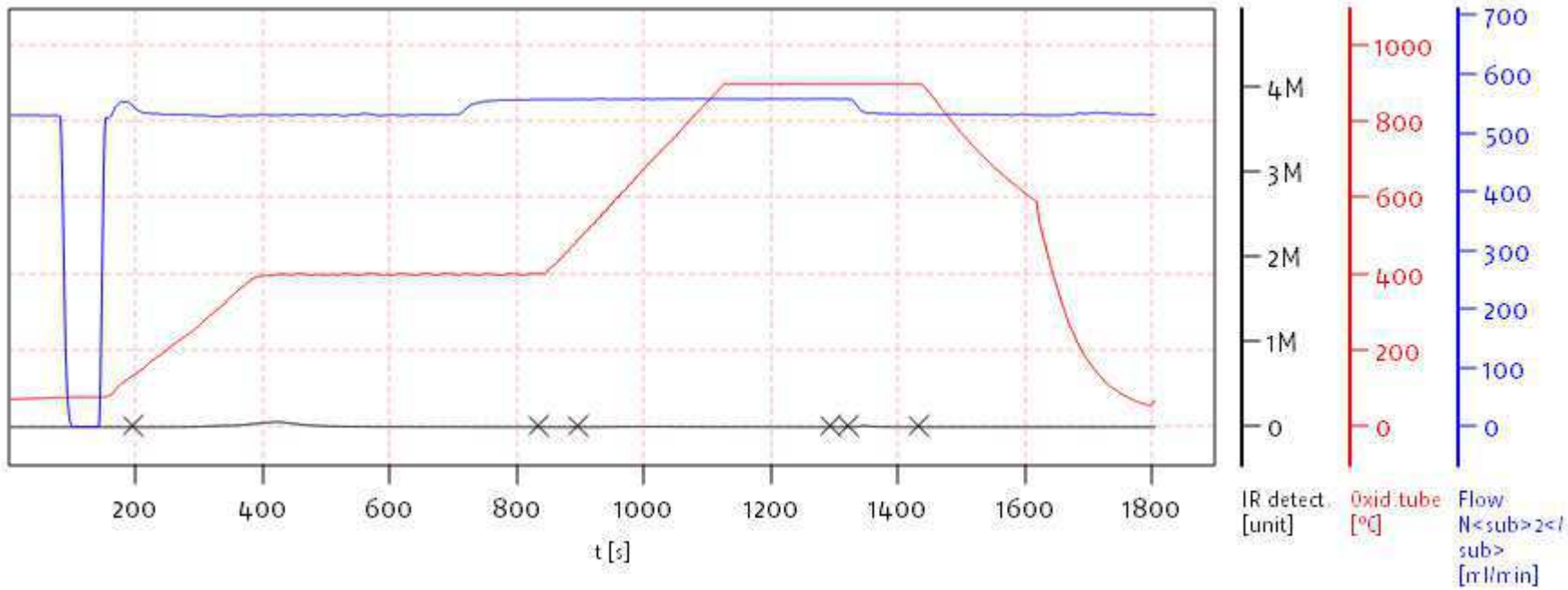
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
118	29	22L0136-03	590.90		CARBON	12/14/2022 8:27 PM	bl	0.058	258 362	0.059	0.000	15 354	31 341	0.058	0.001	0.9484	1.0000



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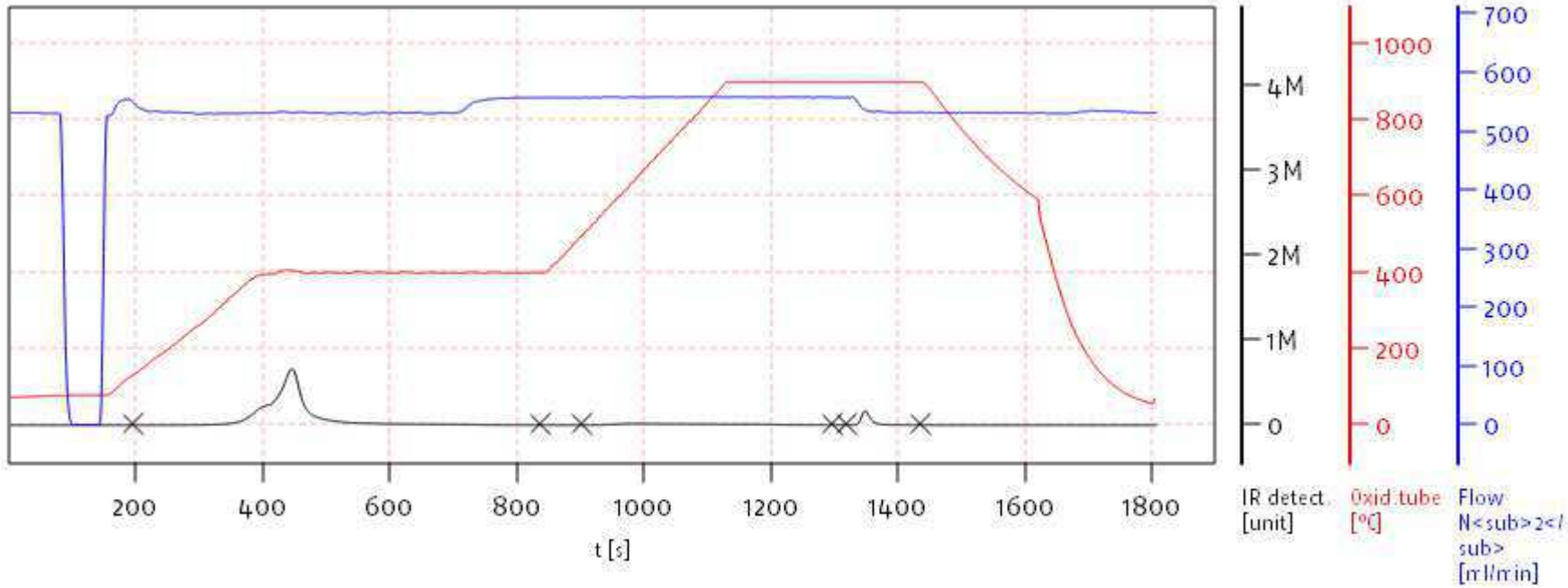
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
119	30	22L0136-04	274.60		CARBON	12/14/2022 8:58 PM	bl	0.841	1 513 399	0.904	0.046	108 906	137 370	0.795	0.062	0.9484	1.0000



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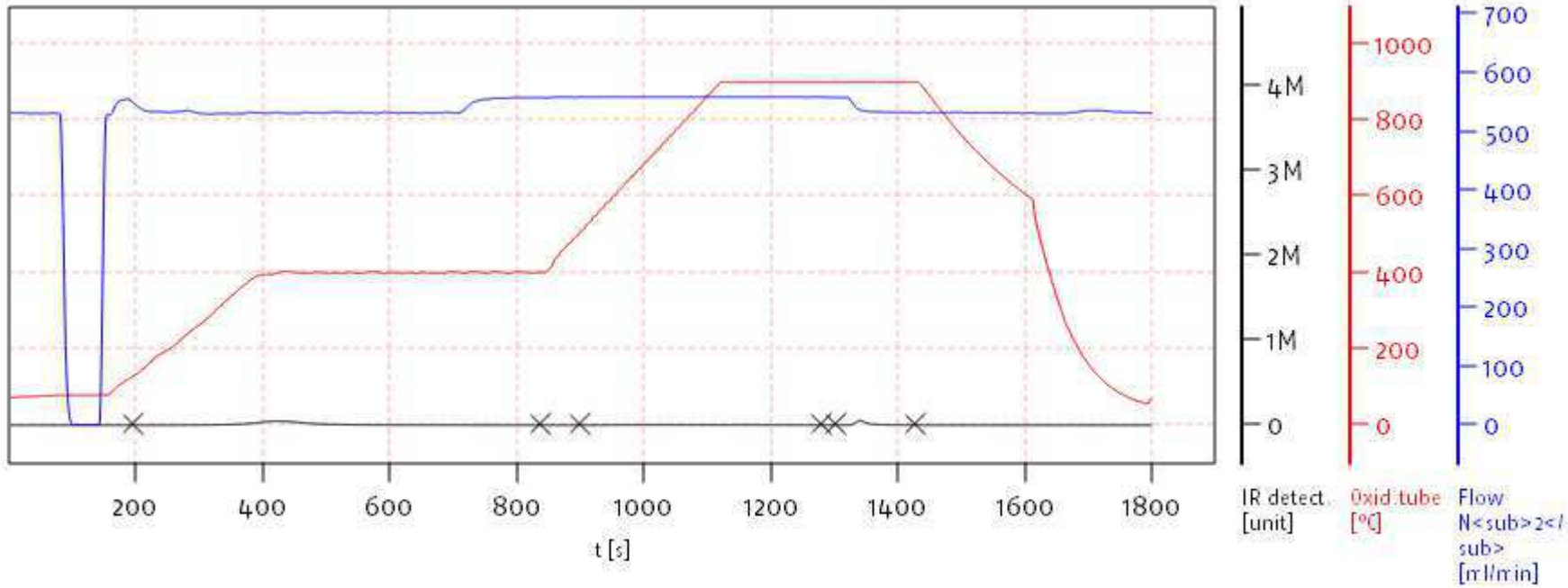
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
120	31	22L0136-05	543.20		CARBON	12/14/2022 9:28 PM	bl	0.050	191 727	0.051	0.006	46 299	29 372	0.045	0.001	0.9484	1.0000



Name:

Access: soliTOC superuser

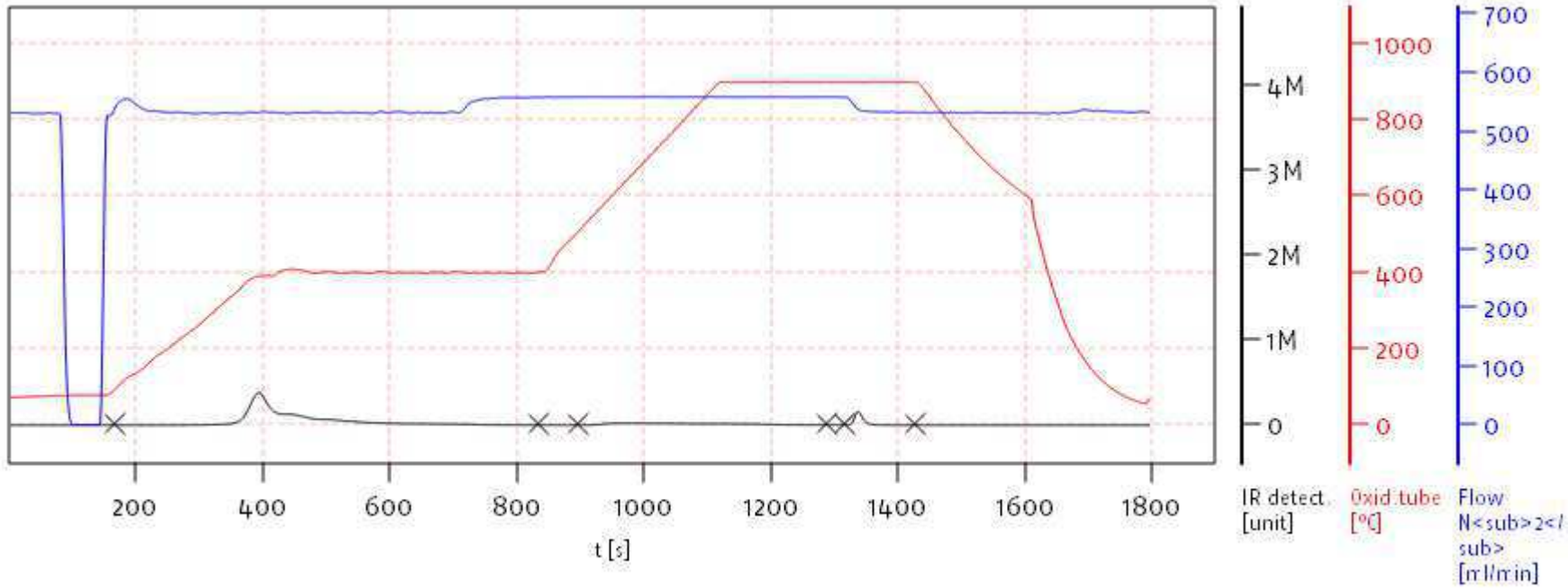
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
121	32	22L0136-06	225.20		CARBON	12/14/2022 9:59 PM	bl	0.739	1 088 520	0.854	0.046	94 112	193 738	0.692	0.115	0.9484	1.0000



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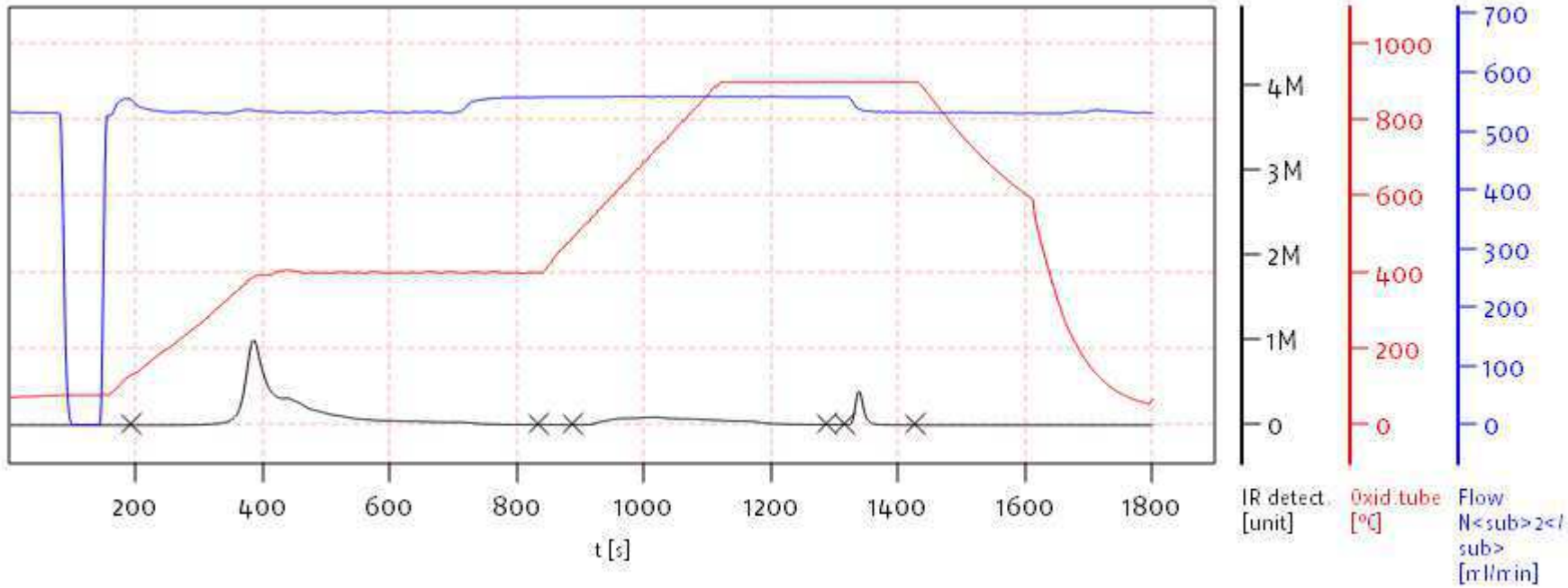
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
122	33	22L0136-07	535.80		CARBON	12/14/2022 10:29 PM	bl	0.784	2 668 539	0.980	0.060	234 176	705 890	0.724	0.196	0.9484	1.0000



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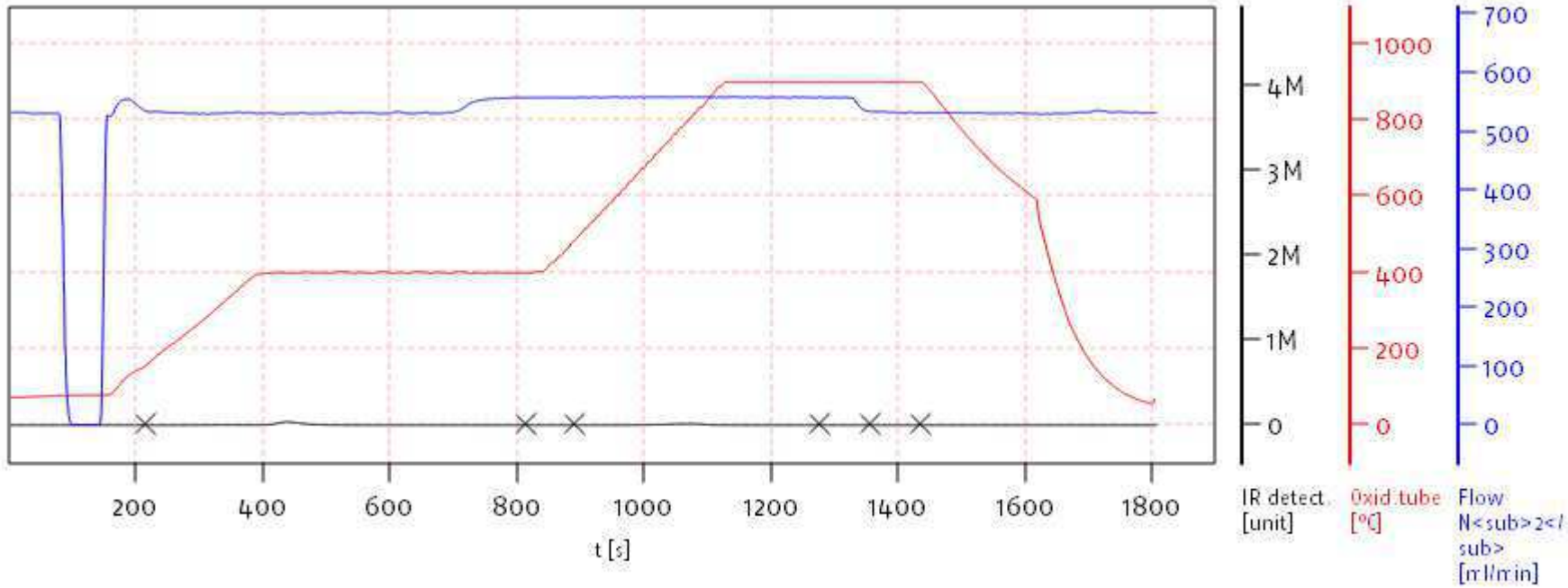
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
123	34	BKL0299-MRL1	609.80		CARBON	12/14/2022 11:00 PM	bl,C2u	0.012	77 830	0.016	0.000	136	41 815	0.012	0.004	0.9484	1.0000



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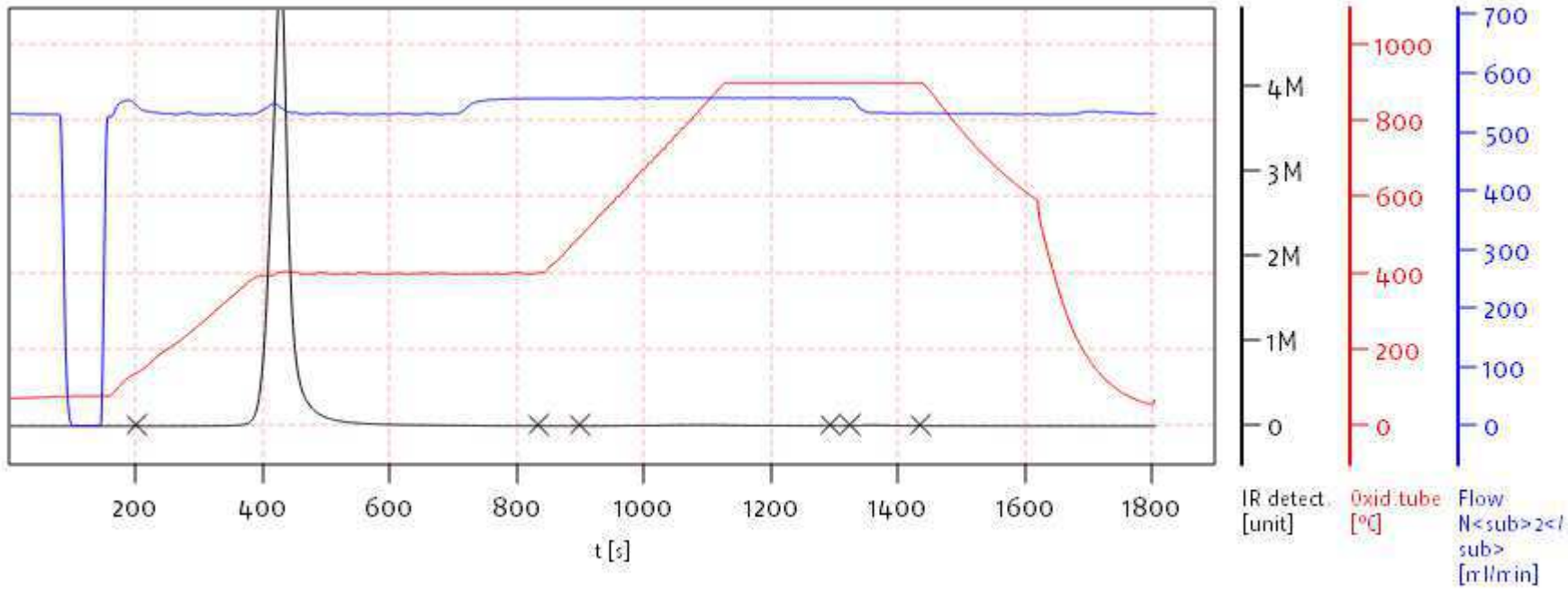
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
124	35	SKL0152-CCVA	21.80		CARBON	12/14/2022 11:30 PM	bl	44.895	6 693 095	45.422	0.000	26 474	100 719	44.895	0.527	0.9484	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
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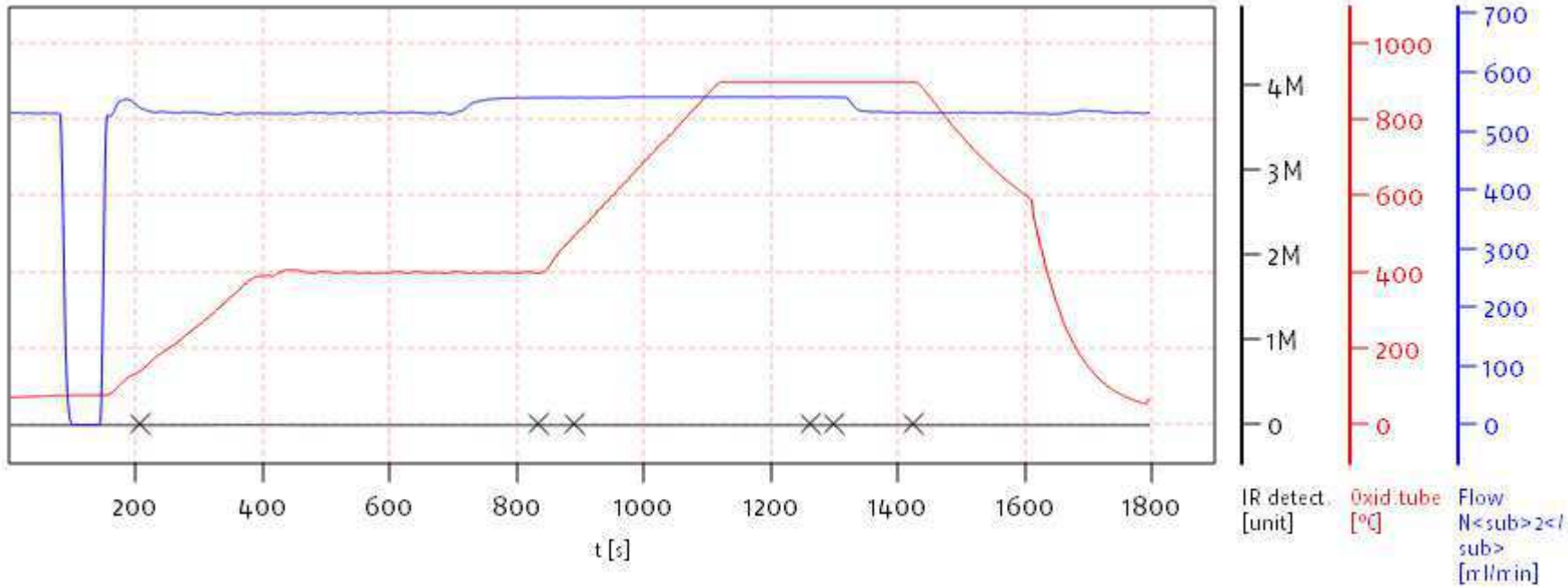
Mode CCC

Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
125	36	SKL0152-CCBA	523.00		CARBON	12/15/2022 12:01 AM	bl,C3u,C2u	0.000	8 781	0.000	0.000	293	117	0.000	0.000	0.9484	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
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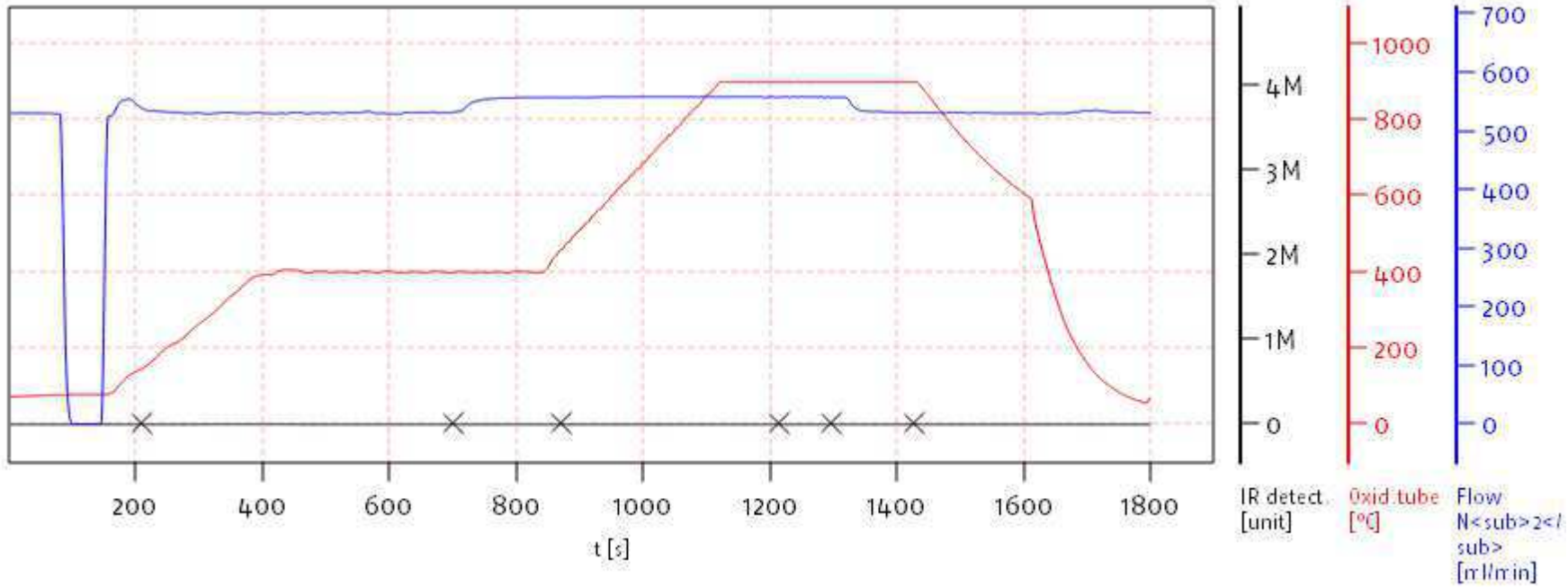
elementar
EXCELLENCE IN ELEMENTS

Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
126	37	BKL0299-BLK1	503.30		CARBON	12/15/2022 12:31 AM	bl,C3u,C2u	0.000	10 828	0.000	0.000	620	1 875	0.000	0.000	0.9484	1.0000



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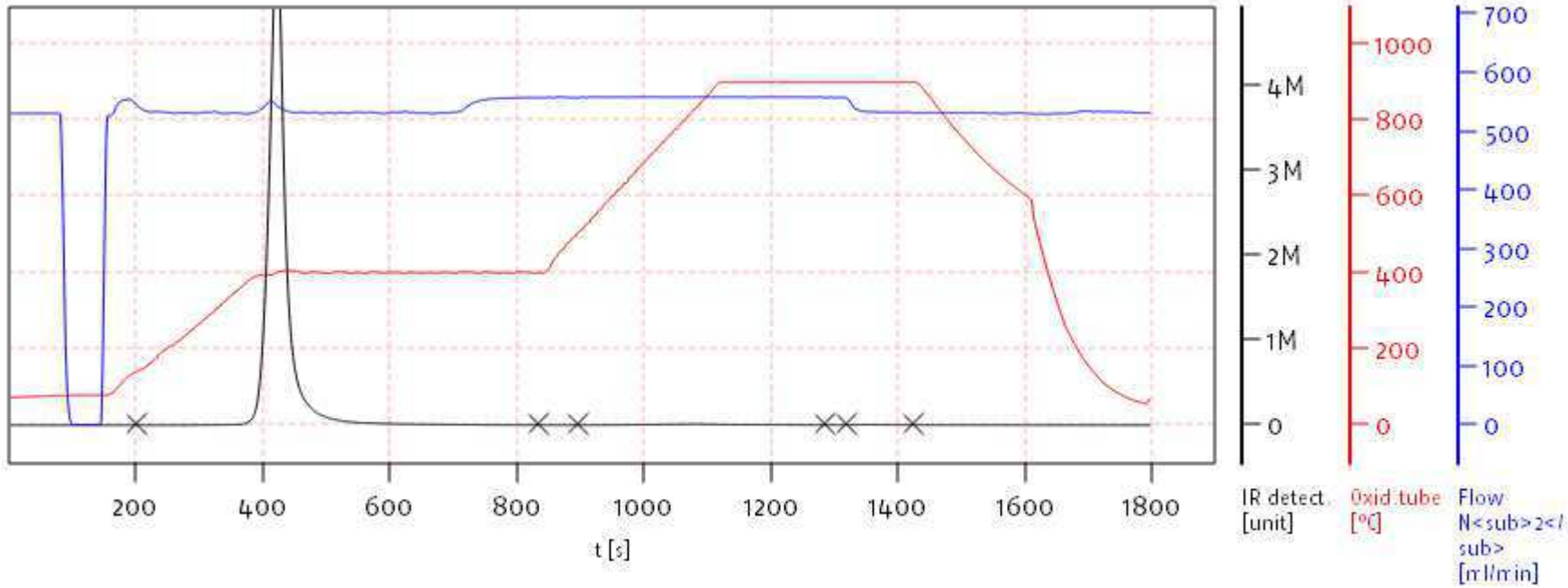
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
127	38	BKL0299-BS1	21.50		CARBON	12/15/2022 1:01 AM	bl	45.092	6 630 122	45.506	0.000	15 893	84 084	45.092	0.414	0.9484	1.0000



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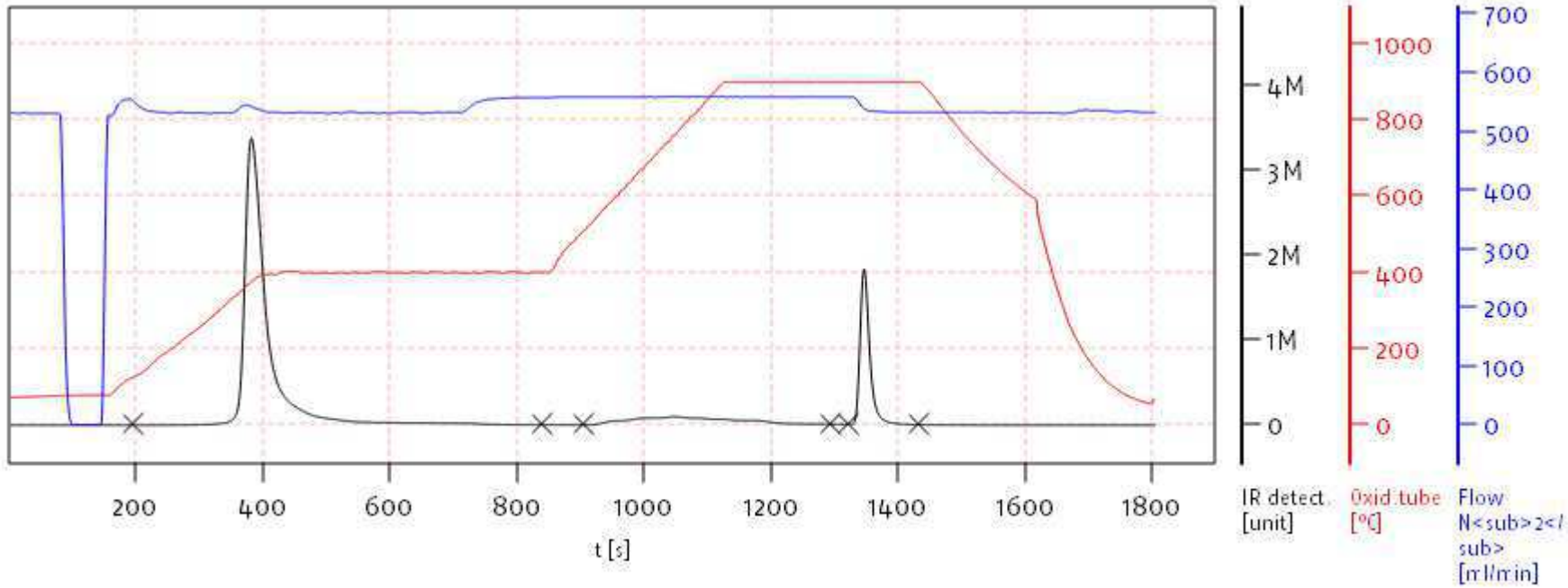
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
128	39	BKL0299-SRM1	312.10		CARBON	12/15/2022 1:32 AM	bl	2.974	5 071 270	3.334	0.601	1 237 630	752 070	2.373	0.360	0.9484	1.0000



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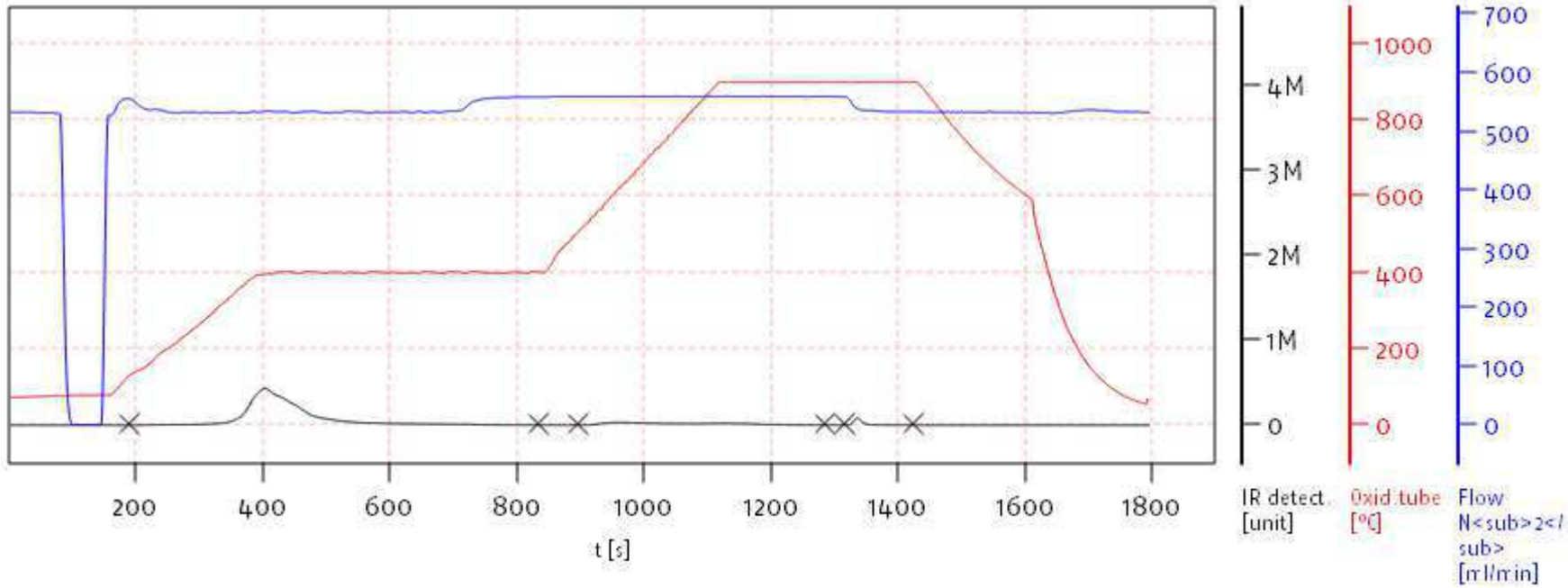
Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
129	40	22L0136-08	506.80		CARBON	12/15/2022 2:02 AM	bl	0.455	1 574 357	0.516	0.007	49 685	224 627	0.448	0.061	0.9484	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
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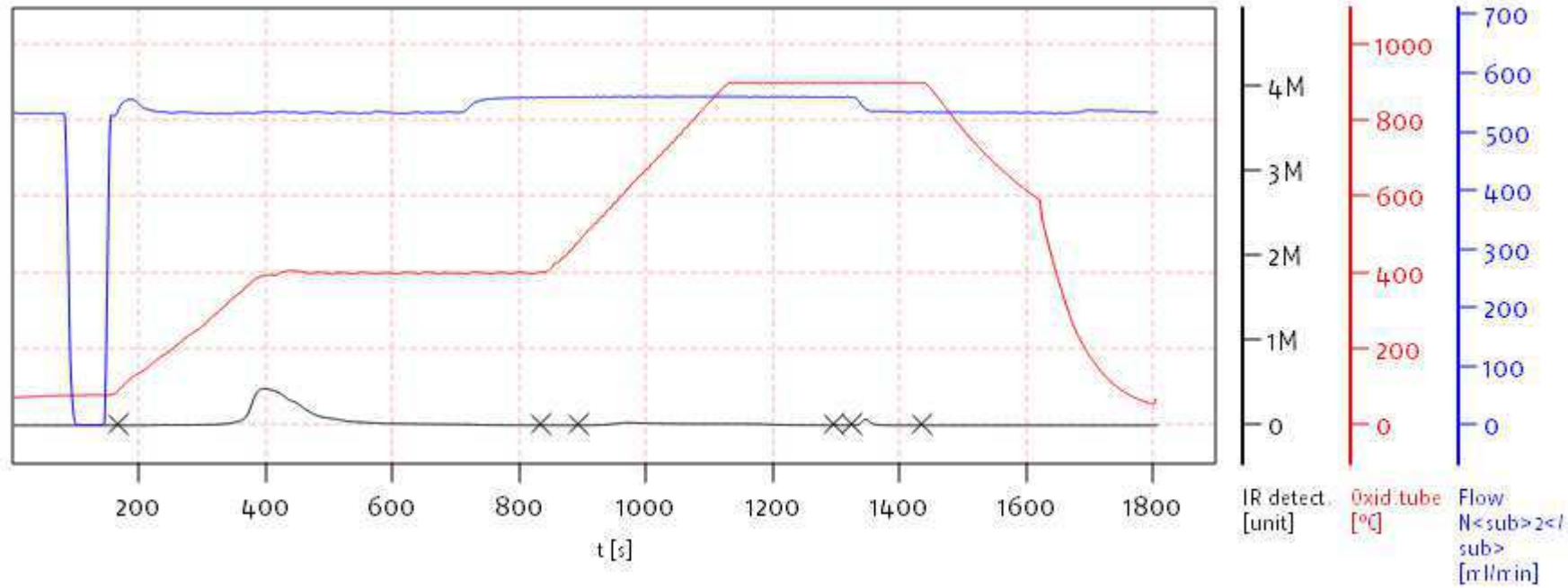
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
130	41	BKL0299-DUP1	521.00		CARBON	12/15/2022 2:33 AM	bl	0.466	1 658 477	0.522	0.006	45 880	215 999	0.460	0.056	0.9484	1.0000



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EXCELLENCE IN ELEMENTS

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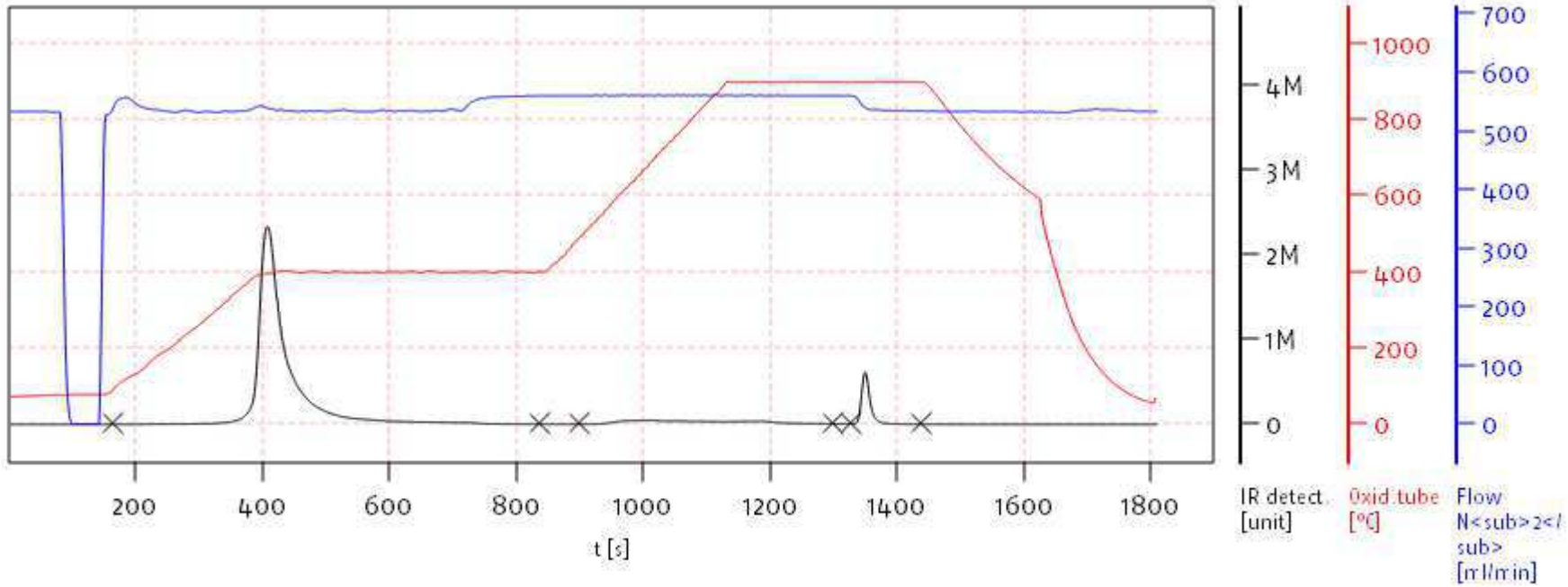
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
131	42	BKL0299-MS1	501.90	0.0107	CARBON	12/15/2022 3:03 AM	bl	1.370	4 354 155	1.490	0.104	364 696	415 500	1.266	0.120	0.9484	1.0000



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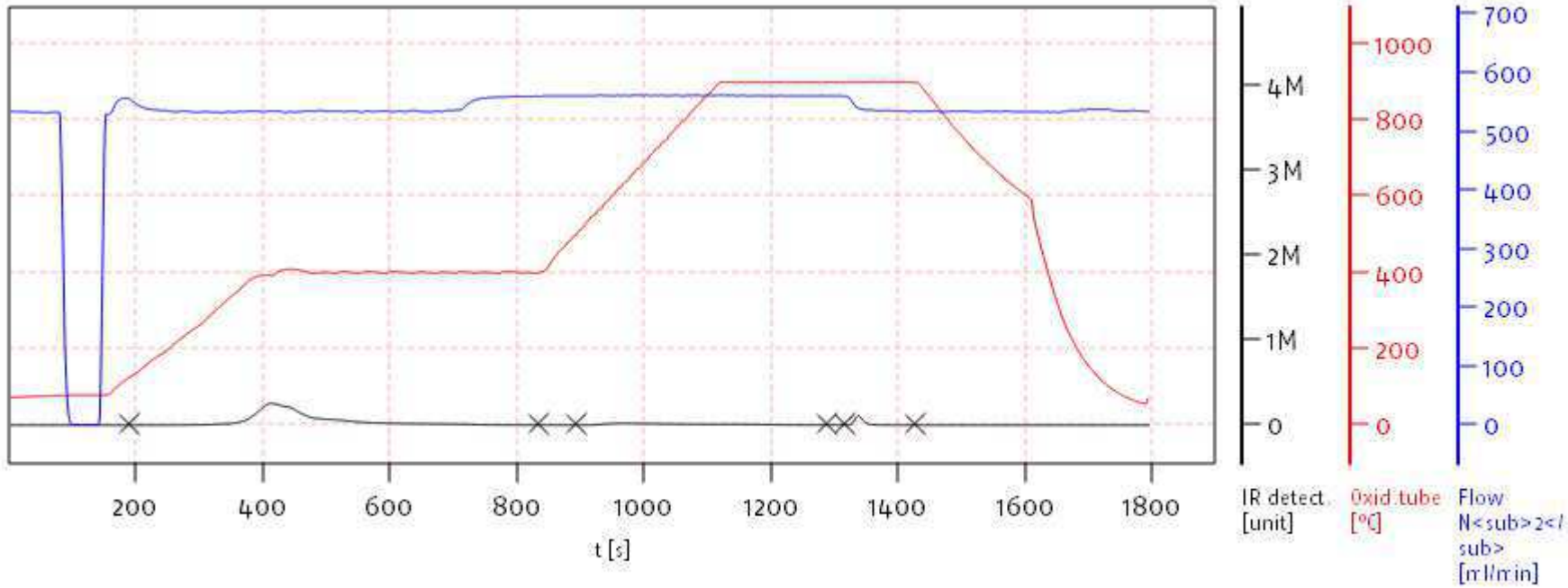
Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
132	43	22L0136-09	506.60		CARBON	12/15/2022 3:34 AM	bl	0.310	1 053 588	0.348	0.013	68 137	148 820	0.298	0.037	0.9484	1.0000



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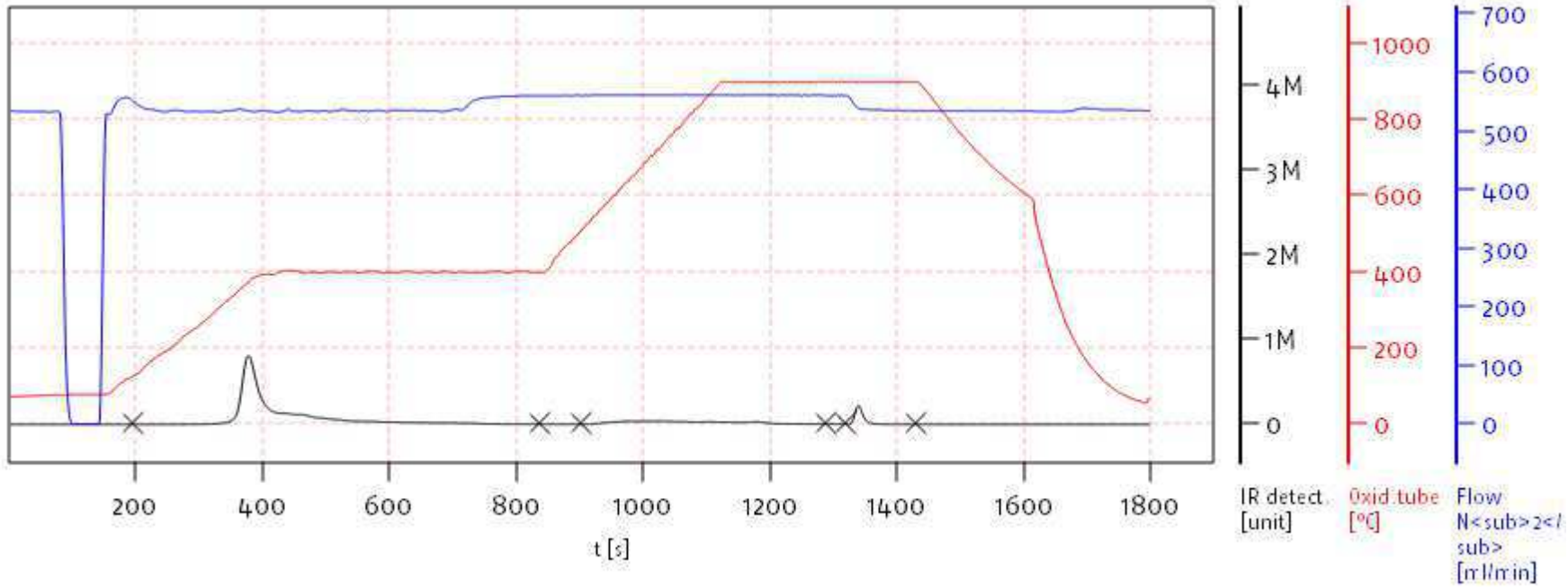
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
133	44	22L0136-10	222.90		CARBON	12/15/2022 4:04 AM	bl	1.100	1 588 962	1.310	0.071	128 884	328 625	1.029	0.210	0.9484	1.0000



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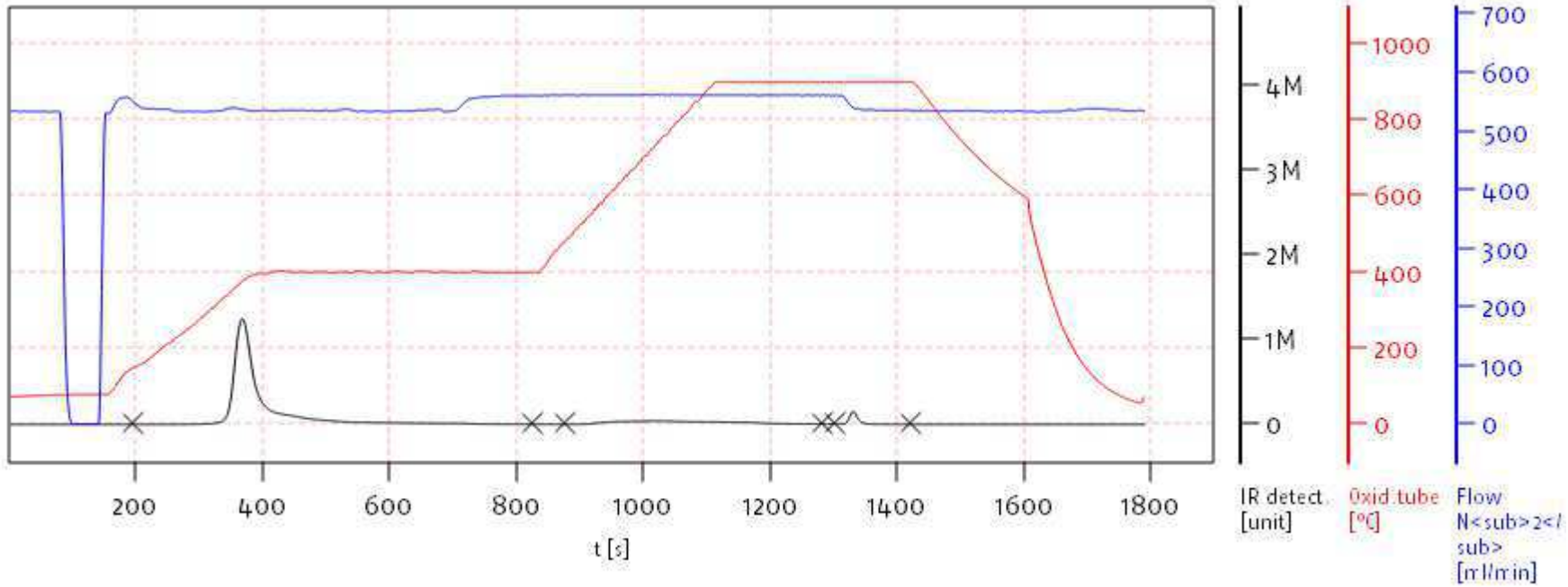
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
134	45	22L0136-11	246.60		CARBON	12/15/2022 4:34 AM	bl	1.268	2 087 892	1.464	0.041	91 303	338 904	1.227	0.196	0.9484	1.0000



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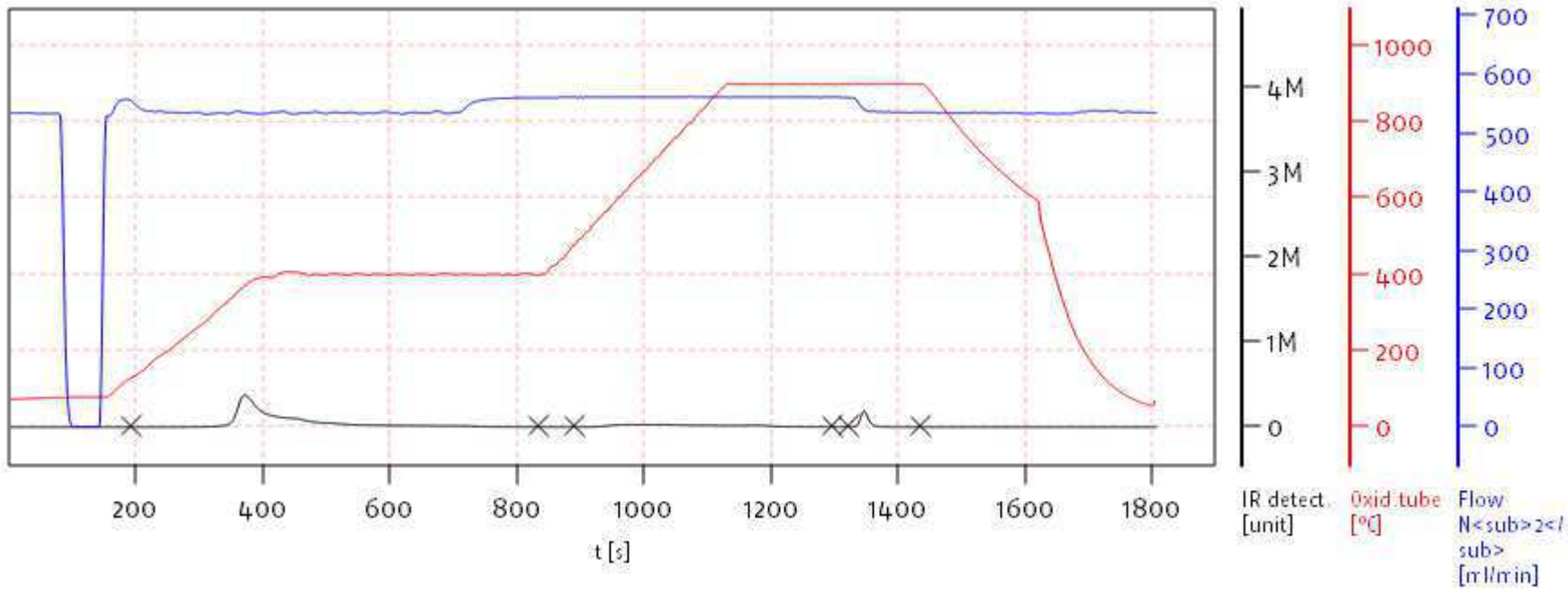
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
135	46	22L0136-12	158.00		CARBON	12/15/2022 5:05 AM	bl	1.051	1 071 049	1.267	0.081	108 867	246 642	0.971	0.216	0.9484	1.0000



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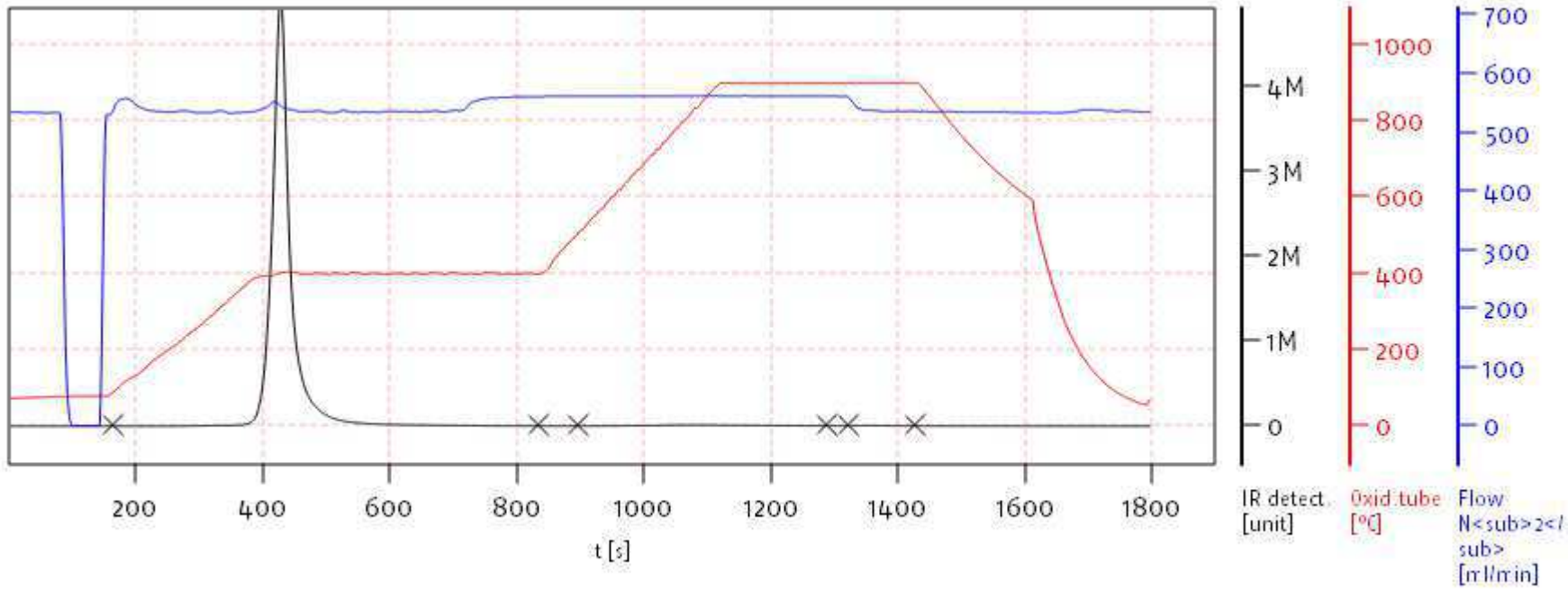
EXCELLENCE IN ELEMENTS

Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
136	47	SKL0152-CCVB	20.50		CARBON	12/15/2022 5:35 AM	bl	44.846	6 288 696	45.451	0.000	19 522	106 640	44.846	0.605	0.9484	1.0000



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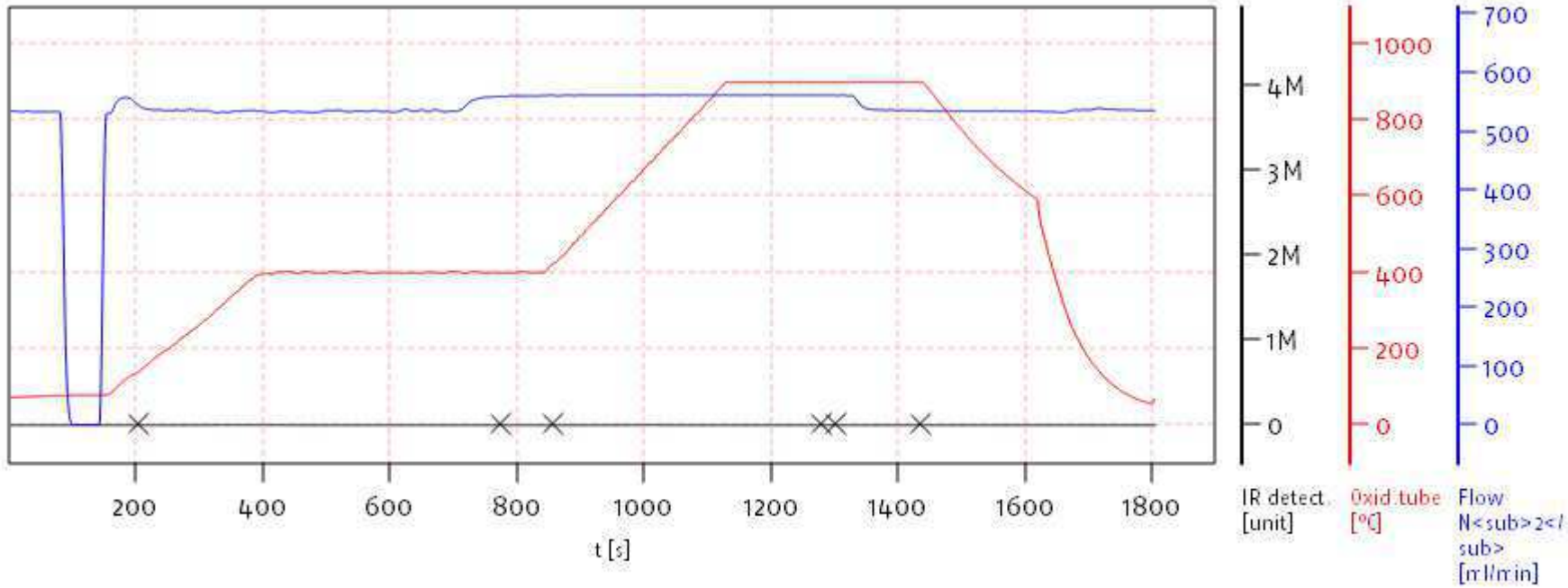
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
137	48	SKL0152-CCBB	514.50		CARBON	12/15/2022 6:06 AM	bl,C2u	0.000	7 616	0.000	0.000	339	3 227	0.000	0.000	0.9484	1.0000



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Soli TOC Cube, Carbon
Balance: BAL3
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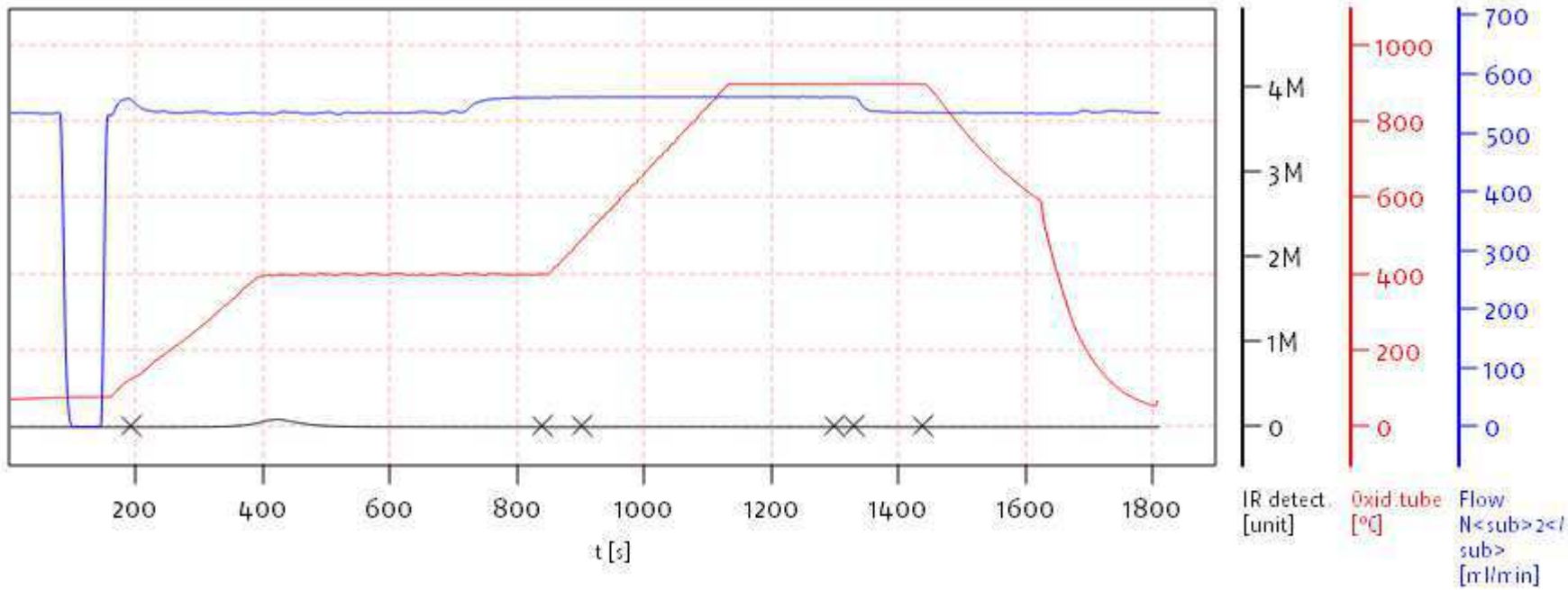
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
138	49	22L0137-01	216.80		CARBON	12/15/2022 6:36 AM	bl	0.186	301 002	0.186	0.000	3 453	13 280	0.186	0.000	0.9484	1.0000



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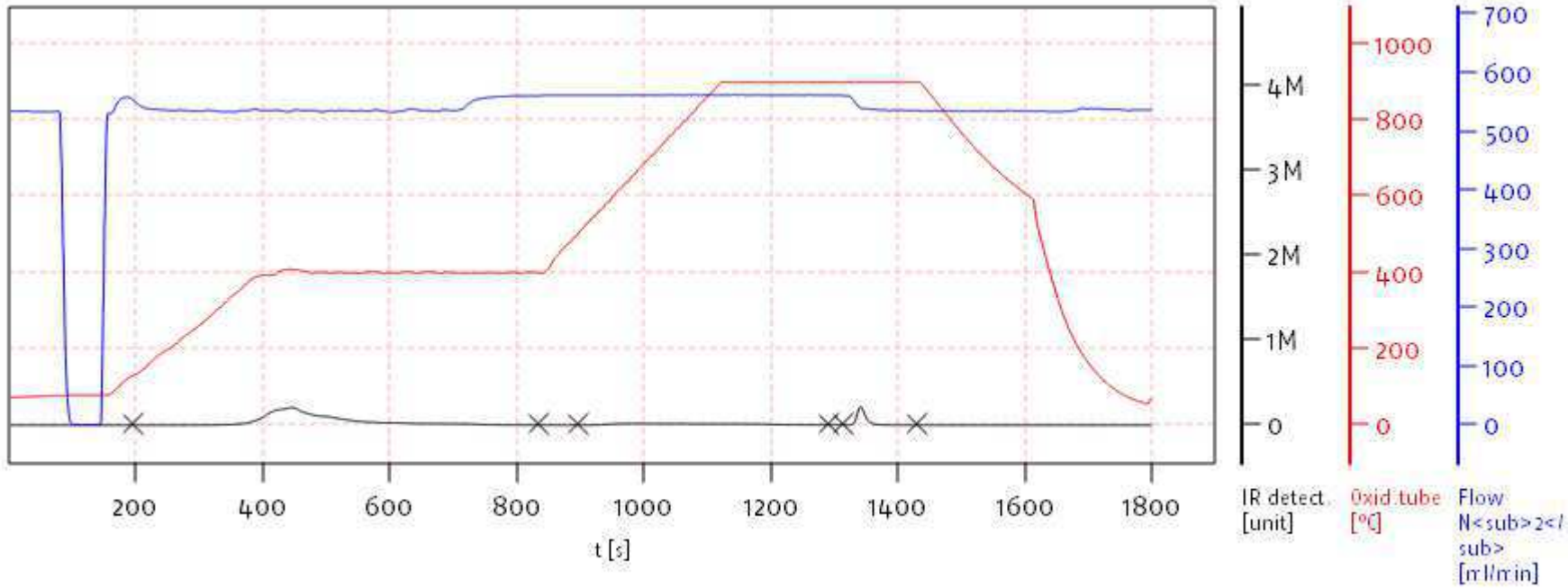
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
139	50	22L0137-02	545.20		CARBON	12/15/2022 7:07 AM	bl	0.279	951 956	0.318	0.029	129 748	166 758	0.249	0.040	0.9484	1.0000



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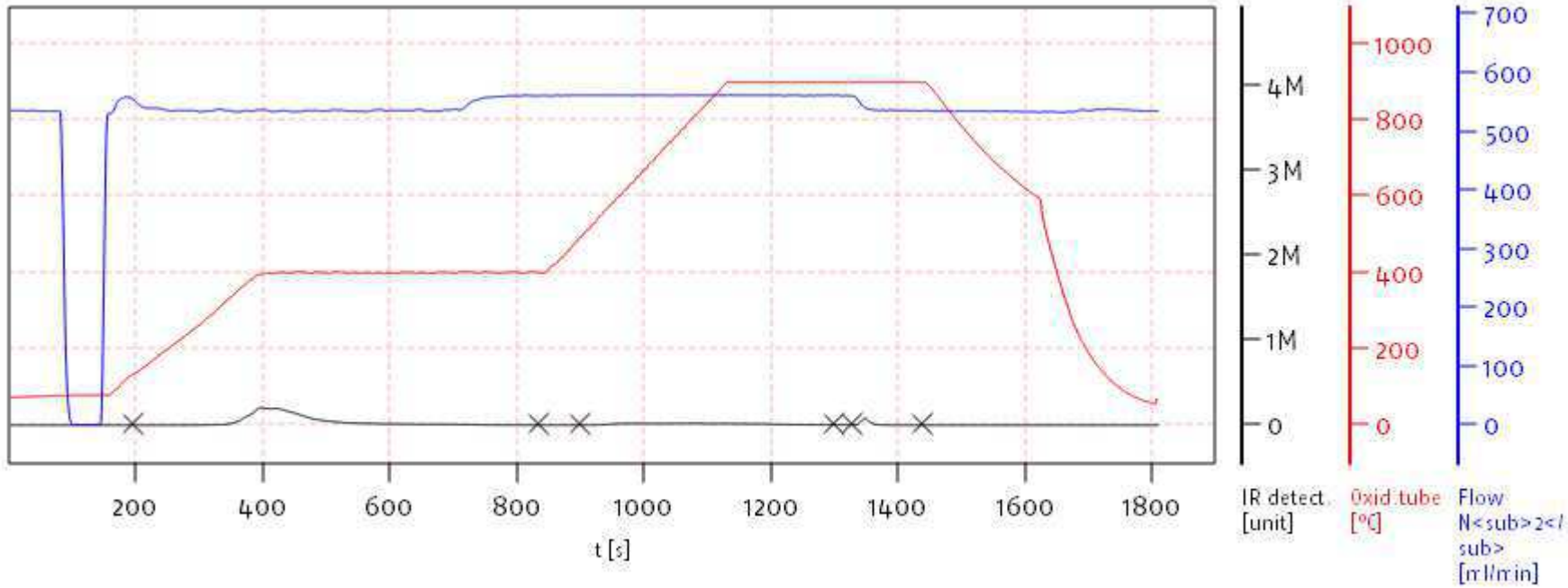
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
140	51	22L0137-03	212.20		CARBON	12/15/2022 7:37 AM	bl	0.610	883 249	0.732	0.017	49 808	194 614	0.593	0.123	0.9484	1.0000



Name:

Access: soliTOC superuser

Date: Fri Dec 16 09:43:23 2022

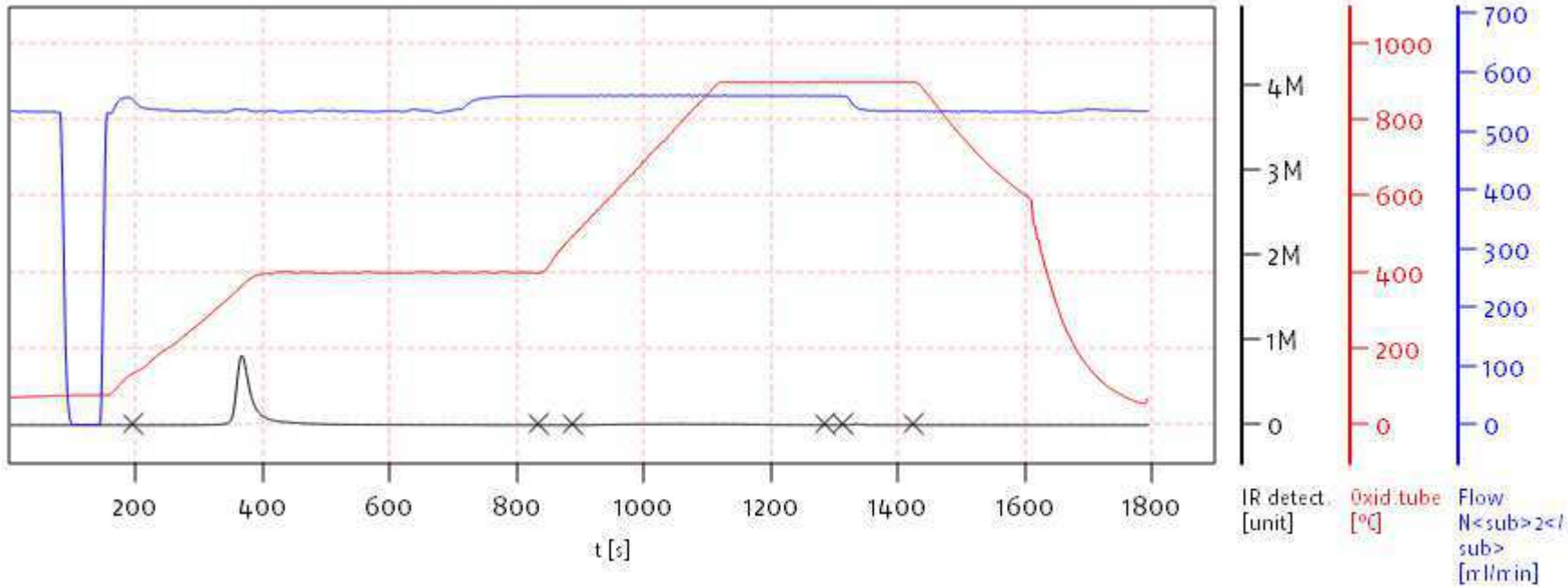
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
141	52	22L0137-04	101.60		CARBON	12/15/2022 8:07 AM	bl	1.323	941 817	1.437	0.000	8 477	101 782	1.323	0.115	0.9484	1.0000



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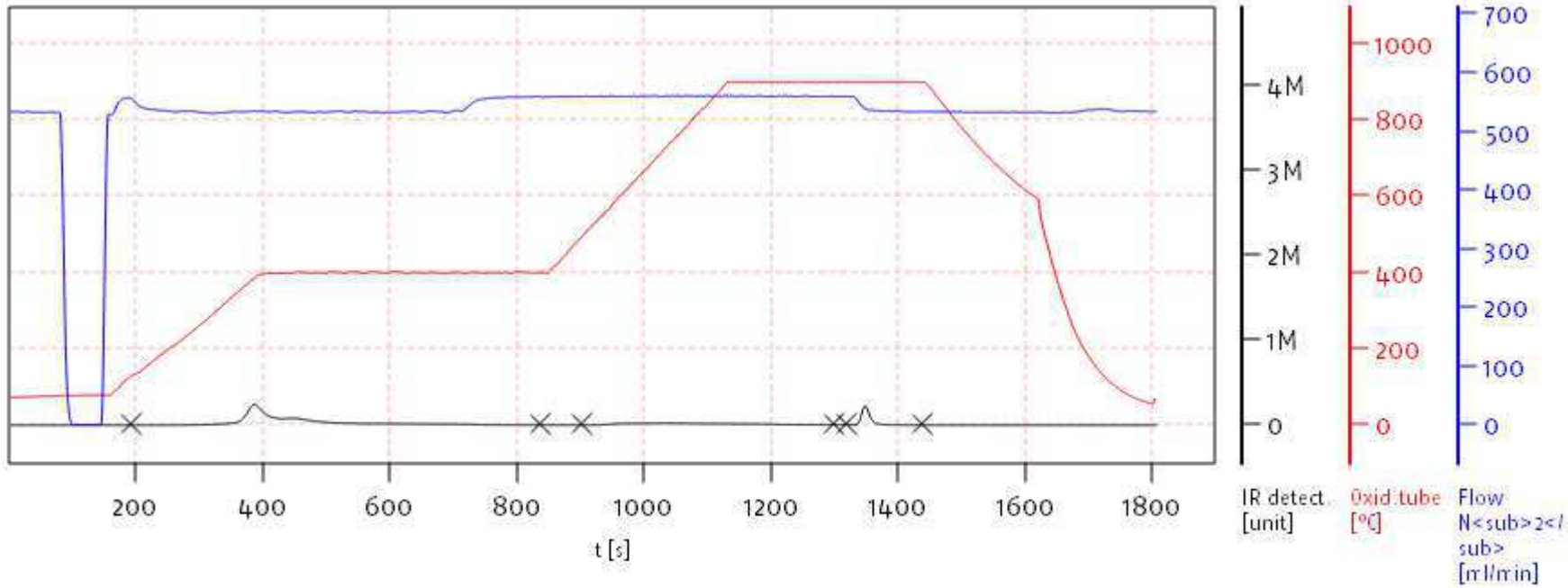
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
142	53	22L0137-05	108.50		CARBON	12/15/2022 8:38 AM	bl	1.079	708 222	1.323	0.157	136 370	197 221	0.922	0.244	0.9484	1.0000



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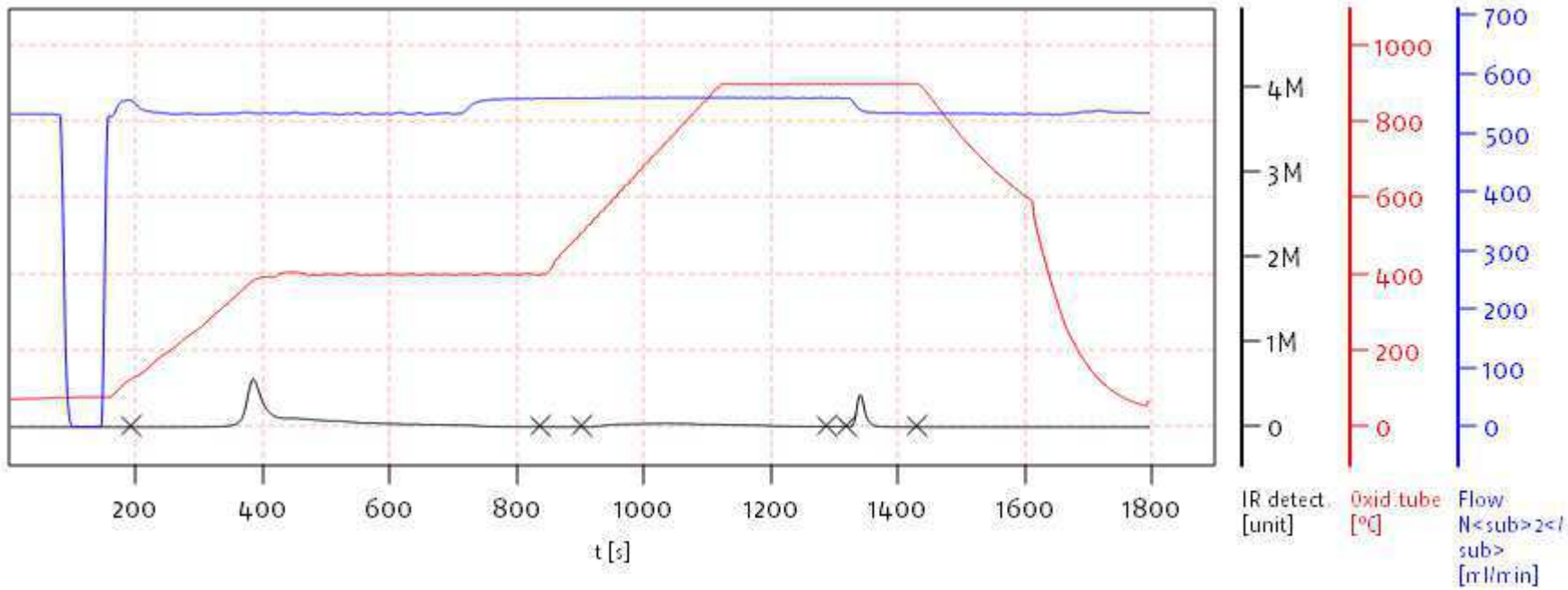
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
143	54	22L0137-06	190.00		CARBON	12/15/2022 9:08 AM	bl	1.167	1 328 431	1.426	0.161	224 578	343 785	1.006	0.258	0.9484	1.0000



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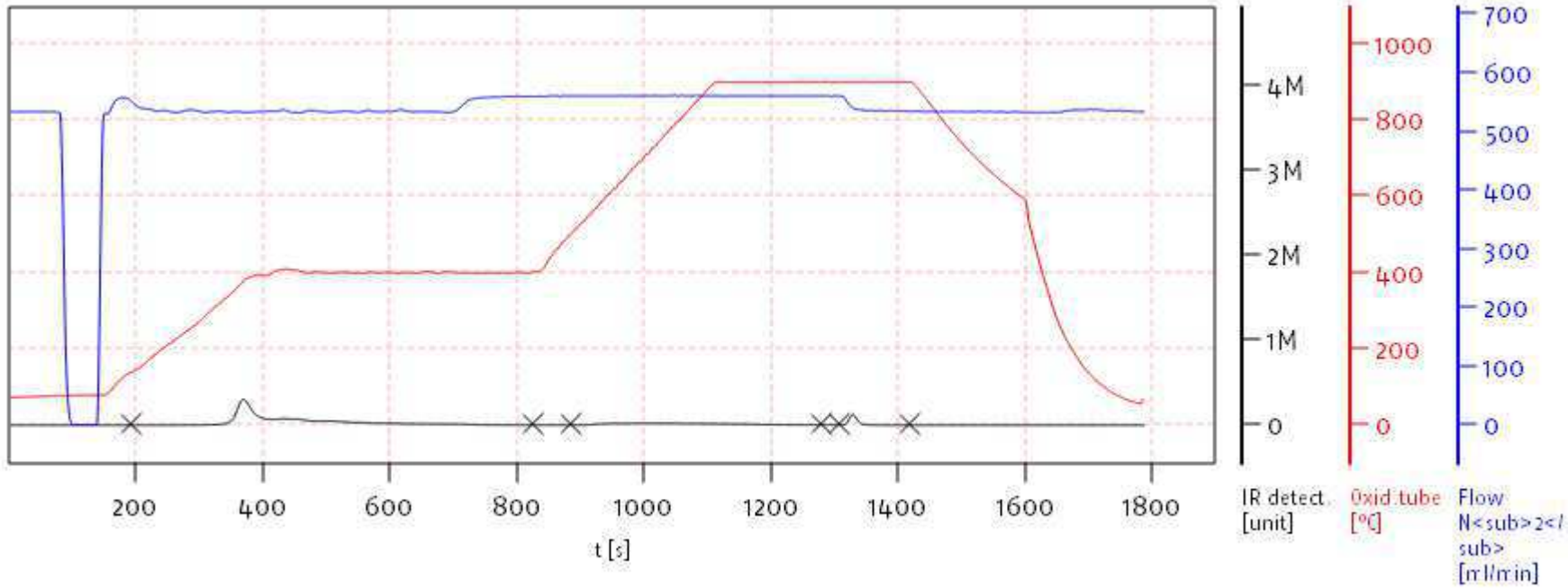
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
144	55	22L0137-07	108.70		CARBON	12/15/2022 9:39 AM	bl	1.103	796 560	1.329	0.063	70 780	185 433	1.040	0.226	0.9484	1.0000



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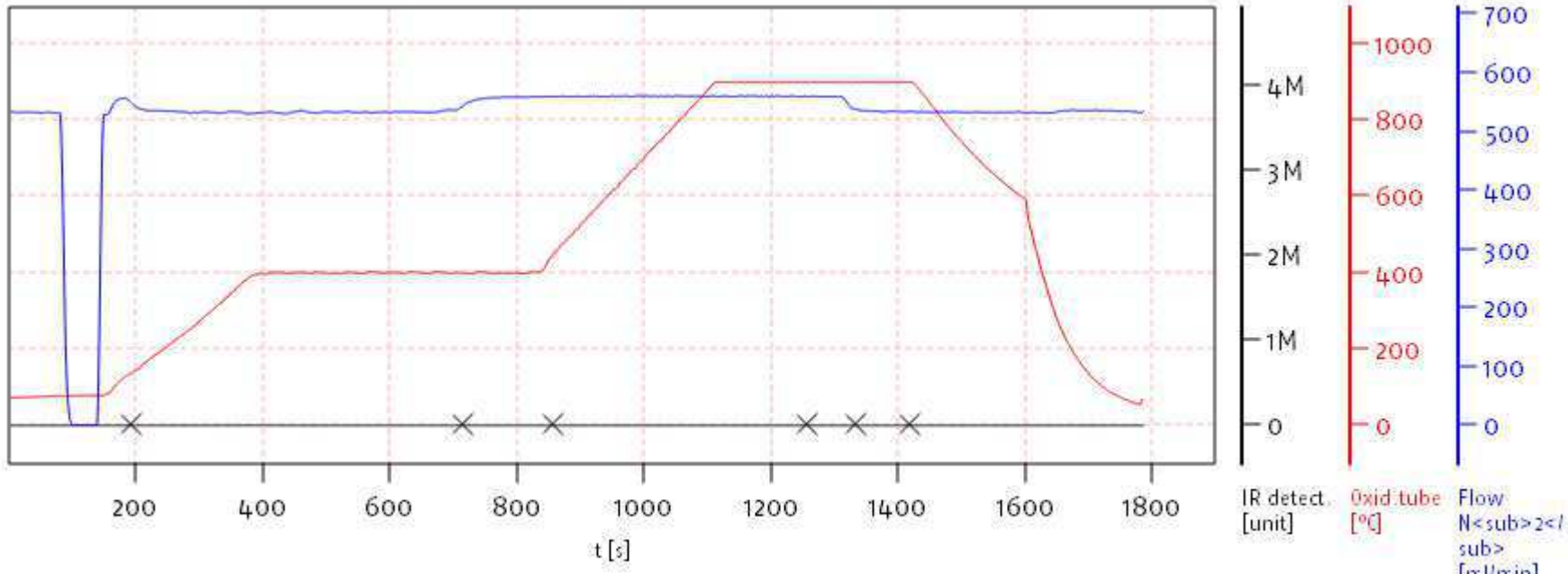
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
145	56	BLANK	1.00		CARBON	12/15/2022 10:09 AM	bl	0.000	5 132	0.000	0.000	98	585	0.000	0.000	0.9484	1.0000



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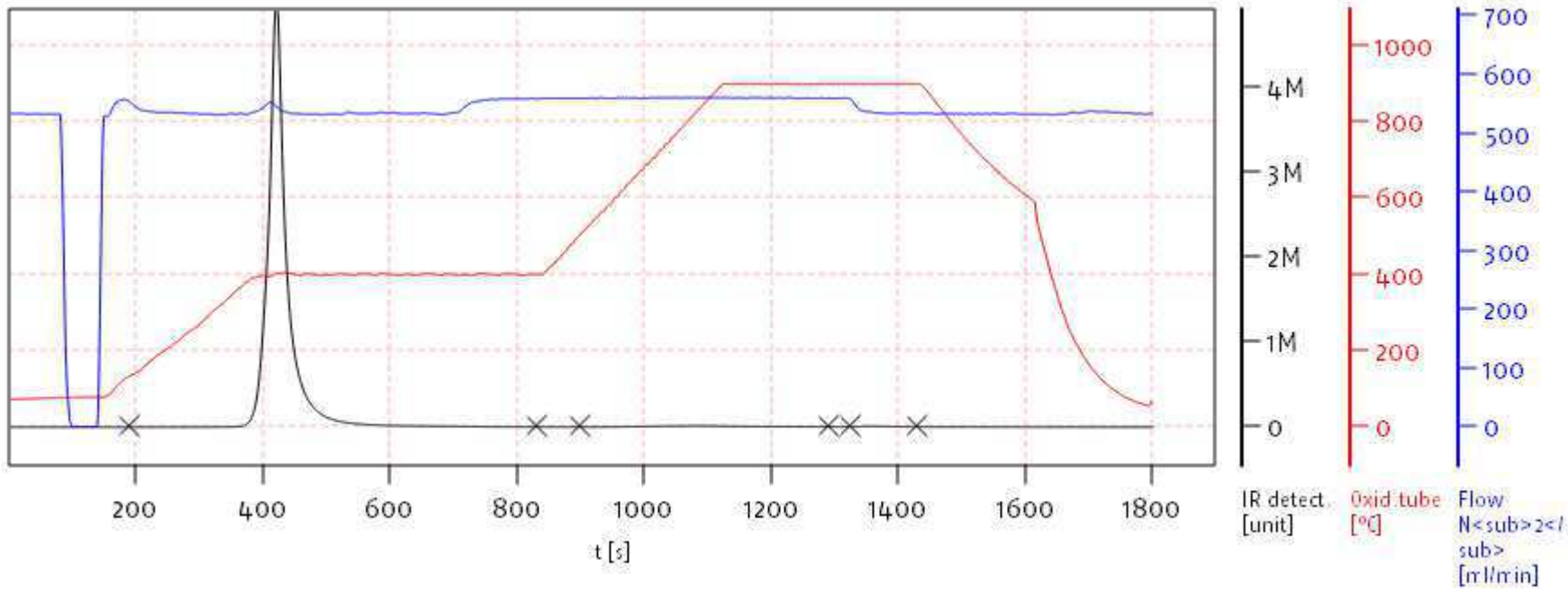
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
146	57	Dfactor	20.90		CARBON	12/15/2022 10:39 AM	bl	44.446	6 328 553	45.053	0.000	24 598	108 555	44.446	0.608	0.9522	1.0000



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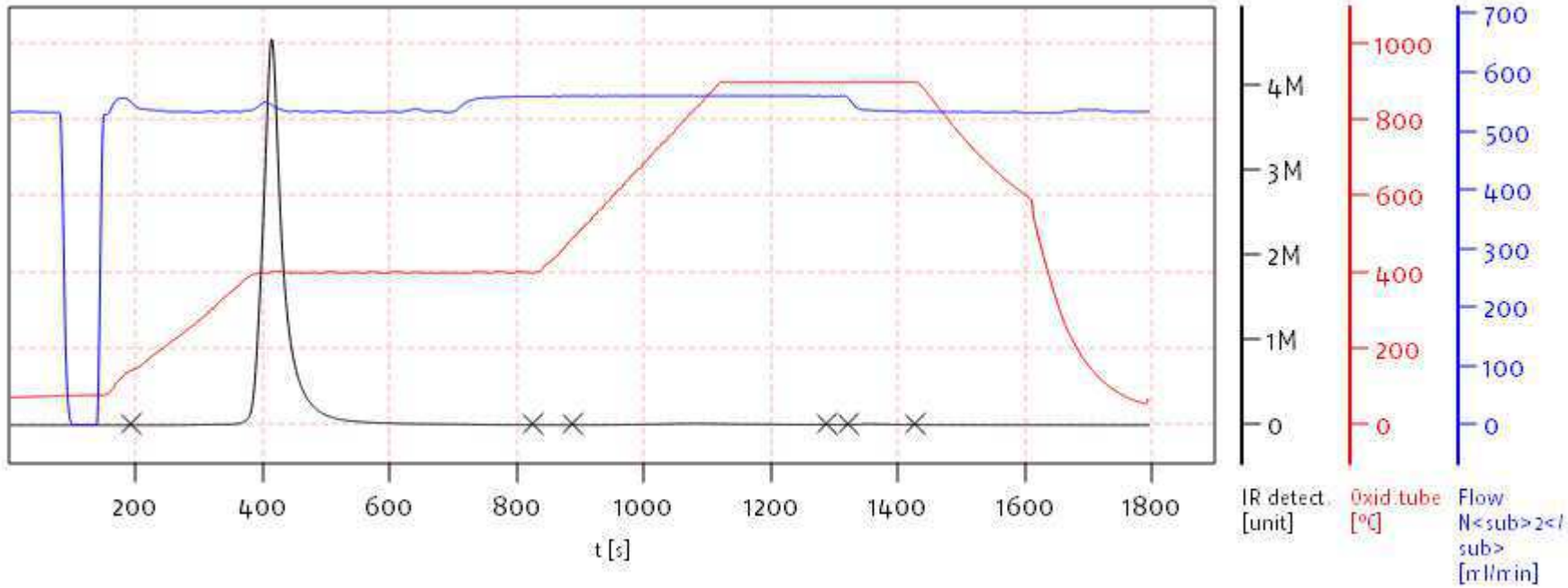
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
147	58	Dfactor	22.10		CARBON	12/15/2022 11:10 AM	bl	44.480	6 548 725	45.258	0.035	31 499	137 533	44.446	0.778	0.9729	1.0000



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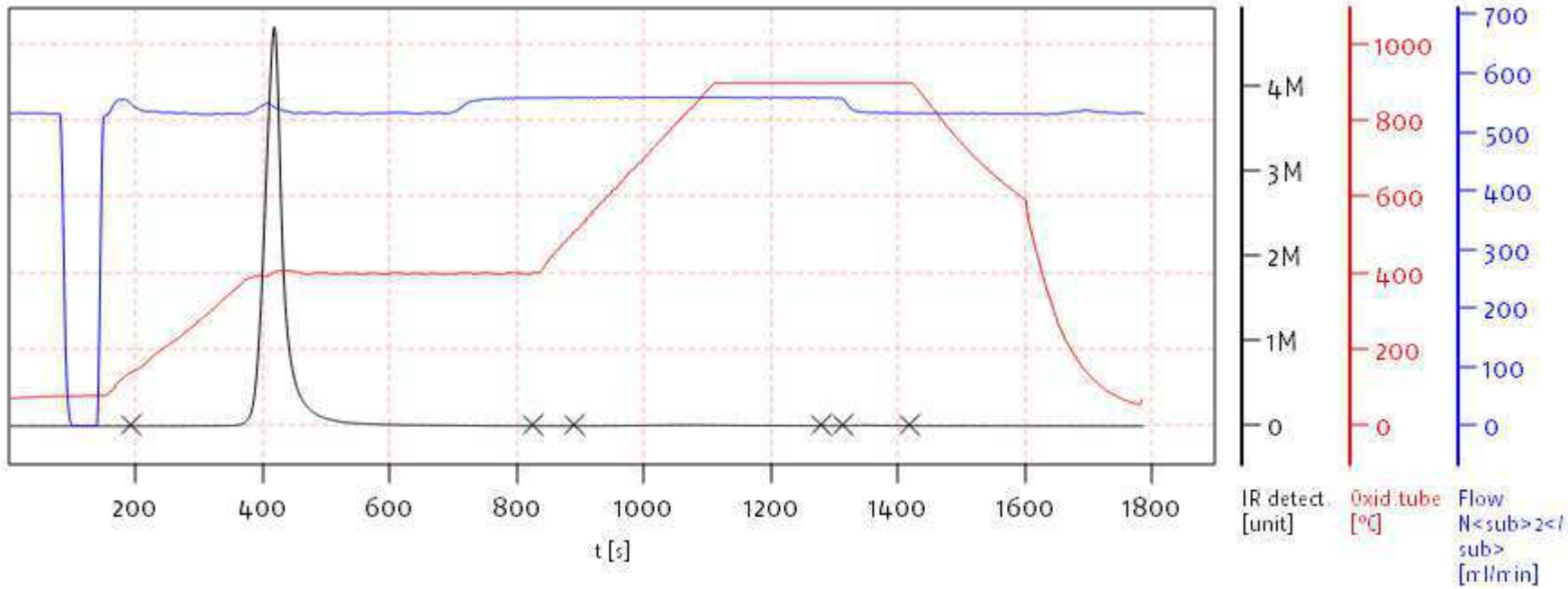
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
148	59	SKL0152-CCVC	20.30		CARBON	12/15/2022 11:40 AM	bl	45.055	6 164 932	45.590	0.000	23 564	96 685	45.055	0.535	0.9625	1.0000



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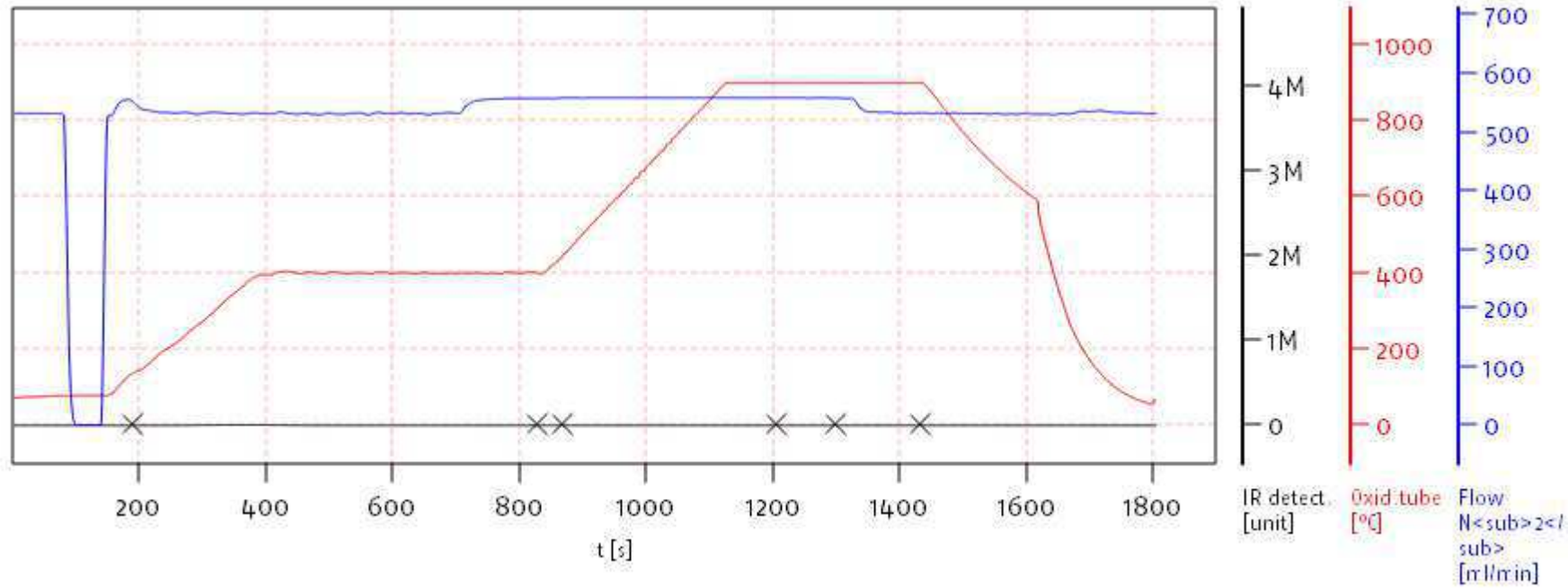
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
149	60	SKL0152-CCBC	509.70		CARBON	12/15/2022 12:10 PM	bl,C2u	0.002	32 017	0.002	0.000	798	2 656	0.002	0.000	0.9625	1.0000



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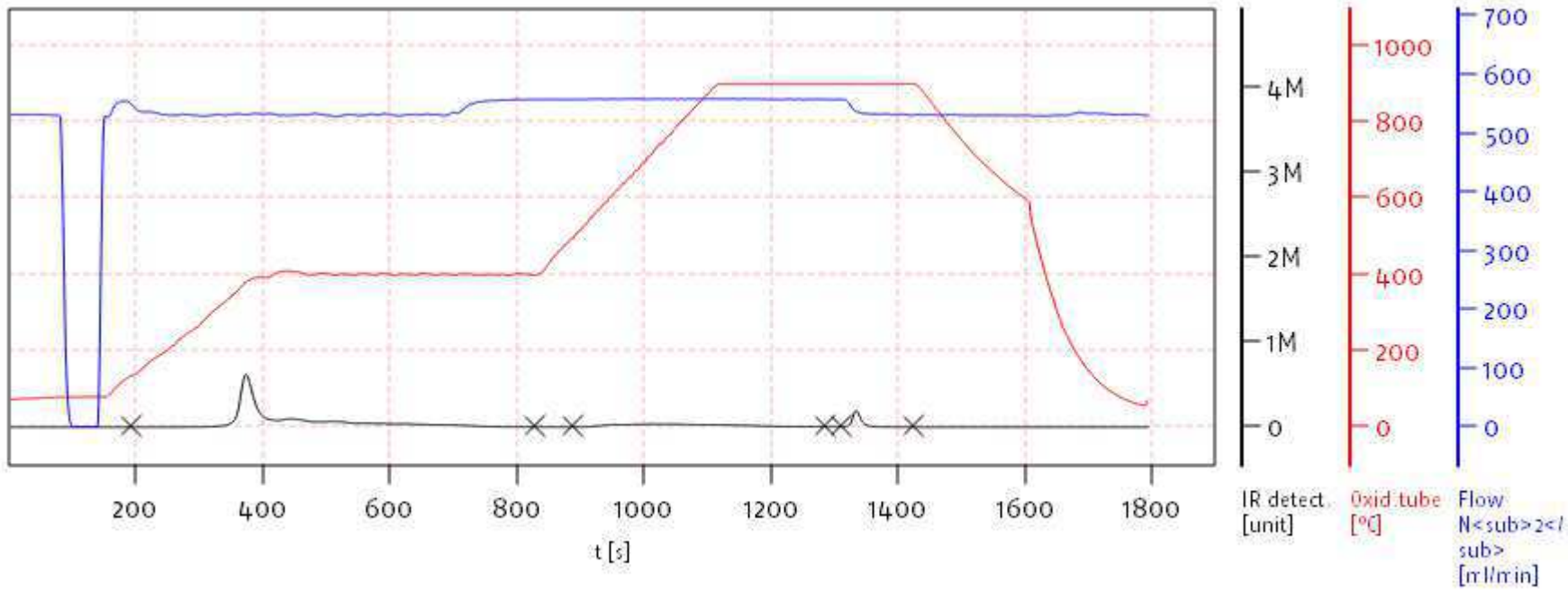
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
150	61	22L0137-08	160.60		CARBON	12/15/2022 12:41 PM	bl	1.241	1 270 917	1.502	0.087	116 742	296 367	1.155	0.260	0.9625	1.0000



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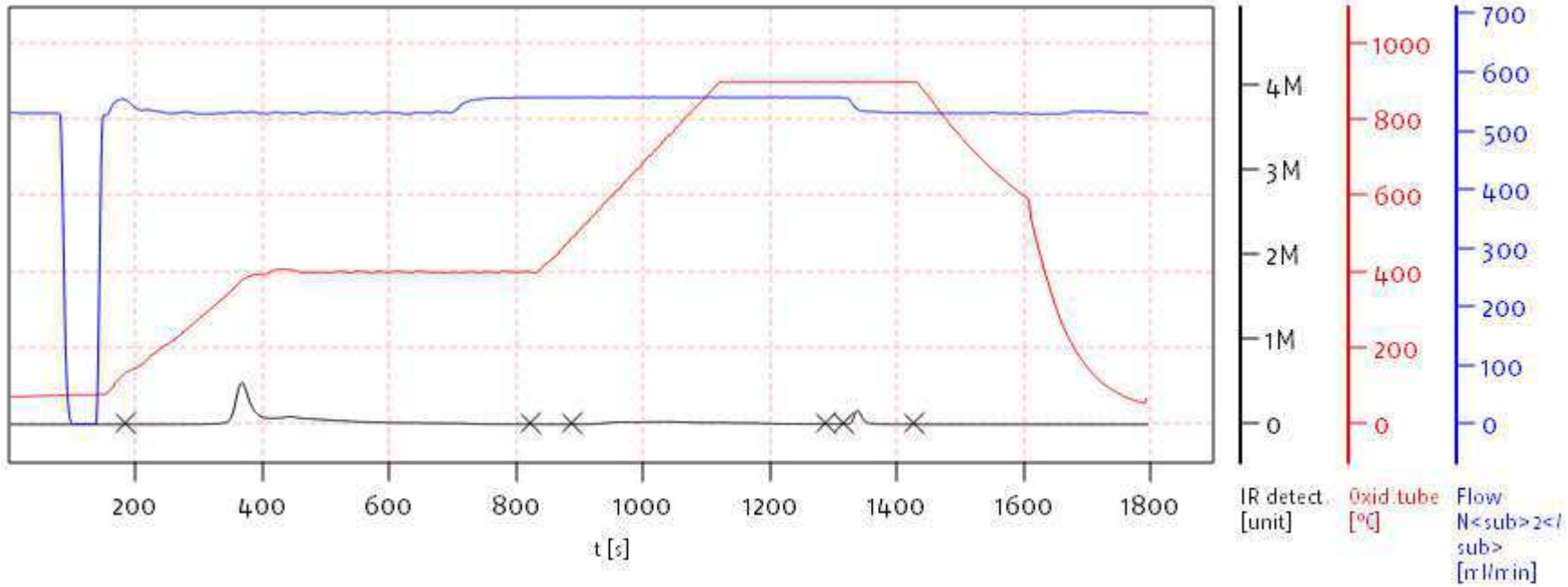
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
151	62	22L0137-09	146.80		CARBON	12/15/2022 1:11 PM	bl	1.076	1 014 738	1.313	0.073	96 111	251 267	1.003	0.237	0.9625	1.0000



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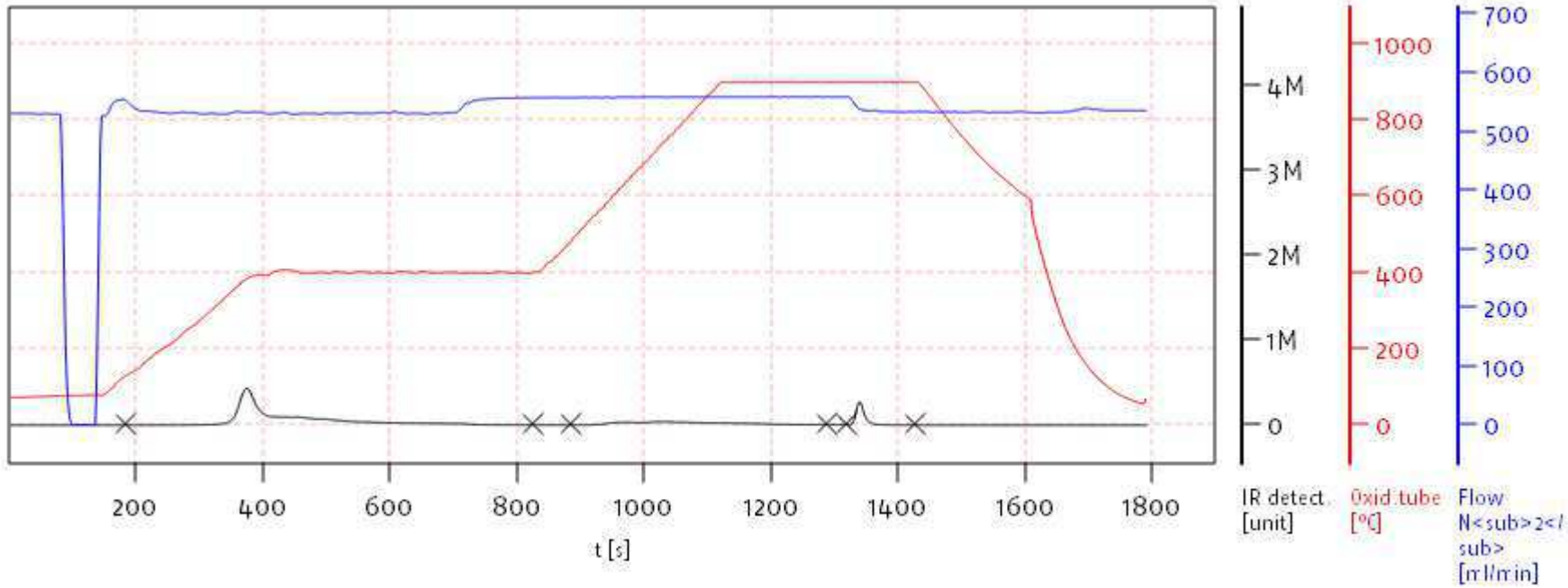
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
152	63	22L0137-10	184.20		CARBON	12/15/2022 1:41 PM	bl	1.015	1 140 184	1.249	0.114	161 817	305 780	0.901	0.235	0.9625	1.0000



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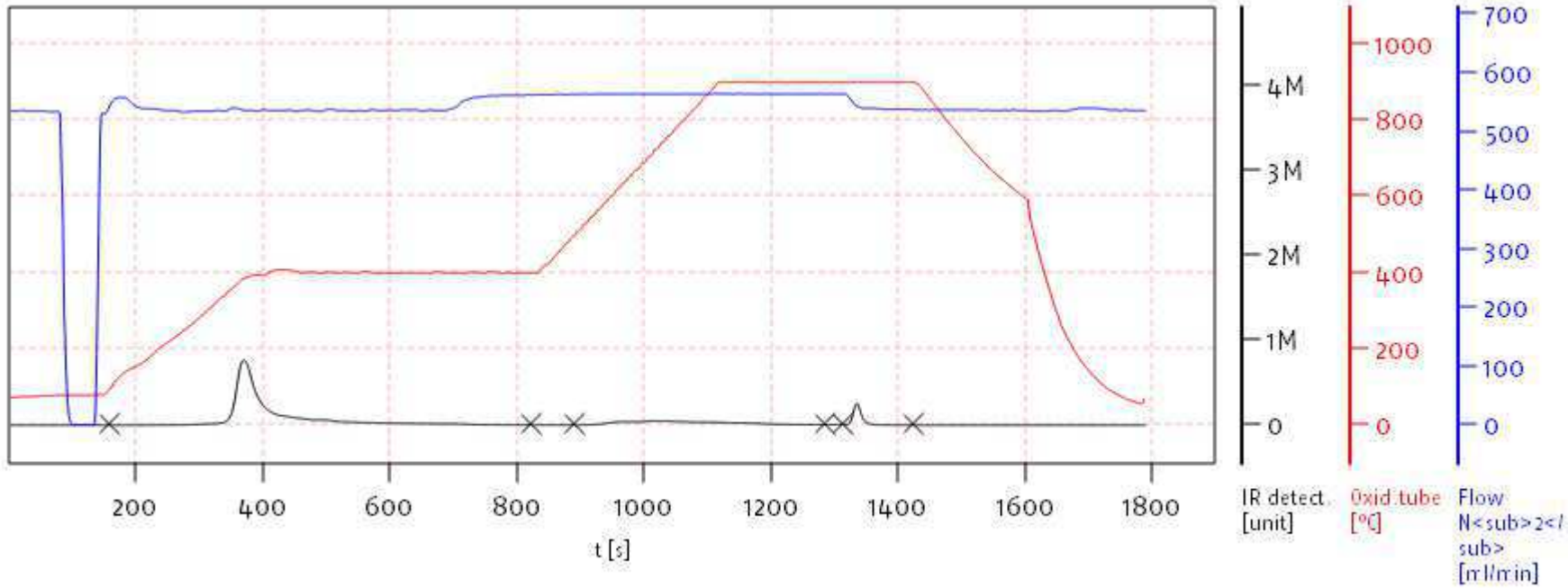
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
153	64	22L0137-11	201.30		CARBON	12/15/2022 2:11 PM	bl	1.247	1 585 291	1.517	0.093	148 084	377 461	1.154	0.270	0.9625	1.0000



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Soli TOC Cube, Carbon
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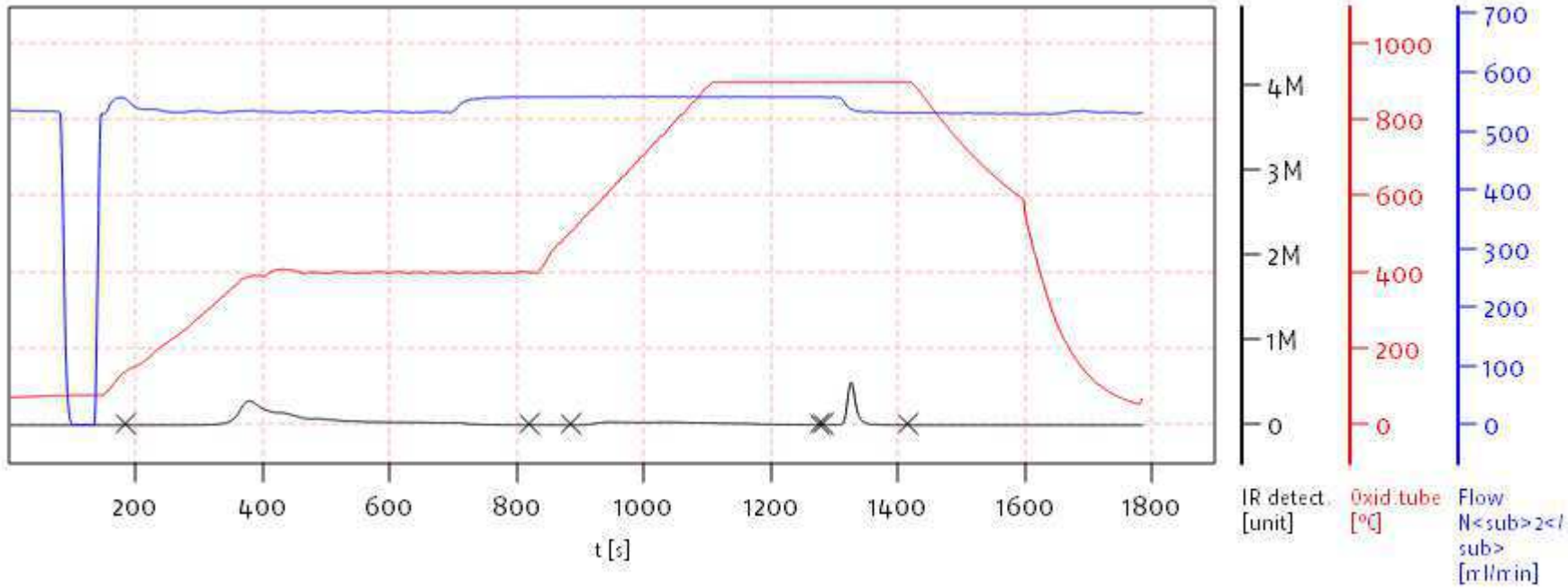
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
154	65	22L0137-12	208.70		CARBON	12/15/2022 2:42 PM	bl	1.024	1 172 229	1.225	0.206	304 115	297 565	0.818	0.201	0.9625	1.0000



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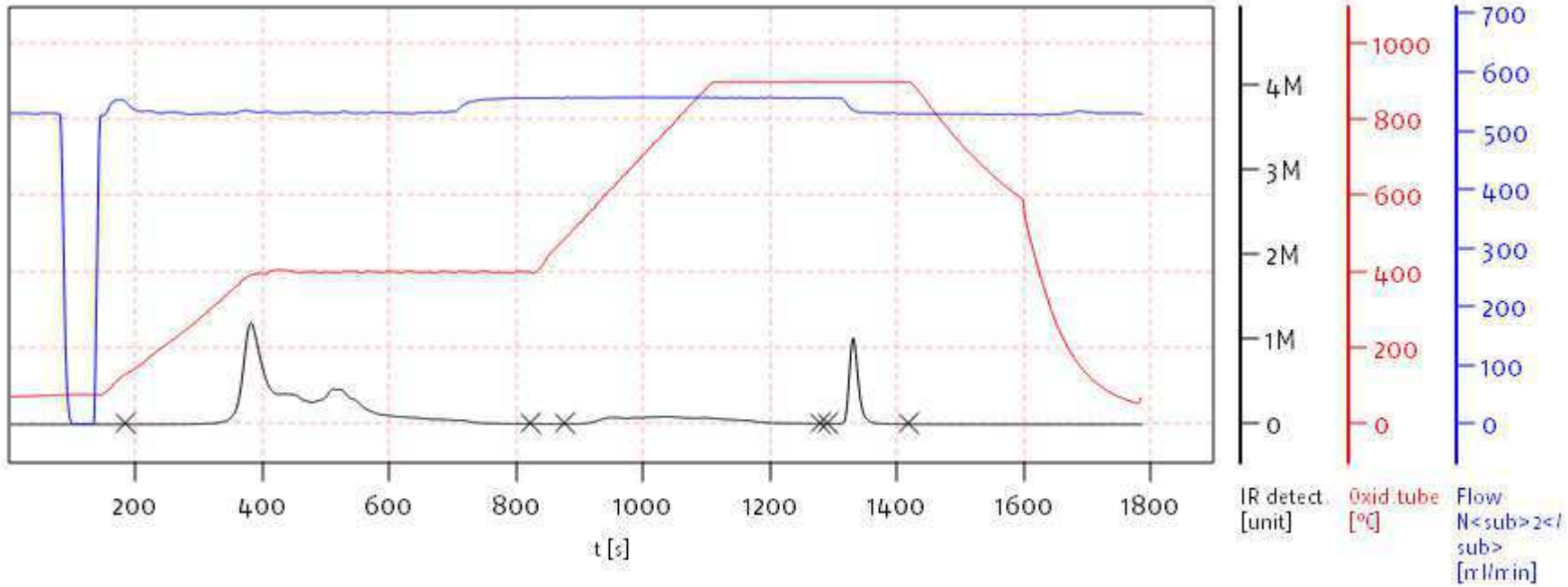
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
155	66	22L0137-13	510.20		CARBON	12/15/2022 3:12 PM	bl	1.351	3 998 223	1.572	0.191	656 166	756 164	1.160	0.221	0.9625	1.0000



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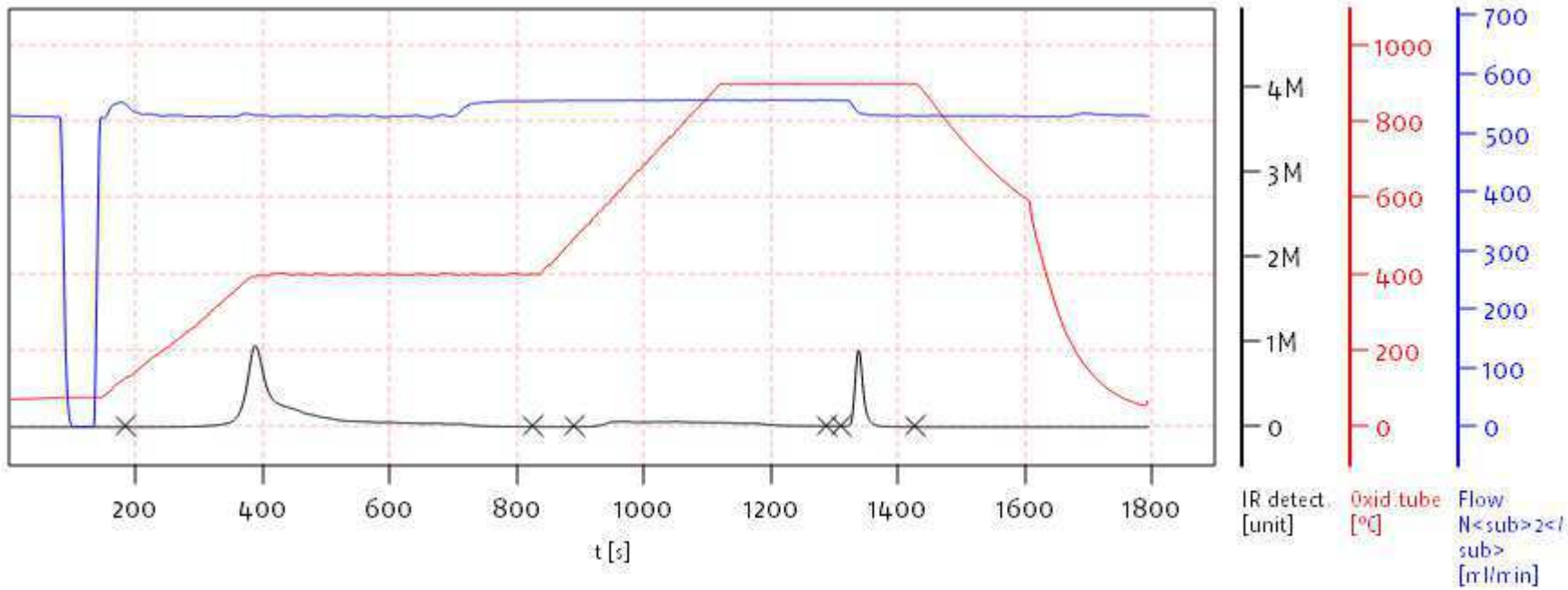
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
156	67	22L0137-14	300.00		CARBON	12/15/2022 3:42 PM	bl	1.424	2 372 574	1.715	0.258	527 442	591 877	1.165	0.292	0.9625	1.0000



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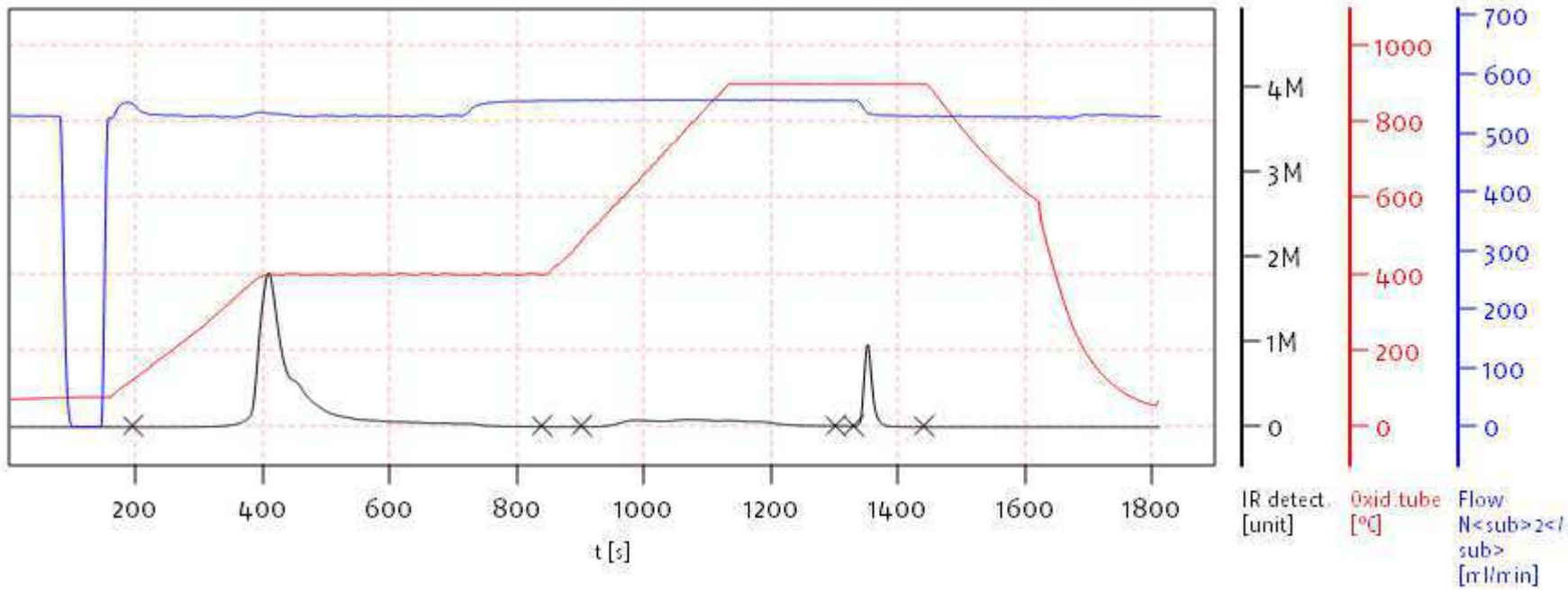
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
157	68	22L0137-15	518.50		CARBON	12/15/2022 4:13 PM	bl	1.322	4 076 804	1.547	0.158	557 140	777 538	1.164	0.224	0.9625	1.0000



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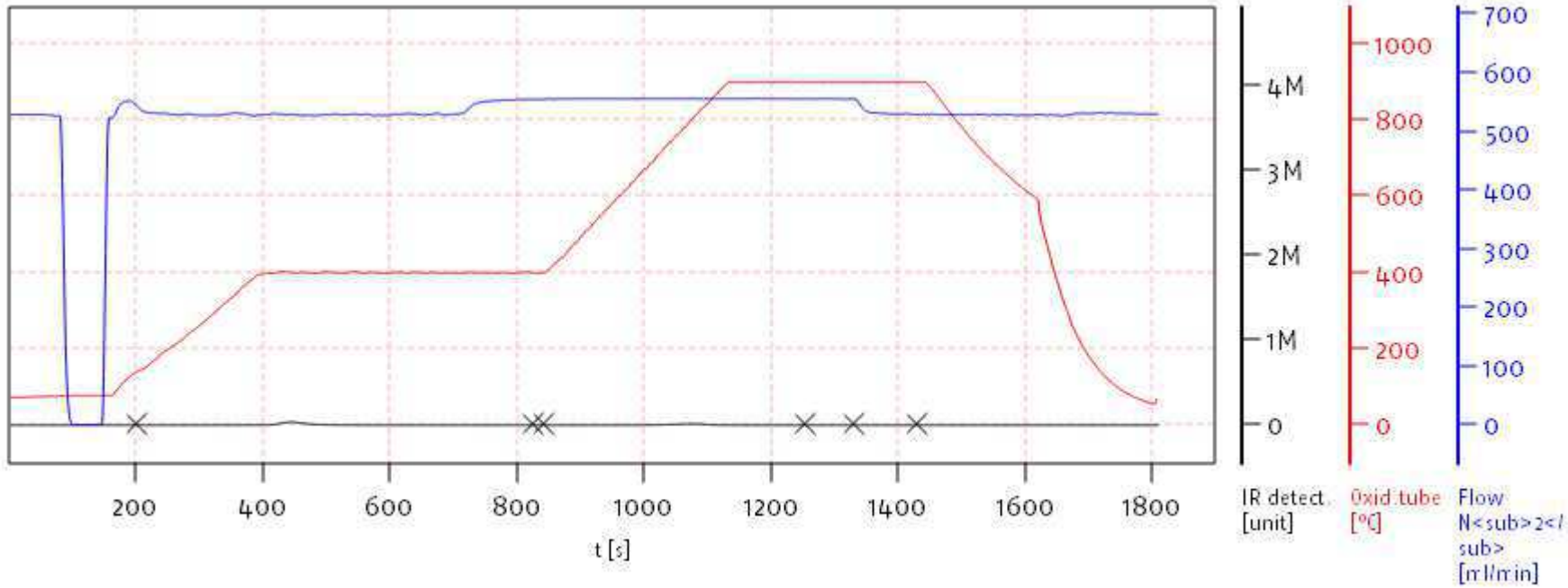
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
158	69	BKL0300-MRL1	532.70		CARBON	12/15/2022 4:43 PM	bl,C2u	0.012	70 689	0.015	0.000	111	35 829	0.012	0.003	0.9625	1.0000



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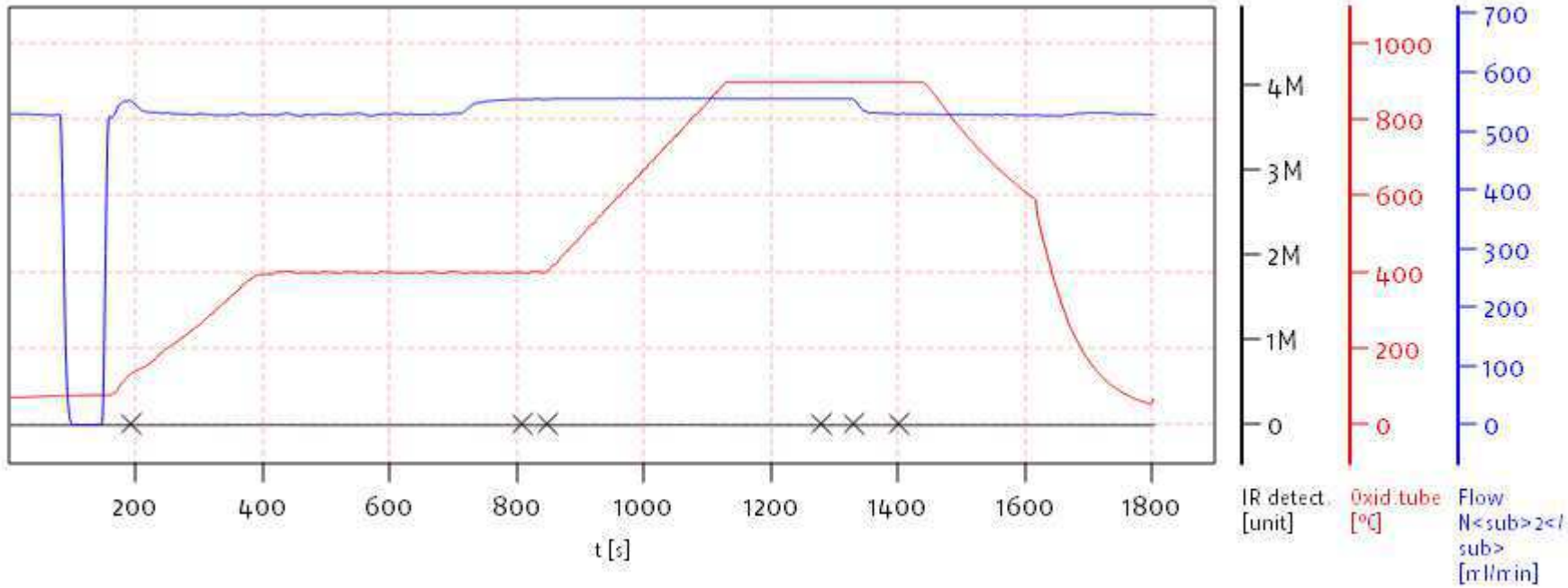
159	70	BKL0300-BLK1	519.70		CARBON	12/15/2022 5:14 PM	bl,C2u	0.000	9 307	0.000	0.000	190	9 380	0.000	0.000	0.9625	1.0000



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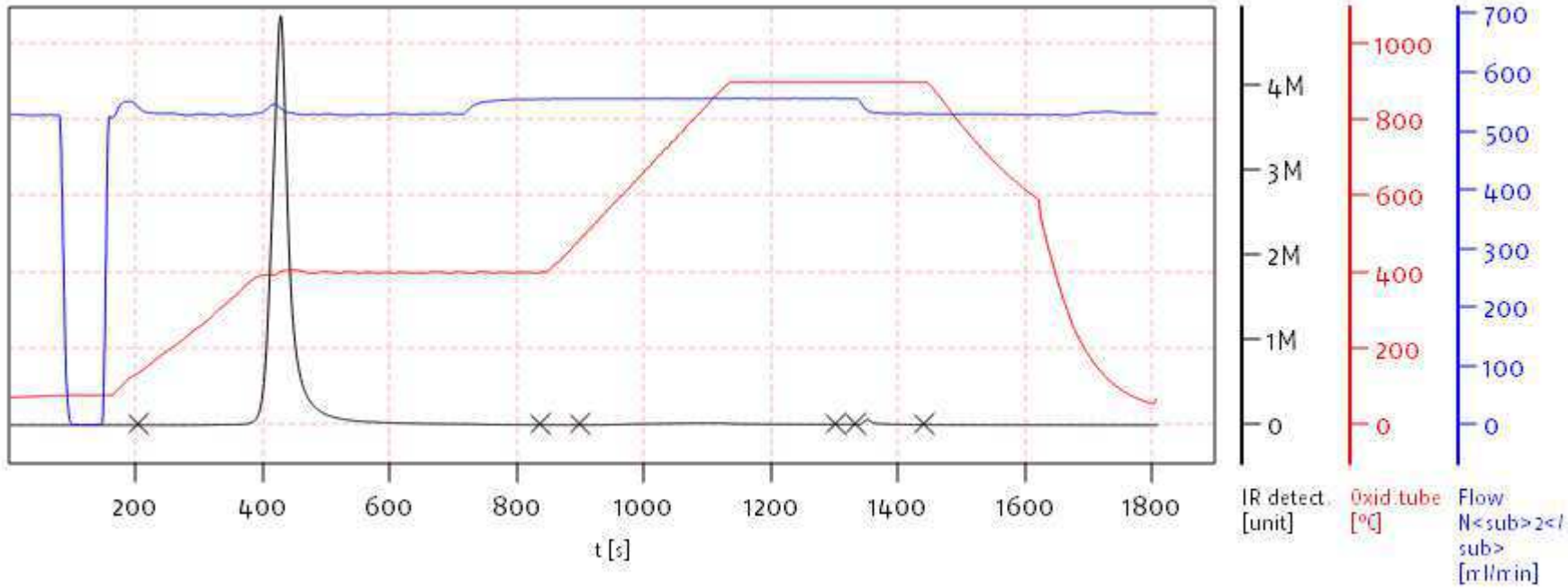
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
160	71	SKL0152-CCVD	20.40		CARBON	12/15/2022 5:44 PM	bl	44.015	6 013 724	45.289	0.285	64 140	194 320	43.730	1.273	0.9625	1.0000



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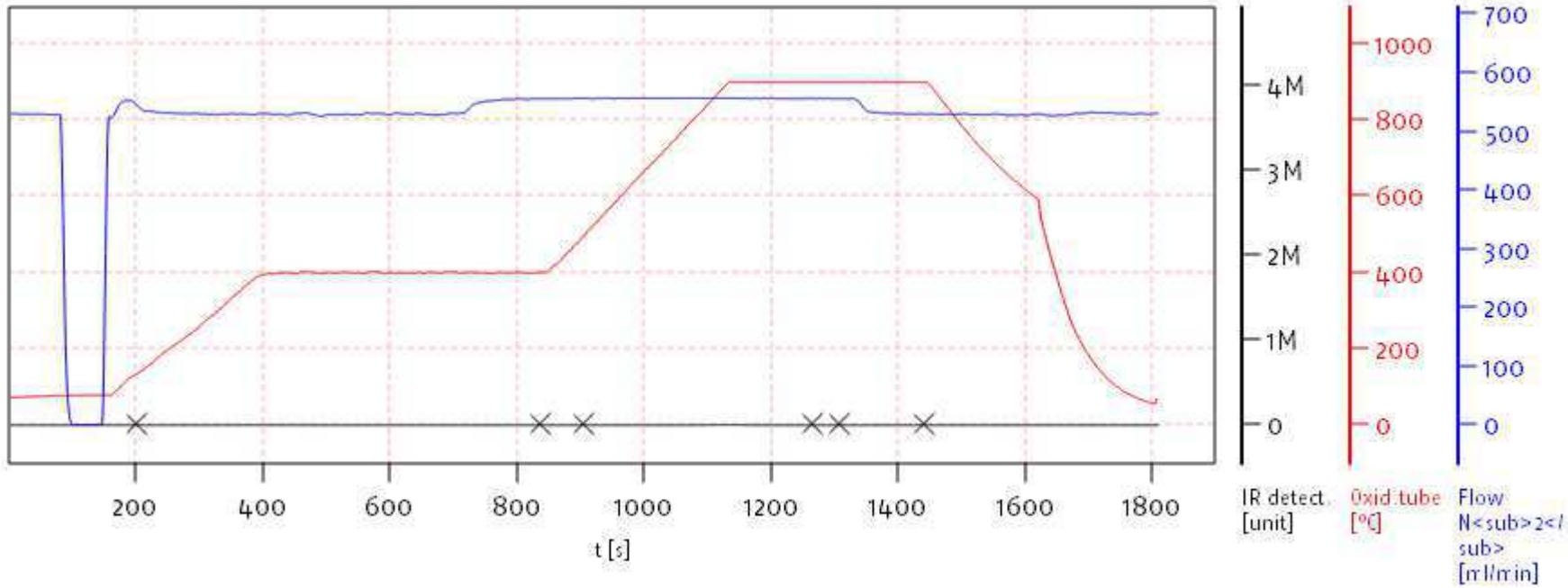
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
161	72	SKL0152-CCBD	506.20		CARBON	12/15/2022 6:15 PM	bl,C2u	0.000	6 043	0.000	0.000	461	8 549	0.000	0.000	0.9625	1.0000



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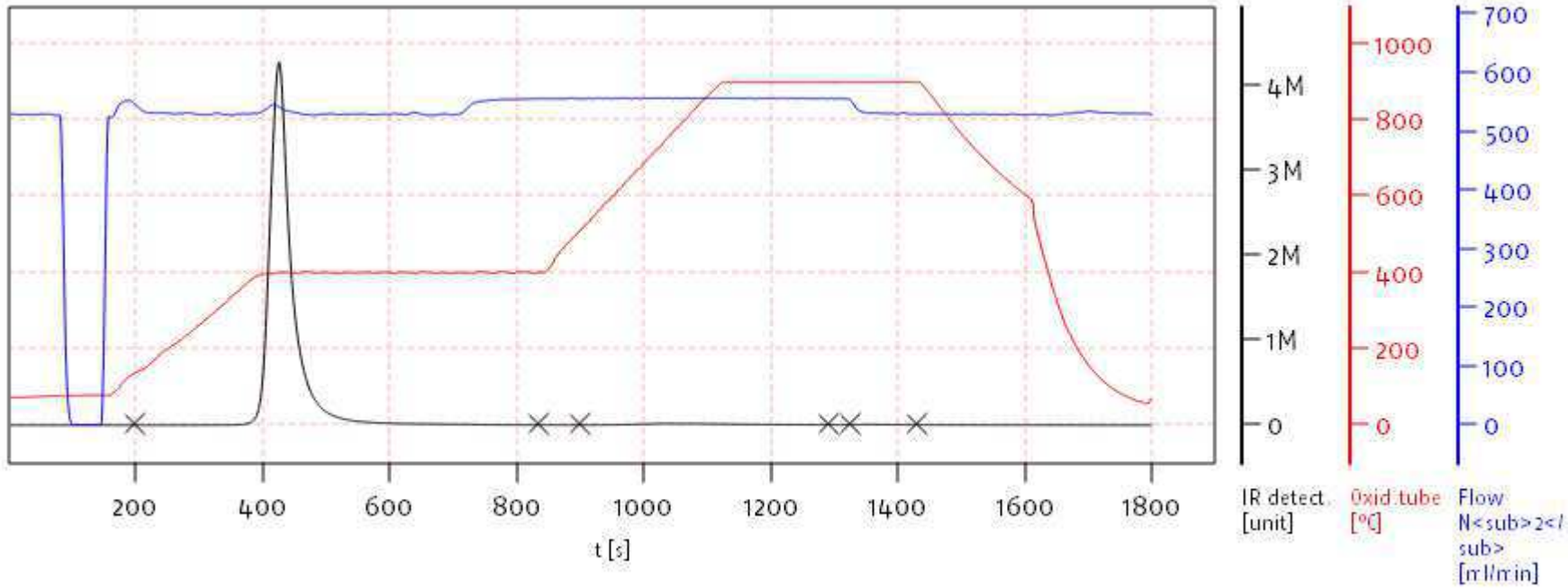
Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
162	73	BKL0300-BS1	21.60		CARBON	12/15/2022 6:45 PM	bl	44.287	6 446 605	45.105	0.000	22 333	140 781	44.287	0.819	0.9625	1.0000



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Access: soliTOC superuser

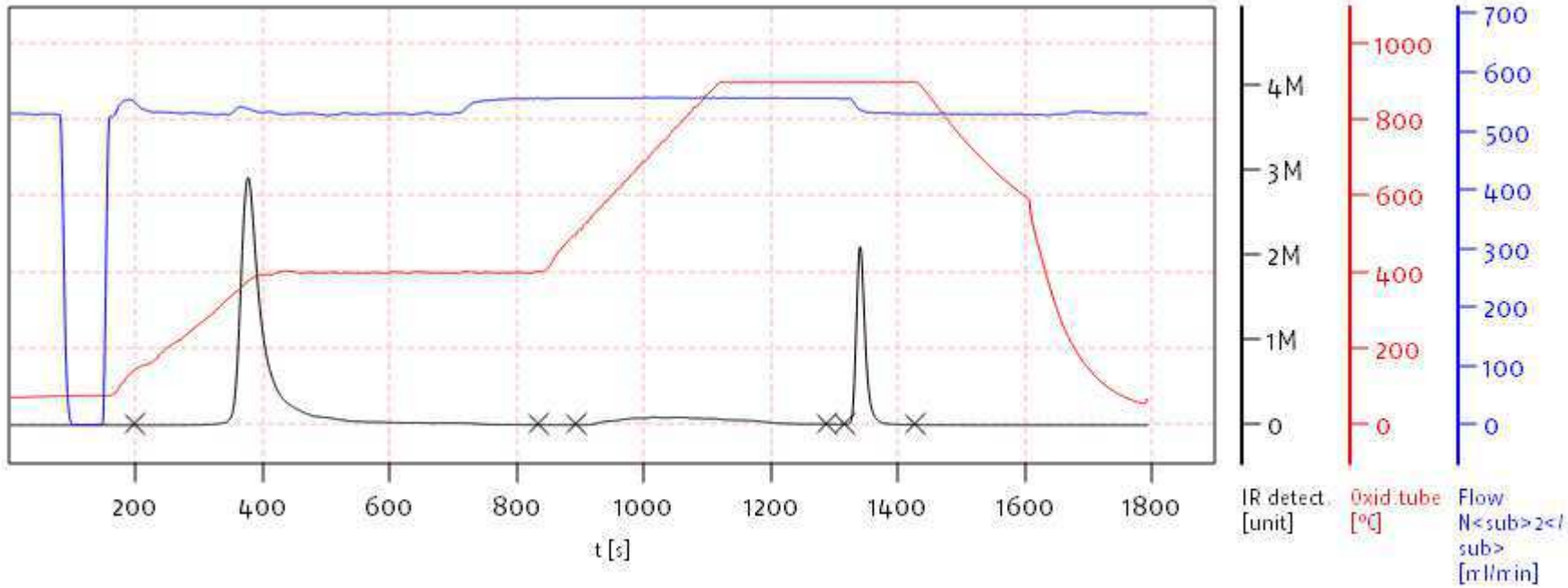
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
163	74	BKL0300-SRM1	299.90		CARBON	12/15/2022 7:16 PM	bl	2.969	4 676 004	3.353	0.659	1 303 989	770 117	2.310	0.384	0.9625	1.0000



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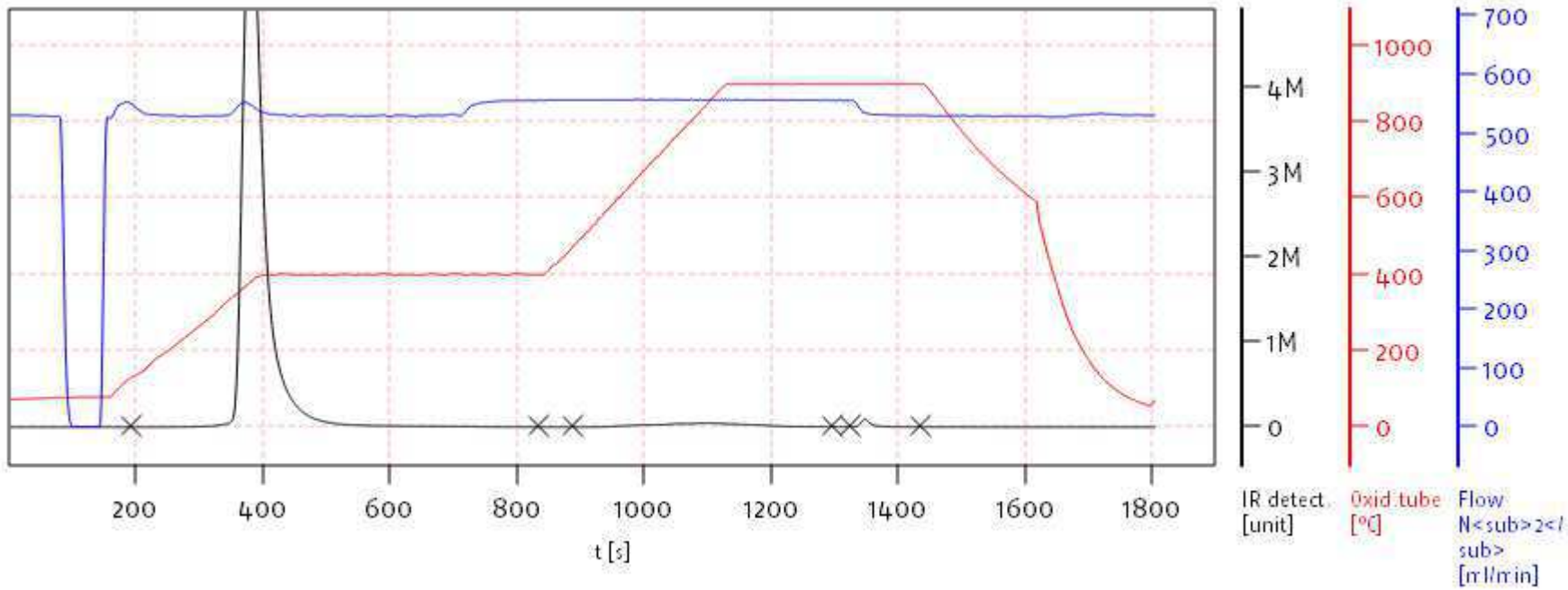
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
164	75	22L0137-16	500.80		CARBON	12/15/2022 7:46 PM	bl	2.701	9 060 963	2.791	0.013	68 692	318 901	2.688	0.090	0.9625	1.0000



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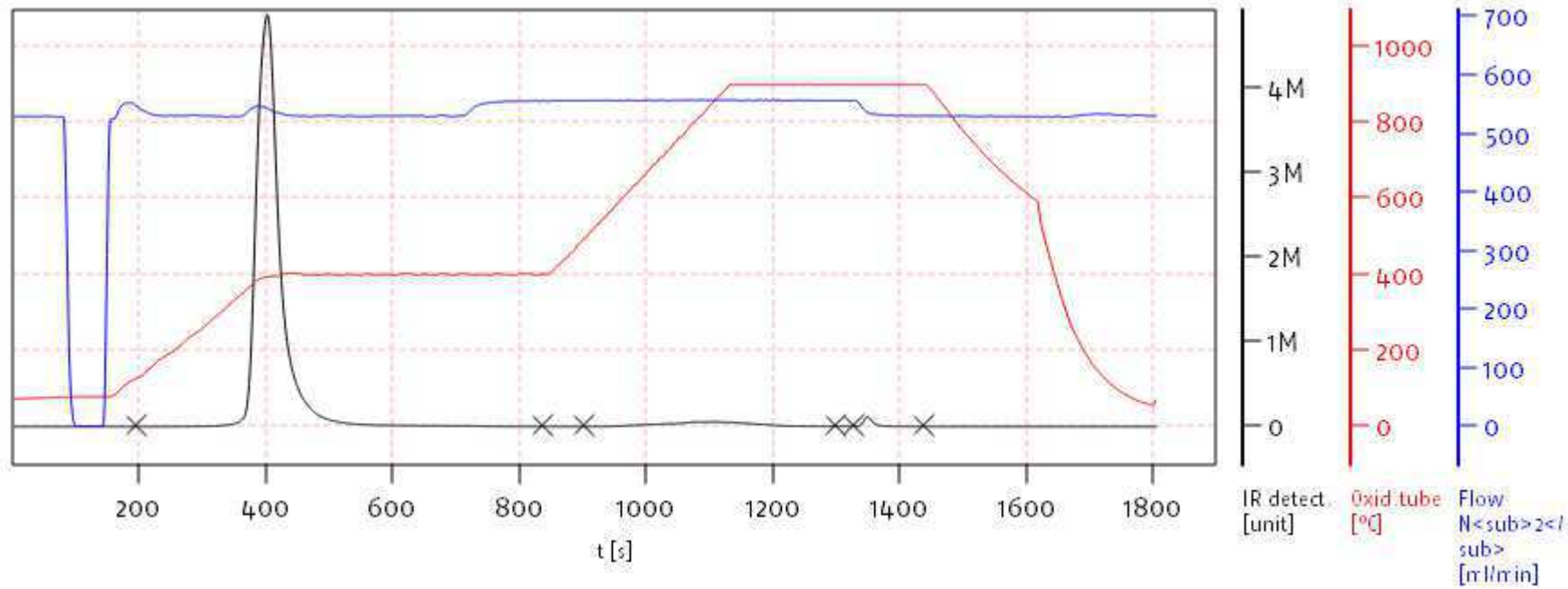
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
165	76	BKL0300-DUP1	509.40		CARBON	12/15/2022 8:17 PM	bl	2.307	7 861 961	2.407	0.015	77 169	354 987	2.292	0.100	0.9625	1.0000



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Soli TOC Cube, Carbon
Balance: BAL3
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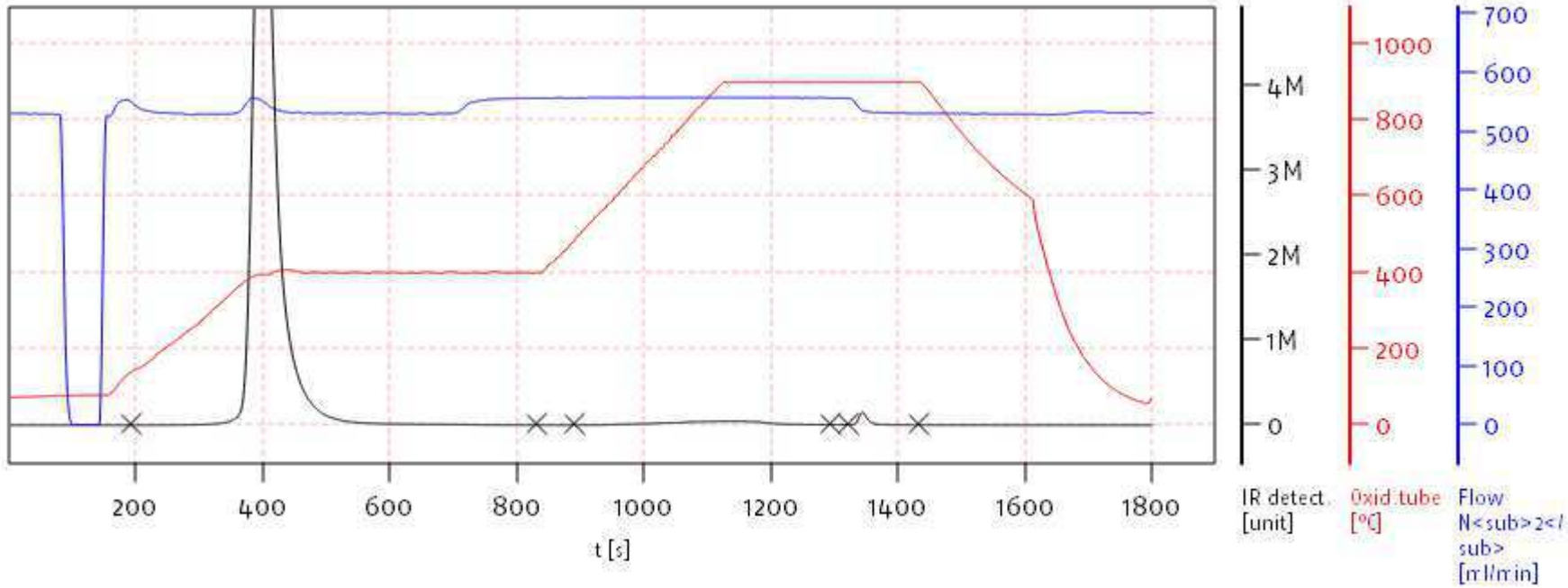
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
166	77	BKL0300-MS1	522.20	0.0109	CARBON	12/15/2022 8:47 PM	bl,C1o	3.378	11 787 301	3.466	0.022	101 321	324 774	3.356	0.088	0.9625	1.0000



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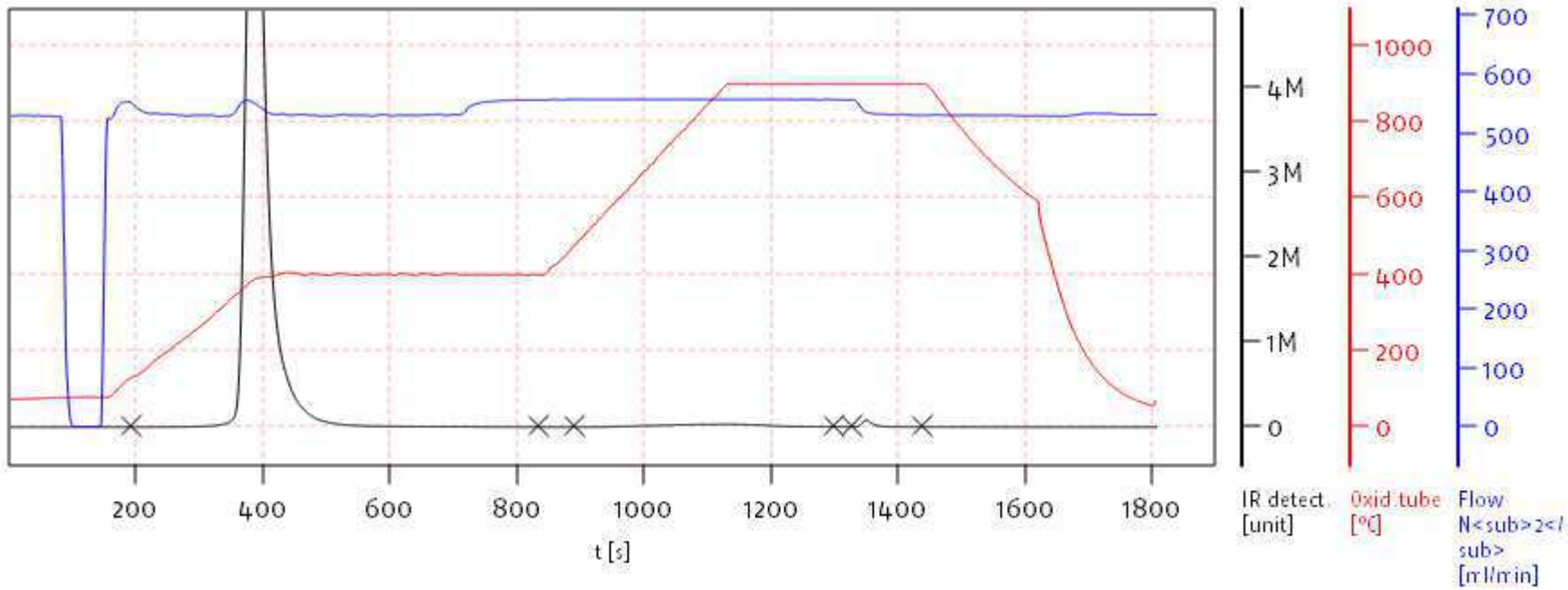
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
167	78	22L0137-17	515.20		CARBON	12/15/2022 9:17 PM	bl,C1o	3.090	10 671 798	3.156	0.011	64 465	247 075	3.079	0.066	0.9625	1.0000



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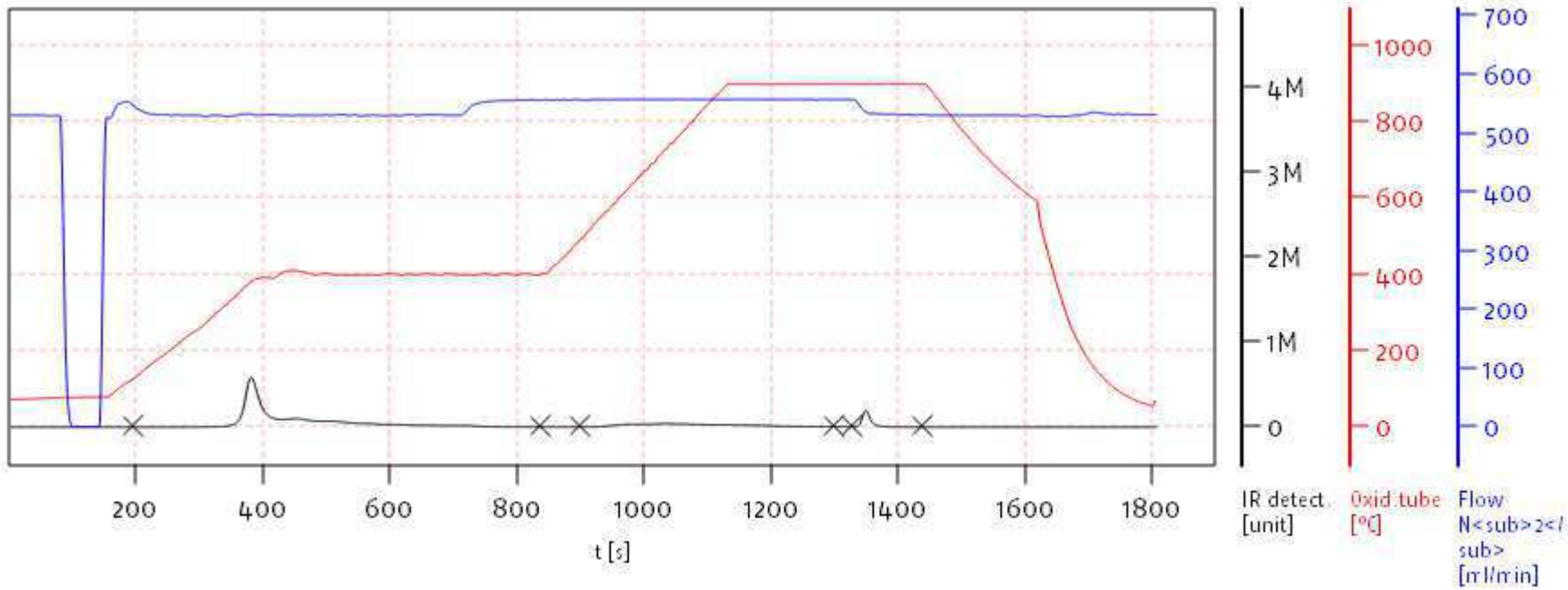
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
168	79	22L0137-18	208.70		CARBON	12/15/2022 9:48 PM	bl	0.914	1 214 250	1.126	0.066	115 623	312 391	0.848	0.212	0.9625	1.0000



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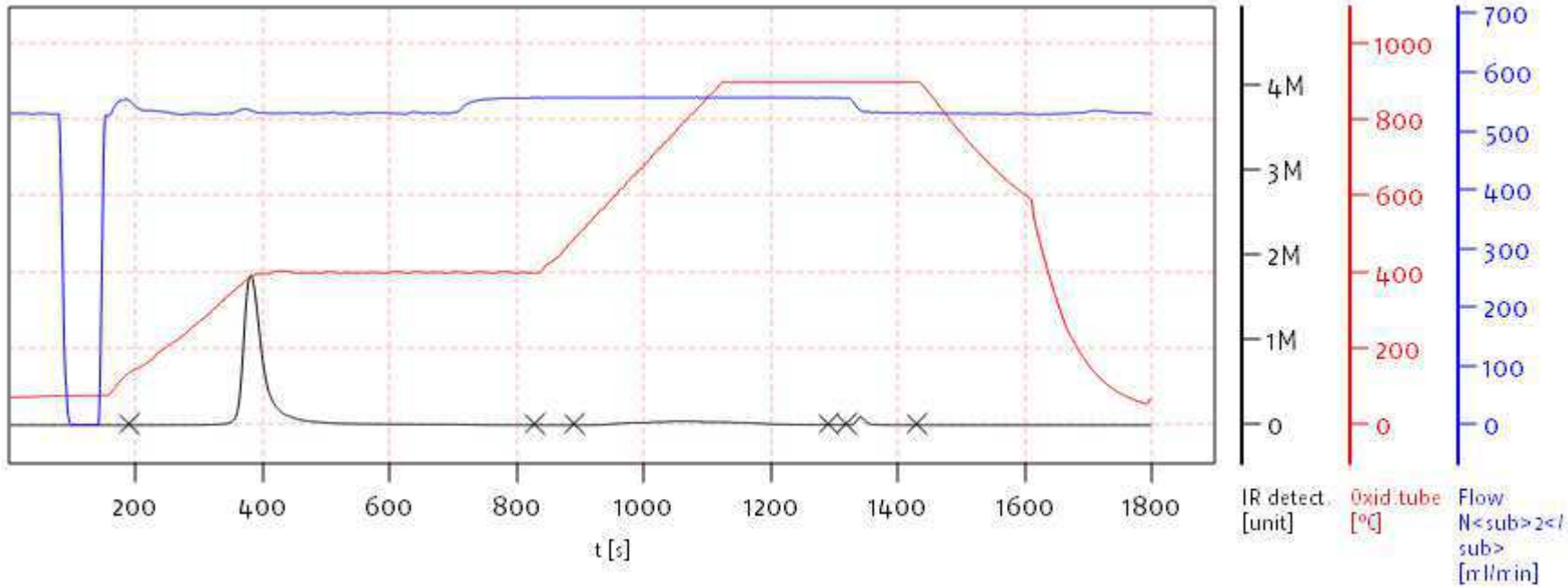
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
169	80	22L0137-19	283.30		CARBON	12/15/2022 10:18 PM	bl	1.312	2 485 768	1.478	0.018	59 696	331 943	1.293	0.167	0.9625	1.0000



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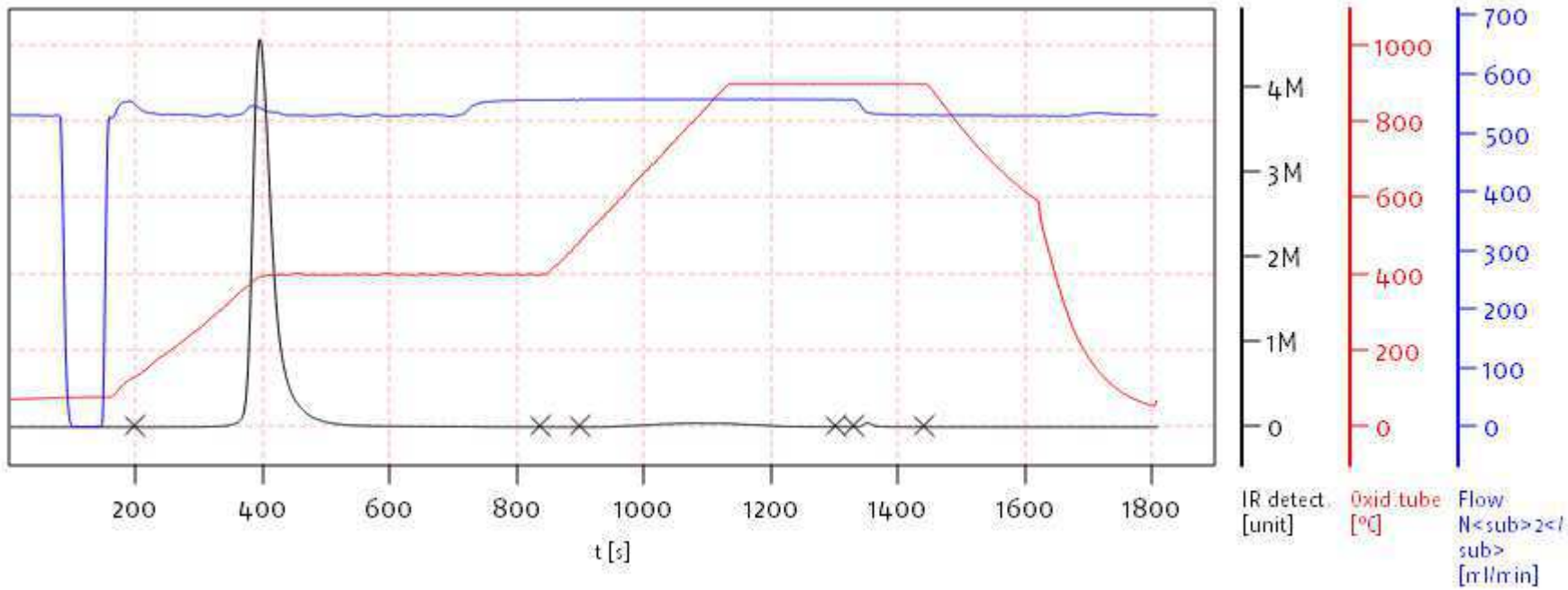
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
170	81	22L0137-20	554.90		CARBON	12/15/2022 10:49 PM	bl	1.728	6 447 079	1.809	0.004	39 272	317 627	1.724	0.081	0.9625	1.0000



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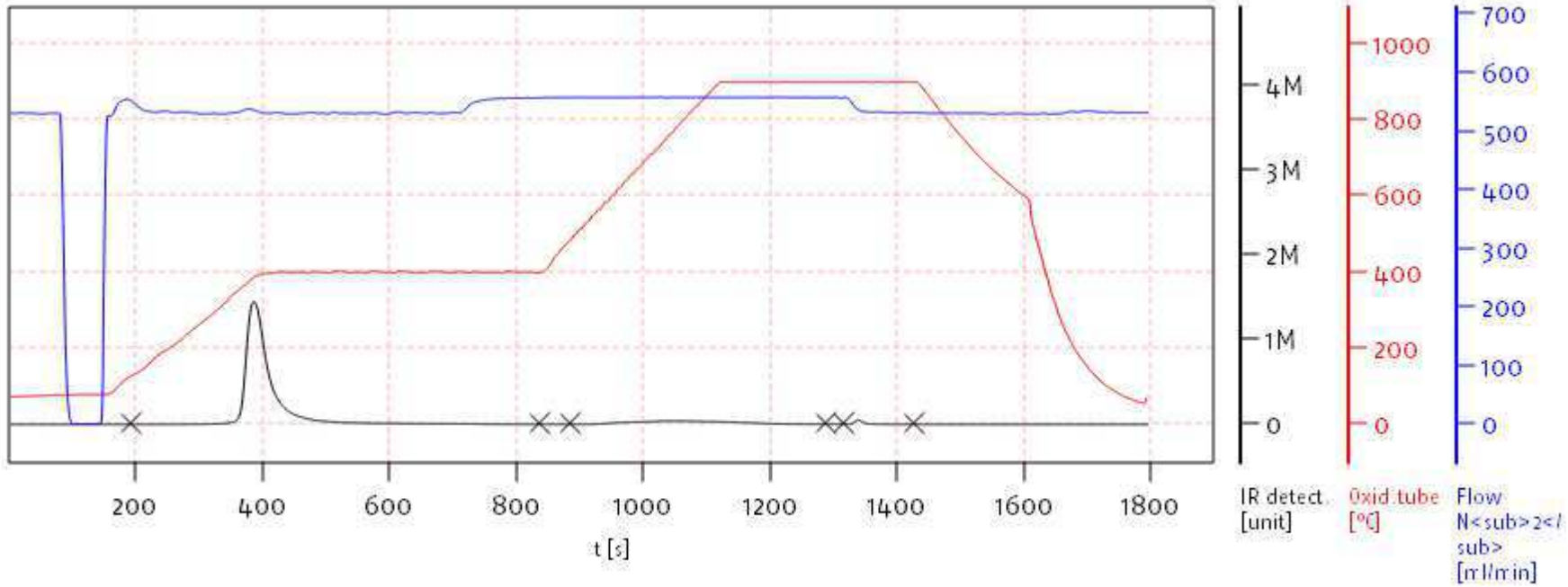
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
171	82	22L0137-21	277.80		CARBON	12/15/2022 11:19 PM	bl	1.258	2 363 462	1.408	0.004	34 068	296 456	1.253	0.150	0.9625	1.0000



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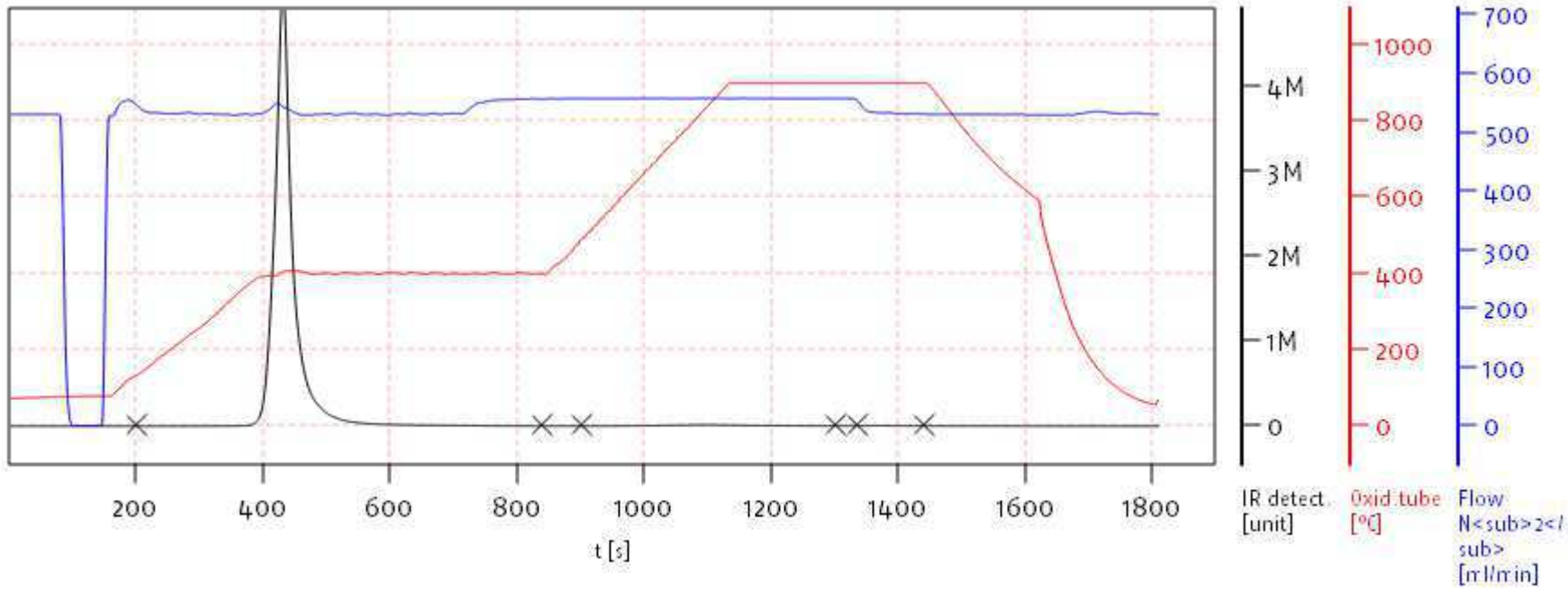
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
172	83	SKL0152-CCVE	20.90		CARBON	12/15/2022 11:50 PM	bl	45.397	6 394 242	45.936	0.000	15 938	99 423	45.397	0.540	0.9625	1.0000



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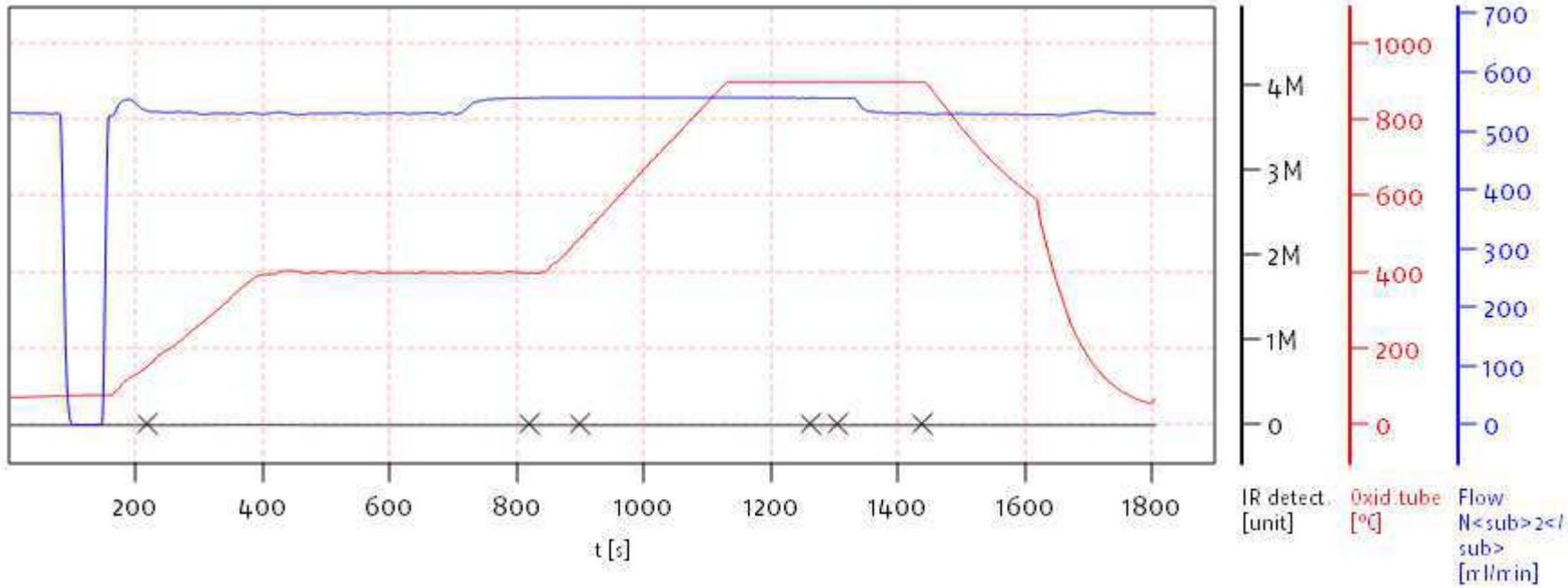
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
173	84	SKL0152-CCBE	516.20		CARBON	12/16/2022 12:20 AM	bl,C3u,C2u	0.000	14 918	0.000	0.000	386	588	0.000	0.000	0.9625	1.0000



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Balance: BAL3
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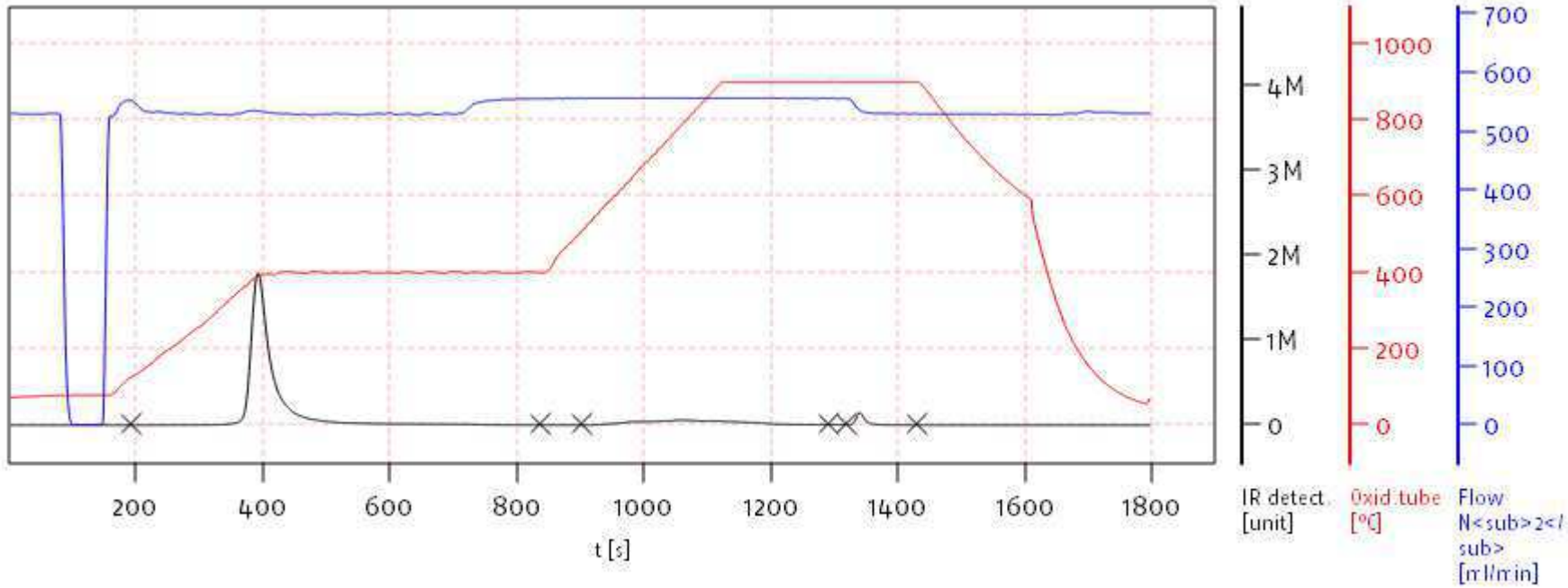
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
174	85	22L0137-22	303.20		CARBON	12/16/2022 12:51 AM	bl	1.301	2 605 260	1.504	0.034	92 479	423 668	1.267	0.203	0.9625	1.0000



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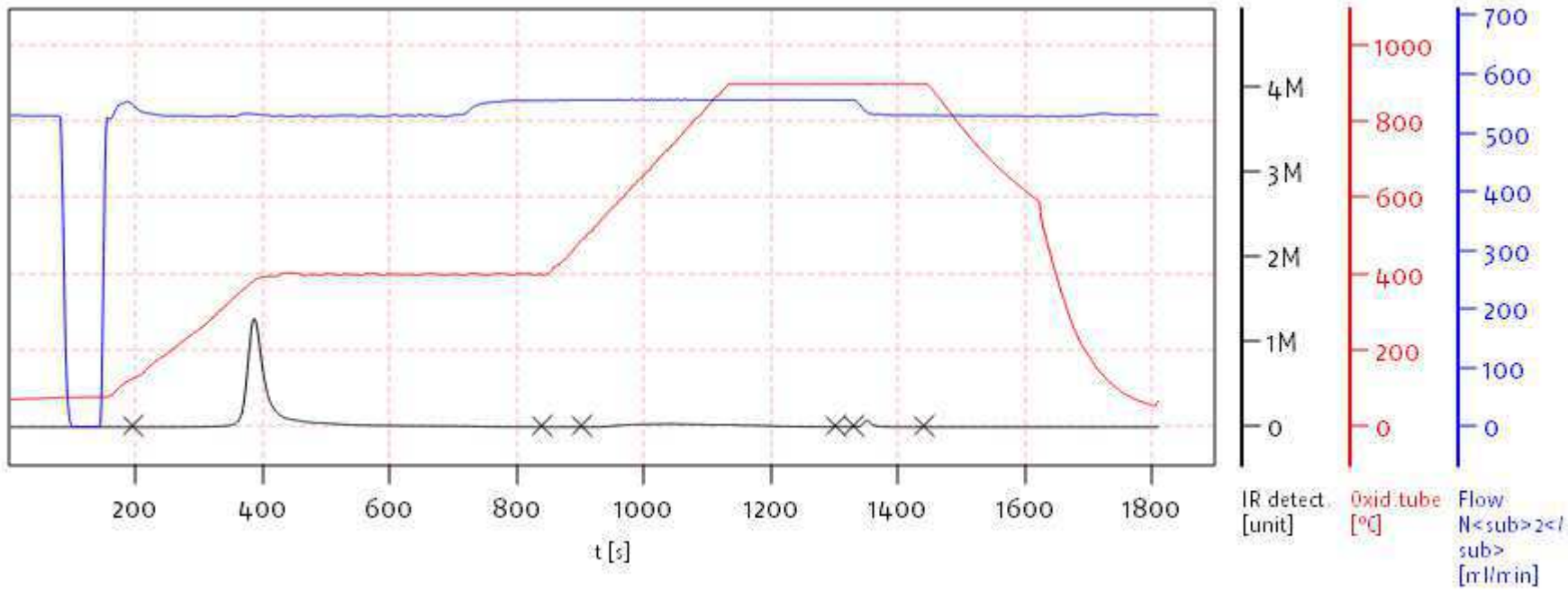
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
175	86	22L0137-23	200.70		CARBON	12/16/2022 1:21 AM	bl	1.353	1 826 710	1.552	0.017	48 104	284 629	1.336	0.199	0.9625	1.0000



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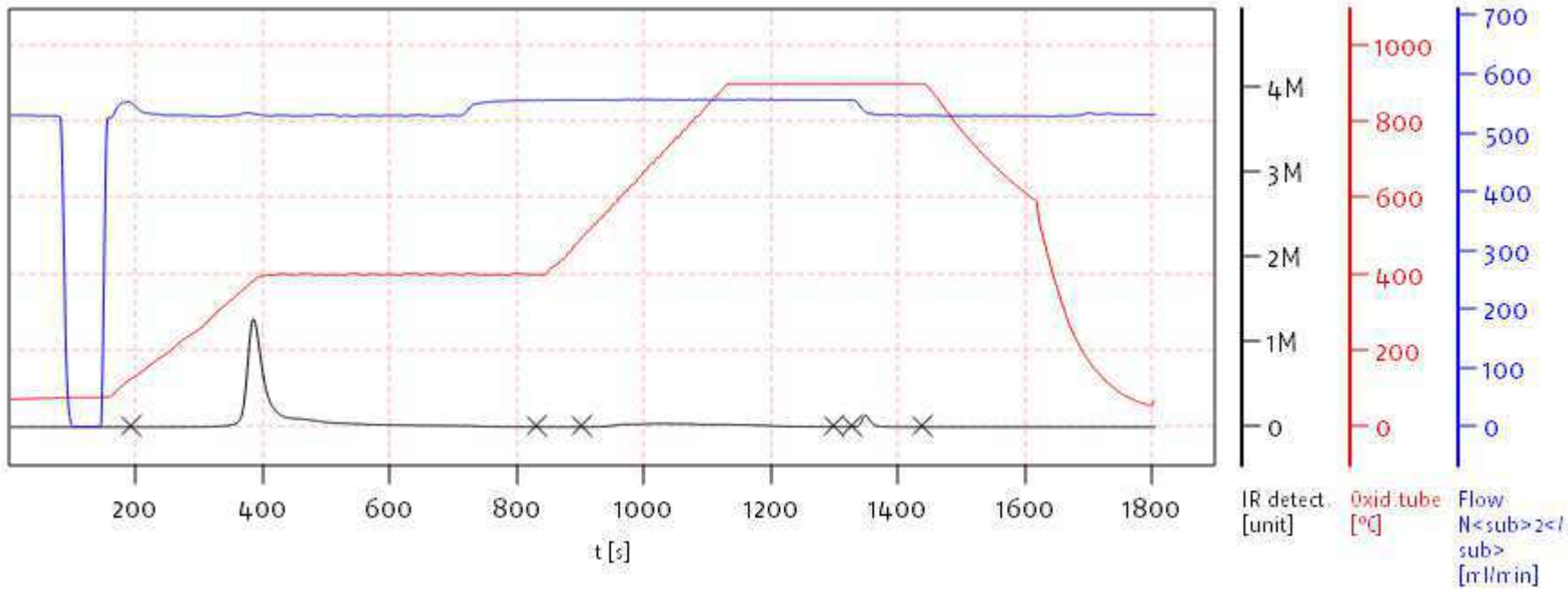
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
176	87	22L0137-24	211.60		CARBON	12/16/2022 1:52 AM	bl	1.375	1 919 243	1.593	0.042	84 207	323 944	1.333	0.218	0.9625	1.0000



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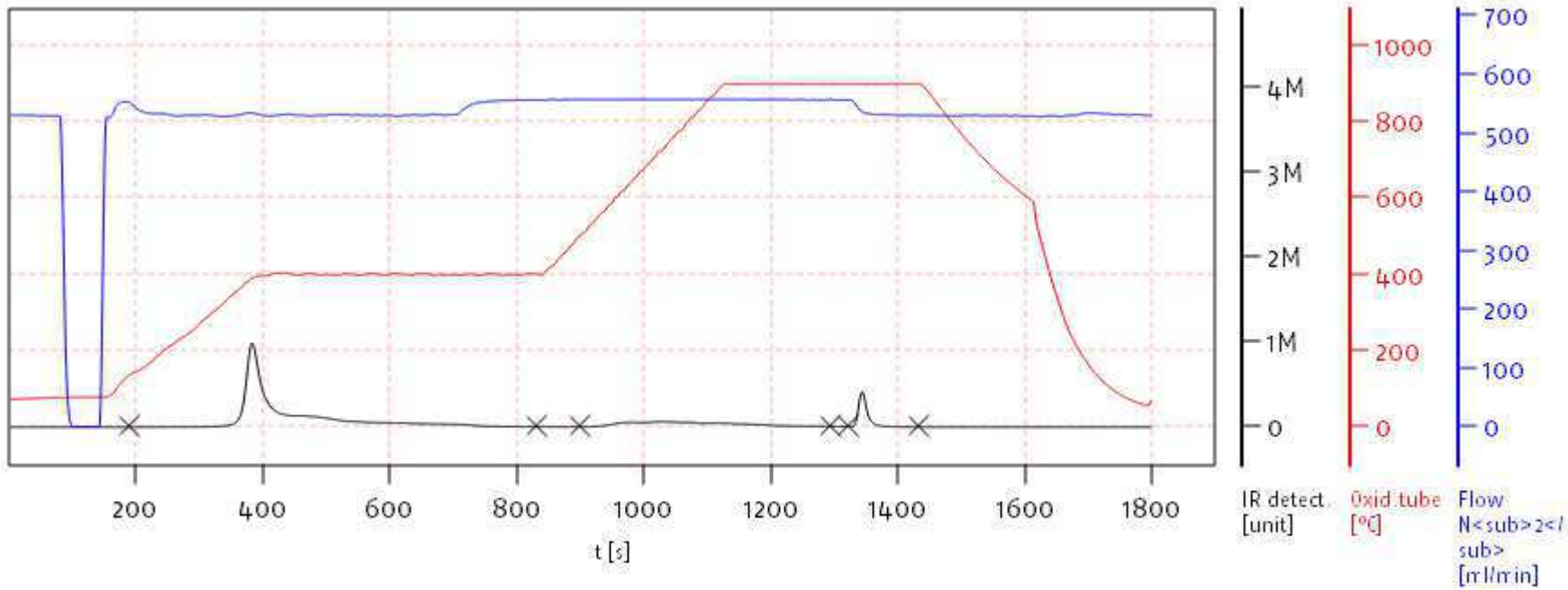
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
177	88	22L0137-25	280.40		CARBON	12/16/2022 2:22 AM	bl	1.159	1 973 195	1.422	0.124	251 312	504 561	1.034	0.264	0.9625	1.0000



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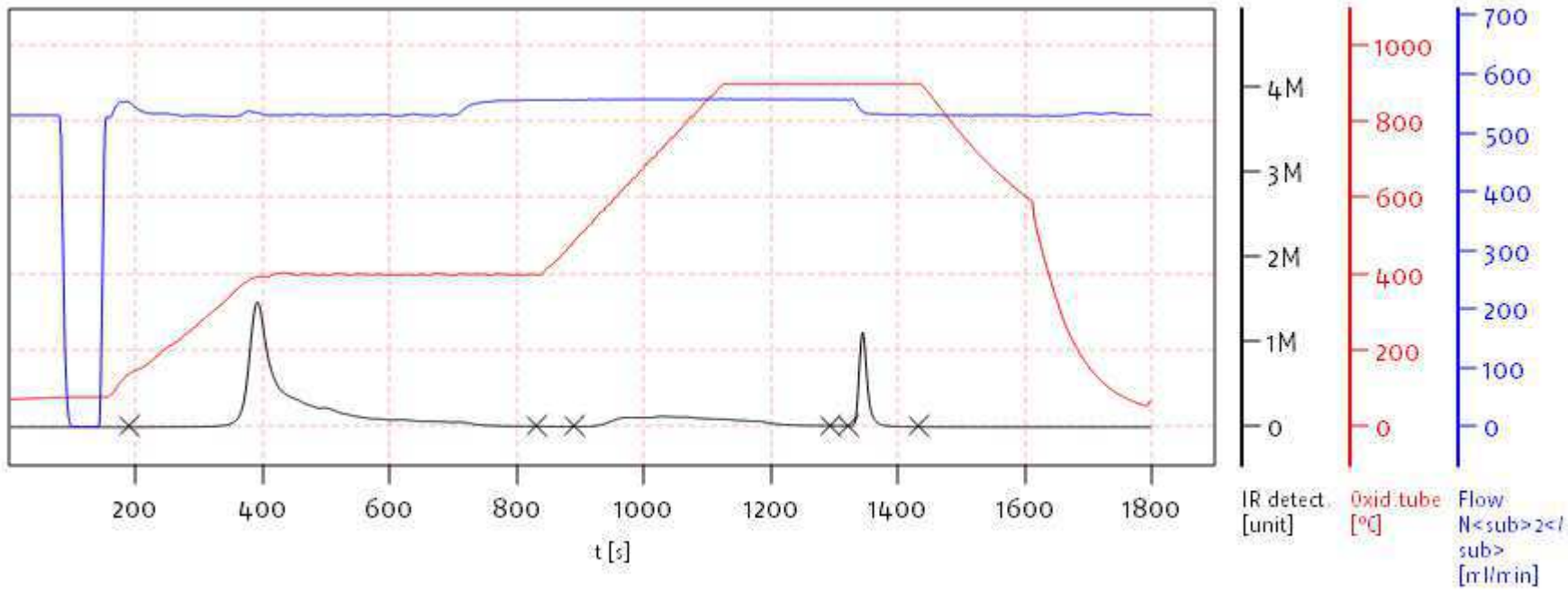
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
178	89	22L0137-26	534.80		CARBON	12/16/2022 2:53 AM	bl	1.223	3 765 198	1.522	0.182	653 691	1 057 664	1.042	0.298	0.9625	1.0000



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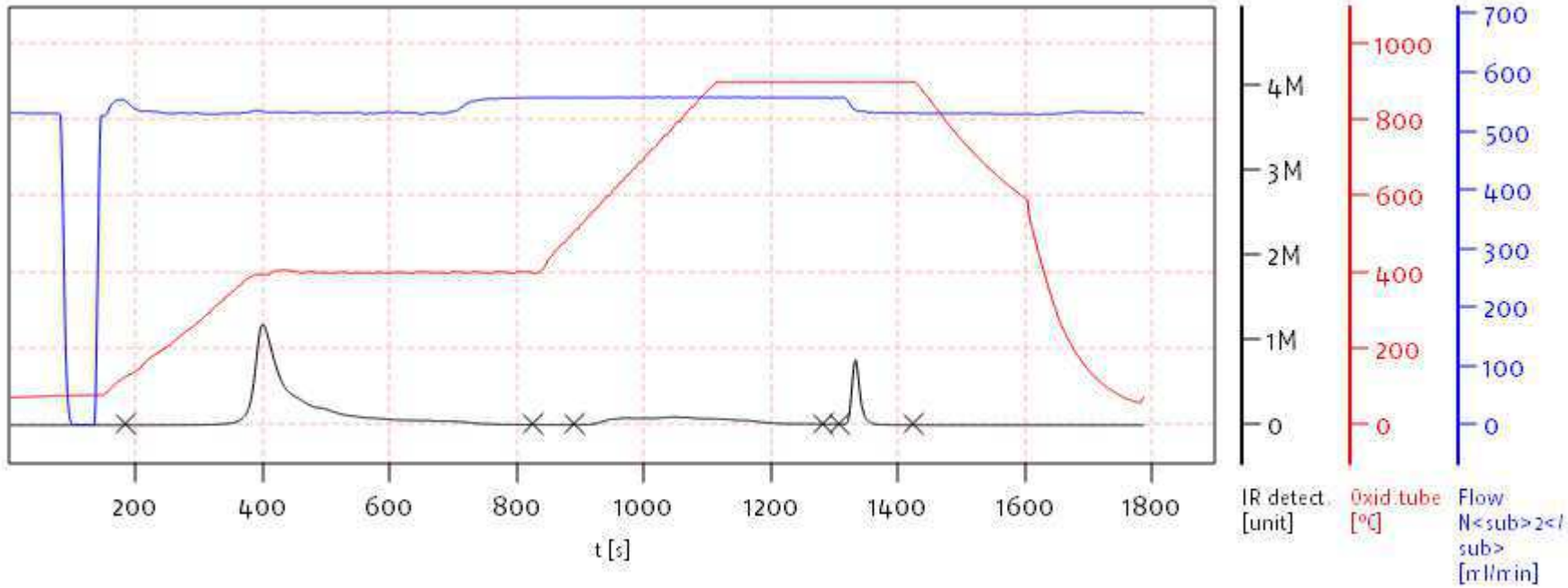
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
179	1	22L0137-27	505.00		CARBON	12/16/2022 3:23 AM	bl	1.039	3 112 351	1.273	0.129	446 139	790 411	0.910	0.234	0.9625	1.0000



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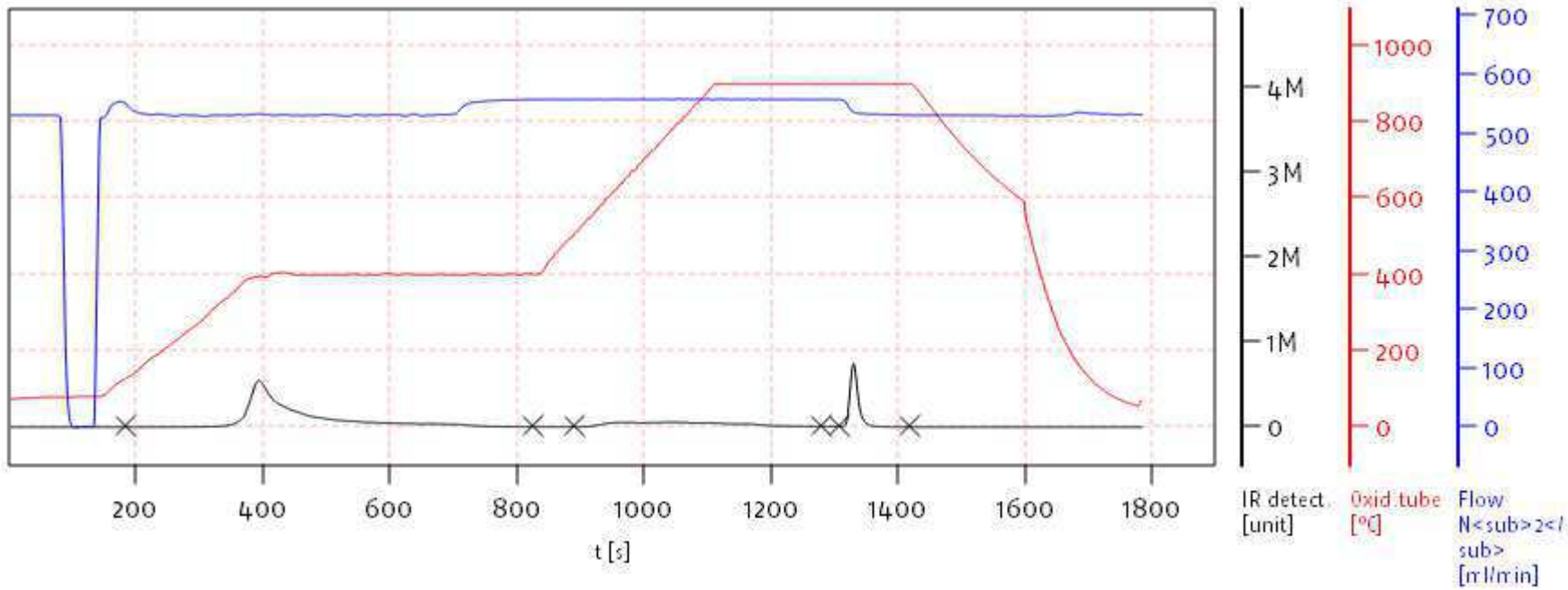
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
180	2	22L0137-28	339.40		CARBON	12/16/2022 3:53 AM	bl	0.948	1 771 749	1.167	0.182	425 528	506 462	0.766	0.219	0.9625	1.0000



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Soli TOC Cube, Carbon
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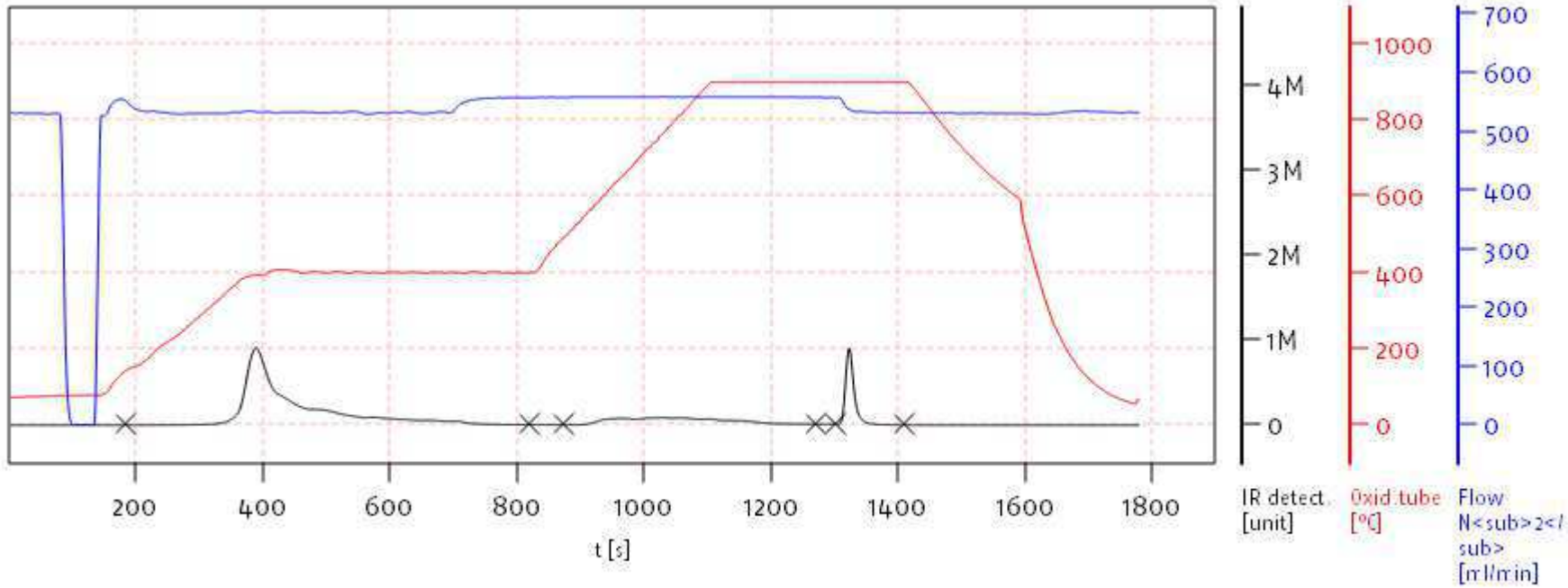
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
181	3	22L0137-29	520.50		CARBON	12/16/2022 4:23 AM	bl	0.961	2 850 211	1.175	0.153	540 629	745 489	0.808	0.214	0.9625	1.0000



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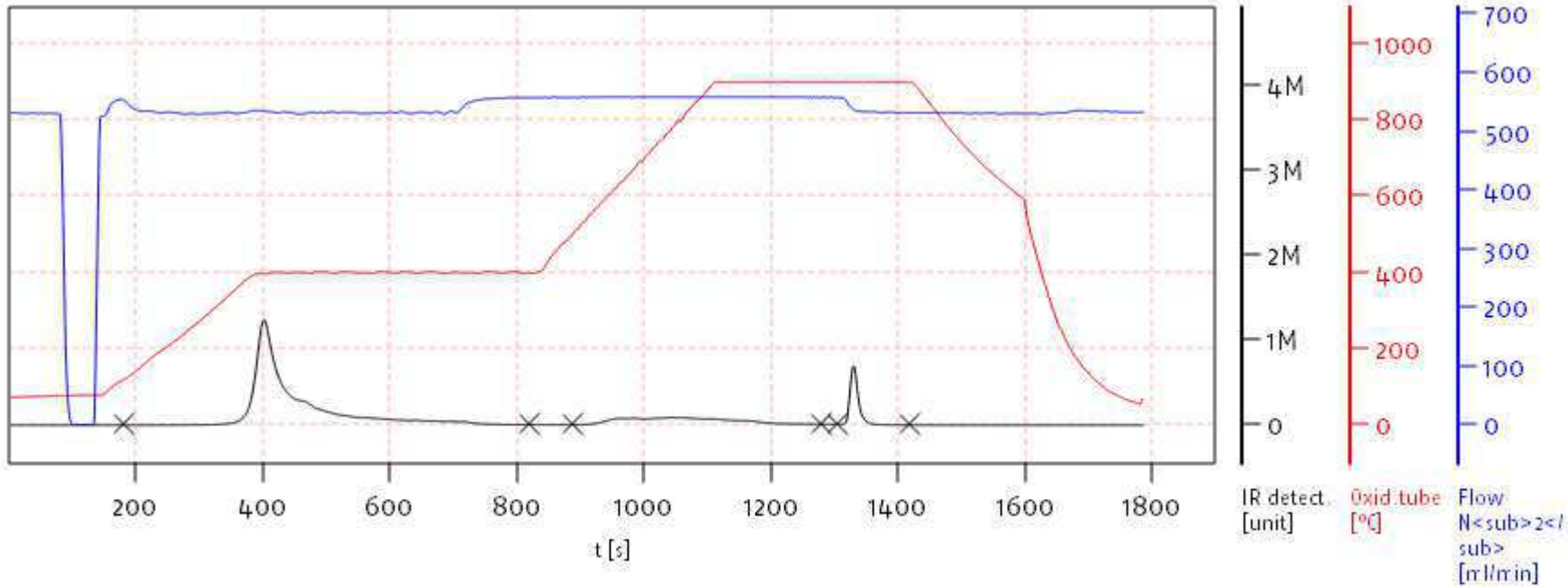
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
182	4	22L0137-30	503.30		CARBON	12/16/2022 4:53 AM	bl	0.998	3 003 671	1.218	0.116	404 991	743 547	0.881	0.221	0.9625	1.0000



Name:

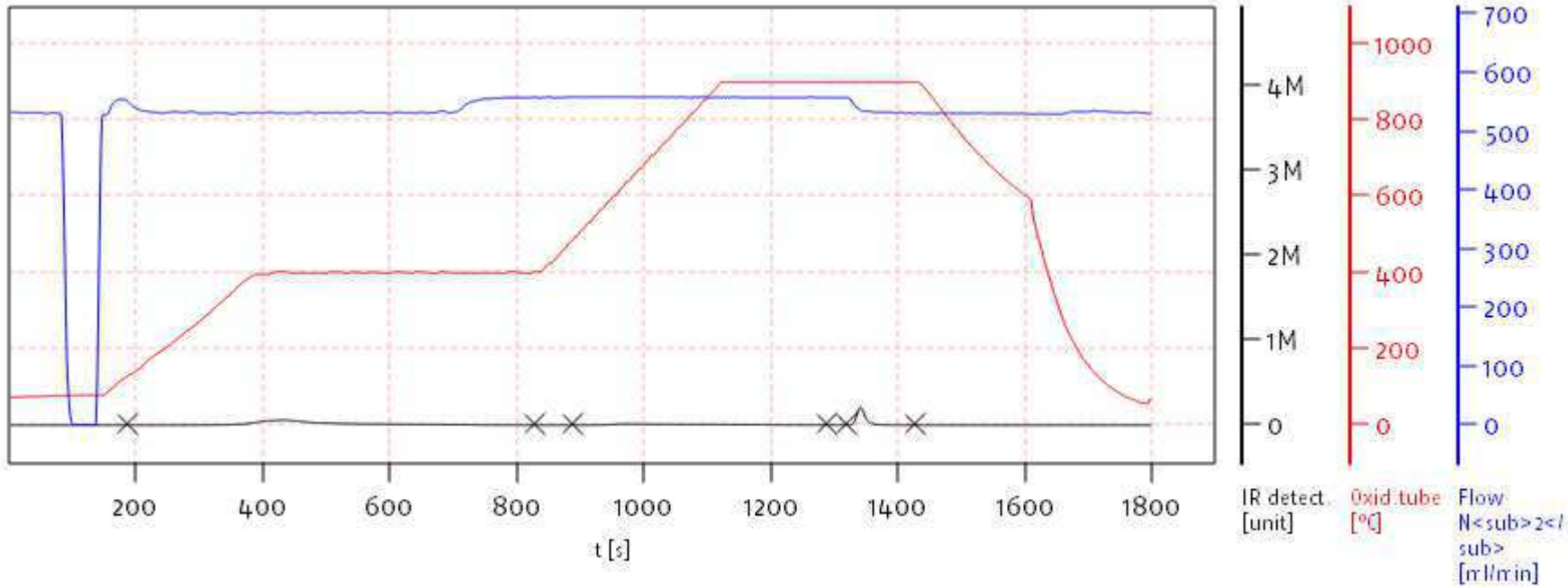
Access: soliTOC superuser

Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
183	5	22L0137-31	528.50		CARBON	12/16/2022 5:24 AM	bl	0.110	315 802	0.130	0.029	124 714	95 175	0.082	0.020	0.9625	1.0000



Name:

Access: soliTOC superuser

Date: Fri Dec 16 09:43:23 2022

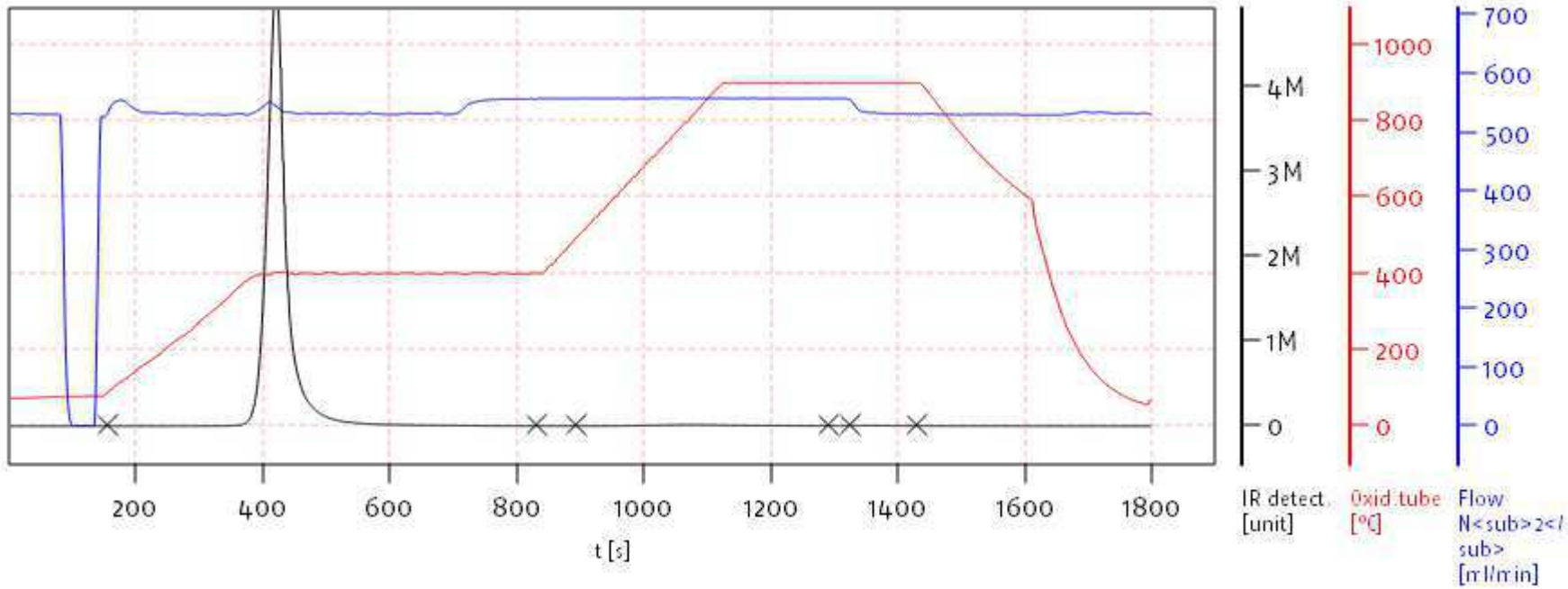
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
184	6	SKL0152-CCVF	22.40		CARBON	12/16/2022 5:54 AM	bl	45.626	6 885 811	46.185	0.000	19 561	107 284	45.626	0.558	0.9625	1.0000



Name:

Access: soliTOC superuser

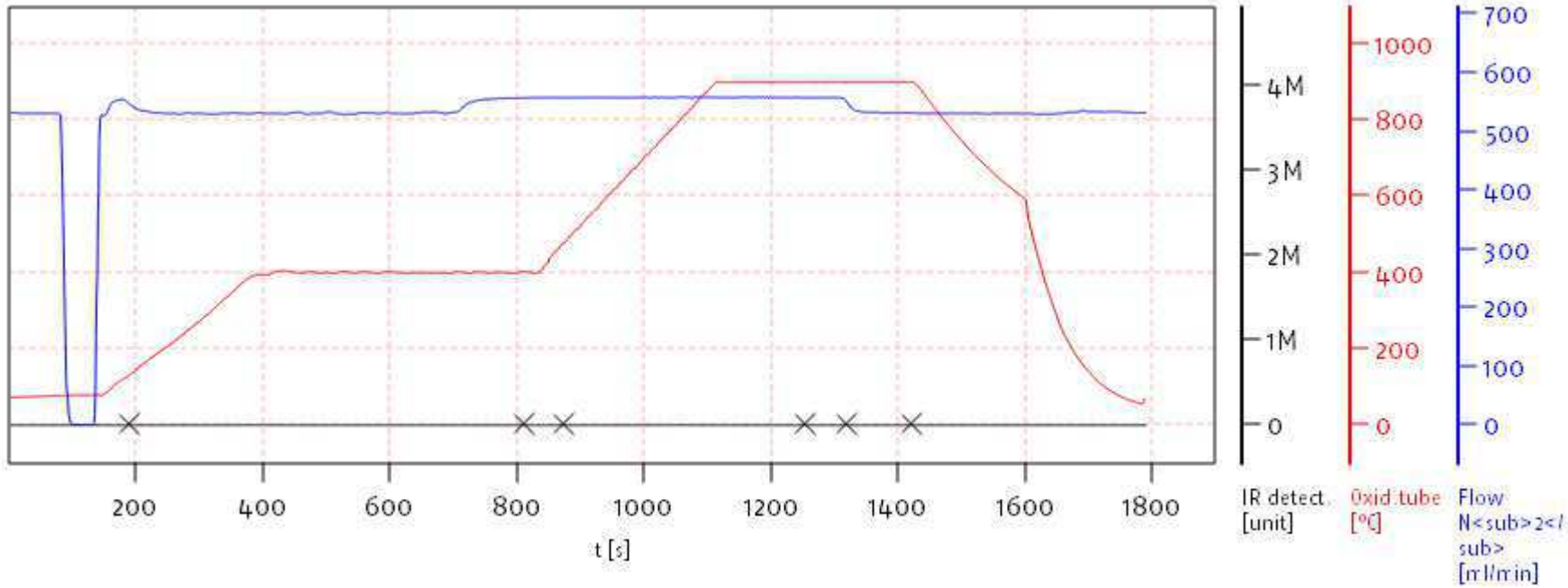
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
185	7	SKL0152-CCBF	503.20		CARBON	12/16/2022 6:24 AM	bl,C2u	0.000	5 900	0.000	0.000	253	4 478	0.000	0.000	0.9625	1.0000



Name:

Access: soliTOC superuser

Date: Fri Dec 16 09:43:23 2022

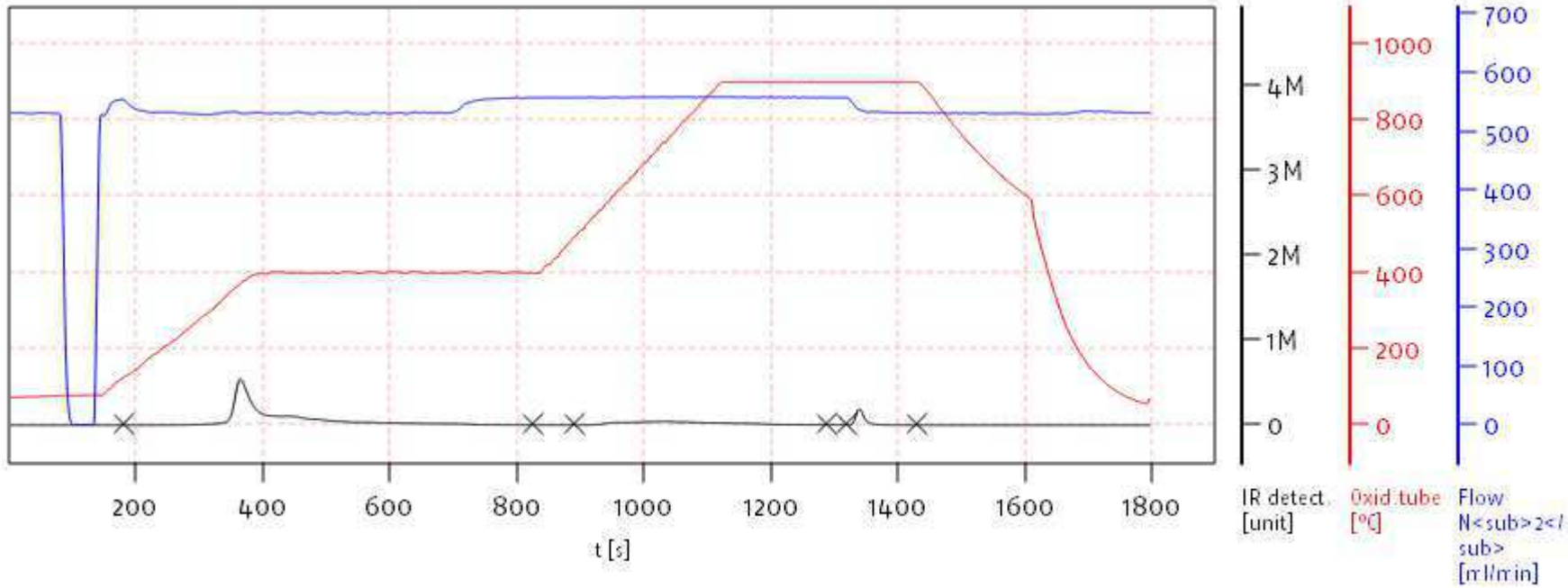
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
186	8	22L0137-32	206.60		CARBON	12/16/2022 6:55 AM	bl	0.932	1 225 458	1.148	0.067	115 751	315 353	0.865	0.216	0.9625	1.0000



Name:

Access: soliTOC superuser

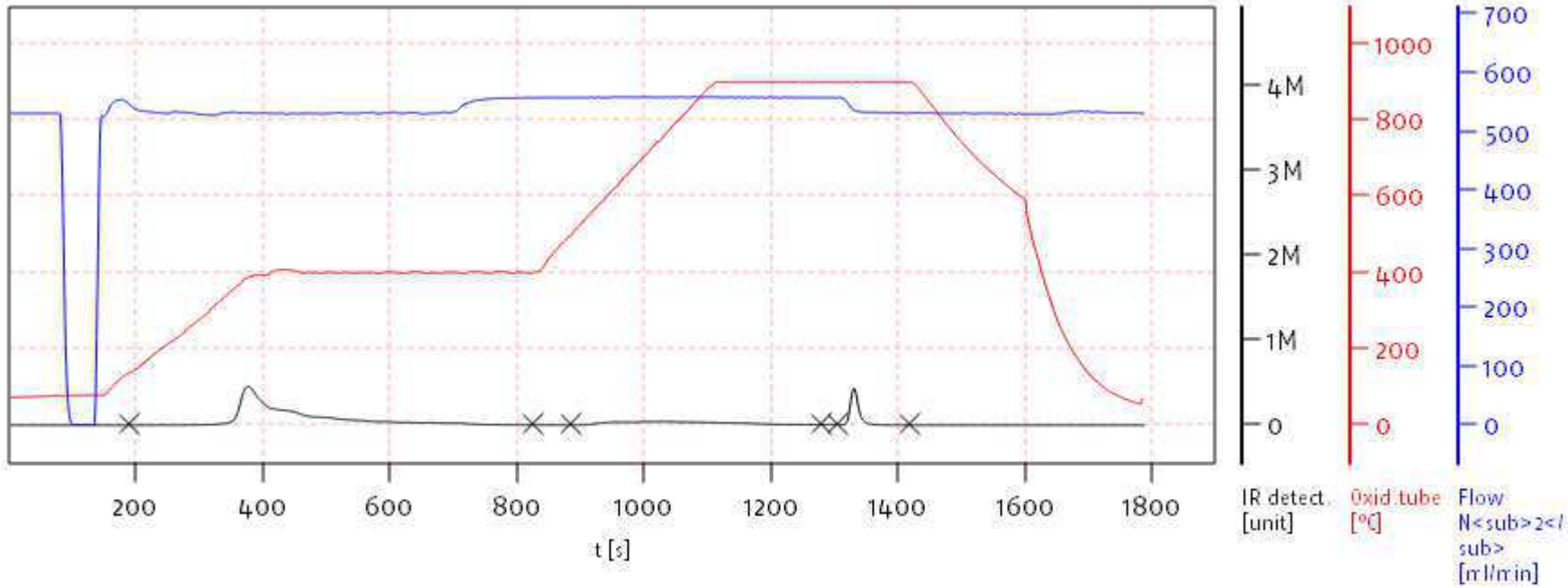
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
187	9	22L0137-33	320.00		CARBON	12/16/2022 7:25 AM	bl	0.801	1 514 691	0.959	0.108	250 588	351 735	0.693	0.157	0.9625	1.0000



Name:

Access: soliTOC superuser

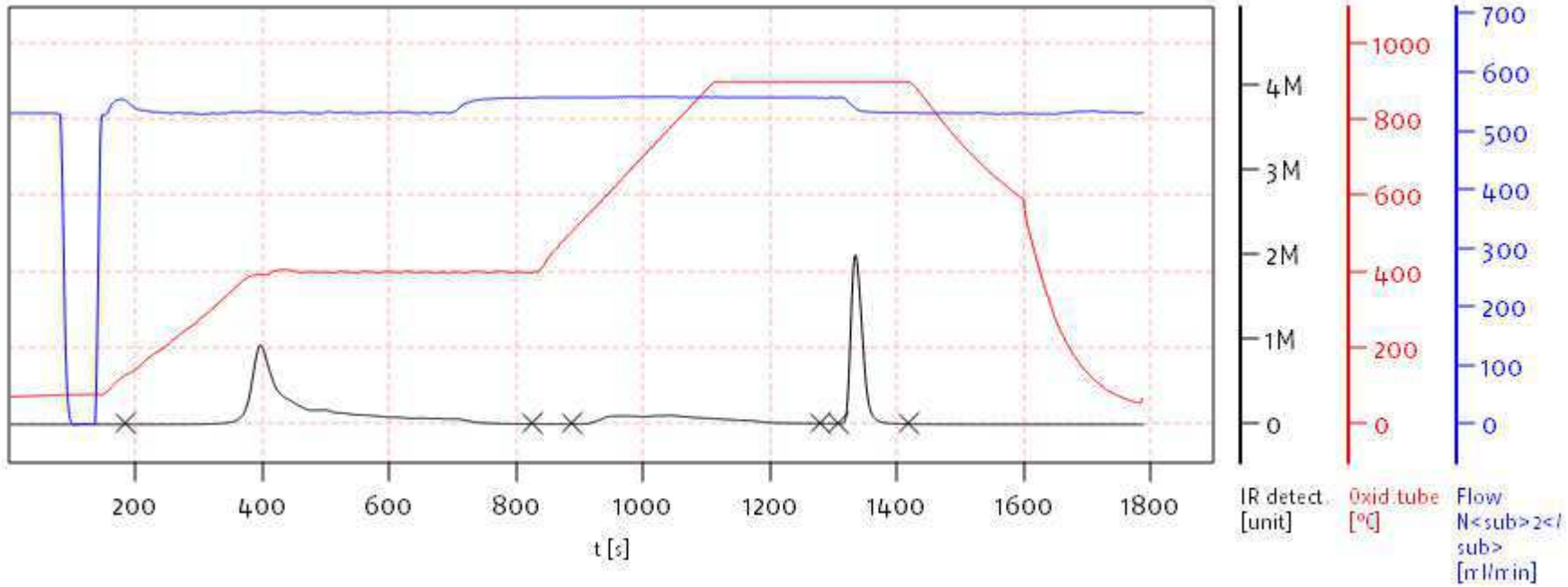
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
188	10	22L0137-34	531.70		CARBON	12/16/2022 7:55 AM	bl	1.222	2 752 650	1.460	0.458	1 598 294	845 850	0.764	0.239	0.9625	1.0000



Name:

Access: soliTOC superuser

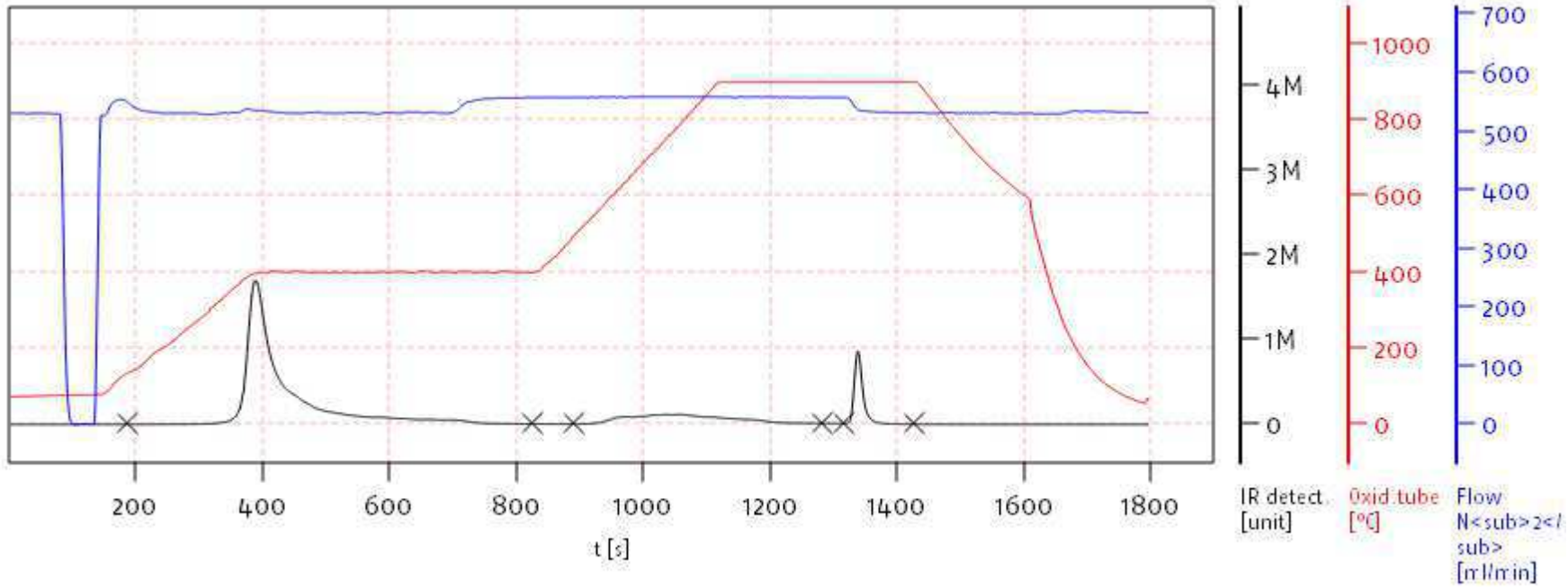
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
189	11	22L0137-35	513.30		CARBON	12/16/2022 8:25 AM	bl	1.296	3 977 800	1.560	0.149	522 035	899 161	1.147	0.263	0.9625	1.0000



Name:

Access: soliTOC superuser

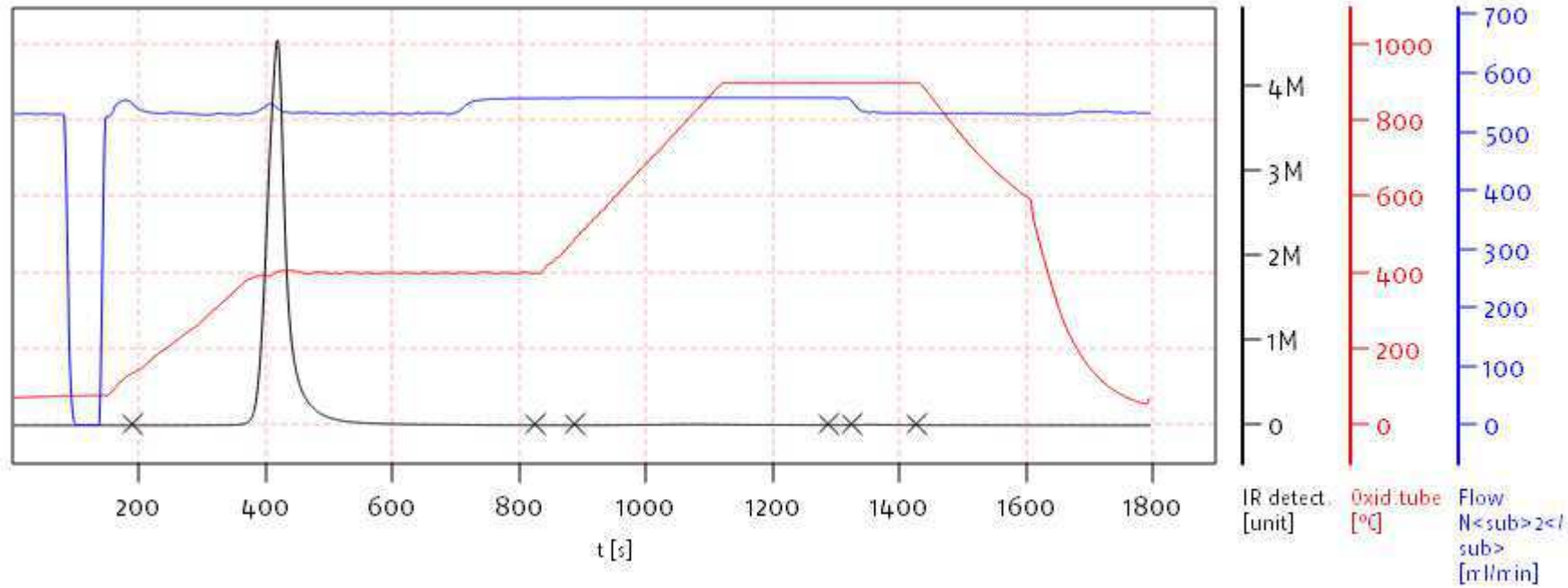
Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
190	12	SKL0152-CCVG	20.60		CARBON	12/16/2022 8:56 AM	bl	45.057	6 255 935	45.581	0.000	21 492	96 202	45.057	0.524	0.9625	1.0000



Name:

Access: soliTOC superuser

Date: Fri Dec 16 09:43:23 2022

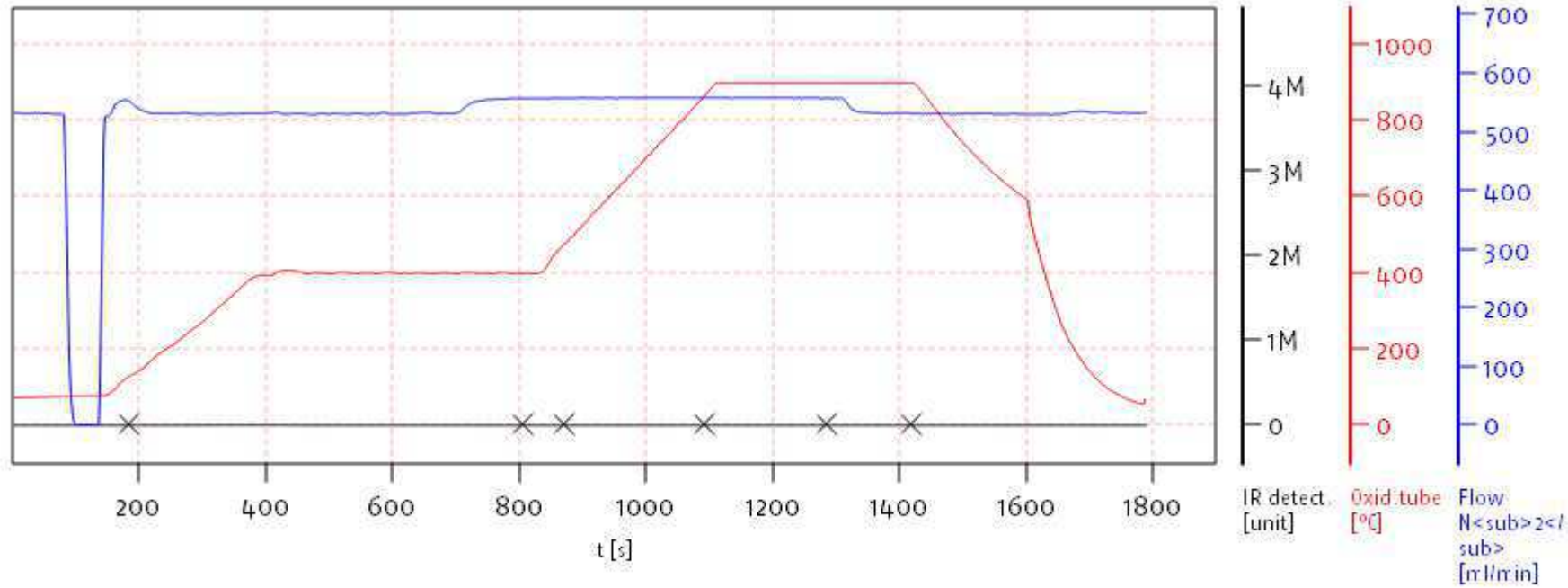
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 121222 DOE from: 12/16/2022 9:42 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
191	13	SKL0152-CCBG	509.80		CARBON	12/16/2022 9:26 AM	bl,C3u,C2u	0.000	11 115	0.000	0.000	368	158	0.000	0.000	0.9625	1.0000



Name:

Access: soliTOC superuser

Date: Fri Dec 16 09:43:23 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 121222 DOE from: 12/16/2022 9:42 AM

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: FD00070
Instrument: TOC Cube
Calibration Date: 04/26/2022 11:29

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
Total Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
Total Inorganic Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
% Soot	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FD00070	Instrument:	TOC Cube
Calibration Date:	04/26/2022 11:29		

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
Total Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
Total Inorganic Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
% Soot	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FD00070	Instrument:	TOC Cube
Calibration Date:	04/26/2022 11:29		

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
Total Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
Total Inorganic Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
% Soot	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: FD00070
Instrument: TOC Cube
Calibration Date: 04/26/2022 11:29

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
Total Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
Total Inorganic Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
% Soot	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408

INITIAL CALIBRATION DATA

EPA 9060A m

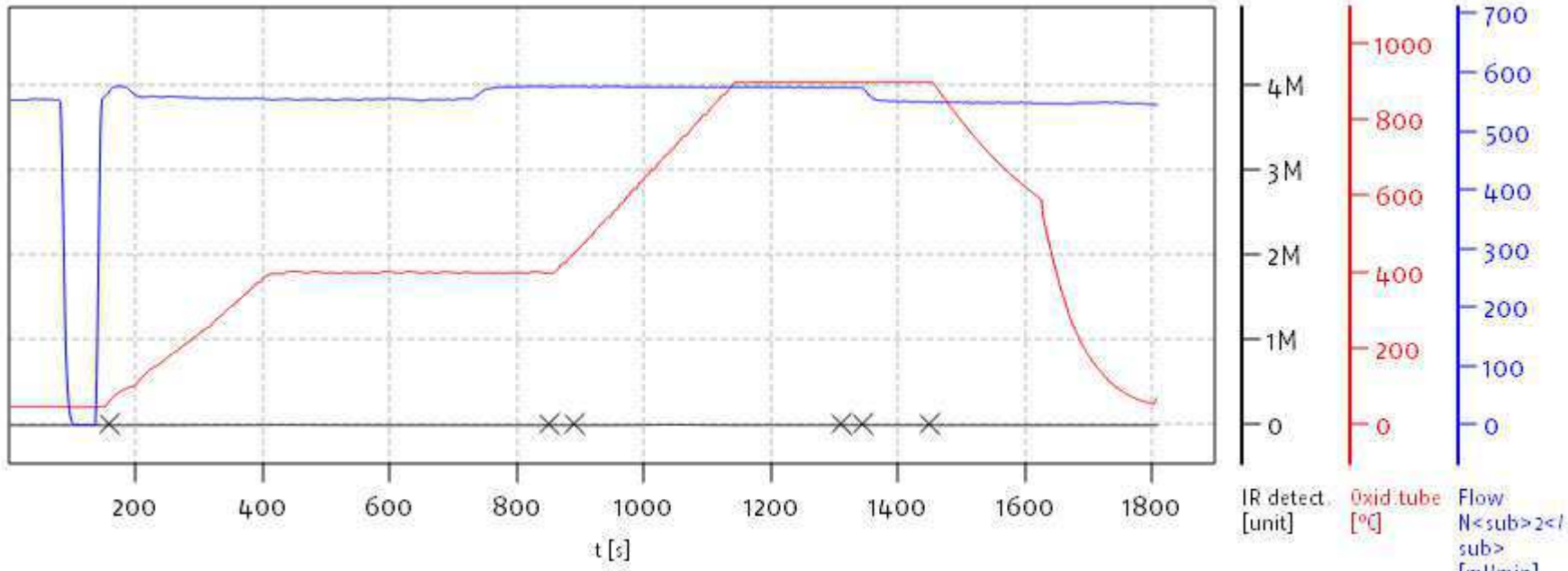
Laboratory:	Analytical Resources, LLC	SDG:	22L0198
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FD00070	Instrument:	TOC Cube
Calibration Date:	04/26/2022 11:29		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Total Organic Carbon	1424064	15.9	0.9988			
Total Carbon	1424064	15.9	0.9988			
Total Inorganic Carbon	1424064	15.9	0.9988			
% Soot	1424064	15.9	0.9988			

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
1	1	BLANK	1.00		1.00	CARBON	4/26/2022 11:29 AM	0.000	0.000	0.000	bl	29 049	30 612	3 899	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

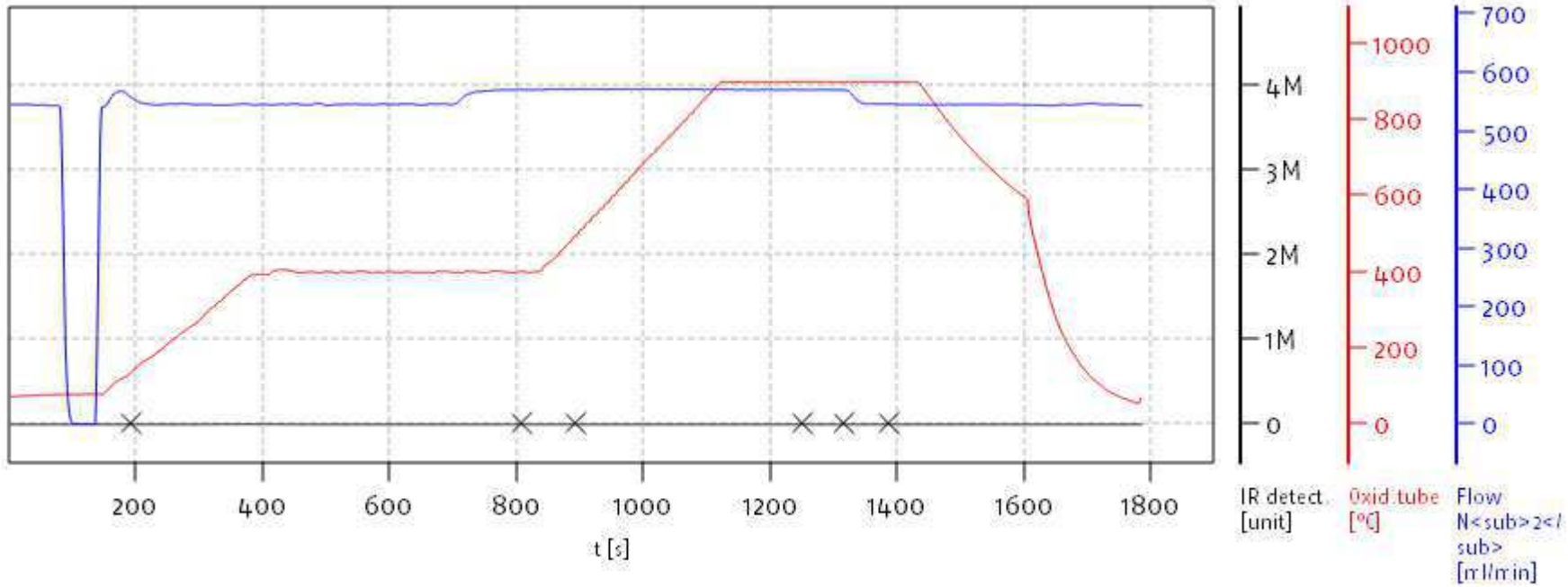
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
2	2	BLANK	1.00		1.00	CARBON	4/26/2022 12:00 PM	0.000	0.000	0.000	bl	11 115	60	8	1.0000	1.0000



Name:

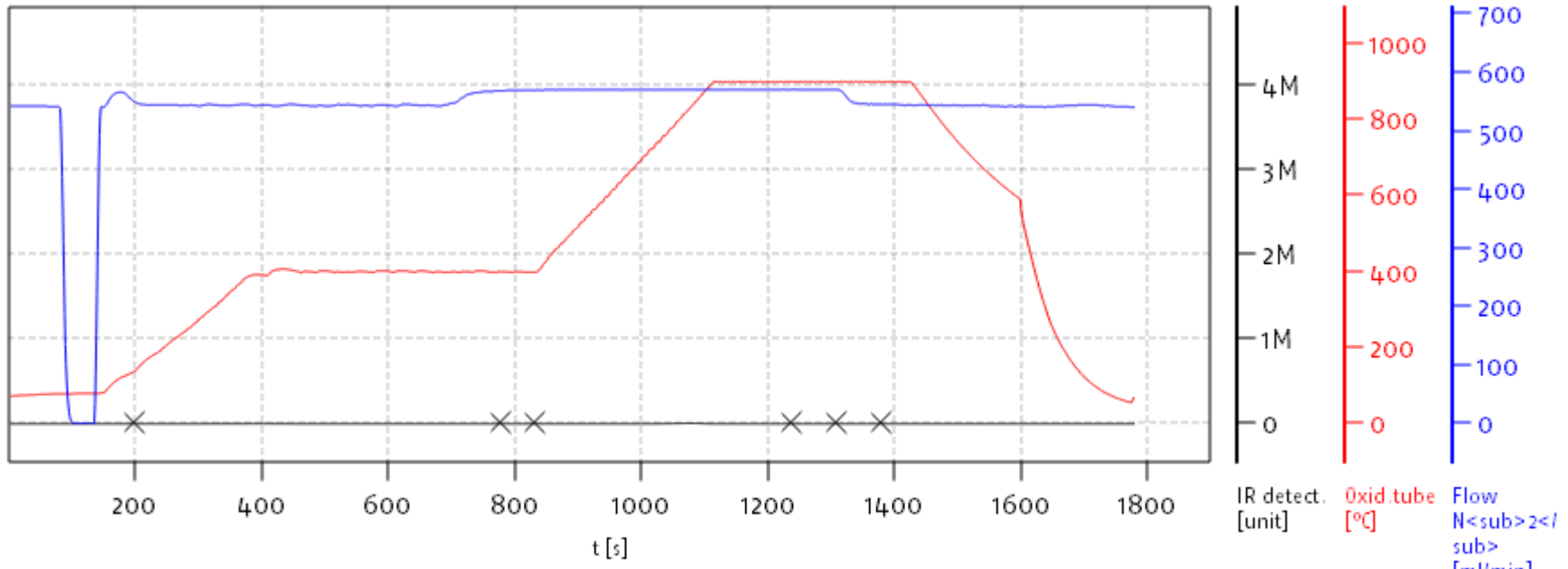
Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
3	3	SEQ-CAL1	200.00	0.0027	1.00	CARBON	4/26/2022 12:30 PM	0.010	0.008	0.018	bl,C1u,C2u	7 294	11 739	22	1.0000	0.7425



Name:

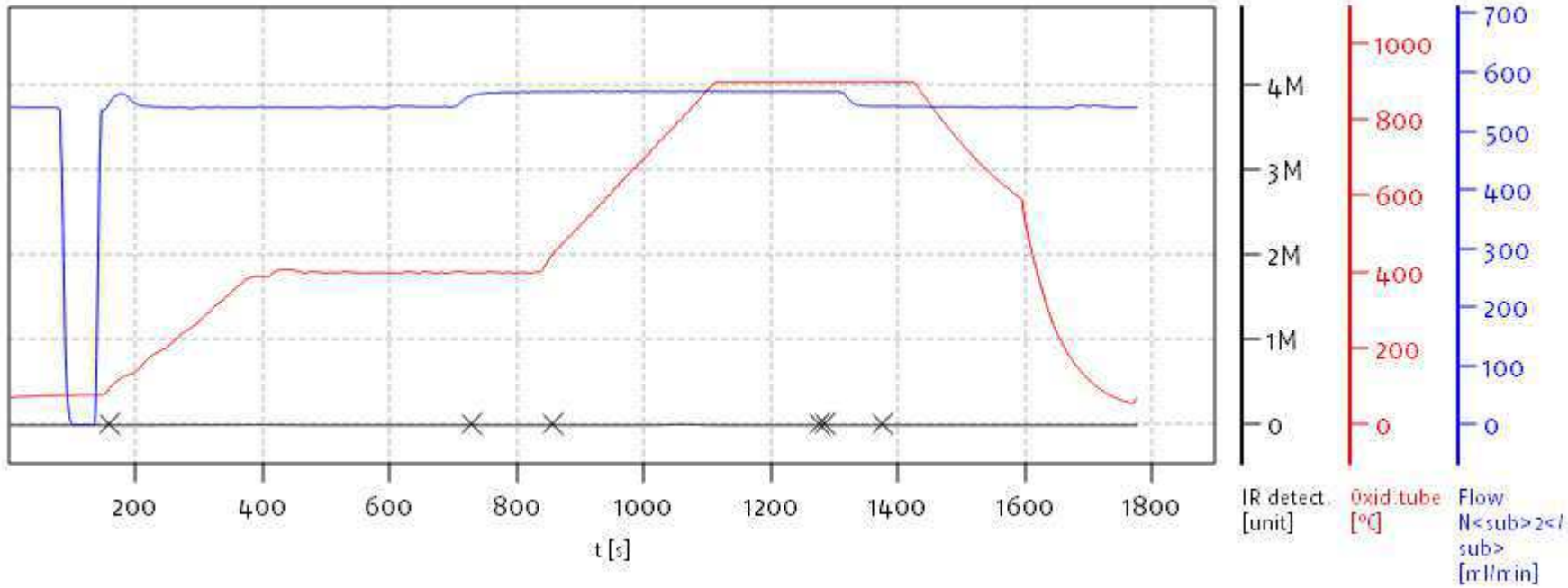
Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
4	4	SEQ-CAL2	200.00	0.0049	1.00	CARBON	4/26/2022 1:00 PM	0.023	0.015	0.038	bl,C2u	23 296	19 107	47	1.0000	0.8936



Name:

Access: soliTOC superuser

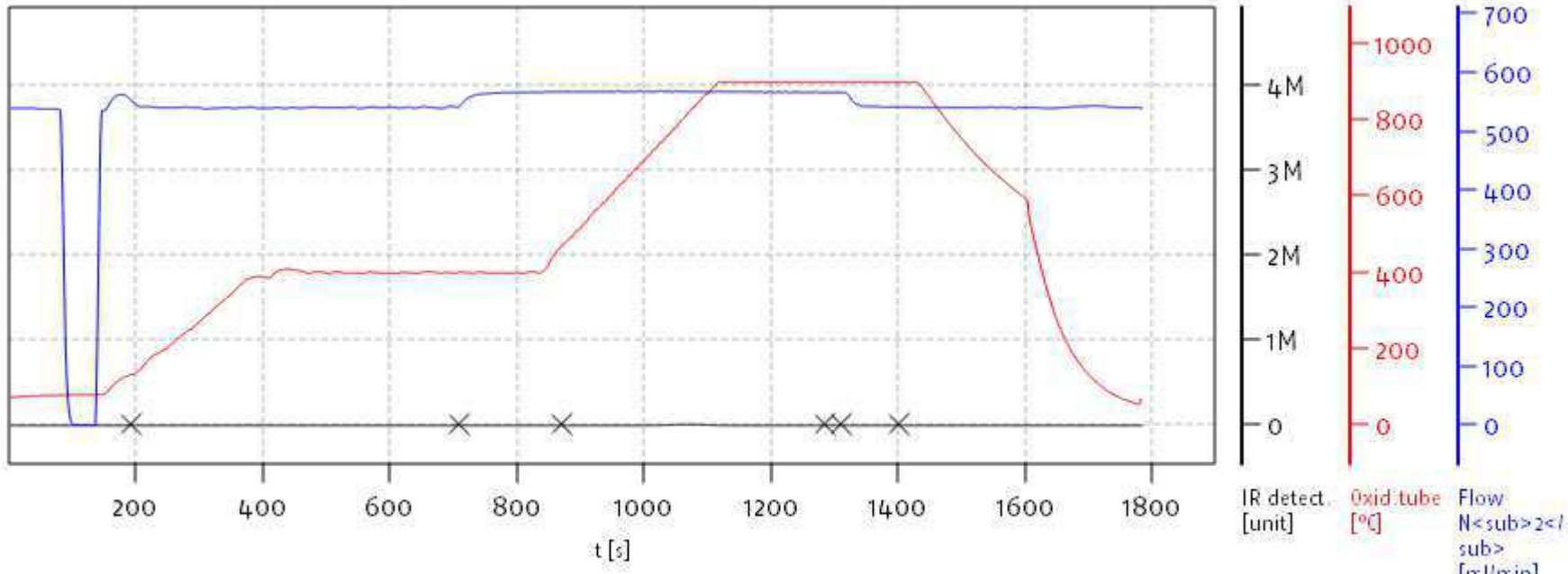
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
5	5	SEQ-CAL3	200.00	0.0071	1.00	CARBON	4/26/2022 1:30 PM	0.006	0.022	0.028	bl,C1u,C2u	2 319	27 530	170	1.0000	0.9343



Name:

Access: soliTOC superuser

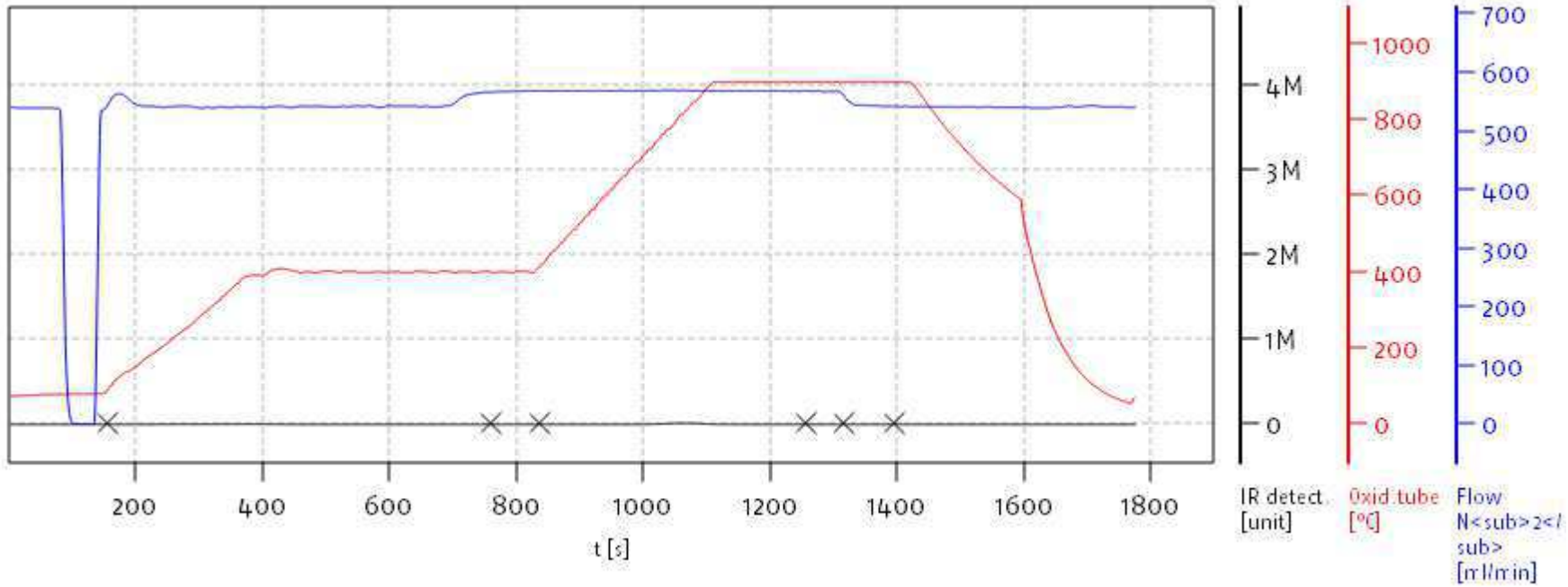
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
6	6	SEQ-CAL4	200.00	0.0098	1.00	CARBON	4/26/2022 2:00 PM	0.020	0.030	0.050	bl,C2u	19 746	38 017	109	1.0000	0.9461



Name:

Access: soliTOC superuser

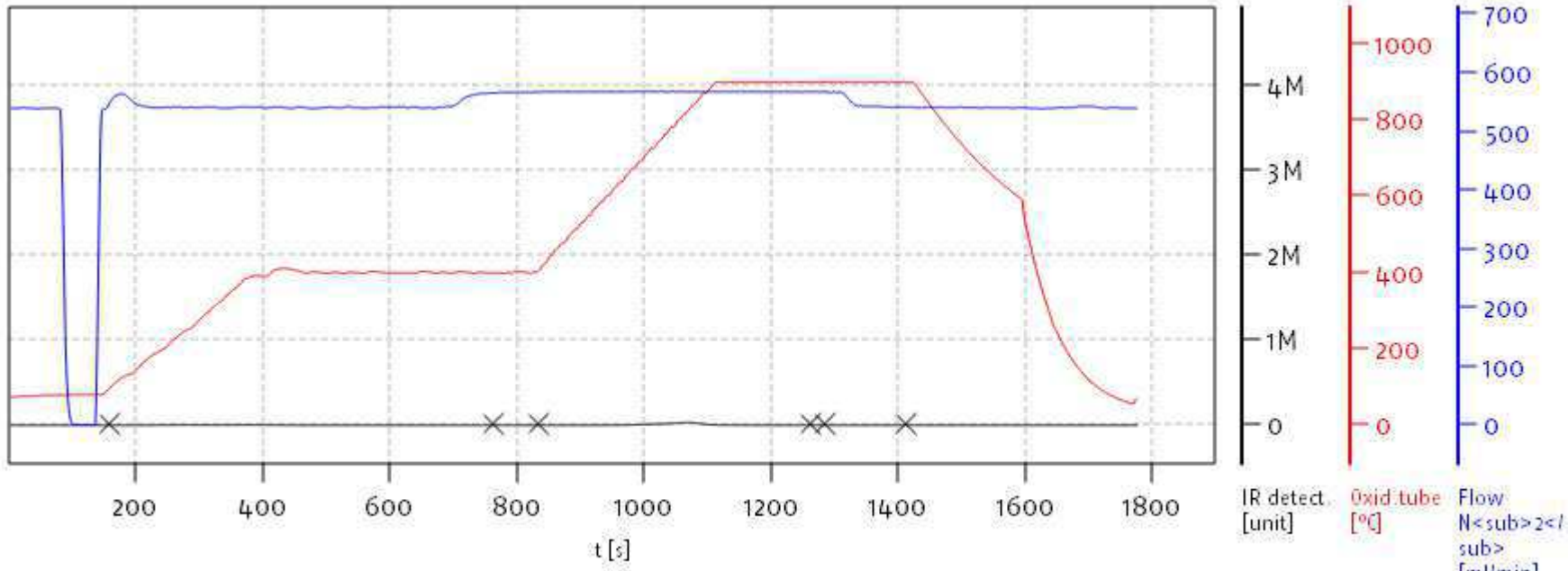
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
7	7	SEQ-CAL5	200.00	0.0148	1.00	CARBON	4/26/2022 2:30 PM	0.021	0.045	0.066	bl,C2u	20 951	92 945	236	1.0000	0.5975



Name:

Access: soliTOC superuser

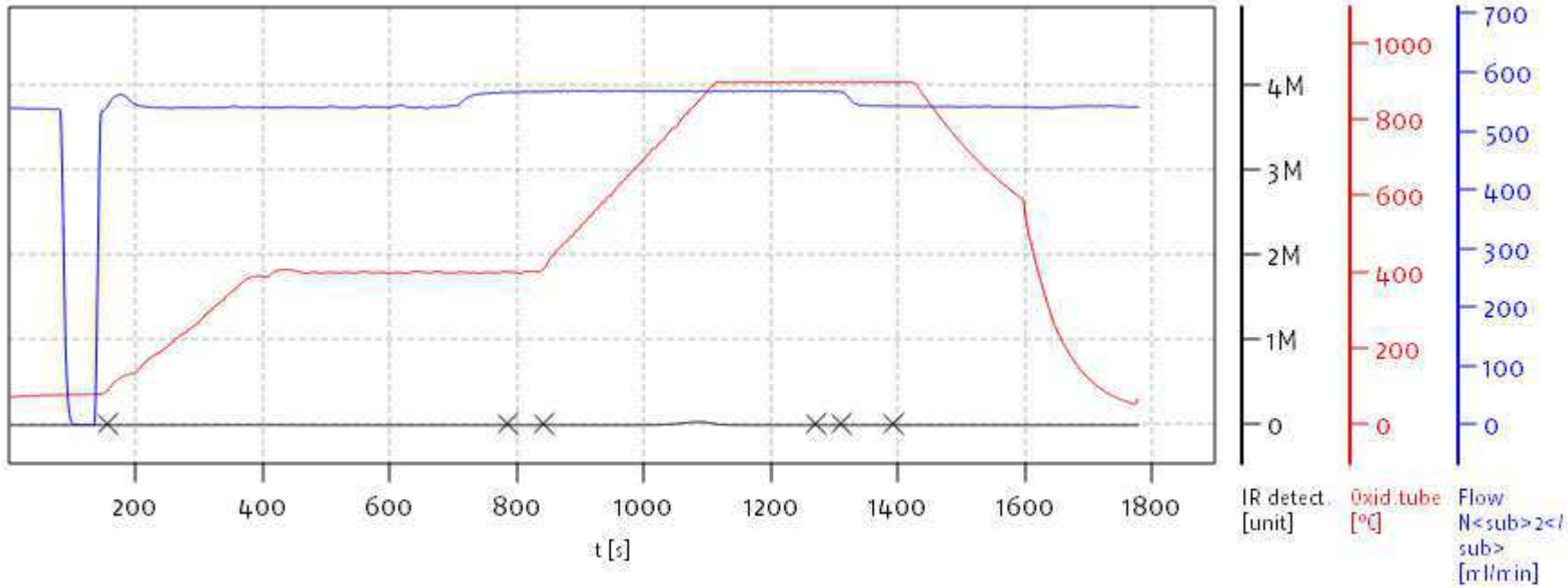
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
8	8	SEQ-CAL6	200.00	0.0196	1.00	CARBON	4/26/2022 3:00 PM	0.012	0.061	0.073	bl,C2u	10 118	82 297	59	1.0000	0.9144



Name:

Access: soliTOC superuser

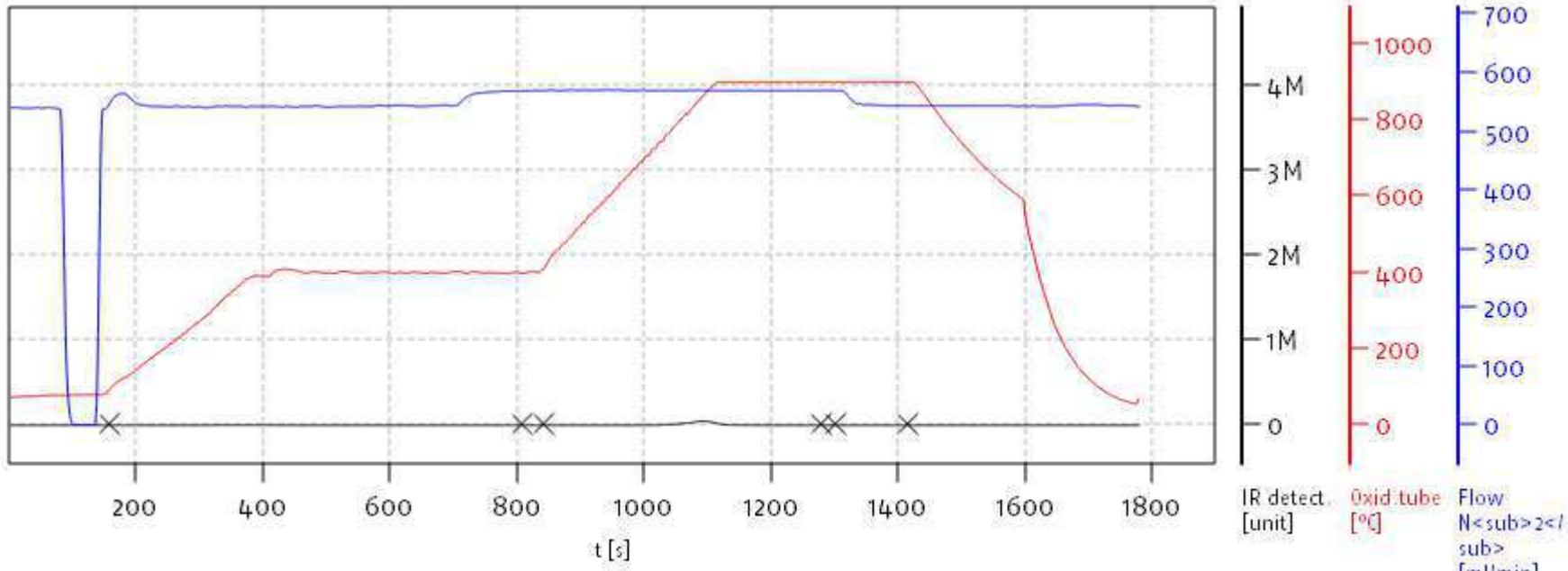
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
9	9	SEQ-CAL7	200.00	0.0247	1.00	CARBON	4/26/2022 3:30 PM	0.013	0.075	0.088	bl,C2u	10 555	101 530	292	1.0000	0.9173



Name:

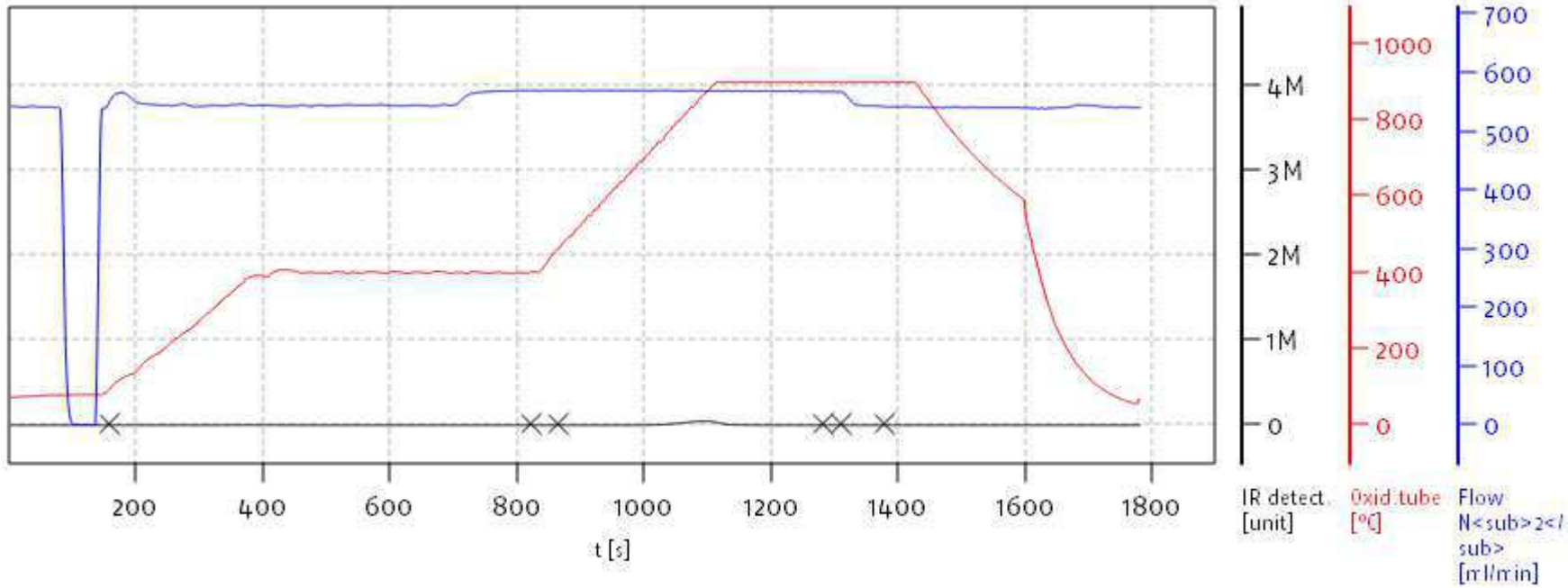
Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
10	10	SEQ-CAL8	200.00	0.0298	1.00	CARBON	4/26/2022 4:00 PM	0.009	0.091	0.100	bl,C1u,C2u	6 668	120 822	116	1.0000	0.9312



Name:

Access: soliTOC superuser

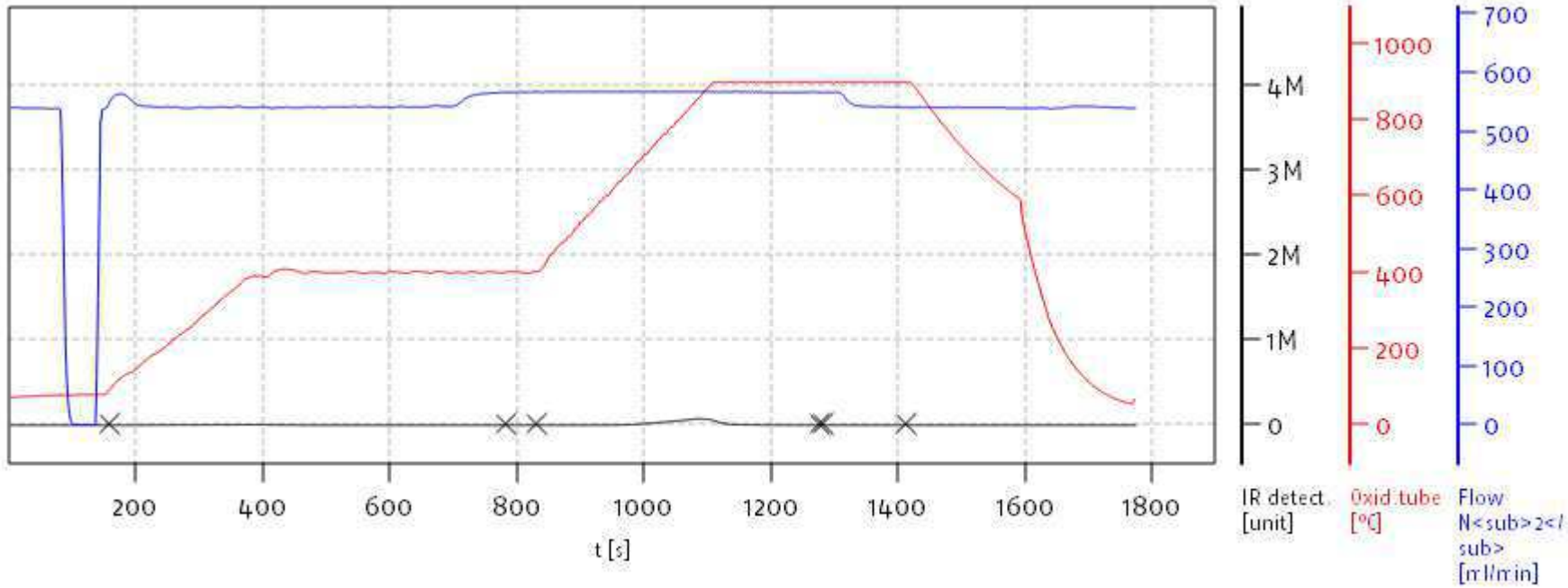
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
11	11	SEQ-CAL9	200.00	0.0402	1.00	CARBON	4/26/2022 4:30 PM	0.031	0.120	0.151	bl,C2u	32 999	260 234	1 044	1.0000	0.5792



Name:

Access: soliTOC superuser

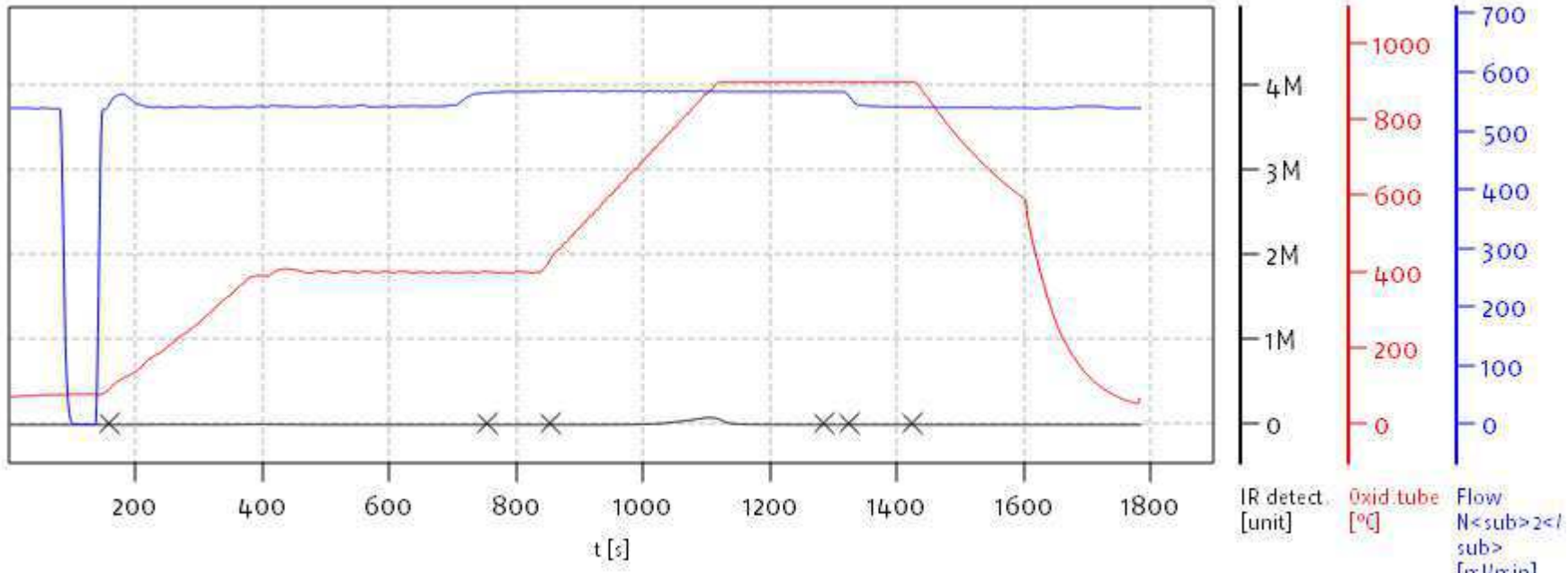
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
12	12	SEQ-CALA	200.00	0.0500	1.00	CARBON	4/26/2022 5:00 PM	0.021	0.151	0.172	bl,C2u	20 147	233 779	913	1.0000	0.8099



Name:

Access: soliTOC superuser

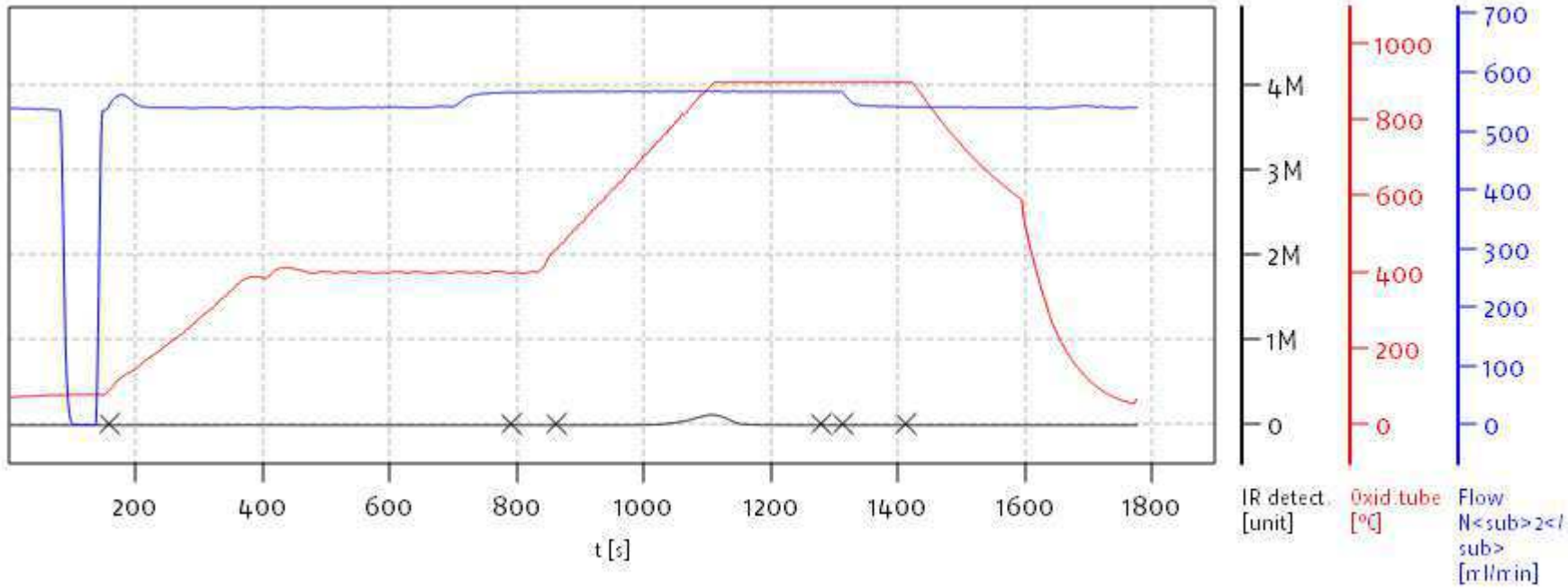
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
13	13	SEQ-CALB	200.00	0.0040	1.00	CARBON	4/26/2022 5:30 PM	0.010	0.258	0.268	bl,C1u,C2u	7 070	323 151	663	1.0000	1.0048



Name:

Access: soliTOC superuser

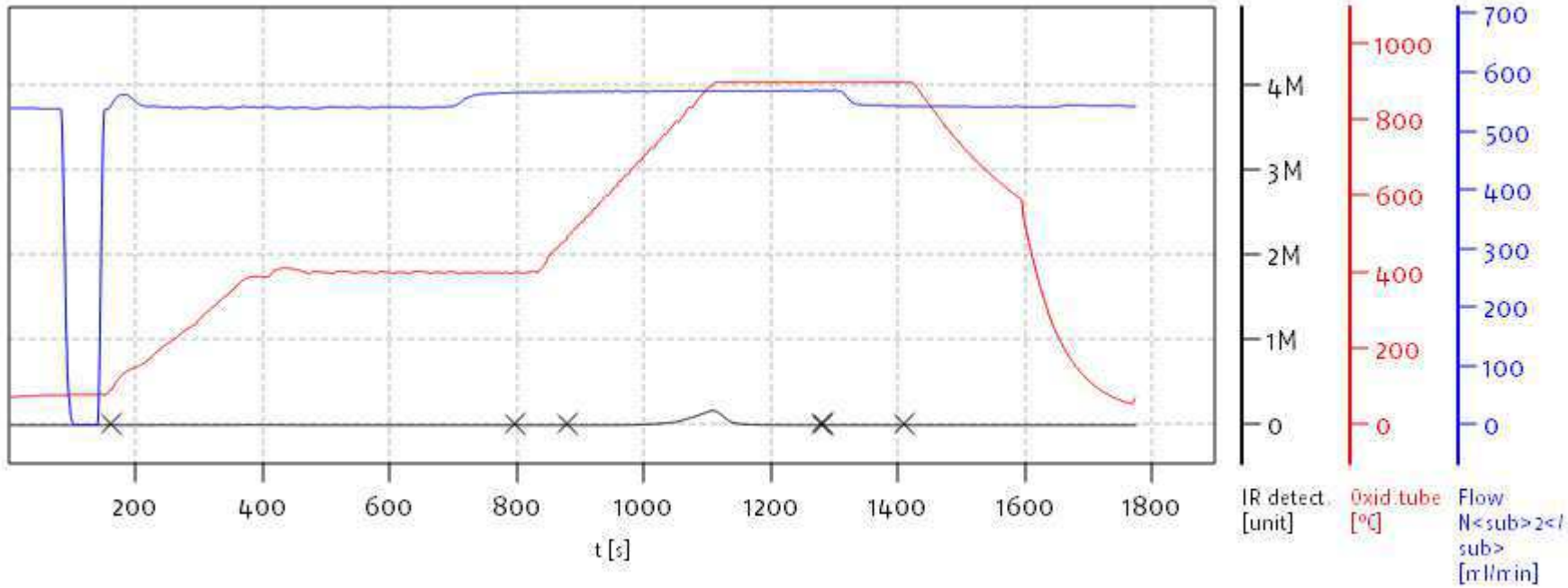
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
14	14	SEQ-CALC	200.00	0.0048	1.00	CARBON	4/26/2022 6:00 PM	0.015	0.324	0.339	bl,C2u	13 785	411 879	575	1.0000	0.9917



Name:

Access: soliTOC superuser

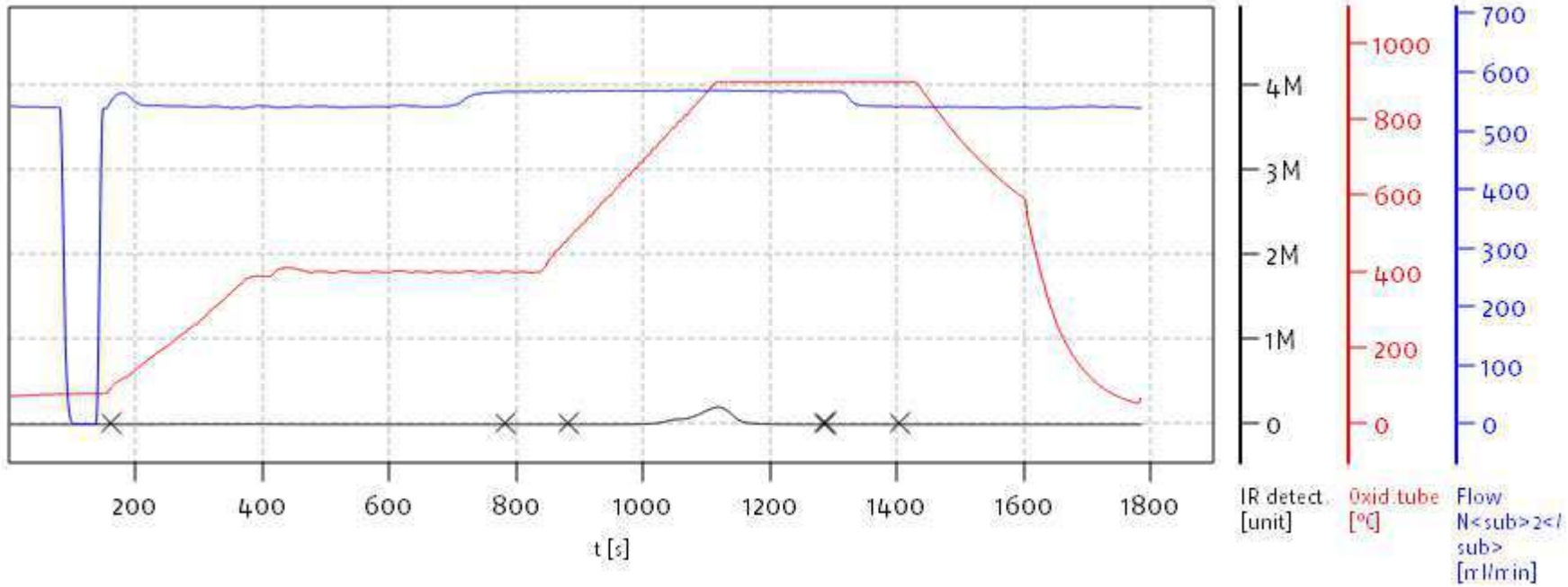
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
15	15	SEQ-CALD	200.00	0.0069	1.00	CARBON	4/26/2022 6:30 PM	0.019	0.444	0.463	bl,C2u	18 465	553 540	263	1.0000	1.0129



Name:

Access: soliTOC superuser

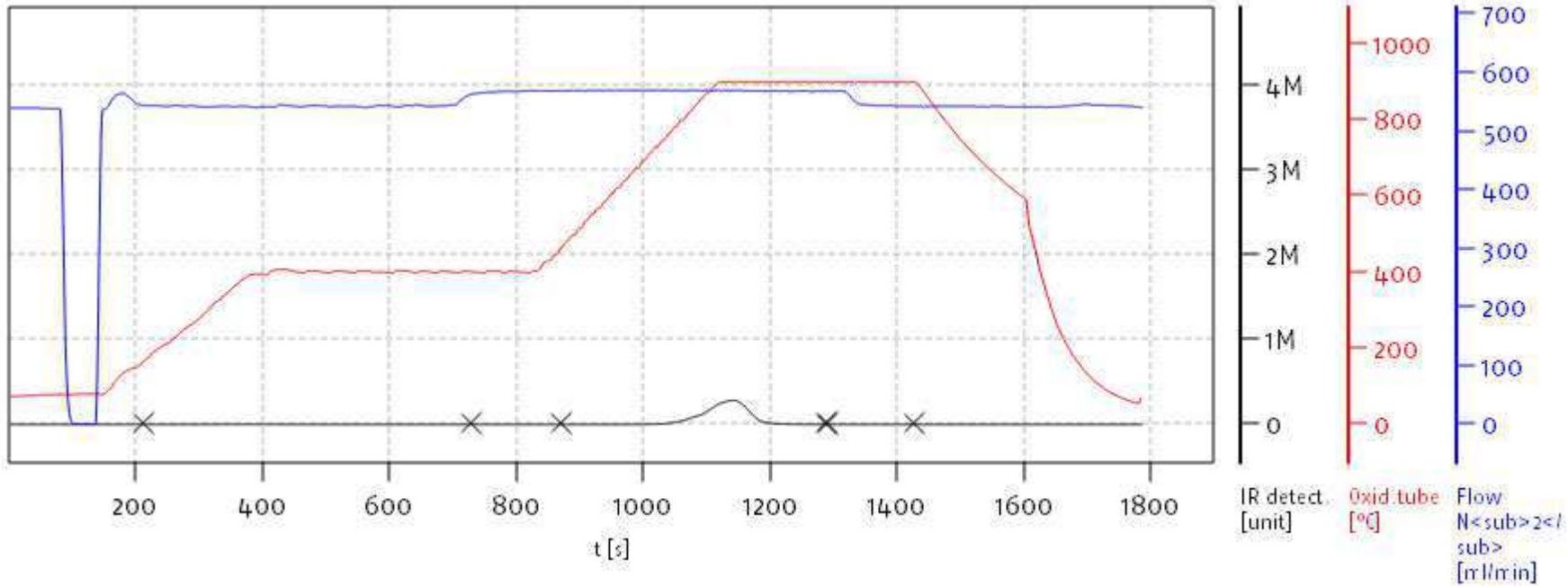
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
16	16	SEQ-CALE	200.00	0.0101	1.00	CARBON	4/26/2022 7:00 PM	0.009	0.600	0.609	bl,C1u,C2u	5 485	839 878	536	1.0000	0.9036



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

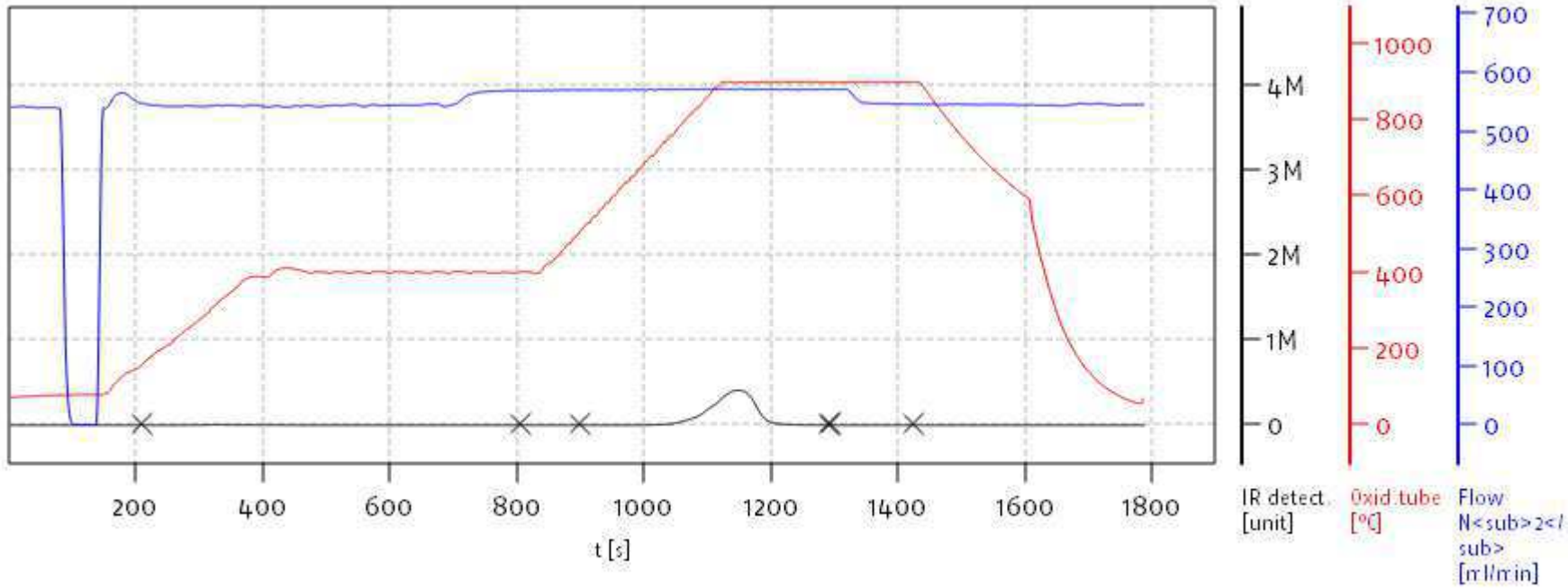
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
17	17	SEQ-CALF	200.00	0.0149	1.00	CARBON	4/26/2022 7:31 PM	0.019	0.906	0.925	bl,C2u	17 439	1 236 200	814	1.0000	0.9279



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

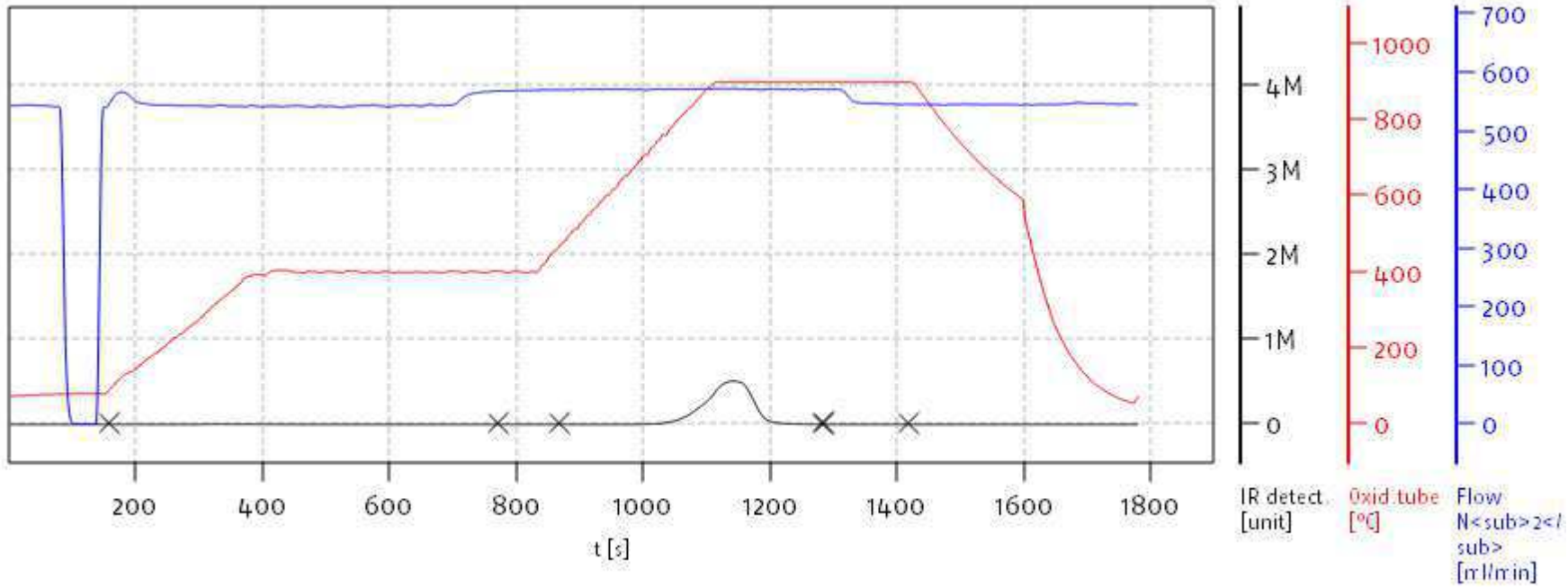
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
18	18	SEQ-CALG	200.00	0.0198	1.00	CARBON	4/26/2022 8:01 PM	0.015	1.206	1.221	bl,C2u	12 557	1 639 190	1 295	1.0000	0.9320



Name:

Access: soliTOC superuser

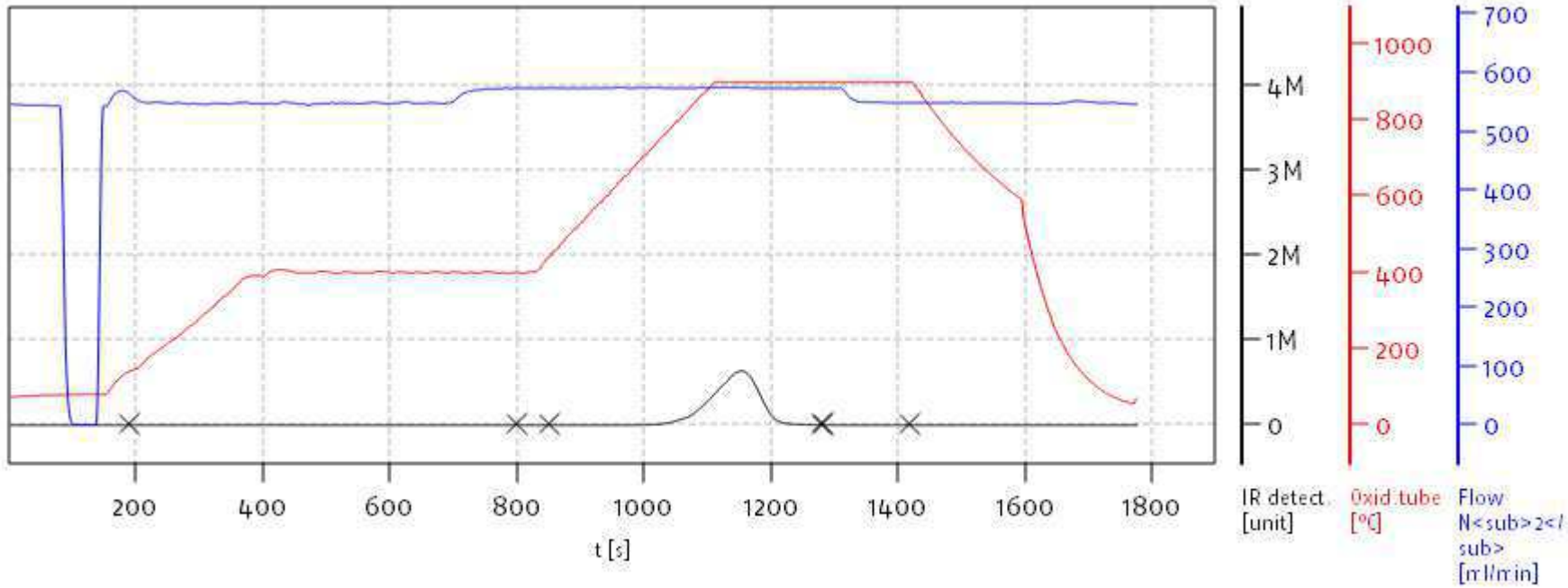
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
19	19	SEQ-CALH	200.00	0.0250	1.00	CARBON	4/26/2022 8:31 PM	0.009	1.524	1.533	bl,C1u,C2u	4 029	2 063 890	2 225	1.0000	0.9357



Name:

Access: soliTOC superuser

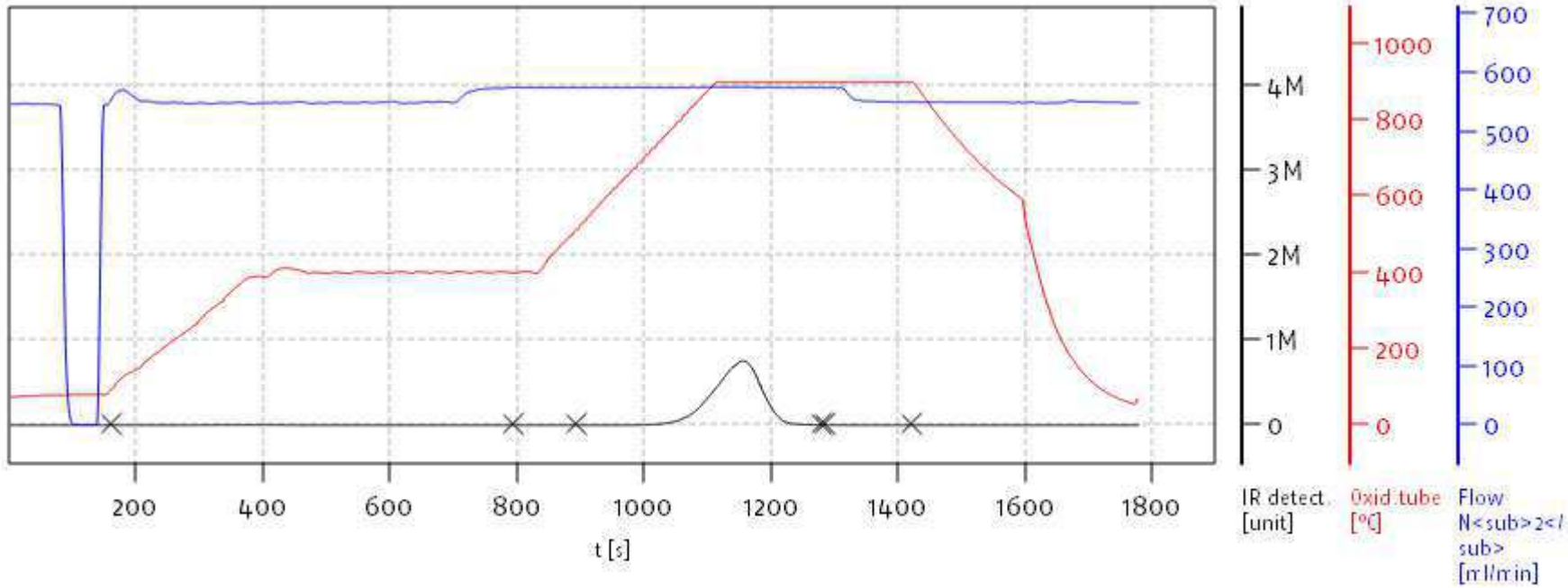
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
20	20	SEQ-CALI	200.00	0.0303	1.00	CARBON	4/26/2022 9:01 PM	0.017	1.800	1.817	bl,C2u	13 926	2 495 900	2 903	1.0000	0.9140



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Access: soliTOC superuser

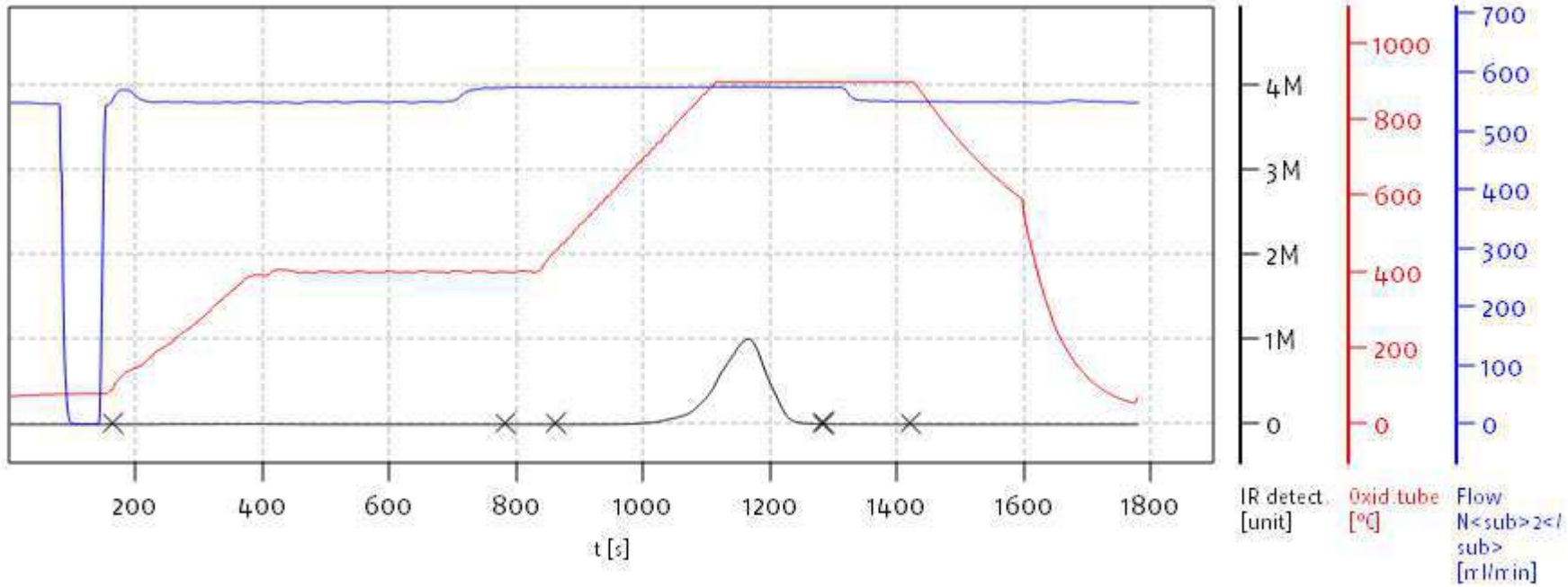
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
21	21	SEQ-CALJ	200.00	0.0415	1.00	CARBON	4/26/2022 9:31 PM	0.031	2.400	2.431	bl,C2u	28 786	3 482 530	5 351	1.0000	0.8737



Name:

Access: soliTOC superuser

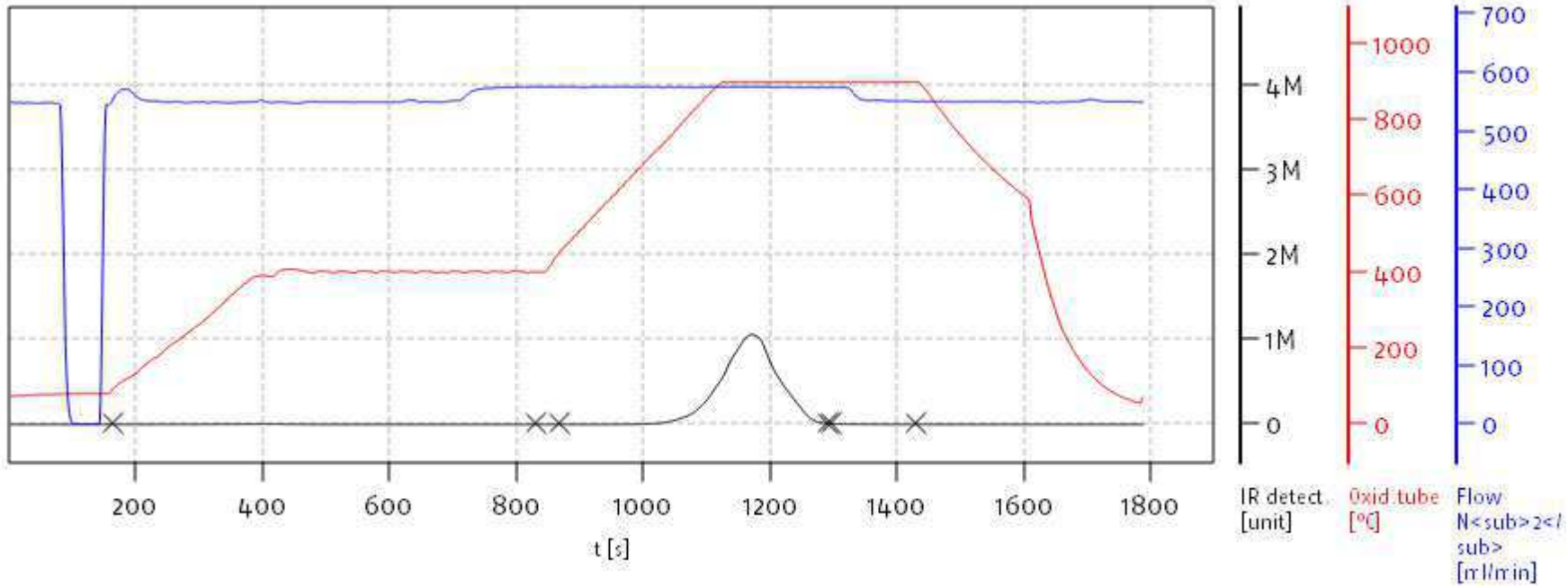
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
22	22	SEQ-CALK	200.00	0.0497	1.00	CARBON	4/26/2022 10:01 PM	0.031	3.012	3.043	bl	23 732	4 105 830	9 736	1.0000	0.9301



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soliTOC V2.0.2 (31015f9) 2018-11-19
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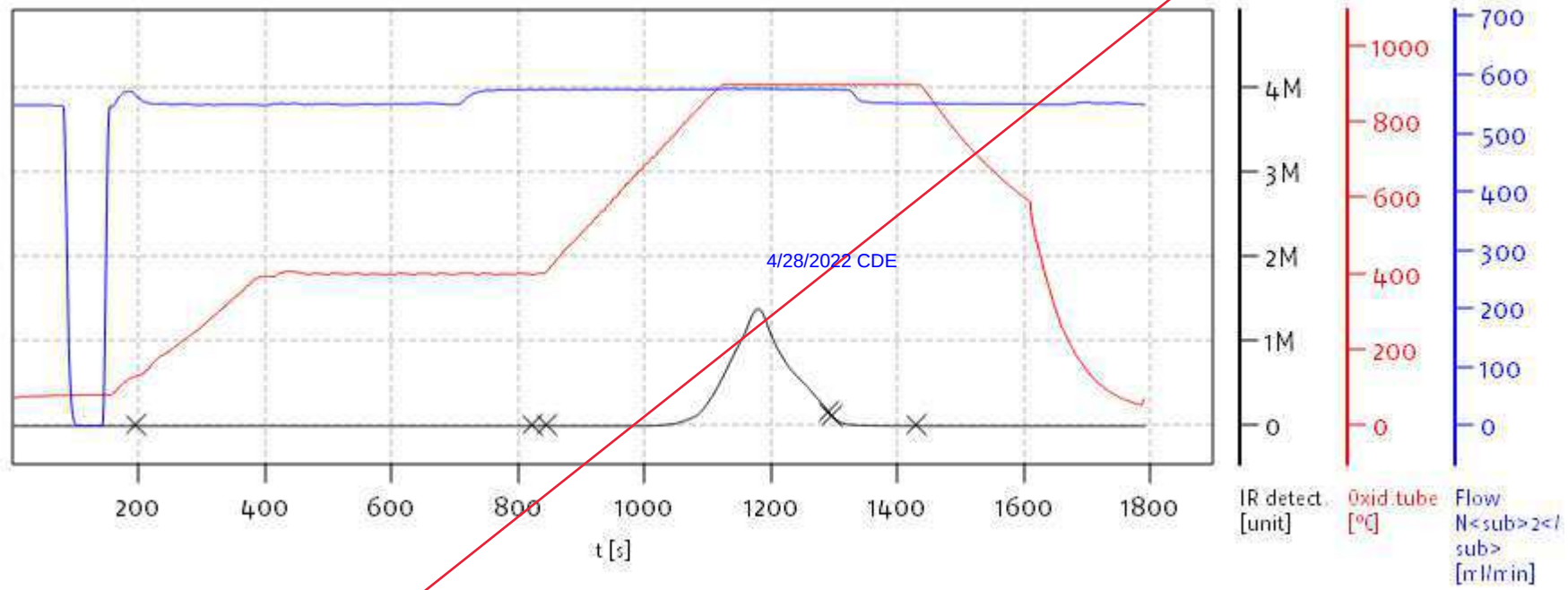
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
23	23	SEQ-CALL	200.00	0.0698	1.00	CARBON	4/26/2022 10:31 PM	0.005	3.805	3.810	bl,C1u	3 605	5 648 620	71 970	1.0000	0.9443



Name:

Access: soliTOC superuser

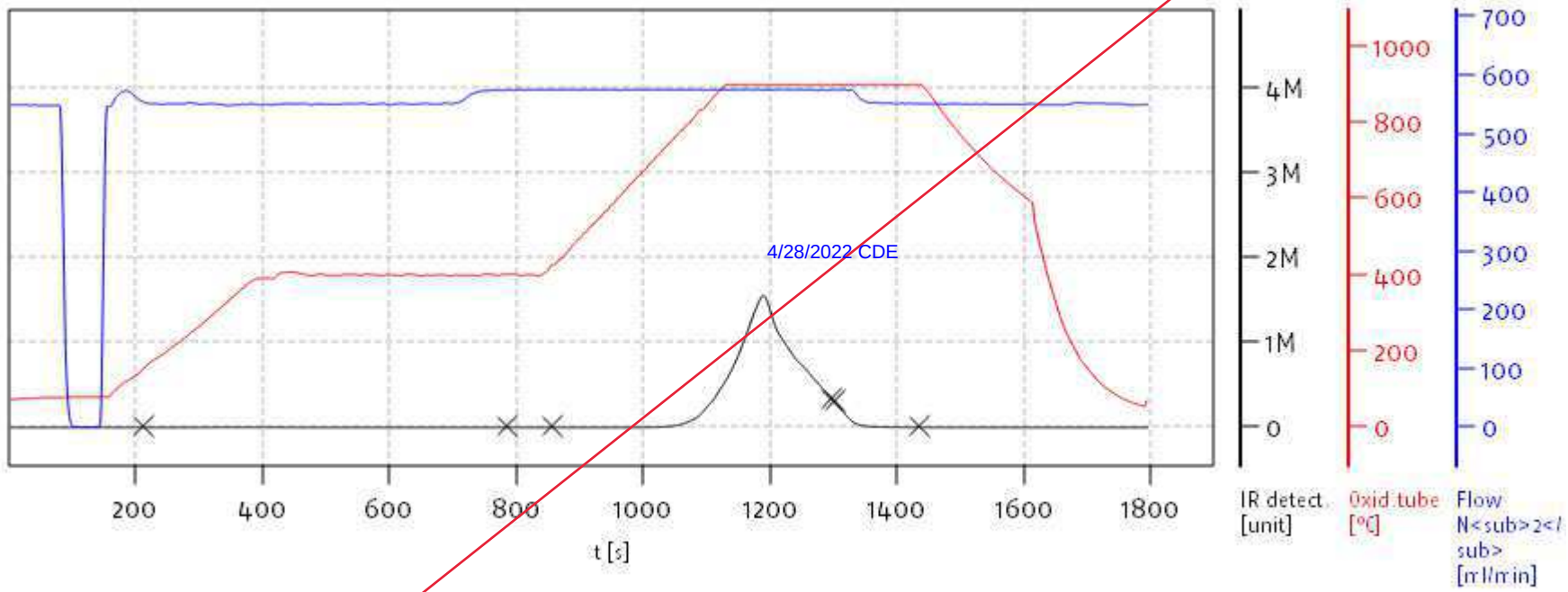
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
24	24	SEQ-CALM	200.00	0.0803	1.00	CARBON	4/26/2022 11:02 PM	0.010	4.637	4.647	bl	10 023	6 397 530	228 171	1.0000	0.9539



Name:

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soliTOC V2.0.2 (31015f9) 2018-11-19
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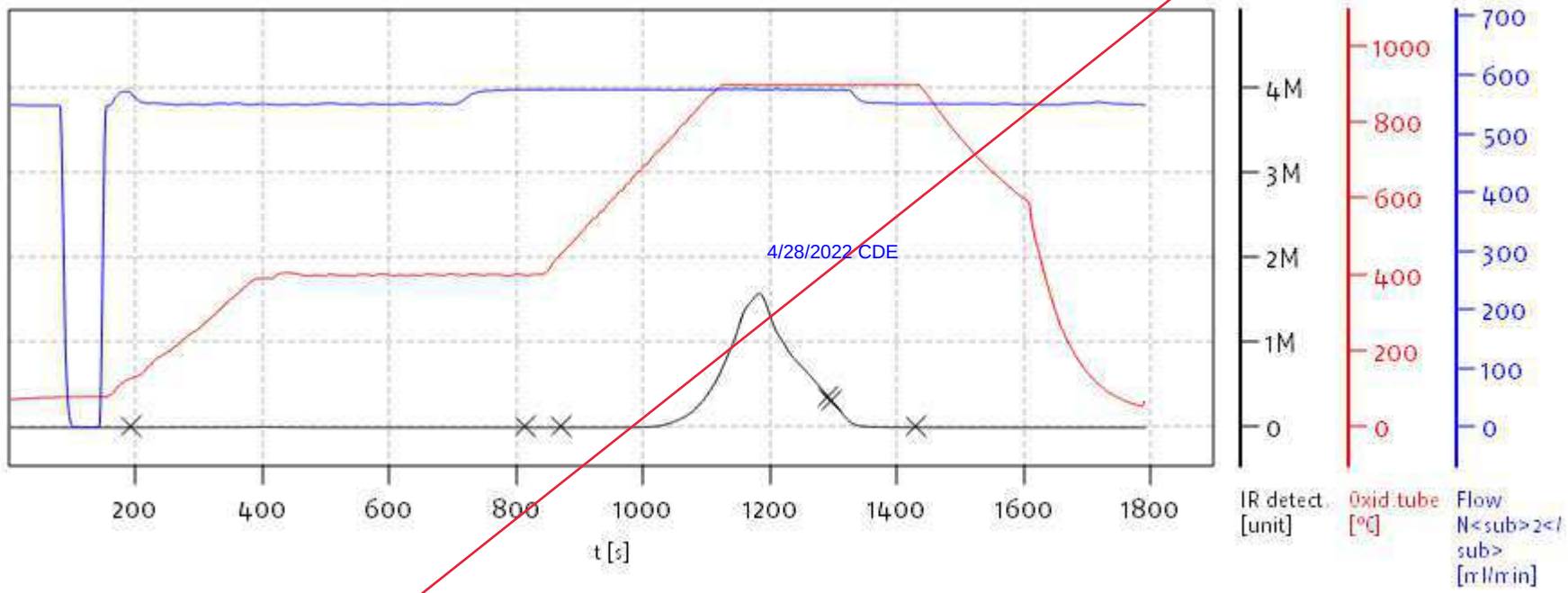
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
25	25	SEQ-CALN	200.00	0.0901	1.00	CARBON	4/26/2022 11:32 PM	0.020	5.219	5.239	bl	23 354	7 186 580	239 986	1.0000	0.9540



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soliTOC V2.0.2 (31015f9) 2018-11-19
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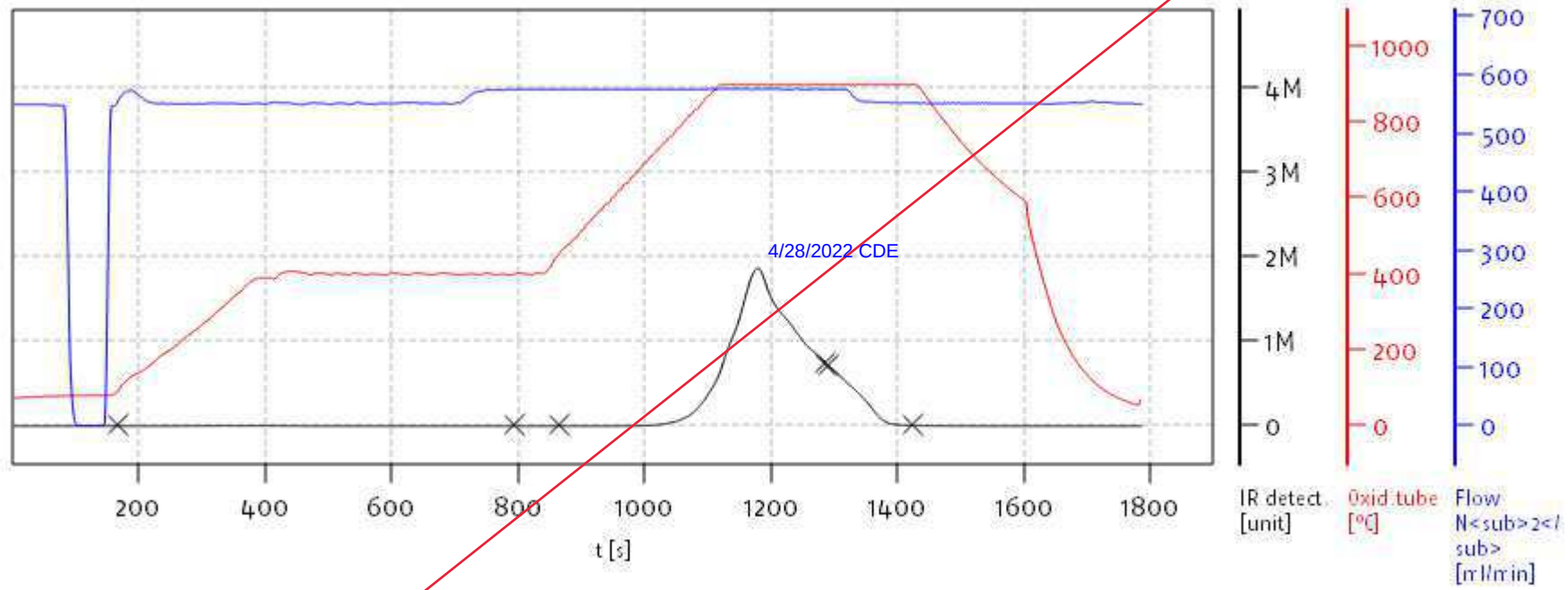
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
26	26	SEQ-CALO	200.00	0.1200	1.00	CARBON	4/27/2022 12:02 AM	0.019	7.915	7.934	bl,C3o	21 248	8 544 610	1 334 580	1.0000	1.0714



Name:

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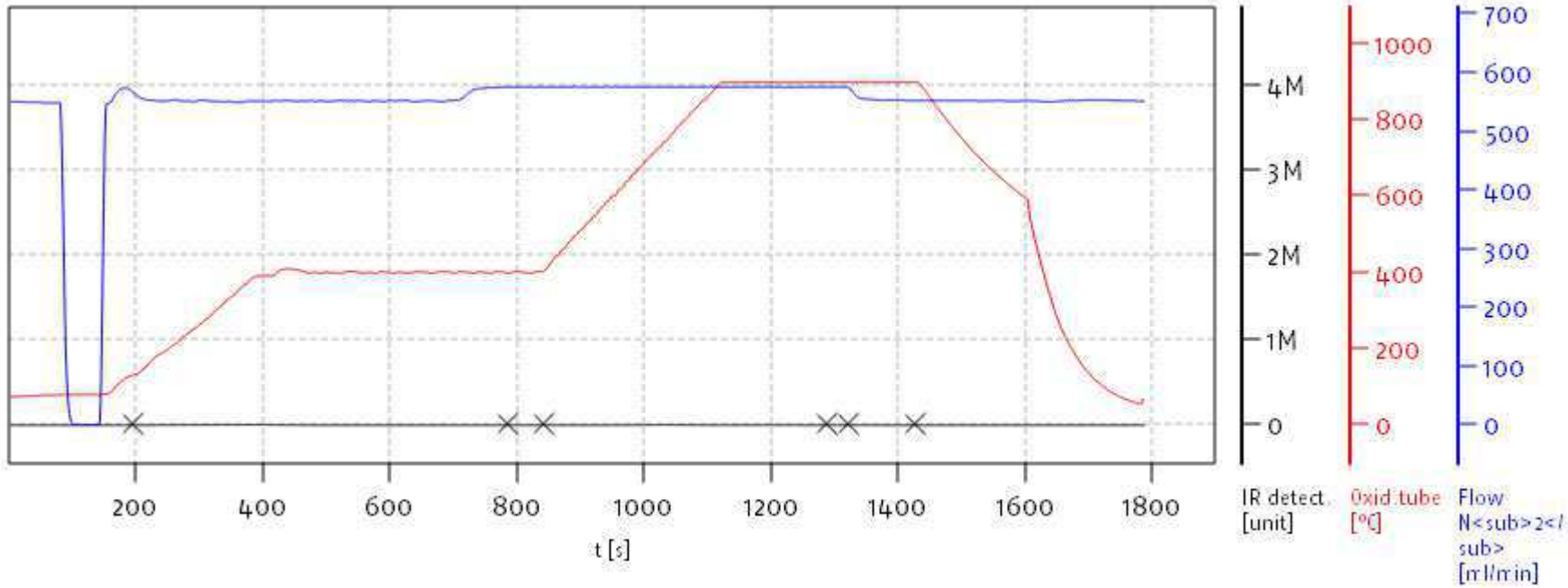
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
27	27	BLANK	1.00		1.00	CARBON	4/27/2022 12:32 AM	0.000	0.000	0.000	bl	29 766	19 596	1 205	1.0000	0.9007



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Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

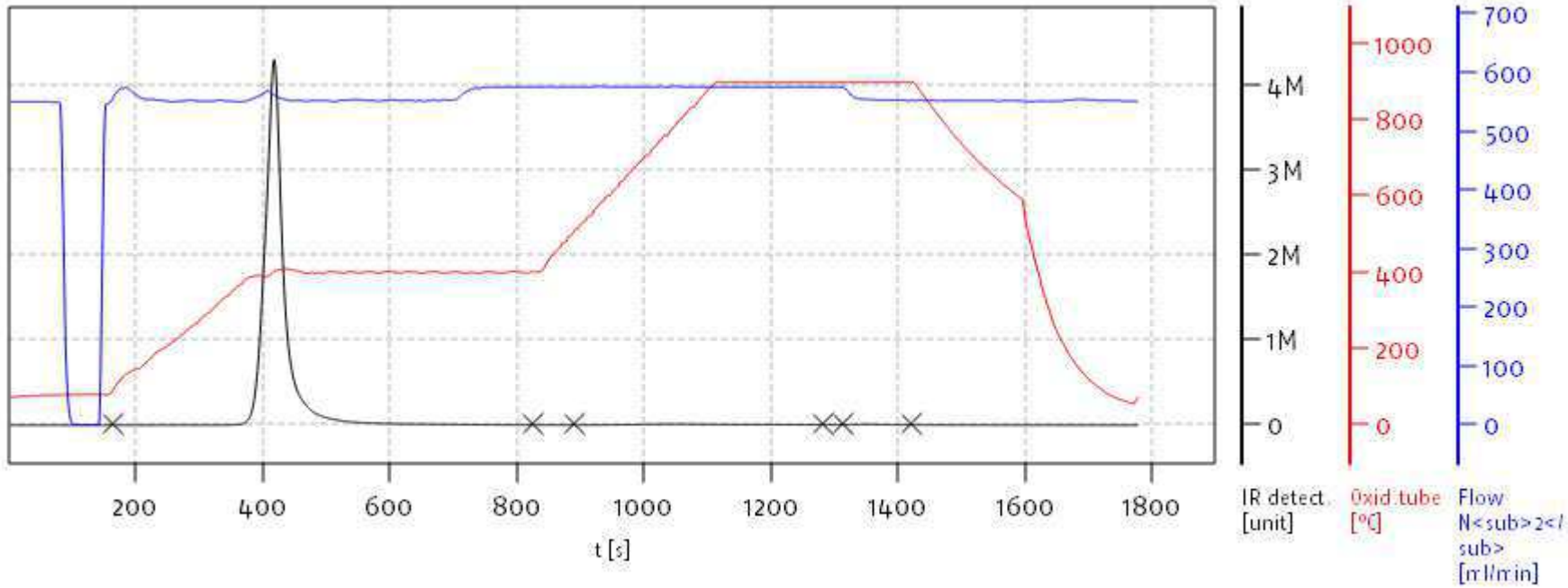
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
28	28	Dfactor	19.00		1.00	CARBON	4/27/2022 1:02 AM	44.678	0.893	45.571	bl	5 588 680	104 999	25 384	0.9581	1.0000



Name:

Access: soliTOC superuser

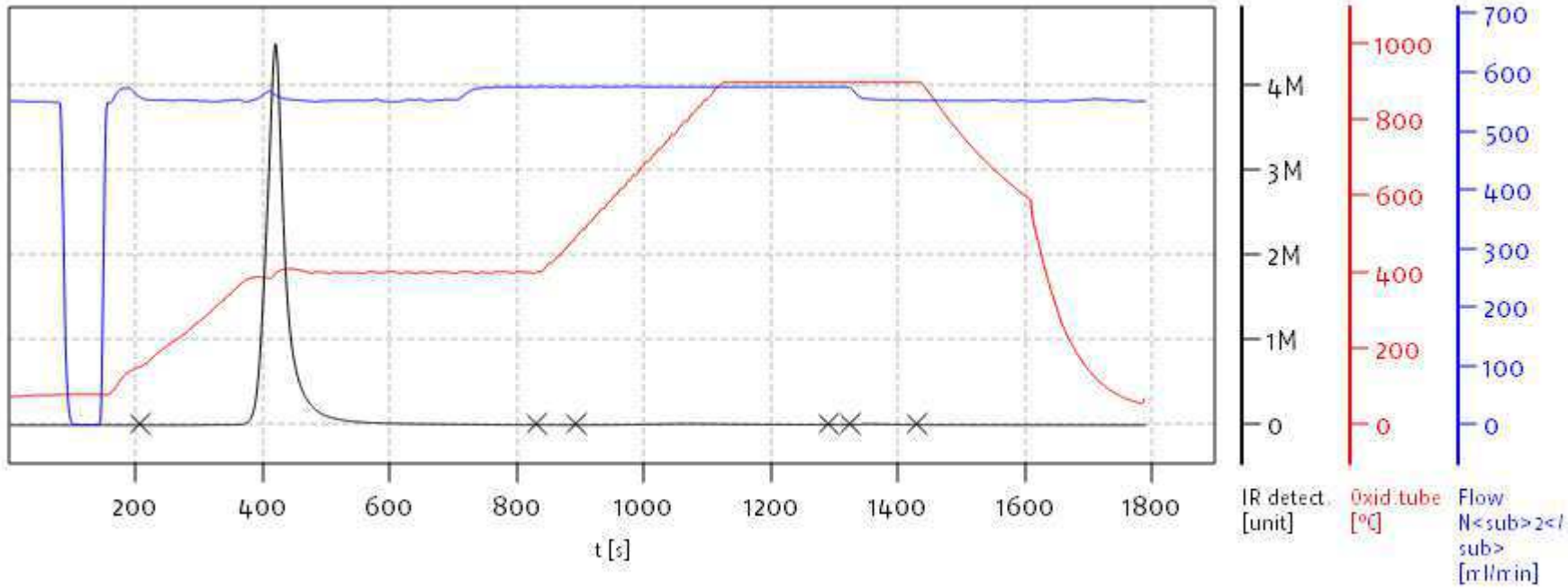
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
29	29	Dfactor	20.80		1.00	CARBON	4/27/2022 1:32 AM	44.694	0.937	45.631	bl	6 076 750	120 961	30 224	0.9647	1.0000



Name:

Access: soliTOC superuser

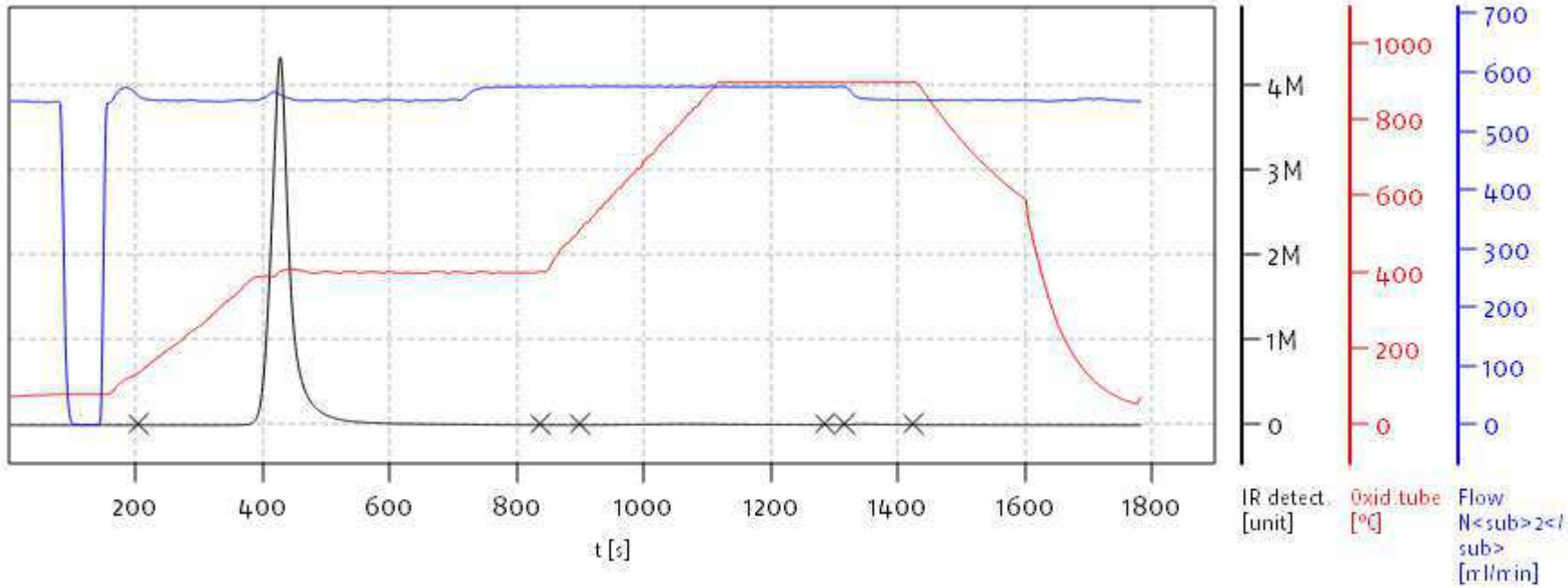
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
30	30	SEQ-ICV1	19.40		1.00	CARBON	4/27/2022 2:03 AM	44.964	0.742	45.706	bl	5 722 450	98 735	27 054	0.9614	0.9007



Name:

Access: soliTOC superuser

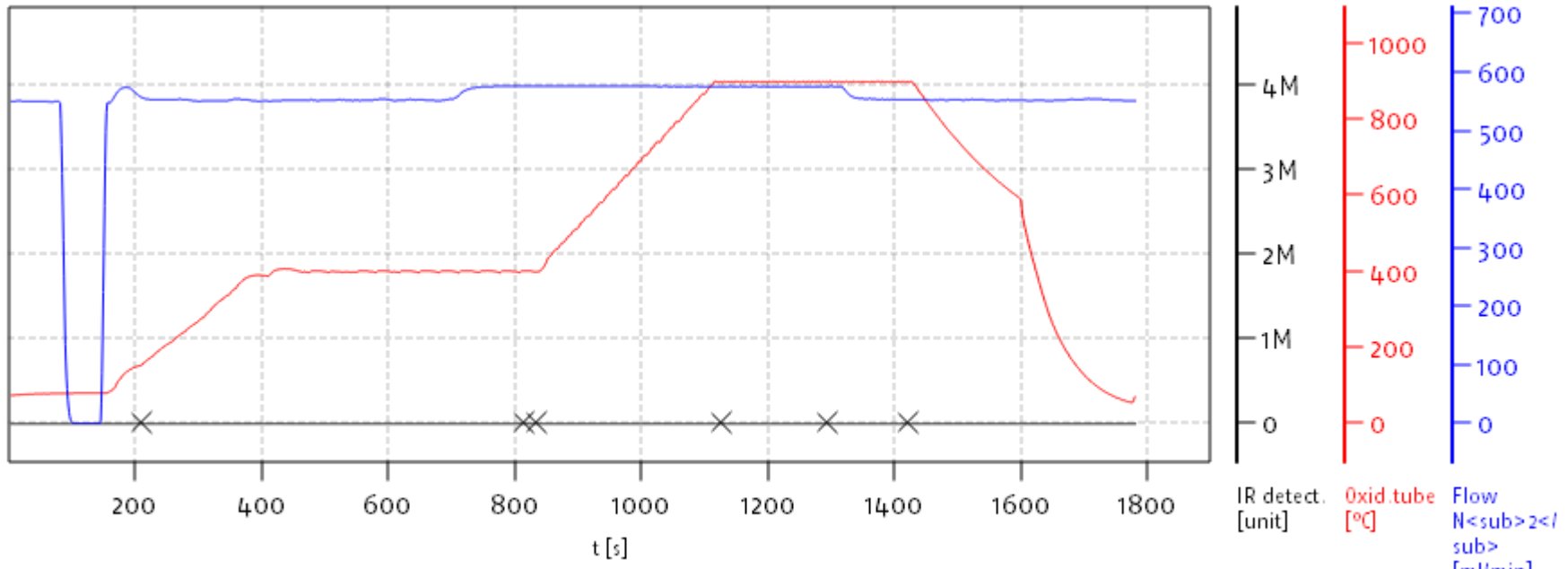
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
31	31	SEQ-ICB1	501.10		1.00	CARBON	4/27/2022 2:33 AM	0.002	0.001	0.003	bl,C1u,C3u,C2u	2 158	225	165	0.9614	0.9007



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

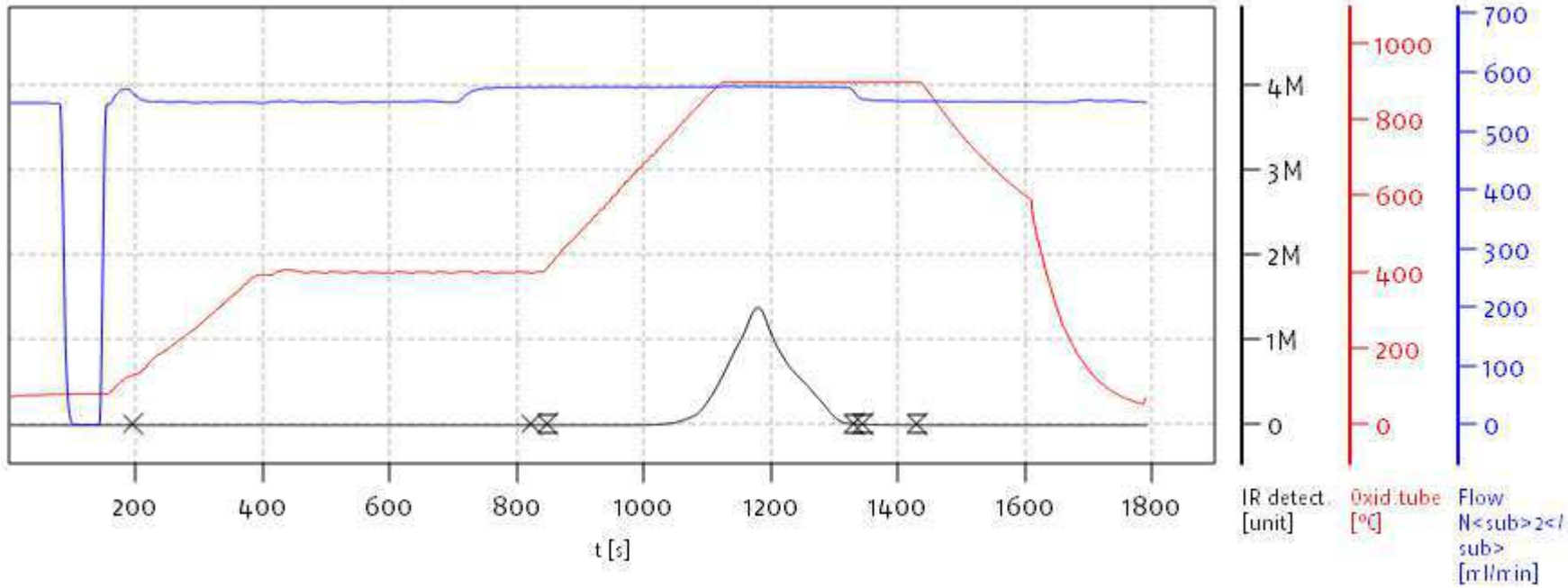
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
23	23	SEQ-CALL	200.00	0.0698	1.00	CARBON	4/27/2022 11:08 AM	0.005	3.917	3.922	bl,C1u	3 605	**5 260 365**	**0**	1.0000	0.9443



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:10:16 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

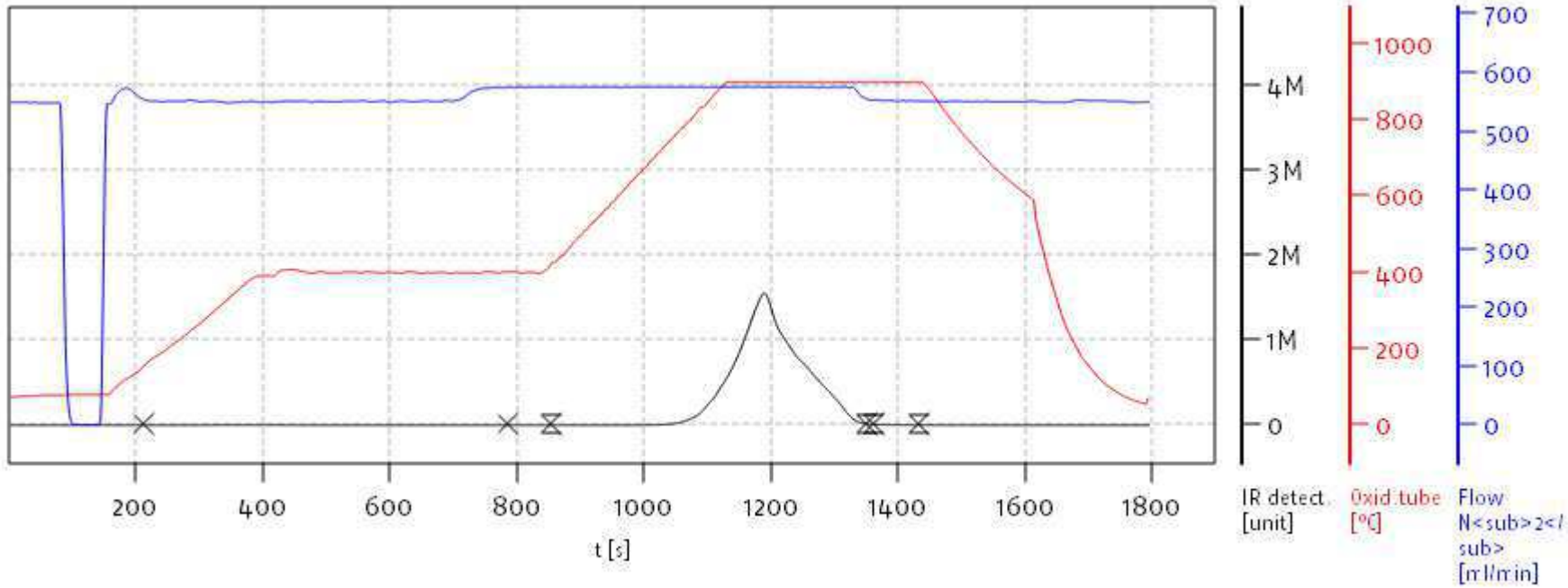
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
24	24	SEQ-CALM	200.00	0.0803	1.00	CARBON	4/27/2022 11:08 AM	0.010	4.637	4.647	bl	10 023	**6 164 833**	**0**	1.0000	0.9539



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:10:16 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

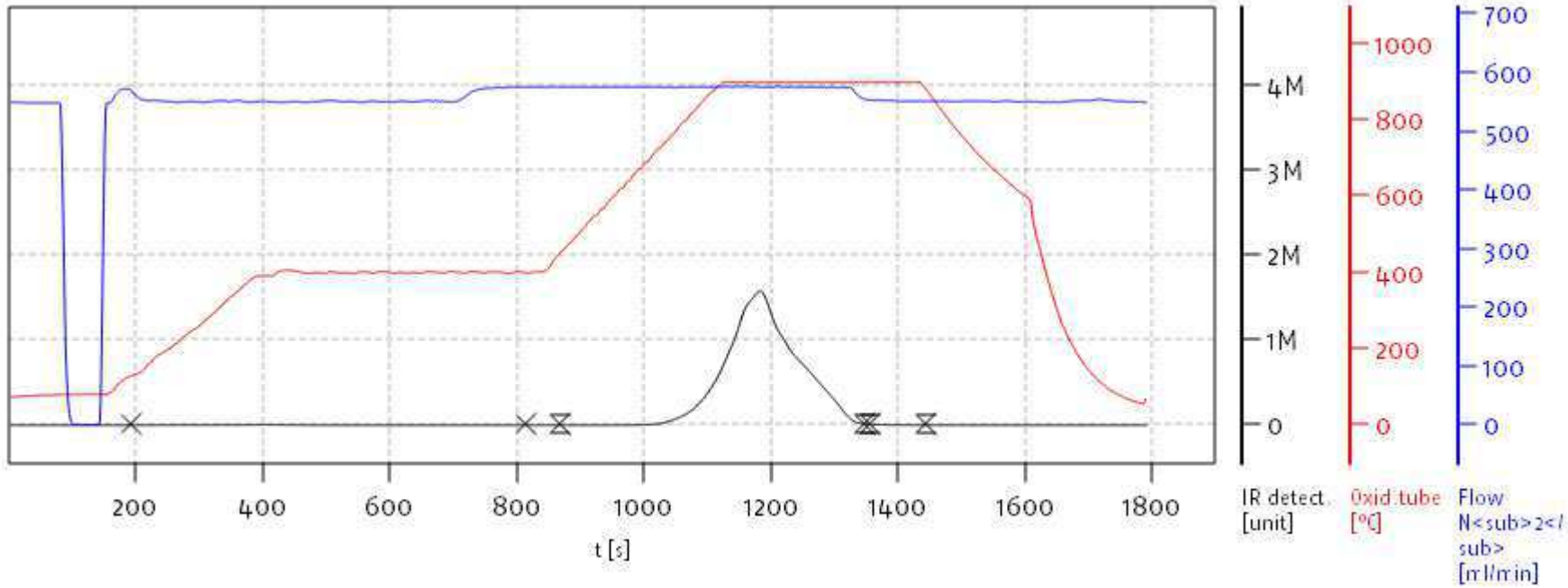
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
25	25	SEQ-CALN	200.00	0.0901	1.00	CARBON	4/27/2022 11:09 AM	0.020	5.219	5.239	bl	23 354	**6 937 833**	**0**	1.0000	0.9540



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:10:16 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

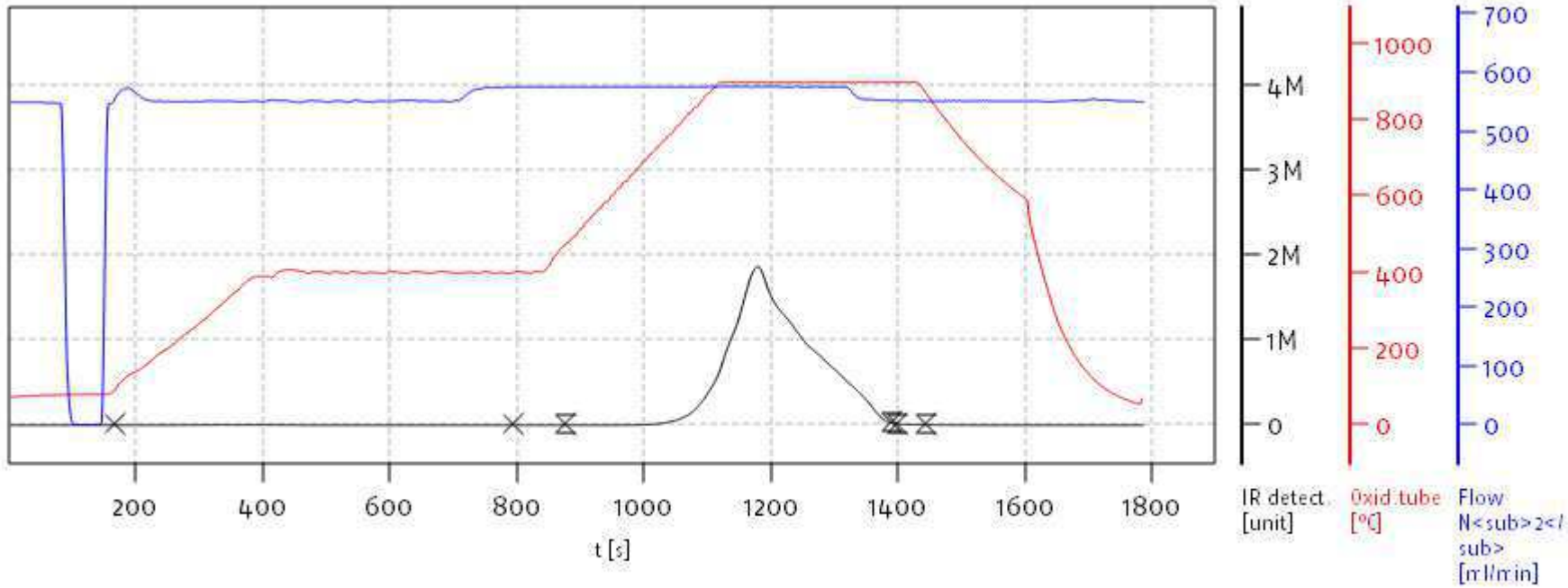
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
26	26	SEQ-CALO	200.00	0.1200	1.00	CARBON	4/27/2022 11:09 AM	0.019	7.915	7.934	bl,C3o	21 248	9 370 139	0	1.0000	1.0714



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:10:16 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

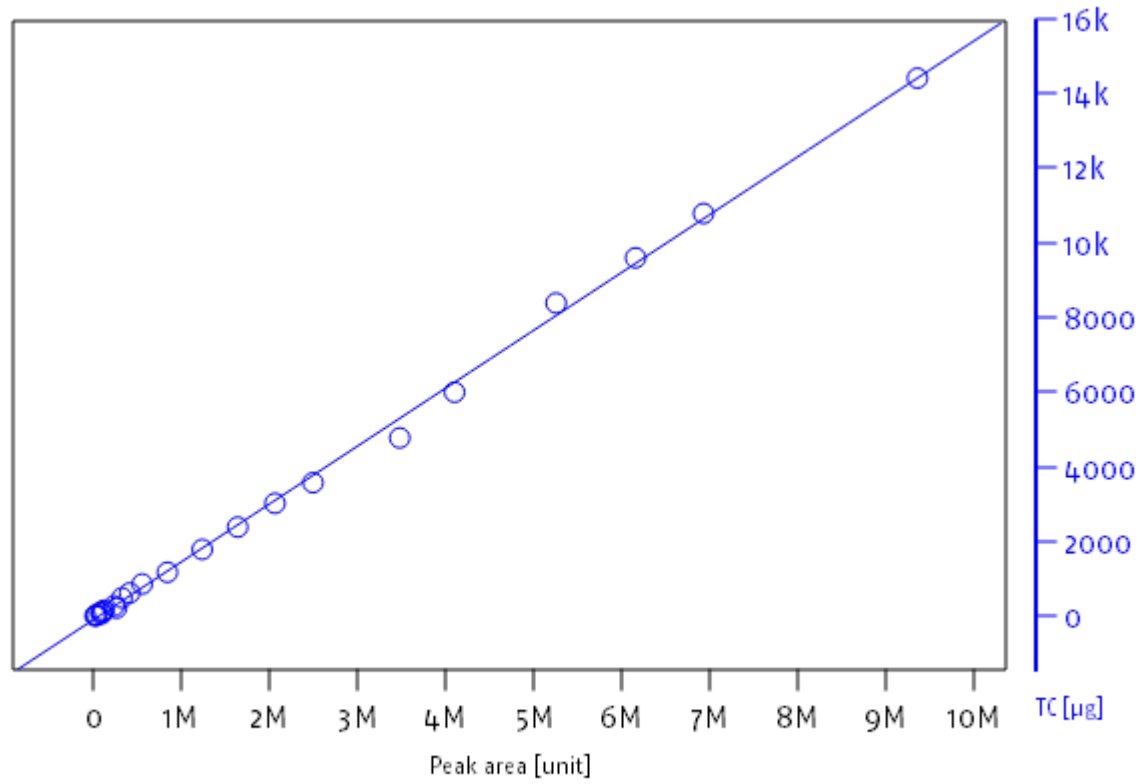
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Calibration parameters TC, Whole range

a	-4.107546e-02
b	+1.548032e-06
c	+0.000000e+00
d	+0.000000e+00
e	+0.000000e+00
r	0.998372
r_old	0.998372
Proc.-SD	166.070255 µg

Calibration graph TC, Whole range



INSTRUMENT BLANKS
EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: FD00070
Sequence: SKD0371
Date Analyzed: 04/27/22 02:33

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SKD0371-ICB1	Total Organic Carbon	0.00	0.02	0.02	%	

INSTRUMENT BLANKS
EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: FD00070
Sequence: SKL0152
Date Analyzed: 12/12/22 11:15

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SKL0152-ICB1	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0152-CCB1	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0152-CCB2	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0152-CCB3	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0152-CCB4	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0152-CCB5	Total Organic Carbon	0.003	0.02	0.02	%	
SKL0152-CCB6	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0152-CCB7	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0152-CCB8	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0152-CCB9	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0152-CCBA	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0152-CCBB	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0152-CCBC	Total Organic Carbon	0.002	0.02	0.02	%	
SKL0152-CCBD	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0152-CCBE	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0152-CCBF	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0152-CCBG	Total Organic Carbon	0.00	0.02	0.02	%	

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: FD00070
Control Limt: +/- 10.00%
Sequence: SKD0371

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SKD0371-ICV1	Total Organic Carbon	44.446	43.7	98.3	%	EPA 9060A m
	Total Carbon	44.446	44.1	99.2	%	EPA 9060A m
	Total Inorganic Carbon	0.0000	0.40		%	EPA 9060A m
	% Soot	0.0000	0.004		%	EPA 9060A m

* Values outside of QC limits

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: FD00070
Control Limt: +/- 10.00%
Sequence: SKL0152

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SKL0152-ICV1	Total Organic Carbon	44.446	45.0	101	%	EPA 9060A m
SKL0152-CCV1	Total Organic Carbon	44.446	44.8	101	%	EPA 9060A m
SKL0152-CCV2	Total Organic Carbon	44.446	44.6	100	%	EPA 9060A m
SKL0152-CCV3	Total Organic Carbon	44.446	44.1	99.1	%	EPA 9060A m
SKL0152-CCV4	Total Organic Carbon	44.446	43.0	96.8	%	EPA 9060A m
SKL0152-CCV5	Total Organic Carbon	44.446	43.0	96.7	%	EPA 9060A m
SKL0152-CCV6	Total Organic Carbon	44.446	44.5	100	%	EPA 9060A m
SKL0152-CCV7	Total Organic Carbon	44.446	43.1	97.1	%	EPA 9060A m
SKL0152-CCV8	Total Organic Carbon	44.446	45.2	102	%	EPA 9060A m
SKL0152-CCV9	Total Organic Carbon	44.446	45.0	101	%	EPA 9060A m
SKL0152-CCVA	Total Organic Carbon	44.446	44.9	101	%	EPA 9060A m
SKL0152-CCVB	Total Organic Carbon	44.446	44.8	101	%	EPA 9060A m
SKL0152-CCVC	Total Organic Carbon	44.446	45.1	101	%	EPA 9060A m
SKL0152-CCVD	Total Organic Carbon	44.446	44.0	99.0	%	EPA 9060A m
SKL0152-CCVE	Total Organic Carbon	44.446	45.4	102	%	EPA 9060A m
SKL0152-CCVF	Total Organic Carbon	44.446	45.6	103	%	EPA 9060A m
SKL0152-CCVG	Total Organic Carbon	44.446	45.1	101	%	EPA 9060A m

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BKL0237-SRM1
Batch: BKL0237
Initial/Final: 0.2934 g / 0.2934 g
Preparation: Plumb 1981
Analyzed: 12/12/2022 13:16
Standard ID: K003456
Expires: 12/12/2079
Standard Lot#: NA
Description: 1941B - Organics in Marine Sediment (Conv

ANALYTE	TRUE (% wet)	FOUND (% wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Total Organic Carbon	2.9900	2.97	0.02	0.02		99.2	80 - 120

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1253 22L0198-01	12/08/22 08:16	12/08/22 17:18	12/10/22 10:00	2	14	12/12/22 19:20			
LDW23-SS1254 22L0198-02	12/08/22 08:39	12/08/22 17:18	12/10/22 10:00	2	14	12/12/22 20:51			
LDW23-SS1255 22L0198-03	12/08/22 08:57	12/08/22 17:18	12/10/22 10:00	2	14	12/12/22 21:21			
LDW23-SS1257 22L0198-04	12/08/22 09:16	12/08/22 17:18	12/10/22 10:00	2	14	12/12/22 21:52			
LDW23-SS1258 22L0198-05	12/08/22 09:35	12/08/22 17:18	12/10/22 10:00	2	14	12/12/22 22:22			
LDW23-SS1259 22L0198-06	12/08/22 09:54	12/08/22 17:18	12/10/22 10:00	2	14	12/12/22 23:53			
LDW23-SS1262 22L0198-07	12/08/22 10:36	12/08/22 17:18	12/10/22 10:00	1	14	12/13/22 00:24			
LDW23-SS1260 22L0198-08	12/08/22 10:12	12/08/22 17:18	12/10/22 10:00	1	14	12/13/22 00:54			
LDW23-SS1263 22L0198-09	12/08/22 10:54	12/08/22 17:18	12/10/22 10:00	1	14	12/13/22 01:25			
LDW23-SS1245 22L0198-10	12/08/22 11:14	12/08/22 17:18	12/10/22 10:00	1	14	12/13/22 01:55			
Duplicate BKL0237-DUP3	12/08/22 08:16	12/08/22 17:18	12/10/22 10:00	2	14	12/12/22 19:50			
Matrix Spike BKL0237-MS3	12/08/22 08:16	12/08/22 17:18	12/10/22 10:00	2	14	12/12/22 20:21			

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: TOC Cube

Analyte	MDL	RL	Units
Total Organic Carbon	0.02	0.02	%

National Institute of Standards & Technology

Certificate of Analysis

Standard Reference Material® 1941b

Organics in Marine Sediment

This Standard Reference Material (SRM) is marine sediment collected at the mouth of the Baltimore (MD) Harbor. SRM 1941b is intended for use in evaluating analytical methods for the determination of selected polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and chlorinated pesticides in marine sediment and similar matrices. Information values are also provided for total organic carbon (TOC), total carbon, hydrogen, and nitrogen. All of the constituents for which certified, reference, and information values are provided in SRM 1941b were naturally present in the sediment before processing. A unit of SRM 1941b consists of a bottle containing 50 g of radiation-sterilized, freeze-dried sediment.

Certified Mass Fraction Values: Certified mass fraction values for PAHs, PCB congeners, and chlorinated pesticides are provided in Table 1 through Table 3. The certified values for the PAHs, PCB congeners, and chlorinated pesticides are based on the agreement of results obtained at NIST from two or more chemically independent analytical techniques along with results from an interlaboratory comparison study [1]. A NIST certified value is a value for which NIST has the highest confidence in its accuracy in that all known or suspected sources of bias have been investigated or taken into account [1].

Reference Mass Fraction Values: Reference mass fraction values for additional PAHs (some in combination), additional PCB congeners, and additional chlorinated pesticides are provided in Table 4 through Table 7. Reference values for alkylated PAH groups are provided in Table 8 and for selected hopanes and steranes in Table 9. A reference value for total organic carbon is provided in Table 10. Reference values are noncertified values that are the best estimate of the true value; however, the values do not meet the NIST criteria for certification and are provided with associated uncertainties that may reflect only measurement precision, may not include all sources of uncertainty, or may reflect a lack of sufficient statistical agreement among multiple analytical methods [1].

Information Mass Fraction Values: Information mass fraction values are provided in Table 11 for carbon, hydrogen, and nitrogen. An information value is considered to be a value that will be of use to the SRM user, but insufficient information is available to assess the uncertainty associated with the value [1]. Information values cannot be used to establish metrological traceability.

Expiration of Certification: The certification of **SRM 1941b** is valid, within the measurement uncertainty specified, until **01 October 2020**, provided the SRM is handled and stored in accordance with the instructions given in this certificate (see "Instructions for Handling, Storage, and Use"). This certification is nullified if the SRM is damaged, contaminated, or otherwise modified.

Maintenance of SRM Certification: NIST will monitor this SRM over the period of its certification. If substantive technical changes occur that affect the certification before the expiration of this certificate, NIST will notify the purchaser. Registration (see attached sheet or register online) will facilitate notification.

Coordination of the technical measurements leading to the certification of this material was under the leadership of M.M. Schantz and S.A. Wise of the NIST Chemical Sciences Division.

Analytical measurements for the certification of SRM 1941b were performed at NIST by J.R. Kucklick, B.J. Porter, D.L. Poster, M.M. Schantz, P. Schubert, S. Tutschku, and L.L. Yu of the NIST Chemical Sciences Division.

Carlos A. Gonzalez, Chief
Chemical Sciences Division

Gaithersburg, MD 20899
Certificate Issue Date: 16 January 2015

Robert L. Watters, Jr., Director
Office of Reference Materials

Measurements for TOC were provided by a commercial laboratory and T.L. Wade of the Geochemical and Environmental Research Group, Texas A&M University (College Station, TX). The carbon, hydrogen, and nitrogen data were provided by a commercial laboratory. Results for the PAHs, PCBs, and chlorinated pesticides from 38 laboratories (see Appendix A) that participated in an interlaboratory comparison exercise coordinated by NIST were used. Results for the alkylated PAH groups, hopanes, and steranes from 33 laboratories (see Appendix B) that participated in another interlaboratory comparison exercise coordinated by NIST were also used.

Collection and preparation of SRM 1941b were performed by M.P. Cronise and C.N. Fales of the NIST Office of Reference Materials and B.J. Porter and M.M. Schantz of the NIST Chemical Sciences Division. The sediment material was collected with the assistance of G.G. Lauenstein, J. Collier, and J. Lewis (National Oceanic and Atmospheric Administration, Silver Spring, MD).

Consultation on the statistical design of the experimental work and evaluation of the data were provided by S.D. Leigh and J.H. Yen of the NIST Statistical Engineering Division.

Support aspects involved in the issuance of this SRM were coordinated through the NIST Office of Reference Materials.

INSTRUCTIONS FOR HANDLING, STORAGE, AND USE

Handling: This material is naturally occurring marine sediment from an urban area and may contain constituents of unknown toxicities; therefore, caution and care should be exercised during its handling and use.

Storage: SRM 1941b must be stored in its original bottle at temperatures less than 30 °C and away from direct sunlight.

Use: Prior to removal of subsamples for analysis, the contents of the bottle should be mixed. The mass fractions of constituents in SRM 1941b are reported on a dry-mass basis. The SRM, as received, contains a mass fraction of approximately 2.4 % moisture (see "Conversion to Dry-Mass Basis"). The sediment sample should be dried to a constant mass before weighing for analysis; or a separate subsample of the sediment should be removed from the bottle at the time of analysis and dried to determine the mass fraction on a dry-mass basis. If the constituents of interest are volatile, then the moisture must be determined with a separate subsample.

PREPARATION AND ANALYSIS[1]

Sample Collection and Preparation: The sediment used to prepare this SRM was collected from the Chesapeake Bay at the mouth of the Baltimore (MD) Harbor near the Francis Scott Key Bridge (39°12.3'N and 76°31.4'W). This location is very near the site where SRM 1941 and SRM 1941a were collected. The sediment was collected using a Kynar-coated modified Van Veen-type grab sampler. A total of approximately 3300 kg of wet sediment was collected from the site. The sediment was freeze-dried, sieved at 150 μm (100 % passing), homogenized in a cone blender, radiation sterilized (^{60}Co), and then packaged in screw-capped amber glass bottles each containing approximately 50 g.

Conversion to Dry-Mass Basis: The results for the constituents in SRM 1941b are reported on a dry-mass basis; however, the material "as received" contains residual moisture. The amount of moisture in SRM 1941b was determined by measuring the mass loss after freeze-drying subsamples of 1.1 g to 1.3 g for four days at 1 Pa with a –10 °C shelf temperature and a –50 °C condenser temperature. The moisture content in SRM 1941b at the time of the certification analyses was 2.39 % ± 0.08 % (95 % confidence level). Analytical results for the organic constituents were determined on an as-received basis and then converted to a dry-mass basis by dividing by the conversion factor of 0.9761 (gram dry mass per gram as-received mass).

Polycyclic Aromatic Hydrocarbons: The general approach used for the value assignment of the PAHs in SRM 1941b was similar to that reported in detail elsewhere [2]. The approach consisted of combining results from analyses using various combinations of different extraction techniques and solvents, clean-up/isolation procedures, and chromatographic separation and detection techniques: Soxhlet extraction and pressurized-fluid extraction (PFE) using dichloromethane (DCM) or a hexane/acetone mixture, cleanup of the extracts using solid-phase extraction (SPE) or normal-phase liquid chromatography (LC), followed by analysis using the following techniques: (1) reversed-phase liquid chromatography with fluorescence detection (LC-FL) analysis of the total PAH fraction, (2) reversed-phase

[1] Certain commercial equipment, instruments or materials are identified in this certificate to adequately specify the

LC-FL analysis of isomeric PAH fractions isolated by normal-phase LC (i.e., multidimensional LC), (3) gas chromatography/mass spectrometry (GC/MS) analysis of the PAH fraction on three stationary phases of different selectivity, i.e., a 5 % (all column compositions are given as mole fractions in %) phenyl-substituted methylpolysiloxane phase, a 50 % phenyl-substituted methylpolysiloxane phase, and a relatively non-polar proprietary phase.

Three sets of GC/MS results, designated as GC/MS (I), GC/MS (II), and GC/MS (III), were obtained using three columns with different selectivities for the separation of PAHs. For GC/MS (I) analyses, duplicate subsamples of approximately 1 g from ten bottles of SRM 1941b were extracted using PFE with DCM. Copper powder was added to the extract to remove elemental sulfur. The concentrated extract was passed through an aminopropyl SPE cartridge and eluted with 2 % DCM in hexane (all solvent concentrations are given as volume fractions in %). The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5 MS, J&W Scientific, Folsom, CA). The GC/MS (II) analyses were performed using 5 g subsamples from six bottles of SRM 1941b. These samples were extracted using PFE with DCM. The high molecular mass compounds were removed from the extracts using size exclusion chromatography (SEC) with a preparative-scale divinylbenzene-polystyrene column (10 μm particle size with 10 nm diameter pores), and the sulfur was removed from the extracts by adding copper powder. The concentrated extract was passed through an aminopropyl SPE cartridge and eluted with 10 % DCM in hexane. The analysis was by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 50 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-17 MS, J&W Scientific). For the GC/MS (III), 9 g subsamples from six bottles of SRM 1941b were Soxhlet-extracted for 18 h with 250 mL of a mixture of 50 % hexane/50 % acetone. Copper powder was added to the extract to remove elemental sulfur, and the concentrated extract was passed through a silica SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a relatively non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific).

Two sets of LC-FL results, designated as LC-FL (total) and LC-FL (isomer), were used in the certification process. For the LC-FL (total), subsamples of approximately 1 g from six bottles of SRM 1941b were extracted using PFE with a mixture of 50 % hexane/50 % acetone. The extracts were concentrated and then processed through an aminopropylsilane SPE cartridge using 2 % DCM in hexane to obtain the total PAH fraction. For the LC-FL (isomer), a 5 g subsample from the six bottles was extracted using PFE with DCM and processed through an aminopropylsilane SPE cartridge using 10 % DCM in hexane; the PAH fraction was then fractionated further on a semi-preparative aminopropylsilane column (μBondapak NH_2, 9 mm i.d. × 30 cm, Waters Associates, Milford, MA) to isolate isomeric PAH fractions as described previously [3–6]. The total PAH fraction and the isomeric PAH fractions were analyzed using a 5 μm particle-size polymeric octadecylsilane (C_{18}) column (4.6 mm i.d. × 25 cm, Hypersil-PAH, Keystone Scientific, Inc., Bellefonte, PA) with wavelength-programmed fluorescence detection [4,5].

For the GC/MS and LC-FL measurements described above, selected perdeuterated PAHs were added to the sediment prior to solvent extraction for use as internal standards for quantification purposes.

In addition to the analyses performed at NIST, SRM 1941b was used in an interlaboratory comparison exercise in 1999 as part of the NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment [7]. Results from 38 laboratories that participated in this exercise were used as the sixth data set in the determination of the certified values for PAHs in SRM 1941b. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest.

Homogeneity Assessment for PAHs: The homogeneity of SRM 1941b was assessed by analyzing duplicate samples of approximately 1 g from ten bottles selected by stratified random sampling. Samples were extracted, processed, and analyzed as described above for GC/MS (I). No statistically significant differences among bottles were observed for the PAHs at this sample size.

PAH Isomers of Molecular Mass 300 and 302: For the determination of the molecular mass 300 and 302 isomers, three subsamples of approximately 5 g each were extracted using PFE with DCM. The extracts were then concentrated with a solvent change to hexane and passed through an aminopropyl SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 50 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-17MS, J&W Scientific). Perdeuterated dibenzo[*a,i*]pyrene was added to the sediment prior to extraction for use as an internal standard [8].

PCBs and Chlorinated Pesticides: The general approach used for the determination of PCBs and chlorinated pesticides in SRM 1941b consisted of combining results from analyses using various combinations of different extraction techniques and solvents, cleanup/isolation procedures, and chromatographic separation and detection techniques. Techniques and solvents included Soxhlet extraction and PFE using DCM or a hexane/acetone mixture;

clean-up/isolation using SPE or LC, followed by analysis using GC/MS and gas chromatography with electron capture detection (GC-ECD) on two columns with different selectivity for the separation of PCBs and chlorinated pesticides. The analytical methods are described in detail elsewhere [2].

Six sets of results were obtained and designated as GC-ECD (I) A and B, GC/MS (I) A and B, GC/MS (II), and Interlaboratory Comparison Exercise. For the GC-ECD (I) analyses, approximately 10 g subsamples from six bottles of SRM 1941b were extracted using PFE with DCM. Copper powder was added to the extract to remove elemental sulfur, and SEC, as described above, was used to remove the high molecular mass compounds. The concentrated extract was then fractionated on a semi-preparative aminopropylsilane column to isolate two fractions containing: (1) the PCBs and lower-polarity pesticides and (2) the more polar pesticides. GC-ECD analyses of the two fractions were performed on two columns of different selectivities for PCB separations: 0.25 mm × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5, J&W Scientific), and a 0.25 mm × 60 m fused silica capillary column with a non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific). The results from the 5 % phenyl phase are designated as GC-ECD (IA) and the results from the proprietary phase are designated as GC-ECD (IB). For the GC-ECD analyses, two PCB congeners that are not significantly present in the sediment extract (PCB 103 and PCB 198 [9,10]) and endosulfan I-d_4, 4,4'-DDE-d_8, 4,4'-DD-d_8, and 4,4'-DDT-d_8 were added to the sediment prior to extraction for use as internal standards for quantification purposes.

Two sets of results were obtained by GC/MS. For GC/MS (I), approximately 9 g subsamples from six bottles were Soxhlet- extracted with a mixture of 50 % hexane/50 % acetone for approximately 18 h. Copper powder was added to the extract to remove elemental sulfur, and the concentrated extract was passed through a silica SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS with two ionization modes, electron impact (EI) and negative ion chemical ionization (NICI). The GC/MS EI method, GC/MS (IA), used a 0.25 mm i.d. × 60 m fused silica capillary column with a relatively non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific). The GC/MS NICI method, GC/MS (IB), used a 0.25 mm i.d. × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5MS, J&W Scientific). The GC/MS (II) results were obtained in the same manner as the GC/MS (IA) analyses except that three subsamples were Soxhlet-extracted with DCM for approximately 18 h. For the GC/MS analyses, selected carbon-13 labeled PCB congeners and chlorinated pesticides were added to the sediment prior to extraction for use as internal standards for quantification purposes.

In addition to the analyses performed at NIST, SRM 1941b was used in an interlaboratory comparison exercise in 1999 as part of the NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment [7]. Results from 38 laboratories that participated in this exercise were used as the sixth data set in the determination of the certified values for PCB congeners and chlorinated pesticides in SRM 1941b. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest.

The reference value for PCB 77 was determined from a separate fraction. The samples were extracted and processed as for GC-ECD (I) above. The first (PCB and lower-polarity pesticide) fraction from the semi-preparative aminopropylsilane column was further fractionated using a Cosmosil PYE (pyrenylethyl group bonded) column (5 μm particle size, 4.6 mm i.d. × 25 cm ; Phenomenex, Torrance, CA) [11]. Three fractions were collected: the first fraction contained the pesticides and multi-*ortho* PCBs, the second fraction contained the polychlorinated naphthalenes, non-*ortho* PCB congeners, and some mono-*ortho* PCB congeners, and the third fraction removed the residual planar compounds from the column. The second fraction was analyzed by GC/MS NICI using the same column as GC/MS (IB) above. Carbon-13 labeled PCB 77 was used as an internal standard for quantification purposes.

Alkylated PAH Groups, Hopanes, and Steranes: SRM 1941b was used in an interlaboratory comparison exercise in 2011 [12]. Results from 33 laboratories that participated in this exercise were used in the determination of the reference values for alkylated PAH groups, hopanes, and steranes in SRM 1941b. Note that not all laboratories returned data for each analyte. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest. For the alkylated PAHs, the majority of the laboratories (>90 %) used the parent PAH for determination of the response factor for the corresponding alkylated group.

Total Organic Carbon (TOC): Two laboratories provided results for TOC using similar procedures. Briefly, subsamples of approximately 200 mg were reacted with 6 mol/L hydrochloric acid and rinsed with deionized water prior to combustion in a gas fusion furnace. The carbon monoxide and carbon dioxide produced were measured and compared to a blank for calculation of the percent TOC. Each laboratory analyzed subsamples from three bottles of SRM 1941b. One of the laboratories also analyzed three subsamples from three bottles of SRM 1941b for carbon, hydrogen, and nitrogen.

Table 1. Certified Mass Fraction Values for PAHs in SRM 1941b

PAHs	Mass Fractions[a] (µg/kg)		
Naphthalene[b,c,d,e,f,g]	848	±	95[h]
Fluorene[b,c,d,e,f,g]	85	±	15[h]
Phenanthrene[b,c,d,e,f,g]	406	±	44[h]
Anthracene[b,c,d,e,f,g]	184	±	18[h]
3-Methylphenanthrene[b,c,d]	105	±	13[h]
2-Methylphenathrene[b,c,d]	128	±	14[h]
1-Methylphenanthrene[b,c,d,g]	73.2	±	5.9[h]
Fluoranthene[b,c,d,e,f,g]	651	±	50[h]
Pyrene[b,c,d,e,f,g]	581	±	39[h]
Benz[*a*]anthracene[b,c,d,e,f,g]	335	±	25[h]
Chrysene[d,f]	291	±	31[h]
Triphenylene[d,f]	108	±	5[i]
Benzo[*b*]fluoranthene[c,e]	453	±	21[h]
Benzo[*k*]fluoranthene[b,c,d,e]	225	±	18[h]
Benzo[*e*]pyrene[b,c,d,g]	325	±	25[h]
Benzo[*a*]pyrene[b,c,d,f,g]	358	±	17[h]
Perylene[b,c,d,f,g]	397	±	45[h]
Benzo[*ghi*]perylene[b,c,d,f,g]	307	±	45[h]
Indeno[1,2,3-*cd*]pyrene[b,c,d,f,g]	341	±	57[h]
Dibenz[*a,j*]anthracene[b,c,d,f]	48.9	±	4.6[h]
Dibenz[*a,c*]anthracene[c,f]	36.7	±	5.2[h]
Dibenz[*a,h*]anthracene[c,f]	53	±	10[h]
Benzo[*b*]chrysene[b,c,d,f]	53	±	12[h]
Picene[b,c,d]	46.6	±	4.7[h]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] GC/MS (I) on 5 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[c] GC/MS (II) on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[d] GC/MS (III) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.
[e] LC-FL (total) of total PAH fraction after PFE with DCM.
[f] LC-FL (isomer) of isomeric PAH fractions after PFE with DCM.
[g] 1999 Interlaboratory Comparison Study [7] with 21 to 29 laboratories submitting data for each PAH.
[h] Certified values are weighted means of the results from two to six analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[i] The certified value is an unweighted mean of the results from two analytical methods. The uncertainty listed with the value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the value is metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 2. Certified Mass Fraction Values for PCB Congeners[a] in SRM 1941b

PCB Congeners			Mass Fractions[b] (µg/kg)		
PCB	8	(2,4'-Dichlorobiphenyl)[c,d,e,f,g]	1.65	±	0.19[h]
PCB	18	(2,2',5-Trichlorobiphenyl)[c,d,e,f,g]	2.39	±	0.29[h]
PCB	28	(2,4,4'-Trichlorobiphenyl)[c,d,e,f,g]	4.52	±	0.57[h]
PCB	31	(2,4',5-Trichlorobiphenyl)[c,e,f]	3.18	±	0.41[h]
PCB	44	(2,2'3,5'-Tetrachlorobiphenyl)[c,d,e,f,g]	3.85	±	0.20[i]
PCB	49	(2,2'4,5'-Tetrachlorobiphenyl)[c,d,e,f]	4.34	±	0.28[i]
PCB	52	(2,2',5,5'-Tetrachlorobiphenyl)[c,d,e,f,g]	5.24	±	0.28[i]
PCB	66	(2,3',4,4'-Tetrachlorobiphenyl)[c,e,f,g,j]	4.96	±	0.53[i]
PCB	87	(2,2',3,4,5'-Pentachlorobiphenyl)[c,d,f,j]	1.14	±	0.16[h]
PCB	95	(2,2',3,5',6-Pentachlorobiphenyl)[c,e,f,g]	3.93	±	0.62[i]
PCB	99	(2,2',4,4',5-Pentachlorobiphenyl)[c,d,e,f,g]	2.90	±	0.36[i]
PCB	101	(2,2',4,5,5'-Pentachlorobiphenyl)[c,e,f,g,j]	5.11	±	0.34[i]
PCB	105	(2,3,3',4,4'-Pentachlorobiphenyl)[c,d,e,f,g,j]	1.43	±	0.10[i]
PCB	110	(2,3,3',4',6-Pentachlorobiphenyl)[c,e,f,j]	4.62	±	0.36[i]
PCB	118	(2,3',4,4',5-Pentachlorobiphenyl)[c,d,e,f,g,j]	4.23	±	0.19[i]
PCB	128	(2,2',3,3',4,4'-Hexachlorobiphenyl)[c,d,e,f,g,j]	0.696	±	0.044[i]
PCB	138	(2,2',3,4,4',5'-Hexachlorobiphenyl)[c,e,f,j]	3.60	±	0.28[i]
PCB	149	(2,2',3,4',5',6-Hexachlorobiphenyl)[c,d,e,j]	4.35	±	0.26[h]
PCB	153	(2,2',4,4',5,5'-Hexachlorobiphenyl)[c,d,e,f,g,j]	5.47	±	0.32[i]
PCB	156	(2,3,3',4,4',5-Hexachlorobiphenyl)[c,d,e,f,j]	0.507	±	0.090[h]
PCB	170	(2,2',3,3',4,4',5-Heptachlorobiphenyl)[c,d,e,f,g,j]	1.35	±	0.09[i]
PCB	180	(2,2',3,4,4',5,5'-Heptachlorobiphenyl)[c,d,e,f,g,j]	3.24	±	0.51[i]
PCB	183	(2,2',3,4,4',5',6-Heptachlorobiphenyl)[c,d,e,j]	0.979	±	0.087[h]
PCB	187	(2,2',3,4',5,5',6-Heptachlorobiphenyl)[c,d,e,f,g,j]	2.17	±	0.22[i]
PCB	194	(2,2',3,3',4,4',5,5'-Octachlorobiphenyl)[c,d,e,j]	1.04	±	0.06[h]
PCB	195	(2,2',3,3',4,4',5,6-Octachlorbiphenyl)[c,e,g,j]	0.645	±	0.060[i]
PCB	201	(2,2',3,3',4,5',6,6'-Octachlorobiphenyl)[c,e,j]	0.777	±	0.034[h]
PCB	206	(2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)[c,e,f,g,j]	2.42	±	0.19[i]
PCB	209	Decachlorobiphenyl[c,d,e,f,g,j]	4.86	±	0.45[i]

[a] PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [9] and later revised by Schulte and Malisch [10] to conform to IUPAC rules, except PCB 201. Under the Ballschmiter and Zell numbering system, the IUPAC PCB 201 is listed as PCB 200.

[b] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[c] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.

[d] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.

[e] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).

[f] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.

[g] 1999 Interlaboratory Comparison Study [7] with 13 to 31 laboratories submitting data for each PCB congener.

[h] Certified values are unweighted means of the results from three to five analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[i] Certified values are weighted means of the results from three to six analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[j] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).

Table 3. Certified Mass Fraction Values for Chlorinated Pesticides in SRM 1941b

Chlorinated Pesticides	Mass Fractions[a] (µg/kg)
Hexachlorobenzene[b,c,d,e]	5.83 ± 0.38[f]
cis-Chlordane[b,c,d,e,g]	0.85 ± 0.11[h]
trans-Chlordane[b,c,e]	0.566 ± 0.093[f]
cis-Nonachlor[b,e,g]	0.378 ± 0.053[h]
trans-Nonachlor[b,c,d,e,g]	0.438 ± 0.073[f]
4,4'-DDE[b,d,e,g]	3.22 ± 0.28[h]
4,4'-DDD[b,d,e,g]	4.66 ± 0.46[h]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.
[c] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).
[d] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.
[e] 1999 Interlaboratory Comparison Study [7] with 13 to 31 laboratories submitting data for each pesticide.
[f] Certified values are unweighted means of the results from three to five analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[g] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.
[h] Certified values are weighted means of the results from three to five analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the chlorinated pesticides listed and the values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 4. Reference Mass Fraction Values for PAHs in SRM 1941b

PAHs	Mass Fractions[a] (µg/kg)		
1-Methylnaphthalene[b,c,d,e]	127	±	14[f]
2-Methylnaphthalene[b,c,d,e]	276	±	53[f]
2,6-Dimethylnaphthalene[b,c,d,e]	75.9	±	4.5[f]
2,3,5-Trimethylnaphthalene[b,c,d,e]	25.5	±	5.1[f]
Biphenyl[b,c,d,e]	74.0	±	8.0[f]
Acenaphthylene[b,c,d,e]	53.3	±	6.4[f]
Acenaphthene[b,c,d,e]	38.4	±	5.2[f]
9-Methylphenanthrene[c]	63.5	±	2.5[g]
4-Methylphenanthrene and 9-Methylphenanthrene[b,d]	80.1	±	4.8[f]
2-Methylanthracene[c,d]	36	±	15[f]
8-Methylfluoranthene[b]	49.5	±	2.7[g]
7-Methylfluoranthene[b]	45.4	±	1.5[g]
1-Methylfluoranthene[b]	42.4	±	2.1[g]
3-Methylfluoranthene[b]	28.8	±	1.3[g]
2-Methylpyrene[b]	78.7	±	4.0[g]
4-Methylpyrene[b]	66.4	±	2.6[g]
1-Methylpyrene[b]	52.5	±	2.3[g]
Acephenanthrene[d]	30.5	±	1.9[g]
Benzo[*c*]phenanthrene[b,c,d]	58	±	15[f]
Benzo[*a*]fluoranthene[b,c,d]	73	±	18[f]
Benzo[*j*]fluoranthene[c]	217	±	5[g]
Indeno[1,2,3-*cd*]fluoranthene[d]	9.63	±	0.34[g]
Pentaphene[d]	25.3	±	1.0[g]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] GC/MS (I) on 5 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[c] GC/MS (II) on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[d] GC/MS (III) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.
[e] 1999 Interlaboratory Comparison Study [7] with 14 to 26 laboratories submitting data for each PAH.
[f] Reference values are weighted means of the results from two to four analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of PAHs listed as determined by the methods indicted. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[g] Reference values are the means of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution for the associated degrees of freedom (19 for footnote b and 5 for footnotes c and d) and 95 % confidence level for each analyte. The measurand is the total mass fraction of the PAHs listed as determined by the method indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 5. Reference Mass Fraction Values for PAHs of Molecular Mass 300 and 302 in SRM 1941b

PAHs of Molecular Mass 300 and 302	Mass Fractions[a,b,c] (µg/kg)		
Coronene	72.6	±	4.7
Dibenzo[*b,e*]fluoranthene	10.3	±	0.3
Naphtho[1,2-*b*]fluoranthene	91.0	±	3.1
Naphtho[1,2-*k*]fluoranthene and Naphtho[2,3-*j*]fluoranthene	79.8	±	2.5
Naphtho[2,3-*b*]fluoranthene	23.5	±	0.3
Dibenzo[*b,k*]fluoranthene	95.6	±	3.1
Dibenzo[*a,k*]fluoranthene	26.6	±	0.4
Dibenzo[*j,l*]fluoranthene	63.8	±	1.8
Dibenzo[*a,l*]pyrene	11.1	±	1.0
Naphtho[2,3-*k*]fluoranthene	10.7	±	0.6
Naphtho[1,2-*a*]pyrene	16.7	±	1.4
Naphtho[2,3-*e*]pyrene	33.2	±	2.3
Dibenzo[*a,e*]pyrene	76.1	±	3.6
Naphtho[2,1-*a*]pyrene	59.2	±	1.8
Dibenzo[*e,i*]pyrene	35.0	±	2.4
Naphtho[2,3-*a*]pyrene	16.5	±	0.6
Benzo[*b*]perylene	38.2	±	1.2
Dibenzo[*a,i*]pyrene	25.5	±	1.0
Dibenzo[*a,h*]pyrene	6.94	±	0.29

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[b] Reference values are the means of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution for two degrees of freedom and 95 % confidence level for each analyte. The measurand is the total mass fraction of the constituent listed as determined by the method indicted. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[c] GC/MS on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM [8].

Table 6. Reference Mass Fraction Values for PCB Congeners[a] in SRM 1941b

PCB Congeners			Mass Fractions[b,c] (µg/kg)		
PCB	45	(2,2',3,6-Tetrachlorobiphenyl)[d,e]	0.73	±	0.12
PCB	56	(2,3,3',4'-Tetrachlorobiphenyl)[d,f,g]	1.21	±	0.11
PCB	63	(2,3,4',5-Tetrachlorobiphenyl)[e,f,g]	0.213	±	0.040
PCB	70	(2,3',4',5-Tetrachlorobiphenyl)[e,f,g]	4.99	±	0.29
PCB	74	(2,4,4',5-Tetrachlorobiphenyl)[e,f,g]	2.04	±	0.15
PCB	77	(3,3',4,4'-Tetrachlorobiphenyl)[h]	0.31	±	0.03
PCB	107	(2,3,3',4',5-Pentachlorobiphenyl)[d,e,f,g]	0.628	±	0.028
PCB	132	(2,2',3,3',4,6'-Hexachlorobiphenyl)[d,f,g]	1.28	±	0.27
PCB	146	(2,2',3,4',5,5'-Hexachlorobiphenyl)[e,f,g]	1.22	±	0.12
PCB	158	(2,3,3',4,4',6-Hexachlorobiphenyl)[d,e,f,g]	0.65	±	0.15
PCB	163	(2,3,3',4',5,6-Hexachlorobiphenyl)[e,f,g]	1.28	±	0.06
PCB	174	(2,2',3,3',4,5,6'-Heptachlorobiphenyl)[d,e,f,g]	1.51	±	0.39
PCB	193	(2,3,3',4',5,5',6-Heptachlorobiphenyl)[d,e,f,g]	0.292	±	0.075

[a] PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [9] and later revised by Schulte and Malisch [10] to conform with IUPAC rules, except PCB 107. Under the Ballschmiter and Zell numbering system, the IUPAC PCB 107 is listed as PCB 108.

[b] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[c] For these PCB congeners except PCB 77, the reference values are unweighted means of the results from two to four analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled within-method variance following the ISO/JCGM Guide [14,15]. For PCB 77, the reference value is the mean of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution corresponding to two degrees of freedom and 95 % confidence level for PCB 77. The measurand is the total mass fraction of the PCB Congeners listed as determined by the method or methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as microgram per kilogram on a dry-mass basis.

[d] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.

[e] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).

[f] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.

[g] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).

[h] GC/MS NICI on a 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC-ECD (I) fractionated using a PYE column.

Table 7. Reference Mass Fraction Values for Selected Chlorinated Pesticides in SRM 1941b

Chlorinated Pesticides	Mass Fractions[a,b] (µg/kg)		
2,4'-DDE[c,d]	0.38	±	0.12
4,4'-DDT[e,f]	1.12	±	0.42

[a] Mass Fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] The reference values are unweighted means of the results from two analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the chlorinated pesticides listed as determined by the methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[c] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).
[d] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).
[e] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.
[f] 1999 Interlaboratory Comparison Study [7] with 10 laboratories submitting data for 4,4'-DDT.

Table 8. Reference Mass Fraction Values for Alkylated PAH Groups in SRM 1941b

Alkylated PAH Group	Mass Fraction[a,b] (µg/kg)		
C2-decalins	18	±	5
C4-decalins	41	±	4
C2-naphthalenes	187	±	53
C3-naphthalenes	158	±	42
C1-benzothiophenes	25	±	14
C2-benzothiophenes	20	±	11
C3-benzothiophenes	22	±	13
C4-benzothiophenes	18	±	5
C1-fluorenes	57	±	18
C2-fluorenes	122	±	43
C3-fluorenes	128	±	31
C1-phenanthrenes/anthracenes	313	±	99
C2-phenanthrenes/anthracenes	247	±	62
C3-phenanthrenes/anthracenes	165	±	46
C4-phenanthrenes/anthracenes	87	±	36
C1-dibenzothiophenes	54	±	13
C2-dibenzothiophenes	91	±	18
C3-dibenzothiophenes	84	±	15
C4-dibenzothiophenes	57	±	13
C1-fluoranthenes/pyrenes	252	±	48
C2-fluoranthenes/pyrenes	205	±	38
C3-fluoranthenes/pyrenes	102	±	22
C4-fluoranthenes/pyrenes	121	±	59
C1-benzanthraces/chrysenes/triphenylenes	208	±	43
C2-benzanthraces/chrysenes/triphenylenes	120	±	24
C3-benzanthraces/chrysenes/triphenylenes	73	±	31
C4-benzanthraces/chrysenes/triphenylenes	41	±	11

[a] The reference mass fraction value reported on a dry-mass basis is the median of results using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the median, and the coverage factor, $k = 2$. The measurand is the total mass fraction of the alkylated PAH groups listed as determined by the interlaboratory study methods. The values listed are metrologically traceable to the SI unit of mass fraction, expressed as micrograms per kilogram on a dry-mass basis.
[b] Data from the interlaboratory study [12].

Table 9. Reference Mass Fraction Values for Hopanes and Steranes in SRM 1941b

Hopane or Sterane	Mass Fraction[a,b] (µg/kg)
17α(H)-22,29,30-Trisnorhopane	54 ± 18
17α(H)-21β(H)-30-Norhopane	137 ± 21
17α(H)-21β(H)-30-Hopane	215 ± 44
17α(H)-21β(H)-22R-Homohopane	44 ± 10
17α(H)-21β(H)-22S-Homohopane	48 ± 13
5α(H)-14α(H),17α(H)-Cholestane 20R	41 ± 11
5α(H)-14β(H),17β(H)-Cholestane 20R	27 ± 6
5α(H)-14β(H),17β(H)-24-Methylcholestane 20R	21 ± 8
5α(H)-14α(H),17α(H)-24-Ethylcholestane 20R	19 ± 5
5α(H)-14β(H),17β(H)-24-Ethylcholestane 20R	41 ± 9

[a] The reference mass fraction value reported on a dry-mass basis is the median of results using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the median, and the coverage factor, $k = 2$. The measurand is the total mass fraction of the constituent listed as determined by the methods used during the interlaboratory study. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[b] Data from the interlaboratory study [12].

Table 10. Reference Mass Fraction Value for Total Organic Carbon in SRM 1941b

Total Organic Carbon (TOC)	2.99 % ± 0.24 %[a,b]

[a] Mass fraction is reported on a dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] The reference value for total organic carbon is a weighted mean value from routine measurements made by two laboratories [21]. The uncertainty listed is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance. The reporting follows the ISO/JCGM Guides [2]. The measurand is the total mass fraction of TOC listed as determined by the methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as a percent on a dry-mass basis.

Table 11. Information Mass Fraction Values for Carbon, Hydrogen, and Nitrogen in SRM 1941b

Elements	Mass Fractions[a] (%)
Carbon	3.3
Hydrogen	1.2
Nitrogen	<0.5

[a] Mass fraction is reported on a dry-mass basis; material as received contains approximately 2.4 % moisture.

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Certificate Revision History: 16 January 2015 (Corrected IUPAC name for PCB-56 and PCB-107; editorial changes); 10 June 2014 (Units corrected from mg/kg to µg/kg in Tables 8 and 9; editorial changes); 10 April 2012 (Reference value added for alkylated PAH groups, hopanes, and steranes; extension of certification period; editorial changes); 16 August 2004 (Reference values for the butyl tins removed; editorial changes); 15 July 2002 (Original certificate date).

Users of this SRM should ensure that the Certificate of Analysis in their possession is current. This can be accomplished by contacting the SRM Program: telephone (301) 975-2200; fax (301) 948-3730; e-mail srminfo@nist.gov; or via the Internet at http://www.nist.gov/srm.

APPENDIX A

The laboratories listed below performed measurements that contributed to the certification of PAHs, PCBs, and chlorinated pesticides in SRM 1941b Organics in Marine Sediment.

Arthur D. Little, Inc; Cambridge, MA
Axys Analytical Services; Sidney, BC, Canada
B & B Laboratories; College Station, TX
Battelle Ocean Sciences; Duxbury, MA
Bedford Institute of Oceanography; Dartmouth, NS, Canada
California Department of Fish and Game; Rancho Cordova, CA
Central Contra Costa Sanitary District; Martinez, CA
Chesapeake Biological Laboratory; Solomons, MD
Centro de Investigacionies Energeticas Medioambientales y Tecnologicas; Madrid, Spain
City of Los Angeles Environmental Monitoring Division; Playa del Rey, CA
City of San Jose Environmental Services Department; San Jose, CA
Columbia Analytical Services; Kelso, WA
East Bay Municipal Utility District; Oakland, CA
Florida Department of Environmental Protection; Tallahassee, FL
Manchester Environmental Laboratory; Port Orchard, WA
Murray State University; Murray, KY
Massachusetts Water Resources Authority Central Lab; Winthrop, MA
National Research Council of Canada; Ottawa, Ontario, Canada
National Oceanic and Atmospheric Association (NOAA), National Marine Fisheries Service (NMFS), Auke Bay Laboratory; Juneau, AK
NOAA, National Ocean Service/Center for Coastal Environmental Health and Biomolecular Research; Charleston, SC
NOAA, NMFS, Sandy Hook Marine Laboratory; Highlands, NJ
NOAA, NMFS, Northwest Fisheries Science Center; Seattle, WA
Orange County Sanitation District; Fountain Valley, CA
Philip Analytical Services; Burlington, Ontario, Canada
Serv de Hidrografia Naval; Buenos Aires, Argentina
Skidaway Institute of Technology; Savannah, GA
Southwest Laboratory of Oklahoma; Broken Arrow, OK
Severn Trent Knoxville Laboratory; Knoxville, TN
Texas A&M University, Geochemical and Environmental Research Group; College Station, TX
Texas Parks and Wildlife Department; San Marcos, TX
University of California at Los Angeles, Institute of Geophysics and Planetary Physics; Los Angeles, CA
University of Connecticut, Environmental Research Institute; Storrs, CT
University of Rhode Island, Graduate School of Oceanography; Narragansett, RI
US Department of Agriculture, Environmental Chemistry Laboratory; Beltsville, MD
US Environmental Protection Agency, Atlantic Ecology Division; Narragansett, RI
US Geological Survey, National Water Quality Laboratory; Denver, CO
Woods Hole Group Environmental Lab; Raynham, MA
Wright State University; Dayton, OH

APPENDIX B

The laboratories listed below performed measurements that contributed to the certification of alkylated PAH groups, hopanes, and steranes in SRM 1941b Organics in Marine Sediment.

Alpha Analytical, Inc.; Mansfield, MA
Analytical Resources, Inc.; Tukwila, WA
Axys Analytical Services; Sydney, BC, Canada
Battelle Analytical & Environmental Chemistry Laboratory; Duxbury, MA
Center for Laboratory Sciences; Pasco, WA
Columbia Analytical Services; Jacksonville, FL
Columbia Analytical Services; Rochester, NY
Columbia Analytical Services, Kelso, WA
Florida Department of Environmental Protection; Tallahassee, FL
Florida International University; North Miami, FL
Michigan Department of Natural Resources and Environment; Lansing, MI
Mississippi State Chemical Laboratory; Mississippi State, MS
NIST; Charleston, SC
NIST; Gaithersburg, MD
NOAA/NCCOS/NOS; Charleston, SC
NOAA/NMFS/Alaska Fisheries Science Center; Juneau, AK
NY State Department of Health; Albany, NY
Pace Analytical Services, Inc. Minneapolis; Minneapolis, MN
RJ Lee Group, Inc; Monroeville, PA
TDI/B&B Laboratories, Inc.; College Station, TX
TestAmerica Laboratories; Mobile, AL
TestAmerica Laboratories; West Sacramento, CA
TestAmerica Laboratories; University Park, IL
TestAmerica Laboratories; Schriever, LA
TestAmerica Laboratories; Edison, NJ
TestAmerica Laboratories; Knoxville, TN
TestAmerica Laboratories; Pittsburgh, PA
TestAmerica Laboratories; South Burlington, VT
TestAmerica Laboratories; Tacoma, WA
US Army Engineer Research and Development Center; Vicksburg, MS
USGS Columbia Environmental Research Center; Columbia, MO
University of Iowa, State Hygienic Laboratory; Iowa City, IO
Washington State Public Health Laboratories; Shoreline, WA

NIST

Date of Issue:
31 March 2014

SAFETY DATA SHEET

1. Substance and Source Identification

Product Identifier

SRM Number: 1941b
SRM Name: Organics in Marine Sediment
Other Means of Identification: Not applicable.

Recommended Use of This Material and Restrictions of Use

This Standard Reference Material (SRM) is marine sediment collected at the mouth of the Baltimore (MD) Harbor. SRM 1941b is intended for use in evaluating analytical methods for the determination of selected polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and chlorinated pesticides in marine sediment and similar matrices. All of the constituents for which certified, reference, and information values are provided in SRM 1941b were naturally present in the sediment before processing. A unit of SRM 1941b consists of a bottle containing 50 g of radiation-sterilized, freeze-dried sediment.

Company Information

National Institute of Standards and Technology
Standard Reference Materials Program
100 Bureau Drive, Stop 2300
Gaithersburg, Maryland 20899-2300

Telephone: 301-975-2200
FAX: 301-948-3730
E-mail: SRMMSDS@nist.gov
Website: http://www.nist.gov/srm

Emergency Telephone ChemTrec:
1-800-424-9300 (North America)
+1-703-527-3887 (International)

2. Hazards Identification

Classification

Physical Hazard: Not classified.
Health Hazard: Not classified.

Label Elements
Symbol
No Symbol/Pictogram

Signal Word
Not applicable.

Hazard Statement(s): Not applicable.

Precautionary Statement(s): Not applicable.

Hazards Not Otherwise Classified: Not applicable.

Ingredients(s) with Unknown Acute Toxicity: Not applicable.

3. Composition and Information on Hazardous Ingredients

Substance: Marine sediment

Other Designations: Sediment.

This material is naturally occurring marine sediment from an urban area. The material contains trace amounts of polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and should be handled with care. Components are listed in compliance with OSHA's 29 CFR 1910.1200; for the actual values see the Certificate of Analysis.

Hazardous Component(s)	CAS Number	EC Number (EINECS)	Nominal Mass Concentration (%)
Marine Sediment	Not available	Not available	100

4. First Aid Measures

Description of First Aid Measures:

Inhalation: If adverse effects occur, remove to uncontaminated area. If not breathing, give artificial respiration or oxygen by qualified personnel. Seek immediate medical attention.

Skin Contact: Wash skin with soap and water.

Eye Contact: Flush eyes with water for at least 15 minutes. If necessary, seek medical attention.

Ingestion: If adverse effects occur after ingestion, seek medical treatment.

Most Important Symptoms/Effects, Acute and Delayed: May cause irritation.

Indication of any immediate medical attention and special treatment needed, if necessary: If any of the above symptoms are present, seek medical attention if needed.

5. Fire Fighting Measures

Fire and Explosion Hazards: Negligible fire hazard. Avoid generating dust. See Section 9, "Physical and Chemical Properties" for flammability properties.

Extinguishing Media:
Suitable: Use extinguishing media appropriate for surrounding fire.
Unsuitable: None listed.

Specific Hazards Arising from the Chemical: None listed.

Special Protective Equipment and Precautions for Fire-Fighters: Avoid inhalation of material or combustion byproducts. Wear full protective clothing and NIOSH approved self-contained breathing apparatus (SCBA).

NFPA Ratings (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe)

Health = 1 Fire = 0 Reactivity = 0

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Any accumulated material on surfaces should be removed and properly disposed of. Use suitable protective equipment; see Section 8, "Exposure Controls and Personal Protection".

Methods and Materials for Containment and Clean up: Collect spilled material in appropriate container for disposal. Keep out of water supplies and sewers. Keep unnecessary people away, isolate hazard area and deny entry.

7. Handling and Storage

Safe Handling Precautions: Minimize dust generation and accumulation on surfaces. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. See Section 8, "Exposure Controls and Personal Protection".

Storage: Store and handling in accordance with all current regulations and standards.

8. Exposure Controls and Personal Protection

Exposure Limits: No occupational exposure limits have been established for marine sediment. This material is a particulate matter and adequate inhalation/respiratory protection should be used to minimize exposure. The exposure limits for Particulates Not Otherwise Regulated (PNOR) are applicable.

OSHA (PEL): 15 mg/m^3 (TWA, total particulates not otherwise regulated)
OSHA (PEL) 5 mg/m^3 (TWA, respirable particulates not otherwise regulated)

NIOSH (REL): 10 mg/m^3 (TWA, total particulates not otherwise regulated, 8 h)
NIOSH (REL): 5 mg/m^3 (TWA, respirable particulates not otherwise regulated)

Engineering Controls: Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

Personal Protection: In accordance with OSHA 29 CFR 1910.132, subpart I, wear appropriate Personal Protective Equipment (PPE) to minimize exposure to this material.

Respiratory Protection: If workplace conditions warrant a respirator, a respiratory protection program that meets OSHA 29CFR 1910.134 must be followed. Refer to NIOSH 42 CFR 84 for applicable certified respirators.

Eye/Face Protection: Wear splash resistant safety goggles with a face shield. An eye wash station should be readily available near areas of use.

Skin and Body Protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Chemical-resistant gloves should be worn at all times when handling chemicals.

9. PHYSICAL AND CHEMICAL PROPERTIES

Descriptive Properties:

Appearance (physical state, color, etc.):	amorphous powder
Molecular Formula:	not applicable
Molar Mass (g/mol):	not applicable
Odor:	not available
Odor threshold:	not available
pH:	not available
Evaporation rate:	not applicable
Melting point/freezing point (°C):	not available
Specific Gravity (water=1)	not available
Vapor Pressure (mmHg):	not applicable
Vapor Density (air = 1):	not applicable
Viscosity (cP):	not applicable
Solubility(ies):	not available
Partition coefficient (n-octanol/water):	not available
Particle Size:	<150 µm

Thermal Stability Properties:

Autoignition Temperature (°C):	not available
Thermal Decomposition (°C):	not available
Initial boiling point and boiling range (°C):	not available
Explosive Limits, LEL (Volume %):	not available
Explosive Limits, UEL (Volume %):	not available
Flash Point (°C):	not available
Flammability (solid, gas):	not available

10. STABILITY AND REACTIVITY

Reactivity: Stable at normal temperatures and pressure.

Stability: X Stable _____ Unstable

Possible Hazardous Reactions: None listed.

Conditions to Avoid: Avoid generating dust.

Incompatible Materials: None listed.

Fire/Explosion Information: See Section 5, "Fire Fighting Measures".

Hazardous Decomposition: Thermal decomposition will produce oxides of carbon.

Hazardous Polymerization: _____ Will Occur X Will Not Occur

11. TOXICOLOGICAL INFORMATION

Route of Exposure: __X__ Inhalation __X__ Skin _____ Ingestion

Symptoms Related to the Physical, Chemical and Toxicological Characteristics: Generated dust may cause irritation if inhaled.

Potential Health Effects (Acute, Chronic and Delayed):

Inhalation: Generated dust may cause irritation.

Skin Contact: May cause mechanical irritation.

Eye Contact: May cause mechanical irritation.

Ingestion: No data available.

Numerical Measures of Toxicity:

Acute Toxicity: Not classified; no data available.

Skin Corrosion/Irritation: Not classified; no data available.

Serious Eye damage/ Eye irritation: Not classified; no data available.

Respiratory Sensitization: Not classified; no data available.

Skin Sensitization: Not classified; no data available.

Germ Cell Mutagenicity: Not classified; no data available.

Carcinogenicity: Not classified.

Listed as a Carcinogen/Potential Carcinogen _____ Yes __X__ No
Marine sediment is not listed by NTP, IARC or OSHA as a carcinogen.

Reproductive Toxicity: Not classified; no data available.

Specific Target Organ Toxicity, Single Exposure: Not classified; no data available.

Specific Target Organ Toxicity, Repeated Exposure: Not classified; no data available.

Aspiration Hazard: Not classified; no data available.

12. ECOLOGICAL INFORMATION

Ecotoxicity Data: No data available.

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

Other Adverse effects: No data available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of waste in accordance with all applicable federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

U.S. DOT and IATA: Not regulated by DOT or IATA.

15. REGULATORY INFORMATION

U.S. Regulations:

CERCLA Sections 102a/103 (40 CFR 302.4): Not regulated.

SARA Title III Section 302 (40 CFR 355.30): Not regulated.

SARA Title III Section 304 (40 CFR 355.40): Not regulated.

SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21):

ACUTE HEALTH:	No.
CHRONIC HEALTH:	No.
FIRE:	No.
REACTIVE:	No.
PRESSURE:	No.

State Regulations:
California Proposition 65: Not listed.

U.S. TSCA Inventory: Not listed.

TSCA 12(b), Export Notification: Not listed.

Canadian Regulations:
WHMIS Information: Not provided for this material.

16. OTHER INFORMATION

Issue Date: 31 March 2014

Sources: 29 CFR Occupational Health and Safety Office (OSHA) 1910.1000, *Limits for Air Contaminants*, Table Z-1; available at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9992 (accessed Mar 2014).

Center for Disease Control (CDC) NIOSH Pocket Guide to Chemical Hazards, *Particulates not otherwise regulated*; available at http://www.cdc.gov/niosh/npg/npgd0480.html (accessed Mar 2014).

Key of Acronyms:

ACGIH	American Conference of Governmental Industrial Hygienists	NRC	Nuclear Regulatory Commission
ALI	Annual Limit on Intake	NTP	National Toxicology Program
CAS	Chemical Abstracts Service	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
CFR	Code of Federal Regulations	RCRA	Resource Conservation and Recovery Act
DOT	Department of Transportation	REL	Recommended Exposure Limit
EC50	Effective Concentration, 50 %	RM	Reference Material
EINECS	European Inventory of Existing Commercial Chemical Substances	RQ	Reportable Quantity
EPCRA	Emergency Planning and Community Right-to-Know Act	RTECS	Registry of Toxic Effects of Chemical Substances
IARC	International Agency for Research on Cancer	SARA	Superfund Amendments and Reauthorization Act
IATA	International Air Transportation Agency	SCBA	Self-Contained Breathing Apparatus
IDLH	Immediately Dangerous to Life and Health	SRM	Standard Reference Material
LC50	Lethal Concentration, 50 %	STEL	Short Term Exposure Limit
LD50	Lethal Dose, 50 %	TLV	Threshold Limit Value
LEL	Lower Explosive Limit	TPQ	Threshold Planning Quantity
MSDS	Material Safety Data Sheet	TSCA	Toxic Substances Control Act
NFPA	National Fire Protection Association	TWA	Time Weighted Average
NIOSH	National Institute for Occupational Safety and Health	UEL	Upper Explosive Limit
NIST	National Institute of Standards and Technology	WHMIS	Workplace Hazardous Materials Information System

Disclaimer: Physical and chemical data contained in this SDS are provided only for use in assessing the hazardous nature of the material. The SDS was prepared carefully, using current references; however, NIST does not certify the data in the SDS. The certified values for this material are given in the NIST Certificate of Analysis.

Users of this SRM should ensure that the SDS in their possession is current. This can be accomplished by contacting the SRM Program: telephone (301) 975-2200; fax (301) 948-3730; e-mail srmmsds@nist.gov; or via the

Bill to:	68455	Ship to:	68456
	DAVE MITCHELL ANALYTICAL RESOURCES INC 4611 S 134TH PLACE SUITE 100 TUKWILA, WA 98168-3240 1 (206)695-6205		DAVE MITCHELL ANALYTICAL RESOURCES INC 4611 S 134TH PLACE SUITE 100 TUKWILA, WA 98168-3240 1 (206)695-6205

Ship via	UPS Ground	Description		Ship from	
Salesmen	MCMIDM2	Instructions		Blanket	
Contact	DAVE MITCHELL	Pro#		Truck#	

Order discrepancies (other than back ordered items) must be reported to our Customer Relations Department at 301-975-6776 within 5 days of receipt of shipment or this order will be considered complete. NIST SRMs/RMs are generally not returnable - with the exception of defective goods or shipments made in error by NIST. To return a SRM/RM, please call for instructions and a Return SRM/RM Authorization Number before shipment. Returns WILL NOT BE ACCEPTED without prior authorization.

Order	UOM	Ship	UOM	B/O	UOM	Item	Description
1	EACH	1	EACH	0	EACH	1941B	Organics in Marine Sediment
						Total qty:	1 / EACH
							NOT FOR HUMAN CONSUMPTION, LABORATORY USE ONLY.

9/21/16
04:04 PM

1700101

Picked by	
Packed by	
# of pieces	
Weight	

MP Biomedicals, LLC

29525 Fountain Parkway
Solon, Ohio 44139

Telephone: 440/337-1200
Toll Free: 800/854-0530

Fax: 440/337-1180
web: www.mpbio.com

Certificate of Analysis

Product Description: Microcrystalline Cellulose Powder_
Catalog Number: 191499_
Lot: Q9483_

Formula: $(C_6H_{10}O_5)n$	**Formula Weight:** N/A
CAS #: 9004-34-6	**Storage:** 15 - 30°C
Physical Description: White Powder	

Test	Specification	Result
Identity Test	Passes	Passes
Purity	97.0 - 102.0%	97.0 - 102.0%
Moisture	<5.0%	3.4%
Particle Size/Mesh +60 mesh +200 mesh	Wt % <8% >45%	 <1% 55%
pH	5 - 7	6.73
Residue on Ignition	<0.05%	<0.05%
Water Soluble Substances	<12.0 mg/5 g	4.5 mg/5 g
Heavy Metals	<10 ppm	<10 ppm

H001822
Microcrystalline Cellulose Powder (TOC)
Expires 11/30/2022
Prepared By Casey English 2/22/2019

Identification A & B: Passes
Bulk Density: 0.29 g/ml
Bulk Density (graduated cylinder): 0.31 g/ml
Conductivity: 18 µS/cm
Starch: Negative
Ether Soluble Substances: 0.01%
Total Aerobic microbial Count: 100 cfu/g
Total Mold and Yeast Count: 20 cfu/g
Staphylococcus aureus: Absent/1 g
Pseudomonas aeruginosa: Absent/1 g
E. coli: Absent/1 g
Salmonella: Absent/10 g
Particle size:

- 450 mesh: 77%
- d10: 37 um
- d50: 139 um
- d90: 271 um

TUP: <9/600 cm^2
Degree of brightness: >88%
Powder flow-angle of repose: <42°
Recommended Retest Date: 11/30/2022

07/26/2018 - *John Huang, PhD*
MP Biomedicals, LLC.
Quality Control Manager

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Online Ordering, MSDSs, certificates of analysis and data sheets now available on our web site
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CAS #: 9004-34-6	**Storage:** 15 - 30°C
Physical Description: White Powder	

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Identity Test	Passes	Passes
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Moisture	<5.0%	3.4%
Particle Size/Mesh +60 mesh +200 mesh	Wt % <8% >45%	 <1% 55%
pH	5 - 7	6.73
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H001822
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E. coli: Absent/1 g
Salmonella: Absent/10 g
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- 450 mesh: 77%
- d10: 37 um
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07/26/2018 - *John Huang, PhD*
MP Biomedicals, LLC.
Quality Control Manager

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Particle Size/Mesh +60 mesh +200 mesh	Wt % <8% >45%	 <1% 55%
pH	5 - 7	6.73
Residue on Ignition	<0.05%	<0.05%
Water Soluble Substances	<12.0 mg/5 g	4.5 mg/5 g
Heavy Metals	<10 ppm	<10 ppm

H001822
Microcrystalline Cellulose Powder (TOC)
Expires 11/30/2022
Prepared By Casey English 2/22/2019

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Total Mold and Yeast Count: 20 cfu/g
Staphylococcus aureus: Absent/1 g
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07/26/2018 - *John Huang, PhD*
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Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SS1253

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	22L0198-01 C	SDG:	22L0198
Sampled:	12/08/22 08:16	Prepared:	12/10/22 14:31	File ID:	
% Solids:	36.84	Preparation:	No Prep Wet Chem	Analyzed:	12/10/22 14:32
Batch:	BKL0260	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	36.84	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
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LDW23-SS1254

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	22L0198-02 C	SDG:	22L0198
Sampled:	12/08/22 08:39	Prepared:	12/10/22 14:31	File ID:	
% Solids:	36.72	Preparation:	No Prep Wet Chem	Analyzed:	12/10/22 14:32
Batch:	BKL0260	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	36.72	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

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LDW23-SS1255

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	22L0198-03 C	SDG:	22L0198
Sampled:	12/08/22 08:57	Prepared:	12/10/22 14:31	File ID:	
% Solids:	36.83	Preparation:	No Prep Wet Chem	Analyzed:	12/10/22 14:32
Batch:	BKL0260	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	36.83	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

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INORGANIC ANALYSIS DATA SHEET
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LDW23-SS1257

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	22L0198-04 C	SDG:	22L0198
Sampled:	12/08/22 09:16	Prepared:	12/10/22 14:31	File ID:	
% Solids:	33.96	Preparation:	No Prep Wet Chem	Analyzed:	12/10/22 14:32
Batch:	BKL0260	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	33.96	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

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LDW23-SS1258

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	22L0198-05 C	SDG:	22L0198
Sampled:	12/08/22 09:35	Prepared:	12/10/22 14:31	File ID:	
% Solids:	36.92	Preparation:	No Prep Wet Chem	Analyzed:	12/10/22 14:32
Batch:	BKL0260	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	36.92	1	0.04	0.04	

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INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SS1259

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	22L0198-06 C	SDG:	22L0198
Sampled:	12/08/22 09:54	Prepared:	12/10/22 14:31	File ID:	
% Solids:	35.96	Preparation:	No Prep Wet Chem	Analyzed:	12/10/22 14:32
Batch:	BKL0260	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	35.96	1	0.04	0.04	

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LDW23-SS1262

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	22L0198-07 C	SDG:	22L0198
Sampled:	12/08/22 10:36	Prepared:	12/10/22 14:31	File ID:	
% Solids:	35.53	Preparation:	No Prep Wet Chem	Analyzed:	12/10/22 14:32
Batch:	BKL0260	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	35.53	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SS1260

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	22L0198-08 C	SDG:	22L0198
Sampled:	12/08/22 10:12	Prepared:	12/10/22 14:31	File ID:	
% Solids:	36.88	Preparation:	No Prep Wet Chem	Analyzed:	12/10/22 14:32
Batch:	BKL0260	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	36.88	1	0.04	0.04	

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LDW23-SS1263

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	22L0198-09 C	SDG:	22L0198
Sampled:	12/08/22 10:54	Prepared:	12/10/22 14:31	File ID:	
% Solids:	34.08	Preparation:	No Prep Wet Chem	Analyzed:	12/10/22 14:32
Batch:	BKL0260	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	34.08	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SS1245

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	22L0198-10 C	SDG:	22L0198
Sampled:	12/08/22 11:14	Prepared:	12/10/22 14:31	File ID:	
% Solids:	38.50	Preparation:	No Prep Wet Chem	Analyzed:	12/10/22 14:32
Batch:	BKL0260	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	38.50	1	0.04	0.04	

PREPARATION BATCH SUMMARY

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BKL0260 Batch Matrix: Solid
Preparation: No Prep Wet Chem

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1253	22L0198-01		12/10/22 14:31	
LDW23-SS1254	22L0198-02		12/10/22 14:31	
LDW23-SS1255	22L0198-03		12/10/22 14:31	
LDW23-SS1257	22L0198-04		12/10/22 14:31	
LDW23-SS1258	22L0198-05		12/10/22 14:31	
LDW23-SS1259	22L0198-06		12/10/22 14:31	
LDW23-SS1262	22L0198-07		12/10/22 14:31	
LDW23-SS1260	22L0198-08		12/10/22 14:31	
LDW23-SS1263	22L0198-09		12/10/22 14:31	
LDW23-SS1245	22L0198-10		12/10/22 14:31	
Blank	BKL0260-BLK1		12/10/22 14:31	
LDW23-SS1253	BKL0260-DUP1		12/10/22 14:31	
LDW23-SS1253	BKL0260-DUP2		12/10/22 14:31	

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET for Solid samples

Method: PSEP 1986, SM2540, EPA 160.1

(dry at 104 (12-24 hr) then combust at 550 (30 min))

Batch:	BKL0260
Date:	12/10/2022 14:32
Analyst:	UW

Instrumentation

Drying Ovens:	1	**Analytical Balance:**	BAL2
Muffle Furnace:	2		

Batch drying time

record times as mm/dd/yy hh:mm

date/time in oven:	12/10/2022 15:30	
date/time out:	12/12/2022 12:25	
elapsed hrs =	44.9	> 24 hr

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

Oven Temps, °C	
Start Temp	109
Dry Cycle 1	90
Dry Cycle 2	
Dry Cycle 3	

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000
if ash wt > dry wt, "Chk for Err"
if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000

Balance Calibration Check

Record weights to 4 places

Cal Weight ID:	CV-02	CV-02	CV-02	CV-02	CV-02		CV-02	CV-02	CV-02		
Date & Time:	12/10/22 14:40	12/10/22 15:10	12/12/22 15:00								
Cal Wt (g): 10.0000	10.0000	10.0000	10.0000								
	Cal OK!	Cal OK!	Cal OK!								

Sample ID	Dish #	Tare Wt. (g)	Dish & Sample (g)	Dry Wt 104C (grams) 1	2	3	dry Wt (g)	TS (%)	Notes	ASH WT 550C (grams) 1	2	3	Ash Wt (g)	TVS (mg/kg)	(%)	Notes
BKL0260-BLK1	70	0.8347	0.0000	0.8346			-0.0001	0.01%								
22L0198-01	71	0.8277	8.1228	3.5150			2.6873	36.84%								
BKL0260-DUP1	72	0.8315	6.6590	2.9790			2.1475	36.85%	RPD=0							
BKL0260-DUP2	73	0.8024	6.4791	2.9025			2.1001	37.00%	RSD=0.2							
22L0198-02	74	0.8340	7.3333	3.2207			2.3867	36.72%								
22L0198-03	75	0.8280	6.8654	3.0513			2.2233	36.83%								
22L0198-04	76	0.8393	8.1523	3.3226			2.4833	33.96%								
22L0198-05	77	0.8030	8.2129	3.5385			2.7355	36.92%								
22L0198-06	78	0.7971	7.7679	3.3036			2.5065	35.96%								
22L0198-07	79	0.8160	7.5582	3.2114			2.3954	35.53%								
22L0198-08	80	0.8228	7.6293	3.3329			2.5101	36.88%								
22L0198-09	81	0.8076	7.0275	2.9273			2.1197	34.08%								
22L0198-10	82	0.8145	7.4043	3.3518			2.5373	38.50%								
22L0199-61	83	0.8325	7.4929	4.5831			3.7506	56.31%								
22L0199-62	84	0.7973	7.0646	4.3193			3.5220	56.20%								
22L0199-63	85	0.8215	7.4970	4.6014			3.7799	56.62%								
22L0199-64	86	0.8319	6.7628	4.5151			3.6832	62.10%								
22L0199-65	87	0.8311	7.9391	4.8960			4.0649	57.19%								
22L0199-66	88	0.8262	7.4980	5.0249			4.1987	62.93%								
22L0199-67	89	0.8227	6.8103	4.4820			3.6593	61.11%								
22L0199-68	90	0.8081	5.9771	4.0371			3.2290	62.47%								
22L0199-69	91	0.8065	8.5558	5.6802			4.8737	62.89%								
22L0199-70	92	0.7900	9.5373	6.4959			5.7059	65.23%								

Form I

METHOD BLANK DATA SHEET

SM 2540 G-97

TotalAnalytes

Blank

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BKL0260
Laboratory ID: BKL0260-BLK1
Prepared: 12/10/22 14:31
Matrix: Solid
Preparation: No Prep Wet Chem
Analyzed: 12/10/22 14:32
Sequence:
Calibration:
Instrument: BAL2

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	ND	1	0.04	0.04	U

DUPLICATES

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BKL0260-DUP1
Batch: BKL0260
Lab Source ID: 22L0198-01
Preparation: No Prep Wet Chem
Initial/Final: 5 g / 5 g
Source Sample Name: LDW23-SS1253
% Solids: 36.84

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Total Solids	20	36.84	36.85	0.0382	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

DUPLICATES

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BKL0260-DUP2
Batch: BKL0260
Lab Source ID: 22L0198-01
Preparation: No Prep Wet Chem
Initial/Final: 5 g / 5 g
Source Sample Name: LDW23-SS1253
% Solids: 36.84

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Total Solids	20	36.84	37.00	0.428	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

HOLDING TIME SUMMARY

Analysis: SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1253 22L0198-01	12/08/22 08:16	12/08/22 17:18	12/10/22 14:31	2	28	12/10/22 14:32	2	28	
LDW23-SS1254 22L0198-02	12/08/22 08:39	12/08/22 17:18	12/10/22 14:31	2	28	12/10/22 14:32	2	28	
LDW23-SS1255 22L0198-03	12/08/22 08:57	12/08/22 17:18	12/10/22 14:31	2	28	12/10/22 14:32	2	28	
LDW23-SS1257 22L0198-04	12/08/22 09:16	12/08/22 17:18	12/10/22 14:31	2	28	12/10/22 14:32	2	28	
LDW23-SS1258 22L0198-05	12/08/22 09:35	12/08/22 17:18	12/10/22 14:31	2	28	12/10/22 14:32	2	28	
LDW23-SS1259 22L0198-06	12/08/22 09:54	12/08/22 17:18	12/10/22 14:31	2	28	12/10/22 14:32	2	28	
LDW23-SS1262 22L0198-07	12/08/22 10:36	12/08/22 17:18	12/10/22 14:31	2	28	12/10/22 14:32	2	28	
LDW23-SS1260 22L0198-08	12/08/22 10:12	12/08/22 17:18	12/10/22 14:31	2	28	12/10/22 14:32	2	28	
LDW23-SS1263 22L0198-09	12/08/22 10:54	12/08/22 17:18	12/10/22 14:31	2	28	12/10/22 14:32	2	28	
LDW23-SS1245 22L0198-10	12/08/22 11:14	12/08/22 17:18	12/10/22 14:31	2	28	12/10/22 14:32	2	28	
Duplicate BKL0260-DUP1	12/08/22 08:16	12/08/22 17:18	12/10/22 14:31	2	28	12/10/22 14:32	2	28	
Duplicate BKL0260-DUP2	12/08/22 08:16	12/08/22 17:18	12/10/22 14:31	2	28	12/10/22 14:32	2	28	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 22L0198
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument:

Analyte	MDL	RL	Units
Total Solids	0.04	0.04	%

TOTAL SOLIDS BENCHSHEET							Batch:	BKL0239
Method: PSEP 1986							Date:	12/9/2022 13:00
(dry at 103-105 C)							Analyst:	CR
Instrumentation							Drying Oven:	15
							Analytical Balance:	B139298002

Batch drying time						
Record times as mm/dd/yy hh:mm			Oven Temp, C	TS (%) calculated as:	Oven Temps, °C	
Date/time in oven:	12/13/2022 15:39		91	Final dry wt (g) = (Dry Wt - Tare Wt)	Start Temp:	91
Date/time out:	12/14/2022 9:28		103	TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)	End Temp:	103
Elapsed hrs:	17.8					

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
22L0198-01	0.8100	12.6600	5.6500	4.84	**40.84%**	Yes
22L0198-02	0.8200	12.8600	5.6200	4.80	**39.87%**	Yes
22L0198-03	0.8200	11.2000	5.1300	4.31	**41.52%**	Yes
22L0198-04	0.8300	11.2200	4.8700	4.04	**38.88%**	Yes
22L0198-05	0.8200	12.8100	5.7200	4.90	**40.87%**	Yes
22L0198-06	0.8200	11.8300	5.2100	4.39	**39.87%**	Yes
22L0198-07	0.8000	11.4000	4.9400	4.14	**39.06%**	Yes
22L0198-08	0.8100	12.2700	5.4600	4.65	**40.58%**	Yes
22L0198-09	0.8100	12.1500	5.1400	4.33	**38.18%**	Yes
22L0198-10	0.8000	11.8000	5.6000	4.80	**43.64%**	Yes

TOTAL SOLIDS BENCHSHEET

Method: PSEP 1986

(dry at 103-105 C)

Instrumentation

Batch:	BKL0239
Date:	12/9/2022 13:00
Analyst:	CR
Drying Oven:	015
Analytical Balance:	B13929 8002

Batch drying time

Record times as mm/dd/yy hh:mm

			Oven Temp, C
Date/time in oven:	12/13/22	15:39	91
Date/time out:	12/14/22	9:28	103
Elapsed hrs:	0.0		

TS (%) calculated as:

Final dry wt (g) = (Dry Wt - Tare Wt)

TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)

Oven Temps, °C	
Start Temp:	91
End Temp:	103

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
22L0198-01 A	0.81	12.66	5.65			No yes
22L0198-02	0.82	12.86	5.62			No yes
22L0198-03	0.82	11.20	5.13			No yes
22L0198-04	0.83	11.22	4.87			No yes
22L0198-05	0.82	12.81	5.72			No yes
22L0198-06	0.82	11.83	5.21			No yes
22L0198-07	0.80	11.40	4.94			No yes
22L0198-08	0.81	12.27	5.46			No yes
22L0198-09	0.81	12.15	5.14			No yes
22L0198-10 A	0.80	11.80	5.60			No yes

T/S + Screens
no copies