Analytical Resources, Incorporated
Analytical Chemists and Consultants

07 September 2021

Cindy Fields
Anchor QEA, LLC
1201 3rd Ave, Suite 2600
Seattle, WA 98101

RE: Lower Duwamish AOC4

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)
21G0212	N/A

Susan Dunnihoo

Digitally signed by Susan Dunnihoo
Date: 2021.09.07 12:47:13 -07'00'

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, Inc.

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.

Susan Dunnihoo, Director, Client Services

Cert# 100006-012

21G0212

1 of 2

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 3972

Project/Client Name: Duwamish AOEU
Project Number: 160067-02.02
Contact Name: Amara Vanderwort
Sampled By: Windward

Ship to: ARI
Attn: Sue Dunnihoo
Shipper: Courier
Form filled out by: Nicolas Eckhardt

Shipping Date: 7/16/21
Airbill Number:
Turnaround requested: STD

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	PCBs	TOC/TOTAL SOLIDS	Archive	Arsenic				Comments / Instructions [Jar tag number(s)]
7/15/2021	1455	LDW21-SC524	3	Sediment	X	X	X					
	1520	LDW21-SC528	3		X	X	X					
	1621	LDW21-SC538B	3		X	X	X					
		LDW21-SC538C	3		X	X	X					
7/15/2021	1621	LDW21-SC538E	3	Sediment	X	X	X					
7/16/2021	8:16	LDW21-IT582B	3		X	X	X	X				
	8:16	LDW21-IT582C	3		X	X	X	X				
	8:16	LDW21-IT582E	3		X	X	X	X				
	11:23	LDW21-IT579B	3		X	X	X	X				
	14:07	LDW21-IT597B	3		X	X	X	X				
	14:07	LDW21-IT597C	3		X	X	X	X				
7/16/2021	14:07	LDW21-IT597E	3	Sediment	X	X	X	X				
		Total Number of Containers	36	Purchase Order / Statement of Work #	CLF-052021-ARI							

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Brandi Quinlisk		Print name:	
Signature: Brandi Quinlisk	Company: ARI	Signature:	Company:
Company: Windward		Company:	
Date/Time: 7/16/21 17:39	Date/Time: 7/16/21 1739	Date/Time:	Date/Time:

* 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:

21G0212

2 of 2

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 4143

Project/Client Name: Duwamish AOC4
Project Number: 180067-02.02
Contact Name: Amara Vandenort
Sampled By: Windward

Ship to: ARI
Attn: Sue Dunnihoo
Shipper: Courier
Form filled out by: Brandi Quinlisk
Shipping Date: 7/16/2021
Airbill Number: —
Turnaround requested: STD

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): PCBs	TOC/Total solids	Archive					Comments / Instructions [Jar tag number(s)]
7/16/21	15:45	LDW21-SC539A	3	Sediment	X	X	X					
↓	↓	LDW21-SC539B	3	↓	X	X	X					
		LDW21-SC539C	3		X	X	X					
7/16/21	15:45	LDW21-SC539E	3	Sediment	X	X	X					
		Total Number of Containers	12	Purchase Order / Statement of Work # CLF-052021-ARI								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Brandi Quinlisk	[signature]	Print name:	
Signature: Brandi Quinlisk	Company: ARI	Signature:	Company:
Company: Windward		Company:	
Date/Time: 7/16/21 17:39	Date/Time: 7/16/21 1739	Date/Time:	Date/Time:

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

To be completed by Laboratory upon sample receipt:

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

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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Windward / Anchor

Project Name: Duwamish AOC4

COC No(s): _____ NA

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

Assigned ARI Job No: 21G0212

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 1857 | 5.6 | ~~5.7~~ SC | | | |

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: D005206

Cooler Accepted by: SC Date: 7/16/21 Time: 1739

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: SC Date: 7/20/21 Time: 0959 Labels checked by: SC

***** 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:

Sample "IT597B" had a broken jar, sample transferred to a new clean jar.

By: DL Date: 07/19/21

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Anchor QEA, LLC	Project:	Lower Duwamish AOC4	
1201 3rd Ave, Suite 2600	Project Number:	180067-02.03	**Reported:**
Seattle, WA 98101	Project Manager:	Cindy Fields	09/07/2021 12:32

ANALYTICAL REPORT FOR SAMPLES

Laboratory ID	Sample ID	Matrix	Date Sampled	Date Received
21G0212-01	LDW21-SC524	Solid	07/15/21 14:55	07/16/21 17:39
21G0212-02	LDW21-SC528	Solid	07/15/21 15:20	07/16/21 17:39
21G0212-03	LDW21-SC538B	Solid	07/15/21 16:21	07/16/21 17:39
21G0212-04	LDW21-SC538C	Solid	07/15/21 16:21	07/16/21 17:39
21G0212-05	LDW21-SC538E	Solid	07/15/21 16:21	07/16/21 17:39
21G0212-06	LDW21-IT582B	Solid	07/16/21 08:16	07/16/21 17:39
21G0212-07	LDW21-IT582C	Solid	07/16/21 08:16	07/16/21 17:39
21G0212-08	LDW21-IT582E	Solid	07/16/21 08:16	07/16/21 17:39
21G0212-09	LDW21-IT579B	Solid	07/16/21 11:23	07/16/21 17:39
21G0212-10	LDW21-IT597B	Solid	07/16/21 14:07	07/16/21 17:39
21G0212-11	LDW21-IT597C	Solid	07/16/21 14:07	07/16/21 17:39
21G0212-12	LDW21-IT597E	Solid	07/16/21 14:07	07/16/21 17:39
21G0212-13	LDW21-SC539A	Solid	07/16/21 15:45	07/16/21 17:39
21G0212-14	LDW21-SC539B	Solid	07/16/21 15:45	07/16/21 17:39
21G0212-15	LDW21-SC539C	Solid	07/16/21 15:45	07/16/21 17:39
21G0212-16	LDW21-SC539E	Solid	07/16/21 15:45	07/16/21 17:39

Anchor QEA, LLC	Project: Lower Duwamish AOC4	
1201 3rd Ave, Suite 2600	Project Number: 180067-02.03	**Reported:**
Seattle WA, 98101	Project Manager: Cindy Fields	07-Sep-2021 12:32

Case Narrative

Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Work Order: 21G0212

Sample receipt

Samples as listed on the preceding page were received 16-Jul-2021 17:39 under ARI work order 21G0212. For details regarding sample receipt, please refer to the Cooler Receipt Form. Mercury aliquots were frozen to meet QAPP requirements.

PCB Aroclors - EPA Method SW8082A

The sample(s) were extracted and analyzed within the recommended holding times. Some samples extracts were initially run at dilution based on screens and extract characteristics.

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 (BS/LCS) percent recoveries 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.

Total Metals - EPA Method 6020B

The sample(s) were digested 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 matrix spike/matrix spike duplicate (MS/MSD) percent recoveries were flagged "HC" as the amount spiked was low in comparison to the parent sample and relative percent difference (RPD) was within advisory control limits. The duplicate (DUP) relative percent difference (RPD) were within advisory control limits.

Total Mercury - EPA Method 7471

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

Initial and continuing calibrations were within method requirements.

Anchor QEA, LLC	Project: Lower Duwamish AOC4	
1201 3rd Ave, Suite 2600	Project Number: 180067-02.03	**Reported:**
Seattle WA, 98101	Project Manager: Cindy Fields	07-Sep-2021 12:32

Case Narrative

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.

Wet Chemistry

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 batch BJG0719 matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits, reported under workorder 21G0199.

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).
J	Estimated concentration value detected below the reporting limit.
HC	The natural concentration of the spiked analyte is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
D	The reported value is from a dilution
*	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, Incorporated
Analytical Chemists and Consultants

Dual Column

LDW21-SC524

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Solid	Laboratory ID:	21G0212-01 B	File ID:	08062120ECD7.D
Sampled:	07/15/21 14:55	Prepared:	07/27/21 14:38	Analyzed:	08/06/21 18:16
% Solids:	56.50	Preparation:	EPA 3546 (Microwave)	Initial/Final:	22.12 g Wet / 2.5 mL
Batch:	BJG0590	Sequence:	SJH0075	Calibration:	EE00069
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	2	1	31.5	1.6	4.0	
11097-69-1	Aroclor 1254	1	1	64.0	1.6	4.0	
11096-82-5	Aroclor 1260	1	1	94.1	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*8.0014*	*6.48*	*81.0*	*40 - 126*	
Tetrachlorometaxylene	*1*	*8.0014*	*5.66*	*70.8*	*44 - 120*	
Decachlorobiphenyl	*2*	*8.0014*	*5.78*	*72.3*	*40 - 126*	
Tetrachlorometaxylene	*2*	*8.0014*	*5.23*	*65.4*	*44 - 120*	

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

Data file 1: /210806.b/08062120ECD7.D
Data file 2: /210806.b/210806.b/08062120ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21G0212-01
Client ID:
Injection Date: 06-AUG-2021 18:16
Report Date: 08/11/2021 08:38
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.064	-0.004	94185	5.409	-0.005	231204	28.3	26.2	7.9	Tetrachloro-m-xylene
13.152	-0.013	86945	13.838	-0.009	410262	32.4	28.9	11.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	278552	-6.0
Hexabromobiphenyl	470266	300838	-36.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	717083	0.7
Hexabromobiphenyl	867949	791658	-8.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.648	-0.011	4788	55.4	1	7.052	-0.006	20965	56.8
Aroclor-1016	2	7.020	-0.012	28759	98.6	2	7.640	-0.011	72017	88.6
Aroclor-1016	3	7.166	-0.011	8307	70.1	3	7.845	-0.013	11627	38.2
Aroclor-1016	4	7.271	-0.016	6959	88.0	4	8.016	-0.014	11264	60.5
Total Col1Ave (4 peaks):				78.0		Total Col2Ave (4 peaks):			61.0	RPD = 24
Corrected Ave (3 peaks):				71.2		Corrected Ave (3 peaks):			51.8	RPD = 31
Aroclor-1221	1	4.098	0.076	479	23.2	1	4.638	-0.054	9655	206.9
Aroclor-1221	2	5.445	-0.010	621	17.6	2	6.087	0.003	10421	95.1
Aroclor-1221	3	5.718	-0.012	3096	34.6	3	6.406	-0.016	13249	65.6
Total Col1Ave (3 peaks):				25.1		Total Col2Ave (3 peaks):			122.5	RPD = 132*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	---			0.0	1	4.638	-0.053	9655	327.1
Aroclor-1232	2	5.718	-0.013	3096	40.5	2	6.087	0.002	10421	131.9
Aroclor-1232	3	7.020	-0.007	28759	224.0	3	6.406	-0.017	13249	76.5
Aroclor-1232	4	8.581	-0.024	28477	738.5	4	7.640	-0.021	72017	198.6
Total Col1Ave (3 peaks):				334.4		Total Col2Ave (4 peaks):			183.5	RPD = 58*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			135.7	
Aroclor-1242	1	6.648	-0.011	4788	62.2	1	7.052	-0.006	20965	65.9
Aroclor-1242	2	7.020	-0.011	28759	115.1	2	7.640	-0.011	72017	104.6
Aroclor-1242	3	8.248	-0.029	9637	280.6	3	8.931	-0.020	73006	234.5
Aroclor-1242	4	8.581	-0.032	28477	371.3	4	9.007	-0.024	68980	251.9
Total Col1Ave (4 peaks):				207.3		Total Col2Ave (4 peaks):			164.2	RPD = 23
Corrected Ave (3 peaks):				152.6		Corrected Ave (3 peaks):			135.0	RPD = 12
Aroclor-1248	1	7.785	-0.014	14726	126.7	1	8.097	-0.009	62077	237.5
Aroclor-1248	2	7.950	-0.018	15486	107.4	2	8.510	-0.012	51511	144.9
Aroclor-1248	3	8.297	-0.022	23312	161.5	3	8.931	-0.020	73006	142.6
Aroclor-1248	4	8.581	-0.029	28477	223.1	4	9.355	-0.023	57239	104.9
Total Col1Ave (4 peaks):				154.7		Total Col2Ave (4 peaks):			157.5	RPD = 2
Corrected Ave (3 peaks):				131.9		Corrected Ave (3 peaks):			130.8	RPD = 1
Aroclor-1254	1	8.657	-0.019	69005	293.0	1	9.225	-0.015	165463	304.7
Aroclor-1254	2	8.728	-0.018	30029	350.1	2	9.316	-0.017	72494	226.4
Aroclor-1254	3	9.024	-0.017	43566	301.8	3	9.747	-0.016	72802	178.2
Aroclor-1254	4	9.153	-0.023	98385	344.3	4	9.897	-0.017	301940	332.4
Aroclor-1254	5	9.840	-0.028	59656	309.7	5	10.136	-0.013	395244	405.7
Total Col1Ave (5 peaks):				319.8		Total Col2Ave (5 peaks):			289.5	RPD = 10
Corrected Ave (4 peaks):				312.2		Corrected Ave (4 peaks):			260.4	RPD = 18
Aroclor-1260	1	10.363	-0.020	52292	474.2	1	11.415	-0.013	188307	381.4
Aroclor-1260	2	10.682	-0.019	42471	374.6	2	11.664	-0.015	484445	376.1
Aroclor-1260	3	11.032	-0.020	133450	449.3	3	12.246	-0.015	338391	404.1
Aroclor-1260	4	11.432	-0.020	66899	441.9	4	12.960	-0.012	202880	563.6
Aroclor-1260	5	11.538	-0.016	35671	611.1	NS	---			----
Total Col1Ave (5 peaks):				470.2		Total Col2Ave (4 peaks):			431.3	RPD = 9
Corrected Ave (4 peaks):				435.0		Corrected Ave (3 peaks):			387.2	RPD = 12
Aroclor-1262	1	10.363	-0.028	52292	276.4	1	10.954	-0.034	184884	232.6
Aroclor-1262	2	11.432	-0.029	66899	548.0	2	11.664	-0.036	484445	308.0
Aroclor-1262	3	11.609	-0.027	42955	260.9	3	12.175	-0.033	184076	244.0
Aroclor-1262	4	12.259	-0.029	42253	324.6	4	12.960	-0.033	202880	296.5
Total Col1Ave (4 peaks):				352.5		Total Col2Ave (4 peaks):			270.3	RPD = 26
Corrected Ave (3 peaks):				287.3		Corrected Ave (3 peaks):			257.7	RPD = 11
Aroclor-1268	1	11.538	-0.027	35671	70.6	1	12.175	-0.033	184076	80.0
Aroclor-1268	2	11.609	-0.027	42955	83.9	2	12.246	-0.028	338391	135.0
Aroclor-1268	3	12.010	-0.002	20472	50.9	3	12.625	-0.035	15784	7.2
Aroclor-1268	4	12.753	-0.025	19265	15.3	4	13.435	-0.038	83458	11.7
Total Col1Ave (4 peaks):				55.2		Total Col2Ave (4 peaks):			58.5	RPD = 6

Corrected Ave (3 peaks): 45.6 Corrected Ave (3 peaks): 33.0 RPD = 32

Total PCB Area Col1 (5.168 - 13.065) = 1830609 Col1 Total PCB = 0.7 ppm*

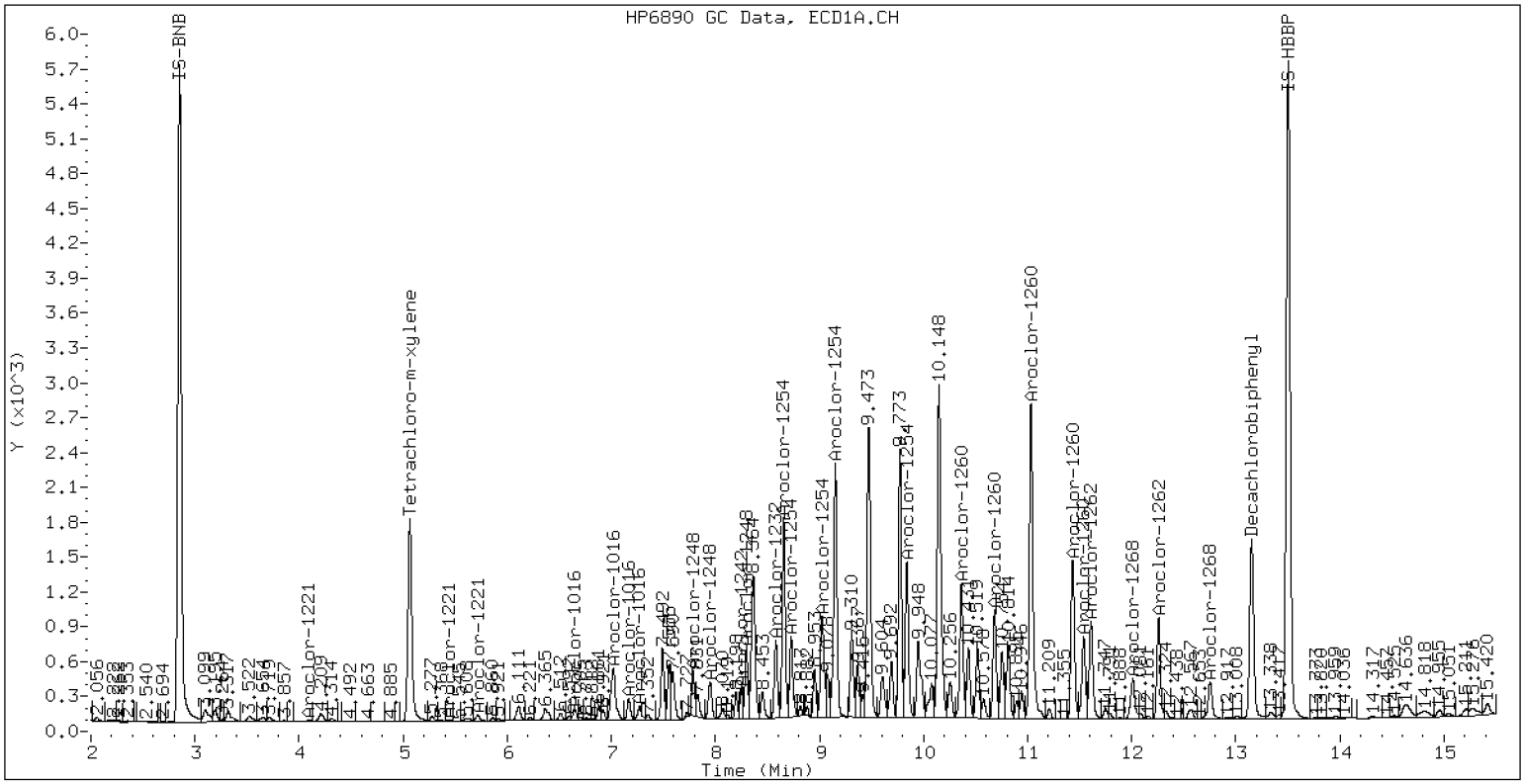
Total PCB Area Col2 (5.168 - 13.065) = 5797283 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

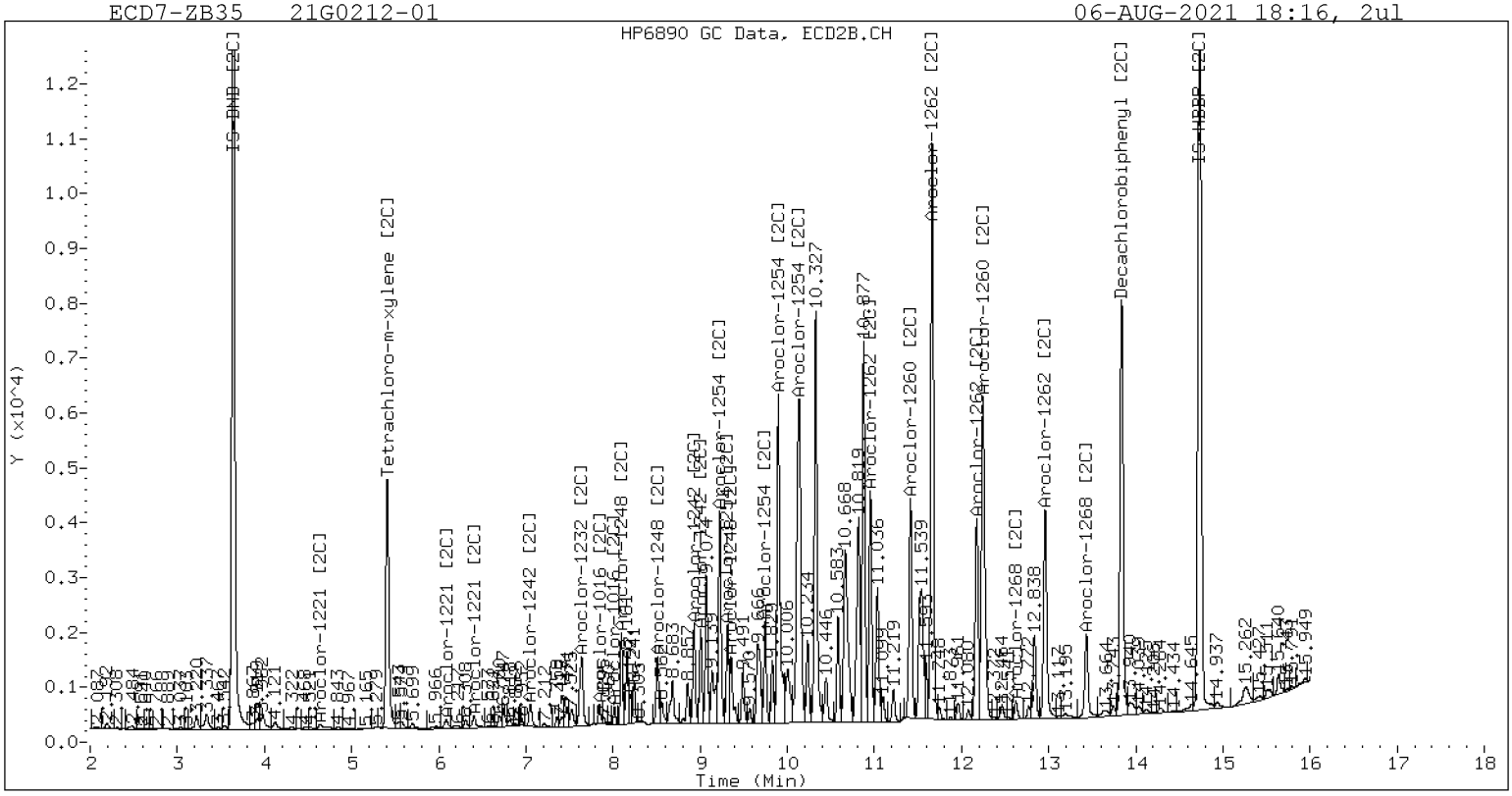
PCB Dual Column Chromatograms

ECD7-ZB5 21G0212-01 06-AUG-2021 18:16, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21G0212-01 06-AUG-2021 18:16, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LDW21-SC528

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Solid	Laboratory ID:	21G0212-02 B	File ID:	08062121ECD7.D
Sampled:	07/15/21 15:20	Prepared:	07/27/21 14:38	Analyzed:	08/06/21 18:36
% Solids:	59.86	Preparation:	EPA 3546 (Microwave)	Initial/Final:	20.89 g Wet / 2.5 mL
Batch:	BJG0590	Sequence:	SJH0075	Calibration:	EE00069
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	2	1	32.8	1.6	4.0	
11097-69-1	Aroclor 1254	1	1	65.3	1.6	4.0	
11096-82-5	Aroclor 1260	1	1	76.4	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9970*	*6.89*	*86.2*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9970*	*6.09*	*76.1*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9970*	*6.16*	*77.1*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9970*	*5.59*	*69.9*	*44 - 120*	

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

Data file 1: /210806.b/08062121ECD7.D
Data file 2: /210806.b/210806.b/08062121ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21G0212-02
Client ID:
Injection Date: 06-AUG-2021 18:36
Report Date: 08/11/2021 08:38
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.064	-0.004	98831	5.408	-0.006	244946	30.4	28.0	8.5	Tetrachloro-m-xylene
13.153	-0.012	91618	13.839	-0.009	429604	34.5	30.8	11.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	271919	-8.3
Hexabromobiphenyl	470266	298114	-36.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	710484	-0.2
Hexabromobiphenyl	867949	777283	-10.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.648	-0.011	4760	56.4	1	7.052	-0.006	21310	58.2
Aroclor-1016	2	7.020	-0.012	28473	100.0	2	7.640	-0.011	72105	89.6
Aroclor-1016	3	7.168	-0.010	8894	76.9	3	7.845	-0.014	12584	41.7
Aroclor-1016	4	7.272	-0.015	6390	82.7	4	8.017	-0.014	11388	61.7
Total Col1Ave (4 peaks):				79.0		Total Col2Ave (4 peaks):			62.8	RPD = 23
Corrected Ave (3 peaks):				72.0		Corrected Ave (3 peaks):			53.9	RPD = 29
Aroclor-1221	1	4.097	0.075	361	17.9	1	4.637	-0.055	8455	182.8
Aroclor-1221	2	5.445	-0.011	473	13.7	2	6.086	0.002	9892	91.1
Aroclor-1221	3	5.717	-0.012	3233	37.0	3	6.406	-0.016	13253	66.2
Total Col1Ave (3 peaks):				22.9		Total Col2Ave (3 peaks):			113.4	RPD = 133*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	---			0.0	1	4.637	-0.055	8455	289.1
Aroclor-1232	2	5.717	-0.014	3233	43.4	2	6.086	0.002	9892	126.4
Aroclor-1232	3	7.020	-0.007	28473	227.2	3	6.406	-0.017	13253	77.2
Aroclor-1232	4	8.582	-0.024	29505	783.8	4	7.640	-0.021	72105	200.7
Total Col1Ave (3 peaks):				351.5		Total Col2Ave (4 peaks):			173.3	RPD = 68*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			134.8	
Aroclor-1242	1	6.648	-0.011	4760	63.4	1	7.052	-0.006	21310	67.6
Aroclor-1242	2	7.020	-0.011	28473	116.8	2	7.640	-0.011	72105	105.7
Aroclor-1242	3	8.249	-0.028	10050	299.7	3	8.931	-0.019	75539	244.9
Aroclor-1242	4	8.582	-0.031	29505	394.1	4	9.008	-0.024	70739	260.8
Total Col1Ave (4 peaks):				218.5		Total Col2Ave (4 peaks):			169.7	RPD = 25
Corrected Ave (3 peaks):				160.0		Corrected Ave (3 peaks):			139.4	RPD = 14
Aroclor-1248	1	7.786	-0.013	14866	131.0	1	8.097	-0.009	63595	245.5
Aroclor-1248	2	7.950	-0.018	15980	113.5	2	8.510	-0.012	53152	150.9
Aroclor-1248	3	8.298	-0.021	24124	171.2	3	8.931	-0.020	75539	149.0
Aroclor-1248	4	8.582	-0.028	29505	236.8	4	9.358	-0.021	60280	111.5
Total Col1Ave (4 peaks):				163.1		Total Col2Ave (4 peaks):			164.2	RPD = 1
Corrected Ave (3 peaks):				138.6		Corrected Ave (3 peaks):			137.1	RPD = 1
Aroclor-1254	1	8.657	-0.019	71218	309.8	1	9.226	-0.014	169888	315.8
Aroclor-1254	2	8.728	-0.018	30439	363.6	2	9.316	-0.017	74698	235.5
Aroclor-1254	3	9.025	-0.016	40845	289.9	3	9.748	-0.015	74940	185.1
Aroclor-1254	4	9.154	-0.022	96919	347.4	4	9.898	-0.016	308912	343.2
Aroclor-1254	5	9.840	-0.027	60694	322.8	5	10.136	-0.013	387942	401.9
Total Col1Ave (5 peaks):				326.7		Total Col2Ave (5 peaks):			296.3	RPD = 10
Corrected Ave (4 peaks):				317.5		Corrected Ave (4 peaks):			269.9	RPD = 16
Aroclor-1260	1	10.364	-0.019	43833	401.1	1	11.417	-0.011	172222	355.3
Aroclor-1260	2	10.682	-0.019	37550	334.2	2	11.665	-0.013	392330	310.3
Aroclor-1260	3	11.033	-0.019	109712	372.7	3	12.248	-0.013	260472	316.8
Aroclor-1260	4	11.433	-0.019	56073	373.8	4	12.960	-0.012	144803	409.7
Aroclor-1260	5	11.538	-0.016	24767	428.2	NS	---			----
Total Col1Ave (5 peaks):				382.0		Total Col2Ave (4 peaks):			348.0	RPD = 9
Corrected Ave (4 peaks):				370.4		Corrected Ave (3 peaks):			327.4	RPD = 12
Aroclor-1262	1	10.364	-0.027	43833	233.8	1	10.955	-0.034	157390	201.6
Aroclor-1262	2	11.433	-0.029	56073	463.6	2	11.665	-0.035	392330	254.1
Aroclor-1262	3	11.609	-0.027	30562	187.3	3	12.176	-0.032	138775	187.4
Aroclor-1262	4	12.258	-0.030	33702	261.3	4	12.960	-0.033	144803	215.5
Total Col1Ave (4 peaks):				286.5		Total Col2Ave (4 peaks):			214.7	RPD = 29
Corrected Ave (3 peaks):				227.5		Corrected Ave (3 peaks):			201.5	RPD = 12
Aroclor-1268	1	11.538	-0.027	24767	49.5	1	12.176	-0.031	138775	61.5
Aroclor-1268	2	11.609	-0.027	30562	60.3	2	12.248	-0.026	260472	105.8
Aroclor-1268	3	12.011	-0.001	16980	42.6	3	12.627	-0.033	10210	4.7
Aroclor-1268	4	12.753	-0.024	13075	10.5	4	13.434	-0.038	50214	7.2
Total Col1Ave (4 peaks):				40.7		Total Col2Ave (4 peaks):			44.8	RPD = 10

Corrected Ave (3 peaks): 34.2 Corrected Ave (3 peaks): 24.5 RPD = 33

Total PCB Area Col1 (5.168 - 13.065) = 1737937 Col1 Total PCB = 0.7 ppm*

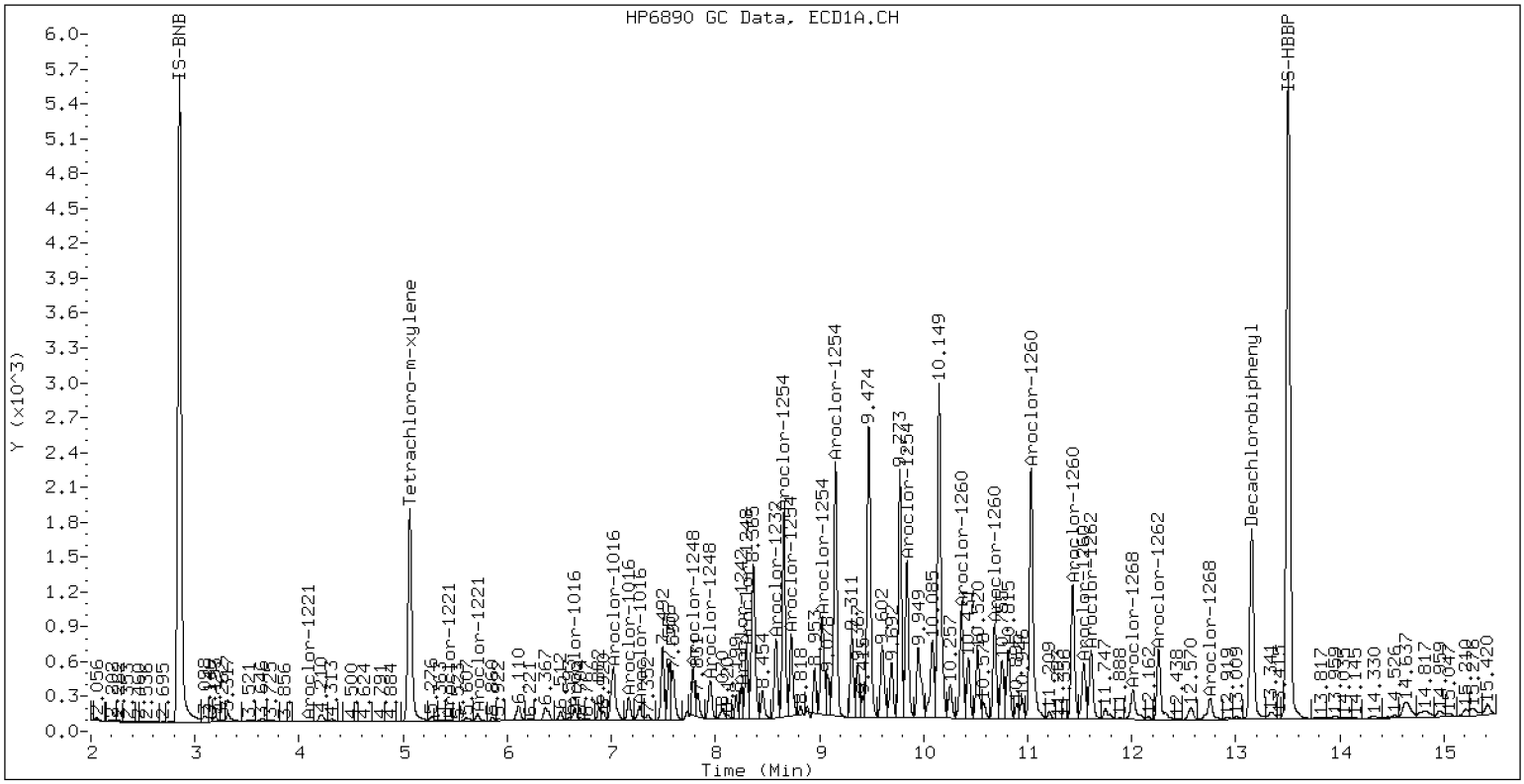
Total PCB Area Col2 (5.168 - 13.065) = 5499312 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

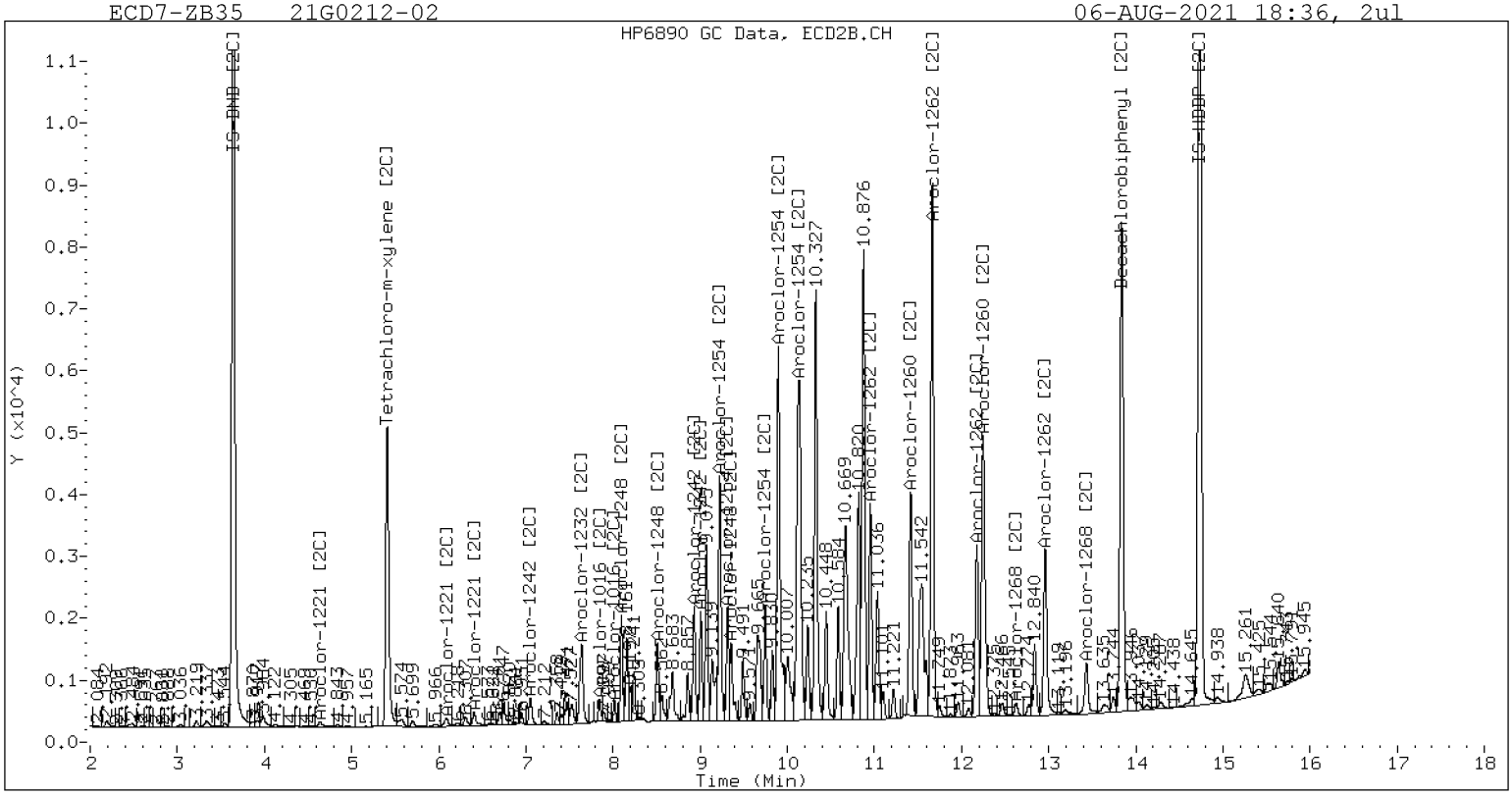
PCB Dual Column Chromatograms

ECD7-ZB5 21G0212-02 06-AUG-2021 18:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21G0212-02 06-AUG-2021 18:36, 2ul

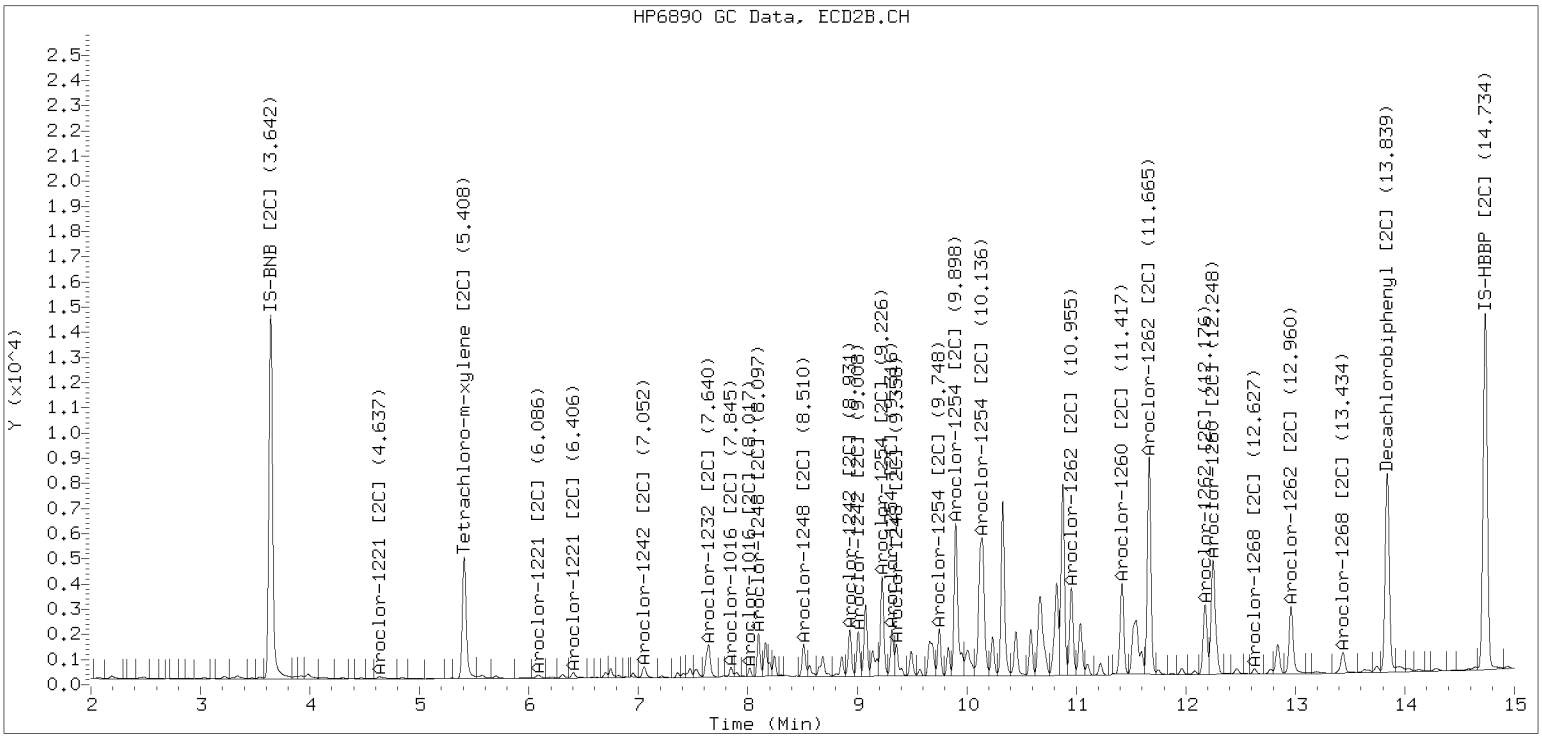


ZB-35 Manual Integration: YES

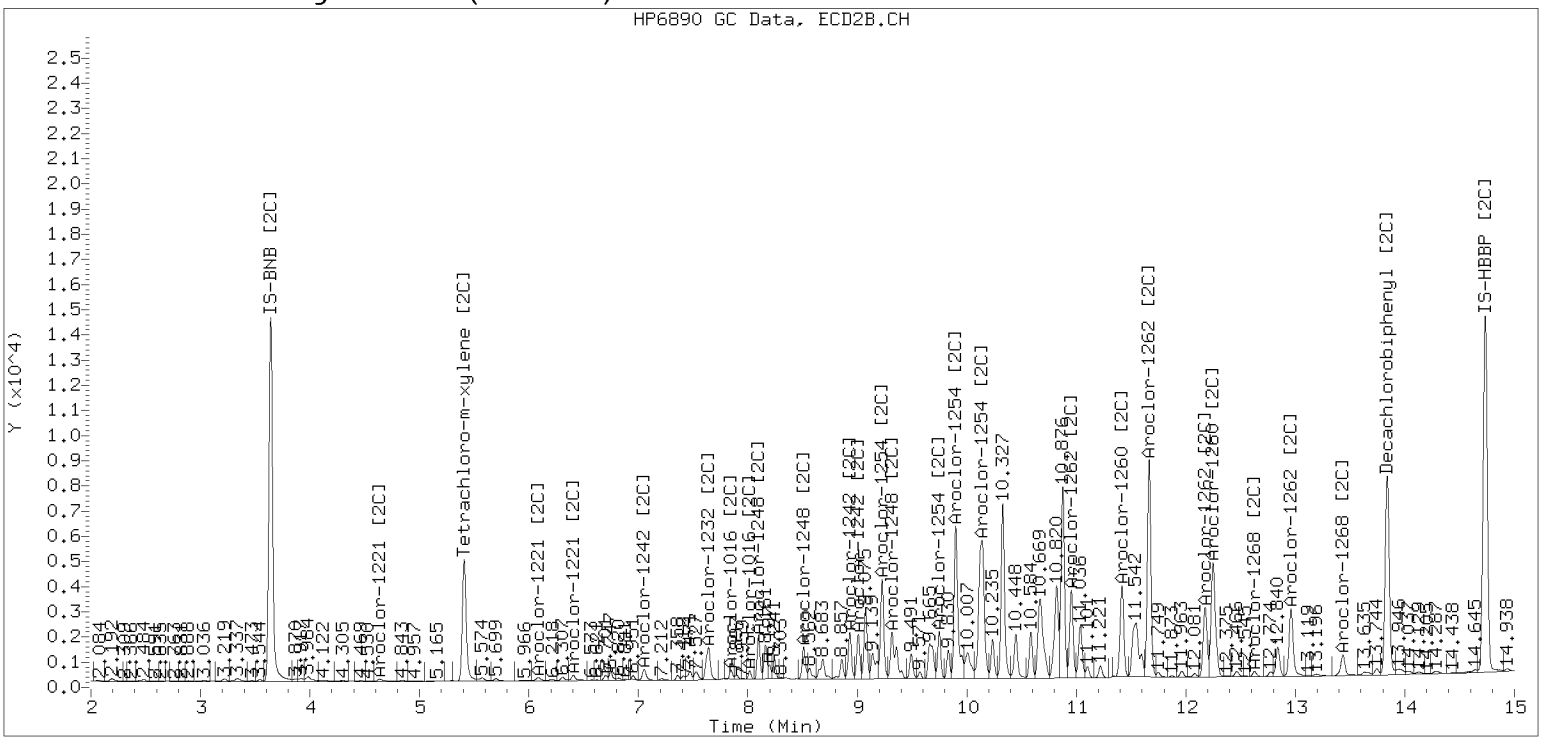
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/210806.b/210806.b/08062121ECD7.D Injection Date: 06-AUG-2021

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

LDW21-SC538B

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Solid	Laboratory ID:	21G0212-03 B	File ID:	08062122ECD7.D
Sampled:	07/15/21 16:21	Prepared:	07/27/21 14:38	Analyzed:	08/06/21 18:57
% Solids:	74.88	Preparation:	EPA 3546 (Microwave)	Initial/Final:	16.7 g Wet / 2.5 mL
Batch:	BJG0590	Sequence:	SJH0075	Calibration:	EE00069
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	4.0	1.6	4.0	U
11097-69-1	Aroclor 1254	1	1	4.0	1.6	4.0	U
11096-82-5	Aroclor 1260	1	1	4.0	0.6	4.0	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9968*	*7.53*	*94.2*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9968*	*6.44*	*80.6*	*44 - 120*	

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

Data file 1: /210806.b/08062122ECD7.D
Data file 2: /210806.b/210806.b/08062122ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21G0212-03
Client ID:
Injection Date: 06-AUG-2021 18:57
Report Date: 08/11/2021 08:39
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.065	-0.003	104059	5.411	-0.004	275024	32.2	31.5	2.2	Tetrachloro-m-xylene
13.161	-0.004	131021	13.846	-0.002	624262	37.7	35.7	5.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	270478	-8.8
Hexabromobiphenyl	470266	390029	-17.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	707918	-0.6
Hexabromobiphenyl	867949	976616	12.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.607	-0.052	1322	15.8	1	7.051	-0.007	2631	7.2
Aroclor-1016	2	7.011	-0.021	1084	3.8	2	7.618	-0.034	5134	6.4
Aroclor-1016	3	7.176	-0.001	690	6.0	3	7.895	0.036	1574	5.2
Aroclor-1016	4	7.289	0.002	568	7.4	4	8.029	-0.002	863	4.7
Total Col1Ave (4 peaks):					8.2	Total Col2Ave (4 peaks):				5.9 RPD = 33
Corrected Ave (3 peaks):					5.7	Corrected Ave (3 peaks):				5.4 RPD = 5
Aroclor-1221	1	4.110	0.087	262	13.1	1	4.750	0.058	3588	77.9
Aroclor-1221	2	5.371	-0.085	395	11.5	2	6.087	0.003	9768	90.3
Aroclor-1221	3	5.718	-0.011	389	4.5	3	6.401	-0.021	5226	26.2
Total Col1Ave (3 peaks):					9.7	Total Col2Ave (3 peaks):				64.8 RPD = 148*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	---			0.0	1	4.750	0.058	3588	123.1
Aroclor-1232	2	5.718	-0.013	389	5.2	2	6.087	0.002	9768	125.2
Aroclor-1232	3	7.011	-0.016	1084	8.7	3	6.401	-0.021	5226	30.6
Aroclor-1232	4	8.625	0.020	1461	39.0	4	7.698	0.036	2064	5.8
Total Col1Ave (3 peaks):					17.7	Total Col2Ave (4 peaks):				71.2 RPD = 121*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				53.2
Aroclor-1242	1	6.607	-0.052	1322	17.7	1	7.051	-0.007	2631	8.4
Aroclor-1242	2	7.011	-0.020	1084	4.5	2	7.618	-0.033	5134	7.6
Aroclor-1242	3	8.298	0.021	479	14.4	3	8.933	-0.018	3935	12.8
Aroclor-1242	4	8.625	0.012	1461	19.6	4	9.032	0.000	7572	28.0
Total Col1Ave (4 peaks):					14.0	Total Col2Ave (4 peaks):				14.2 RPD = 1
Corrected Ave (3 peaks):					12.2	Corrected Ave (3 peaks):				9.6 RPD = 24
Aroclor-1248	1	7.806	0.007	448	4.0	1	8.101	-0.006	1098	4.3
Aroclor-1248	2	7.970	0.002	145	1.0	2	8.527	0.006	1121	3.2
Aroclor-1248	3	8.298	-0.021	479	3.4	3	8.933	-0.018	3935	7.8
Aroclor-1248	4	8.625	0.015	1461	11.8	4	9.382	0.004	3792	7.0
Total Col1Ave (4 peaks):					5.1	Total Col2Ave (4 peaks):				5.6 RPD = 10
Corrected Ave (3 peaks):					2.8	Corrected Ave (3 peaks):				4.8 RPD = 53*
Aroclor-1254	1	8.625	-0.051	1461	6.4	1	9.268	0.028	4749	8.9
Aroclor-1254	2	8.806	0.060	562	6.7	2	9.382	0.050	3792	12.0
Aroclor-1254	3	8.982	-0.060	855	6.1	3	9.749	-0.015	4665	11.6
Aroclor-1254	4	9.166	-0.010	675	2.4	4	9.899	-0.016	2496	2.8
Aroclor-1254	5	9.857	-0.011	871	4.7	5	10.147	-0.002	13644	14.2
Total Col1Ave (5 peaks):					5.3	Total Col2Ave (5 peaks):				9.9 RPD = 61*
Corrected Ave (4 peaks):					4.9	Corrected Ave (4 peaks):				8.8 RPD = 57*
Aroclor-1260	1	10.364	-0.019	173	1.2	1	11.430	0.002	3024	5.0
Aroclor-1260	2	10.711	0.010	273	1.9	2	11.672	-0.006	3503	2.2
Aroclor-1260	3	11.097	0.045	2082	5.4	3	12.268	0.006	2118	2.1
Aroclor-1260	4	11.467	0.015	454	2.3	4	12.958	-0.015	3665	8.3
Aroclor-1260	5	11.553	-0.001	298	3.9	NS	---			----
Total Col1Ave (5 peaks):					2.9	Total Col2Ave (4 peaks):				4.4 RPD = 39
Corrected Ave (4 peaks):					2.3	Corrected Ave (3 peaks):				3.1 RPD = 28
Aroclor-1262	1	10.364	-0.027	173	0.7	1	10.999	0.010	3860	3.9
Aroclor-1262	2	11.467	0.005	454	2.9	2	11.672	-0.027	3503	1.8
Aroclor-1262	3	11.630	-0.006	655	3.1	3	12.170	-0.038	15126	16.3
Aroclor-1262	4	12.265	-0.024	1167	6.9	4	12.958	-0.035	3665	4.3
Total Col1Ave (4 peaks):					3.4	Total Col2Ave (4 peaks):				6.6 RPD = 64*
Corrected Ave (3 peaks):					2.2	Corrected Ave (3 peaks):				3.4 RPD = 41*
Aroclor-1268	1	11.553	-0.012	298	0.5	1	12.170	-0.037	15126	5.3
Aroclor-1268	2	11.630	-0.006	655	1.0	2	12.268	-0.007	2118	0.7
Aroclor-1268	3	11.997	-0.015	1039	2.0	3	12.637	-0.022	6400	2.4
Aroclor-1268	4	12.763	-0.014	2190	1.3	4	13.439	-0.034	8290	0.9
Total Col1Ave (4 peaks):					1.2	Total Col2Ave (4 peaks):				2.3 RPD = 64*

Corrected Ave (3 peaks): 0.9 Corrected Ave (3 peaks): 1.3 RPD = 36

Total PCB Area Col1 (5.168 - 13.065) = 62101 Col1 Total PCB = 0.0 ppm*

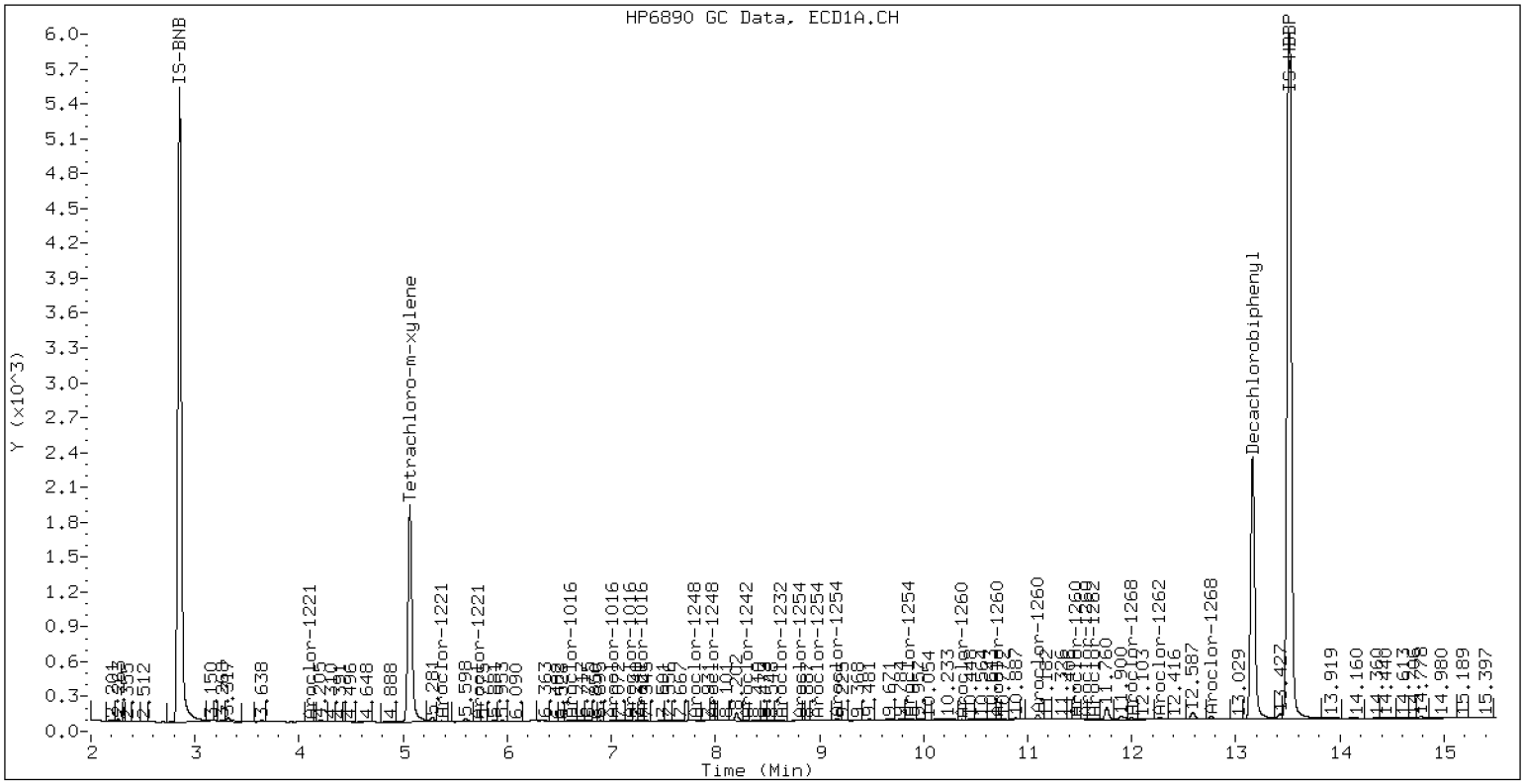
Total PCB Area Col2 (5.168 - 13.065) = 657627 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

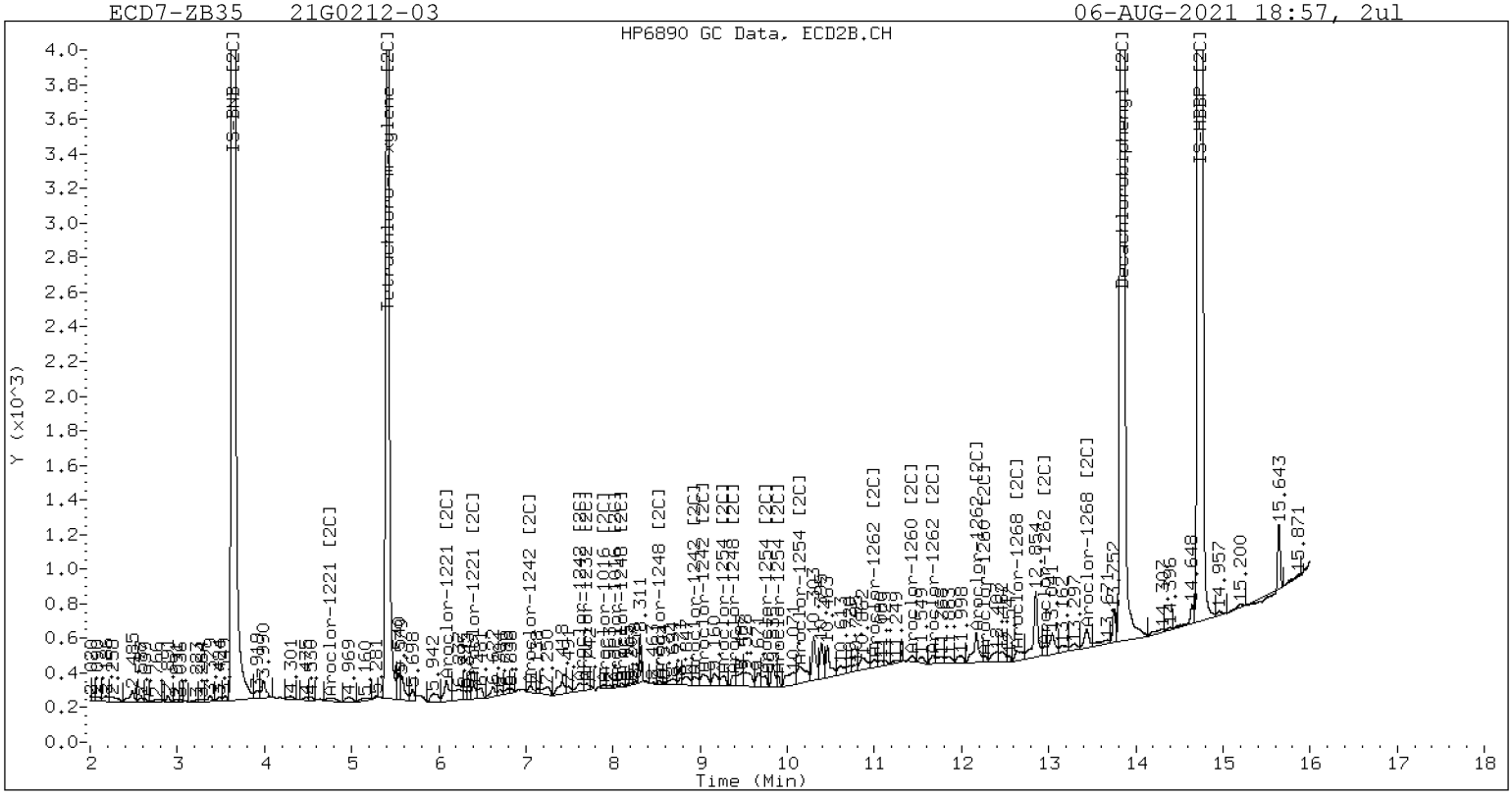
PCB Dual Column Chromatograms

ECD7-ZB5 21G0212-03 06-AUG-2021 18:57, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21G0212-03 06-AUG-2021 18:57, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LDW21-SC538C

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Solid	Laboratory ID:	21G0212-04 B	File ID:	08062123ECD7.D
Sampled:	07/15/21 16:21	Prepared:	07/27/21 14:38	Analyzed:	08/06/21 19:17
% Solids:	77.52	Preparation:	EPA 3546 (Microwave)	Initial/Final:	16.13 g Wet / 2.5 mL
Batch:	BJG0590	Sequence:	SJH0075	Calibration:	EE00069
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	4.0	1.6	4.0	U
11097-69-1	Aroclor 1254	1	1	4.0	1.6	4.0	U
11096-82-5	Aroclor 1260	1	1	4.0	0.6	4.0	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9975*	*7.24*	*90.5*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9975*	*6.08*	*76.0*	*44 - 120*	

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

Data file 1: /210806.b/08062123ECD7.D
Data file 2: /210806.b/210806.b/08062123ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21G0212-04
Client ID:
Injection Date: 06-AUG-2021 19:17
Report Date: 08/11/2021 08:39
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.064	-0.004	101153	5.410	-0.005	266255	30.4	30.0	1.3	Tetrachloro-m-xylene
13.160	-0.005	125119	13.845	-0.002	621941	36.2	35.3	2.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	278541	-6.0
Hexabromobiphenyl	470266	387562	-17.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	719229	1.0
Hexabromobiphenyl	867949	983704	13.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.607	-0.052	539	6.2	1	7.045	-0.013	3064	8.3
Aroclor-1016	2	7.040	0.007	723	2.5	2	7.652	0.000	1423	1.7
Aroclor-1016	3	7.172	-0.005	151	1.3	3	7.884	0.026	882	2.9
Aroclor-1016	4	7.333	0.046	569	7.2	4	8.029	-0.001	613	3.3
Total Col1Ave (4 peaks):					4.3	Total Col2Ave (4 peaks):				4.0 RPD = 6
Corrected Ave (3 peaks):					3.3	Corrected Ave (3 peaks):				2.6 RPD = 23
Aroclor-1221	1	4.029	0.006	244	11.8	1	4.736	0.044	4062	86.8
Aroclor-1221	2	5.375	-0.080	1678	47.5	2	6.086	0.003	8942	81.3
Aroclor-1221	3	5.703	-0.026	400	4.5	3	6.400	-0.022	4468	22.0
Total Col1Ave (3 peaks):					21.3	Total Col2Ave (3 peaks):				63.4 RPD = 99*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	---			0.0	1	4.736	0.045	4062	137.2
Aroclor-1232	2	5.703	-0.028	400	5.2	2	6.086	0.002	8942	112.9
Aroclor-1232	3	7.040	0.012	723	5.6	3	6.400	-0.023	4468	25.7
Aroclor-1232	4	8.626	0.021	1368	35.5	4	7.652	-0.010	1423	3.9
Total Col1Ave (3 peaks):					15.4	Total Col2Ave (4 peaks):				69.9 RPD = 128*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				47.5
Aroclor-1242	1	6.607	-0.052	539	7.0	1	7.045	-0.012	3064	9.6
Aroclor-1242	2	7.040	0.008	723	2.9	2	7.652	0.001	1423	2.1
Aroclor-1242	3	8.202	-0.075	22582	657.4	3	8.936	-0.015	3195	10.2
Aroclor-1242	4	8.626	0.013	1368	17.8	4	9.064	0.032	6127	22.3
Total Col1Ave (4 peaks):					171.3	Total Col2Ave (4 peaks):				11.0 RPD = 176*
Corrected Ave (3 peaks):					9.2	Corrected Ave (3 peaks):				7.3 RPD = 24
Aroclor-1248	1	7.814	0.014	261	2.2	1	8.103	-0.004	885	3.4
Aroclor-1248	2	7.912	-0.056	843	5.8	2	8.528	0.006	914	2.6
Aroclor-1248	3	8.394	0.074	1259	8.7	3	8.936	-0.015	3195	6.2
Aroclor-1248	4	8.626	0.016	1368	10.7	4	9.383	0.004	4130	7.5
Total Col1Ave (4 peaks):					6.9	Total Col2Ave (4 peaks):				4.9 RPD = 33
Corrected Ave (3 peaks):					5.6	Corrected Ave (3 peaks):				4.1 RPD = 32
Aroclor-1254	1	8.626	-0.049	1368	5.8	1	9.267	0.026	5068	9.3
Aroclor-1254	2	8.810	0.064	530	6.2	2	9.383	0.050	4130	12.9
Aroclor-1254	3	8.973	-0.068	299	2.1	3	9.752	-0.011	2298	5.6
Aroclor-1254	4	9.167	-0.008	507	1.8	4	9.901	-0.013	2340	2.6
Aroclor-1254	5	9.855	-0.013	350	1.8	5	10.142	-0.006	16804	17.2
Total Col1Ave (5 peaks):					3.5	Total Col2Ave (5 peaks):				9.5 RPD = 92*
Corrected Ave (4 peaks):					2.9	Corrected Ave (4 peaks):				7.6 RPD = 90*
Aroclor-1260	1	---			0.0	1	11.431	0.003	1649	2.7
Aroclor-1260	2	10.715	0.014	219	1.5	2	11.674	-0.005	2572	1.6
Aroclor-1260	3	11.045	-0.007	271	0.7	3	12.173	-0.089	9201	8.8
Aroclor-1260	4	11.457	0.005	109	0.6	4	12.959	-0.013	2630	5.9
Aroclor-1260	5	11.549	-0.005	168	2.2	NS	---			----
Total Col1Ave (4 peaks):					1.3	Total Col2Ave (4 peaks):				4.8 RPD = 117*
Corrected Ave (3 peaks):					0.9	Corrected Ave (3 peaks):				3.4 RPD = 114*
Aroclor-1262	1	---			0.0	1	10.999	0.010	2213	2.2
Aroclor-1262	2	11.457	-0.004	109	0.7	2	11.674	-0.026	2572	1.3
Aroclor-1262	3	11.626	-0.010	467	2.2	3	12.173	-0.035	9201	9.8
Aroclor-1262	4	12.287	-0.002	603	3.6	4	12.959	-0.034	2630	3.1
Total Col1Ave (3 peaks):					2.2	Total Col2Ave (4 peaks):				4.1 RPD = 62*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				2.2
Aroclor-1268	1	11.549	-0.017	168	0.3	1	12.173	-0.034	9201	3.2
Aroclor-1268	2	11.626	-0.010	467	0.7	2	---			0.0
Aroclor-1268	3	11.995	-0.017	902	1.7	3	12.635	-0.025	5041	1.8
Aroclor-1268	4	12.762	-0.015	2106	1.3	4	13.441	-0.021	6277	0.7
Total Col1Ave (4 peaks):					1.0	Total Col2Ave (3 peaks):				1.9 RPD = 63*

Corrected Ave (3 peaks): 0.8 Corrected Ave: < 3 Peaks

Total PCB Area Col1 (5.168 - 13.065) = 66511 Col1 Total PCB = 0.0 ppm*

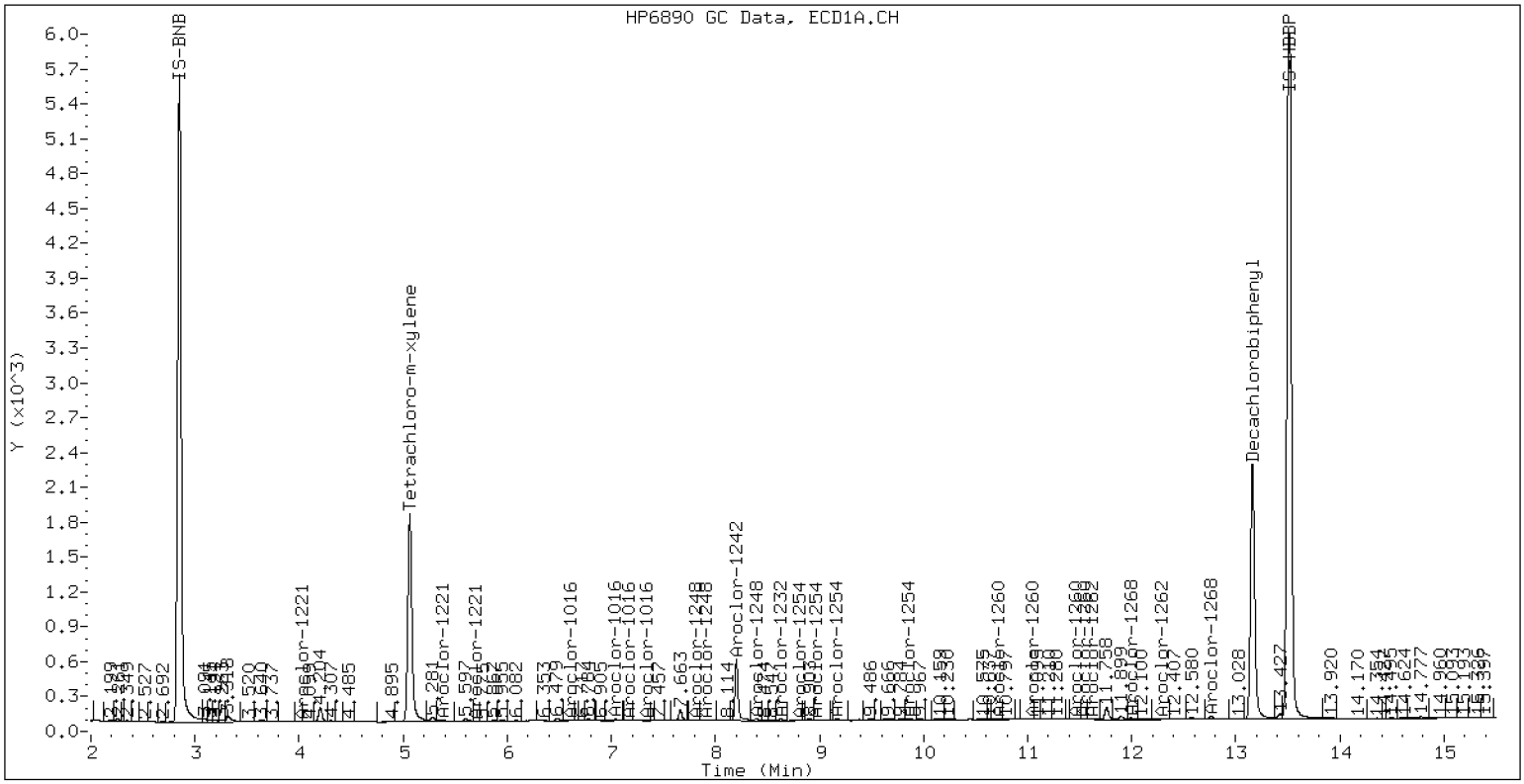
Total PCB Area Col2 (5.168 - 13.065) = 608742 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

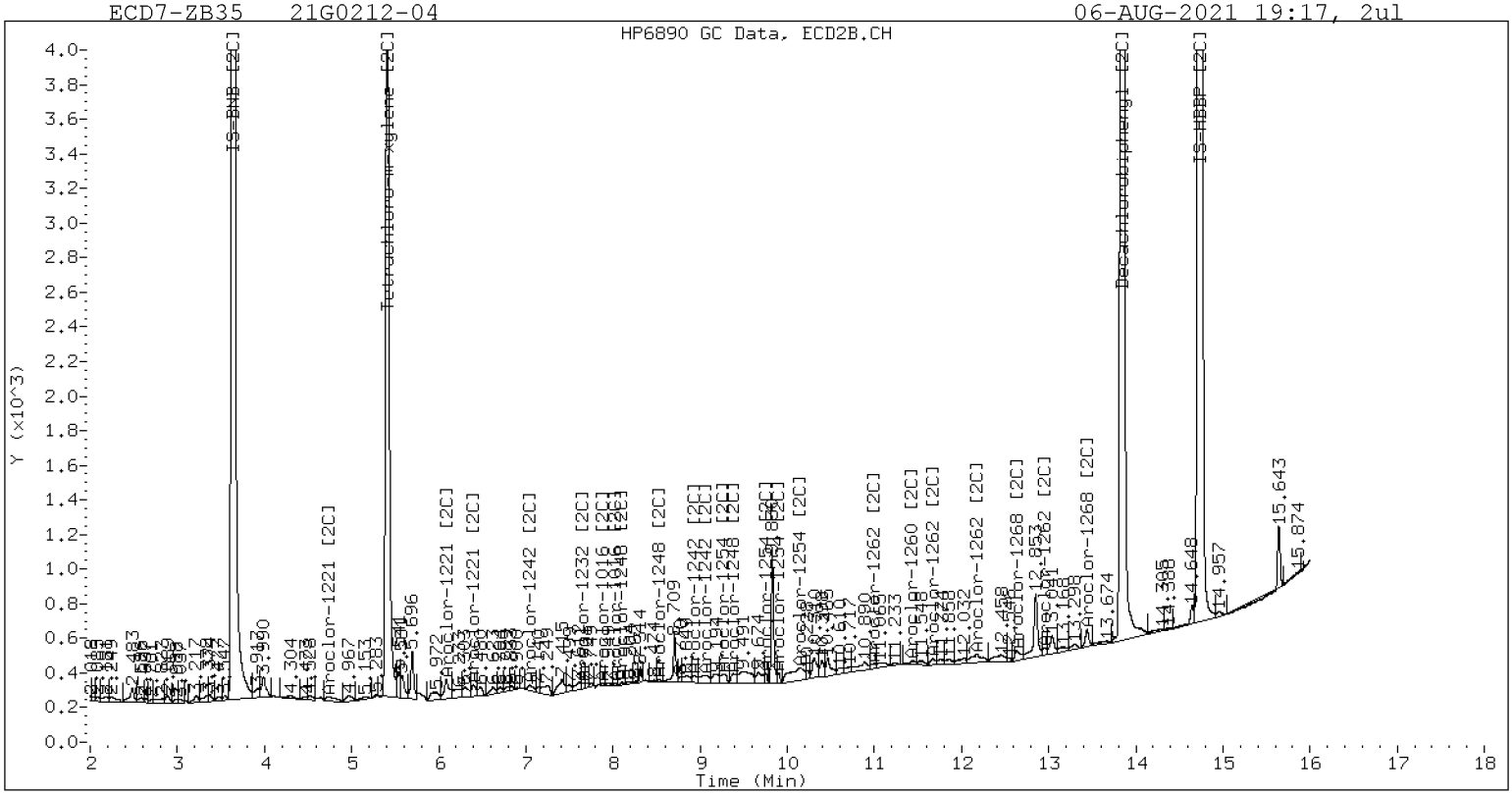
PCB Dual Column Chromatograms

ECD7-ZB5 21G0212-04 06-AUG-2021 19:17, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21G0212-04 06-AUG-2021 19:17, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LDW21-SC538E

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Solid	Laboratory ID:	21G0212-05 B	File ID:	08062124ECD7.D
Sampled:	07/15/21 16:21	Prepared:	07/27/21 14:38	Analyzed:	08/06/21 19:37
% Solids:	79.04	Preparation:	EPA 3546 (Microwave)	Initial/Final:	15.82 g Wet / 2.5 mL
Batch:	BJG0590	Sequence:	SJH0075	Calibration:	EE00069
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	4.0	1.6	4.0	U
11097-69-1	Aroclor 1254	1	1	4.0	1.6	4.0	U
11096-82-5	Aroclor 1260	1	1	4.0	0.6	4.0	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9974*	*6.92*	*86.6*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9974*	*6.45*	*80.7*	*44 - 120*	

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

Data file 1: /210806.b/08062124ECD7.D
Data file 2: /210806.b/210806.b/08062124ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21G0212-05
Client ID:
Injection Date: 06-AUG-2021 19:37
Report Date: 08/11/2021 08:39
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.066	-0.002	110227	5.412	-0.003	302411	32.3	31.9	1.1	Tetrachloro-m-xylene
13.163	-0.002	140434	13.847	-0.001	696983	34.6	35.7	3.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	286008	-3.5
Hexabromobiphenyl	470266	454891	-3.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	768222	7.9
Hexabromobiphenyl	867949	1087786	25.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.652	-0.007	1240	14.0	1	7.056	-0.002	5176	13.1
Aroclor-1016	2	7.028	-0.004	1301	4.3	2	7.651	-0.001	8432	9.7
Aroclor-1016	3	7.177	-0.001	278	2.3	3	7.901	0.043	645	2.0
Aroclor-1016	4	7.282	-0.005	449	5.5	4	8.026	-0.004	1068	5.4
Total Col1Ave (4 peaks):				6.5		Total Col2Ave (4 peaks):			7.5	RPD = 14
Corrected Ave (3 peaks):				4.1		Corrected Ave (3 peaks):			5.7	RPD = 33
Aroclor-1221	1	4.098	0.076	456	21.6	1	4.728	0.036	357	7.1
Aroclor-1221	2	5.377	-0.079	377	10.4	2	6.088	0.004	7191	61.2
Aroclor-1221	3	5.722	-0.008	259	2.8	3	6.405	-0.017	4818	22.3
Total Col1Ave (3 peaks):				11.6		Total Col2Ave (3 peaks):			30.2	RPD = 89*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	---			0.0	1	4.728	0.037	357	11.3
Aroclor-1232	2	5.722	-0.009	259	3.3	2	6.088	0.003	7191	85.0
Aroclor-1232	3	7.028	0.001	1301	9.9	3	6.405	-0.017	4818	26.0
Aroclor-1232	4	8.630	0.025	1438	36.3	4	7.651	-0.011	8432	21.7
Total Col1Ave (3 peaks):				16.5		Total Col2Ave (4 peaks):			36.0	RPD = 74*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			19.7	
Aroclor-1242	1	6.652	-0.007	1240	15.7	1	7.056	-0.002	5176	15.2
Aroclor-1242	2	7.028	-0.003	1301	5.1	2	7.651	-0.000	8432	11.4
Aroclor-1242	3	8.308	0.031	539	15.3	3	8.939	-0.012	5167	15.5
Aroclor-1242	4	8.630	0.017	1438	18.3	4	9.023	-0.009	4017	13.7
Total Col1Ave (4 peaks):				13.6		Total Col2Ave (4 peaks):			13.9	RPD = 3
Corrected Ave (3 peaks):				12.0		Corrected Ave (3 peaks):			13.4	RPD = 11
Aroclor-1248	1	7.798	-0.001	621	5.2	1	8.105	-0.002	1608	5.7
Aroclor-1248	2	7.963	-0.005	1593	10.8	2	8.522	0.001	3194	8.4
Aroclor-1248	3	8.308	-0.011	539	3.6	3	8.939	-0.012	5167	9.4
Aroclor-1248	4	8.630	0.020	1438	11.0	4	9.378	-0.001	6490	11.1
Total Col1Ave (4 peaks):				7.6		Total Col2Ave (4 peaks):			8.7	RPD = 13
Corrected Ave (3 peaks):				6.5		Corrected Ave (3 peaks):			7.9	RPD = 18
Aroclor-1254	1	8.630	-0.046	1438	5.9	1	9.268	0.027	7438	12.8
Aroclor-1254	2	8.788	0.042	817	9.3	2	9.378	0.045	6490	18.9
Aroclor-1254	3	9.040	-0.002	511	3.4	3	9.752	-0.011	5293	12.1
Aroclor-1254	4	9.170	-0.006	714	2.4	4	9.910	-0.004	4213	4.3
Aroclor-1254	5	9.870	0.002	236	1.2	5	10.147	-0.001	9840	9.4
Total Col1Ave (5 peaks):				4.5		Total Col2Ave (5 peaks):			11.5	RPD = 88*
Corrected Ave (4 peaks):				3.3		Corrected Ave (4 peaks):			9.7	RPD = 99*
Aroclor-1260	1	10.373	-0.010	198	1.2	1	11.430	0.002	3012	4.4
Aroclor-1260	2	10.652	-0.050	841	4.9	2	11.675	-0.003	4992	2.8
Aroclor-1260	3	11.045	-0.007	397	0.9	3	12.258	-0.004	4502	3.9
Aroclor-1260	4	11.459	0.007	626	2.7	4	12.966	-0.006	2605	5.3
Aroclor-1260	5	11.546	-0.008	177	2.0	NS	---			----
Total Col1Ave (5 peaks):				2.3		Total Col2Ave (4 peaks):			4.1	RPD = 55*
Corrected Ave (4 peaks):				1.7		Corrected Ave (3 peaks):			3.7	RPD = 74*
Aroclor-1262	1	10.373	-0.018	198	0.7	1	10.997	0.008	4762	4.4
Aroclor-1262	2	11.459	-0.002	626	3.4	2	11.675	-0.025	4992	2.3
Aroclor-1262	3	11.629	-0.007	422	1.7	3	12.176	-0.032	9896	9.5
Aroclor-1262	4	12.287	-0.001	391	2.0	4	12.966	-0.027	2605	2.8
Total Col1Ave (4 peaks):				1.9		Total Col2Ave (4 peaks):			4.7	RPD = 84*
Corrected Ave (3 peaks):				1.5		Corrected Ave (3 peaks):			3.1	RPD = 73*
Aroclor-1268	1	11.546	-0.020	177	0.2	1	12.176	-0.031	9896	3.1
Aroclor-1268	2	11.629	-0.007	422	0.5	2	12.258	-0.017	4502	1.3
Aroclor-1268	3	11.997	-0.015	818	1.3	3	12.637	-0.023	2771	0.9
Aroclor-1268	4	12.765	-0.012	1711	0.9	4	13.444	-0.028	6503	0.7
Total Col1Ave (4 peaks):				0.8		Total Col2Ave (4 peaks):			1.5	RPD = 66*

Corrected Ave (3 peaks): 0.6 Corrected Ave (3 peaks): 1.0 RPD = 53*

Total PCB Area Col1 (5.168 - 13.065) = 54496 Col1 Total PCB = 0.0 ppm*

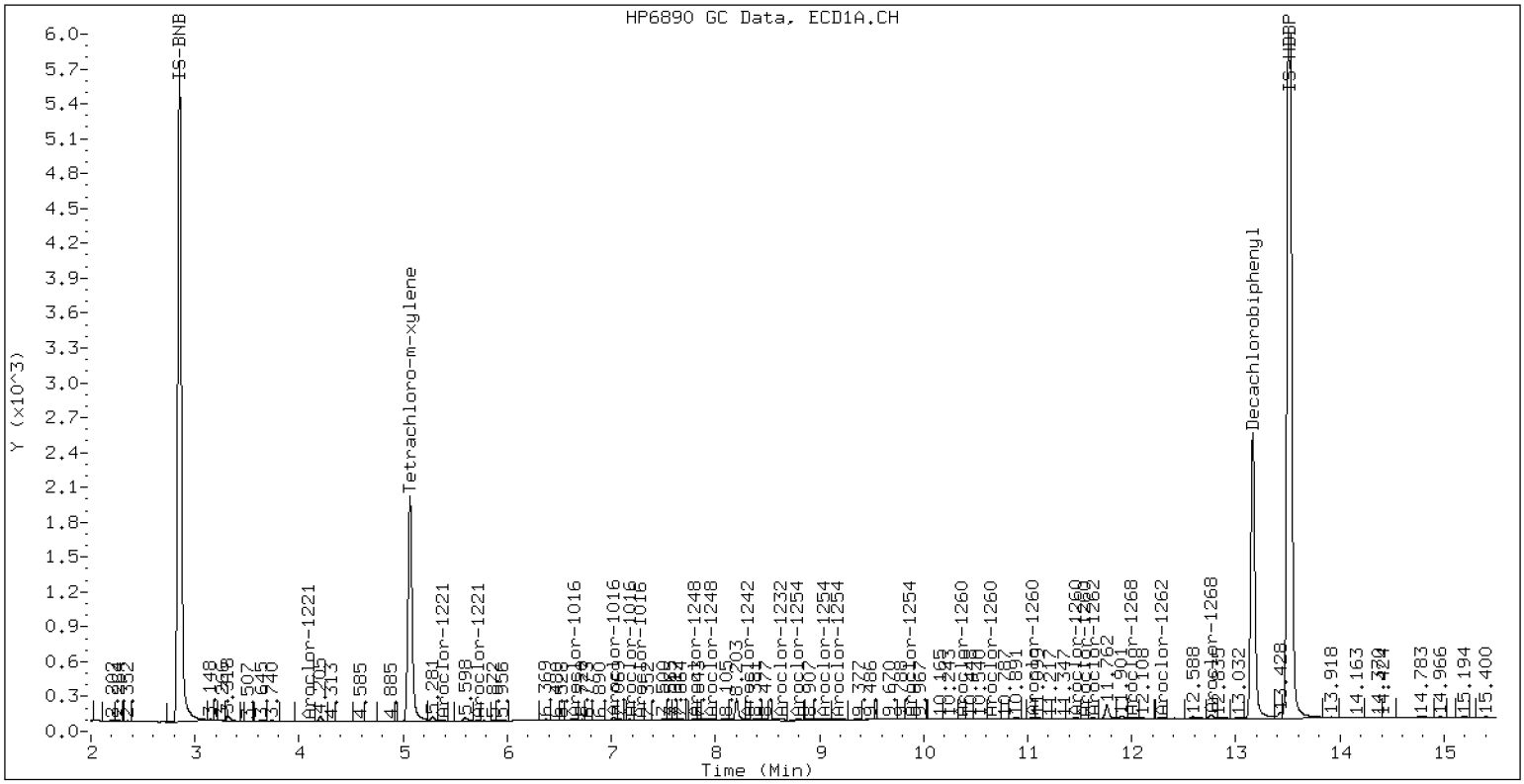
Total PCB Area Col2 (5.168 - 13.065) = 678495 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

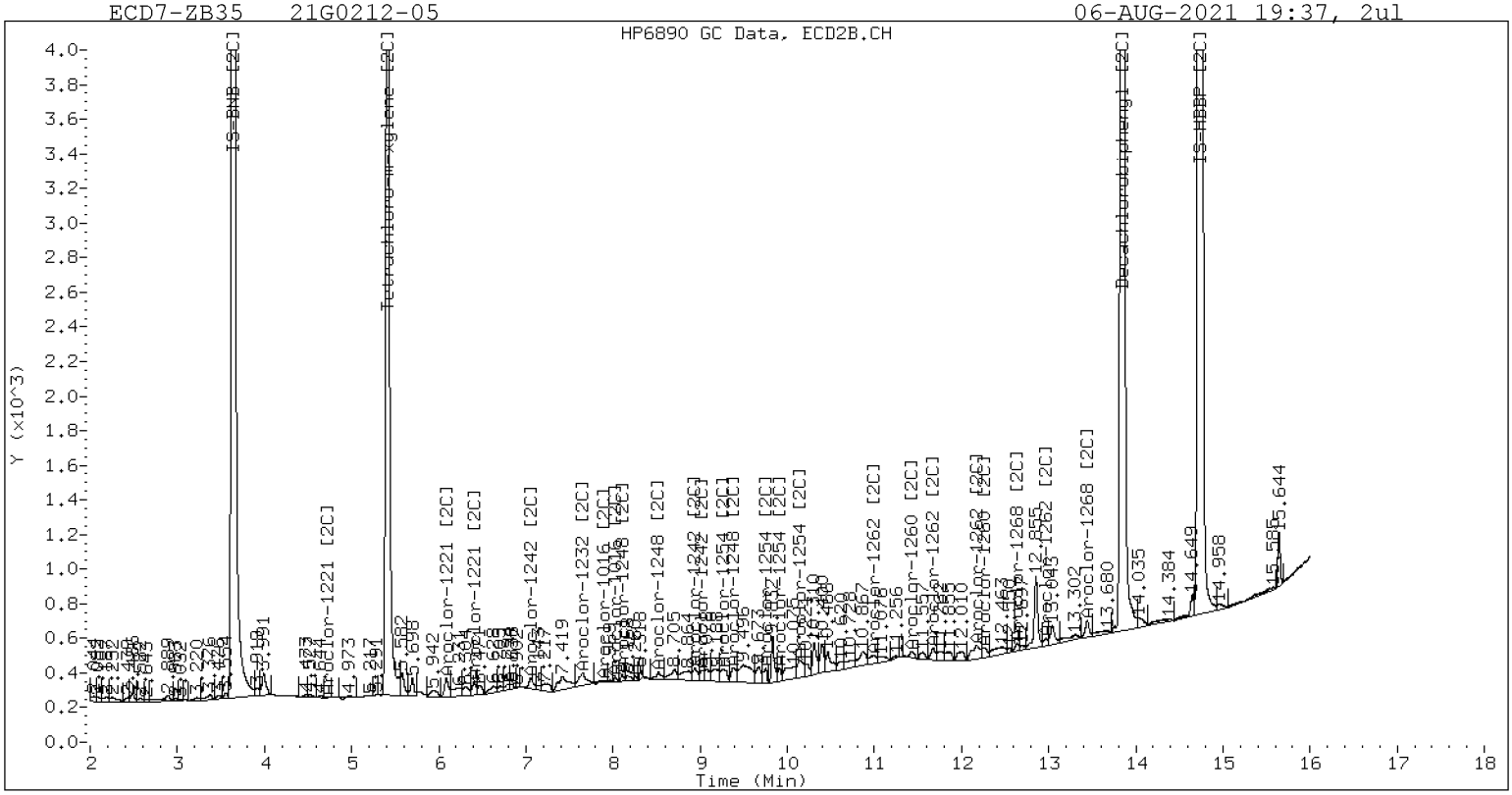
PCB Dual Column Chromatograms

ECD7-ZB5 21G0212-05 06-AUG-2021 19:37, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21G0212-05 06-AUG-2021 19:37, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LDW21-IT582B

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Solid	Laboratory ID:	21G0212-06 B	File ID:	08062125ECD7.D
Sampled:	07/16/21 08:16	Prepared:	07/27/21 14:38	Analyzed:	08/06/21 19:58
% Solids:	74.48	Preparation:	EPA 3546 (Microwave)	Initial/Final:	16.8 g Wet / 2.5 mL
Batch:	BJG0590	Sequence:	SJH0075	Calibration:	EE00069
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	4.0	1.6	4.0	U
11097-69-1	Aroclor 1254	1	1	4.0	1.6	4.0	U
11096-82-5	Aroclor 1260	1	1	4.0	0.6	4.0	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9919*	*6.55*	*82.0*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9919*	*6.11*	*76.5*	*44 - 120*	

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

Data file 1: /210806.b/08062125ECD7.D
Data file 2: /210806.b/210806.b/08062125ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21G0212-06
Client ID:
Injection Date: 06-AUG-2021 19:58
Report Date: 08/11/2021 08:39
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.065	-0.003	102101	5.410	-0.005	264014	30.6	29.2	4.6	Tetrachloro-m-xylene
13.156	-0.009	93714	13.840	-0.007	477415	32.8	31.5	4.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	279408	-5.7
Hexabromobiphenyl	470266	320409	-31.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	732590	2.9
Hexabromobiphenyl	867949	844795	-2.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.712	0.053	254	2.9	1	7.037	-0.021	1661	4.4
Aroclor-1016	2	7.038	0.006	1113	3.8	2	7.621	-0.031	2856	3.4
Aroclor-1016	3	7.240	0.062	172	1.4	3	---			0.0
Aroclor-1016	4	---			0.0	4	8.043	0.013	713	3.7
Total Col1Ave (3 peaks):					2.7	Total Col2Ave (3 peaks):				3.9 RPD = 34
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1221	1	4.024	0.002	674	32.6	1	4.739	0.046	2239	47.0
Aroclor-1221	2	5.373	-0.082	920	26.0	2	6.087	0.003	7705	68.8
Aroclor-1221	3	5.770	0.040	153	1.7	3	6.442	0.021	1944	9.4
Total Col1Ave (3 peaks):					20.1	Total Col2Ave (3 peaks):				41.7 RPD = 70*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	---			0.0	1	4.739	0.047	2239	74.2
Aroclor-1232	2	5.770	0.039	153	2.0	2	6.087	0.002	7705	95.5
Aroclor-1232	3	7.038	0.011	1113	8.6	3	6.442	0.020	1944	11.0
Aroclor-1232	4	8.586	-0.019	243	6.3	4	7.621	-0.041	2856	7.7
Total Col1Ave (3 peaks):					5.6	Total Col2Ave (4 peaks):				47.1 RPD = 157*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				21.0
Aroclor-1242	1	6.712	0.053	254	3.3	1	7.037	-0.021	1661	5.1
Aroclor-1242	2	7.038	0.007	1113	4.4	2	7.621	-0.030	2856	4.1
Aroclor-1242	3	8.302	0.025	118	3.4	3	8.934	-0.016	1614	5.1
Aroclor-1242	4	8.586	-0.027	243	3.2	4	9.012	-0.019	960	3.4
Total Col1Ave (4 peaks):					3.6	Total Col2Ave (4 peaks):				4.4 RPD = 21
Corrected Ave (3 peaks):					3.3	Corrected Ave (3 peaks):				4.2 RPD = 24
Aroclor-1248	1	7.810	0.010	269	2.3	1	8.098	-0.008	623	2.3
Aroclor-1248	2	7.951	-0.017	388	2.7	2	8.531	0.009	878	2.4
Aroclor-1248	3	8.302	-0.017	118	0.8	3	8.934	-0.017	1614	3.1
Aroclor-1248	4	8.586	-0.024	243	1.9	4	9.351	-0.028	2122	3.8
Total Col1Ave (4 peaks):					1.9	Total Col2Ave (4 peaks):				2.9 RPD = 41*
Corrected Ave (3 peaks):					1.7	Corrected Ave (3 peaks):				2.6 RPD = 44*
Aroclor-1254	1	8.660	-0.015	575	2.4	1	9.230	-0.010	2555	4.6
Aroclor-1254	2	8.733	-0.013	166	1.9	2	9.315	-0.017	1831	5.6
Aroclor-1254	3	9.030	-0.012	143	1.0	3	9.747	-0.016	1386	3.3
Aroclor-1254	4	9.152	-0.024	775	2.7	4	9.897	-0.017	2011	2.2
Aroclor-1254	5	9.846	-0.021	328	1.7	5	10.132	-0.016	5477	5.5
Total Col1Ave (5 peaks):					2.0	Total Col2Ave (5 peaks):				4.2 RPD = 74*
Corrected Ave (4 peaks):					1.8	Corrected Ave (4 peaks):				3.9 RPD = 75*
Aroclor-1260	1	10.371	-0.012	149	1.3	1	11.420	-0.007	1291	2.5
Aroclor-1260	2	---			0.0	2	11.667	-0.011	2557	1.9
Aroclor-1260	3	11.037	-0.014	467	1.5	3	12.247	-0.014	1691	1.9
Aroclor-1260	4	11.443	-0.009	331	2.1	4	12.963	-0.009	1414	3.7
Aroclor-1260	5	11.542	-0.012	145	2.3	NS	---			----
Total Col1Ave (4 peaks):					1.8	Total Col2Ave (4 peaks):				2.5 RPD = 32
Corrected Ave (3 peaks):					1.6	Corrected Ave (3 peaks):				2.1 RPD = 26
Aroclor-1262	1	10.371	-0.020	149	0.7	1	10.961	-0.028	1197	1.4
Aroclor-1262	2	11.443	-0.018	331	2.5	2	11.667	-0.033	2557	1.5
Aroclor-1262	3	11.622	-0.014	452	2.6	3	12.247	0.039	1691	2.1
Aroclor-1262	4	12.276	-0.012	372	2.7	4	12.963	-0.030	1414	1.9
Total Col1Ave (4 peaks):					2.1	Total Col2Ave (4 peaks):				1.7 RPD = 20
Corrected Ave (3 peaks):					2.0	Corrected Ave (3 peaks):				1.6 RPD = 18
Aroclor-1268	1	11.542	-0.023	145	0.3	1	12.247	0.040	1691	0.7
Aroclor-1268	2	11.622	-0.014	452	0.8	2	---			0.0
Aroclor-1268	3	11.989	-0.023	517	1.2	3	12.632	-0.028	2744	1.2
Aroclor-1268	4	12.756	-0.021	1554	1.2	4	13.437	-0.035	3521	0.5
Total Col1Ave (4 peaks):					0.9	Total Col2Ave (3 peaks):				0.8 RPD = 11

Corrected Ave (3 peaks): 0.8 Corrected Ave: < 3 Peaks

Total PCB Area Col1 (5.168 - 13.065) = 35587 Col1 Total PCB = 0.0 ppm*

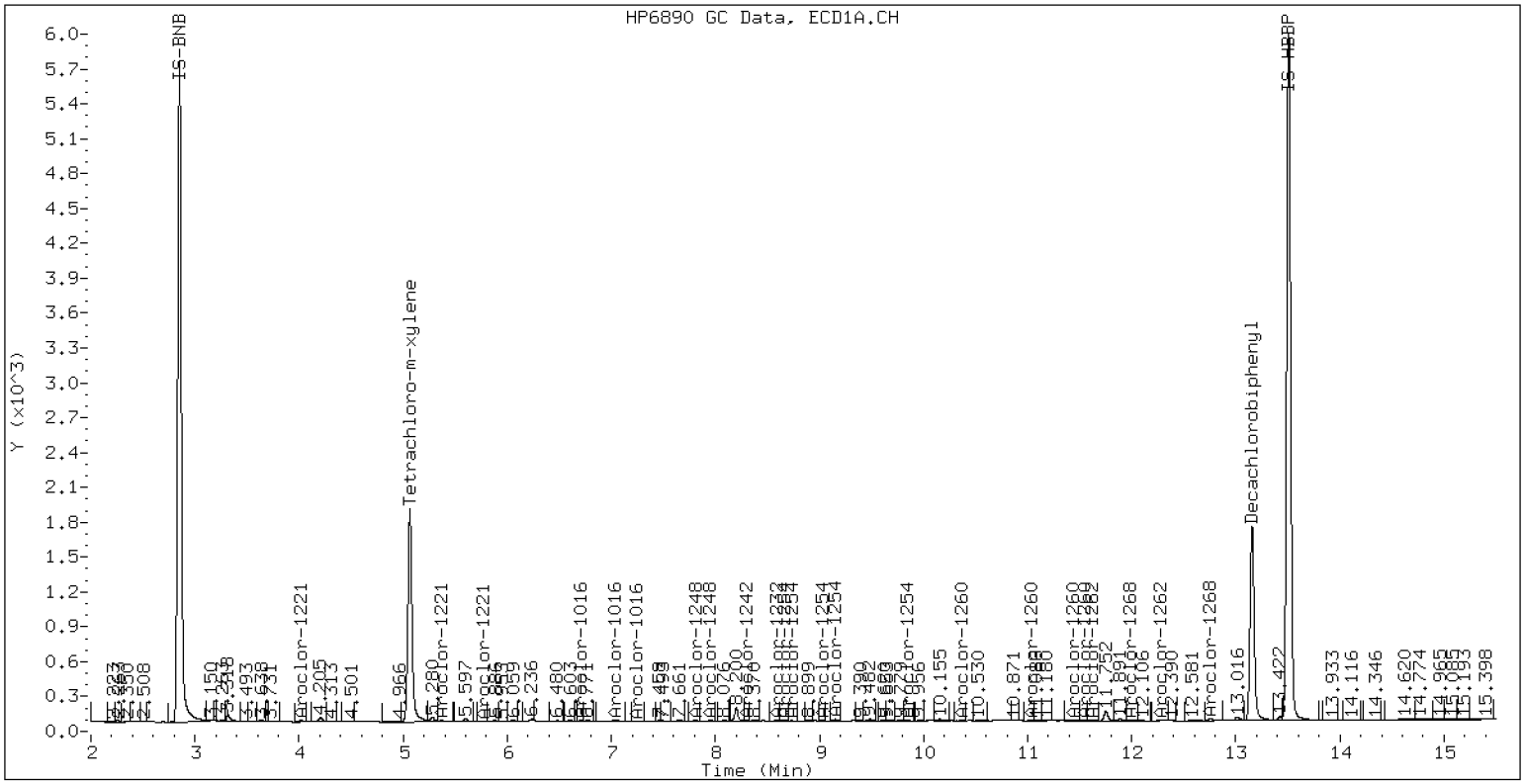
Total PCB Area Col2 (5.168 - 13.065) = 431736 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

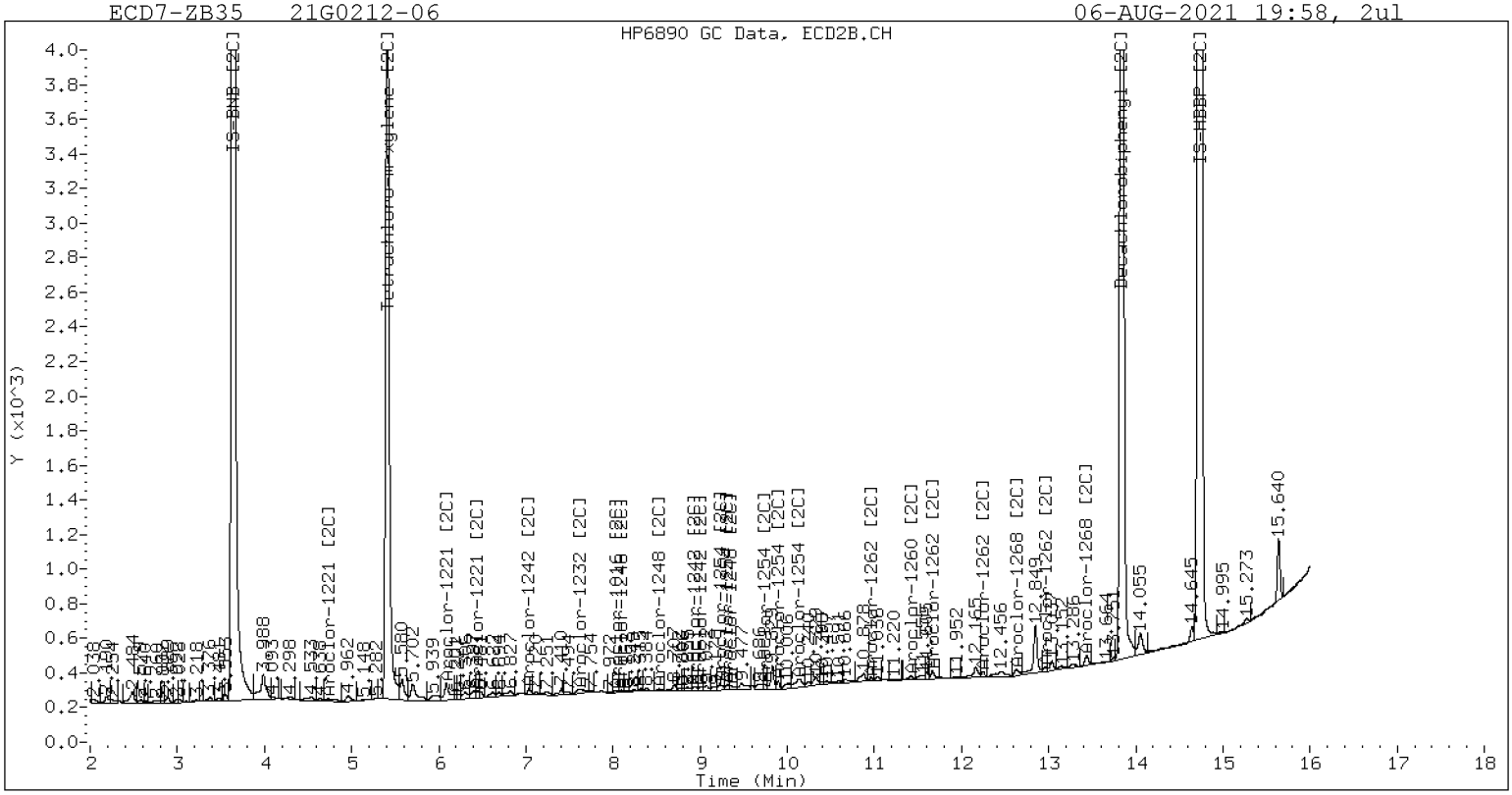
PCB Dual Column Chromatograms

ECD7-ZB5 21G0212-06 06-AUG-2021 19:58, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21G0212-06 06-AUG-2021 19:58, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LDW21-IT582C

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Solid	Laboratory ID:	21G0212-07 B	File ID:	08062126ECD7.D
Sampled:	07/16/21 08:16	Prepared:	07/27/21 14:38	Analyzed:	08/06/21 20:18
% Solids:	74.45	Preparation:	EPA 3546 (Microwave)	Initial/Final:	17.82 g Wet / 2.5 mL
Batch:	BJG0590	Sequence:	SJH0075	Calibration:	EE00069
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	3.8	1.5	3.8	U
11104-28-2	Aroclor 1221	1	1	3.8	1.5	3.8	U
11141-16-5	Aroclor 1232	1	1	3.8	1.5	3.8	U
53469-21-9	Aroclor 1242	1	1	3.8	1.5	3.8	U
12672-29-6	Aroclor 1248	1	1	3.8	1.5	3.8	U
11097-69-1	Aroclor 1254	1	1	3.8	1.5	3.8	U
11096-82-5	Aroclor 1260	1	1	3.8	0.6	3.8	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.5375*	*6.55*	*86.9*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.5375*	*5.61*	*74.4*	*44 - 120*	

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

Data file 1: /210806.b/08062126ECD7.D
Data file 2: /210806.b/210806.b/08062126ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21G0212-07
Client ID:
Injection Date: 06-AUG-2021 20:18
Report Date: 08/11/2021 08:39
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.064	-0.004	98605	5.409	-0.005	251221	29.8	28.5	4.5	Tetrachloro-m-xylene
13.157	-0.008	97881	13.842	-0.005	495762	34.7	33.4	3.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	277530	-6.4
Hexabromobiphenyl	470266	315977	-32.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	716169	0.6
Hexabromobiphenyl	867949	827251	-4.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.711	0.052	282	3.3	1	7.036	-0.021	2116	5.7
Aroclor-1016	2	7.039	0.007	759	2.6	2	7.703	0.051	321	0.4
Aroclor-1016	3	7.243	0.066	211	1.8	3	7.939	0.080	348	1.1
Aroclor-1016	4	---			0.0	4	8.039	0.009	549	3.0
Total Col1Ave (3 peaks):				2.6		Total Col2Ave (4 peaks):			2.6	RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			1.5	
Aroclor-1221	1	4.023	0.000	2161	105.3	1	4.735	0.043	1525	32.7
Aroclor-1221	2	5.528	0.073	205	5.8	2	6.086	0.002	6994	63.9
Aroclor-1221	3	5.718	-0.011	140	1.6	3	6.442	0.020	2074	10.3
Total Col1Ave (3 peaks):				37.6		Total Col2Ave (3 peaks):			35.6	RPD = 5
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	---			0.0	1	4.735	0.044	1525	51.7
Aroclor-1232	2	5.718	-0.012	140	1.8	2	6.086	0.001	6994	88.6
Aroclor-1232	3	7.039	0.012	759	5.9	3	6.442	0.019	2074	12.0
Aroclor-1232	4	8.590	-0.015	177	4.6	4	7.703	0.041	321	0.9
Total Col1Ave (3 peaks):				4.1		Total Col2Ave (4 peaks):			38.3	RPD = 161*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			21.5	
Aroclor-1242	1	6.711	0.053	282	3.7	1	7.036	-0.021	2116	6.7
Aroclor-1242	2	7.039	0.008	759	3.0	2	7.600	-0.052	2265	3.3
Aroclor-1242	3	8.308	0.032	100	2.9	3	8.934	-0.017	1240	4.0
Aroclor-1242	4	8.590	-0.023	177	2.3	4	9.014	-0.018	945	3.5
Total Col1Ave (4 peaks):				3.0		Total Col2Ave (4 peaks):			4.3	RPD = 37
Corrected Ave (3 peaks):				2.8		Corrected Ave (3 peaks):			3.6	RPD = 26
Aroclor-1248	1	---			0.0	1	8.099	-0.007	369	1.4
Aroclor-1248	2	7.958	-0.010	258	1.8	2	8.517	-0.004	1085	3.1
Aroclor-1248	3	8.308	-0.011	100	0.7	3	8.934	-0.017	1240	2.4
Aroclor-1248	4	8.590	-0.020	177	1.4	4	9.349	-0.029	737	1.4
Total Col1Ave (3 peaks):				1.3		Total Col2Ave (4 peaks):			2.1	RPD = 46*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			1.7	
Aroclor-1254	1	8.661	-0.015	541	2.3	1	9.230	-0.010	1645	3.0
Aroclor-1254	2	8.733	-0.013	162	1.9	2	9.349	0.017	737	2.3
Aroclor-1254	3	9.031	-0.011	100	0.7	3	9.750	-0.013	1225	3.0
Aroclor-1254	4	9.135	-0.040	3119	11.0	4	9.899	-0.015	1852	2.0
Aroclor-1254	5	9.848	-0.020	425	2.2	5	10.142	-0.006	4503	4.6
Total Col1Ave (5 peaks):				3.6		Total Col2Ave (5 peaks):			3.0	RPD = 18
Corrected Ave (4 peaks):				1.8		Corrected Ave (4 peaks):			2.6	RPD = 37
Aroclor-1260	1	10.370	-0.013	102	0.9	1	11.423	-0.005	1482	2.9
Aroclor-1260	2	10.727	0.025	178	1.5	2	11.668	-0.010	2070	1.5
Aroclor-1260	3	11.040	-0.012	277	0.9	3	12.251	-0.011	1369	1.6
Aroclor-1260	4	11.440	-0.012	250	1.6	4	12.966	-0.007	746	2.0
Aroclor-1260	5	11.543	-0.011	108	1.8	NS	---			----
Total Col1Ave (3 peaks):				1.3		Total Col2Ave (4 peaks):			2.0	RPD = 41*
Corrected Ave (4 peaks):				1.2		Corrected Ave (3 peaks):			1.7	RPD = 33
Aroclor-1262	1	10.370	-0.021	102	0.5	1	10.967	-0.022	1908	2.3
Aroclor-1262	2	11.440	-0.021	250	1.9	2	11.668	-0.032	2070	1.3
Aroclor-1262	3	11.621	-0.015	302	1.7	3	12.167	-0.041	4388	5.6
Aroclor-1262	4	12.263	-0.025	404	3.0	4	12.966	-0.027	746	1.0
Total Col1Ave (4 peaks):				1.8		Total Col2Ave (4 peaks):			2.5	RPD = 35
Corrected Ave (3 peaks):				1.4		Corrected Ave (3 peaks):			1.5	RPD = 9
Aroclor-1268	1	11.543	-0.023	108	0.2	1	12.167	-0.040	4388	1.8
Aroclor-1268	2	11.621	-0.015	302	0.6	2	12.251	-0.024	1369	0.5
Aroclor-1268	3	11.990	-0.022	334	0.8	3	12.629	-0.031	2265	1.0
Aroclor-1268	4	12.755	-0.022	1220	0.9	4	13.437	-0.036	3553	0.5
Total Col1Ave (4 peaks):				0.6		Total Col2Ave (4 peaks):			1.0	RPD = 42*

Corrected Ave (3 peaks): 0.5 Corrected Ave (3 peaks): 0.7 RPD = 24

Total PCB Area Col1 (5.168 - 13.065) = 37974 Col1 Total PCB = 0.0 ppm*

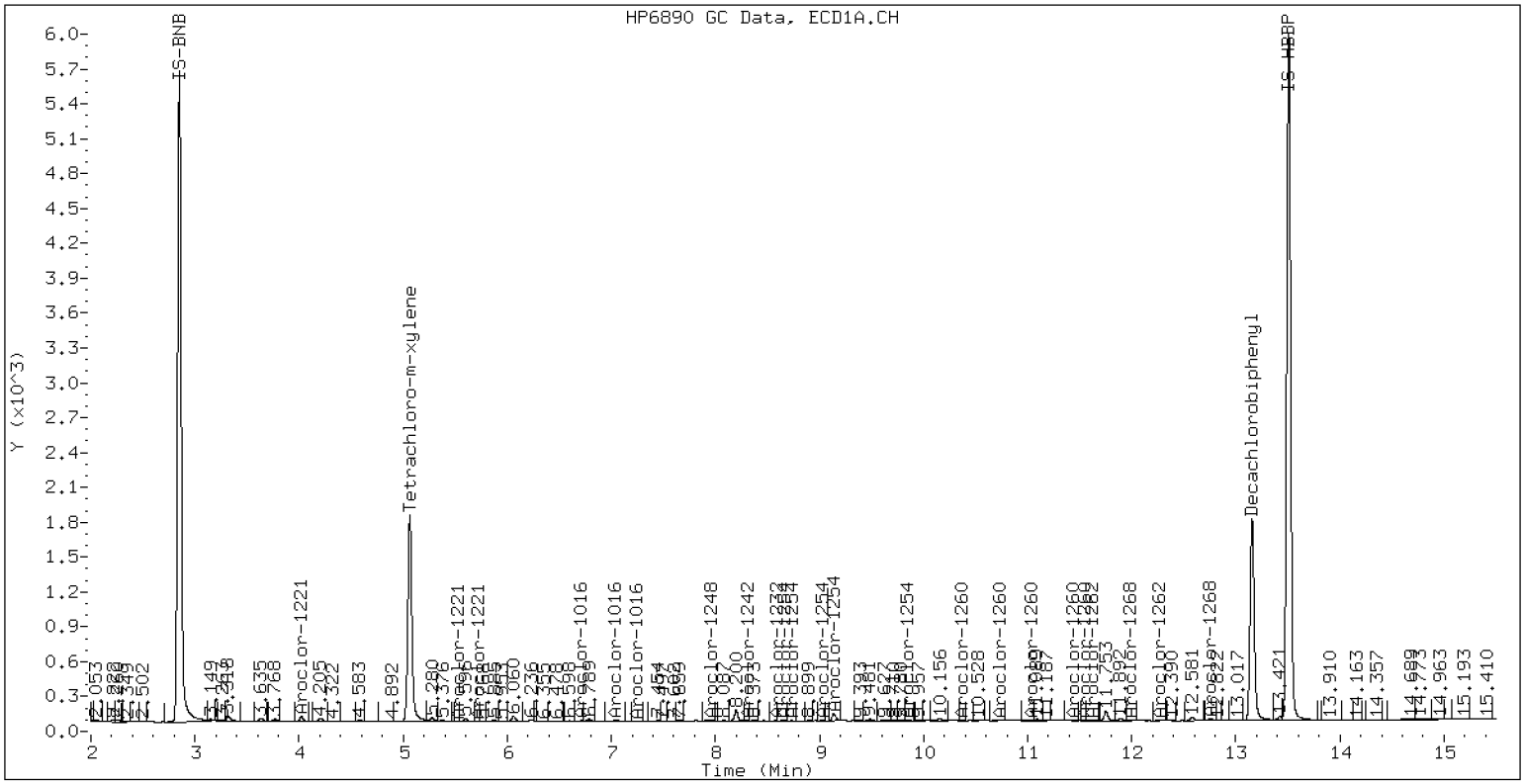
Total PCB Area Col2 (5.168 - 13.065) = 421723 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

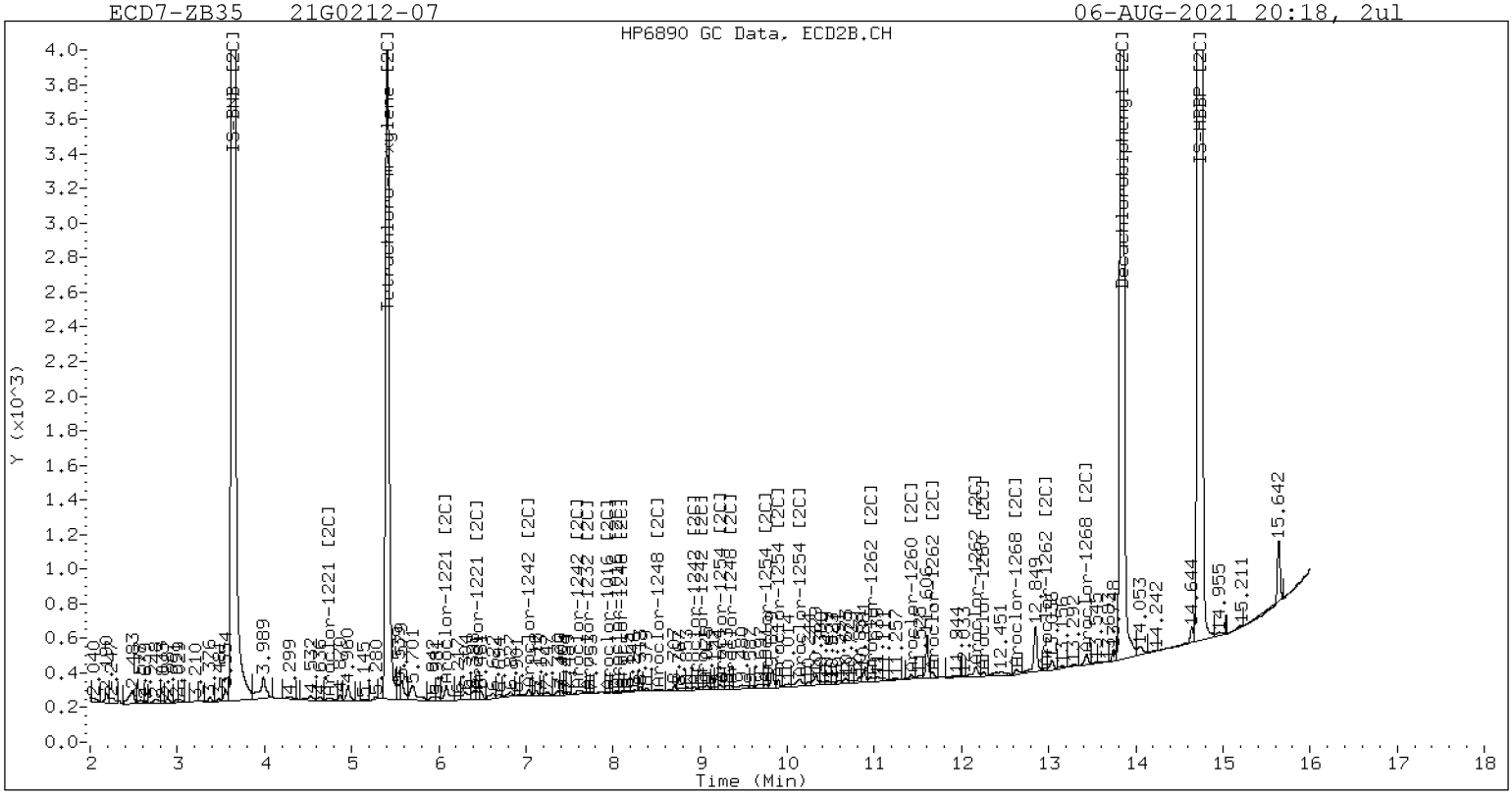
PCB Dual Column Chromatograms

ECD7-ZB5 21G0212-07 06-AUG-2021 20:18, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21G0212-07 06-AUG-2021 20:18, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dual Column

LDW21-IT582E

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Solid	Laboratory ID:	21G0212-08 B	File ID:	08062127ECD7.D
Sampled:	07/16/21 08:16	Prepared:	07/27/21 14:38	Analyzed:	08/06/21 20:39
% Solids:	78.35	Preparation:	EPA 3546 (Microwave)	Initial/Final:	15.97 g Wet / 2.5 mL
Batch:	BJG0590	Sequence:	SJH0075	Calibration:	EE00069
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	4.0	1.6	4.0	U
11097-69-1	Aroclor 1254	1	1	4.0	1.6	4.0	U
11096-82-5	Aroclor 1260	1	1	4.0	0.6	4.0	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9920*	*6.84*	*85.5*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9920*	*5.89*	*73.7*	*44 - 120*	

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

Data file 1: /210806.b/08062127ECD7.D
Data file 2: /210806.b/210806.b/08062127ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21G0212-08
Client ID:
Injection Date: 06-AUG-2021 20:39
Report Date: 08/11/2021 08:39
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.064	-0.004	97707	5.410	-0.004	267028	29.5	29.2	1.1	Tetrachloro-m-xylene
13.158	-0.007	108864	13.843	-0.005	542727	34.2	32.1	6.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	277412	-6.4
Hexabromobiphenyl	470266	356885	-24.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	742421	4.3
Hexabromobiphenyl	867949	941826	8.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.602	-0.057	531	6.2	1	7.043	-0.015	719	1.9
Aroclor-1016	2	7.040	0.008	465	1.6	2	7.634	-0.018	2722	3.2
Aroclor-1016	3	7.242	0.065	267	2.3	3	---			0.0
Aroclor-1016	4	---			0.0	4	8.102	0.072	817	4.2
Total Col1Ave (3 peaks):					3.3	Total Col2Ave (3 peaks):				3.1 RPD = 7
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1221	1	---			0.0	1	4.740	0.047	2611	54.0
Aroclor-1221	2	---			0.0	2	6.086	0.002	8238	72.6
Aroclor-1221	3	---			0.0	3	6.401	-0.021	2775	13.3
Col1Ave: <3 Quant Peaks						Col2Ave: 46.6				
Aroclor-1232	1	---			0.0	1	4.740	0.048	2611	85.4
Aroclor-1232	2	5.772	0.041	143	1.9	2	6.086	0.002	8238	100.7
Aroclor-1232	3	7.040	0.013	465	3.6	3	6.443	0.020	4821	26.9
Aroclor-1232	4	8.662	0.057	707	18.4	4	7.634	-0.028	2722	7.3
Total Col1Ave (3 peaks):					8.0	Total Col2Ave (4 peaks):				55.1 RPD = 149*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				39.9
Aroclor-1242	1	6.602	-0.057	531	6.9	1	7.043	-0.015	719	2.2
Aroclor-1242	2	7.040	0.009	465	1.9	2	7.634	-0.017	2722	3.8
Aroclor-1242	3	8.306	0.029	271	7.9	3	8.938	-0.013	2081	6.5
Aroclor-1242	4	8.662	0.049	707	9.3	4	9.011	-0.021	1178	4.2
Total Col1Ave (4 peaks):					6.5	Total Col2Ave (4 peaks):				4.2 RPD = 44*
Corrected Ave (3 peaks):					5.6	Corrected Ave (3 peaks):				3.4 RPD = 49*
Aroclor-1248	1	7.814	0.014	231	2.0	1	8.102	-0.005	817	3.0
Aroclor-1248	2	7.967	-0.001	437	3.0	2	8.530	0.008	1113	3.0
Aroclor-1248	3	8.306	-0.013	271	1.9	3	8.938	-0.014	2081	3.9
Aroclor-1248	4	8.662	0.052	707	5.6	4	9.362	-0.017	2211	3.9
Total Col1Ave (4 peaks):					3.1	Total Col2Ave (4 peaks):				3.5 RPD = 11
Corrected Ave (3 peaks):					2.3	Corrected Ave (3 peaks):				3.3 RPD = 36
Aroclor-1254	1	8.662	-0.014	707	3.0	1	9.231	-0.009	1950	3.5
Aroclor-1254	2	8.730	-0.016	267	3.1	2	9.362	0.029	2211	6.7
Aroclor-1254	3	9.037	-0.005	109	0.8	3	9.830	0.067	5619	13.3
Aroclor-1254	4	9.138	-0.038	1904	6.7	4	9.900	-0.014	1763	1.9
Aroclor-1254	5	9.851	-0.016	138	0.7	5	10.138	-0.011	6563	6.5
Total Col1Ave (5 peaks):					2.9	Total Col2Ave (5 peaks):				6.4 RPD = 76*
Corrected Ave (4 peaks):					1.9	Corrected Ave (4 peaks):				4.6 RPD = 83*
Aroclor-1260	1	---			0.0	1	11.431	0.003	652	1.1
Aroclor-1260	2	10.740	0.039	207	1.5	2	11.669	-0.010	1224	0.8
Aroclor-1260	3	11.093	0.041	21238	60.3	3	12.167	-0.094	68714	69.0
Aroclor-1260	4	11.441	-0.011	365	2.0	4	13.040	0.068	6017	14.0
Aroclor-1260	5	11.547	-0.007	140	2.0	NS	---			----
Total Col1Ave (4 peaks):					16.5	Total Col2Ave (4 peaks):				21.2 RPD = 25
Corrected Ave (3 peaks):					1.9	Corrected Ave (3 peaks):				5.3 RPD = 96*
Aroclor-1262	1	---			0.0	1	10.967	-0.021	1583	1.7
Aroclor-1262	2	11.441	-0.021	365	2.5	2	11.669	-0.031	1224	0.7
Aroclor-1262	3	11.630	-0.006	233	1.2	3	12.167	-0.041	68714	76.6
Aroclor-1262	4	12.257	-0.032	6556	42.5	4	13.040	0.047	6017	7.4
Total Col1Ave (3 peaks):					15.4	Total Col2Ave (4 peaks):				21.6 RPD = 33
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				3.2
Aroclor-1268	1	11.547	-0.019	140	0.2	1	12.167	-0.040	68714	25.1
Aroclor-1268	2	11.630	-0.006	233	0.4	2	---			0.0
Aroclor-1268	3	11.991	-0.021	438	0.9	3	12.636	-0.024	3417	1.3
Aroclor-1268	4	12.758	-0.019	1480	1.0	4	13.412	-0.060	24265	2.9
Total Col1Ave (4 peaks):					0.6	Total Col2Ave (3 peaks):				9.8 RPD = 176*
Corrected Ave (3 peaks):					0.5	Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.168 - 13.065) = 95210 Col1 Total PCB = 0.0 ppm*

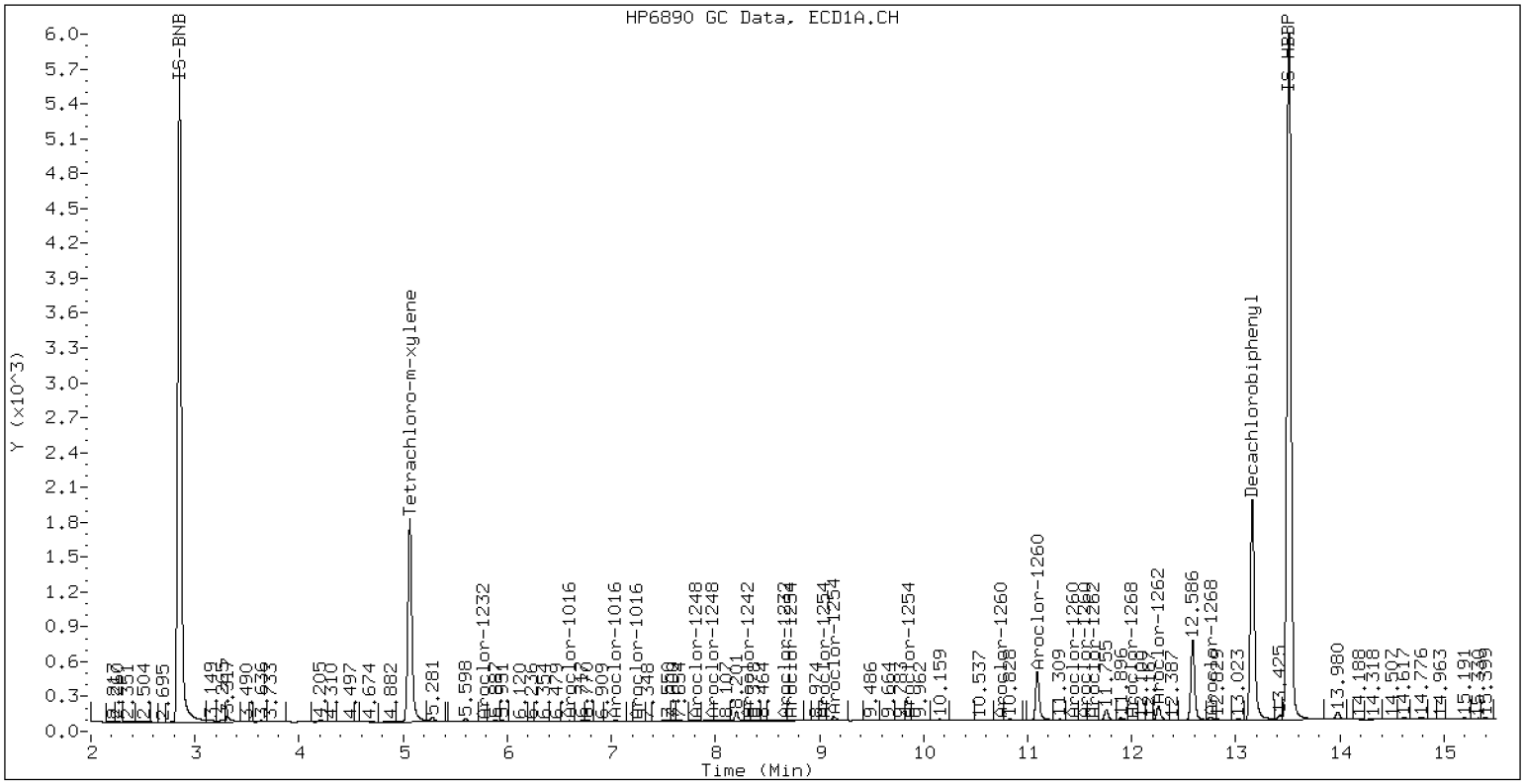
Total PCB Area Col2 (5.168 - 13.065) = 538530 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

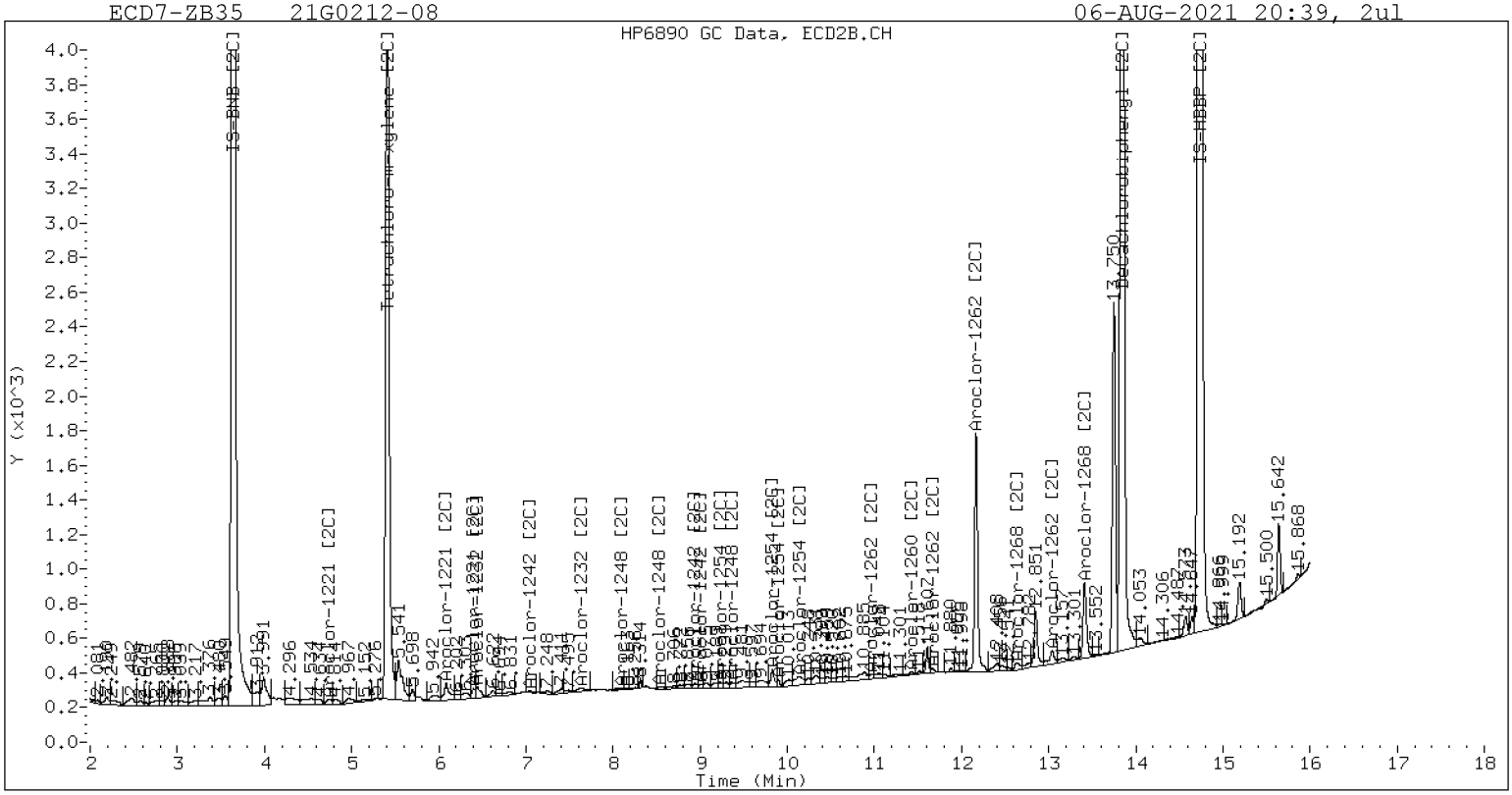
PCB Dual Column Chromatograms

ECD7-ZB5 21G0212-08 06-AUG-2021 20:39, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21G0212-08 06-AUG-2021 20:39, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LDW21-IT579B

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Solid	Laboratory ID:	21G0212-09 B	File ID:	08062132ECD7.D
Sampled:	07/16/21 11:23	Prepared:	07/27/21 14:38	Analyzed:	08/06/21 22:21
% Solids:	71.36	Preparation:	EPA 3546 (Microwave)	Initial/Final:	17.62 g Wet / 2.5 mL
Batch:	BJG0590	Sequence:	SJH0075	Calibration:	EE00069
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	4.0	1.6	4.0	U
11097-69-1	Aroclor 1254	1	1	81.2	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	73.6	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9532*	*7.31*	*91.9*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9532*	*5.60*	*70.4*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9532*	*6.78*	*85.2*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9532*	*5.46*	*68.6*	*44 - 120*	

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

Data file 1: /210806.b/08062132ECD7.D
Data file 2: /210806.b/210806.b/08062132ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21G0212-09
Client ID:
Injection Date: 06-AUG-2021 22:21
Report Date: 08/11/2021 08:39
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.063	-0.005	92901	5.408	-0.007	230415	28.2	27.5	2.5	Tetrachloro-m-xylene
13.152	-0.013	95469	13.839	-0.009	472869	36.8	34.1	7.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	276303	-6.8
Hexabromobiphenyl	470266	291273	-38.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	680724	-4.4
Hexabromobiphenyl	867949	773964	-10.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.646	-0.013	1164	13.6	1	7.049	-0.009	5920	16.9
Aroclor-1016	2	7.018	-0.015	8610	29.8	2	7.637	-0.015	20142	26.1
Aroclor-1016	3	7.167	-0.010	2360	20.1	3	7.844	-0.014	569	2.0
Aroclor-1016	4	7.266	-0.021	2023	25.8	4	8.015	-0.015	2178	12.3
Total Col1Ave (4 peaks):					22.3	Total Col2Ave (4 peaks):				14.3 RPD = 44*
Corrected Ave (3 peaks):					19.8	Corrected Ave (3 peaks):				10.4 RPD = 62*
Aroclor-1221	1	4.098	0.076	210	10.3	1	4.635	-0.057	9463	213.6
Aroclor-1221	2	5.448	-0.007	185	5.3	2	6.084	0.000	6205	59.6
Aroclor-1221	3	5.715	-0.015	1010	11.4	3	6.403	-0.018	5454	28.4
Total Col1Ave (3 peaks):					9.0	Total Col2Ave (3 peaks):				100.5 RPD = 167*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	---			0.0	1	4.635	-0.056	9463	337.7
Aroclor-1232	2	5.715	-0.016	1010	13.3	2	6.084	-0.001	6205	82.7
Aroclor-1232	3	7.018	-0.010	8610	67.6	3	6.403	-0.019	5454	33.2
Aroclor-1232	4	8.578	-0.027	25244	660.0	4	7.637	-0.025	20142	58.5
Total Col1Ave (3 peaks):					247.0	Total Col2Ave (4 peaks):				129.0 RPD = 63*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				58.1
Aroclor-1242	1	6.646	-0.013	1164	15.3	1	7.049	-0.009	5920	19.6
Aroclor-1242	2	7.018	-0.014	8610	34.7	2	7.637	-0.014	20142	30.8
Aroclor-1242	3	8.296	0.019	23784	698.0	3	8.931	-0.020	67641	228.9
Aroclor-1242	4	8.578	-0.035	25244	331.8	4	9.006	-0.026	48185	185.4
Total Col1Ave (4 peaks):					270.0	Total Col2Ave (4 peaks):				116.2 RPD = 80*
Corrected Ave (3 peaks):					127.3	Corrected Ave (3 peaks):				78.6 RPD = 47*
Aroclor-1248	1	7.784	-0.015	15043	130.5	1	8.096	-0.011	65692	264.7
Aroclor-1248	2	7.947	-0.021	8609	60.2	2	8.508	-0.013	39840	118.0
Aroclor-1248	3	8.296	-0.023	23784	166.1	3	8.931	-0.020	67641	139.2
Aroclor-1248	4	8.578	-0.031	25244	199.4	4	9.351	-0.028	18788	36.3
Total Col1Ave (4 peaks):					139.8	Total Col2Ave (4 peaks):				139.6 RPD = 0
Corrected Ave (3 peaks):					118.9	Corrected Ave (3 peaks):				97.8 RPD = 19
Aroclor-1254	1	8.656	-0.020	89429	382.8	1	9.224	-0.016	198487	385.1
Aroclor-1254	2	8.726	-0.020	36705	431.5	2	9.315	-0.017	95837	315.3
Aroclor-1254	3	9.021	-0.021	51431	359.2	3	9.746	-0.017	107359	276.8
Aroclor-1254	4	9.153	-0.023	130223	459.4	4	9.895	-0.019	345605	400.8
Aroclor-1254	5	9.839	-0.028	78256	409.6	5	10.121	-0.028	447083	483.4
Total Col1Ave (5 peaks):					408.5	Total Col2Ave (5 peaks):				372.3 RPD = 9
Corrected Ave (4 peaks):					395.8	Corrected Ave (4 peaks):				344.5 RPD = 14
Aroclor-1260	1	10.362	-0.021	39657	371.4	1	11.416	-0.012	183591	380.4
Aroclor-1260	2	10.682	-0.020	27164	247.4	2	11.664	-0.015	322799	256.4
Aroclor-1260	3	11.031	-0.020	88209	306.7	3	12.244	-0.018	289590	353.7
Aroclor-1260	4	11.432	-0.020	43254	295.1	4	12.960	-0.013	172812	491.0
Aroclor-1260	5	11.538	-0.016	42369	749.7	NS	---			----
Total Col1Ave (5 peaks):					394.1	Total Col2Ave (4 peaks):				370.4 RPD = 6
Corrected Ave (4 peaks):					305.2	Corrected Ave (3 peaks):				330.1 RPD = 8
Aroclor-1262	1	10.362	-0.029	39657	216.5	1	10.953	-0.036	139180	179.1
Aroclor-1262	2	11.432	-0.030	43254	366.0	2	11.664	-0.036	322799	209.9
Aroclor-1262	3	11.608	-0.028	45649	286.4	3	12.174	-0.034	194036	263.1
Aroclor-1262	4	12.258	-0.031	37660	298.8	4	12.960	-0.033	172812	258.3
Total Col1Ave (4 peaks):					291.9	Total Col2Ave (4 peaks):				227.6 RPD = 25
Corrected Ave (3 peaks):					267.2	Corrected Ave (3 peaks):				215.8 RPD = 21
Aroclor-1268	1	11.538	-0.028	42369	86.6	1	12.174	-0.034	194036	86.3
Aroclor-1268	2	11.608	-0.028	45649	92.1	2	12.244	-0.030	289590	118.2
Aroclor-1268	3	12.000	-0.012	20250	52.0	3	12.623	-0.036	44182	20.5
Aroclor-1268	4	12.752	-0.025	44800	36.7	4	13.434	-0.038	206830	29.7
Total Col1Ave (4 peaks):					66.9	Total Col2Ave (4 peaks):				62.7 RPD = 5

Corrected Ave (3 peaks): 58.4 Corrected Ave (3 peaks): 45.5 RPD = 25

Total PCB Area Col1 (5.168 - 13.065) = 1805937 Col1 Total PCB = 0.7 ppm*

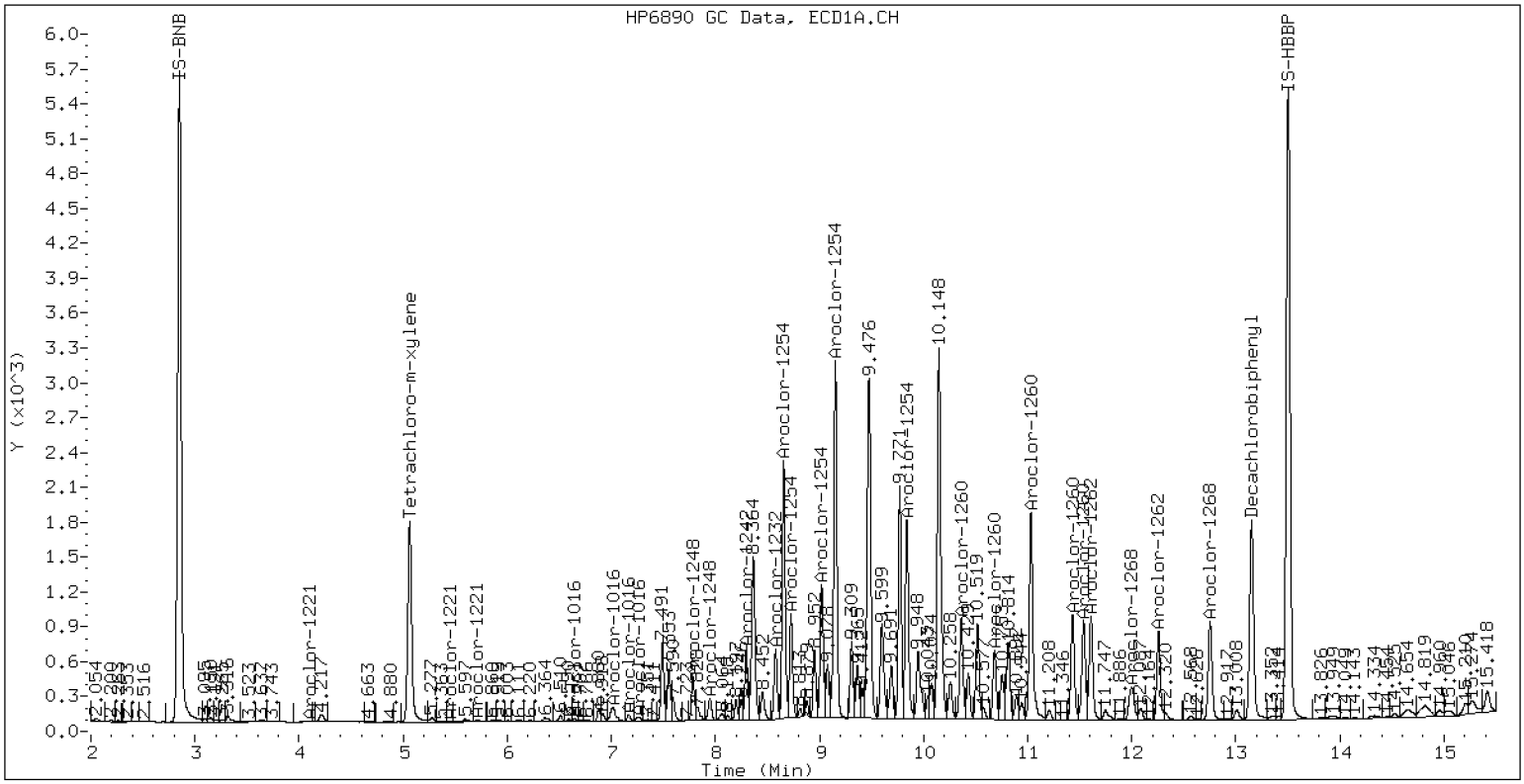
Total PCB Area Col2 (5.168 - 13.065) = 5495903 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

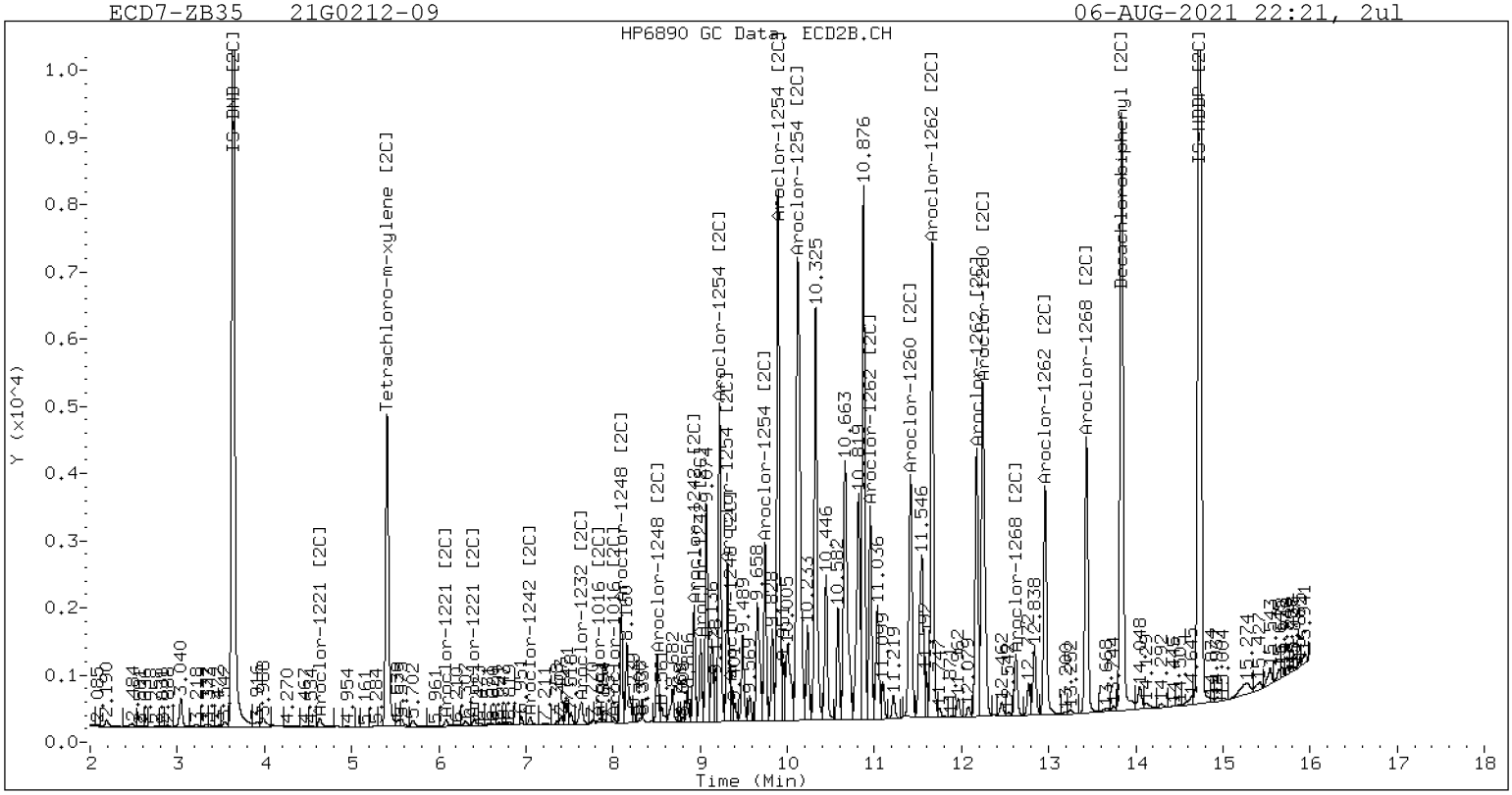
PCB Dual Column Chromatograms

ECD7-ZB5 21G0212-09 06-AUG-2021 22:21, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21G0212-09 06-AUG-2021 22:21, 2ul

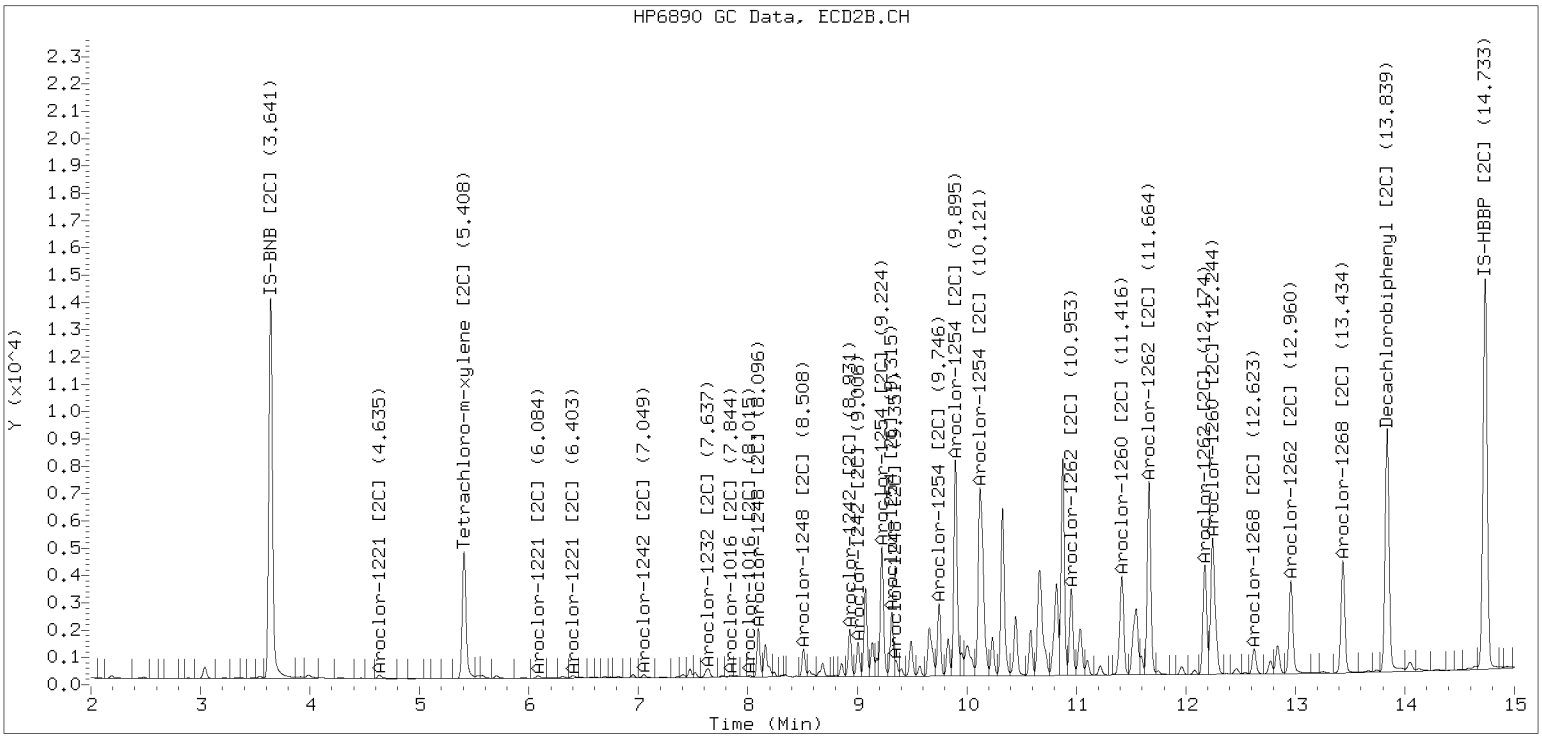


ZB-35 Manual Integration: YES

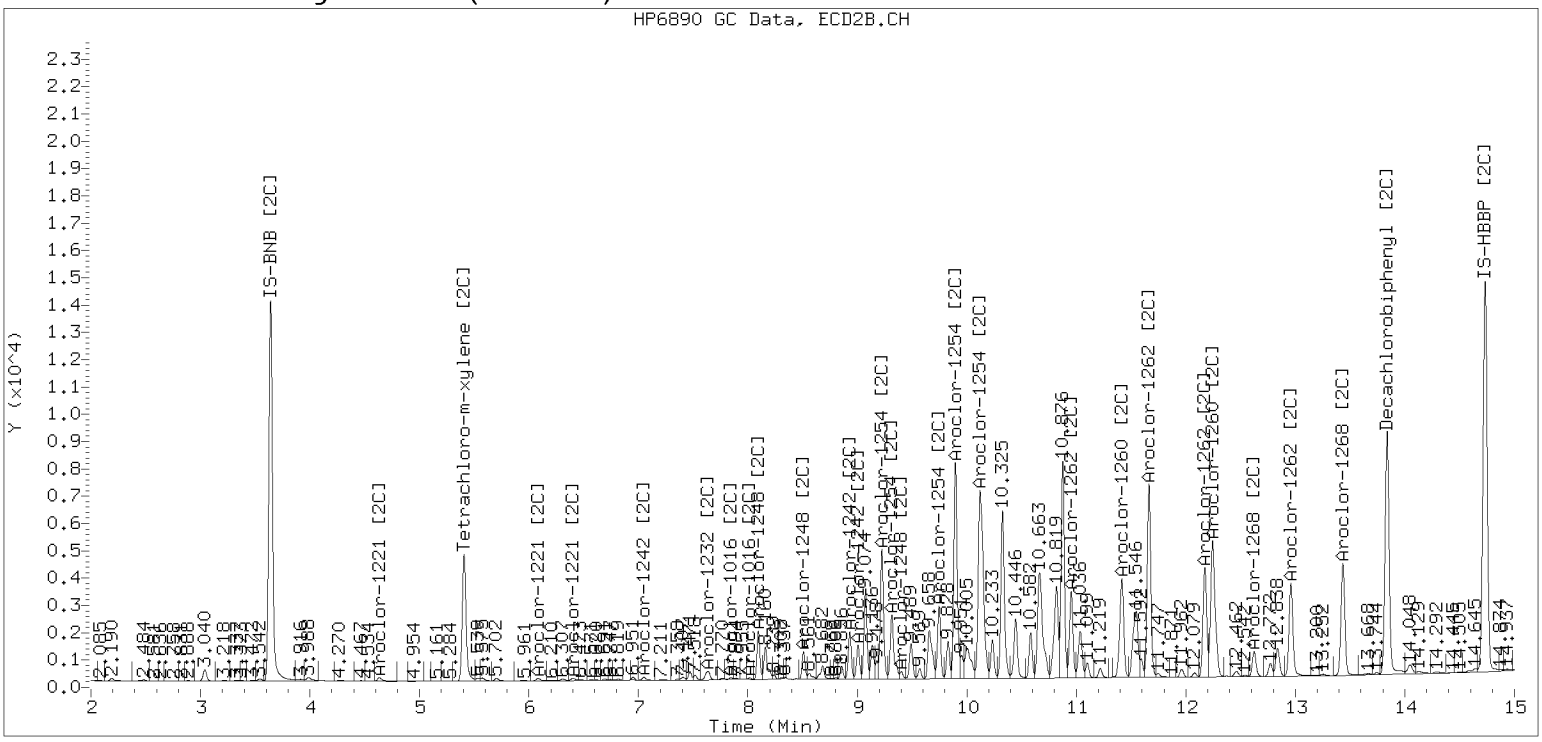
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/210806.b/210806.b/08062132ECD7.D Injection Date: 06-AUG-2021

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dual Column

LDW21-IT597B

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Solid	Laboratory ID:	21G0212-10 B	File ID:	08072109ECD7.D
Sampled:	07/16/21 14:07	Prepared:	07/27/21 14:38	Analyzed:	08/07/21 22:12
% Solids:	58.62	Preparation:	EPA 3546 (Microwave)	Initial/Final:	21.4 g Wet / 2.5 mL
Batch:	BJG0590	Sequence:	SJH0101	Calibration:	EE00069
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	5	19.9	7.8	19.9	U
11104-28-2	Aroclor 1221	1	5	19.9	7.8	19.9	U
11141-16-5	Aroclor 1232	1	5	19.9	7.8	19.9	U
53469-21-9	Aroclor 1242	1	5	19.9	7.8	19.9	U
12672-29-6	Aroclor 1248	1	5	19.9	7.8	19.9	U
11097-69-1	Aroclor 1254	1	5	769	7.8	19.9	D
11096-82-5	Aroclor 1260	2	5	217	2.9	19.9	D

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9715*	*7.54*	*94.6*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9715*	*5.81*	*72.9*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9715*	*6.64*	*83.3*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9715*	*5.77*	*72.3*	*44 - 120*	

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

Data file 1: /210807.b/08072109ECD7.D
Data file 2: /210807.b/210807.b/08072109ECD7.D
Method: \\target\share\chem4\ecd7.i\210807.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21G0212-10
Client ID:
Injection Date: 07-AUG-2021 22:12
Report Date: 08/16/2021 07:28
Matrix: NONE
Dilution Factor: 5.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.065	-0.001	19197	5.410	-0.004	48955	5.8	5.8	0.8	Tetrachloro-m-xylene
13.157	-0.008	24199	13.840	-0.009	105847	7.6	6.7	12.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	275533	-7.1
Hexabromobiphenyl	470266	358649	-23.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	686198	-3.6
Hexabromobiphenyl	867949	886284	2.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT (ZB5 Col)	Shift	Area	Amount	Peak#	RT (ZB35 Col)	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	7.791	-0.010	56674	492.9	1	---			0.0
Aroclor-1248	2	7.952	-0.017	23104	162.0	2	---			0.0
Aroclor-1248	3	8.304	-0.017	59950	419.9	3	---			0.0
Aroclor-1248	4	8.585	-0.026	49153	389.3	4	---			0.0
		Total Col1Ave (4 peaks):			366.8		Col2Ave: <3 Quant Peaks			
Aroclor-1254	1	8.664	-0.011	166446	714.5	1	9.229	-0.008	407743	784.8
Aroclor-1254	2	8.733	-0.014	76618	903.2	2	9.320	-0.010	209351	683.3
Aroclor-1254	3	9.029	-0.014	84396	591.1	3	9.751	-0.009	176294	450.9
Aroclor-1254	4	9.161	-0.017	279398	988.4	4	9.901	-0.010	765411	880.6
Aroclor-1254	5	9.849	-0.019	125844	660.5	5	10.130	-0.016	711721	763.4
		Total Col1Ave (5 peaks):			771.5		Total Col2Ave (5 peaks):			712.6 RPD = 8
		Corrected Ave (4 peaks):			717.3		Corrected Ave (4 peaks):			670.6 RPD = 7
Aroclor-1260	1	10.371	-0.012	26905	204.6	1	11.425	-0.002	208327	376.9
Aroclor-1260	2	10.690	-0.011	22907	169.5	2	11.669	-0.009	225437	156.4
Aroclor-1260	3	11.040	-0.012	61447	173.5	3	12.251	-0.009	157163	167.6
Aroclor-1260	4	11.439	-0.013	40546	224.6	4	12.963	-0.009	69024	171.3
Aroclor-1260	5	11.545	-0.010	13192	189.6	NS	---			----
		Total Col1Ave (5 peaks):			192.4		Total Col2Ave (4 peaks):			218.0 RPD = 13
		Corrected Ave (4 peaks):			184.3		Corrected Ave (3 peaks):			165.1 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 (5.166 - 13.065) = 2776425 Col1 Total PCB = 1.1 ppm*

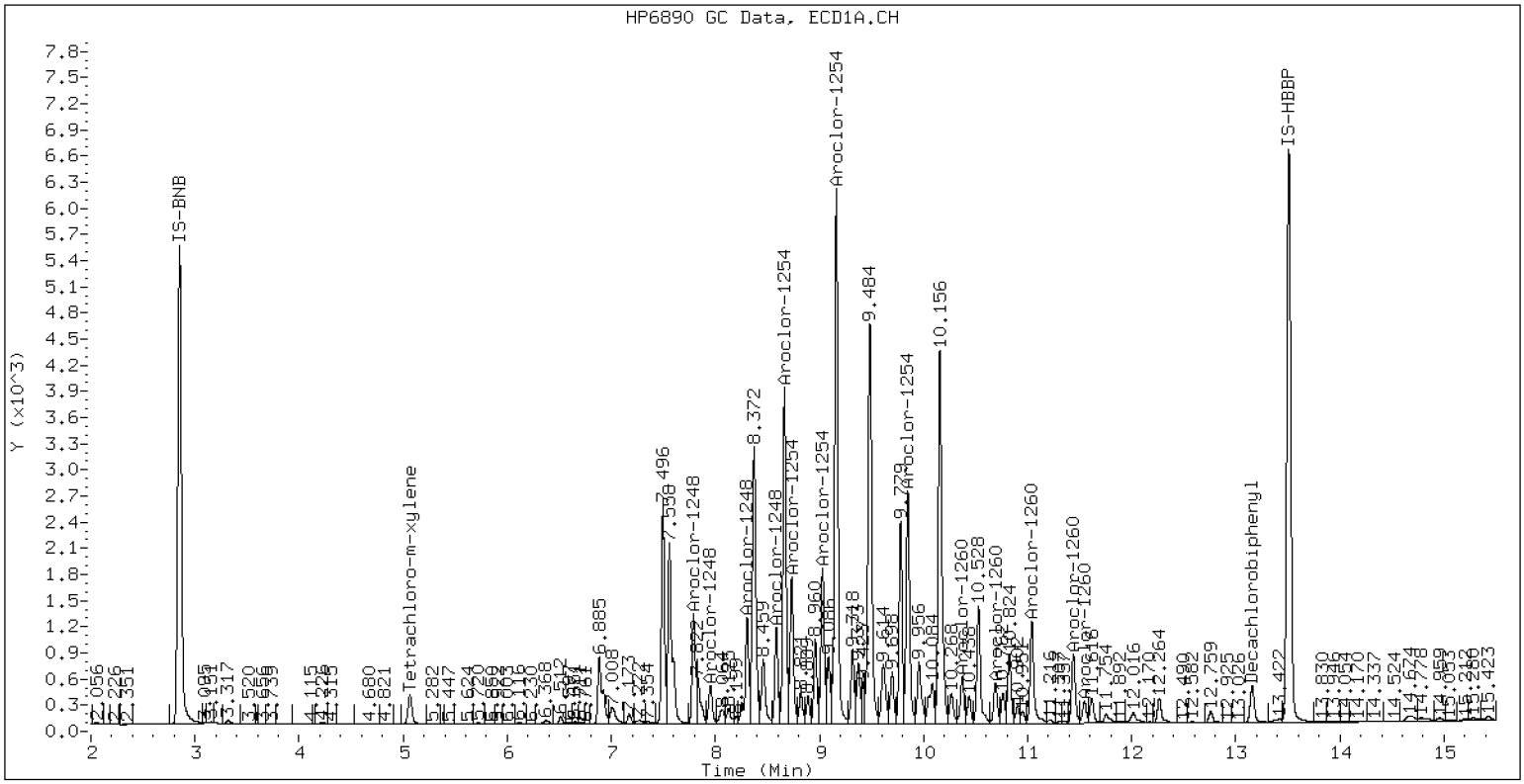
Total PCB Area Col2 (5.166 - 13.065) = 7444025 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

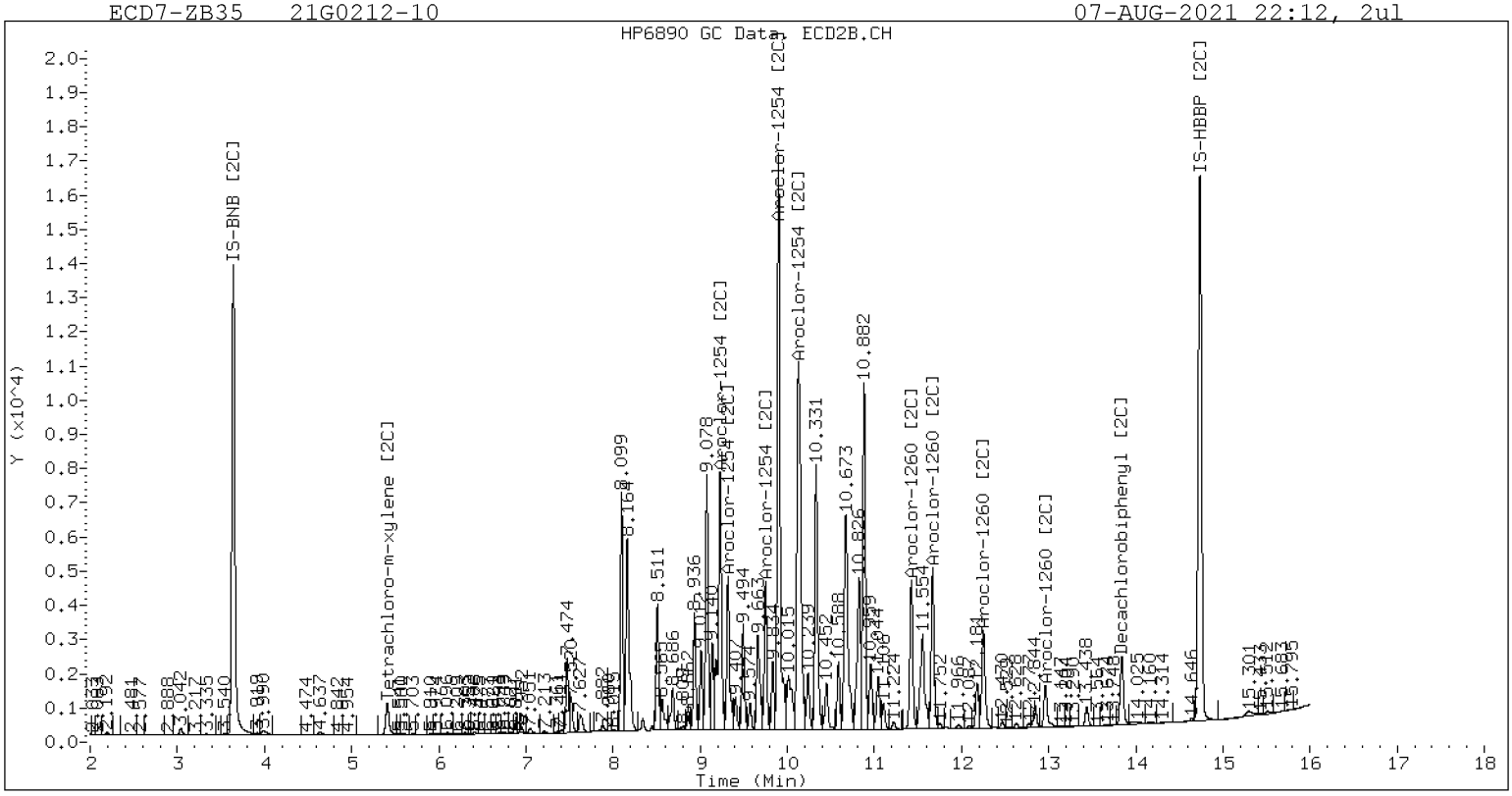
PCB Dual Column Chromatograms

ECD7-ZB5 21G0212-10 07-AUG-2021 22:12, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 21G0212-10 07-AUG-2021 22:12, 2ul

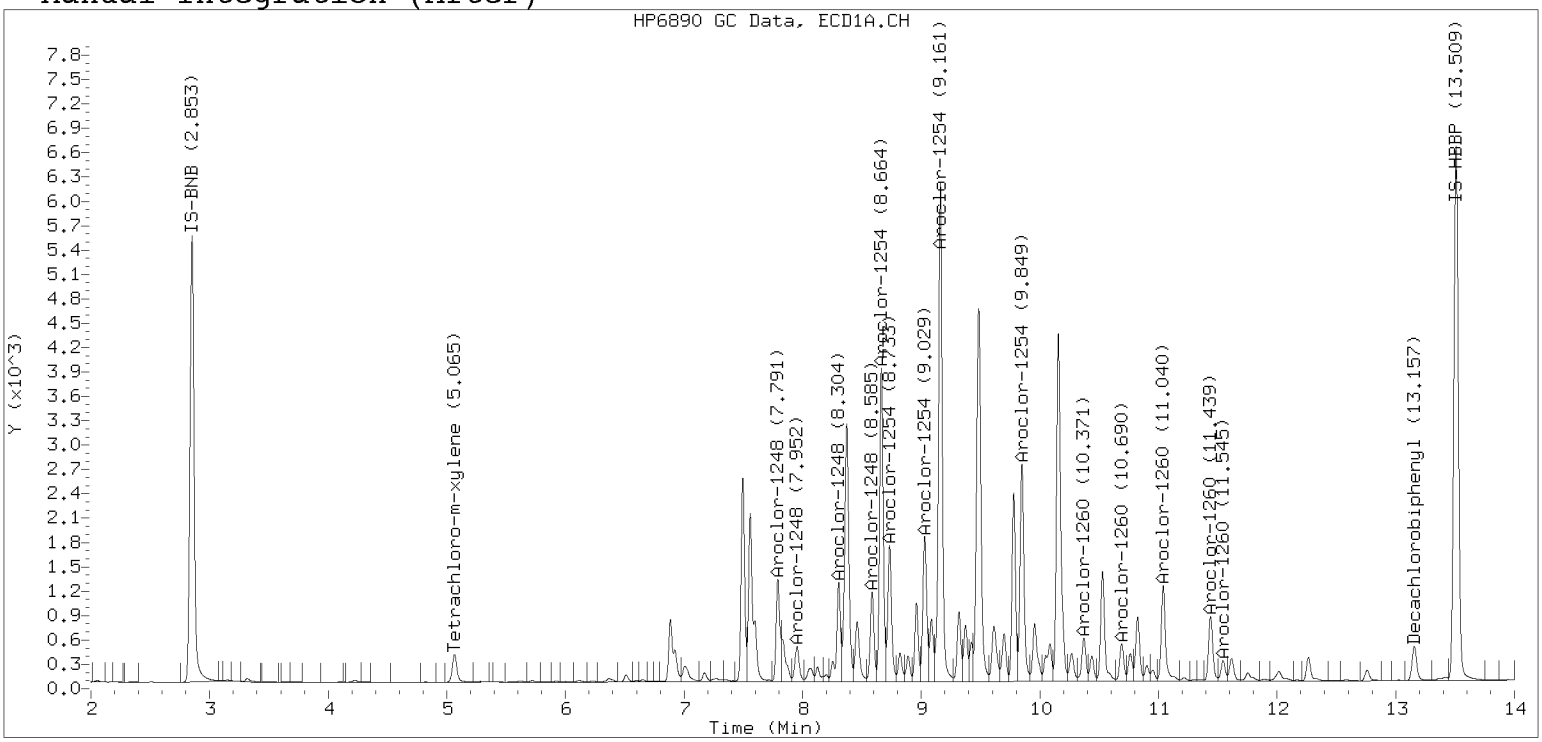


ZB-35 Manual Integration: NO

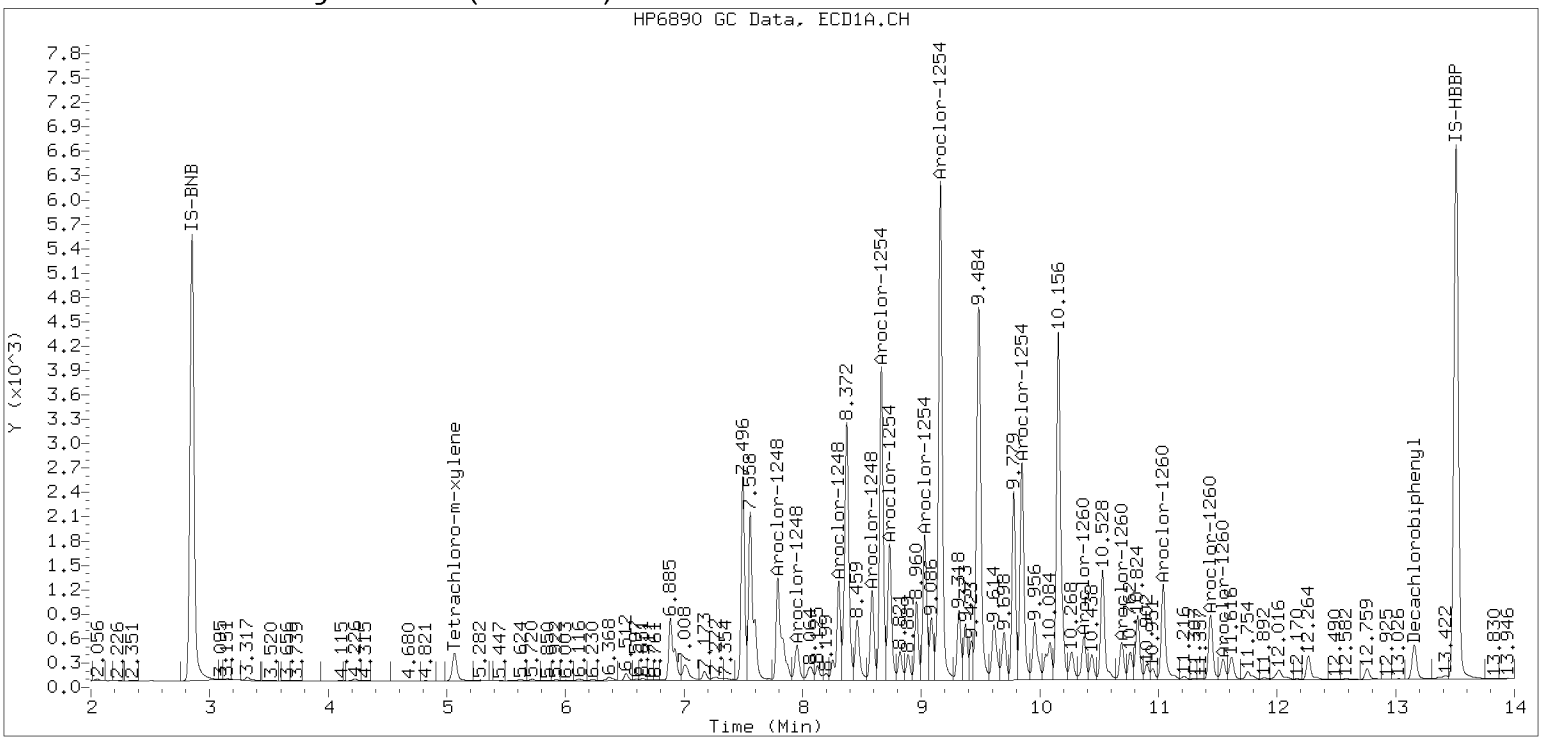
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/210807.b/08072109ECD7.D Injection Date: 07-AUG-2021 22:12

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dual Column

LDW21-IT597C

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Solid	Laboratory ID:	21G0212-11 B	File ID:	08062134ECD7.D
Sampled:	07/16/21 14:07	Prepared:	07/27/21 14:38	Analyzed:	08/06/21 23:02
% Solids:	74.77	Preparation:	EPA 3546 (Microwave)	Initial/Final:	16.77 g Wet / 2.5 mL
Batch:	BJG0590	Sequence:	SJH0075	Calibration:	EE00069
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	4.0	1.6	4.0	U
11097-69-1	Aroclor 1254	1	1	122	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	66.7	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9752*	*7.09*	*88.9*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9752*	*5.75*	*72.1*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9752*	*6.78*	*85.1*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9752*	*5.72*	*71.8*	*44 - 120*	

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

Data file 1: /210806.b/08062134ECD7.D
Data file 2: /210806.b/210806.b/08062134ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21G0212-11
Client ID:
Injection Date: 06-AUG-2021 23:02
Report Date: 08/11/2021 08:39
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.064	-0.005	96495	5.408	-0.007	250668	28.9	28.7	0.5	Tetrachloro-m-xylene
13.155	-0.010	101228	13.841	-0.007	497978	35.6	34.0	4.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	280090	-5.5
Hexabromobiphenyl	470266	319103	-32.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	708173	-0.5
Hexabromobiphenyl	867949	816372	-5.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.650	-0.009	510	5.9	1	7.049	-0.009	3043	8.3
Aroclor-1016	2	7.008	-0.024	6557	22.4	2	7.630	-0.022	15265	19.0
Aroclor-1016	3	7.170	-0.008	2321	19.5	3	7.880	0.021	3112	10.4
Aroclor-1016	4	7.267	-0.020	1212	15.2	4	8.016	-0.014	1352	7.4
Total Col1Ave (4 peaks):				15.7		Total Col2Ave (4 peaks):			11.3	RPD = 33
Corrected Ave (3 peaks):				13.5		Corrected Ave (3 peaks):			8.7	RPD = 44*
Aroclor-1221	1	---			0.0	1	4.635	-0.058	13509	293.1
Aroclor-1221	2	---			0.0	2	6.086	0.003	7910	73.1
Aroclor-1221	3	---			0.0	3	6.409	-0.013	5597	28.1
Col1Ave: <3 Quant Peaks						Col2Ave: 131.4				
Aroclor-1232	1	---			0.0	1	4.635	-0.057	13509	463.4
Aroclor-1232	2	5.715	-0.015	680	8.9	2	6.086	0.002	7910	101.4
Aroclor-1232	3	7.008	-0.019	6557	50.8	3	6.409	-0.014	5597	32.7
Aroclor-1232	4	8.582	-0.023	43039	1110.0	4	7.630	-0.032	15265	42.6
Total Col1Ave (3 peaks):				389.9		Total Col2Ave (4 peaks):			160.0	RPD = 84*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			50.9	
Aroclor-1242	1	6.650	-0.009	510	6.6	1	7.049	-0.009	3043	9.7
Aroclor-1242	2	7.008	-0.023	6557	26.1	2	7.630	-0.021	15265	22.4
Aroclor-1242	3	8.251	-0.026	6765	195.9	3	8.934	-0.016	72699	236.5
Aroclor-1242	4	8.582	-0.031	43039	558.1	4	9.010	-0.022	55735	206.1
Total Col1Ave (4 peaks):				196.7		Total Col2Ave (4 peaks):			118.7	RPD = 49*
Corrected Ave (3 peaks):				76.2		Corrected Ave (3 peaks):			79.4	RPD = 4
Aroclor-1248	1	7.788	-0.011	39262	335.9	1	8.099	-0.008	153390	594.1
Aroclor-1248	2	7.951	-0.017	10072	69.5	2	8.510	-0.011	81026	230.8
Aroclor-1248	3	8.301	-0.018	24401	168.1	3	8.934	-0.017	72699	143.8
Aroclor-1248	4	8.582	-0.028	43039	335.3	4	9.347	-0.032	23812	44.2
Total Col1Ave (4 peaks):				227.2		Total Col2Ave (4 peaks):			253.2	RPD = 11
Corrected Ave (3 peaks):				191.0		Corrected Ave (3 peaks):			139.6	RPD = 31
Aroclor-1254	1	8.661	-0.015	118622	500.9	1	9.228	-0.012	269886	503.3
Aroclor-1254	2	8.731	-0.015	48722	565.0	2	9.319	-0.014	130079	411.4
Aroclor-1254	3	9.026	-0.015	92154	634.9	3	9.751	-0.013	212544	526.8
Aroclor-1254	4	9.158	-0.018	202796	705.8	4	9.900	-0.014	566876	631.9
Aroclor-1254	5	9.845	-0.022	126541	653.3	5	10.127	-0.021	677683	704.3
Total Col1Ave (5 peaks):				612.0		Total Col2Ave (5 peaks):			555.5	RPD = 10
Corrected Ave (4 peaks):				588.5		Corrected Ave (4 peaks):			518.3	RPD = 13
Aroclor-1260	1	10.369	-0.014	32740	279.9	1	11.422	-0.006	249100	489.3
Aroclor-1260	2	10.687	-0.014	30134	250.5	2	11.668	-0.011	329590	248.2
Aroclor-1260	3	11.036	-0.015	76683	243.4	3	12.250	-0.011	231998	268.6
Aroclor-1260	4	11.436	-0.015	54036	336.5	4	12.962	-0.010	123595	332.9
Aroclor-1260	5	11.542	-0.012	17859	288.5	NS	---			----
Total Col1Ave (5 peaks):				279.8		Total Col2Ave (4 peaks):			334.8	RPD = 18
Corrected Ave (4 peaks):				265.6		Corrected Ave (3 peaks):			283.2	RPD = 6
Aroclor-1262	1	10.369	-0.023	32740	163.1	1	10.957	-0.032	119474	145.7
Aroclor-1262	2	11.436	-0.025	54036	417.3	2	11.668	-0.032	329590	203.2
Aroclor-1262	3	11.613	-0.023	20891	119.6	3	12.174	-0.034	165476	212.7
Aroclor-1262	4	12.260	-0.028	28737	208.1	4	12.962	-0.030	123595	175.2
Total Col1Ave (4 peaks):				227.1		Total Col2Ave (4 peaks):			184.2	RPD = 21
Corrected Ave (3 peaks):				163.6		Corrected Ave (3 peaks):			174.7	RPD = 7
Aroclor-1268	1	11.542	-0.023	17859	33.3	1	12.174	-0.034	165476	69.8
Aroclor-1268	2	11.613	-0.023	20891	38.5	2	12.250	-0.024	231998	89.7
Aroclor-1268	3	12.015	0.003	11909	27.9	3	12.631	-0.029	13491	5.9
Aroclor-1268	4	12.757	-0.020	11648	8.7	4	13.434	-0.039	65990	9.0
Total Col1Ave (4 peaks):				27.1		Total Col2Ave (4 peaks):			43.6	RPD = 47*
Corrected Ave (3 peaks):				23.3		Corrected Ave (3 peaks):			28.2	RPD = 19

Total PCB Area Col1 (5.168 - 13.065) = 2428032 Col1 Total PCB = 1.0 ppm*

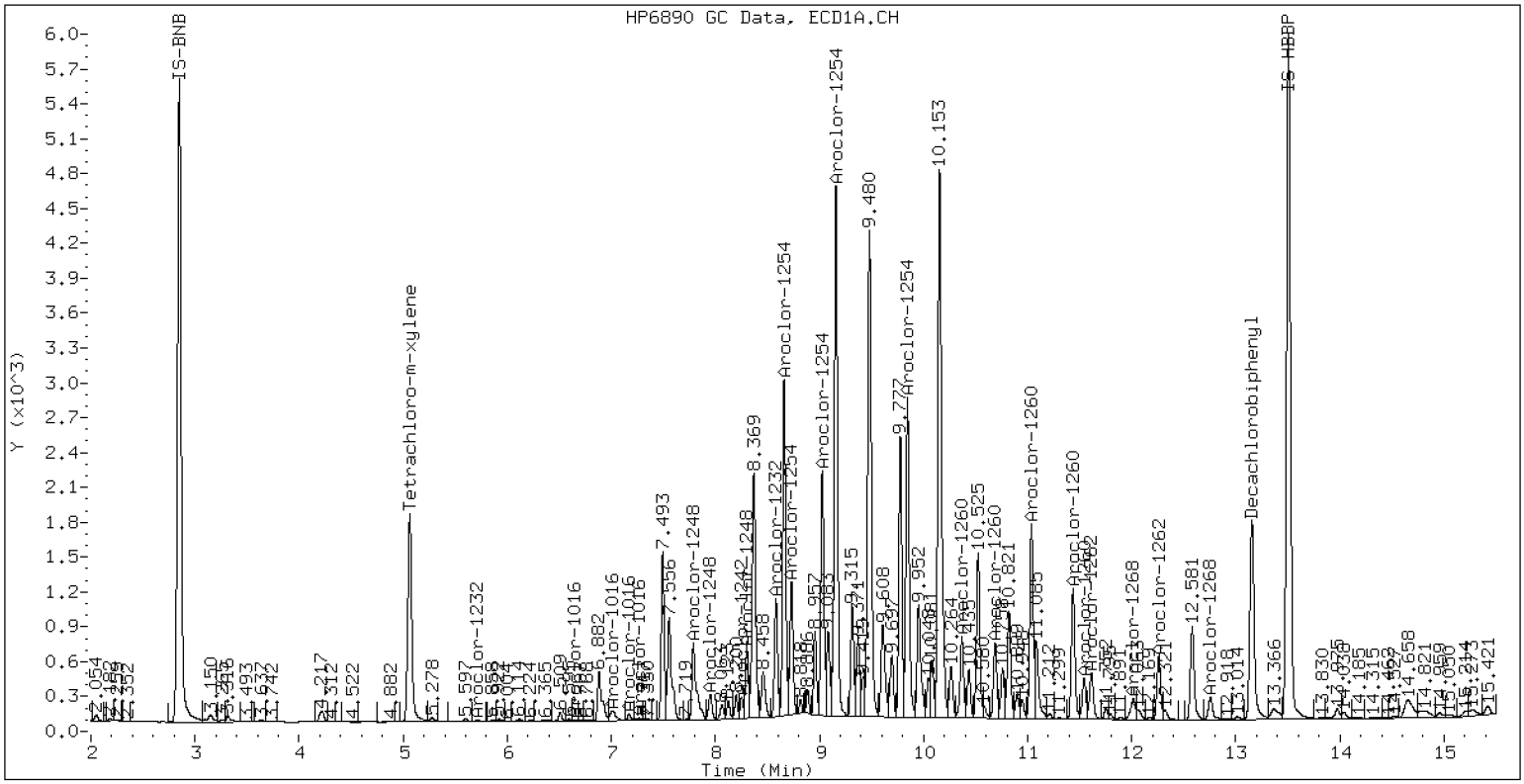
Total PCB Area Col2 (5.168 - 13.065) = 7357344 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

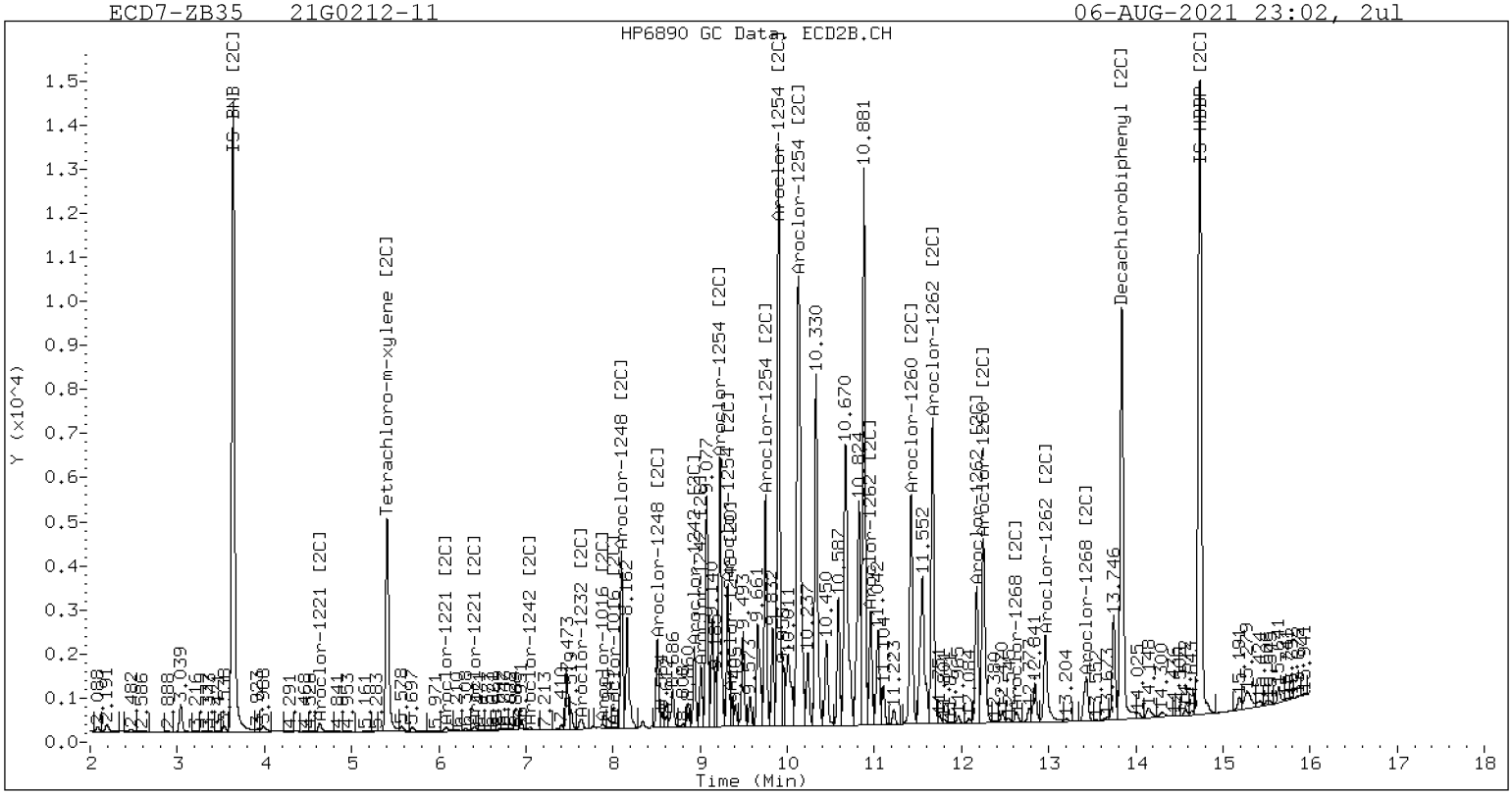
PCB Dual Column Chromatograms

ECD7-ZB5 21G0212-11 06-AUG-2021 23:02, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21G0212-11 06-AUG-2021 23:02, 2ul

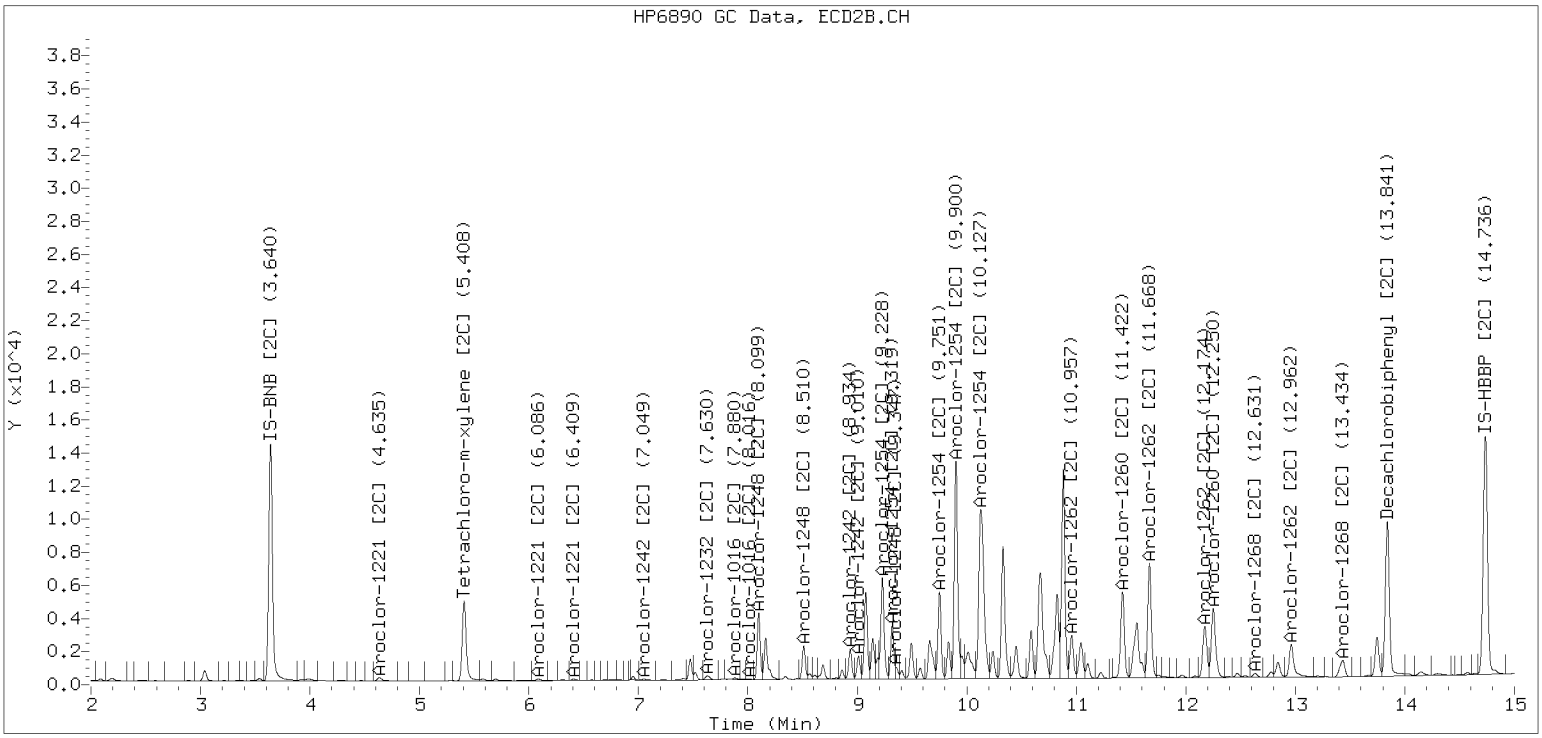


ZB-35 Manual Integration: YES

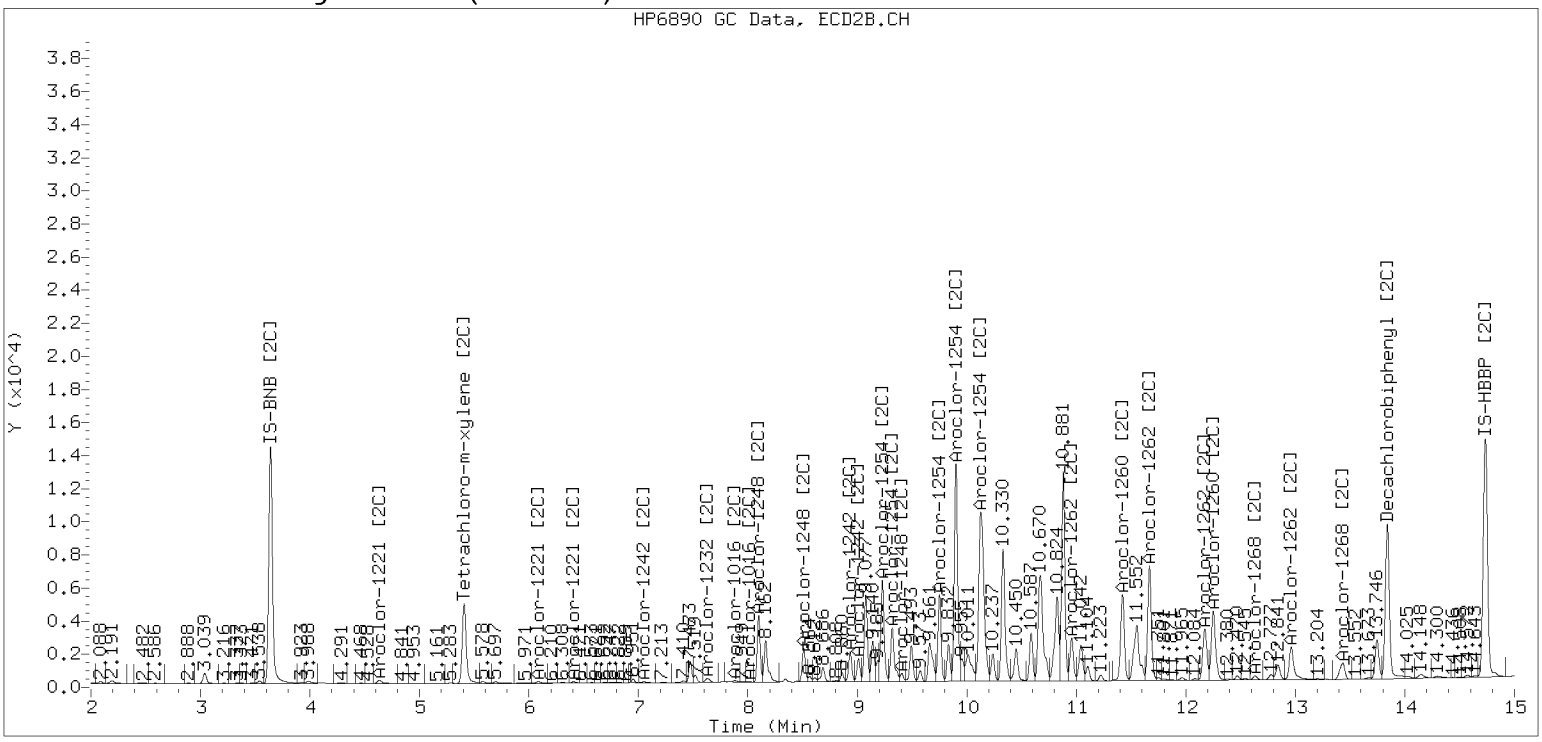
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/210806.b/210806.b/08062134ECD7.D Injection Date: 06-AUG-2021

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dual Column

LDW21-IT597E

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Solid	Laboratory ID:	21G0212-12 B	File ID:	08062135ECD7.D
Sampled:	07/16/21 14:07	Prepared:	07/27/21 14:38	Analyzed:	08/06/21 23:23
% Solids:	82.58	Preparation:	EPA 3546 (Microwave)	Initial/Final:	15.16 g Wet / 2.5 mL
Batch:	BJG0590	Sequence:	SJH0075	Calibration:	EE00069
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	4.0	1.6	4.0	U
11097-69-1	Aroclor 1254	2	1	2.0	1.6	4.0	J
11096-82-5	Aroclor 1260	2	1	2.5	0.6	4.0	J

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9878*	*7.37*	*92.3*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9878*	*6.69*	*83.8*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9878*	*7.84*	*98.2*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9878*	*6.38*	*79.9*	*44 - 120*	

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

Data file 1: /210806.b/08062135ECD7.D
Data file 2: /210806.b/210806.b/08062135ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21G0212-12
Client ID:
Injection Date: 06-AUG-2021 23:23
Report Date: 08/11/2021 08:39
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.066	-0.002	112019	5.411	-0.004	303828	33.5	32.0	4.7	Tetrachloro-m-xylene
13.163	-0.002	138267	13.847	-0.001	712120	36.9	39.3	6.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	279925	-5.6
Hexabromobiphenyl	470266	420000	-10.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	770842	8.3
Hexabromobiphenyl	867949	1011143	16.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.607	-0.052	308	3.5	1	7.056	-0.001	913	2.3
Aroclor-1016	2	7.074	0.042	410	1.4	2	7.647	-0.005	2458	2.8
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	7.340	0.053	310	3.9	4	8.105	0.074	1781	8.9
Total Col1Ave (3 peaks):				2.9		Total Col2Ave (3 peaks):			4.7	RPD = 45*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1221	1	4.104	0.081	132	6.4	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.088	0.004	7302	62.0
Aroclor-1221	3	5.777	0.047	239	2.7	3	6.401	-0.020	2524	11.6
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	5.777	0.046	239	3.1	2	6.088	0.003	7302	86.0
Aroclor-1232	3	7.074	0.047	410	3.2	3	6.401	-0.021	2524	13.6
Aroclor-1232	4	8.584	-0.021	1202	31.0	4	7.647	-0.015	2458	6.3
Total Col1Ave (3 peaks):				12.4		Total Col2Ave (3 peaks):			35.3	RPD = 96*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.607	-0.052	308	4.0	1	7.056	-0.001	913	2.7
Aroclor-1242	2	7.074	0.043	410	1.6	2	7.647	-0.005	2458	3.3
Aroclor-1242	3	8.314	0.037	603	17.5	3	8.946	-0.004	2558	7.6
Aroclor-1242	4	8.584	-0.029	1202	15.6	4	9.021	-0.011	1721	5.8
Total Col1Ave (4 peaks):				9.7		Total Col2Ave (4 peaks):			4.9	RPD = 66*
Corrected Ave (3 peaks):				7.1		Corrected Ave (3 peaks):			3.9	RPD = 57*
Aroclor-1248	1	7.797	-0.003	334	2.9	1	8.105	-0.002	1781	6.3
Aroclor-1248	2	7.963	-0.005	360	2.5	2	8.519	-0.002	1618	4.2
Aroclor-1248	3	8.314	-0.005	603	4.2	3	8.946	-0.005	2558	4.6
Aroclor-1248	4	8.584	-0.026	1202	9.4	4	9.360	-0.018	3275	5.6
Total Col1Ave (4 peaks):				4.7		Total Col2Ave (4 peaks):			5.2	RPD = 10
Corrected Ave (3 peaks):				3.2		Corrected Ave (3 peaks):			4.8	RPD = 41*
Aroclor-1254	1	8.670	-0.005	1736	7.3	1	9.237	-0.003	7178	12.3
Aroclor-1254	2	8.744	-0.002	893	10.4	2	9.329	-0.004	3359	9.8
Aroclor-1254	3	9.054	0.013	1991	13.7	3	9.755	-0.008	3790	8.6
Aroclor-1254	4	9.173	-0.003	2704	9.4	4	9.910	-0.004	7313	7.5
Aroclor-1254	5	9.859	-0.009	1566	8.1	5	10.148	-0.000	11742	11.2
Total Col1Ave (5 peaks):				9.8		Total Col2Ave (5 peaks):			9.9	RPD = 1
Corrected Ave (4 peaks):				8.8		Corrected Ave (4 peaks):			9.3	RPD = 5
Aroclor-1260	1	10.380	-0.003	1457	9.5	1	11.426	-0.002	7612	12.1
Aroclor-1260	2	10.698	-0.003	1212	7.7	2	11.674	-0.004	17049	10.4
Aroclor-1260	3	11.048	-0.003	3229	7.8	3	12.256	-0.005	12560	11.7
Aroclor-1260	4	11.448	-0.004	1552	7.3	4	12.969	-0.004	7362	16.0
Aroclor-1260	5	11.551	-0.003	1103	13.5	NS	---			----
Total Col1Ave (5 peaks):				9.2		Total Col2Ave (4 peaks):			12.5	RPD = 31
Corrected Ave (4 peaks):				8.1		Corrected Ave (3 peaks):			11.4	RPD = 34
Aroclor-1262	1	10.380	-0.011	1457	5.5	1	10.966	-0.023	6928	6.8
Aroclor-1262	2	11.448	-0.014	1552	9.1	2	11.674	-0.026	17049	8.5
Aroclor-1262	3	11.624	-0.011	1376	6.0	3	12.178	-0.030	15284	15.9
Aroclor-1262	4	12.270	-0.018	1913	10.5	4	12.969	-0.024	7362	8.4
Total Col1Ave (4 peaks):				7.8		Total Col2Ave (4 peaks):			9.9	RPD = 24
Corrected Ave (3 peaks):				6.9		Corrected Ave (3 peaks):			7.9	RPD = 14
Aroclor-1268	1	11.551	-0.014	1103	1.6	1	12.178	-0.029	15284	5.2
Aroclor-1268	2	11.624	-0.011	1376	1.9	2	12.256	-0.018	12560	3.9
Aroclor-1268	3	12.012	-0.000	1147	2.0	3	12.635	-0.025	3652	1.3
Aroclor-1268	4	12.763	-0.014	2107	1.2	4	13.440	-0.033	8750	1.0
Total Col1Ave (4 peaks):				1.7		Total Col2Ave (4 peaks):			2.8	RPD = 51*
Corrected Ave (3 peaks):				1.6		Corrected Ave (3 peaks):			2.1	RPD = 28

Total PCB Area Col1 (5.168 - 13.065) = 80242 Col1 Total PCB = 0.0 ppm*

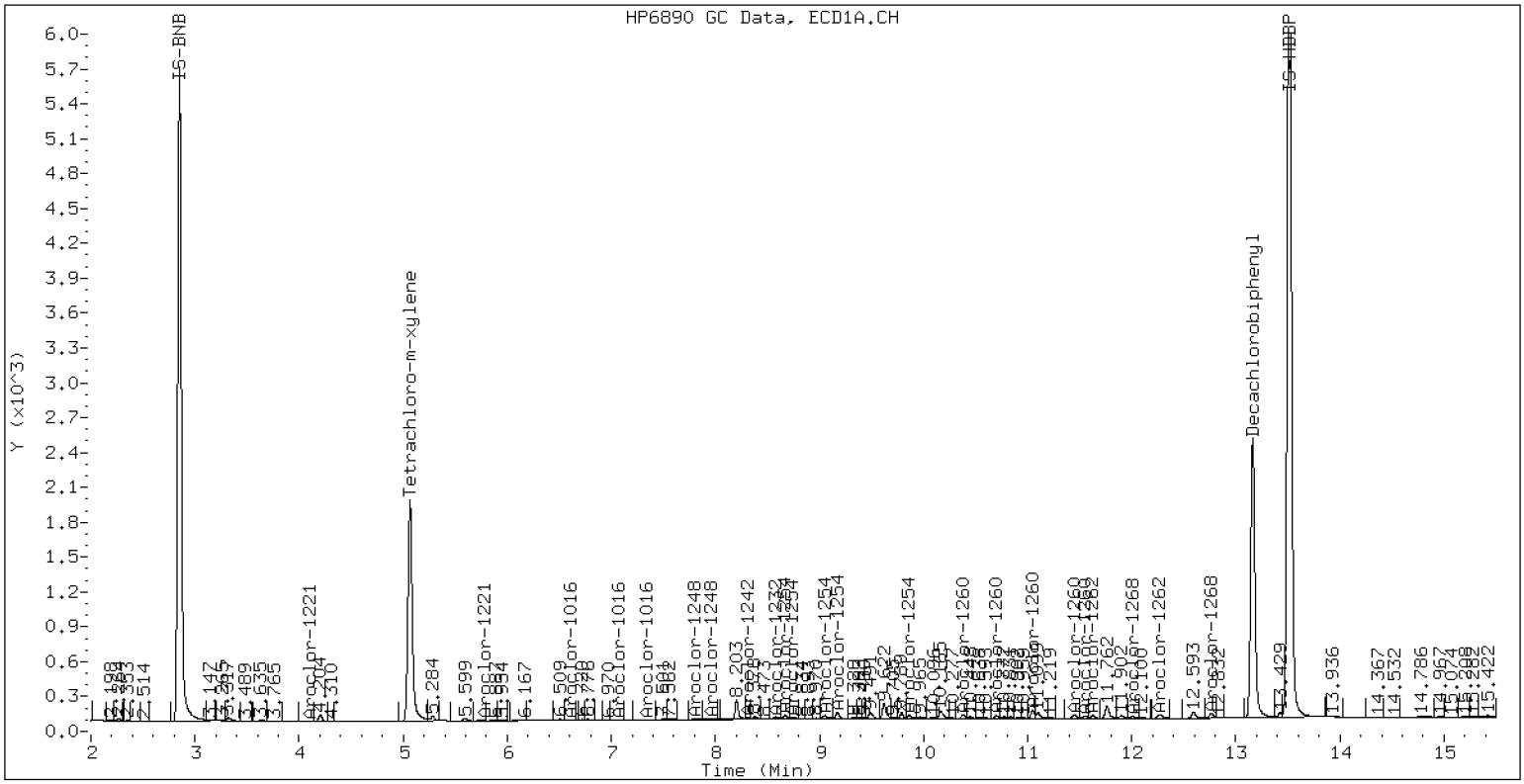
Total PCB Area Col2 (5.168 - 13.065) = 636247 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

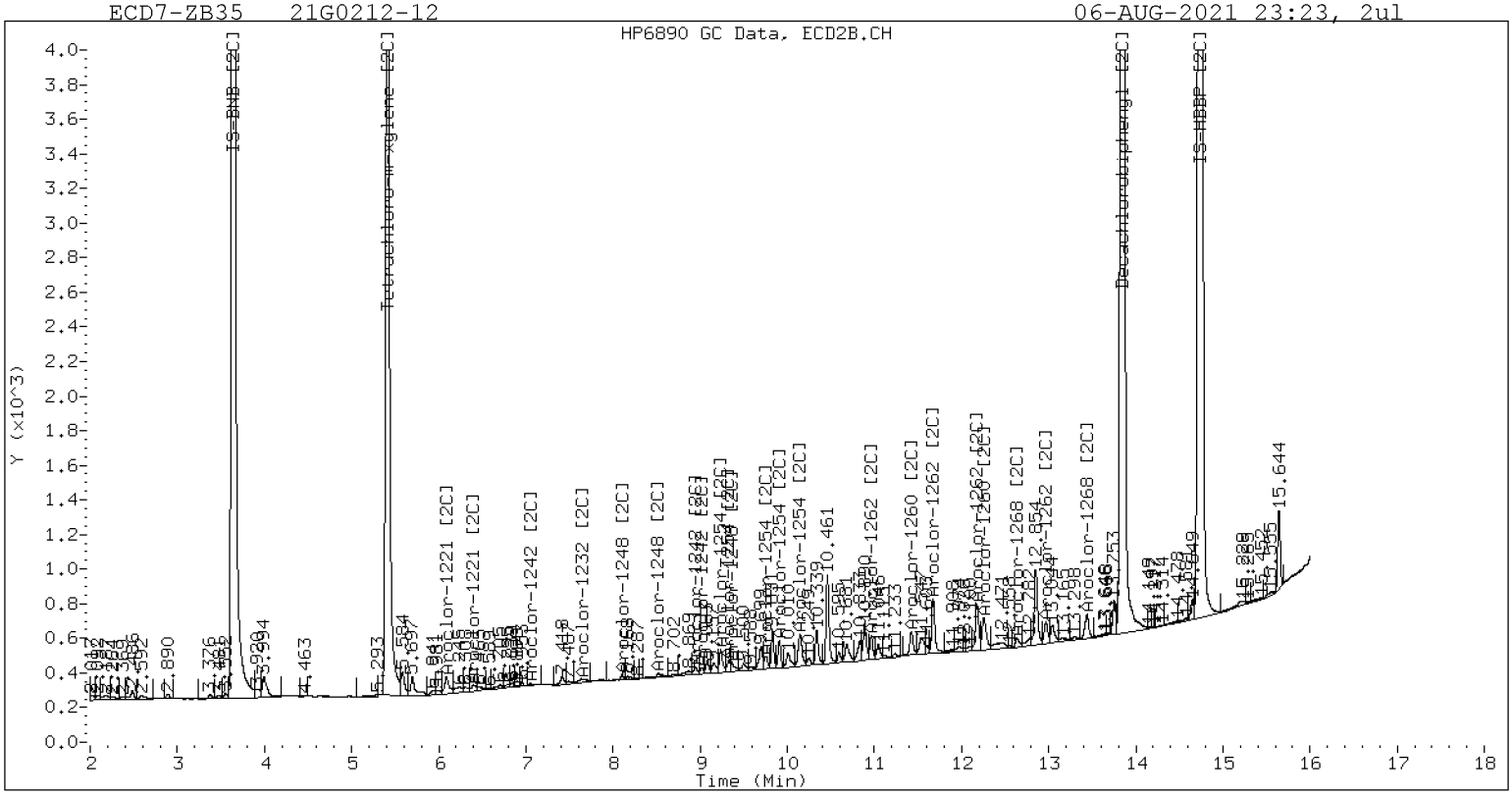
PCB Dual Column Chromatograms

ECD7-ZB5 21G0212-12 06-AUG-2021 23:23, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21G0212-12 06-AUG-2021 23:23, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LDW21-SC539A

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Solid	Laboratory ID:	21G0212-13 B	File ID:	08072110ECD7.D
Sampled:	07/16/21 15:45	Prepared:	07/27/21 14:38	Analyzed:	08/07/21 22:32
% Solids:	55.15	Preparation:	EPA 3546 (Microwave)	Initial/Final:	22.72 g Wet / 2.5 mL
Batch:	BJG0590	Sequence:	SJH0101	Calibration:	EE00069
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	5	20.0	7.8	20.0	U
11104-28-2	Aroclor 1221	1	5	20.0	7.8	20.0	U
11141-16-5	Aroclor 1232	1	5	20.0	7.8	20.0	U
53469-21-9	Aroclor 1242	1	5	20.0	7.8	20.0	U
12672-29-6	Aroclor 1248	1	5	20.0	7.8	20.0	U
11097-69-1	Aroclor 1254	2	5	167	7.8	20.0	D
11096-82-5	Aroclor 1260	1	5	302	2.9	20.0	D

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9808*	*7.59*	*95.1*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9808*	*6.70*	*84.0*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9808*	*6.82*	*85.5*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9808*	*6.85*	*85.8*	*44 - 120*	

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

Data file 1: /210807.b/08072110ECD7.D
Data file 2: /210807.b/210807.b/08072110ECD7.D
Method: \\target\share\chem4\ecd7.i\210807.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21G0212-13
Client ID:
Injection Date: 07-AUG-2021 22:32
Report Date: 08/16/2021 07:28
Matrix: NONE
Dilution Factor: 5.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.066	-0.001	22597	5.412	-0.002	61918	6.7	6.9	2.1	Tetrachloro-m-xylene
13.160	-0.005	27341	13.842	-0.007	124537	7.6	6.8	10.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	281618	-5.0
Hexabromobiphenyl	470266	402963	-14.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	731884	2.8
Hexabromobiphenyl	867949	1015631	17.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT (ZB5 Col)	Shift	Area	Amount	Peak#	RT (ZB35 Col)	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	7.795	-0.005	6114	52.0	1	---			0.0
Aroclor-1248	2	7.950	-0.019	5240	36.0	2	---			0.0
Aroclor-1248	3	8.311	-0.010	4771	32.7	3	---			0.0
Aroclor-1248	4	8.591	-0.020	6805	52.7	4	---			0.0
		Total Col1Ave (4 peaks):			43.4		Col2Ave: <3 Quant Peaks			
Aroclor-1254	1	8.667	-0.008	35926	150.9	1	9.233	-0.004	103602	186.9
Aroclor-1254	2	8.739	-0.008	18394	212.1	2	9.323	-0.007	59410	181.8
Aroclor-1254	3	9.037	-0.006	11905	81.6	3	9.755	-0.006	23799	57.1
Aroclor-1254	4	9.166	-0.012	44939	155.5	4	9.908	-0.003	140192	151.2
Aroclor-1254	5	9.852	-0.015	30020	154.1	5	10.151	0.005	257116	258.6
		Total Col1Ave (5 peaks):			150.9		Total Col2Ave (5 peaks):			167.1 RPD = 10
		Corrected Ave (4 peaks):			135.5		Corrected Ave (4 peaks):			144.3 RPD = 6
Aroclor-1260	1	10.377	-0.006	43240	292.7	1	11.423	-0.004	159648	252.1
Aroclor-1260	2	10.695	-0.006	39659	261.1	2	11.672	-0.005	495085	299.6
Aroclor-1260	3	11.045	-0.007	137728	346.2	3	12.255	-0.006	295013	274.6
Aroclor-1260	4	11.445	-0.007	70580	348.0	4	12.965	-0.007	141215	305.8
Aroclor-1260	5	11.549	-0.006	20622	263.8	NS	---			----
		Total Col1Ave (5 peaks):			302.4		Total Col2Ave (4 peaks):			283.0 RPD = 7
		Corrected Ave (4 peaks):			290.9		Corrected Ave (3 peaks):			275.4 RPD = 5
Aroclor-1262	1	---			0.0	1	10.964	-0.025	156511	153.5
Aroclor-1262	2	---			0.0	2	11.672	-0.028	495085	245.4
Aroclor-1262	3	---			0.0	3	12.185	-0.024	139000	143.6
Aroclor-1262	4				0.0	4	12.965	-0.020	141215	160.9
		Col1Ave: <3 Quant Peaks					Col2Ave: 175.8			
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 (5.166 - 13.065) = 1215358 Col1 Total PCB = 0.5 ppm*

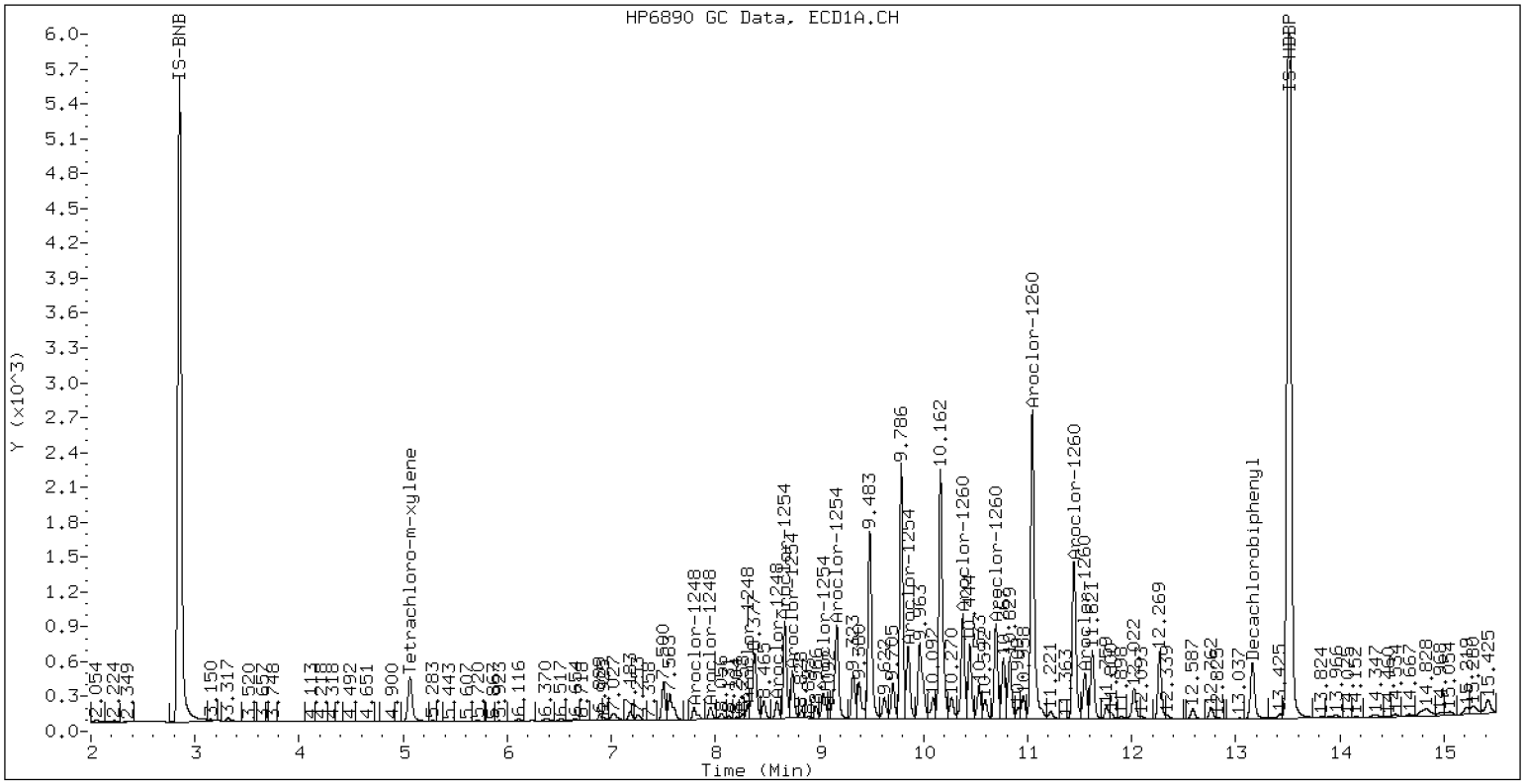
Total PCB Area Col2 (5.166 - 13.065) = 4069368 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

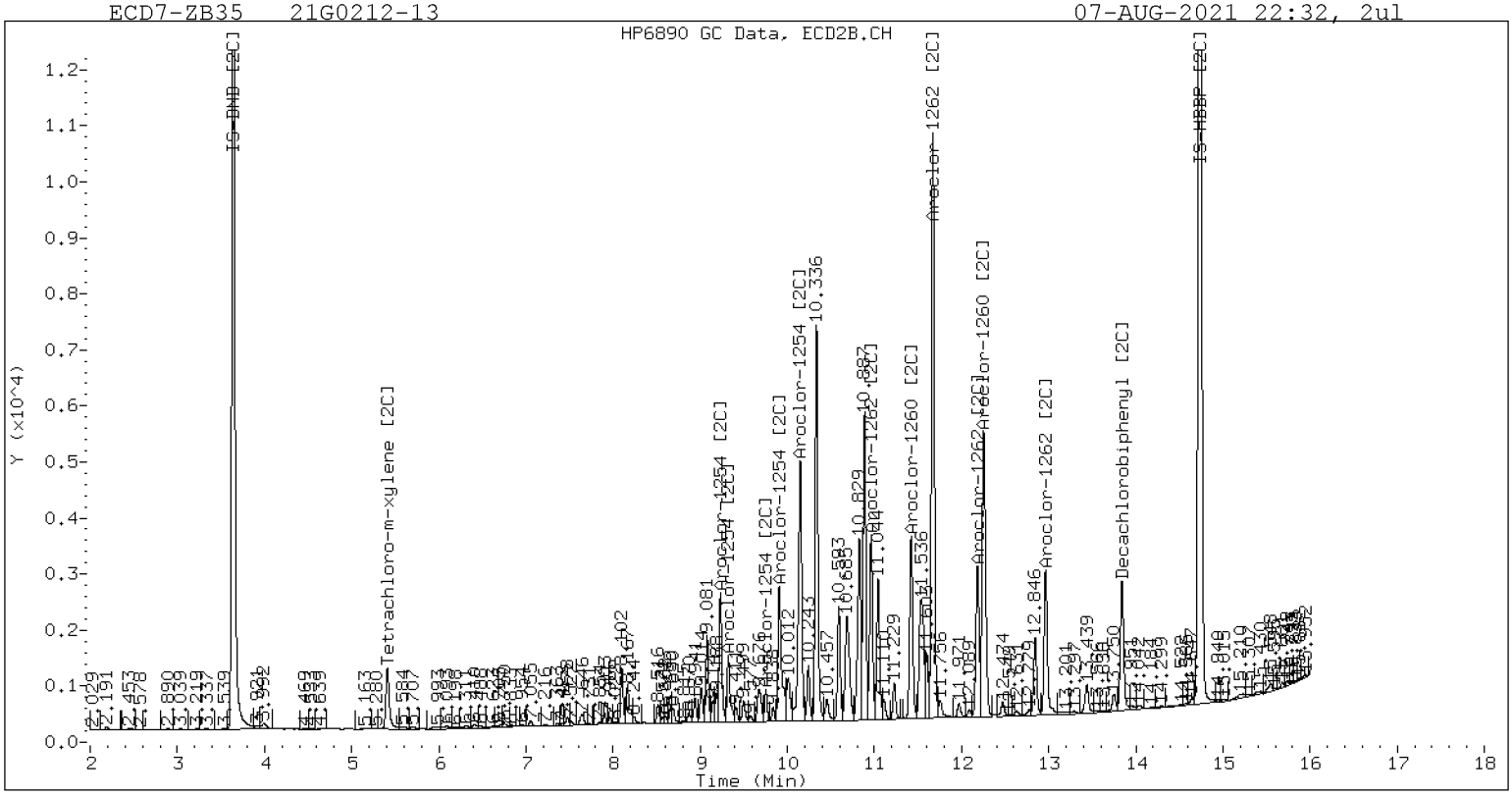
PCB Dual Column Chromatograms

ECD7-ZB5 21G0212-13 07-AUG-2021 22:32, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21G0212-13 07-AUG-2021 22:32, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LDW21-SC539B

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Solid	Laboratory ID:	21G0212-14 B	File ID:	08062137ECD7.D
Sampled:	07/16/21 15:45	Prepared:	07/27/21 14:38	Analyzed:	08/07/21 00:04
% Solids:	79.15	Preparation:	EPA 3546 (Microwave)	Initial/Final:	15.79 g Wet / 2.5 mL
Batch:	BJG0590	Sequence:	SJH0075	Calibration:	EE00069
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	11.8	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	20.0	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	12.7	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*8.0014*	*7.47*	*93.3*	*40 - 126*	
Tetrachlorometaxylene	*1*	*8.0014*	*6.89*	*86.1*	*44 - 120*	
Decachlorobiphenyl	*2*	*8.0014*	*7.50*	*93.7*	*40 - 126*	
Tetrachlorometaxylene	*2*	*8.0014*	*6.34*	*79.2*	*44 - 120*	

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

Data file 1: /210806.b/08062137ECD7.D
Data file 2: /210806.b/210806.b/08062137ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21G0212-14
Client ID:
Injection Date: 07-AUG-2021 00:04
Report Date: 08/11/2021 08:39
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.066	-0.002	111348	5.411	-0.004	290530	34.4	31.7	8.3	Tetrachloro-m-xylene
13.160	-0.005	130336	13.845	-0.003	673675	37.3	37.5	0.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	270719	-8.7
Hexabromobiphenyl	470266	391669	-16.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	743710	4.5
Hexabromobiphenyl	867949	1002288	15.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.654	-0.005	1702	20.3	1	7.055	-0.002	8118	21.2
Aroclor-1016	2	7.027	-0.005	5819	20.5	2	7.646	-0.006	17245	20.5
Aroclor-1016	3	7.176	-0.002	2370	20.6	3	7.853	-0.005	3748	11.9
Aroclor-1016	4	7.279	-0.008	1719	22.4	4	8.024	-0.006	4349	22.5
Total Col1Ave (4 peaks):					20.9	Total Col2Ave (4 peaks):				19.0 RPD = 10
Corrected Ave (3 peaks):					20.5	Corrected Ave (3 peaks):				17.8 RPD = 14
Aroclor-1221	1	---			0.0	1	4.638	-0.054	598	12.4
Aroclor-1221	2	5.362	-0.094	213	6.2	2	6.089	0.005	10315	90.7
Aroclor-1221	3	5.720	-0.010	682	7.8	3	6.407	-0.015	8499	40.6
Col1Ave: <3 Quant Peaks						Col2Ave: 47.9				
Aroclor-1232	1	---			0.0	1	4.638	-0.053	598	19.5
Aroclor-1232	2	5.720	-0.011	682	9.2	2	6.089	0.004	10315	125.9
Aroclor-1232	3	7.027	-0.000	5819	46.6	3	6.407	-0.015	8499	47.3
Aroclor-1232	4	8.592	-0.013	7710	205.7	4	7.646	-0.016	17245	45.9
Total Col1Ave (3 peaks):					87.2	Total Col2Ave (4 peaks):				59.6 RPD = 38
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				37.6
Aroclor-1242	1	6.654	-0.005	1702	22.8	1	7.055	-0.002	8118	24.6
Aroclor-1242	2	7.027	-0.005	5819	24.0	2	7.646	-0.006	17245	24.1
Aroclor-1242	3	8.260	-0.017	2512	75.2	3	8.942	-0.009	24269	75.2
Aroclor-1242	4	8.592	-0.021	7710	103.4	4	9.019	-0.013	17632	62.1
Total Col1Ave (4 peaks):					56.4	Total Col2Ave (4 peaks):				46.5 RPD = 19
Corrected Ave (3 peaks):					40.7	Corrected Ave (3 peaks):				36.9 RPD = 10
Aroclor-1248	1	7.796	-0.004	9540	84.5	1	8.104	-0.003	38120	140.6
Aroclor-1248	2	7.957	-0.011	5163	36.8	2	8.516	-0.005	20460	55.5
Aroclor-1248	3	8.310	-0.009	7252	51.7	3	8.942	-0.009	24269	45.7
Aroclor-1248	4	8.592	-0.018	7710	62.2	4	9.363	-0.016	12209	21.6
Total Col1Ave (4 peaks):					58.8	Total Col2Ave (4 peaks):				65.8 RPD = 11
Corrected Ave (3 peaks):					50.2	Corrected Ave (3 peaks):				40.9 RPD = 20
Aroclor-1254	1	8.668	-0.008	22590	98.7	1	9.234	-0.006	70490	125.2
Aroclor-1254	2	8.739	-0.007	10563	126.7	2	9.325	-0.007	30669	92.4
Aroclor-1254	3	9.036	-0.006	10076	71.8	3	9.757	-0.006	26754	63.1
Aroclor-1254	4	9.168	-0.008	30228	108.8	4	9.907	-0.007	95283	101.1
Aroclor-1254	5	9.855	-0.013	15431	82.4	5	10.144	-0.005	120547	119.3
Total Col1Ave (5 peaks):					97.7	Total Col2Ave (5 peaks):				100.2 RPD = 3
Corrected Ave (4 peaks):					90.4	Corrected Ave (4 peaks):				94.0 RPD = 4
Aroclor-1260	1	10.378	-0.005	9495	66.1	1	11.425	-0.003	45653	73.0
Aroclor-1260	2	10.695	-0.006	7594	51.4	2	11.672	-0.006	90091	55.3
Aroclor-1260	3	11.045	-0.007	19295	49.9	3	12.255	-0.007	62612	59.1
Aroclor-1260	4	11.445	-0.007	10610	53.8	4	12.966	-0.006	30187	66.2
Aroclor-1260	5	11.549	-0.004	5464	71.9	NS	---			----
Total Col1Ave (5 peaks):					58.6	Total Col2Ave (4 peaks):				63.4 RPD = 8
Corrected Ave (4 peaks):					55.3	Corrected Ave (3 peaks):				60.2 RPD = 8
Aroclor-1262	1	10.378	-0.013	9495	38.5	1	10.964	-0.025	40567	40.3
Aroclor-1262	2	11.445	-0.017	10610	66.8	2	11.672	-0.027	90091	45.2
Aroclor-1262	3	11.621	-0.015	6835	31.9	3	12.174	-0.034	109235	114.4
Aroclor-1262	4	12.264	-0.024	13779	81.3	4	12.966	-0.027	30187	34.8
Total Col1Ave (4 peaks):					54.6	Total Col2Ave (4 peaks):				58.7 RPD = 7
Corrected Ave (3 peaks):					45.7	Corrected Ave (3 peaks):				40.1 RPD = 13
Aroclor-1268	1	11.549	-0.016	5464	8.3	1	12.174	-0.034	109235	37.5
Aroclor-1268	2	11.621	-0.015	6835	10.3	2	12.255	-0.019	62612	19.7
Aroclor-1268	3	12.021	0.009	3591	6.9	3	12.634	-0.026	6691	2.4
Aroclor-1268	4	12.762	-0.015	4191	2.6	4	13.419	-0.053	41434	4.6
Total Col1Ave (4 peaks):					7.0	Total Col2Ave (4 peaks):				16.1 RPD = 79*
Corrected Ave (3 peaks):					5.9	Corrected Ave (3 peaks):				8.9 RPD = 41*

Total PCB Area Col1 (5.168 - 13.065) = 518691 Col1 Total PCB = 0.2 ppm*

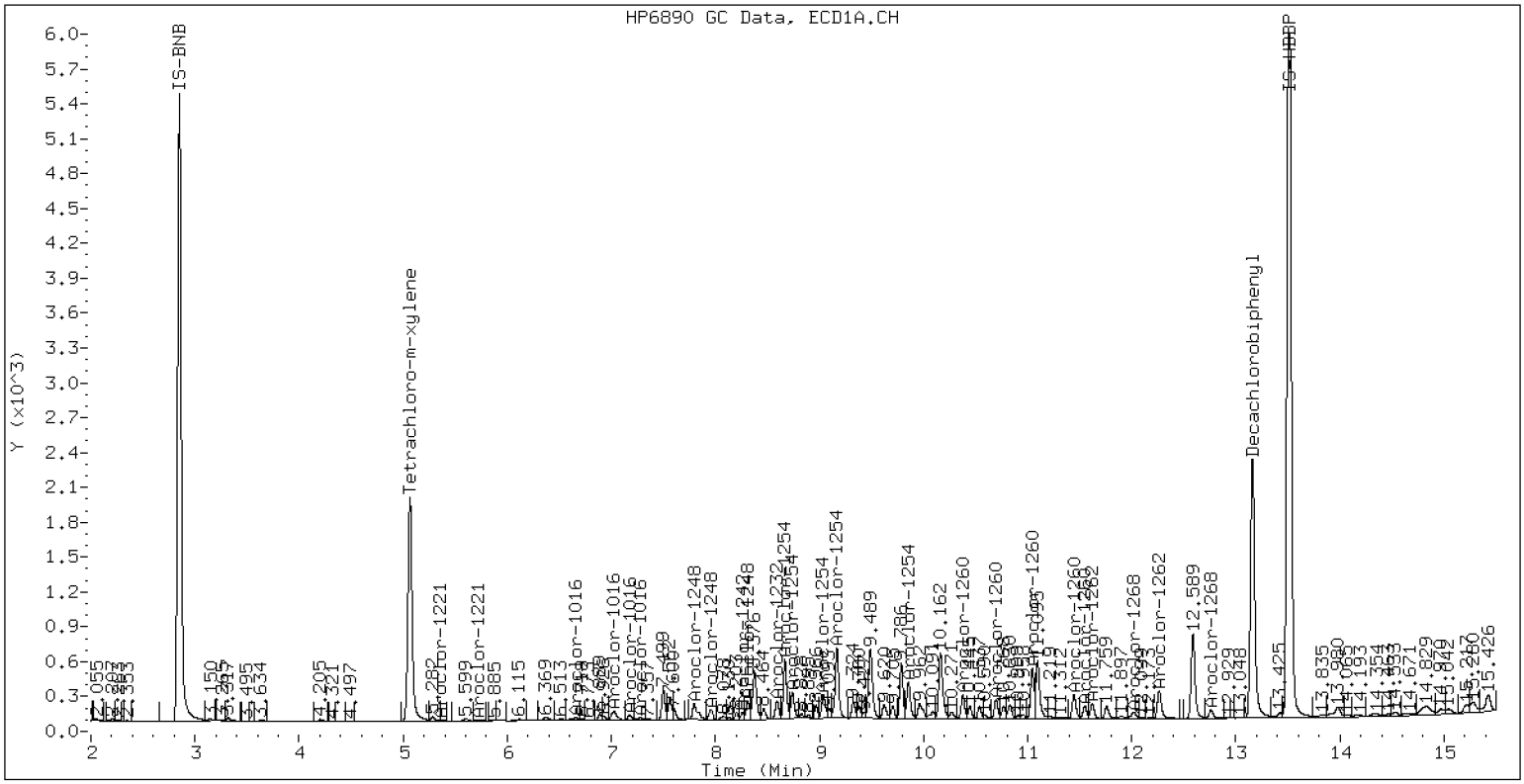
Total PCB Area Col2 (5.168 - 13.065) = 2007409 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

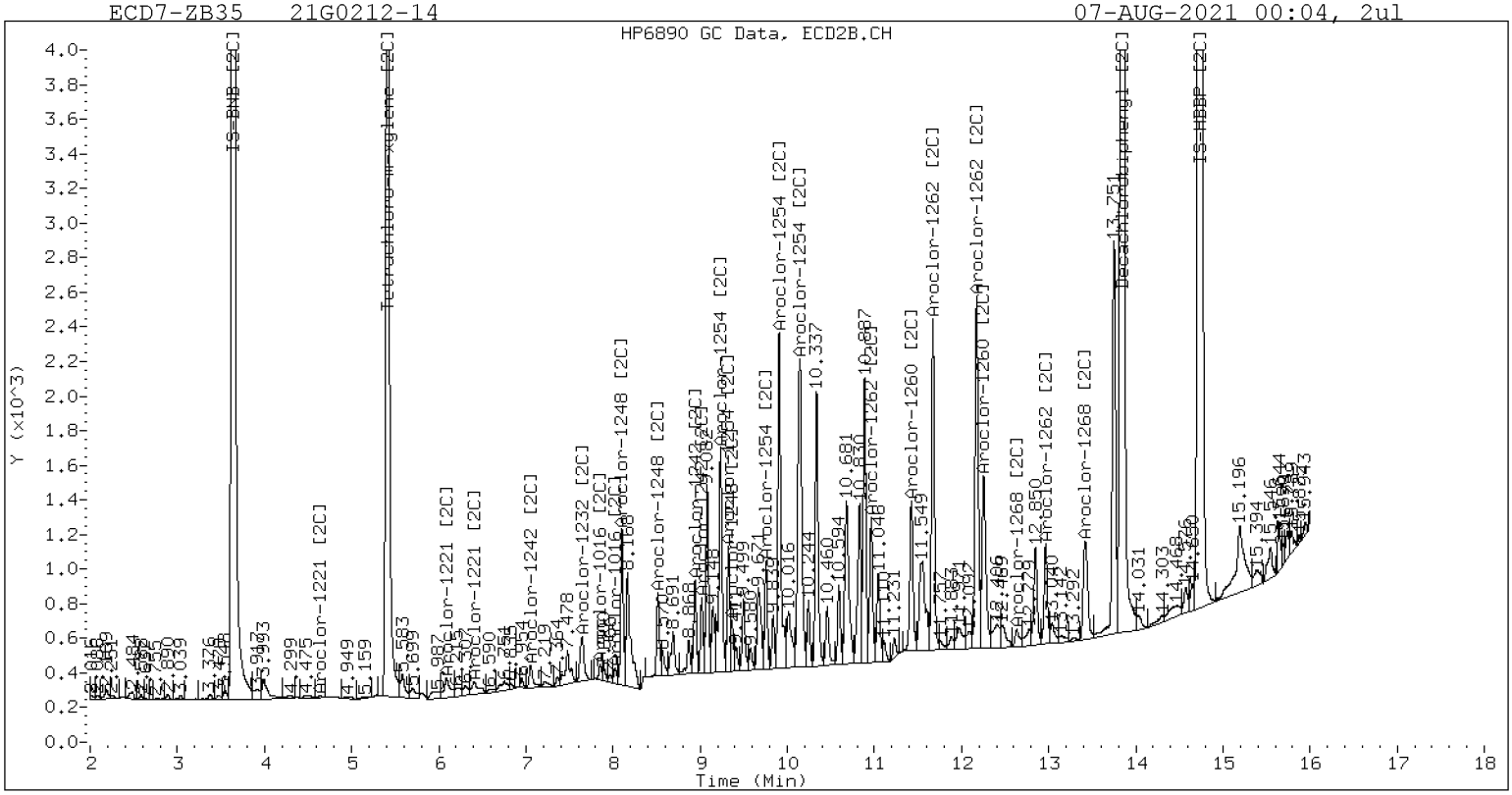
PCB Dual Column Chromatograms

ECD7-ZB5 21G0212-14 07-AUG-2021 00:04, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21G0212-14 07-AUG-2021 00:04, 2ul

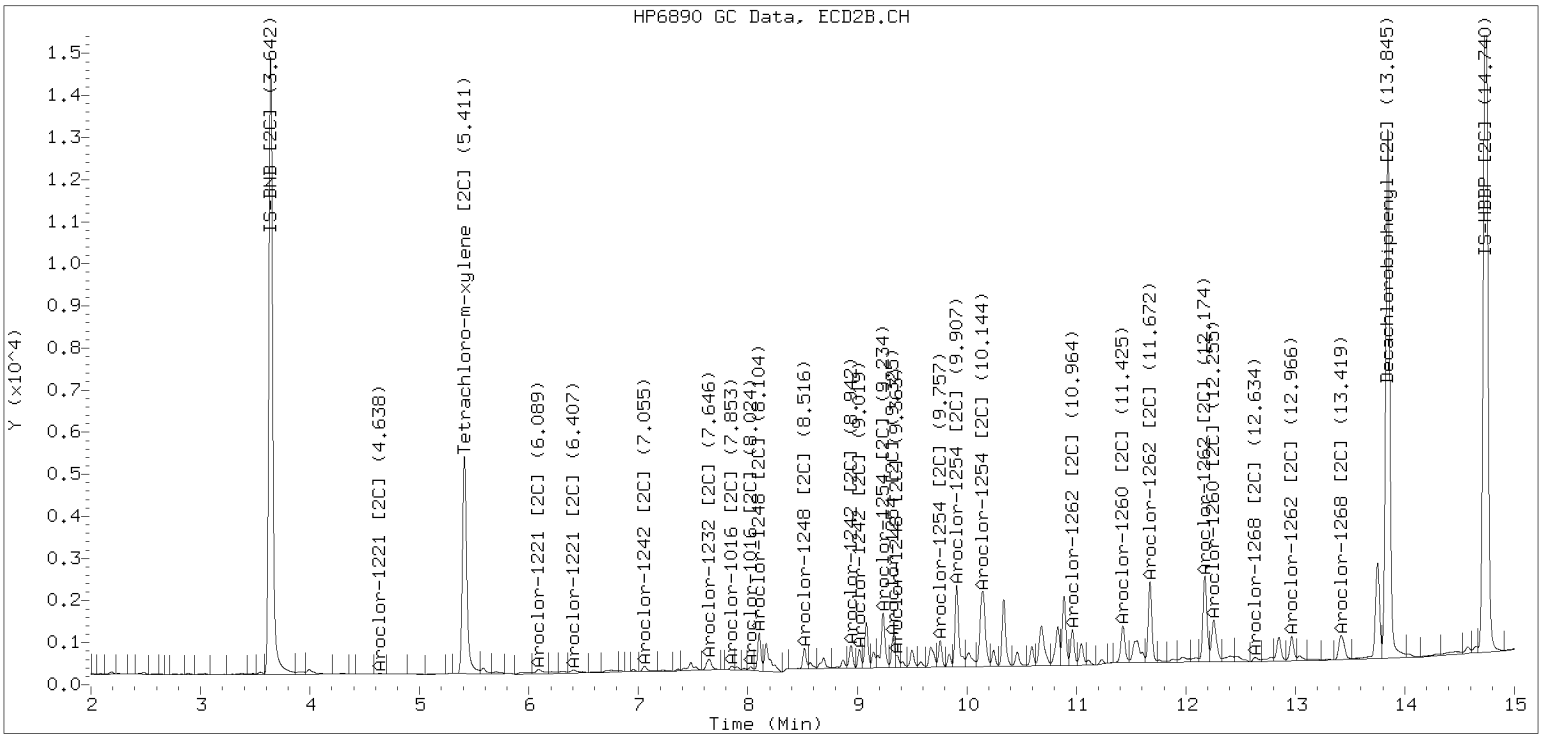


ZB-35 Manual Integration: YES

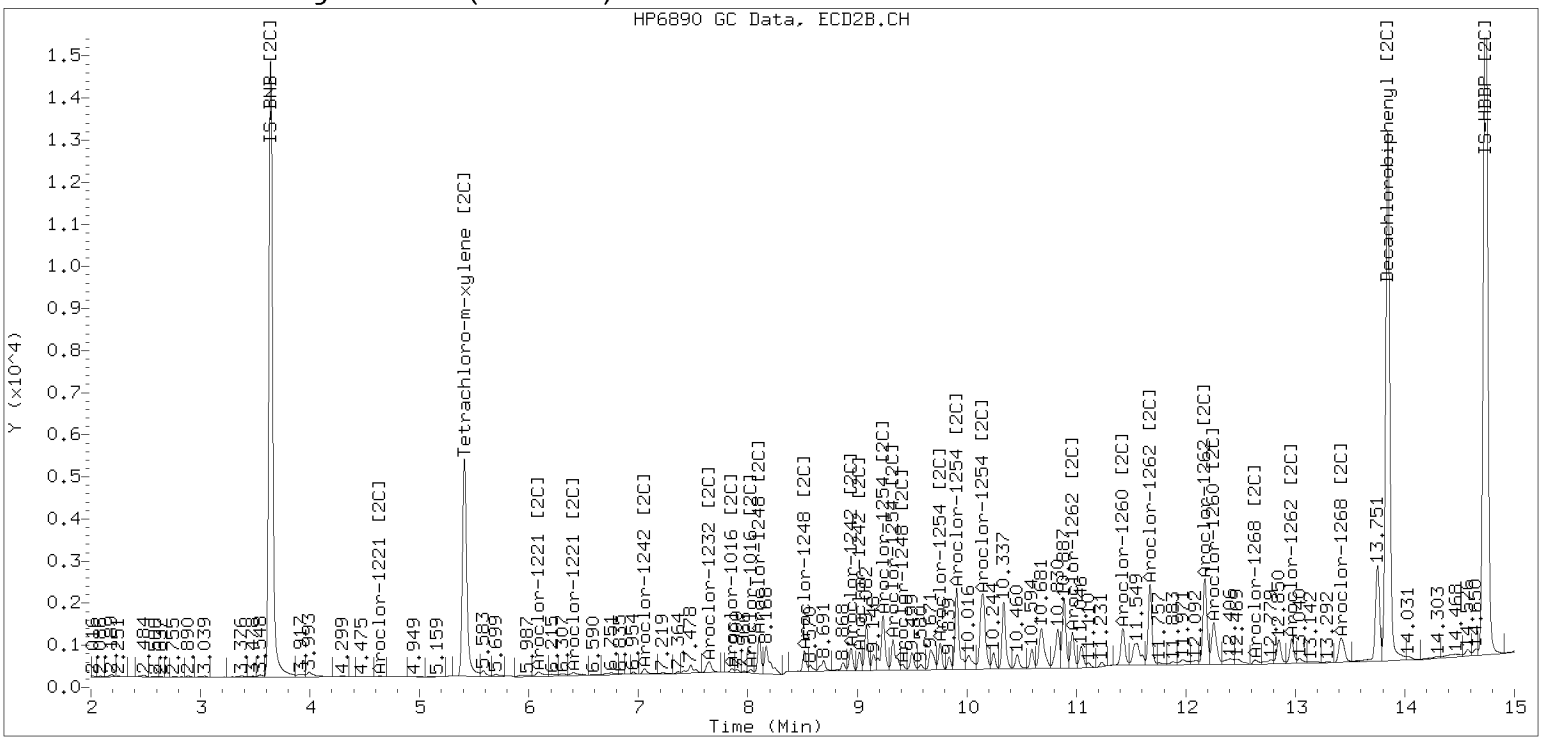
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/210806.b/210806.b/08062137ECD7.D Injection Date: 07-AUG-2021

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, Incorporated
Analytical Chemists and Consultants

LDW21-SC539C

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Solid	Laboratory ID:	21G0212-15 B	File ID:	08062138ECD7.D
Sampled:	07/16/21 15:45	Prepared:	07/27/21 14:38	Analyzed:	08/07/21 00:24
% Solids:	70.18	Preparation:	EPA 3546 (Microwave)	Initial/Final:	17.82 g Wet / 2.5 mL
Batch:	BJG0590	Sequence:	SJH0075	Calibration:	EE00069
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	4.0	1.6	4.0	U
11097-69-1	Aroclor 1254	1	1	4.0	1.6	4.0	U
11096-82-5	Aroclor 1260	1	1	4.0	0.6	4.0	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9961*	*7.34*	*91.8*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9961*	*6.53*	*81.7*	*44 - 120*	

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

Data file 1: /210806.b/08062138ECD7.D
Data file 2: /210806.b/210806.b/08062138ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21G0212-15
Client ID:
Injection Date: 07-AUG-2021 00:24
Report Date: 08/11/2021 08:39
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.065	-0.003	105849	5.411	-0.003	272413	32.7	30.8	6.1	Tetrachloro-m-xylene
13.160	-0.005	125271	13.844	-0.004	612706	36.7	33.5	9.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	271188	-8.5
Hexabromobiphenyl	470266	382666	-18.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	718240	0.9
Hexabromobiphenyl	867949	1021397	17.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.648	-0.011	2188	26.0	1	7.054	-0.004	16279	44.0
Aroclor-1016	2	7.008	-0.025	2325	8.2	2	7.627	-0.025	10429	12.8
Aroclor-1016	3	7.179	0.001	675	5.9	3	7.904	0.046	2408	7.9
Aroclor-1016	4	7.287	0.000	634	8.2	4	8.025	-0.005	1000	5.4
Total Col1Ave (4 peaks):					12.1	Total Col2Ave (4 peaks):				17.5 RPD = 37
Corrected Ave (3 peaks):					7.4	Corrected Ave (3 peaks):				8.7 RPD = 16
Aroclor-1221	1	4.107	0.085	1115	55.6	1	4.769	0.077	5314	113.7
Aroclor-1221	2	5.440	-0.015	200	5.8	2	6.087	0.003	10650	97.0
Aroclor-1221	3	5.720	-0.009	2778	31.9	3	6.407	-0.015	11768	58.2
Total Col1Ave (3 peaks):					31.1	Total Col2Ave (3 peaks):				89.6 RPD = 97*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	---			0.0	1	4.769	0.078	5314	179.7
Aroclor-1232	2	5.720	-0.010	2778	37.4	2	6.087	0.002	10650	134.6
Aroclor-1232	3	7.008	-0.019	2325	18.6	3	6.407	-0.016	11768	67.8
Aroclor-1232	4	8.596	-0.009	714	19.0	4	7.627	-0.035	10429	28.7
Total Col1Ave (3 peaks):					25.0	Total Col2Ave (4 peaks):				102.7 RPD = 122*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				77.0
Aroclor-1242	1	6.648	-0.011	2188	29.2	1	7.054	-0.004	16279	51.1
Aroclor-1242	2	7.008	-0.024	2325	9.6	2	7.627	-0.025	10429	15.1
Aroclor-1242	3	8.304	0.028	467	14.0	3	8.937	-0.013	3198	10.3
Aroclor-1242	4	8.596	-0.017	714	9.6	4	9.015	-0.017	2437	8.9
Total Col1Ave (4 peaks):					15.6	Total Col2Ave (4 peaks):				21.3 RPD = 31
Corrected Ave (3 peaks):					11.0	Corrected Ave (3 peaks):				11.4 RPD = 3
Aroclor-1248	1	7.798	-0.001	565	5.0	1	8.103	-0.004	3514	13.4
Aroclor-1248	2	7.958	-0.010	1046	7.5	2	8.524	0.002	2258	6.3
Aroclor-1248	3	8.304	-0.015	467	3.3	3	8.937	-0.014	3198	6.2
Aroclor-1248	4	8.596	-0.014	714	5.7	4	9.422	0.043	5515	10.1
Total Col1Ave (4 peaks):					5.4	Total Col2Ave (4 peaks):				9.0 RPD = 51*
Corrected Ave (3 peaks):					4.7	Corrected Ave (3 peaks):				7.6 RPD = 47*
Aroclor-1254	1	8.663	-0.012	868	3.8	1	9.236	-0.004	7200	13.2
Aroclor-1254	2	8.740	-0.006	198	2.4	2	9.422	0.089	5515	17.2
Aroclor-1254	3	9.037	-0.004	563	4.0	3	9.751	-0.012	2989	7.3
Aroclor-1254	4	9.166	-0.010	1379	5.0	4	9.905	-0.009	3083	3.4
Aroclor-1254	5	9.852	-0.015	948	5.1	5	10.147	-0.002	22050	22.6
Total Col1Ave (5 peaks):					4.0	Total Col2Ave (5 peaks):				12.7 RPD = 104*
Corrected Ave (4 peaks):					3.8	Corrected Ave (4 peaks):				10.3 RPD = 92*
Aroclor-1260	1	10.375	-0.008	865	6.2	1	11.428	0.000	4541	7.1
Aroclor-1260	2	10.767	0.066	813	5.6	2	11.672	-0.007	11423	6.9
Aroclor-1260	3	11.042	-0.010	2494	6.6	3	12.277	0.015	3328	3.1
Aroclor-1260	4	11.549	0.097	1322	6.9	4	12.962	-0.010	4977	10.7
Aroclor-1260	5	---			0.0	NS	---			----
Total Col1Ave (4 peaks):					6.3	Total Col2Ave (4 peaks):				6.9 RPD = 10
Corrected Ave (3 peaks):					6.1	Corrected Ave (3 peaks):				5.7 RPD = 7
Aroclor-1262	1	10.375	-0.016	865	3.6	1	10.973	-0.016	9772	9.5
Aroclor-1262	2	11.549	0.087	1322	8.5	2	11.672	-0.028	11423	5.6
Aroclor-1262	3	11.624	-0.012	1320	6.3	3	12.179	-0.029	7580	7.8
Aroclor-1262	4	12.275	-0.013	1334	8.1	4	12.962	-0.031	4977	5.6
Total Col1Ave (4 peaks):					6.6	Total Col2Ave (4 peaks):				7.1 RPD = 8
Corrected Ave (3 peaks):					6.0	Corrected Ave (3 peaks):				6.4 RPD = 6
Aroclor-1268	1	11.549	-0.017	1322	2.1	1	12.179	-0.028	7580	2.6
Aroclor-1268	2	11.624	-0.012	1320	2.0	2	12.277	0.003	3328	1.0
Aroclor-1268	3	12.001	-0.011	1868	3.7	3	12.635	-0.025	4067	1.4
Aroclor-1268	4	12.761	-0.016	1762	1.1	4	13.441	-0.031	7851	0.9
Total Col1Ave (4 peaks):					2.2	Total Col2Ave (4 peaks):				1.5 RPD = 40*

Corrected Ave (3 peaks): 1.7 Corrected Ave (3 peaks): 1.1 RPD = 44*

Total PCB Area Col1 (5.168 - 13.065) = 82873 Col1 Total PCB = 0.0 ppm*

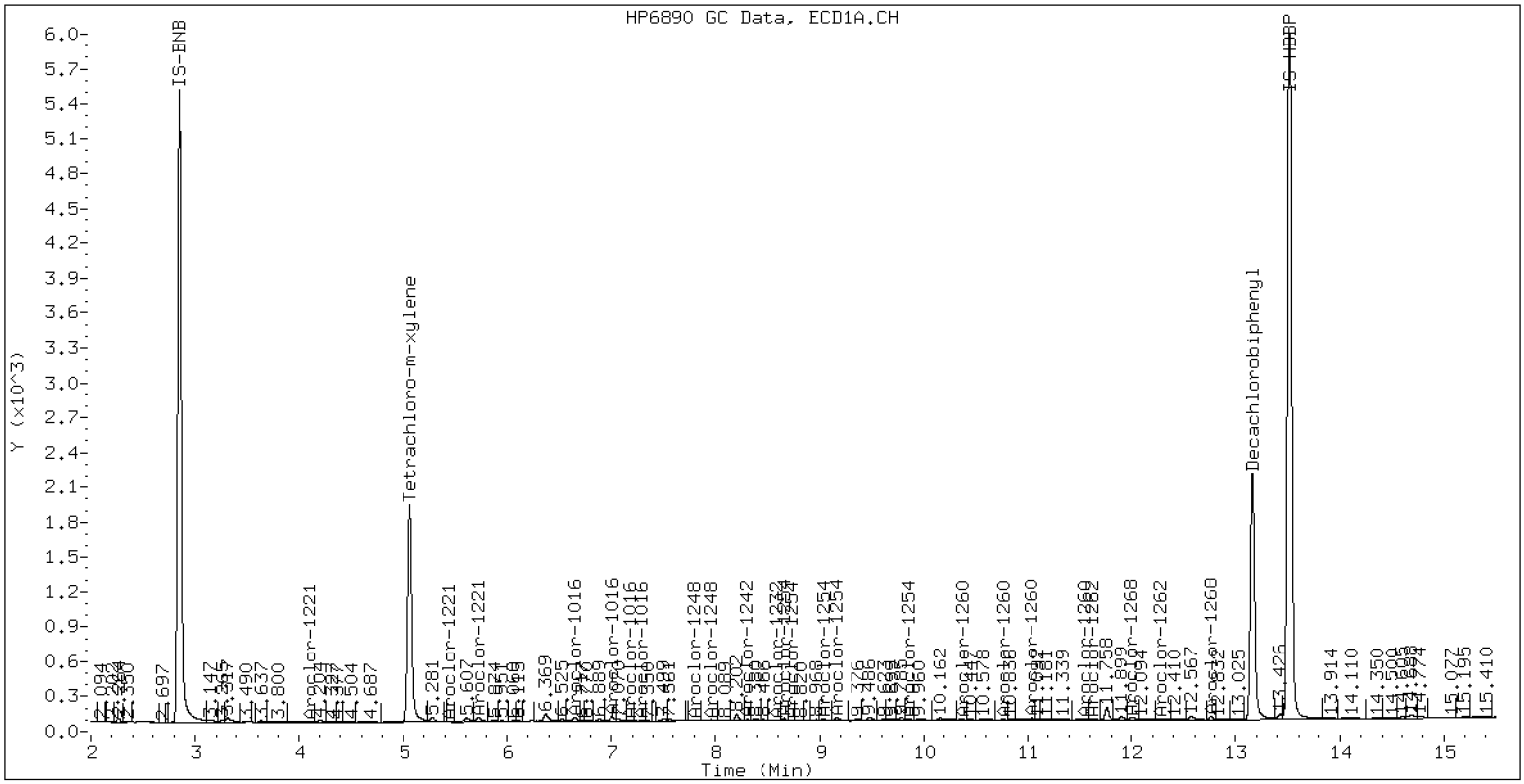
Total PCB Area Col2 (5.168 - 13.065) = 740064 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

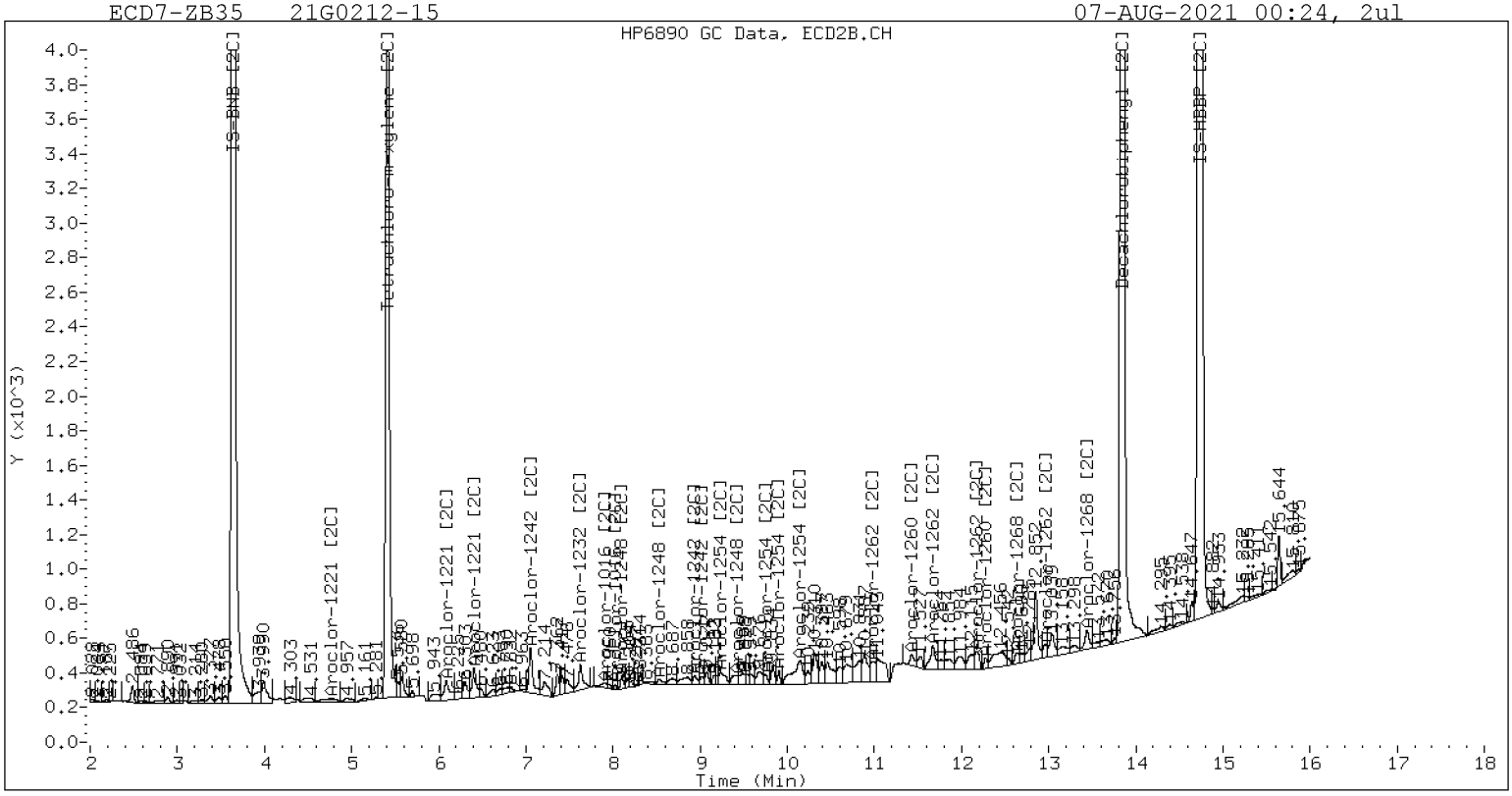
PCB Dual Column Chromatograms

ECD7-ZB5 21G0212-15 07-AUG-2021 00:24, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 21G0212-15 07-AUG-2021 00:24, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LDW21-SC539E

Dual Column

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Solid	Laboratory ID:	21G0212-16 B	File ID:	08062139ECD7.D
Sampled:	07/16/21 15:45	Prepared:	07/27/21 14:38	Analyzed:	08/07/21 00:45
% Solids:	80.60	Preparation:	EPA 3546 (Microwave)	Initial/Final:	15.51 g Wet / 2.5 mL
Batch:	BJG0590	Sequence:	SJH0075	Calibration:	EE00069
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	4.0	1.6	4.0	U
11097-69-1	Aroclor 1254	1	1	4.0	1.6	4.0	U
11096-82-5	Aroclor 1260	1	1	4.0	0.6	4.0	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9993*	*7.31*	*91.4*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9993*	*6.58*	*82.3*	*44 - 120*	

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

Data file 1: /210806.b/08062139ECD7.D
Data file 2: /210806.b/210806.b/08062139ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 21G0212-16
Client ID:
Injection Date: 07-AUG-2021 00:45
Report Date: 08/11/2021 08:39
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.066	-0.002	110844	5.412	-0.003	301267	32.9	31.5	4.5	Tetrachloro-m-xylene
13.164	-0.000	152837	13.848	0.000	793458	36.6	39.9	8.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	282091	-4.8
Hexabromobiphenyl	470266	468895	-0.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	776627	9.1
Hexabromobiphenyl	867949	1109280	27.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.614	-0.045	1667	19.1	1	7.059	0.001	817	2.0
Aroclor-1016	2	7.075	0.043	985	3.3	2	7.676	0.024	3820	4.3
Aroclor-1016	3	7.184	0.006	141	1.2	3	7.877	0.019	727	2.2
Aroclor-1016	4	7.338	0.051	415	5.2	4	8.109	0.079	572	2.8
Total Col1Ave (4 peaks):				7.2		Total Col2Ave (4 peaks):			2.9	RPD = 86*
Corrected Ave (3 peaks):				3.2		Corrected Ave (3 peaks):			2.4	RPD = 31
Aroclor-1221	1	4.104	0.081	105	5.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.090	0.006	9459	79.7
Aroclor-1221	3	5.774	0.044	113	1.2	3	6.404	-0.018	3822	17.5
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	5.774	0.043	113	1.5	2	6.090	0.005	9459	110.6
Aroclor-1232	3	7.075	0.048	985	7.6	3	6.404	-0.019	3822	20.4
Aroclor-1232	4	8.674	0.069	209	5.4	4	7.676	0.014	3820	9.7
Total Col1Ave (3 peaks):				4.8		Total Col2Ave (3 peaks):			46.9	RPD = 163*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.614	-0.045	1667	21.4	1	7.059	0.001	817	2.4
Aroclor-1242	2	7.075	0.043	985	3.9	2	7.676	0.025	3820	5.1
Aroclor-1242	3	8.204	-0.073	1763	50.7	3	8.949	-0.002	3898	11.6
Aroclor-1242	4	8.674	0.061	209	2.7	4	9.019	-0.013	2722	9.2
Total Col1Ave (4 peaks):				19.7		Total Col2Ave (4 peaks):			7.1	RPD = 94*
Corrected Ave (3 peaks):				9.3		Corrected Ave (3 peaks):			5.6	RPD = 51*
Aroclor-1248	1	---			0.0	1	8.109	0.003	572	2.0
Aroclor-1248	2	7.969	0.001	361	2.5	2	8.577	0.056	2669	6.9
Aroclor-1248	3	8.380	0.061	394	2.7	3	8.949	-0.002	3898	7.0
Aroclor-1248	4	8.674	0.064	209	1.6	4	9.396	0.017	6168	10.4
Total Col1Ave (3 peaks):				2.3		Total Col2Ave (4 peaks):			6.6	RPD = 98*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			5.3	
Aroclor-1254	1	8.674	-0.002	209	0.9	1	9.240	-0.000	7615	12.9
Aroclor-1254	2	---			0.0	2	9.331	-0.002	3896	11.2
Aroclor-1254	3	9.027	-0.014	181	1.2	3	9.759	-0.004	4669	10.6
Aroclor-1254	4	9.176	0.001	104	0.4	4	9.909	-0.005	3205	3.3
Aroclor-1254	5	9.864	-0.003	631	3.2	5	10.146	-0.002	15173	14.4
Total Col1Ave (4 peaks):				1.4		Total Col2Ave (5 peaks):			10.5	RPD = 152*
Corrected Ave (3 peaks):				0.8		Corrected Ave (4 peaks):			9.5	RPD = 168*
Aroclor-1260	1	10.387	0.004	792	4.6	1	11.436	0.008	449	0.6
Aroclor-1260	2	10.770	0.068	2913	16.5	2	11.679	0.000	1626	0.9
Aroclor-1260	3	11.051	-0.000	538	1.2	3	12.261	-0.001	2100	1.8
Aroclor-1260	4	11.454	0.002	956	4.1	4	12.981	0.008	1605	3.2
Aroclor-1260	5	11.554	-0.000	388	4.3	NS	---			----
Total Col1Ave (5 peaks):				6.1		Total Col2Ave (4 peaks):			1.6	RPD = 116*
Corrected Ave (4 peaks):				3.5		Corrected Ave (3 peaks):			1.1	RPD = 104*
Aroclor-1262	1	10.387	-0.004	792	2.7	1	10.968	-0.021	2033	1.8
Aroclor-1262	2	11.454	-0.008	956	5.0	2	11.679	-0.021	1626	0.7
Aroclor-1262	3	11.630	-0.005	459	1.8	3	12.183	-0.025	4767	4.5
Aroclor-1262	4	12.295	0.006	513	2.5	4	12.981	-0.012	1605	1.7
Total Col1Ave (4 peaks):				3.0		Total Col2Ave (4 peaks):			2.2	RPD = 32
Corrected Ave (3 peaks):				2.3		Corrected Ave (3 peaks):			1.4	RPD = 49*
Aroclor-1268	1	11.554	-0.012	388	0.5	1	12.183	-0.025	4767	1.5
Aroclor-1268	2	11.630	-0.005	459	0.6	2	12.261	-0.014	2100	0.6
Aroclor-1268	3	11.997	-0.015	934	1.5	3	12.639	-0.021	3162	1.0
Aroclor-1268	4	12.765	-0.012	2264	1.2	4	13.445	-0.028	6017	0.6
Total Col1Ave (4 peaks):				0.9		Total Col2Ave (4 peaks):			0.9	RPD = 0
Corrected Ave (3 peaks):				0.7		Corrected Ave (3 peaks):			0.7	RPD = 0

Total PCB Area Col1 (5.168 - 13.065) = 41871 Col1 Total PCB = 0.0 ppm*

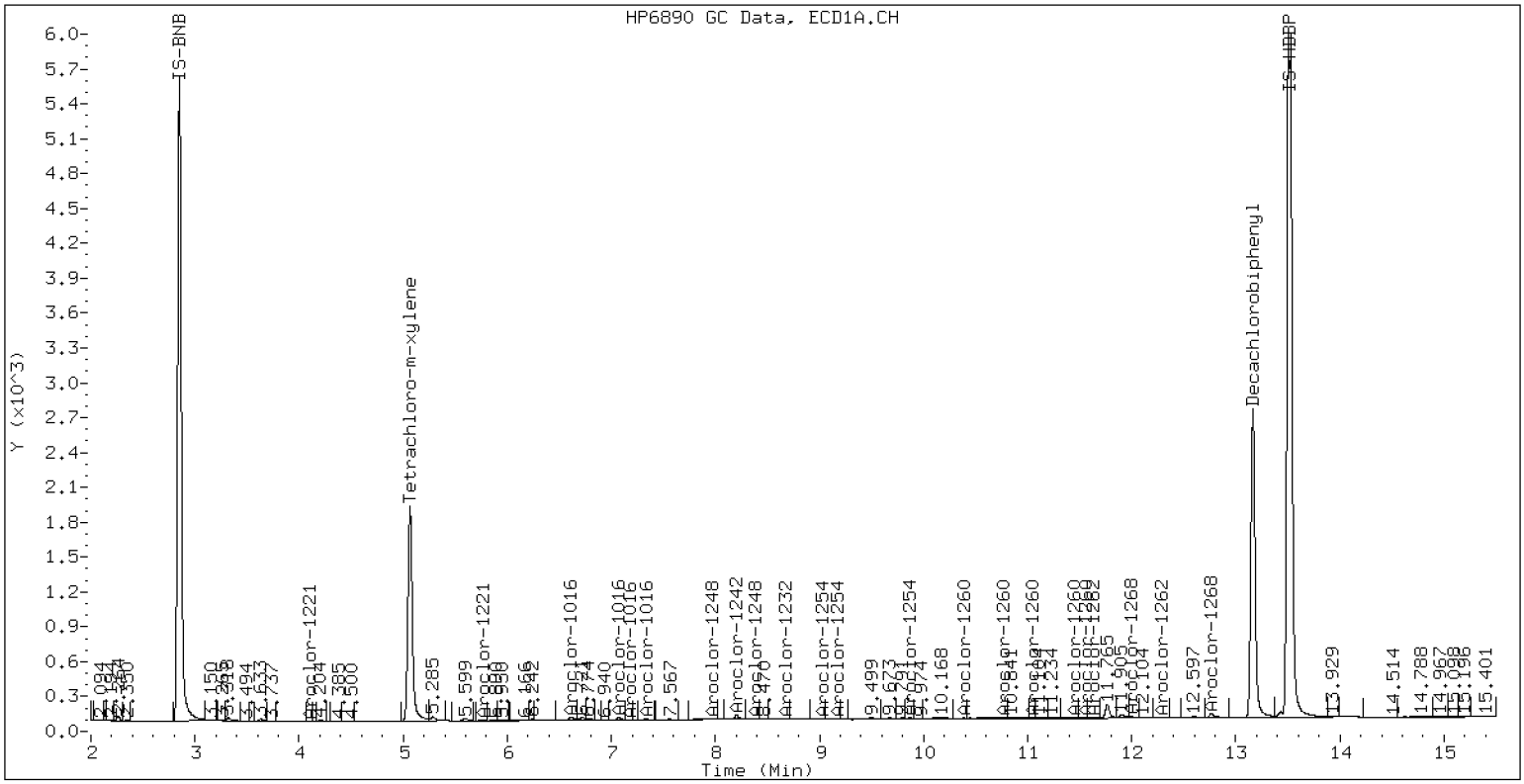
Total PCB Area Col2 (5.168 - 13.065) = 538613 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

PCB Dual Column Chromatograms

ECD7-ZB5 21G0212-16 07-AUG-2021 00:45, 2ul



ZB-5 Manual Integration: NO

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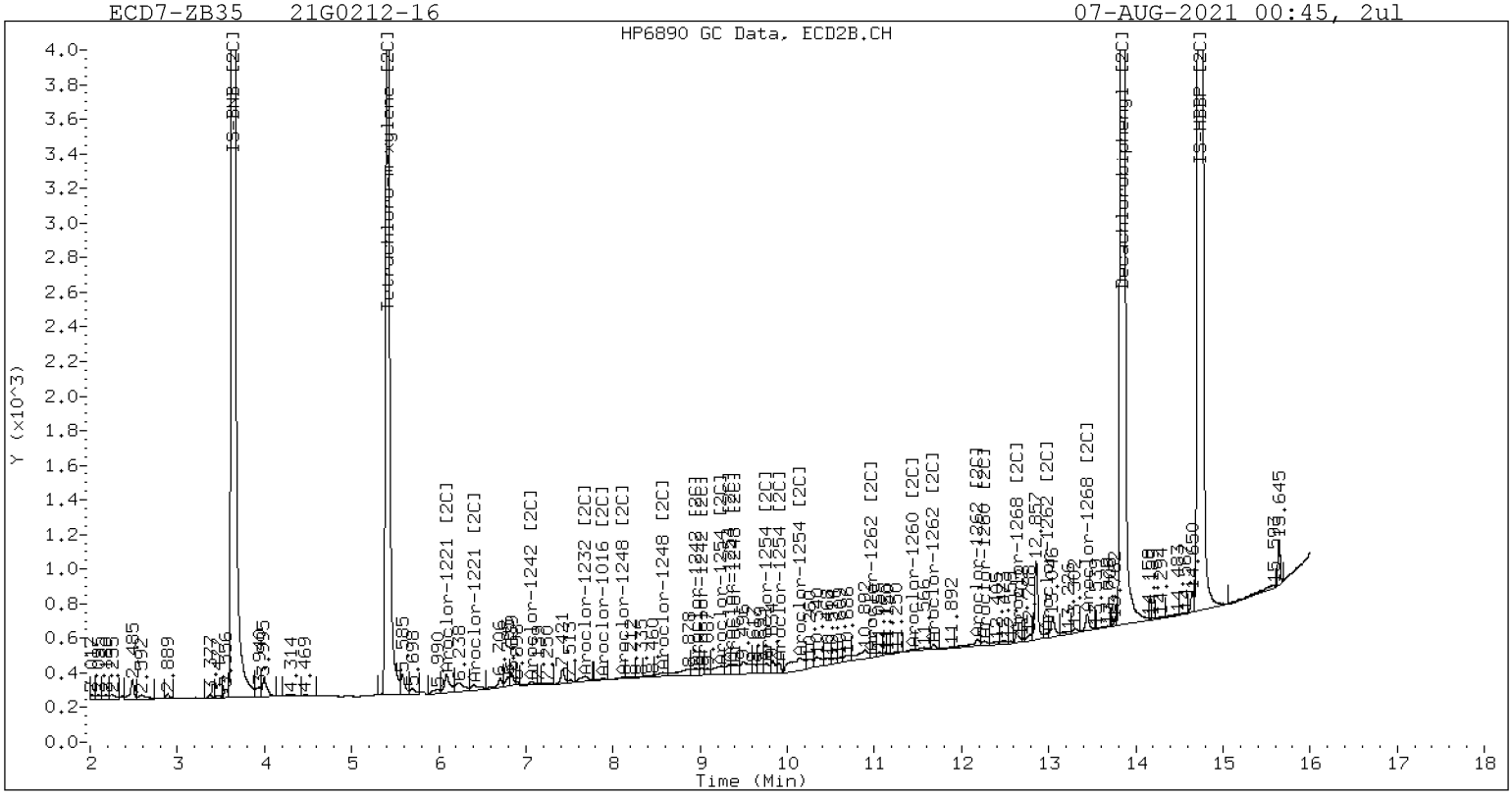


ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC			Project:	Lower Duwamish AOC4
Batch:	BJG0590	Batch Matrix:	Solid	Preparation:	EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW21-SC524	21G0212-01	08062120ECD7.D	07/27/21 14:38	
LDW21-SC528	21G0212-02	08062121ECD7.D	07/27/21 14:38	
LDW21-SC538B	21G0212-03	08062122ECD7.D	07/27/21 14:38	
LDW21-SC538C	21G0212-04	08062123ECD7.D	07/27/21 14:38	
LDW21-SC538E	21G0212-05	08062124ECD7.D	07/27/21 14:38	
LDW21-IT582B	21G0212-06	08062125ECD7.D	07/27/21 14:38	
LDW21-IT582C	21G0212-07	08062126ECD7.D	07/27/21 14:38	
LDW21-IT582E	21G0212-08	08062127ECD7.D	07/27/21 14:38	
LDW21-IT579B	21G0212-09	08062132ECD7.D	07/27/21 14:38	
LDW21-IT597B	21G0212-10	08072109ECD7.D	07/27/21 14:38	
LDW21-IT597C	21G0212-11	08062134ECD7.D	07/27/21 14:38	
LDW21-IT597E	21G0212-12	08062135ECD7.D	07/27/21 14:38	
LDW21-SC539A	21G0212-13	08072110ECD7.D	07/27/21 14:38	
LDW21-SC539B	21G0212-14	08062137ECD7.D	07/27/21 14:38	
LDW21-SC539C	21G0212-15	08062138ECD7.D	07/27/21 14:38	
LDW21-SC539E	21G0212-16	08062139ECD7.D	07/27/21 14:38	
Blank	BJG0590-BLK1	08062117ECD7.D	07/27/21 14:38	
LCS	BJG0590-BS1	08062118ECD7.D	07/27/21 14:38	
LDW21-IT582E	BJG0590-MS1	08062128ECD7.D	07/27/21 14:38	
LDW21-IT582E	BJG0590-MSD1	08062129ECD7.D	07/27/21 14:38	
Reference	BJG0590-SRM1	08062119ECD7.D	07/27/21 14:38	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BJG0590

Prepared using: EPA 3546 (Microwave)

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

Matrix: Solid **Date Prepared:** 07/27/21 **Balance ID:** B146462614 **Set Up By:** CTO 7/26/21

WO Comments

21G0212: <G> BPR Project batch as mcuh as possible </G> <C> SRM, MS, DUP </C> <M> PS, MS/MSD </M> <E>8270E RM H002055, SIM RM H010158, PCB RM J006840-43, MS/MSD </E>
<H> J006840-43, Dup </H>

The following standards may be missing from this batch!

Designator	Description
QLS 5	QLS Spike

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
21G0212-01 B	56.5	(22.12)	22.12	5mL	5mL	2mL	2.5	1.0	
21G0212-02 B	59.9	(20.88)	20.89	5mL	5mL	2mL	2.5	1.0	
21G0212-03 B	74.9	(16.69)	16.70	5mL	5mL	2mL	2.5	1.0	
21G0212-04 B	77.5	(16.13)	16.13	5mL	5mL	2mL	2.5	1.0	
21G0212-05 B	79.0	(15.82)	15.82	5mL	5mL	2mL	2.5	1.0	
21G0212-06 B	74.5	(16.78)	16.80	5mL	5mL	2mL	2.5	1.0	
21G0212-07 B	74.5	(16.79)	17.82	5mL	5mL	2mL	2.5	1.0	
21G0212-08 B	78.4	(15.95)	15.97	5mL	5mL	2mL	2.5	1.0	
21G0212-09 B	71.4	(17.52)	17.62	5mL	5mL	2mL	2.5	1.0	
21G0212-10 B	58.6	(21.32)	21.40	5mL	5mL	2mL	2.5	1.0	
21G0212-11 B	74.8	(16.72)	16.77	5mL	5mL	2mL	2.5	1.0	
21G0212-12 B	82.6	(15.14)	15.16	5mL	5mL	2mL	2.5	1.0	
21G0212-13 B	55.2	(22.67)	22.72	5mL	5mL	2mL	2.5	1.0	
21G0212-14 B	79.2	(15.79)	15.79	5mL	5mL	2mL	2.5	1.0	
21G0212-15 B	70.2	(17.81)	17.82	5mL	5mL	2mL	2.5	1.0	
21G0212-16 B	80.6	(15.51)	15.51	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
BJG0590-BLK1	100.0	(12.50)	12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BJG0590-BS1	100.0	(12.50)	12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BJG0590-MS1	78.4	(15.95)	15.97 15.95	5mL	5mL	2mL	2.5	1.0	Use 21G0212-08
BJG0590-MSD1	78.4	(15.95)	15.95	5mL	5mL	2mL	2.5	1.0	Use 21G0212-08
BJG0590-SRM1	100.0	~~(12.50)~~ (2.50)	2.56	5mL	5mL	2mL	2.5	1.0	Use J006842

07/27/21 — Client ID verified By — Date

CTO 8/5/21 — Preparation Reviewed By — Date

07/27/21 14:38 — Extraction Date and Time

Printed: 7/26/2021 8:44:29AM

3099F
Page 1 of 2

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BJG0590

Prepared using: EPA 3546 (Microwave)

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

WO Comments

21G0212: <G> BPR Project batch as mcuh as possible </G> <C> SRM, MS, DUP </C> <M> PS, MS/MSD </M> <E>8270E RM H002055, SIM RM H010158, PCB RM J006840-43, MS/MSD </E>
<H> J006840-43, Dup </H>

Prep Steps

Microwave

1 (2) 3

CT 07/27/21

Analyst/Date

KD
100°C
Hexane Exchange
(2 X 20 mL)

1 2 3 (4) (5) 6 (00)

AA 08/04/21

Analyst/Date

TurboVap
Pre Cleanups

1 2 3 (4) 5

CW 8/5/21

Analyst/Date

TurboVap
Post Cleanups

1 2 3 4 (5)

CW 8/5/21

Analyst/Date

Vialing

CW 8/5/21

Analyst/Date

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: CT Date: 07/27/21	
Anhydrous Sodium Sulfate	J007552
Neutral Glass Wool	J006768
1:1 Hexane/Acetone	J007652
Hexane	J006422
KD Analyst: AA Date: 08/04/21	
Hexane	J005194
Anhydrous Sodium Sulfate	J007778
Vialing Analyst: CW Date: 8/5/21	
Hexane	J006933
Concentrated Sulfuric Acid	J006816
Tetrabutylammonium hydrogensulfate (TBAS)	J007842
Sodium Sulfite	J007364
Silica Gel (SPE) Darts	J007869

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 2µg/mL	N J006926 Exp: 08/08/2021	50µL	CT	
Spike 20µg/mL	1 J004905 Exp: 11/07/2021	63µL	CT	

(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, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BJG0590

Prepared using: EPA 3546 (Microwave)

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

WO Comments

21G0212: <G> BPR Project batch as mcuh as possible </G> <C> SRM, MS, DUP </C> <M> PS, MS/MSD </M> <E>8270E RM H002055, SIM RM H010158, PCB RM J006840-43, MS/MSD </E>
<H> J006840-43, Dup </H>

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

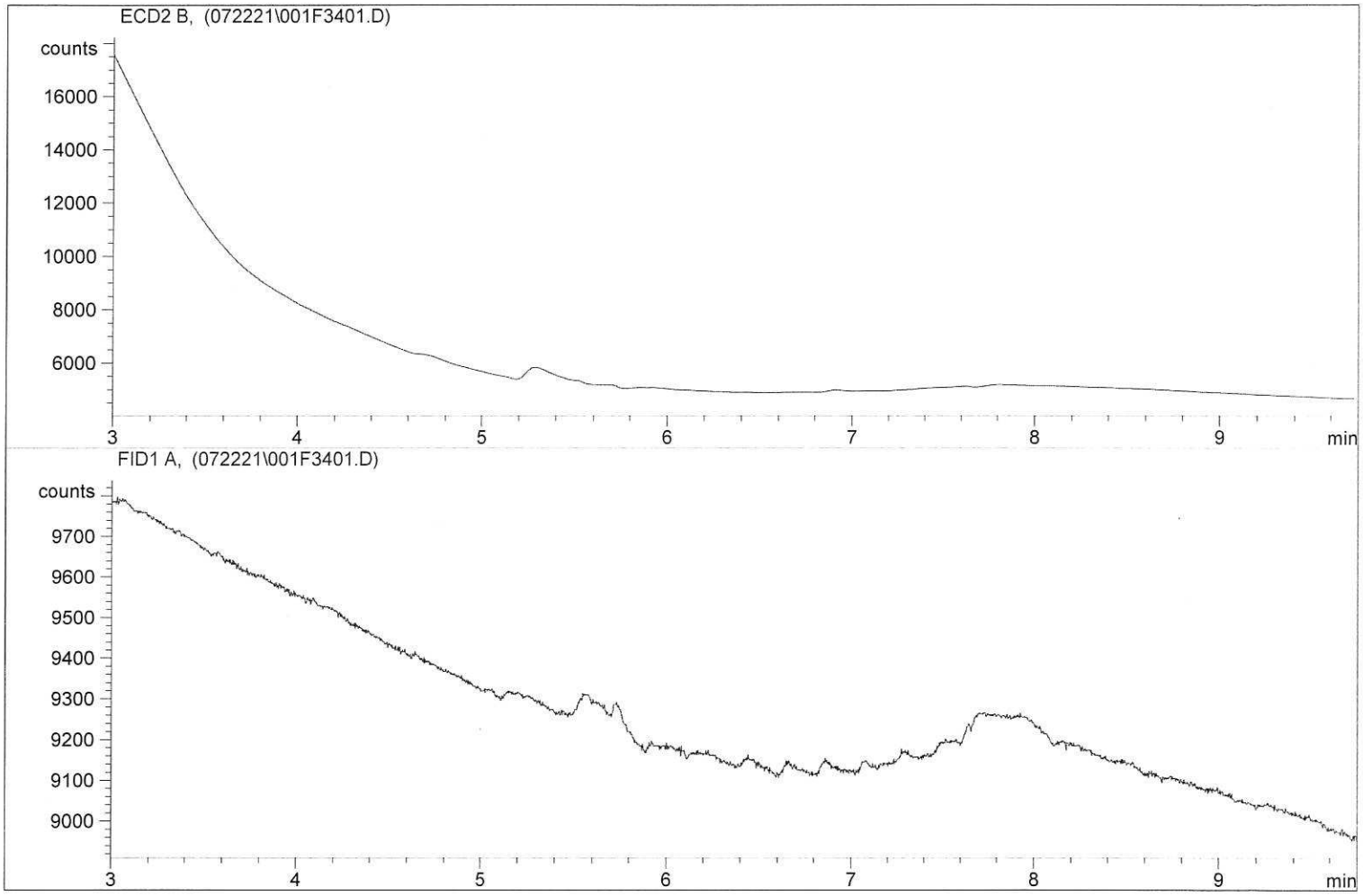
Organic Extractions Laboratory Analyst Notes

Extraction Parameter: PCB Extraction Batch BJG0598

Total Solids Batch: BJG0450 Work Order(s): 21G0212

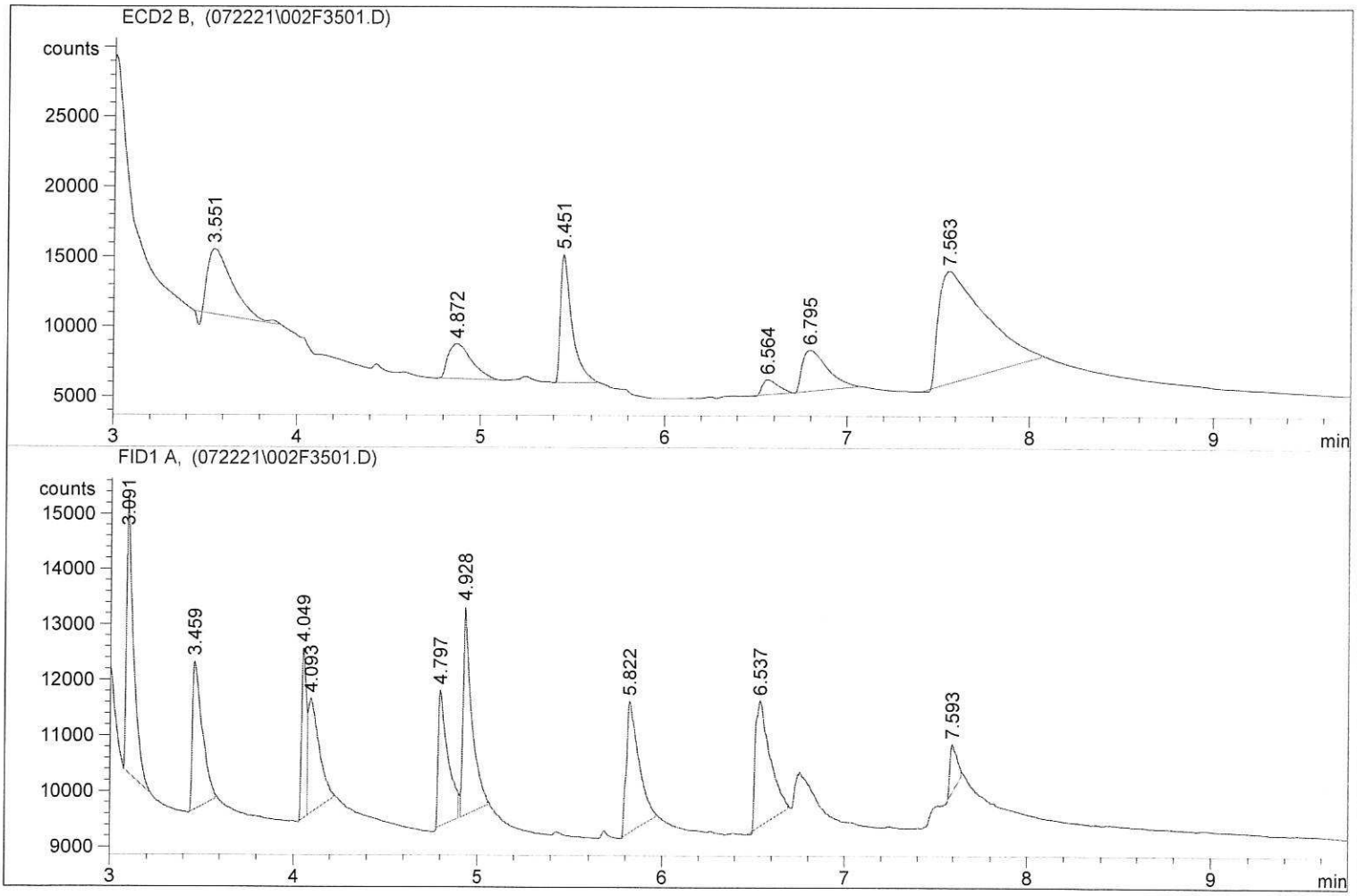
Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☑ Standing Water Decanted (Not shared)= 01, 02, 04-09, 13, 15,	07/22/21
☐ Standing Water Homogenized (Shared samples)=	
☑ Clay/Clumps (Difficult to homogenize)= 10	07/22/21
☐ Rocks (%+size)?	
☑ Organics (Leaves/sticks/grass)= 06, 13, 15	07/22/21
☐ Oily, obvious fuel/sulfur odors=	
☐ 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	07/22/21
☑ Multiple Jars Y / N	07/22/21
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

Injection Date	: 7/22/2021 8:58:19 PM	Seq. Line :	34
Sample Name	: DCM RINSE	Location :	Vial 1
Acq. Operator	: JL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\072221C.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



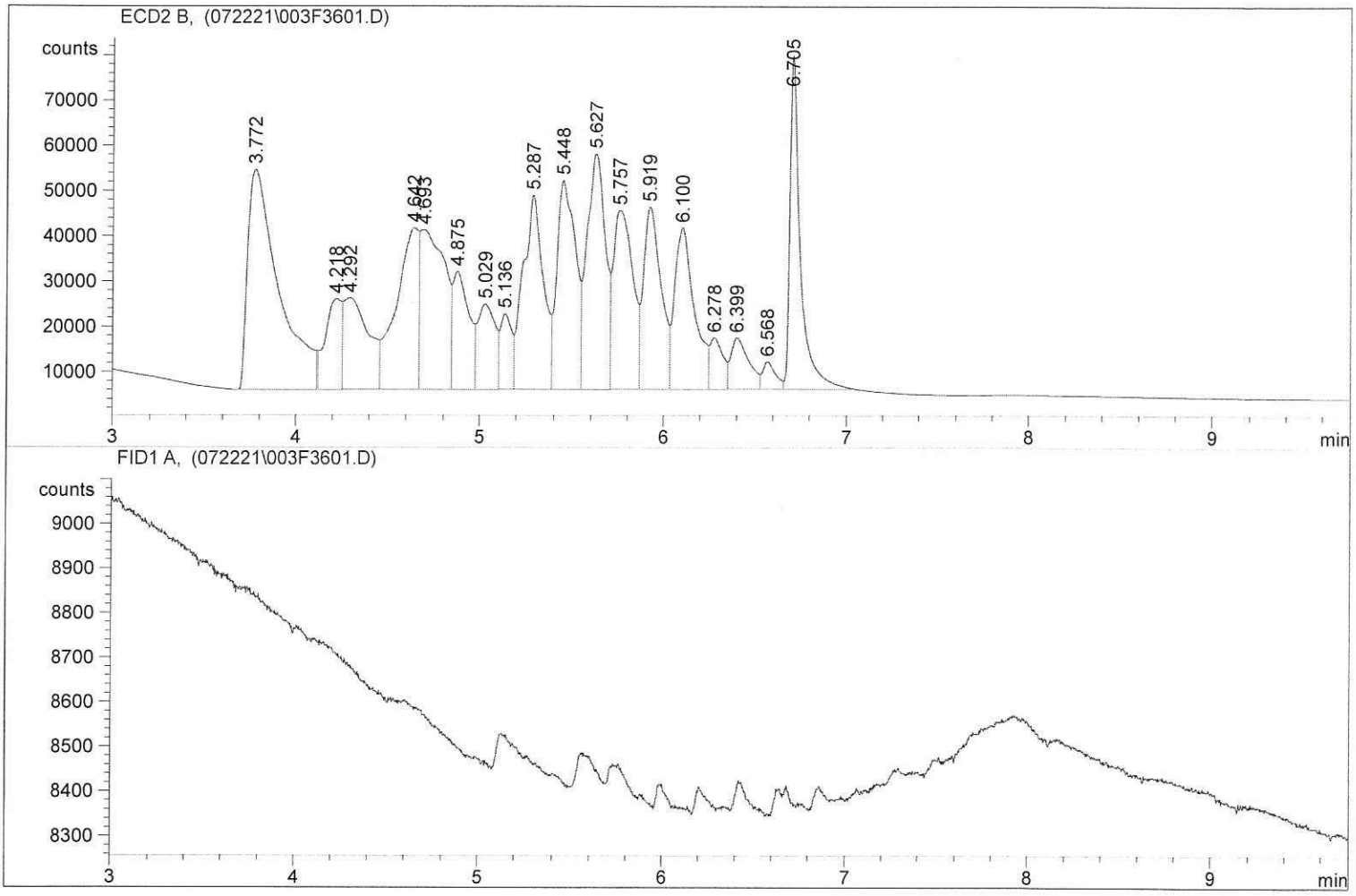
*** End of Report ***

Injection Date	: 7/22/2021 9:13:02 PM	Seq. Line :	35
Sample Name	: PNA STD 10PPM	Location :	Vial 2
Acq. Operator	: JL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\072221C.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



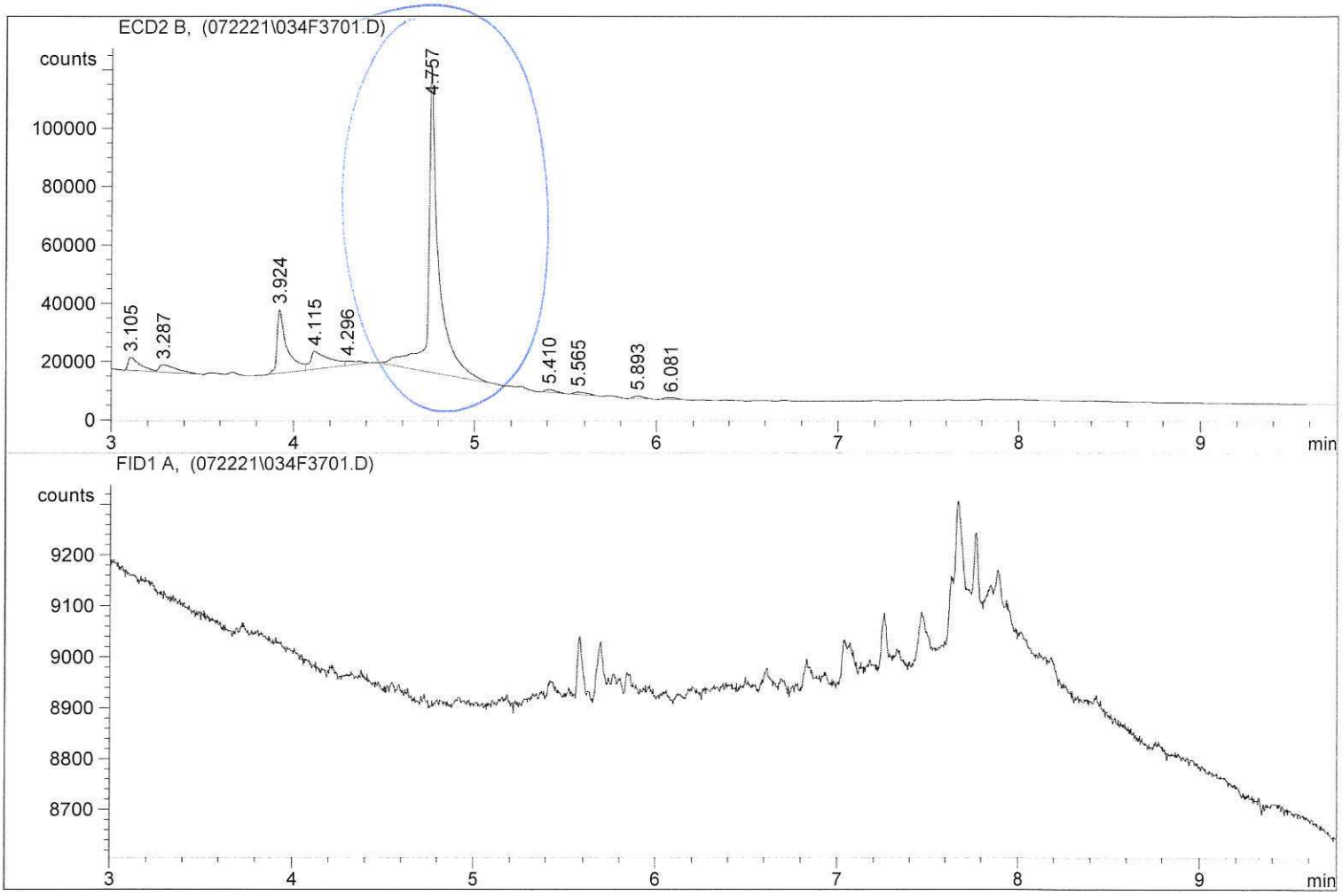
*** End of Report ***

Injection Date	: 7/22/2021 9:27:45 PM	Seq. Line :	36
Sample Name	: AR1660 1PPM	Location :	Vial 3
Acq. Operator	: JL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\072221C.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



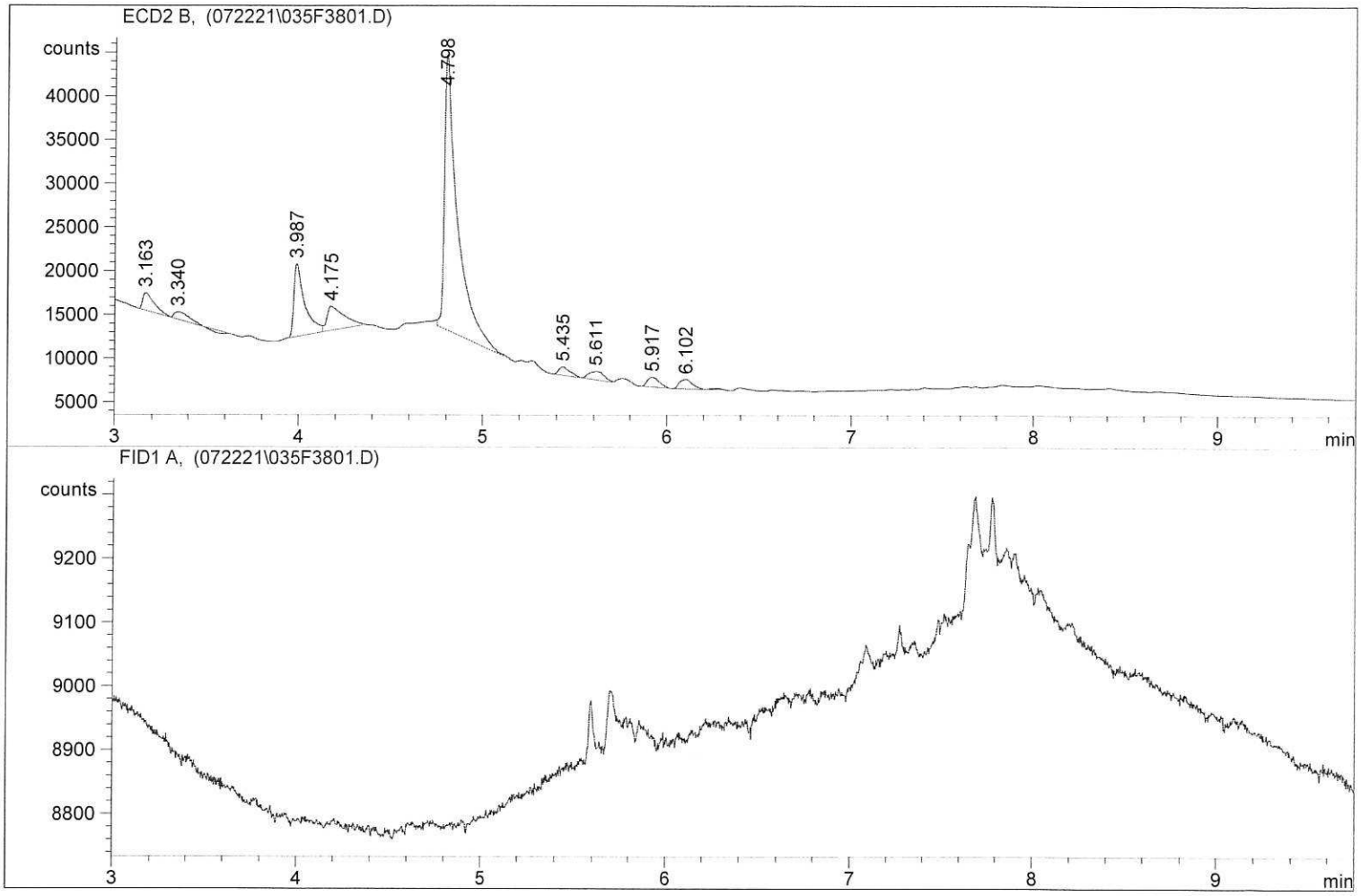
*** End of Report ***

Injection Date	: 7/22/2021 9:42:29 PM	Seq. Line :	37
Sample Name	: 21G0212 1	Location :	Vial 34
Acq. Operator	: JL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\072221C.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	: 7/22/2021 9:57:14 PM	Seq. Line :	38
Sample Name	: 21G0212 2	Location :	Vial 35
Acq. Operator	: JL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\072221C.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  : 7/22/2021 10:11:55 PM          Seq. Line :  39
Sample Name     : 21G0212 3                       Location : Vial 36
Acq. Operator   : JL                                   Inj :   1
                                                 Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\1\SEQUENCE\072221C.S
Method          : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed    : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD
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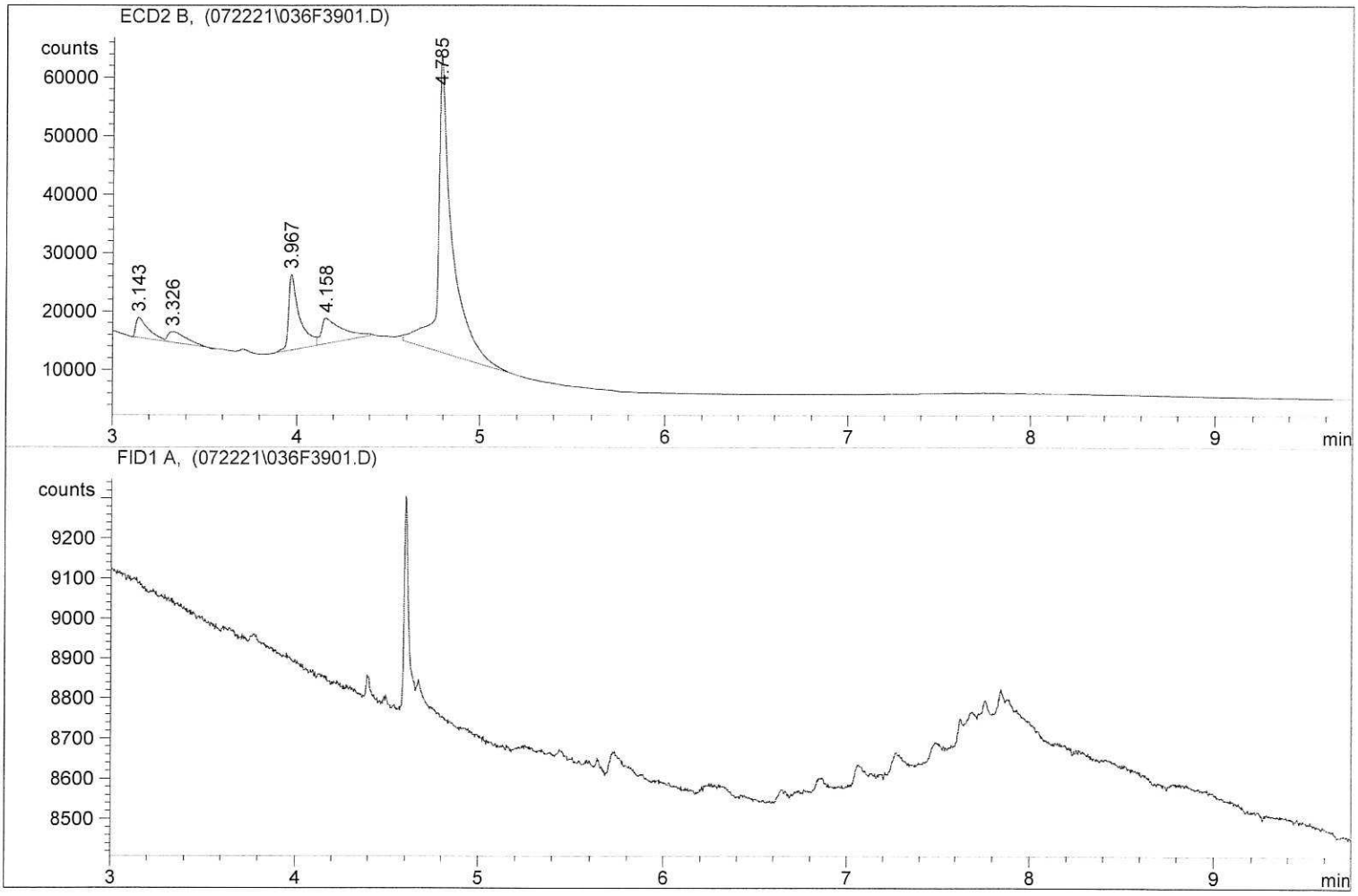
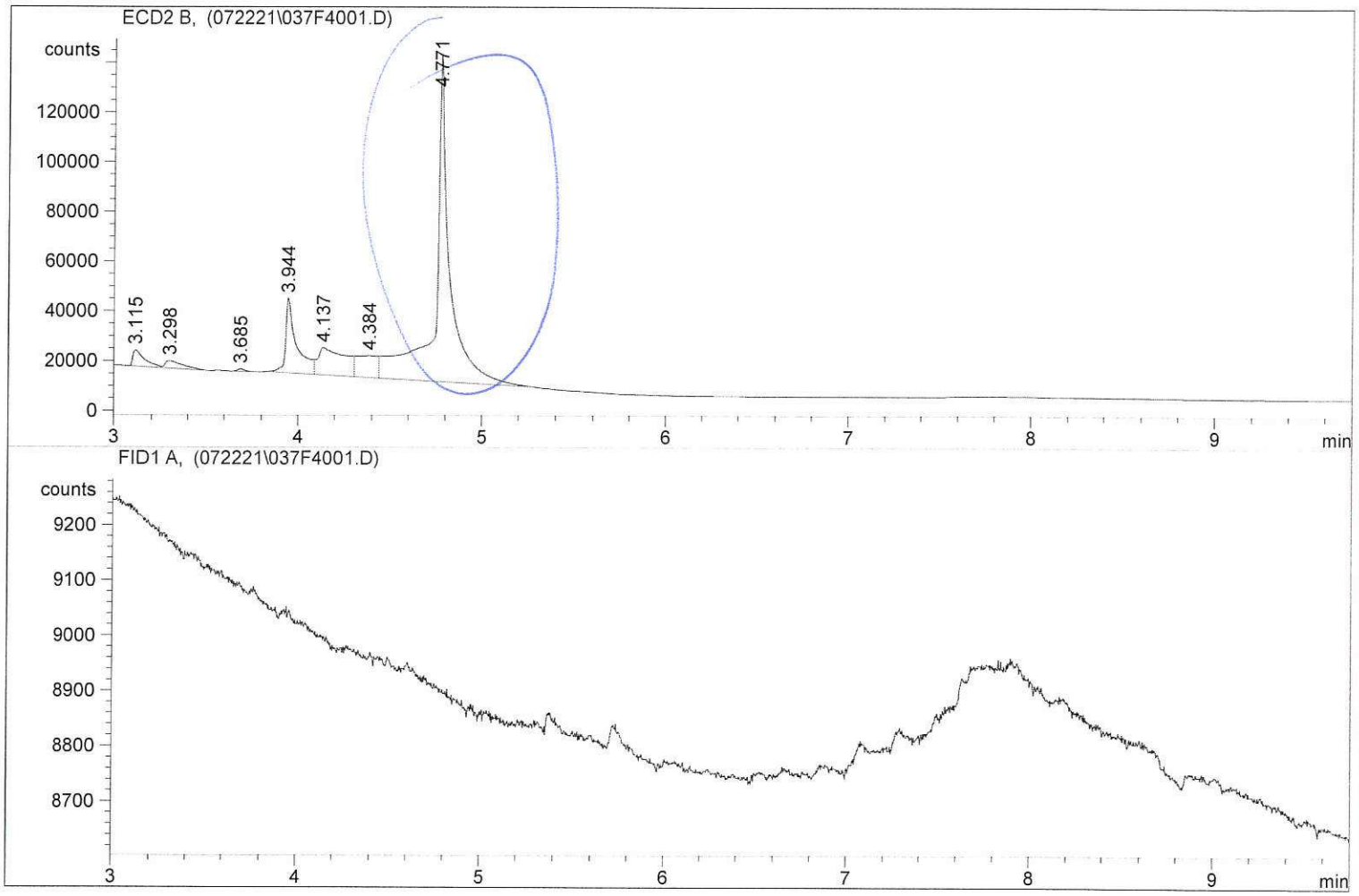


*** End of Report ***

Injection Date : 7/22/2021 10:26:34 PM
Sample Name : 21G0212 4
Acq. Operator : JL

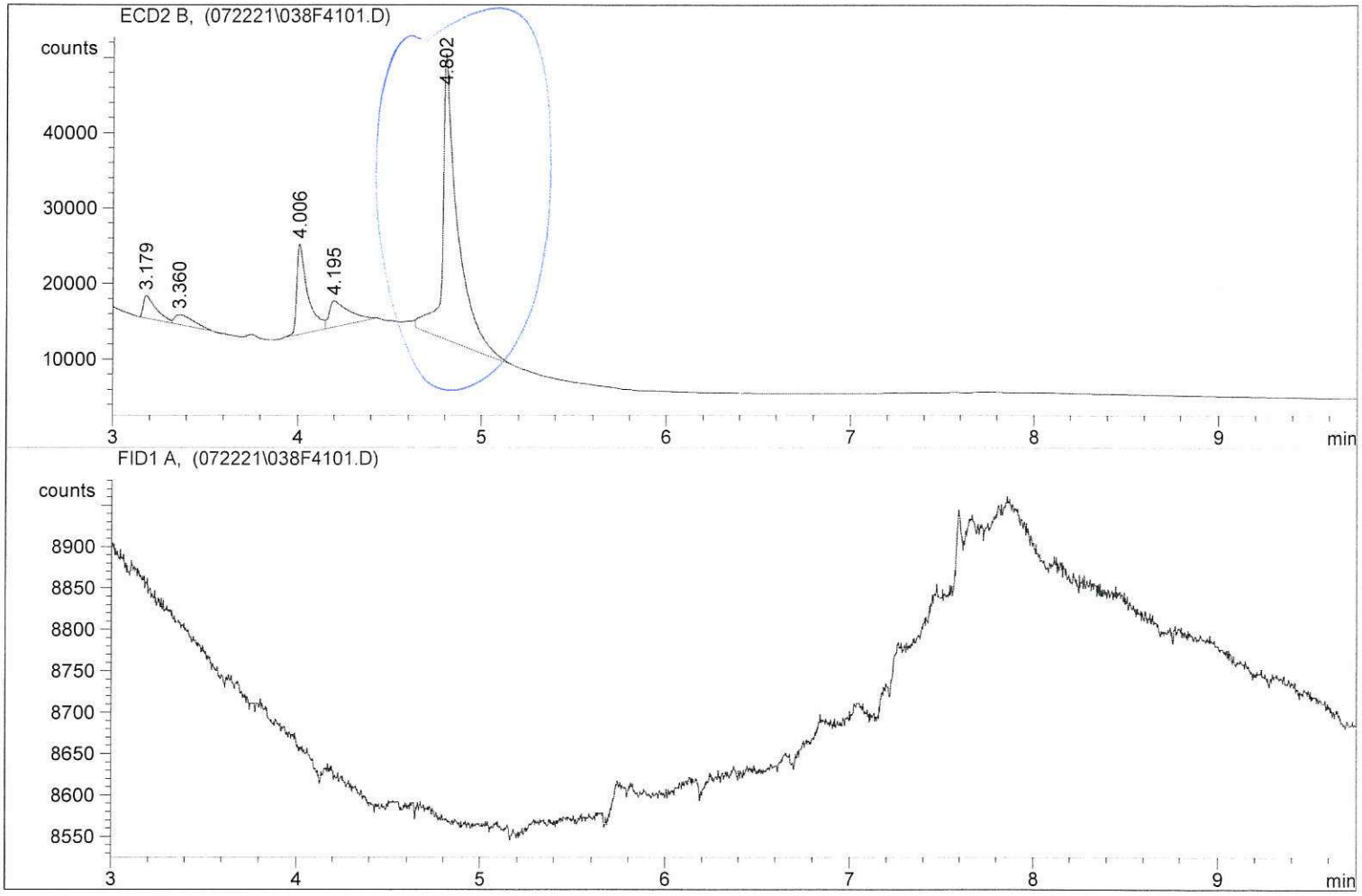
Seq. Line : 40
Location : Vial 37
Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\072221C.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	: 7/22/2021 10:41:16 PM	Seq. Line :	41
Sample Name	: 21G0212 5	Location :	Vial 38
Acq. Operator	: JL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\072221C.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 : 7/22/2021 10:55:54 PM Seq. Line : 42
Sample Name : 21G0212 6 Location : Vial 39
Acq. Operator : JL Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\072221C.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD

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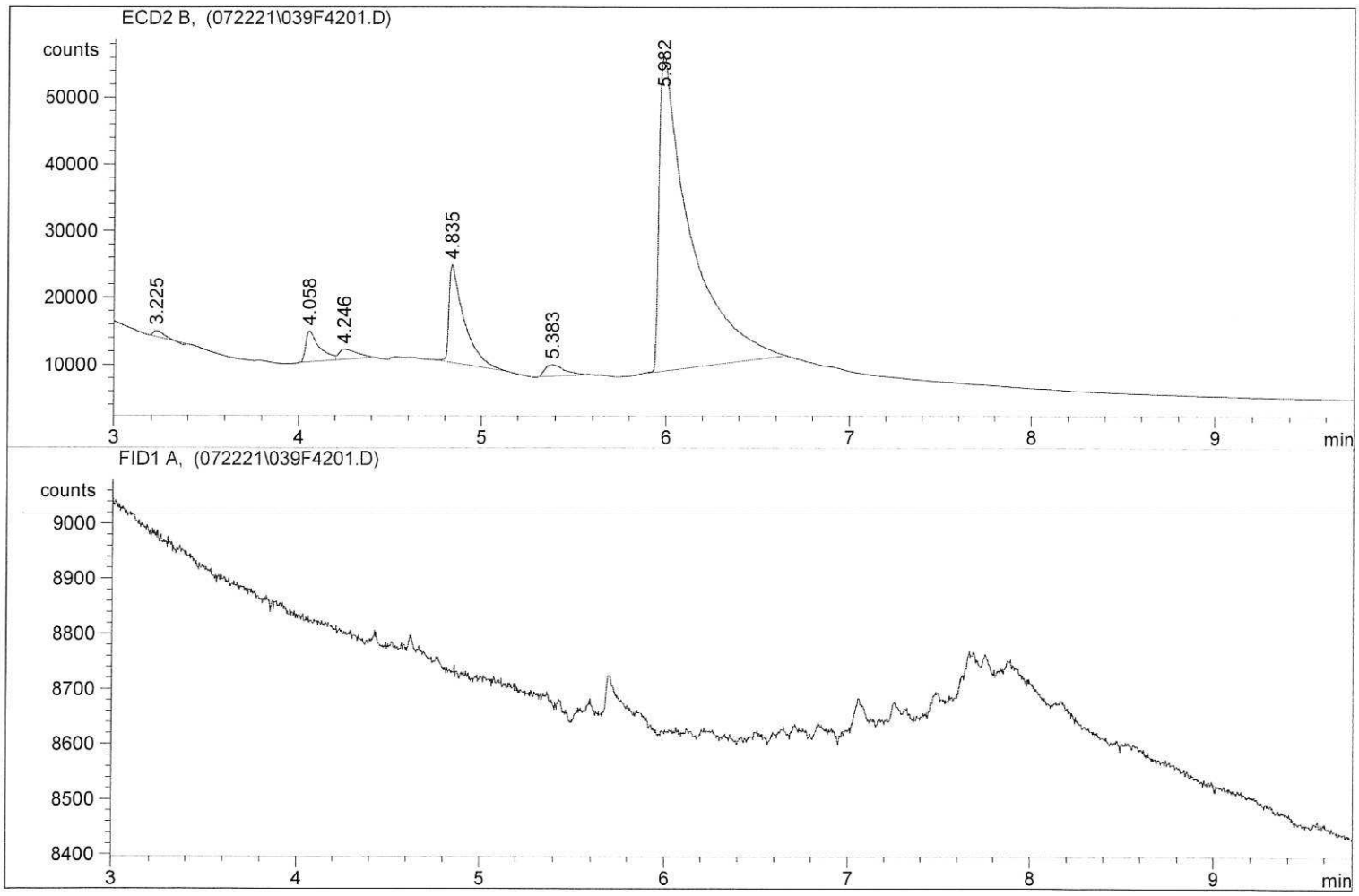
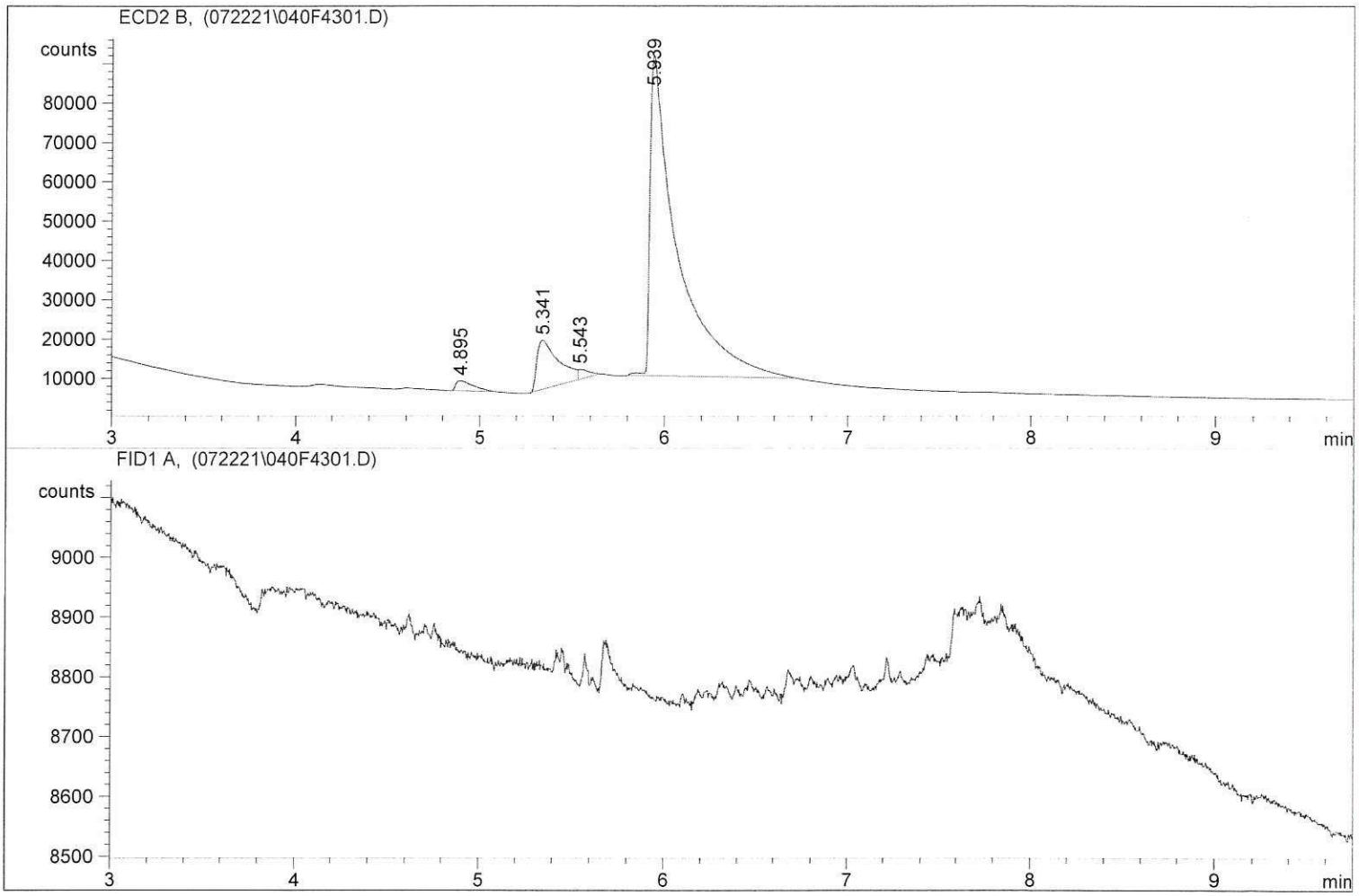


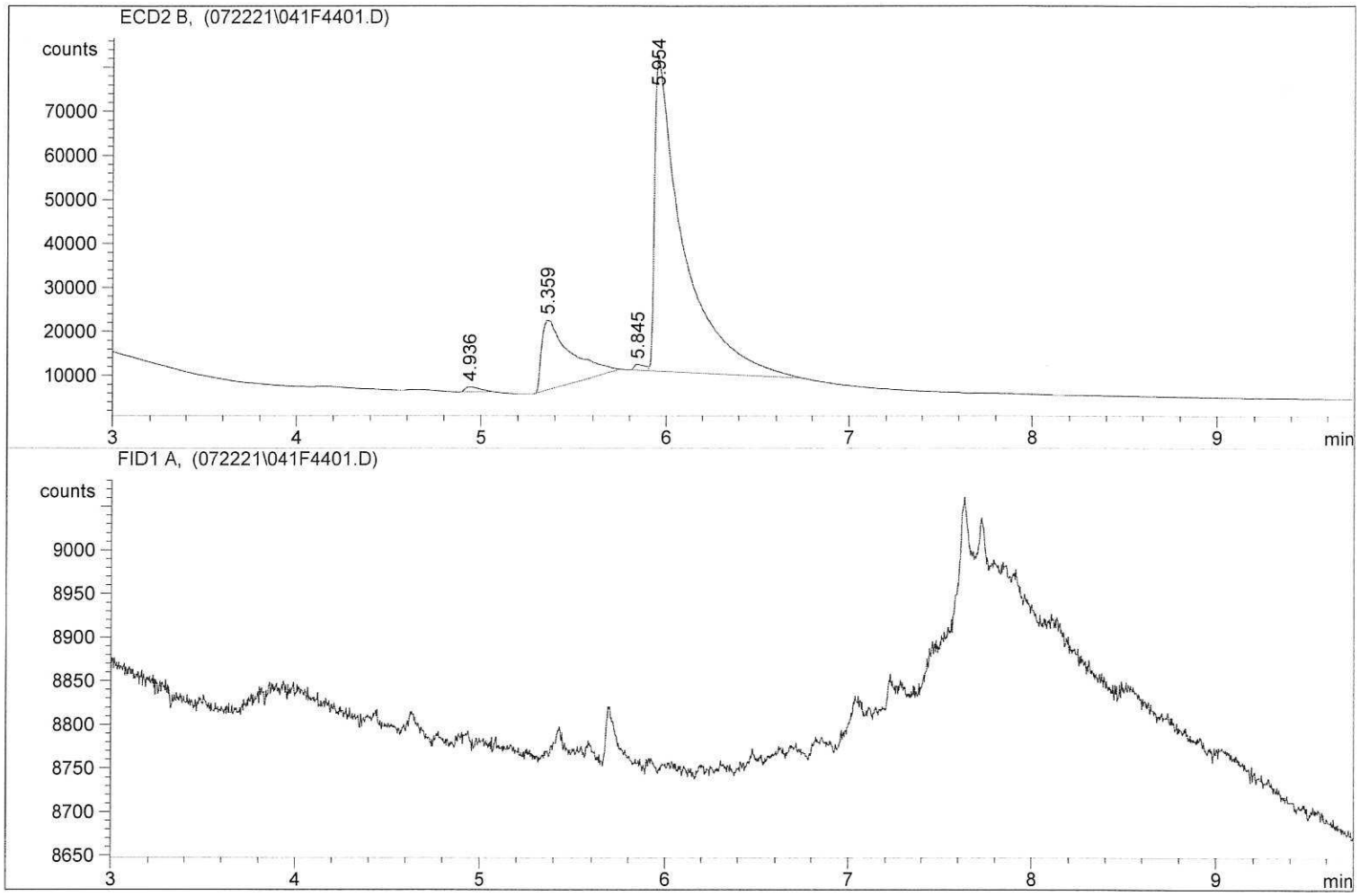
*** End of Report ***

Injection Date	: 7/22/2021 11:10:41 PM	Seq. Line :	43
Sample Name	: 21G0212 7	Location :	Vial 40
Acq. Operator	: JL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\072221C.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



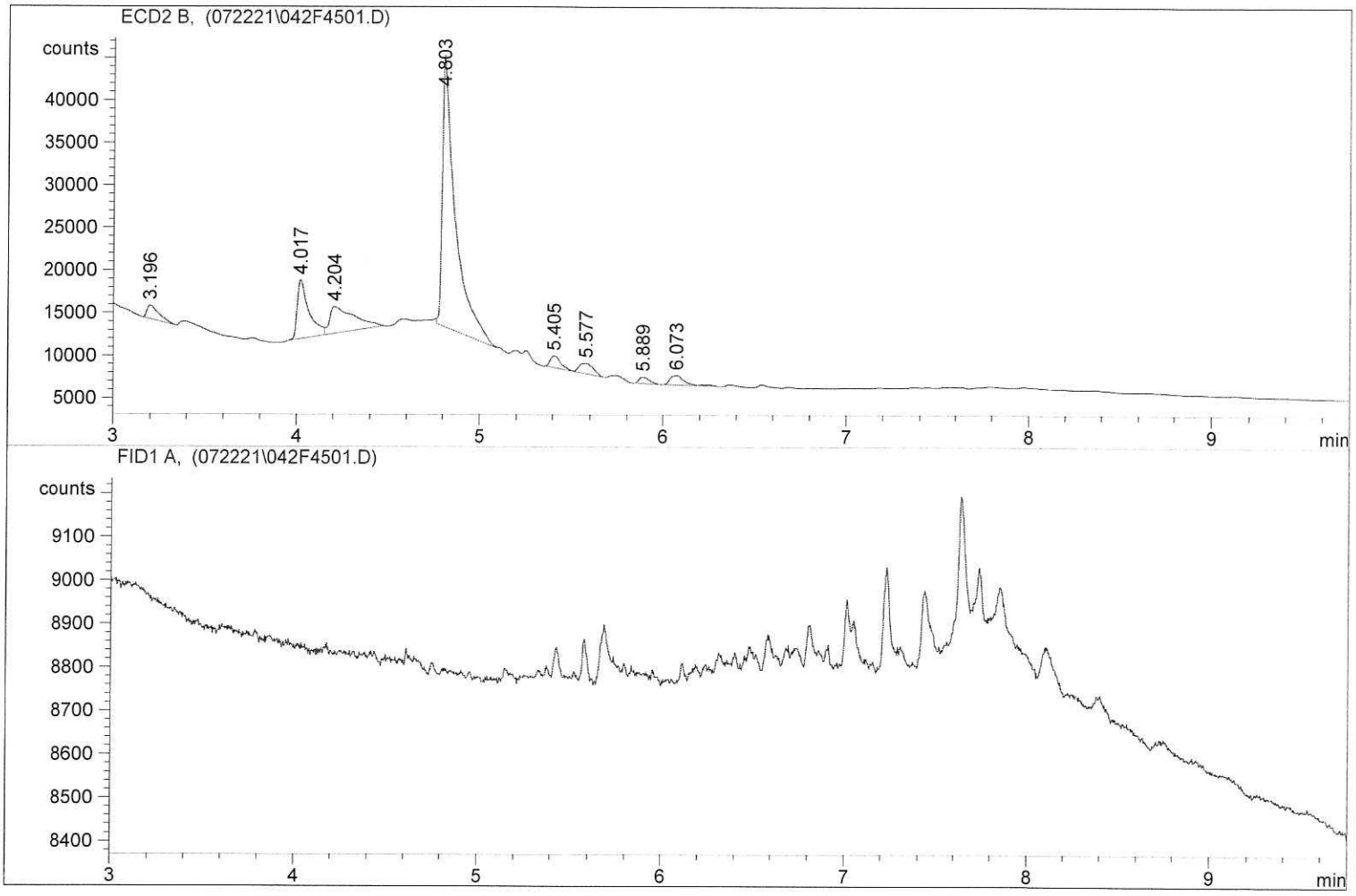
*** End of Report ***

Injection Date	: 7/22/2021 11:25:20 PM	Seq. Line :	44
Sample Name	: 21G0212 8	Location :	Vial 41
Acq. Operator	: JL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\072221C.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



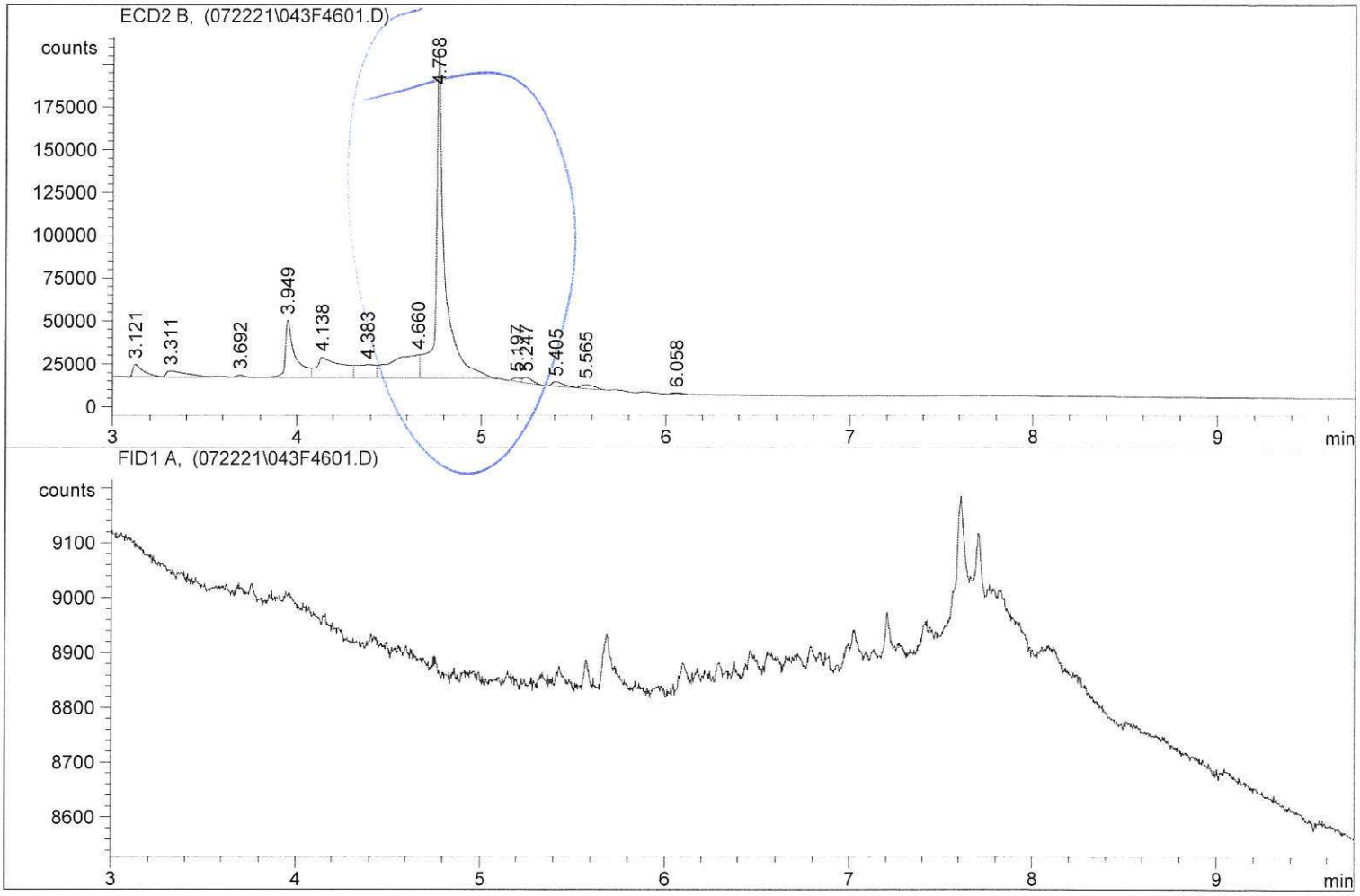
*** End of Report ***

Injection Date	: 7/22/2021 11:40:00 PM	Seq. Line :	45
Sample Name	: 21G0212 9	Location :	Vial 42
Acq. Operator	: JL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\072221C.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



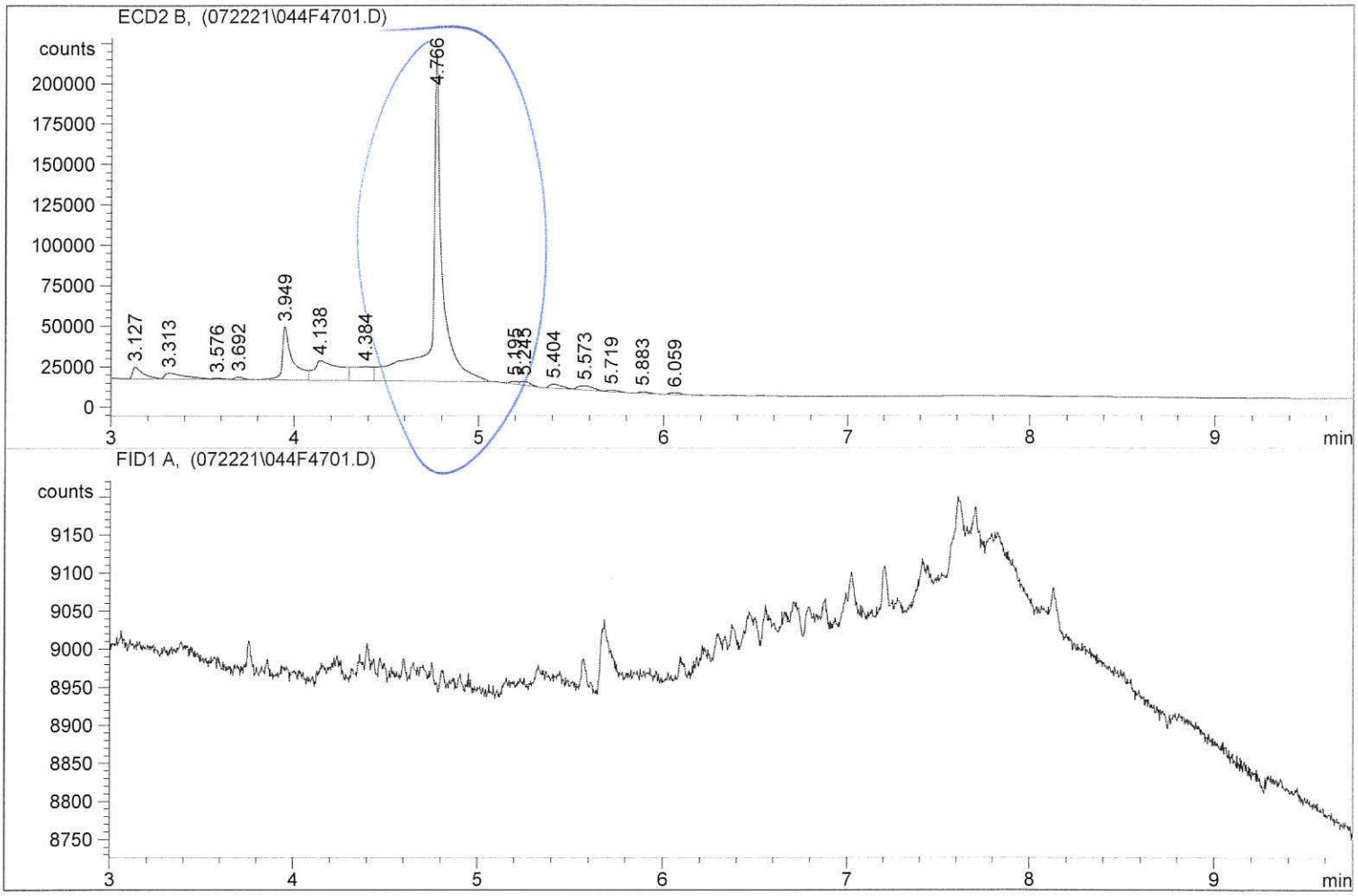
*** End of Report ***

```
==================================================================
Injection Date  : 7/22/2021 11:54:37 PM          Seq. Line :  46
Sample Name     : 21G0212 10                      Location : Vial 43
Acq. Operator   : JL                                   Inj :   1
                                                 Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\1\SEQUENCE\072221C.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	: 7/23/2021 12:09:18 AM	Seq. Line :	47
Sample Name	: 21G0212 11	Location :	Vial 44
Acq. Operator	: JL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\072221C.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

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Injection Date : 7/23/2021 12:22:56 AM Seq. Line : 48
Sample Name : 21G0212 12 Location : Vial 45
Acq. Operator : JL Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\072221C.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD

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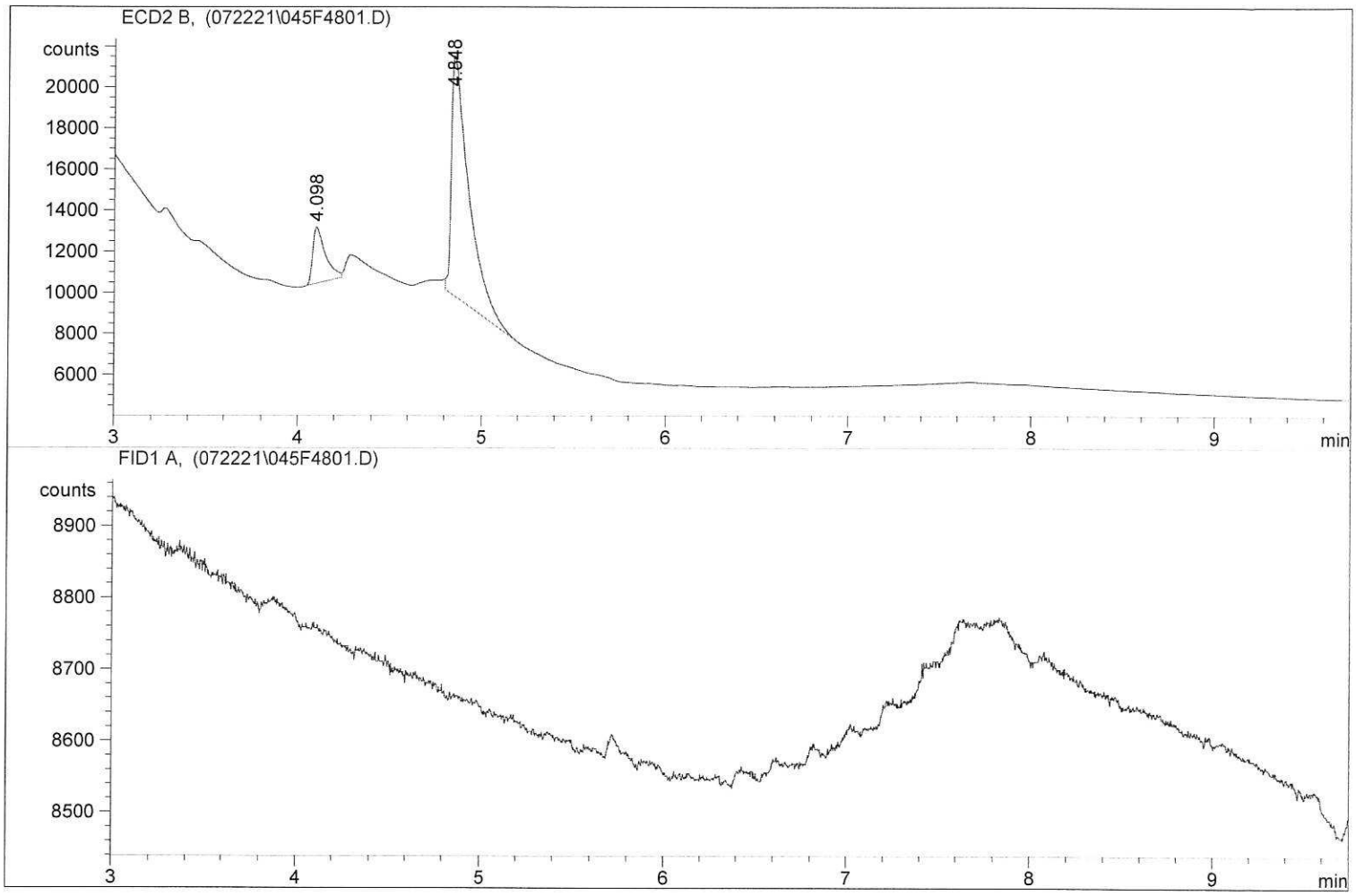
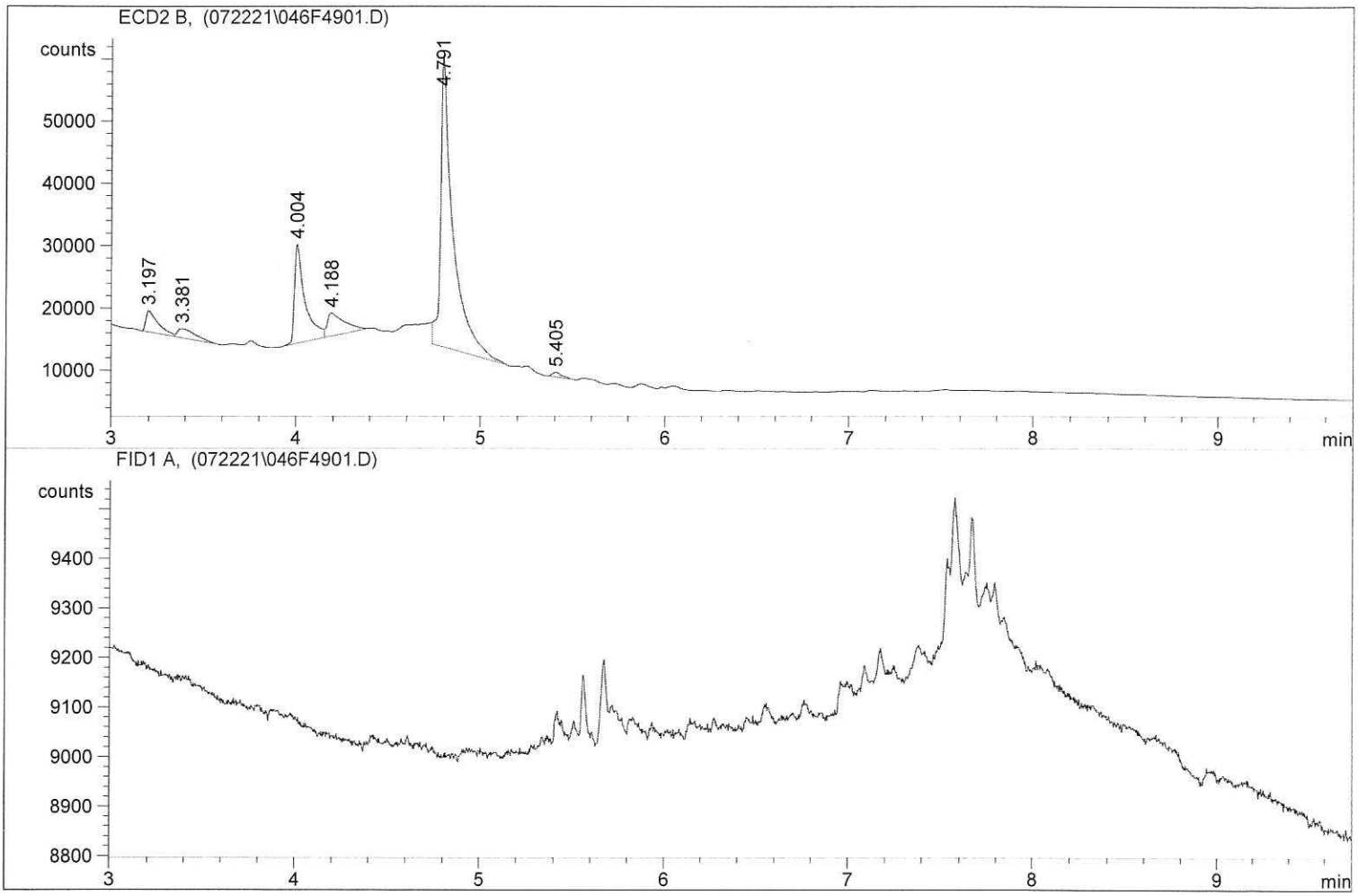


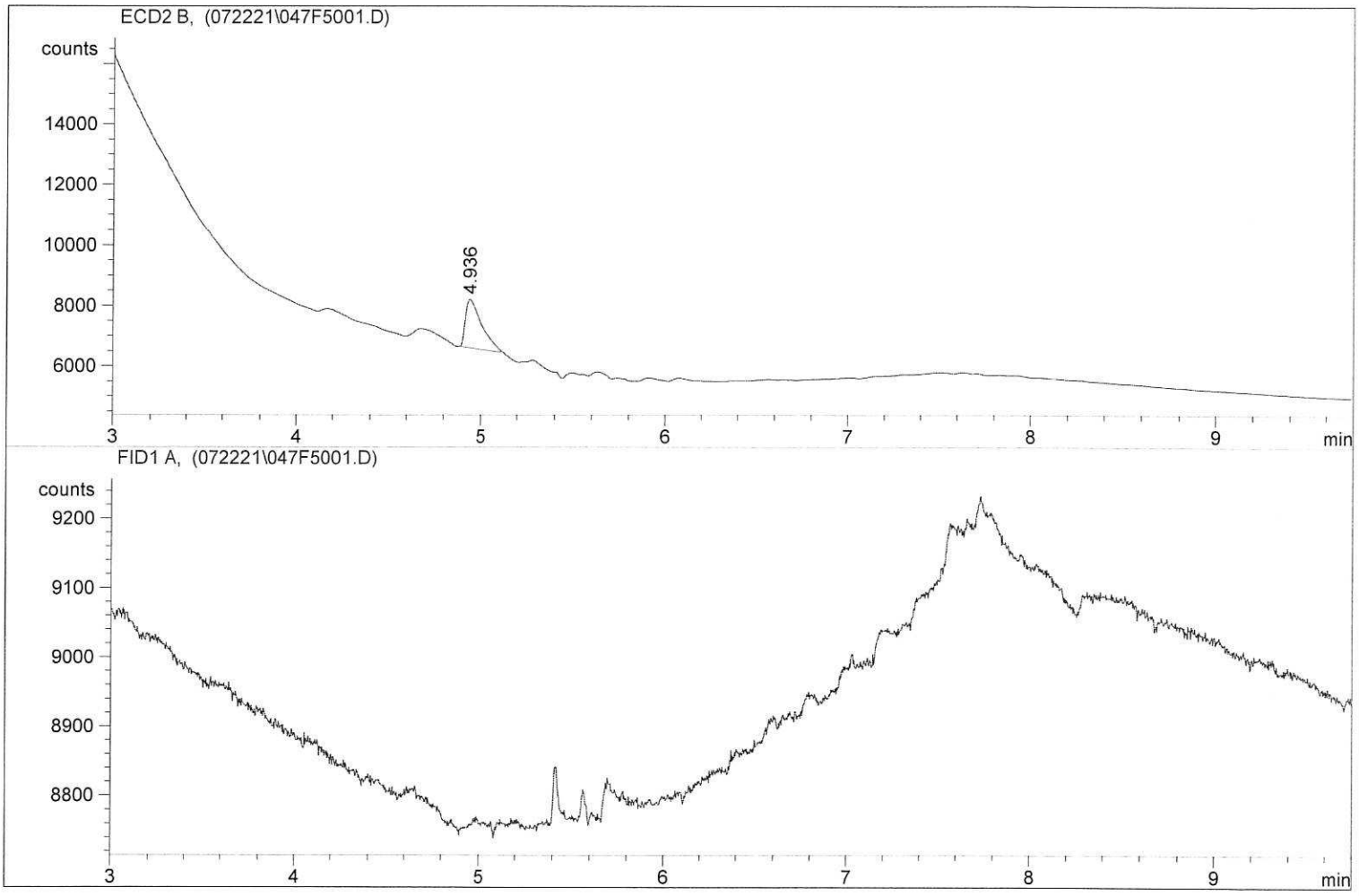
*** End of Report ***

Injection Date	: 7/23/2021 12:36:48 AM	Seq. Line :	49
Sample Name	: 21G0212 13	Location :	Vial 46
Acq. Operator	: JL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\072221C.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



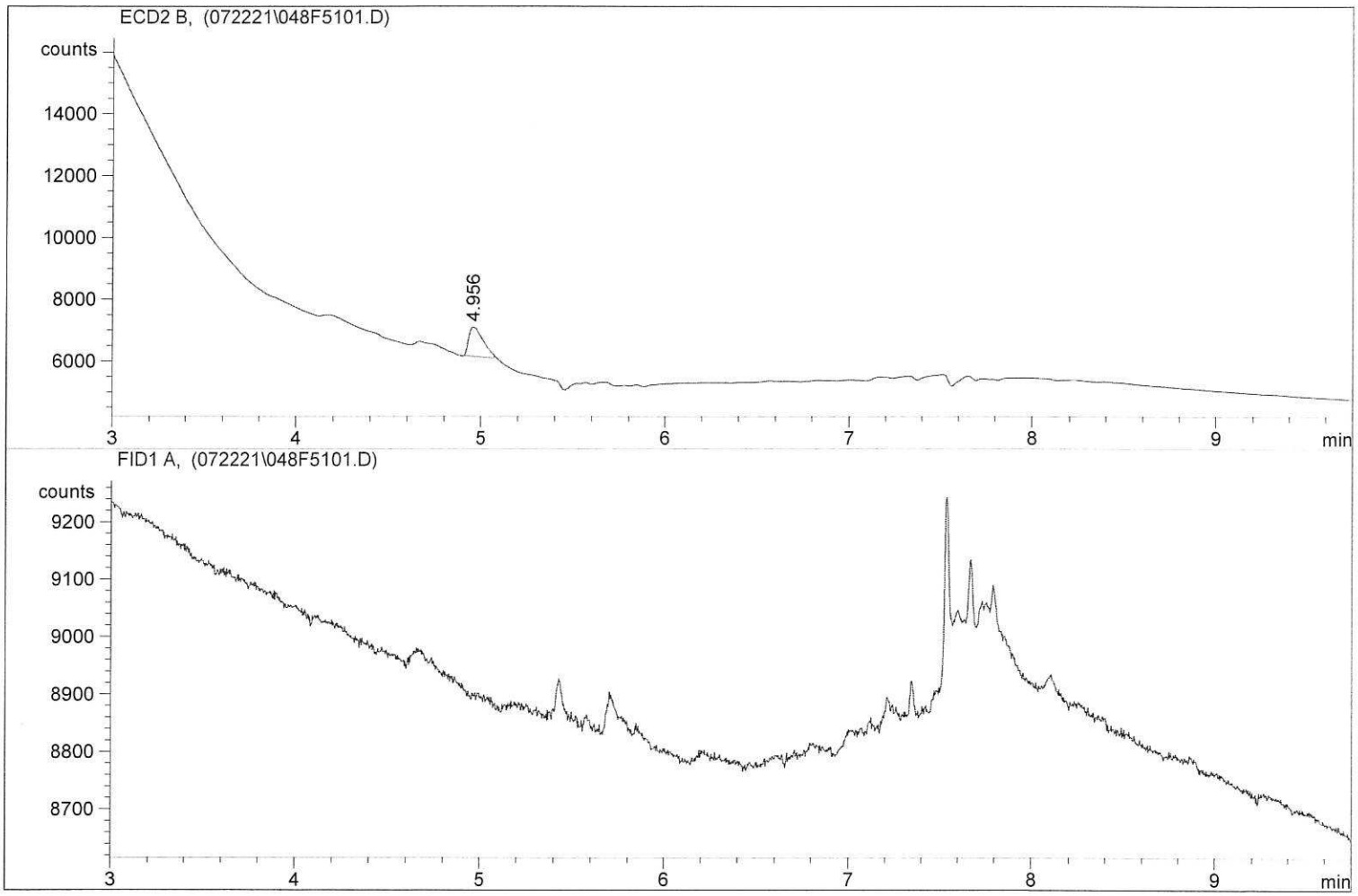
*** End of Report ***

Injection Date	: 7/23/2021 12:50:28 AM	Seq. Line :	50
Sample Name	: 21G0212 14	Location :	Vial 47
Acq. Operator	: JL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\072221C.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



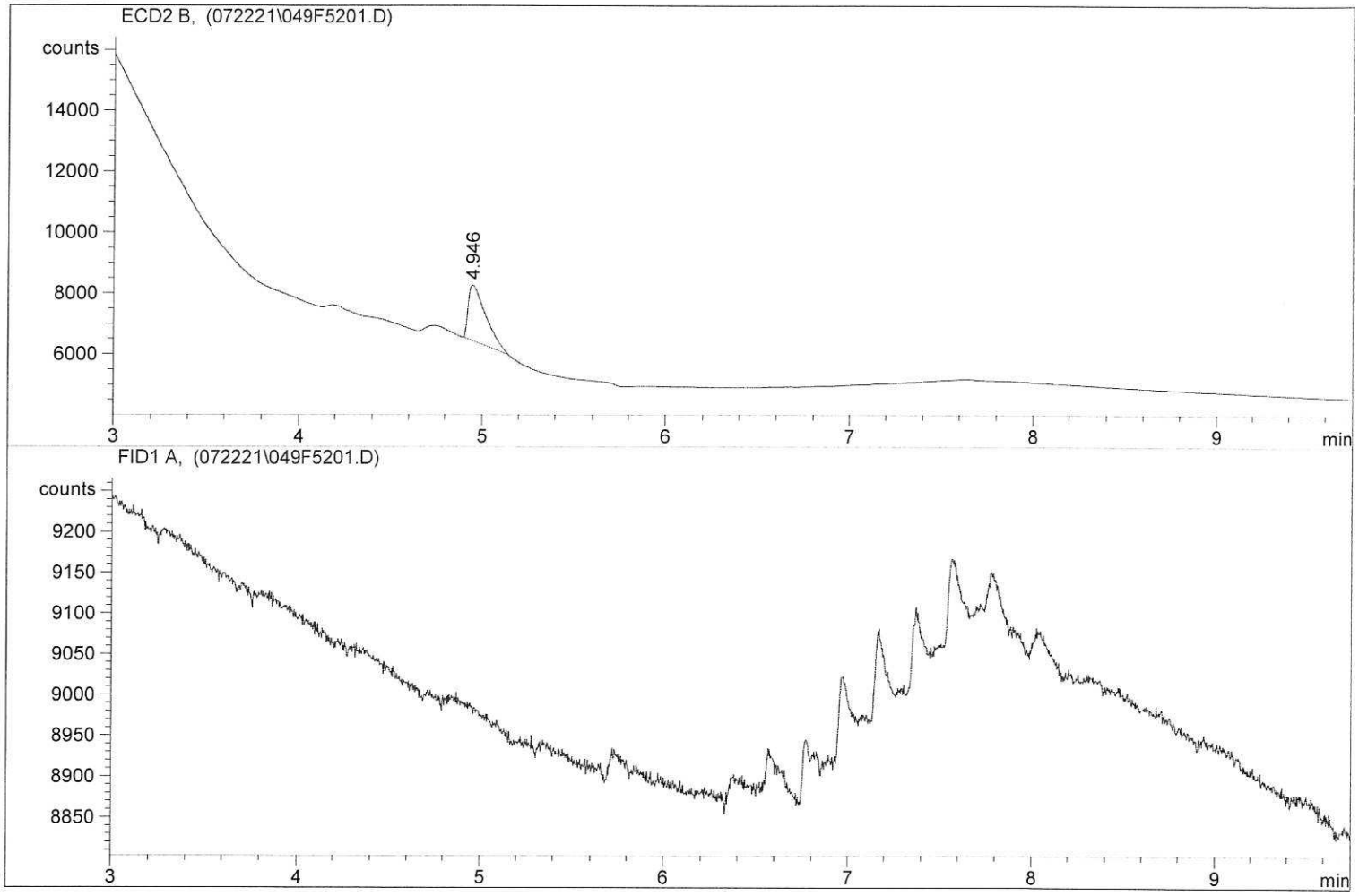
*** End of Report ***

Injection Date	: 7/23/2021 1:04:22 AM	Seq. Line :	51
Sample Name	: 21G0212 15	Location :	Vial 48
Acq. Operator	: JL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\072221C.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	: 7/23/2021 1:18:05 AM	Seq. Line :	52
Sample Name	: 21G0212 16	Location :	Vial 49
Acq. Operator	: JL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\072221C.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Cleanup Batch:	CJH0058	Cleanup Type:	Sulfuric Acid
Cleanup Method:	EPA 3665A Sulfuric Acid Cleanup	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW21-SC539B	21G0212-14	08062137ECD7.D	08/05/2021	
LDW21-IT579B	21G0212-09	08062132ECD7.D	08/05/2021	
LDW21-SC539E	21G0212-16	08062139ECD7.D	08/05/2021	
LDW21-SC539C	21G0212-15	08062138ECD7.D	08/05/2021	
LDW21-SC539A	21G0212-13	08072110ECD7.D	08/05/2021	
LDW21-SC538C	21G0212-04	08062123ECD7.D	08/05/2021	
Blank	BJG0590-BLK1	08062117ECD7.D	08/05/2021	
LCS	BJG0590-BS1	08062118ECD7.D	08/05/2021	
Matrix Spike	BJG0590-MS1	08062128ECD7.D	08/05/2021	
LDW21-SC538E	21G0212-05	08062124ECD7.D	08/05/2021	
LDW21-IT597B	21G0212-10	08072109ECD7.D	08/05/2021	
LDW21-SC538B	21G0212-03	08062122ECD7.D	08/05/2021	
Reference	BJG0590-SRM1	08062119ECD7.D	08/05/2021	
LDW21-IT582C	21G0212-07	08062126ECD7.D	08/05/2021	
LDW21-IT582E	21G0212-08	08062127ECD7.D	08/05/2021	
LDW21-IT582B	21G0212-06	08062125ECD7.D	08/05/2021	
LDW21-IT597C	21G0212-11	08062134ECD7.D	08/05/2021	
LDW21-IT597E	21G0212-12	08062135ECD7.D	08/05/2021	
LDW21-SC524	21G0212-01	08062120ECD7.D	08/05/2021	
LDW21-SC528	21G0212-02	08062121ECD7.D	08/05/2021	
Matrix Spike Dup	BJG0590-MSD1	08062129ECD7.D	08/05/2021	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CJH0058

Matrix: Solid | **Cleanup using: Organics - EPA 3665A Sulfuric Acid Cleanup** | **Printed: 8/5/2021 9:02:15PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
21G0212-16	B	LDW21-SC539E	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-15	B	LDW21-SC539C	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-11	B	LDW21-IT597C	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-12	B	LDW21-IT597E	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-13	B	LDW21-SC539A	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-14	B	LDW21-SC539B	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-03	B	LDW21-SC538B	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-04	B	LDW21-SC538C	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-05	B	LDW21-SC538E	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-06	B	LDW21-IT582B	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-07	B	LDW21-IT582C	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-08	B	LDW21-IT582E	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-09	B	LDW21-IT579B	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-10	B	LDW21-IT597B	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-02	B	LDW21-SC528	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-01	B	LDW21-SC524	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
BJG0590-SRM1	-	Reference	-	2.5	2.5	-	8/5/2021	CCT	
BJG0590-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	8/5/2021	CCT	
BJG0590-BLK1	-	Blank	-	2.5	2.5	-	8/5/2021	CCT	
BJG0590-BS1	-	LCS	-	2.5	2.5	-	8/5/2021	CCT	
BJG0590-MS1	-	Matrix Spike	-	2.5	2.5	-	8/5/2021	CCT	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Cleanup Batch:	CJH0059	Cleanup Type:	Sulfur
Cleanup Method:	EPA 3660B Sulfur Cleanup	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW21-SC539E	21G0212-16	08062139ECD7.D	08/05/2021	
LDW21-IT597E	21G0212-12	08062135ECD7.D	08/05/2021	
LDW21-SC538B	21G0212-03	08062122ECD7.D	08/05/2021	
LDW21-SC528	21G0212-02	08062121ECD7.D	08/05/2021	
LDW21-SC524	21G0212-01	08062120ECD7.D	08/05/2021	
LDW21-SC538C	21G0212-04	08062123ECD7.D	08/05/2021	
LDW21-IT597C	21G0212-11	08062134ECD7.D	08/05/2021	
LDW21-IT597B	21G0212-10	08072109ECD7.D	08/05/2021	
LDW21-IT582E	21G0212-08	08062127ECD7.D	08/05/2021	
LDW21-IT579B	21G0212-09	08062132ECD7.D	08/05/2021	
LDW21-SC538E	21G0212-05	08062124ECD7.D	08/05/2021	
Matrix Spike	BJG0590-MS1	08062128ECD7.D	08/05/2021	
LDW21-IT582C	21G0212-07	08062126ECD7.D	08/05/2021	
Reference	BJG0590-SRM1	08062119ECD7.D	08/05/2021	
LDW21-SC539A	21G0212-13	08072110ECD7.D	08/05/2021	
Blank	BJG0590-BLK1	08062117ECD7.D	08/05/2021	
LCS	BJG0590-BS1	08062118ECD7.D	08/05/2021	
Matrix Spike Dup	BJG0590-MSD1	08062129ECD7.D	08/05/2021	
LDW21-SC539C	21G0212-15	08062138ECD7.D	08/05/2021	
LDW21-SC539B	21G0212-14	08062137ECD7.D	08/05/2021	
LDW21-IT582B	21G0212-06	08062125ECD7.D	08/05/2021	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CJH0059

Matrix: Solid **Cleanup using: Organics - EPA 3660B Sulfur Cleanup** **Printed: 8/5/2021 9:02:52PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
21G0212-16	B	LDW21-SC539E	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-15	B	LDW21-SC539C	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-11	B	LDW21-IT597C	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-12	B	LDW21-IT597E	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-13	B	LDW21-SC539A	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-14	B	LDW21-SC539B	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-03	B	LDW21-SC538B	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-04	B	LDW21-SC538C	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-05	B	LDW21-SC538E	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-06	B	LDW21-IT582B	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-07	B	LDW21-IT582C	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-08	B	LDW21-IT582E	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-09	B	LDW21-IT579B	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-10	B	LDW21-IT597B	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-02	B	LDW21-SC528	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-01	B	LDW21-SC524	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
BJG0590-SRM1	-	Reference	-	2.5	2.5	-	8/5/2021	CCT	
BJG0590-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	8/5/2021	CCT	
BJG0590-BLK1	-	Blank	-	2.5	2.5	-	8/5/2021	CCT	
BJG0590-BS1	-	LCS	-	2.5	2.5	-	8/5/2021	CCT	
BJG0590-MS1	-	Matrix Spike	-	2.5	2.5	-	8/5/2021	CCT	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Cleanup Batch:	CJH0060	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW21-SC528	21G0212-02	08062121ECD7.D	08/05/2021	
Blank	BJG0590-BLK1	08062117ECD7.D	08/05/2021	
LDW21-SC538C	21G0212-04	08062123ECD7.D	08/05/2021	
Matrix Spike	BJG0590-MS1	08062128ECD7.D	08/05/2021	
LDW21-SC539B	21G0212-14	08062137ECD7.D	08/05/2021	
Matrix Spike Dup	BJG0590-MSD1	08062129ECD7.D	08/05/2021	
LDW21-SC539E	21G0212-16	08062139ECD7.D	08/05/2021	
LDW21-SC539C	21G0212-15	08062138ECD7.D	08/05/2021	
LDW21-IT579B	21G0212-09	08062132ECD7.D	08/05/2021	
LCS	BJG0590-BS1	08062118ECD7.D	08/05/2021	
LDW21-SC538B	21G0212-03	08062122ECD7.D	08/05/2021	
LDW21-SC539A	21G0212-13	08072110ECD7.D	08/05/2021	
LDW21-SC524	21G0212-01	08062120ECD7.D	08/05/2021	
LDW21-IT597E	21G0212-12	08062135ECD7.D	08/05/2021	
LDW21-IT597C	21G0212-11	08062134ECD7.D	08/05/2021	
LDW21-IT597B	21G0212-10	08072109ECD7.D	08/05/2021	
LDW21-IT582E	21G0212-08	08062127ECD7.D	08/05/2021	
LDW21-IT582C	21G0212-07	08062126ECD7.D	08/05/2021	
LDW21-IT582B	21G0212-06	08062125ECD7.D	08/05/2021	
Reference	BJG0590-SRM1	08062119ECD7.D	08/05/2021	
LDW21-SC538E	21G0212-05	08062124ECD7.D	08/05/2021	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CJH0060

Matrix: Solid **Cleanup using: Organics - EPA 3630C Silica Gel Cleanup** **Printed: 8/5/2021 9:03:37PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
21G0212-16	B	LDW21-SC539E	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-15	B	LDW21-SC539C	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-11	B	LDW21-IT597C	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-12	B	LDW21-IT597E	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-13	B	LDW21-SC539A	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-14	B	LDW21-SC539B	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-03	B	LDW21-SC538B	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-04	B	LDW21-SC538C	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-05	B	LDW21-SC538E	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-06	B	LDW21-IT582B	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-07	B	LDW21-IT582C	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-08	B	LDW21-IT582E	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-09	B	LDW21-IT579B	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-10	B	LDW21-IT597B	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-02	B	LDW21-SC528	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
21G0212-01	B	LDW21-SC524	B 01	2.5	2.5	8082A PCB Solid 4	8/5/2021	CCT	
BJG0590-SRM1	-	Reference	-	2.5	2.5	-	8/5/2021	CCT	
BJG0590-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	8/5/2021	CCT	
BJG0590-BLK1	-	Blank	-	2.5	2.5	-	8/5/2021	CCT	
BJG0590-BS1	-	LCS	-	2.5	2.5	-	8/5/2021	CCT	
BJG0590-MS1	-	Matrix Spike	-	2.5	2.5	-	8/5/2021	CCT	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
METHOD BLANK DATA SHEET
EPA 8082A

Blank

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC			Project:	Lower Duwamish AOC4
Matrix:	Solid	Laboratory ID:	BJG0590-BLK1	File ID:	08062117ECD7.D
Sampled:	N/A	Prepared:	07/27/21 14:38	Analyzed:	08/06/21 17:14
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	12.5 g / 2.5 mL
Batch:	BJG0590	Sequence:	SJH0075	Calibration:	EE00069
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	7.58	94.8	40 - 126	
Tetrachlorometaxylene	8.0000	7.01	87.6	44 - 120	
Decachlorobiphenyl [2C]	8.0000	8.44	105	40 - 126	
Tetrachlorometaxylene [2C]	8.0000	6.70	83.7	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: /210806.b/08062117ECD7.D
Data file 2: /210806.b/210806.b/08062117ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BJG0590-BLK1
Client ID:
Injection Date: 06-AUG-2021 17:14
Report Date: 08/11/2021 08:38
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.067	-0.001	113764	5.413	-0.002	304488	35.0	33.5	4.5	Tetrachloro-m-xylene
13.164	-0.000	152894	13.849	0.001	752074	37.9	42.2	10.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	271975	-8.3
Hexabromobiphenyl	470266	452247	-3.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	737656	3.6
Hexabromobiphenyl	867949	994192	14.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	7.059	0.001	414	1.1
Aroclor-1016	2	---			0.0	2	7.641	-0.010	1274	1.5
Aroclor-1016	3	---			0.0	3	7.858	0.000	1804	5.8
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: 2.8				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.090	0.006	3703	32.8
Aroclor-1221	3	---			0.0	3	6.405	-0.016	1245	6.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	5.783	0.053	103	1.4	2	6.090	0.005	3703	45.6
Aroclor-1232	3	7.030	0.003	144	1.1	3	6.405	-0.017	1245	7.0
Aroclor-1232	4	---			0.0	4	7.641	-0.020	1274	3.4
	Col1Ave: <3 Quant Peaks					Col2Ave: 18.7				
Aroclor-1242	1	---			0.0	1	7.059	0.002	414	1.3
Aroclor-1242	2	7.030	-0.001	144	0.6	2	7.641	-0.010	1274	1.8
Aroclor-1242	3	8.204	-0.073	4336	129.3	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	8.198	0.092	4345	16.2
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	9.407	0.029	2372	4.2
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	9.241	0.001	5819	10.4
Aroclor-1254	2	---			0.0	2	9.407	0.075	2372	7.2
Aroclor-1254	3	---			0.0	3	9.750	-0.013	617	1.5
Aroclor-1254	4	---			0.0	4	9.832	-0.082	3673	3.9
Aroclor-1254	5	---			0.0	5	10.156	0.007	922	0.9
	Col1Ave: <3 Quant Peaks					Col2Ave: 4.8				
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	12.256	-0.005	305	0.3
Aroclor-1260	4	---			0.0	4	13.048	0.076	6551	14.5
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	---			0.0	1	11.059	0.070	205	0.2
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	12.186	-0.022	1138	1.2
Aroclor-1262	4	---			0.0	4	13.048	0.055	6551	7.6
	Col1Ave: <3 Quant Peaks					Col2Ave: 3.0				
Aroclor-1268	1	---			0.0	1	12.186	-0.022	1138	0.4
Aroclor-1268	2	---			0.0	2	12.256	-0.018	305	0.1
Aroclor-1268	3	11.996	-0.016	685	1.1	3	12.637	-0.023	1620	0.6
Aroclor-1268	4	12.768	-0.009	2391	1.3	4	13.445	-0.027	4922	0.6
	Col1Ave: <3 Quant Peaks					Col2Ave: 0.4				

Total PCB Area Col1 (5.168 - 13.065) = 24939 Col1 Total PCB = 0.0 ppm*

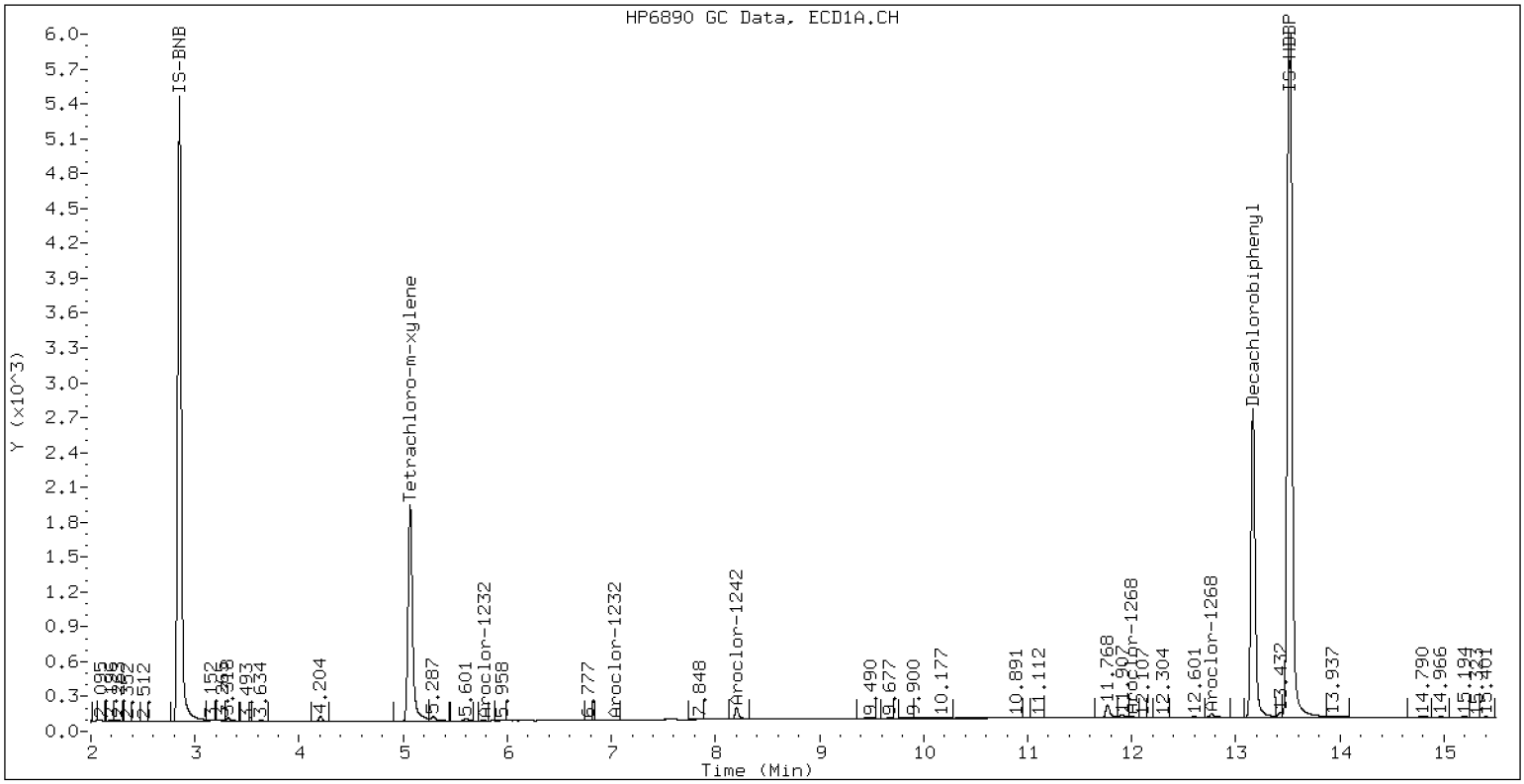
Total PCB Area Col2 (5.168 - 13.065) = 387526 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

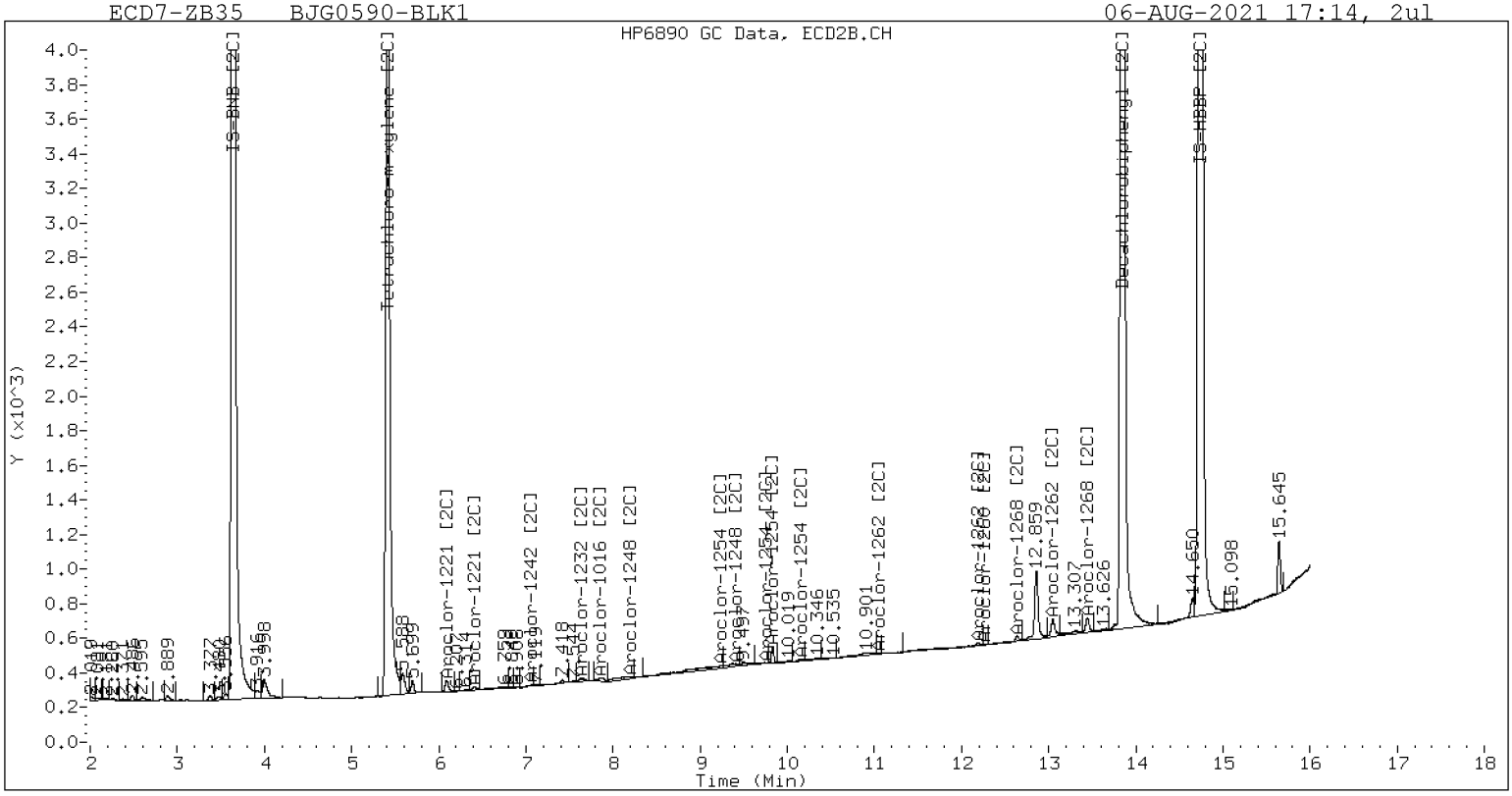
PCB Dual Column Chromatograms

ECD7-ZB5 BJG0590-BLK1 06-AUG-2021 17:14, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BJG0590-BLK1 06-AUG-2021 17:14, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LCS / LCS DUPLICATE RECOVERY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Matrix:	Solid	Analyzed:	08/06/21 17:35
Batch:	BJG0590	Laboratory ID:	BJG0590-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 [2C]	101	84.9		84.2	56 - 120
Aroclor 1260 [2C]	101	102		101	58 - 120

* Indicates values outside of QC limits

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

Data file 1: /210806.b/08062118ECD7.D
Data file 2: /210806.b/210806.b/08062118ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BJG0590-BS1
Client ID:
Injection Date: 06-AUG-2021 17:35
Report Date: 08/11/2021 08:38
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
5.067	-0.001	120006	5.412	-0.002	319531	37.1	34.9	6.1	Tetrachloro-m-xylene
13.165	-0.000	165677	13.848	0.000	816649	40.6	45.4	11.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	271089	-8.6
Hexabromobiphenyl	470266	457285	-2.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	743114	4.4
Hexabromobiphenyl	867949	1002413	15.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.658	-0.001	35841	426.2	1	7.056	-0.002	153589	401.3
Aroclor-1016	2	7.029	-0.004	119004	419.4	2	7.647	-0.005	351586	417.6
Aroclor-1016	3	7.174	-0.003	48491	420.7	3	7.855	-0.004	136812	433.9
Aroclor-1016	4	7.283	-0.004	32427	421.1	4	8.026	-0.004	85887	445.0
Total Col1Ave (4 peaks): 421.8						Total Col2Ave (4 peaks): 424.4 RPD = 1				
Corrected Ave (3 peaks): 420.4						Corrected Ave (3 peaks): 417.6 RPD = 1				
Aroclor-1221	1	4.024	0.001	114	5.7	1	4.673	-0.019	783	16.2
Aroclor-1221	2	5.447	-0.008	4132	120.3	2	6.074	-0.010	14842	130.7
Aroclor-1221	3	5.723	-0.006	23019	264.3	3	6.410	-0.012	66307	316.7
Total Col1Ave (3 peaks): 130.1						Total Col2Ave (3 peaks): 154.5 RPD = 17				
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	---			0.0	1	4.673	-0.019	783	25.6
Aroclor-1232	2	5.723	-0.008	23019	309.6	2	6.074	-0.011	14842	181.3
Aroclor-1232	3	7.029	0.002	119004	952.4	3	6.410	-0.013	66307	369.3
Aroclor-1232	4	8.597	-0.008	4464	119.0	4	7.647	-0.015	351586	935.7
Total Col1Ave (3 peaks): 460.3						Total Col2Ave (4 peaks): 378.0 RPD = 20				
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks): 192.1				
Aroclor-1242	1	6.658	-0.001	35841	478.8	1	7.056	-0.002	153589	465.5
Aroclor-1242	2	7.029	-0.003	119004	489.5	2	7.647	-0.004	351586	492.6
Aroclor-1242	3	8.269	-0.008	2944	88.1	3	8.934	-0.017	45120	139.9
Aroclor-1242	4	8.597	-0.016	4464	59.8	4	9.026	-0.006	14610	51.5
Total Col1Ave (4 peaks): 279.0						Total Col2Ave (4 peaks): 287.4 RPD = 3				
Corrected Ave (3 peaks): 208.9						Corrected Ave (3 peaks): 219.0 RPD = 5				
Aroclor-1248	1	7.798	-0.002	33669	297.6	1	8.105	-0.002	82190	303.4
Aroclor-1248	2	7.966	-0.003	42186	300.7	2	8.519	-0.003	115320	313.0
Aroclor-1248	3	8.318	-0.002	5694	40.5	3	8.934	-0.017	45120	85.1
Aroclor-1248	4	8.597	-0.013	4464	35.9	4	9.376	-0.003	9028	16.0
Total Col1Ave (4 peaks): 168.7						Total Col2Ave (4 peaks): 179.4 RPD = 6				
Corrected Ave (3 peaks): 124.7						Corrected Ave (3 peaks): 134.8 RPD = 8				
Aroclor-1254	1	8.672	-0.004	30016	131.0	1	9.238	-0.003	87969	156.3
Aroclor-1254	2	---			0.0	2	9.327	-0.006	3148	9.5
Aroclor-1254	3	9.041	-0.001	4666	33.2	3	9.761	-0.002	15753	37.2
Aroclor-1254	4	9.172	-0.004	27327	98.3	4	9.926	0.012	214040	227.4
Aroclor-1254	5	9.855	-0.012	36313	193.7	5	10.157	0.008	273457	270.8
Total Col1Ave (4 peaks): 114.0						Total Col2Ave (5 peaks): 140.3 RPD = 21				
Corrected Ave (3 peaks): 87.5						Corrected Ave (4 peaks): 107.6 RPD = 21				
Aroclor-1260	1	10.382	-0.001	82239	490.6	1	11.426	-0.002	292207	467.4
Aroclor-1260	2	10.700	-0.001	81559	473.2	2	11.678	-0.001	798707	489.8
Aroclor-1260	3	11.050	-0.002	213553	473.0	3	12.260	-0.002	525913	495.9
Aroclor-1260	4	11.451	-0.001	101453	440.9	4	12.971	-0.001	266798	585.3
Aroclor-1260	5	11.554	0.001	48152	542.7	NS	---			----
Total Col1Ave (5 peaks): 484.1						Total Col2Ave (4 peaks): 509.6 RPD = 5				
Corrected Ave (4 peaks): 469.4						Corrected Ave (3 peaks): 484.4 RPD = 3				
Aroclor-1262	1	10.382	-0.010	82239	285.9	1	10.968	-0.021	312412	310.4
Aroclor-1262	2	11.451	-0.010	101453	546.8	2	11.678	-0.022	798707	401.0
Aroclor-1262	3	11.626	-0.010	60614	242.2	3	12.189	-0.019	256683	268.7
Aroclor-1262	4	12.273	-0.015	58622	296.3	4	12.971	-0.022	266798	307.9
Total Col1Ave (4 peaks): 342.8						Total Col2Ave (4 peaks): 322.0 RPD = 6				
Corrected Ave (3 peaks): 274.8						Corrected Ave (3 peaks): 295.7 RPD = 7				
Aroclor-1268	1	11.554	-0.011	48152	62.7	1	12.189	-0.018	256683	88.1
Aroclor-1268	2	11.626	-0.010	60614	77.9	2	12.260	-0.014	525913	165.7
Aroclor-1268	3	12.029	0.017	24302	39.8	3	12.635	-0.025	10789	3.9
Aroclor-1268	4	12.767	-0.011	14242	7.4	4	13.445	-0.028	60870	6.8
Total Col1Ave (4 peaks): 47.0						Total Col2Ave (4 peaks): 66.1 RPD = 34				

Corrected Ave (3 peaks): 36.6 Corrected Ave (3 peaks): 32.9 RPD = 11

Total PCB Area Col1 (5.168 - 13.065) = 2099897 Col1 Total PCB = 0.9 ppm*

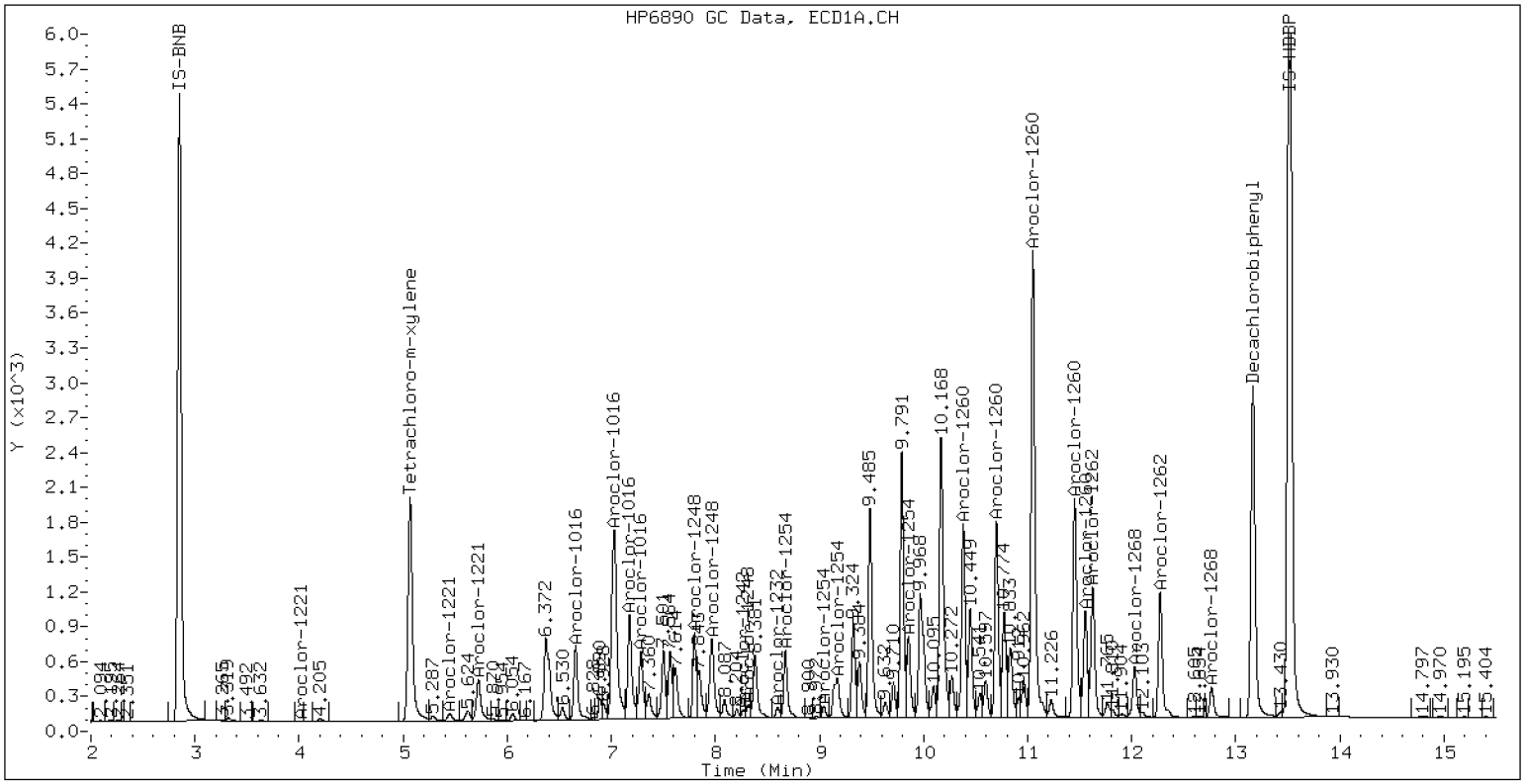
Total PCB Area Col2 (5.168 - 13.065) = 7270436 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

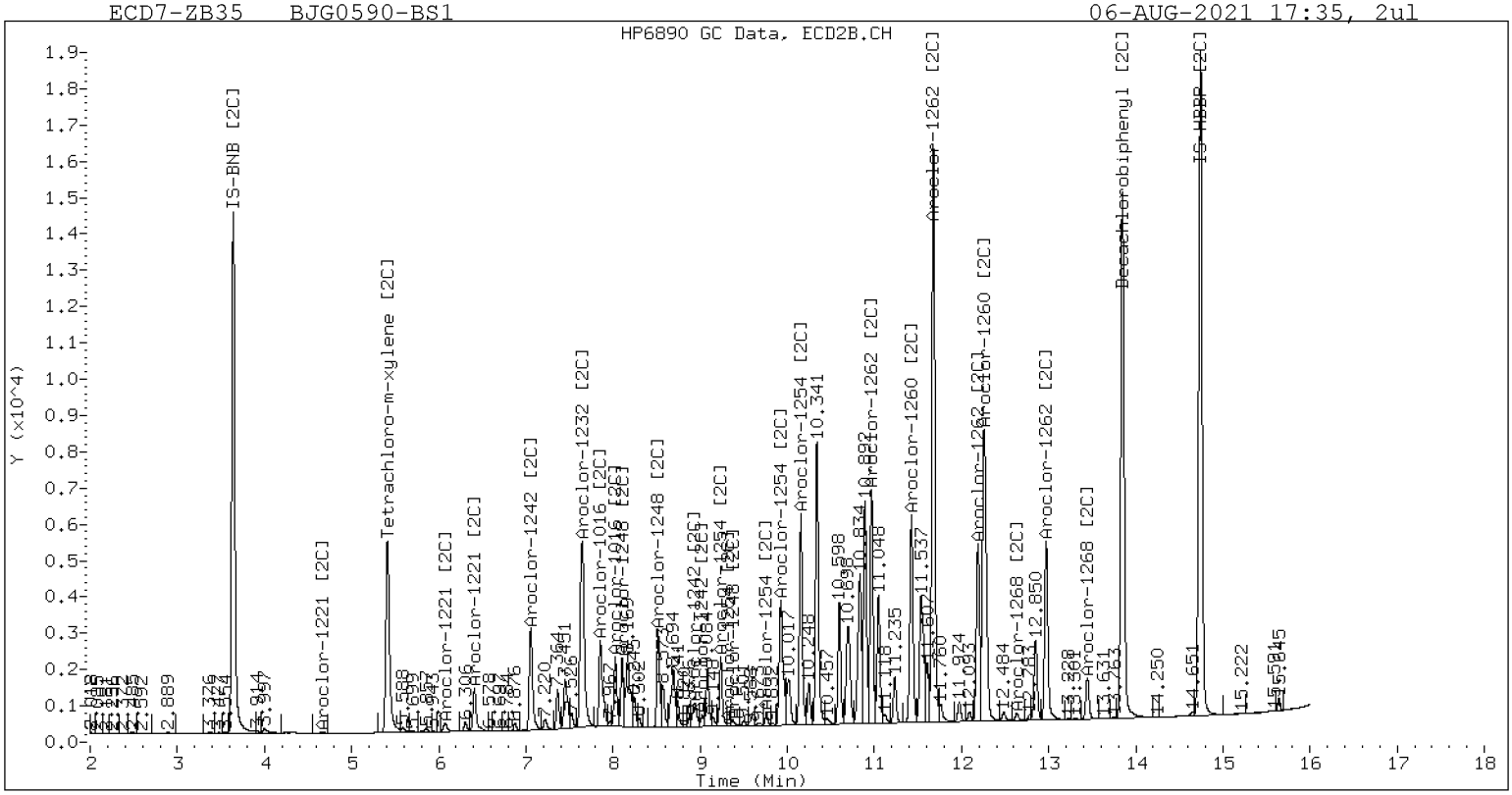
PCB Dual Column Chromatograms

ECD7-ZB5 BJG0590-BS1 06-AUG-2021 17:35, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BJG0590-BS1 06-AUG-2021 17:35, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LDW21-IT582E

MS / MS DUPLICATE RECOVERY
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Matrix:	Solid	Analyzed:	08/06/21 20:59
Batch:	BJG0590	Laboratory ID:	BJG0590-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	15.95 g / 2.5 mL	Source Sample:	LDW21-IT582E

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	71.7		71.0	56 - 120
Aroclor 1260	101	ND	U	91.9		91.0	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, Incorporated
Analytical Chemists and Consultants

LDW21-IT582E

MS / MS DUPLICATE RECOVERY
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Matrix:	Solid	Analyzed:	08/06/21 21:20
Batch:	BJG0590	Laboratory ID:	BJG0590-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	15.95 g / 2.5 mL	Source Sample:	LDW21-IT582E

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Aroclor 1016	101	66.7		66.0	7.24	30	56 - 120
Aroclor 1260	101	82.4		81.6	10.9	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: /210806.b/08062128ECD7.D
Data file 2: /210806.b/210806.b/08062128ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BJG0590-MS1
Client ID:
Injection Date: 06-AUG-2021 20:59
Report Date: 08/11/2021 08:39
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.064	-0.004	99048	5.410	-0.005	265188	30.7	30.0	2.1	Tetrachloro-m-xylene
13.156	-0.008	104296	13.842	-0.006	534653	36.6	35.5	3.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	270427	-8.8
Hexabromobiphenyl	470266	319377	-32.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	716488	0.6
Hexabromobiphenyl	867949	841163	-3.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.653	-0.006	31148	371.3	1	7.053	-0.005	126725	343.4
Aroclor-1016	2	7.021	-0.011	105206	371.7	2	7.641	-0.011	277102	341.3
Aroclor-1016	3	7.169	-0.009	39547	343.9	3	7.848	-0.010	100789	331.6
Aroclor-1016	4	7.277	-0.010	26703	347.6	4	8.019	-0.011	63783	342.8
Total Col1Ave (4 peaks):					358.6	Total Col2Ave (4 peaks):				339.8 RPD = 5
Corrected Ave (3 peaks):					354.3	Corrected Ave (3 peaks):				338.6 RPD = 5
Aroclor-1221	1	4.018	-0.005	588	29.4	1	4.738	0.046	2738	58.7
Aroclor-1221	2	5.445	-0.011	4788	139.7	2	6.071	-0.013	14019	128.0
Aroclor-1221	3	5.719	-0.010	21540	247.9	3	6.406	-0.016	52246	258.8
Total Col1Ave (3 peaks):					139.0	Total Col2Ave (3 peaks):				148.5 RPD = 7
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	---			0.0	1	4.738	0.047	2738	92.8
Aroclor-1232	2	5.719	-0.012	21540	290.4	2	6.071	-0.014	14019	177.6
Aroclor-1232	3	7.021	-0.006	105206	844.1	3	6.406	-0.017	52246	301.8
Aroclor-1232	4	8.588	-0.017	3618	96.6	4	7.641	-0.021	277102	764.9
Total Col1Ave (3 peaks):					410.4	Total Col2Ave (4 peaks):				334.3 RPD = 20
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				190.8
Aroclor-1242	1	6.653	-0.006	31148	417.1	1	7.053	-0.004	126725	398.4
Aroclor-1242	2	7.021	-0.010	105206	433.8	2	7.641	-0.010	277102	402.7
Aroclor-1242	3	8.254	-0.023	2938	88.1	3	8.928	-0.023	27437	88.2
Aroclor-1242	4	8.588	-0.025	3618	48.6	4	9.012	-0.020	10379	37.9
Total Col1Ave (4 peaks):					246.9	Total Col2Ave (4 peaks):				231.8 RPD = 6
Corrected Ave (3 peaks):					184.6	Corrected Ave (3 peaks):				174.8 RPD = 5
Aroclor-1248	1	7.791	-0.008	27414	242.9	1	8.100	-0.007	56863	217.7
Aroclor-1248	2	7.957	-0.011	31803	227.2	2	8.513	-0.009	81621	229.8
Aroclor-1248	3	8.304	-0.016	4917	35.1	3	8.928	-0.023	27437	53.7
Aroclor-1248	4	8.588	-0.022	3618	29.2	4	9.361	-0.018	4722	8.7
Total Col1Ave (4 peaks):					133.6	Total Col2Ave (4 peaks):				127.4 RPD = 5
Corrected Ave (3 peaks):					97.2	Corrected Ave (3 peaks):				93.3 RPD = 4
Aroclor-1254	1	8.661	-0.014	21492	94.0	1	9.229	-0.011	54482	100.4
Aroclor-1254	2	---			0.0	2	9.315	-0.018	1163	3.6
Aroclor-1254	3	9.029	-0.013	3664	26.1	3	9.752	-0.011	9369	23.0
Aroclor-1254	4	9.155	-0.021	21426	77.2	4	9.916	0.002	127527	140.5
Aroclor-1254	5	9.844	-0.024	22619	121.0	5	10.148	-0.000	173239	178.0
Total Col1Ave (4 peaks):					79.6	Total Col2Ave (5 peaks):				89.1 RPD = 11
Corrected Ave (3 peaks):					65.8	Corrected Ave (4 peaks):				66.9 RPD = 2
Aroclor-1260	1	10.372	-0.011	55331	472.6	1	11.418	-0.010	186728	356.0
Aroclor-1260	2	10.690	-0.011	53547	444.8	2	11.669	-0.009	525188	383.8
Aroclor-1260	3	11.039	-0.012	142846	453.0	3	12.252	-0.010	339125	381.1
Aroclor-1260	4	11.440	-0.012	68353	425.3	4	12.964	-0.009	175245	458.2
Aroclor-1260	5	11.545	-0.009	31062	501.3	NS	---			----
Total Col1Ave (5 peaks):					459.4	Total Col2Ave (4 peaks):				394.8 RPD = 15
Corrected Ave (4 peaks):					448.9	Corrected Ave (3 peaks):				373.6 RPD = 18
Aroclor-1262	1	10.372	-0.019	55331	275.4	1	10.959	-0.030	195743	231.7
Aroclor-1262	2	11.440	-0.022	68353	527.4	2	11.669	-0.030	525188	314.3
Aroclor-1262	3	11.616	-0.019	38942	222.8	3	12.181	-0.027	172356	215.0
Aroclor-1262	4	12.264	-0.024	36644	265.2	4	12.964	-0.029	175245	241.0
Total Col1Ave (4 peaks):					322.7	Total Col2Ave (4 peaks):				250.5 RPD = 25
Corrected Ave (3 peaks):					254.5	Corrected Ave (3 peaks):				229.3 RPD = 10
Aroclor-1268	1	11.545	-0.021	31062	57.9	1	12.181	-0.026	172356	70.5
Aroclor-1268	2	11.616	-0.019	38942	71.7	2	12.252	-0.023	339125	127.3
Aroclor-1268	3	12.017	0.005	16351	38.3	3	12.628	-0.032	8241	3.5
Aroclor-1268	4	12.759	-0.018	9825	7.3	4	13.437	-0.035	41836	5.5
Total Col1Ave (4 peaks):					43.8	Total Col2Ave (4 peaks):				51.7 RPD = 17

Corrected Ave (3 peaks): 34.5 Corrected Ave (3 peaks): 26.5 RPD = 26

Total PCB Area Col1 (5.168 - 13.065) = 1512648 Col1 Total PCB = 0.6 ppm*

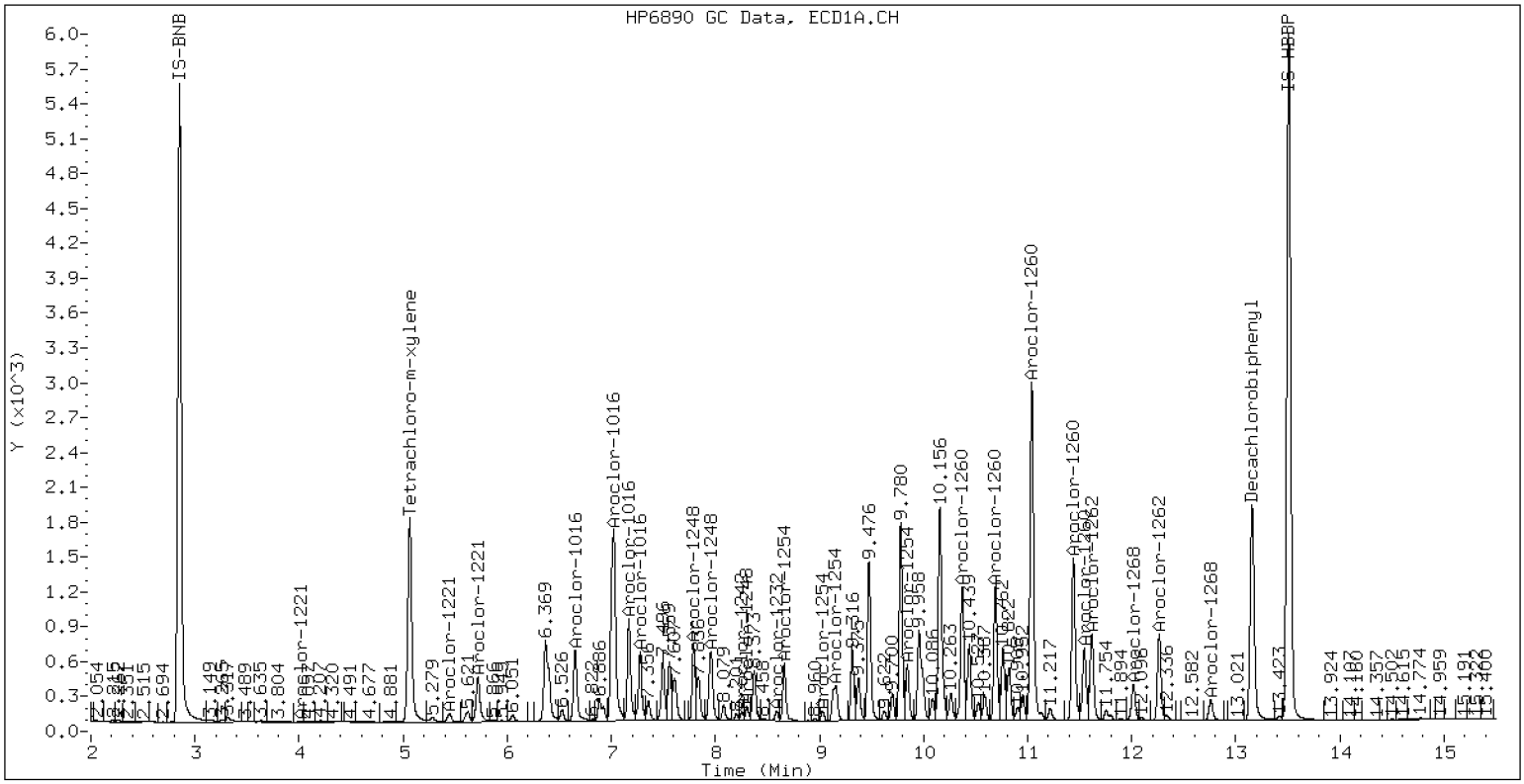
Total PCB Area Col2 (5.168 - 13.065) = 4902308 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

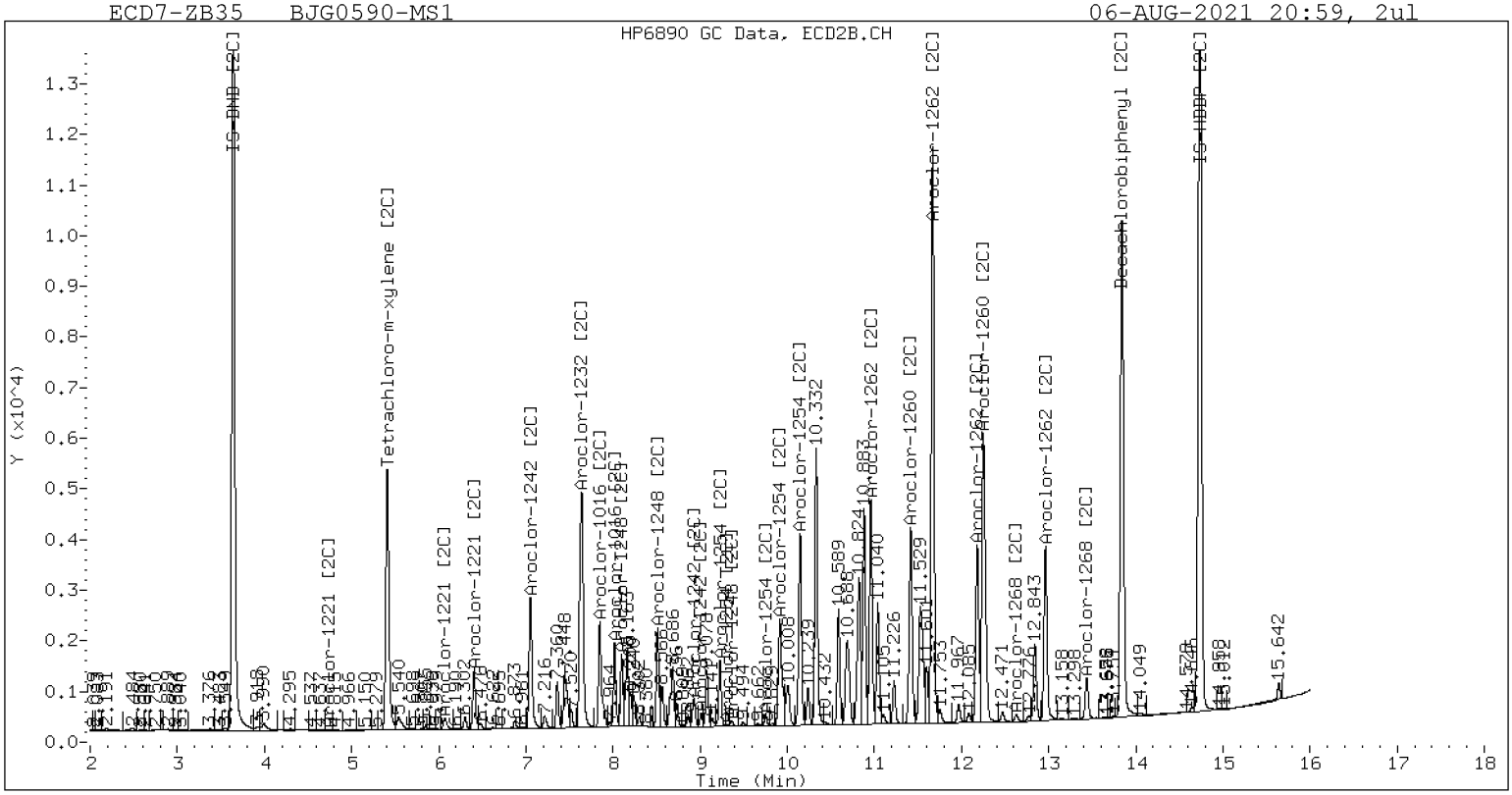
PCB Dual Column Chromatograms

ECD7-ZB5 BJG0590-MS1 06-AUG-2021 20:59, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BJG0590-MS1 06-AUG-2021 20:59, 2ul



ZB-35 Manual Integration: NO

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

Data file 1: /210806.b/08062129ECD7.D
Data file 2: /210806.b/210806.b/08062129ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BJG0590-MSD1
Client ID:
Injection Date: 06-AUG-2021 21:20
Report Date: 08/11/2021 08:39
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.064	-0.005	90124	5.410	-0.005	245220	27.3	26.7	2.2	Tetrachloro-m-xylene
13.159	-0.006	101178	13.843	-0.005	519190	32.1	31.0	3.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	276051	-6.9
Hexabromobiphenyl	470266	353944	-24.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	743962	4.5
Hexabromobiphenyl	867949	934113	7.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.654	-0.005	29196	340.9	1	7.053	-0.005	123285	321.7
Aroclor-1016	2	7.023	-0.009	100038	346.2	2	7.643	-0.009	272148	322.9
Aroclor-1016	3	7.170	-0.007	37924	323.1	3	7.849	-0.009	100469	318.3
Aroclor-1016	4	7.279	-0.008	25406	324.0	4	8.021	-0.009	62781	324.9
Total Col1Ave (4 peaks):					333.6	Total Col2Ave (4 peaks):				321.9 RPD = 4
Corrected Ave (3 peaks):					329.3	Corrected Ave (3 peaks):				321.0 RPD = 3
Aroclor-1221	1	4.020	-0.002	224	11.0	1	4.737	0.045	2765	57.1
Aroclor-1221	2	5.445	-0.010	3001	85.8	2	6.071	-0.013	13962	122.8
Aroclor-1221	3	5.720	-0.010	19524	220.1	3	6.406	-0.016	50864	242.7
Total Col1Ave (3 peaks):					105.6	Total Col2Ave (3 peaks):				140.8 RPD = 29
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	---			0.0	1	4.737	0.046	2765	90.3
Aroclor-1232	2	5.720	-0.011	19524	257.9	2	6.071	-0.013	13962	170.3
Aroclor-1232	3	7.023	-0.004	100038	786.3	3	6.406	-0.016	50864	283.0
Aroclor-1232	4	8.590	-0.015	3582	93.7	4	7.643	-0.019	272148	723.4
Total Col1Ave (3 peaks):					379.3	Total Col2Ave (4 peaks):				316.8 RPD = 18
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				181.2
Aroclor-1242	1	6.654	-0.005	29196	383.0	1	7.053	-0.005	123285	373.3
Aroclor-1242	2	7.023	-0.008	100038	404.1	2	7.643	-0.008	272148	380.9
Aroclor-1242	3	8.257	-0.020	2785	81.8	3	8.930	-0.020	27790	86.0
Aroclor-1242	4	8.590	-0.023	3582	47.1	4	9.014	-0.017	10414	36.7
Total Col1Ave (4 peaks):					229.0	Total Col2Ave (4 peaks):				219.2 RPD = 4
Corrected Ave (3 peaks):					170.7	Corrected Ave (3 peaks):				165.3 RPD = 3
Aroclor-1248	1	7.793	-0.006	26812	232.8	1	8.101	-0.005	57475	211.9
Aroclor-1248	2	7.959	-0.009	30922	216.4	2	8.514	-0.007	82611	224.0
Aroclor-1248	3	8.306	-0.013	4800	33.6	3	8.930	-0.021	27790	52.3
Aroclor-1248	4	8.590	-0.019	3582	28.3	4	9.364	-0.015	4935	8.7
Total Col1Ave (4 peaks):					127.8	Total Col2Ave (4 peaks):				124.2 RPD = 3
Corrected Ave (3 peaks):					92.8	Corrected Ave (3 peaks):				91.0 RPD = 2
Aroclor-1254	1	8.664	-0.011	21330	91.4	1	9.231	-0.009	55810	99.1
Aroclor-1254	2	---			0.0	2	9.316	-0.016	1266	3.8
Aroclor-1254	3	9.032	-0.010	3622	25.3	3	9.754	-0.009	9517	22.5
Aroclor-1254	4	9.159	-0.017	21711	76.7	4	9.918	0.004	124897	132.5
Aroclor-1254	5	9.847	-0.020	22746	119.2	5	10.150	0.002	177102	175.2
Total Col1Ave (4 peaks):					78.1	Total Col2Ave (5 peaks):				86.6 RPD = 10
Corrected Ave (3 peaks):					64.5	Corrected Ave (4 peaks):				64.5 RPD = 0
Aroclor-1260	1	10.375	-0.008	54635	421.1	1	11.420	-0.008	188011	322.7
Aroclor-1260	2	10.693	-0.009	52725	395.2	2	11.671	-0.007	527716	347.3
Aroclor-1260	3	11.042	-0.010	143729	411.3	3	12.254	-0.008	340582	344.7
Aroclor-1260	4	11.442	-0.010	67936	381.4	4	12.965	-0.007	177031	416.8
Aroclor-1260	5	11.547	-0.007	31006	451.5	NS	---			----
Total Col1Ave (5 peaks):					412.1	Total Col2Ave (4 peaks):				357.9 RPD = 14
Corrected Ave (4 peaks):					402.3	Corrected Ave (3 peaks):				338.2 RPD = 17
Aroclor-1262	1	10.375	-0.016	54635	245.4	1	10.962	-0.027	198729	211.9
Aroclor-1262	2	11.442	-0.020	67936	473.0	2	11.671	-0.028	527716	284.3
Aroclor-1262	3	11.619	-0.017	38770	200.2	3	12.183	-0.025	178250	200.3
Aroclor-1262	4	12.267	-0.022	36574	238.8	4	12.965	-0.028	177031	219.3
Total Col1Ave (4 peaks):					289.4	Total Col2Ave (4 peaks):				228.9 RPD = 23
Corrected Ave (3 peaks):					228.1	Corrected Ave (3 peaks):				210.5 RPD = 8
Aroclor-1268	1	11.547	-0.018	31006	52.2	1	12.183	-0.024	178250	65.7
Aroclor-1268	2	11.619	-0.017	38770	64.4	2	12.254	-0.021	340582	115.1
Aroclor-1268	3	12.020	0.008	16290	34.4	3	12.630	-0.029	8814	3.4
Aroclor-1268	4	12.760	-0.017	9809	6.6	4	13.439	-0.033	43257	5.2
Total Col1Ave (4 peaks):					39.4	Total Col2Ave (4 peaks):				47.3 RPD = 18

Corrected Ave (3 peaks): 31.1 Corrected Ave (3 peaks): 24.7 RPD = 23

Total PCB Area Col1 (5.168 - 13.065) = 1482519 Col1 Total PCB = 0.6 ppm*

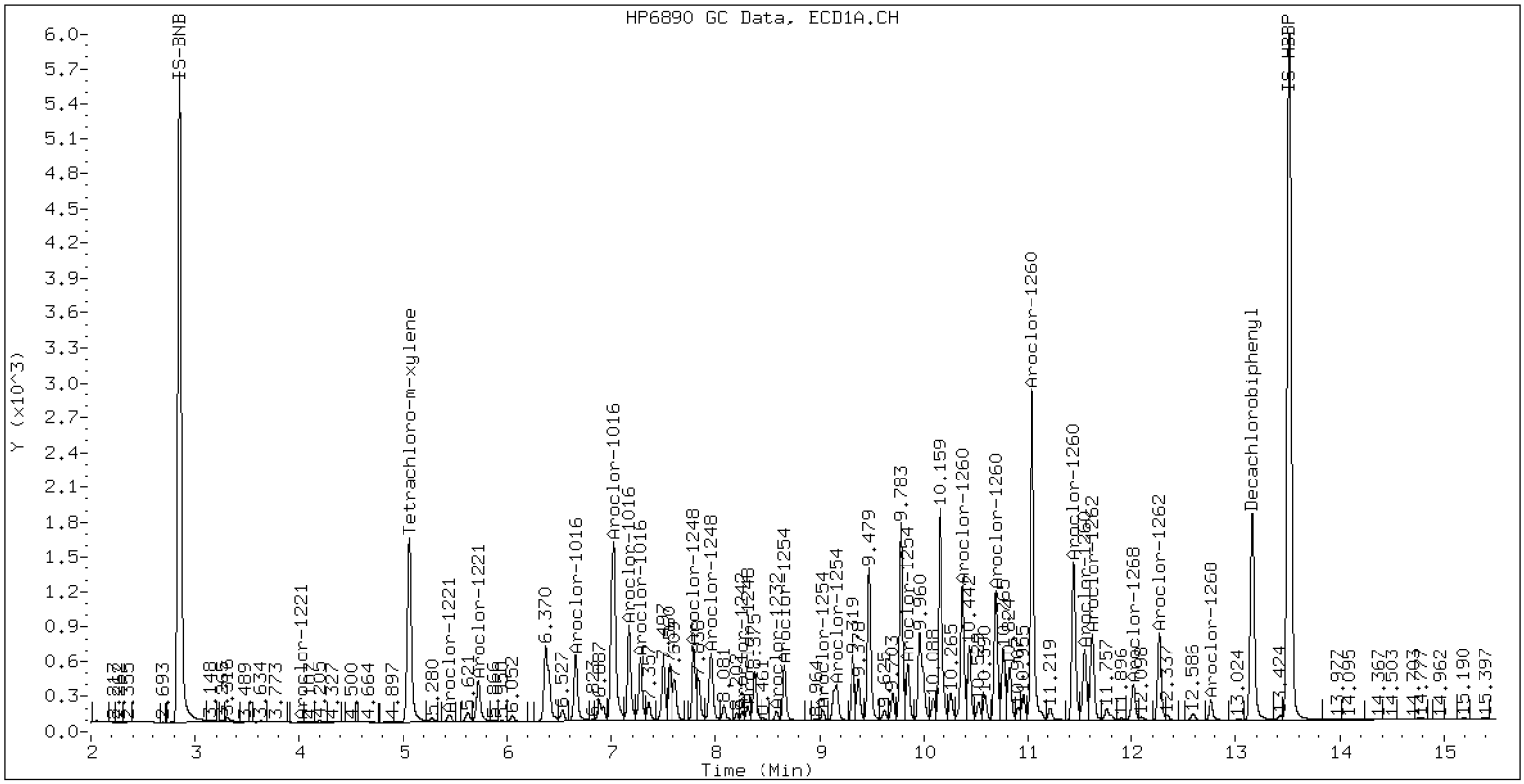
Total PCB Area Col2 (5.168 - 13.065) = 4926773 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

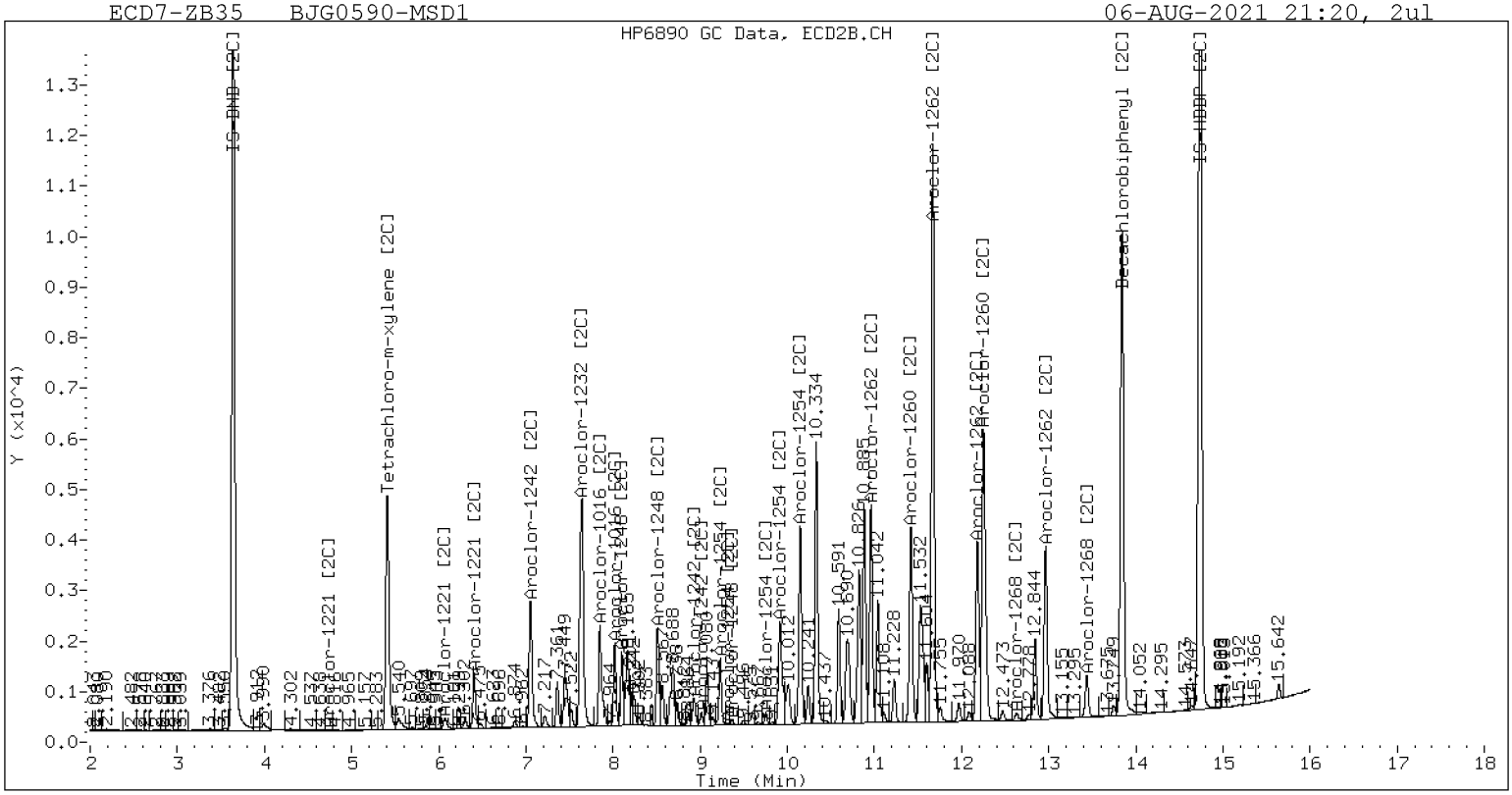
PCB Dual Column Chromatograms

ECD7-ZB5 BJG0590-MSD1 06-AUG-2021 21:20, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BJG0590-MSD1 06-AUG-2021 21:20, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Matrix: Solid
Laboratory ID: BJG0590-SRM1
Batch: BJG0590
Initial/Final: 2.5 g / 2.5 mL
Preparation: EPA 3546 (Microwave)
Analyzed: 08/06/2021 17:55
Standard ID: J006842
Expires: 12/28/2021
Standard Lot#: PSRM0136
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	107	2.9	20.0		98.7	38 - 167
Aroclor 1260 [2C]	108.00	109	2.9	20.0		101	38 - 167

* Values outside of QC limits

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

Data file 1: /210806.b/08062119ECD7.D
Data file 2: /210806.b/210806.b/08062119ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BJG0590-~~BSD~~1 SRM1
Client ID:
Injection Date: 06-AUG-2021 17:55
Report Date: 08/11/2021 08:38
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.065	-0.003	101880	5.410	-0.004	265663	31.2	29.3	6.2	Tetrachloro-m-xylene
13.159	-0.006	118673	13.843	-0.005	592712	33.6	34.2	1.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	273482	-7.7
Hexabromobiphenyl	470266	395941	-15.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	735011	3.2
Hexabromobiphenyl	867949	967054	11.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.653	-0.006	1013	11.9	1	7.054	-0.003	6514	17.2
Aroclor-1016	2	7.028	-0.005	4613	16.1	2	7.646	-0.006	14005	16.8
Aroclor-1016	3	7.175	-0.002	1271	10.9	3	7.852	-0.006	2224	7.1
Aroclor-1016	4	7.278	-0.009	1153	14.8	4	8.021	-0.009	2441	12.8
Total Col1Ave (4 peaks):					13.5	Total Col2Ave (4 peaks):				13.5 RPD = 0
Corrected Ave (3 peaks):					12.6	Corrected Ave (3 peaks):				12.2 RPD = 3
Aroclor-1221	1	4.102	0.079	759	37.5	1	4.727	0.034	1269	26.5
Aroclor-1221	2	5.510	0.055	187	5.4	2	6.092	0.008	9088	80.9
Aroclor-1221	3	5.720	-0.010	259	2.9	3	6.410	-0.012	5776	27.9
Total Col1Ave (3 peaks):					15.3	Total Col2Ave (3 peaks):				45.1 RPD = 99*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	---			0.0	1	4.727	0.035	1269	41.9
Aroclor-1232	2	5.720	-0.011	259	3.5	2	6.092	0.007	9088	112.2
Aroclor-1232	3	7.028	0.001	4613	36.6	3	6.410	-0.013	5776	32.5
Aroclor-1232	4	8.591	-0.014	5301	140.0	4	7.646	-0.016	14005	37.7
Total Col1Ave (3 peaks):					60.0	Total Col2Ave (4 peaks):				56.1 RPD = 7
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				37.4
Aroclor-1242	1	6.653	-0.006	1013	13.4	1	7.054	-0.003	6514	20.0
Aroclor-1242	2	7.028	-0.004	4613	18.8	2	7.646	-0.005	14005	19.8
Aroclor-1242	3	8.257	-0.020	1531	45.4	3	8.941	-0.010	19134	60.0
Aroclor-1242	4	8.591	-0.022	5301	70.4	4	9.017	-0.015	12663	45.1
Total Col1Ave (4 peaks):					37.0	Total Col2Ave (4 peaks):				36.2 RPD = 2
Corrected Ave (3 peaks):					25.9	Corrected Ave (3 peaks):				28.3 RPD = 9
Aroclor-1248	1	7.795	-0.005	3604	31.6	1	8.103	-0.004	15359	57.3
Aroclor-1248	2	7.959	-0.009	2767	19.5	2	8.516	-0.005	12042	33.0
Aroclor-1248	3	8.309	-0.011	4446	31.4	3	8.941	-0.011	19134	36.5
Aroclor-1248	4	8.591	-0.019	5301	42.3	4	9.365	-0.014	14977	26.8
Total Col1Ave (4 peaks):					31.2	Total Col2Ave (4 peaks):				38.4 RPD = 21
Corrected Ave (3 peaks):					27.5	Corrected Ave (3 peaks):				32.1 RPD = 15
Aroclor-1254	1	8.667	-0.009	19003	82.2	1	9.233	-0.008	56324	101.2
Aroclor-1254	2	8.738	-0.008	6097	72.4	2	9.322	-0.010	15960	48.6
Aroclor-1254	3	9.036	-0.006	11222	79.2	3	9.757	-0.007	29538	70.5
Aroclor-1254	4	9.166	-0.010	24940	88.9	4	9.908	-0.006	98777	106.1
Aroclor-1254	5	9.853	-0.015	18243	96.5	5	10.148	-0.001	133470	133.7
Total Col1Ave (5 peaks):					83.8	Total Col2Ave (5 peaks):				92.0 RPD = 9
Corrected Ave (4 peaks):					80.7	Corrected Ave (4 peaks):				81.6 RPD = 1
Aroclor-1260	1	10.376	-0.007	16288	112.2	1	11.423	-0.005	71018	117.8
Aroclor-1260	2	10.694	-0.008	13035	87.3	2	11.672	-0.007	167230	106.3
Aroclor-1260	3	11.043	-0.009	42683	109.2	3	12.255	-0.007	104383	102.0
Aroclor-1260	4	11.443	-0.009	23430	117.6	4	12.966	-0.006	48241	109.7
Aroclor-1260	5	11.547	-0.007	8211	106.9	NS	---			----
Total Col1Ave (5 peaks):					106.6	Total Col2Ave (4 peaks):				108.9 RPD = 2
Corrected Ave (4 peaks):					103.9	Corrected Ave (3 peaks):				106.0 RPD = 2
Aroclor-1262	1	10.376	-0.016	16288	65.4	1	10.963	-0.026	67319	69.3
Aroclor-1262	2	11.443	-0.018	23430	145.8	2	11.672	-0.028	167230	87.0
Aroclor-1262	3	11.620	-0.016	10503	48.5	3	12.182	-0.026	55842	60.6
Aroclor-1262	4	12.267	-0.022	10140	59.2	4	12.966	-0.027	48241	57.7
Total Col1Ave (4 peaks):					79.7	Total Col2Ave (4 peaks):				68.7 RPD = 15
Corrected Ave (3 peaks):					57.7	Corrected Ave (3 peaks):				62.5 RPD = 8
Aroclor-1268	1	11.547	-0.018	8211	12.3	1	12.182	-0.025	55842	19.9
Aroclor-1268	2	11.620	-0.016	10503	15.6	2	12.255	-0.020	104383	34.1
Aroclor-1268	3	12.020	0.008	5382	10.2	3	12.632	-0.028	6241	2.3
Aroclor-1268	4	12.762	-0.016	3595	2.2	4	13.438	-0.034	18220	2.1
Total Col1Ave (4 peaks):					10.1	Total Col2Ave (4 peaks):				14.6 RPD = 37

Corrected Ave (3 peaks): 8.2 Corrected Ave (3 peaks): 8.1 RPD = 2

Total PCB Area Col1 (5.168 - 13.065) = 536478 Col1 Total PCB = 0.2 ppm*

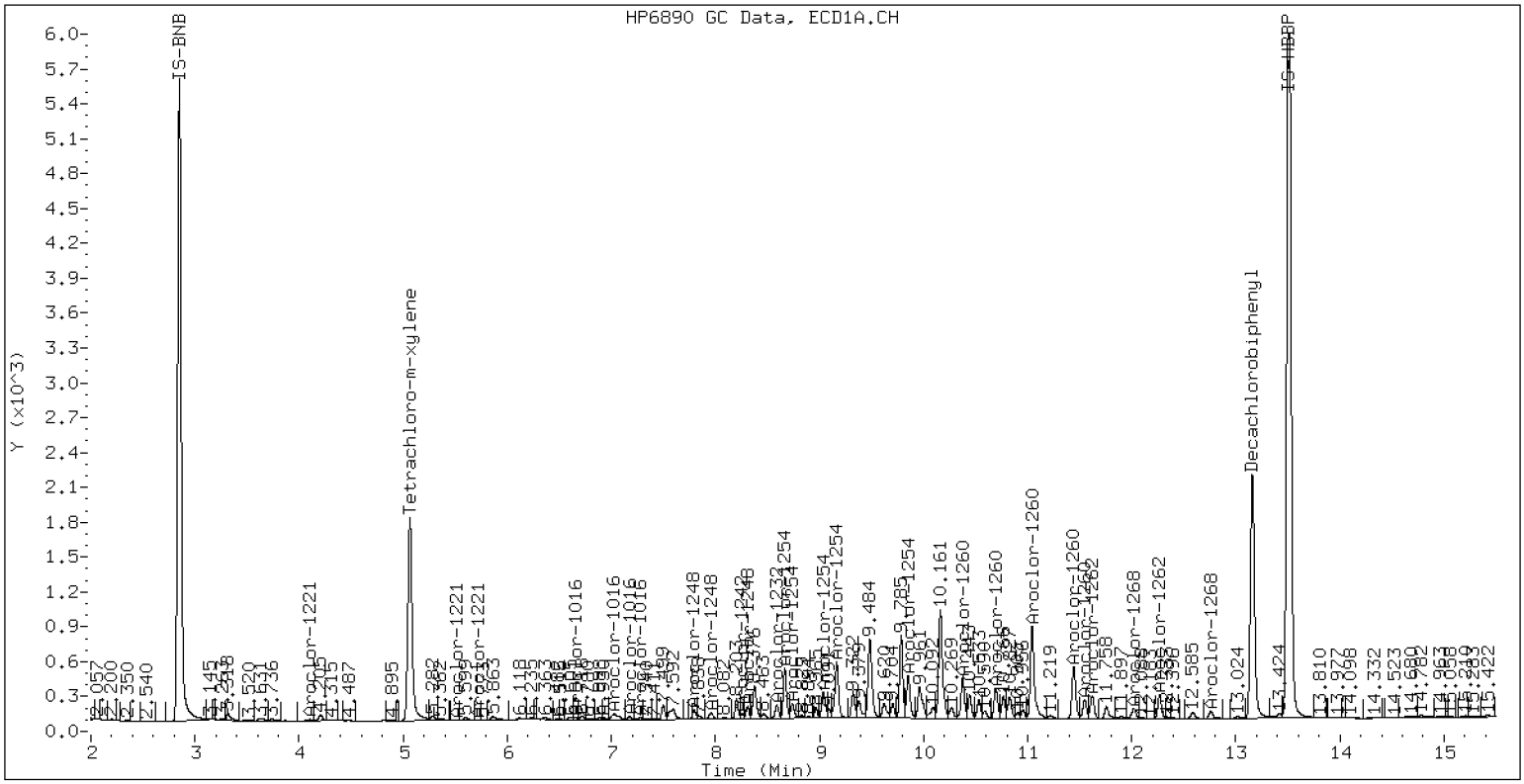
Total PCB Area Col2 (5.168 - 13.065) = 2229015 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

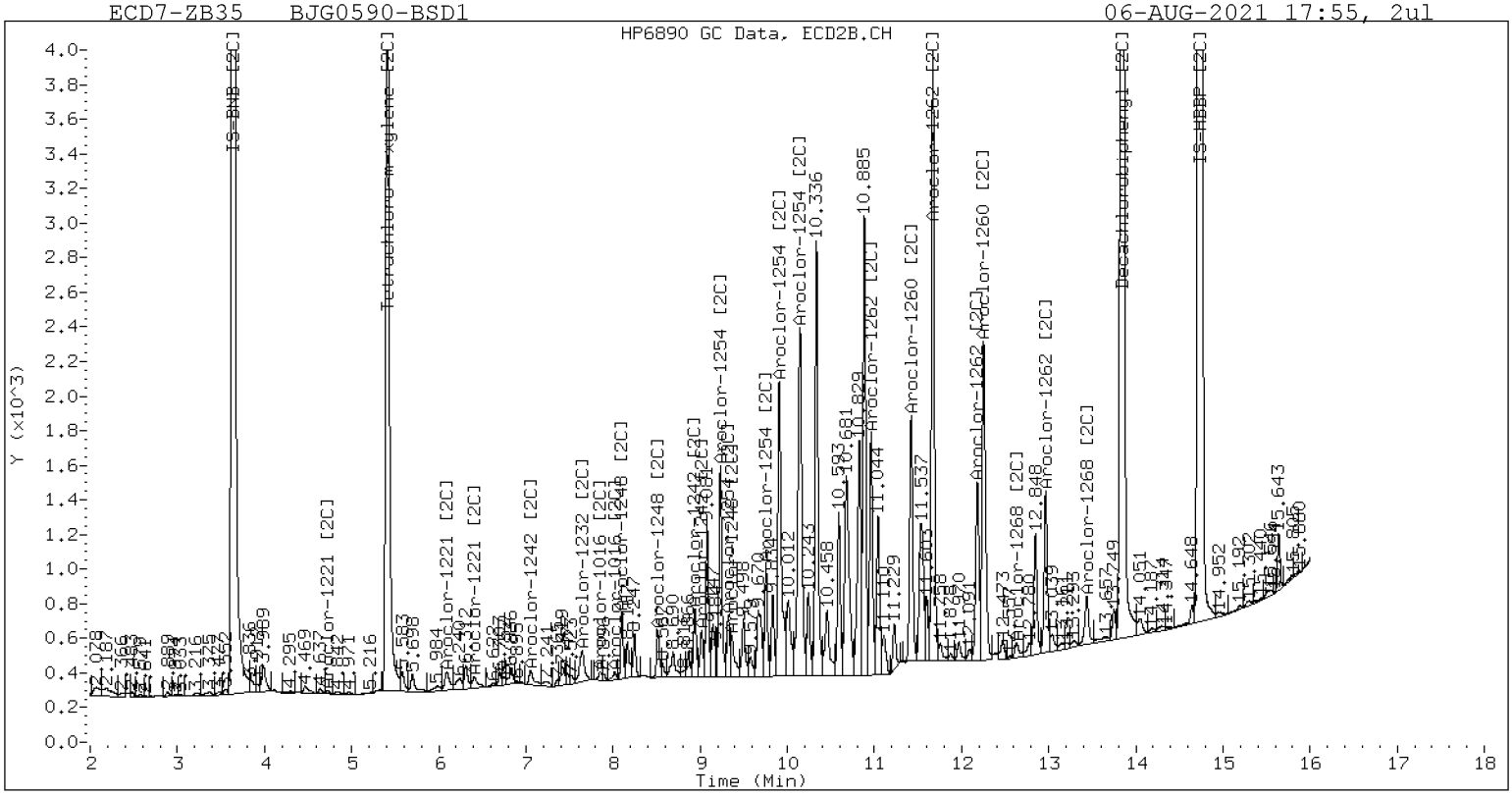
PCB Dual Column Chromatograms

ECD7-ZB5 BJG0590-BSD1 06-AUG-2021 17:55, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BJG0590-BSD1 06-AUG-2021 17:55, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EE00069	Instrument:	ECD7
Calibration Date:	05/22/2021	Column (1):	ZB5

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RRF		RRF		RRF		RRF		RRF		RRF
Aroclor 1016	250	4.281279E-02	20	3.871182E-02	50	0.0403374	1000	4.123519E-02	100	4.155757E-02	500	4.329345E-02
Aroclor-1016 (1)	250	2.536287E-02	20	2.227229E-02	50	2.543137E-02	1000	2.380487E-02	100	2.583324E-02	500	2.619464E-02
Aroclor-1016 (2)	250	8.744554E-02	20	7.824352E-02	50	8.011398E-02	1000	8.502404E-02	100	8.320027E-02	500	0.0884132
Aroclor-1016 (3)	250	3.512761E-02	20	3.258856E-02	50	3.391883E-02	1000	3.305896E-02	100	3.453077E-02	500	3.488241E-02
Aroclor-1016 (4)	250	2.331514E-02	20	2.174292E-02	50	2.188545E-02	1000	2.305283E-02	100	2.266598E-02	500	2.368355E-02
Aroclor 1260	250	4.049834E-02	20	3.757905E-02	50	3.742661E-02	1000	3.862396E-02	100	3.846127E-02	500	4.050787E-02
Aroclor-1260 (1)	250	3.024331E-02	20	0.0295947	50	2.833626E-02	1000	2.887592E-02	100	2.891171E-02	500	2.999037E-02
Aroclor-1260 (2)	250	3.112451E-02	20	2.960276E-02	50	2.896969E-02	1000	3.034873E-02	100	2.962048E-02	500	3.125267E-02
Aroclor-1260 (3)	250	0.0829488	20	7.636092E-02	50	7.654474E-02	1000	7.682588E-02	100	7.880533E-02	500	8.244053E-02
Aroclor-1260 (4)	250	4.216235E-02	20	3.730173E-02	50	3.824813E-02	1000	4.153595E-02	100	3.954491E-02	500	4.276573E-02
Aroclor-1260 (5)	250	1.601272E-02	20	1.503517E-02	50	1.503425E-02	1000	1.553329E-02	100	1.542391E-02	500	1.609003E-02
Decachlorobiphenyl	40	0.7350733	3.2	0.7186045	8	0.7083055	160	0.6794829	16	0.7197548	80	0.718407
Tetrachlorometaxylene	40	1.012184	3.2	0.8770118	8	0.8951053	160	0.9715738	16	0.9597575	80	1.015792

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EE00069	Instrument:	ECD7
Calibration Date:	05/22/2021	Column (1):	ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RRF		RRF		RRF		RRF		RRF		RRF
Aroclor 1221							250	1.391921E-02				
Aroclor-1221 (1)							250	5.917406E-03				
Aroclor-1221 (2)							250	1.013896E-02				
Aroclor-1221 (3)							250	2.570124E-02				
Aroclor 1232									250	1.837497E-02		
Aroclor-1232 (1)									250	3.612719E-03		
Aroclor-1232 (2)									250	2.194073E-02		
Aroclor-1232 (3)									250	3.687219E-02		
Aroclor-1232 (4)									250	1.107425E-02		
Aroclor 1242	250	3.143118E-02										
Aroclor-1242 (1)	250	2.209033E-02										
Aroclor-1242 (2)	250	7.174105E-02										
Aroclor-1242 (3)	250	9.865198E-03										
Aroclor-1242 (4)	250	2.202817E-02										
Aroclor 1248			250	3.822602E-02								
Aroclor-1248 (1)			250	0.0333819								
Aroclor-1248 (2)			250	4.140515E-02								
Aroclor-1248 (3)			250	4.145795E-02								
Aroclor-1248 (4)			250	3.665909E-02								
Aroclor 1254					250	5.422381E-02						
Aroclor-1254 (1)					250	6.763994E-02						
Aroclor-1254 (2)					250	0.0246305						
Aroclor-1254 (3)					250	4.145573E-02						
Aroclor-1254 (4)					250	8.207036E-02						
Aroclor-1254 (5)					250	5.532253E-02						
Aroclor 1262							250	4.029314E-02				
Aroclor-1262 (1)							250	5.031797E-02				
Aroclor-1262 (2)							250	0.0324611				

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EE00069	Instrument:	ECD7
Calibration Date:	05/22/2021	Column (1):	ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RRF		RRF		RRF		RRF		RRF		RRF
Aroclor-1262 (3)							250	0.0437816				
Aroclor-1262 (4)							250	0.0346119				
Aroclor 1268									250	0.1782065		
Aroclor-1268 (1)									250	0.1343391		
Aroclor-1268 (2)									250	0.136111		
Aroclor-1268 (3)									250	0.1069228		
Aroclor-1268 (4)									250	0.3354529		

Analytical Resources, Incorporated
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INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EE00069	Instrument:	ECD7
Calibration Date:	05/22/2021	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016	0.0413247	4.0			RSD (20)	
Aroclor-1016 (1)	2.481655E-02	6.0			RSD (20)	
Aroclor-1016 (2)	8.374009E-02	4.8			RSD (20)	
Aroclor-1016 (3)	3.401786E-02	3.0			RSD (20)	
Aroclor-1016 (4)	2.272431E-02	3.4			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	3.884952E-02	3.5			RSD (20)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EE00069	Instrument:	ECD7
Calibration Date:	05/22/2021	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor-1260 (1)	2.932538E-02	2.5			RSD (20)	
Aroclor-1260 (2)	3.015314E-02	3.0			RSD (20)	
Aroclor-1260 (3)	0.0789877	3.8			RSD (20)	
Aroclor-1260 (4)	0.0402598	5.5			RSD (20)	
Aroclor-1260 (5)	1.552156E-02	2.9			RSD (20)	
Aroclor 1262		0.0			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		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	0.7132713	2.6			RSD (20)	
Tetrachlorometaxylene	0.9552374	6.1			RSD (20)	

Analytical Resources, Incorporated
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INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EE00069	Instrument:	ECD7
Calibration Date:	05/22/2021	Column (2):	ZB35

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RRF		RRF		RRF		RRF		RRF		RRF
Aroclor 1016 [2C]	250	4.831016E-02	20	4.704819E-02	50	4.628025E-02	1000	4.398583E-02	100	0.0473163	500	4.691569E-02
Aroclor-1016 (1) [2C]	250	4.227934E-02	20	4.463057E-02	50	4.204167E-02	1000	3.625869E-02	100	4.207907E-02	500	3.995641E-02
Aroclor-1016 (2) [2C]	250	0.0934567	20	9.249709E-02	50	9.046024E-02	1000	8.556254E-02	100	9.164228E-02	500	0.0902442
Aroclor-1016 (3) [2C]	250	3.541638E-02	20	3.274937E-02	50	0.0327615	1000	3.292514E-02	100	0.0346121	500	3.518771E-02
Aroclor-1016 (4) [2C]	250	2.208821E-02	20	1.831573E-02	50	0.0198576	1000	2.119692E-02	100	2.093176E-02	500	2.227439E-02
Aroclor 1260 [2C]	250	7.651115E-02	20	7.628202E-02	50	7.484558E-02	1000	7.464166E-02	100	7.449105E-02	500	7.479524E-02
Aroclor-1260 (1) [2C]	250	5.109277E-02	20	0.0513235	50	5.080722E-02	1000	4.665795E-02	100	5.020861E-02	500	4.925182E-02
Aroclor-1260 (2) [2C]	250	0.1304961	20	0.1308898	50	0.1285596	1000	0.1349621	100	0.1281739	500	0.1278062
Aroclor-1260 (3) [2C]	250	8.617502E-02	20	8.719133E-02	50	8.540519E-02	1000	8.050445E-02	100	8.440926E-02	500	8.409056E-02
Aroclor-1260 (4) [2C]	250	3.828059E-02	20	3.572346E-02	50	3.461026E-02	1000	3.644211E-02	100	3.517241E-02	500	3.803236E-02
Decachlorobiphenyl [2C]	40	1.423491	3.2	1.366671	8	1.344486	160	1.589411	16	1.400241	80	1.481925
Tetrachlorometaxylene [2C]	40	1.009093	3.2	0.9667487	8	0.9626062	160	0.9923058	16	0.9826074	80	1.004084

Analytical Resources, Incorporated
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INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EE00069	Instrument:	ECD7
Calibration Date:	05/22/2021	Column (2):	ZB35

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RRF		RRF		RRF		RRF		RRF		RRF
Aroclor 1221 [2C]							250	1.332511E-02				
Aroclor-1221 (1) [2C]							250	5.207268E-03				
Aroclor-1221 (2) [2C]							250	0.0122273				
Aroclor-1221 (3) [2C]							250	2.254076E-02				
Aroclor 1232 [2C]									250	1.797132E-02		
Aroclor-1232 (1) [2C]									250	3.293084E-03		
Aroclor-1232 (2) [2C]									250	8.813512E-03		
Aroclor-1232 (3) [2C]									250	1.932692E-02		
Aroclor-1232 (4) [2C]									250	4.045176E-02		
Aroclor 1242 [2C]	250	4.440635E-02										
Aroclor-1242 (1) [2C]	250	3.551807E-02										
Aroclor-1242 (2) [2C]	250	7.683181E-02										
Aroclor-1242 (3) [2C]	250	3.473024E-02										
Aroclor-1242 (4) [2C]	250	3.054528E-02										
Aroclor 1248 [2C]			250	4.670282E-02								
Aroclor-1248 (1) [2C]			250	0.0291658								
Aroclor-1248 (2) [2C]			250	3.966268E-02								
Aroclor-1248 (3) [2C]			250	5.709904E-02								
Aroclor-1248 (4) [2C]			250	6.088369E-02								
Aroclor 1254 [2C]					250	7.038136E-02						
Aroclor-1254 (1) [2C]					250	6.057494E-02						
Aroclor-1254 (2) [2C]					250	3.572117E-02						
Aroclor-1254 (3) [2C]					250	4.558157E-02						
Aroclor-1254 (4) [2C]					250	0.1013365						
Aroclor-1254 (5) [2C]					250	0.1086926						
Aroclor 1262 [2C]							250	9.616195E-02				
Aroclor-1262 (1) [2C]							250	8.033395E-02				
Aroclor-1262 (2) [2C]							250	0.1589417				

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EE00069	Instrument:	ECD7
Calibration Date:	05/22/2021	Column (2):	ZB35

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RRF		RRF		RRF		RRF		RRF		RRF
Aroclor-1262 (3) [2C]							250	0.0762251				
Aroclor-1262 (4) [2C]							250	6.914695E-02				
Aroclor 1268 [2C]									250	0.35673		
Aroclor-1268 (1) [2C]									250	0.2323928		
Aroclor-1268 (2) [2C]									250	0.2533114		
Aroclor-1268 (3) [2C]									250	0.222398		
Aroclor-1268 (4) [2C]									250	0.7188172		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EE00069	Instrument:	ECD7
Calibration Date:	05/22/2021	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016 [2C]	4.664274E-02	3.1			RSD (20)	
Aroclor-1016 (1) [2C]	4.120762E-02	6.9			RSD (20)	
Aroclor-1016 (2) [2C]	9.064384E-02	3.1			RSD (20)	
Aroclor-1016 (3) [2C]	3.394203E-02	3.7			RSD (20)	
Aroclor-1016 (4) [2C]	2.077744E-02	7.2			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]	7.526112E-02	1.2			RSD (20)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EE00069	Instrument:	ECD7
Calibration Date:	05/22/2021	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor-1260 (1) [2C]	4.989031E-02	3.5			RSD (20)	
Aroclor-1260 (2) [2C]	0.130148	2.1			RSD (20)	
Aroclor-1260 (3) [2C]	0.0846293	2.7			RSD (20)	
Aroclor-1260 (4) [2C]	3.637686E-02	4.1			RSD (20)	
Aroclor 1262 [2C]		0.0			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 [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]	1.434371	6.3			RSD (20)	
Tetrachlorometaxylene [2C]	0.9862409	1.9			RSD (20)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.
Client: Anchor QEA, LLC
Calibration: EE00069
Sequence: SJE0321

SDG: 21G0212
Project: Lower Duwamish AOC4
Laboratory ID: SJE0321-SCV1
Sequence Name: AR1660SCV1
Standard ID: J000948

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1016	250.00	250	-0.2	20.00
Aroclor 1016 [2C]	250.00	250	0.2	20.00
Aroclor 1260	250.00	295	17.8	20.00
Aroclor 1260 [2C]	250.00	287	14.8	20.00
Decachlorobiphenyl	40.000	39.8	-0.4	20.00
Tetrachlorometaxylene	40.000	42.4	6.0	20.00
Decachlorobiphenyl [2C]	40.000	39.0	-2.4	20.00
Tetrachlorometaxylene [2C]	40.000	40.6	1.4	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: /210522.b/05222117ECD7.D
Data file 2: /210522.b/210522.b/05222117ECD7.D
Method: \\target\share\chem4\ecd7.i\210522.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV1
Client ID:
Injection Date: 22-MAY-2021 19:32
Report Date: 05/25/2021 08:47
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.074	0.000	150100	5.424	-0.000	360043	42.4	40.6	4.4	Tetrachloro-m-xylene
13.178	0.002	171195	13.872	0.002	637856	39.8	39.0	2.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	296594	0.0
Hexabromobiphenyl	470266	481880	2.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	719765	1.1
Hexabromobiphenyl	867949	911548	5.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.666	0.001	22769	247.5	1	7.071	0.001	92068	248.3
Aroclor-1016	2	7.034	0.000	78003	251.2	2	7.661	0.001	201632	247.2
Aroclor-1016	3	7.182	0.001	31610	250.6	3	7.869	0.001	76459	250.4
Aroclor-1016	4	7.291	0.001	20953	248.7	4	8.041	0.002	47774	255.6
Total Col1Ave (4 peaks):					249.5	Total Col2Ave (4 peaks):				250.4 RPD = 0
Corrected Ave (3 peaks):					248.9	Corrected Ave (3 peaks):				248.6 RPD = 0
Aroclor-1221	1	4.026	0.004	113	5.2	1	4.692	-0.000	432	9.2
Aroclor-1221	2	5.455	-0.000	2657	70.7	2	6.089	0.005	11633	105.7
Aroclor-1221	3	5.729	0.000	16535	173.5	3	6.423	0.001	39442	194.5
Total Col1Ave (3 peaks):					83.1	Total Col2Ave (3 peaks):				103.2 RPD = 22
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.026	0.005	113	8.4	1	4.692	0.000	432	14.6
Aroclor-1232	2	5.729	0.001	16535	203.3	2	6.089	0.004	11633	146.7
Aroclor-1232	3	7.034	0.001	78003	570.6	3	6.423	0.000	39442	226.8
Aroclor-1232	4	8.606	-0.009	2061	50.2	4	7.661	-0.001	201632	554.0
Total Col1Ave (4 peaks):					208.1	Total Col2Ave (4 peaks):				235.5 RPD = 12
Corrected Ave (3 peaks):					87.3	Corrected Ave (3 peaks):				129.4 RPD = 39
Aroclor-1242	1	6.666	0.001	22769	278.0	1	7.071	0.001	92068	288.1
Aroclor-1242	2	7.034	0.000	78003	293.3	2	7.661	0.002	201632	291.7
Aroclor-1242	3	8.276	0.005	2315	63.3	3	8.950	-0.008	27869	89.2
Aroclor-1242	4	8.606	-0.005	2061	25.2	4	9.040	0.003	7790	28.3
Total Col1Ave (4 peaks):					165.0	Total Col2Ave (4 peaks):				174.3 RPD = 6
Corrected Ave (3 peaks):					122.2	Corrected Ave (3 peaks):				135.2 RPD = 10
Aroclor-1248	1	7.807	0.001	21433	173.2	1	8.122	0.001	43799	166.9
Aroclor-1248	2	7.974	0.001	29322	191.0	2	8.536	0.001	66601	186.6
Aroclor-1248	3	8.324	0.002	4130	26.9	3	8.950	-0.011	27869	54.2
Aroclor-1248	4	8.606	-0.007	2061	15.2	4	9.391	0.002	5888	10.7
Total Col1Ave (4 peaks):					101.6	Total Col2Ave (4 peaks):				104.6 RPD = 3
Corrected Ave (3 peaks):					71.7	Corrected Ave (3 peaks):				77.3 RPD = 7
Aroclor-1254	1	8.682	-0.000	16848	67.2	1	9.255	-0.000	44067	80.9
Aroclor-1254	2	---			0.0	2	9.349	0.002	2467	7.7
Aroclor-1254	3	9.050	0.001	1728	11.2	3	9.781	0.001	6046	14.7
Aroclor-1254	4	9.178	-0.005	15131	49.7	4	9.947	0.017	111904	122.7
Aroclor-1254	5	9.867	-0.008	22044	107.5	5	10.177	0.016	145643	148.9
Total Col1Ave (4 peaks):					58.9	Total Col2Ave (5 peaks):				75.0 RPD = 24
Corrected Ave (3 peaks):					42.7	Corrected Ave (4 peaks):				56.5 RPD = 28
Aroclor-1260	1	10.394	0.003	53063	300.4	1	11.446	0.000	155193	273.0
Aroclor-1260	2	10.712	0.001	53264	293.3	2	11.699	0.002	412469	278.1
Aroclor-1260	3	11.062	0.002	141369	297.1	3	12.282	0.002	271072	281.1
Aroclor-1260	4	11.463	0.004	66669	274.9	4	12.994	0.002	130808	315.6
Aroclor-1260	5	11.566	0.001	28694	306.9	NS	---			----
Total Col1Ave (5 peaks):					294.5	Total Col2Ave (4 peaks):				287.0 RPD = 3
Corrected Ave (4 peaks):					291.4	Corrected Ave (3 peaks):				277.4 RPD = 5
Aroclor-1262	1	10.394	-0.001	53063	175.1	1	10.989	-0.000	162597	177.6
Aroclor-1262	2	11.463	0.000	66669	341.0	2	11.699	-0.001	412469	227.8
Aroclor-1262	3	11.638	-0.000	37034	140.4	3	12.211	0.003	127645	147.0
Aroclor-1262	4	12.286	-0.001	33351	160.0	4	12.994	0.001	130808	166.0
Total Col1Ave (4 peaks):					204.1	Total Col2Ave (4 peaks):				179.6 RPD = 13
Corrected Ave (3 peaks):					158.5	Corrected Ave (3 peaks):				163.5 RPD = 3
Aroclor-1268	1	11.566	-0.001	28694	35.5	1	12.211	0.004	127645	48.2
Aroclor-1268	2	11.638	0.002	37034	45.2	2	12.282	0.008	271072	93.9
Aroclor-1268	3	12.040	0.029	15321	23.8	3	12.659	-0.001	4976	2.0
Aroclor-1268	4	12.781	-0.000	8326	4.1	4	13.469	-0.003	26590	3.2
Total Col1Ave (4 peaks):					27.1	Total Col2Ave (4 peaks):				36.8 RPD = 30

Corrected Ave (3 peaks): 21.1 Corrected Ave (3 peaks): 17.8 RPD = 17

Total PCB Area Col1 (5.174 - 13.076) = 1346327 Col1 Total PCB = 0.5 ppm*

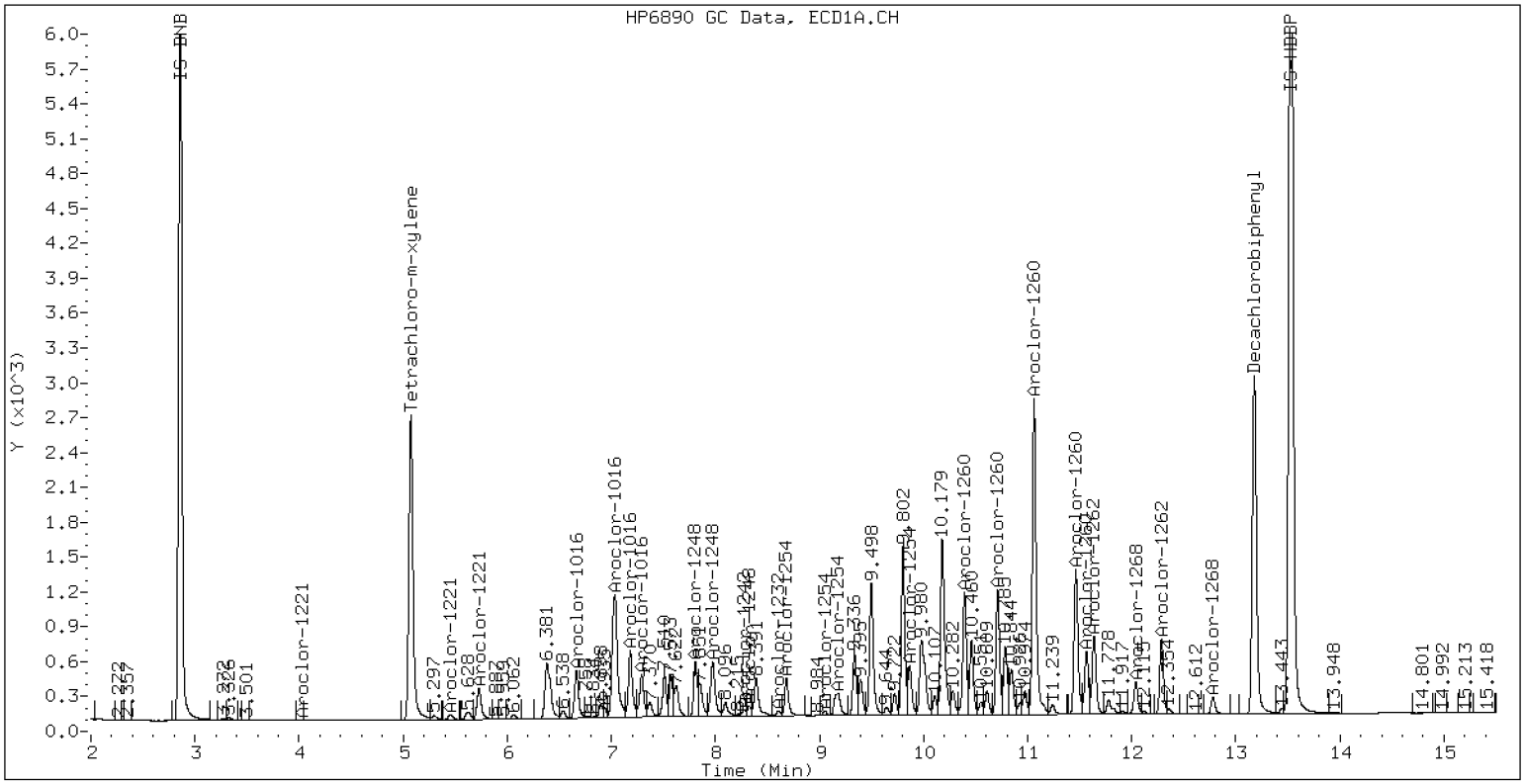
Total PCB Area Col2 (5.174 - 13.076) = 4068268 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

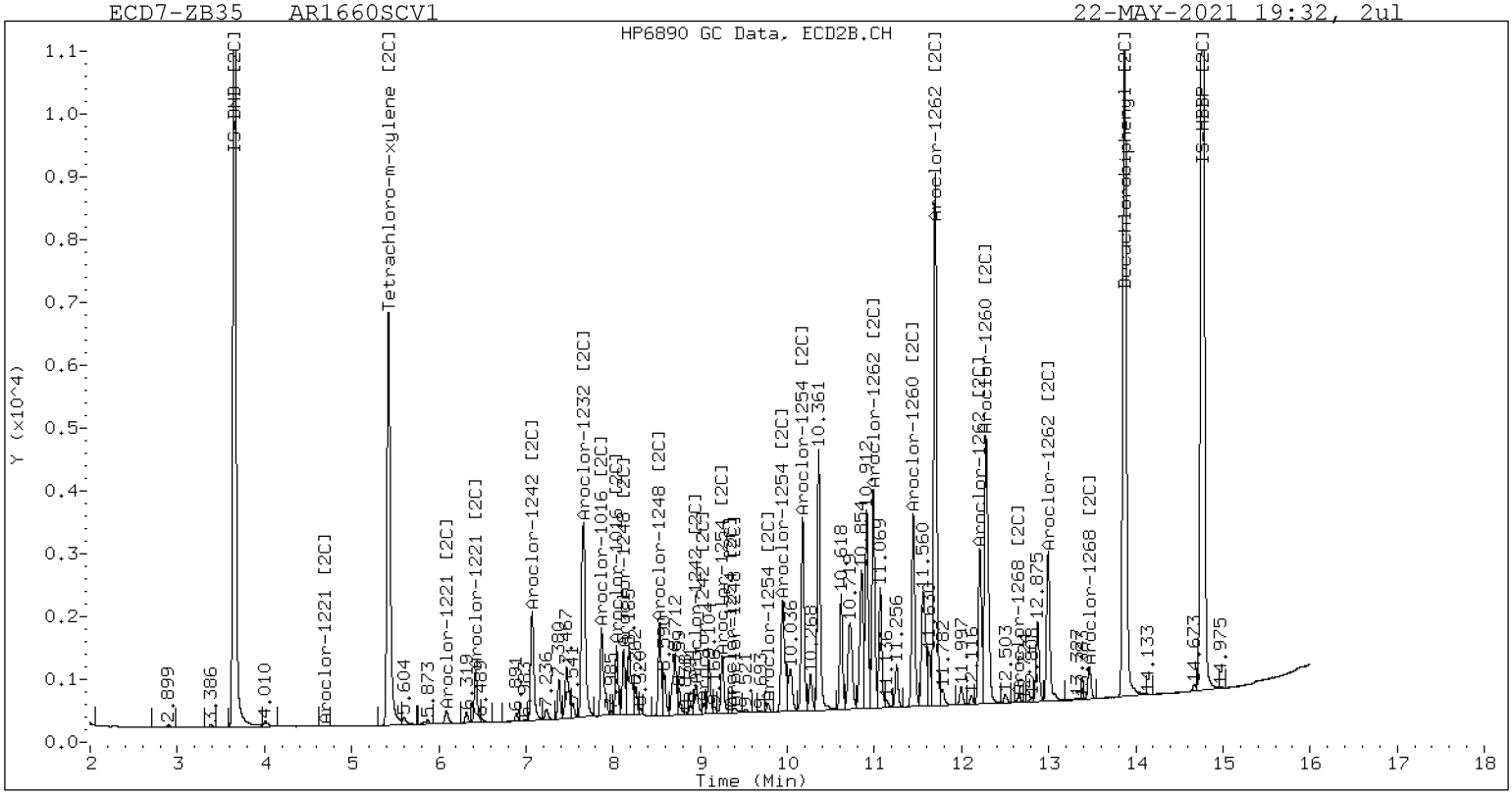
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV1 22-MAY-2021 19:32, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV1 22-MAY-2021 19:32, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.
Client: Anchor QEA, LLC
Calibration: EE00069
Sequence: SJE0321

SDG: 21G0212
Project: Lower Duwamish AOC4
Laboratory ID: SJE0321-SCV2
Sequence Name: AR1242SCV2
Standard ID: J000949

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1242	250.00	226	-9.7	20.00
Aroclor 1242 [2C]	250.00	222	-11.3	20.00
Decachlorobiphenyl	40.000	40.3	0.7	20.00
Tetrachlorometaxylene	40.000	41.8	4.5	20.00
Decachlorobiphenyl [2C]	40.000	40.3	0.7	20.00
Tetrachlorometaxylene [2C]	40.000	40.5	1.1	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: /210522.b/05222118ECD7.D
Data file 2: /210522.b/210522.b/05222118ECD7.D
Method: \\target\share\chem4\ecd7.i\210522.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV2
Client ID:
Injection Date: 22-MAY-2021 19:53
Report Date: 05/25/2021 08:47
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.073	-0.001	148026	5.424	-0.000	355279	41.8	40.5	3.3	Tetrachloro-m-xylene
13.177	0.001	171517	13.873	0.003	654853	40.3	40.3	0.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	296608	0.1
Hexabromobiphenyl	470266	477702	1.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	712373	0.1
Hexabromobiphenyl	867949	906518	4.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.665	-0.000	18392	199.9	1	7.071	-0.000	72036	196.3
Aroclor-1016	2	7.033	-0.001	59895	192.9	2	7.660	0.000	156335	193.7
Aroclor-1016	3	7.182	0.001	24546	194.6	3	7.869	0.001	59486	196.8
Aroclor-1016	4	7.291	0.001	16263	193.0	4	8.041	0.001	37109	200.6
Total Col1Ave (4 peaks): 195.1						Total Col2Ave (4 peaks): 196.8 RPD = 1				
Corrected Ave (3 peaks): 193.5						Corrected Ave (3 peaks): 195.6 RPD = 1				
Aroclor-1221	1	4.021	-0.002	126	5.7	1	---			0.0
Aroclor-1221	2	5.453	-0.002	2075	55.2	2	6.090	0.006	9535	87.6
Aroclor-1221	3	5.729	-0.001	12906	135.4	3	6.422	0.000	30451	151.7
Total Col1Ave (3 peaks): 65.5						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.021	-0.000	126	9.4	1	---			0.0
Aroclor-1232	2	5.729	-0.000	12906	158.7	2	6.090	0.006	9535	121.5
Aroclor-1232	3	7.033	-0.001	59895	438.1	3	6.422	-0.001	30451	176.9
Aroclor-1232	4	8.614	-0.001	18633	453.8	4	7.660	-0.002	156335	434.0
Total Col1Ave (4 peaks): 265.0						Total Col2Ave (3 peaks): 244.1 RPD = 8				
Corrected Ave (3 peaks): 202.1						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.665	0.000	18392	224.6	1	7.071	-0.000	72036	227.8
Aroclor-1242	2	7.033	-0.001	59895	225.2	2	7.660	0.001	156335	228.5
Aroclor-1242	3	8.275	0.003	8247	225.5	3	8.961	0.003	69303	224.1
Aroclor-1242	4	8.614	0.003	18633	228.1	4	9.040	0.004	56266	206.9
Total Col1Ave (4 peaks): 225.8						Total Col2Ave (4 peaks): 221.8 RPD = 2				
Corrected Ave (3 peaks): 225.1						Corrected Ave (3 peaks): 219.6 RPD = 2				
Aroclor-1248	1	7.806	-0.001	17228	139.2	1	8.121	-0.001	35861	138.1
Aroclor-1248	2	7.974	0.001	24199	157.6	2	8.536	0.000	54676	154.8
Aroclor-1248	3	8.322	0.000	19391	126.2	3	8.961	0.000	69303	136.3
Aroclor-1248	4	8.614	0.001	18633	137.1	4	9.391	0.001	77643	143.2
Total Col1Ave (4 peaks): 140.0						Total Col2Ave (4 peaks): 143.1 RPD = 2				
Corrected Ave (3 peaks): 134.1						Corrected Ave (3 peaks): 139.2 RPD = 4				
Aroclor-1254	1	8.683	0.001	12254	48.9	1	9.255	-0.000	28380	52.6
Aroclor-1254	2	8.753	0.000	5283	57.9	2	9.391	0.044	77643	244.1
Aroclor-1254	3	9.050	0.002	5840	38.0	3	9.781	0.001	18362	45.2
Aroclor-1254	4	9.185	0.003	9954	32.7	4	9.930	0.000	37314	41.4
Aroclor-1254	5	9.881	0.005	6746	32.9	5	10.160	-0.000	39089	40.4
Total Col1Ave (5 peaks): 42.1						Total Col2Ave (5 peaks): 84.7 RPD = 67*				
Corrected Ave (4 peaks): 38.1						Corrected Ave (4 peaks): 44.9 RPD = 16				
Aroclor-1260	1	10.393	0.002	187	1.1	1	11.458	0.012	3982	7.0
Aroclor-1260	2	10.713	0.002	208	1.2	2	11.703	0.006	2513	1.7
Aroclor-1260	3	11.063	0.004	540	1.1	3	12.285	0.005	1926	2.0
Aroclor-1260	4	11.466	0.006	450	1.9	4	13.071	0.079	5406	13.1
Aroclor-1260	5	---			0.0	NS	---			----
Total Col1Ave (4 peaks): 1.3						Total Col2Ave (4 peaks): 6.0 RPD = 128*				
Corrected Ave (3 peaks): 1.1						Corrected Ave (3 peaks): 3.6 RPD = 105*				
Aroclor-1262	1	10.393	-0.001	187	0.6	1	10.914	-0.075	13876	15.2
Aroclor-1262	2	11.466	0.003	450	2.3	2	11.703	0.003	2513	1.4
Aroclor-1262	3	---			0.0	3	12.209	0.001	1037	1.2
Aroclor-1262	4	12.313	0.026	270	1.3	4	13.071	0.078	5406	6.9
Total Col1Ave (3 peaks): 1.4						Total Col2Ave (4 peaks): 6.2 RPD = 125*				
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks): 3.2				
Aroclor-1268	1	---			0.0	1	12.209	0.002	1037	0.4
Aroclor-1268	2	---			0.0	2	12.285	0.010	1926	0.7
Aroclor-1268	3	12.011	-0.000	683	1.1	3	12.658	-0.002	2315	0.9
Aroclor-1268	4	12.779	-0.002	1999	1.0	4	13.467	-0.005	4164	0.5
Col1Ave: <3 Quant Peaks						Col2Ave: 0.6				

Total PCB Area Col1 (5.174 - 13.076) = 451658 Col1 Total PCB = 0.2 ppm*

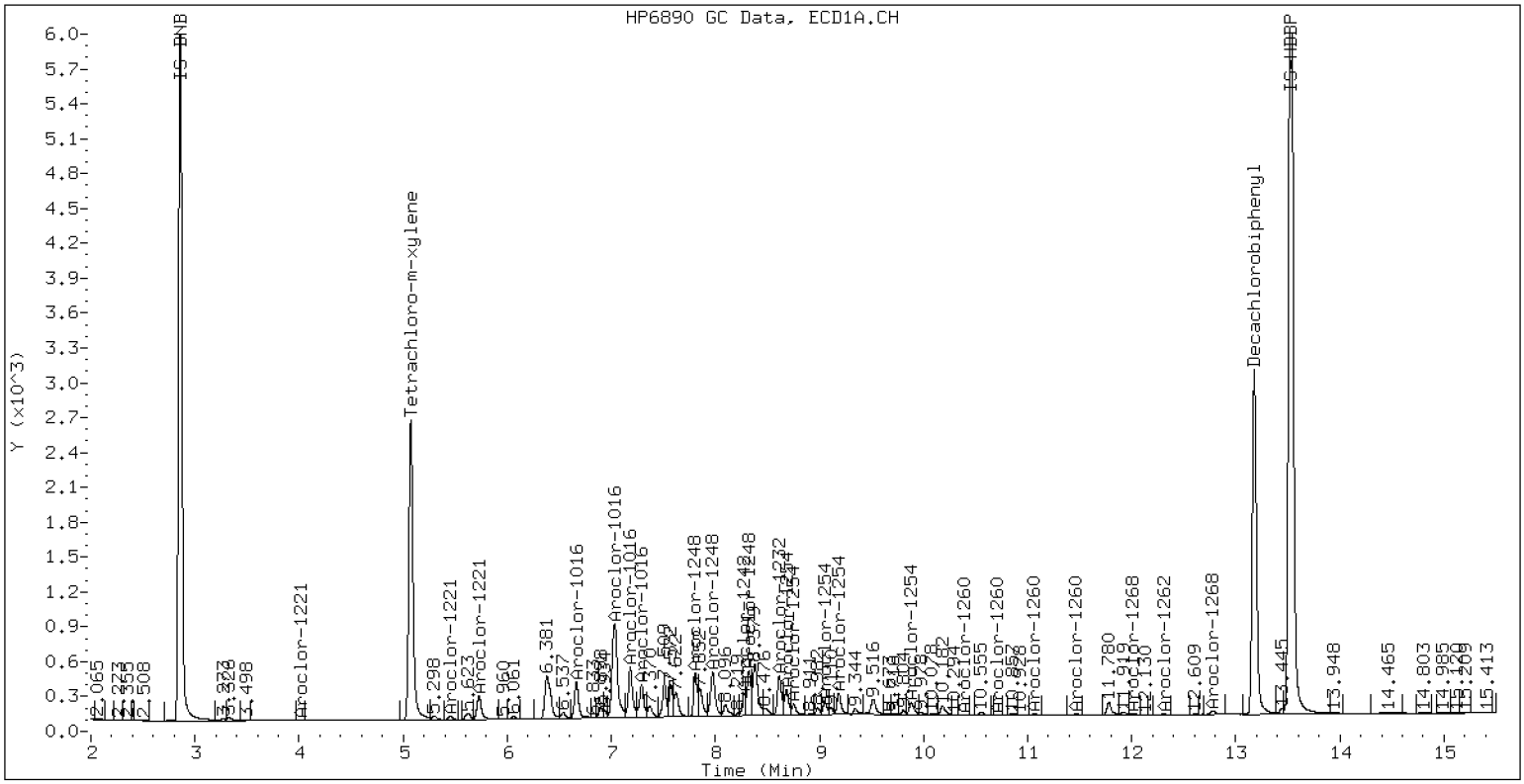
Total PCB Area Col2 (5.174 - 13.076) = 1609207 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

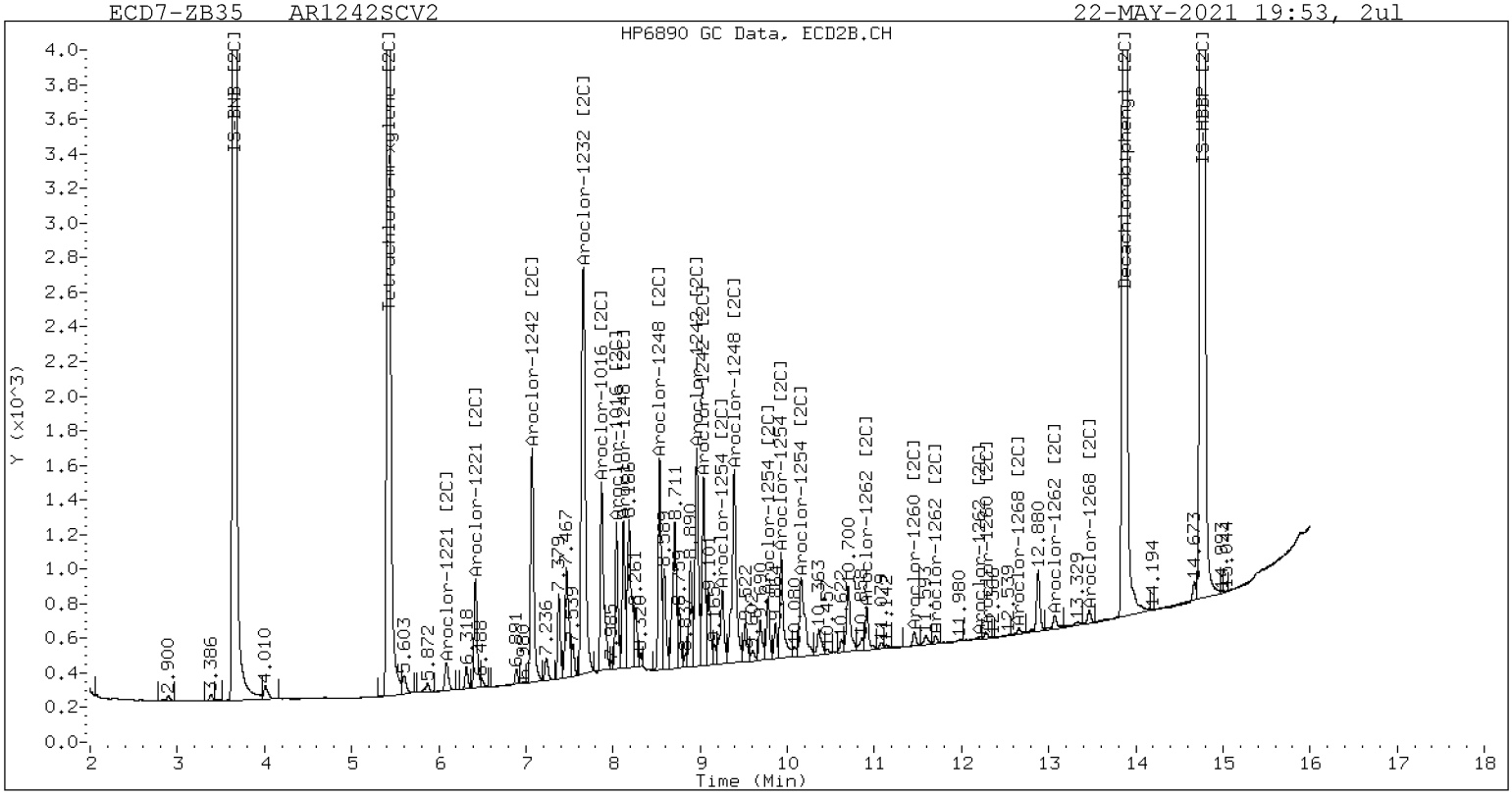
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV2 22-MAY-2021 19:53, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV2 22-MAY-2021 19:53, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.
Client: Anchor QEA, LLC
Calibration: EE00069
Sequence: SJE0321

SDG: 21G0212
Project: Lower Duwamish AOC4
Laboratory ID: SJE0321-SCV3
Sequence Name: AR1248SCV3
Standard ID: J000950

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1248	250.00	239	-4.5	20.00
Aroclor 1248 [2C]	250.00	240	-4.0	20.00
Decachlorobiphenyl	40.000	40.5	1.3	20.00
Tetrachlorometaxylene	40.000	42.7	6.7	20.00
Decachlorobiphenyl [2C]	40.000	40.4	0.9	20.00
Tetrachlorometaxylene [2C]	40.000	40.8	2.0	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: /210522.b/05222119ECD7.D
Data file 2: /210522.b/210522.b/05222119ECD7.D
Method: \\target\share\chem4\ecd7.i\210522.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV3
Client ID:
Injection Date: 22-MAY-2021 20:15
Report Date: 05/25/2021 08:47
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.075	0.001	148558	5.424	0.000	355673	42.7	40.8	4.6	Tetrachloro-m-xylene
13.177	0.001	172097	13.874	0.003	652141	40.5	40.4	0.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	291470	-1.7
Hexabromobiphenyl	470266	476310	1.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	707436	-0.6
Hexabromobiphenyl	867949	901019	3.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.665	0.000	8436	93.3	1	7.070	-0.001	37964	104.2
Aroclor-1016	2	7.032	-0.002	39299	128.8	2	7.657	-0.003	105519	131.6
Aroclor-1016	3	7.185	0.004	14510	117.1	3	7.870	0.002	23528	78.4
Aroclor-1016	4	7.290	0.001	9419	113.8	4	8.042	0.002	19521	106.2
Total Col1Ave (4 peaks): 113.2						Total Col2Ave (4 peaks): 105.1				RPD = 7
Corrected Ave (3 peaks): 108.0						Corrected Ave (3 peaks): 96.3				RPD = 12
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	5.457	0.001	514	13.9	2	6.100	0.016	4839	44.8
Aroclor-1221	3	5.730	0.001	2589	27.6	3	6.422	0.001	7431	37.3
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	5.730	0.001	2589	32.4	2	6.100	0.015	4839	62.1
Aroclor-1232	3	7.032	-0.001	39299	292.5	3	6.422	-0.000	7431	43.5
Aroclor-1232	4	8.613	-0.002	31117	771.2	4	7.657	-0.005	105519	295.0
Total Col1Ave (3 peaks): 365.4						Total Col2Ave (3 peaks): 133.5				RPD = 93*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.665	0.000	8436	104.8	1	7.070	-0.001	37964	120.9
Aroclor-1242	2	7.032	-0.002	39299	150.4	2	7.657	-0.002	105519	155.3
Aroclor-1242	3	8.274	0.003	13538	376.7	3	8.961	0.003	120141	391.2
Aroclor-1242	4	8.613	0.002	31117	387.7	4	9.040	0.003	91529	338.9
Total Col1Ave (4 peaks): 254.9						Total Col2Ave (4 peaks): 251.6				RPD = 1
Corrected Ave (3 peaks): 210.6						Corrected Ave (3 peaks): 205.0				RPD = 3
Aroclor-1248	1	7.807	0.000	29704	244.2	1	8.121	-0.000	63408	245.9
Aroclor-1248	2	7.974	0.001	35985	238.5	2	8.536	0.000	84533	241.0
Aroclor-1248	3	8.323	0.001	36177	239.5	3	8.961	0.000	120141	237.9
Aroclor-1248	4	8.613	0.000	31117	233.0	4	9.391	0.001	126590	235.1
Total Col1Ave (4 peaks): 238.8						Total Col2Ave (4 peaks): 240.0				RPD = 0
Corrected Ave (3 peaks): 237.0						Corrected Ave (3 peaks): 238.0				RPD = 0
Aroclor-1254	1	8.683	0.001	23899	97.0	1	9.255	-0.000	40453	75.5
Aroclor-1254	2	8.753	0.001	11007	122.7	2	9.391	0.044	126590	400.8
Aroclor-1254	3	9.050	0.001	12659	83.8	3	9.780	0.001	36693	91.0
Aroclor-1254	4	9.184	0.002	21298	71.2	4	9.930	0.000	71223	79.5
Aroclor-1254	5	9.881	0.006	14795	73.4	5	10.158	-0.003	48447	50.4
Total Col1Ave (5 peaks): 89.6						Total Col2Ave (5 peaks): 139.4				RPD = 44*
Corrected Ave (4 peaks): 81.4						Corrected Ave (4 peaks): 74.1				RPD = 9
Aroclor-1260	1	10.396	0.005	668	3.8	1	11.456	0.010	5225	9.3
Aroclor-1260	2	10.713	0.002	511	2.8	2	11.701	0.004	5284	3.6
Aroclor-1260	3	11.063	0.003	1423	3.0	3	12.284	0.004	3829	4.0
Aroclor-1260	4	11.464	0.004	549	2.3	4	12.994	0.002	2061	5.0
Aroclor-1260	5	11.570	0.005	526	5.7	NS	---			----
Total Col1Ave (5 peaks): 3.5						Total Col2Ave (4 peaks): 5.5				RPD = 43*
Corrected Ave (4 peaks): 3.0						Corrected Ave (3 peaks): 4.2				RPD = 34
Aroclor-1262	1	10.396	0.002	668	2.2	1	10.988	-0.001	3149	3.5
Aroclor-1262	2	11.464	0.001	549	2.8	2	11.701	0.001	5284	3.0
Aroclor-1262	3	11.638	-0.000	520	2.0	3	12.207	-0.001	2542	3.0
Aroclor-1262	4	12.292	0.005	702	3.4	4	12.994	0.001	2061	2.6
Total Col1Ave (4 peaks): 2.6						Total Col2Ave (4 peaks): 3.0				RPD = 14
Corrected Ave (3 peaks): 2.4						Corrected Ave (3 peaks): 2.9				RPD = 19
Aroclor-1268	1	11.570	0.003	526	0.7	1	12.207	-0.000	2542	1.0
Aroclor-1268	2	11.638	0.001	520	0.6	2	12.284	0.009	3829	1.3
Aroclor-1268	3	12.015	0.004	863	1.4	3	12.657	-0.002	2695	1.1
Aroclor-1268	4	12.780	-0.001	2506	1.3	4	13.467	-0.005	4780	0.6
Total Col1Ave (4 peaks): 1.0						Total Col2Ave (4 peaks): 1.0				RPD = 2
Corrected Ave (3 peaks): 0.9						Corrected Ave (3 peaks): 0.9				RPD = 3

Total PCB Area Col1 (5.174 - 13.076) = 550840 Col1 Total PCB = 0.2 ppm*

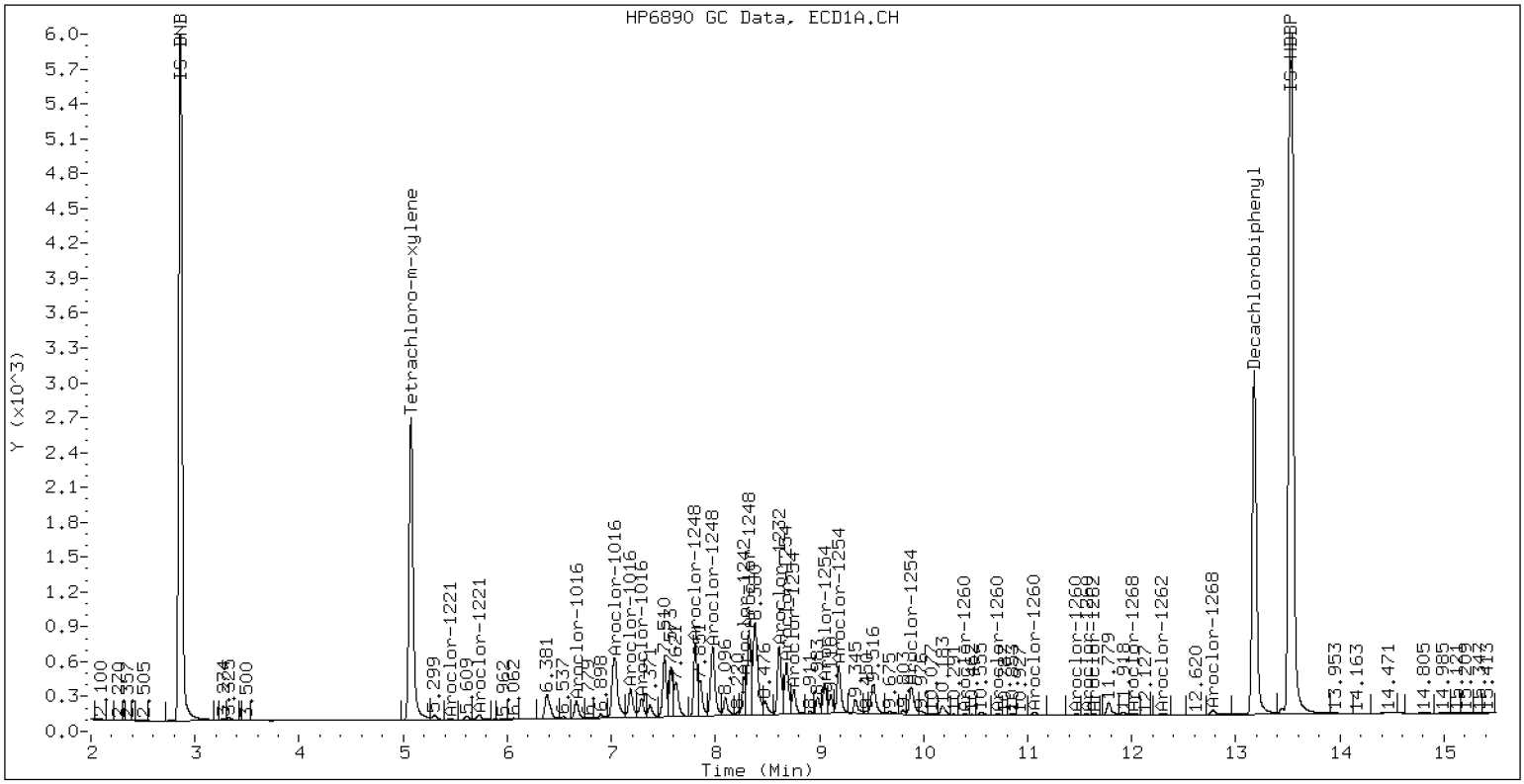
Total PCB Area Col2 (5.174 - 13.076) = 1898867 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

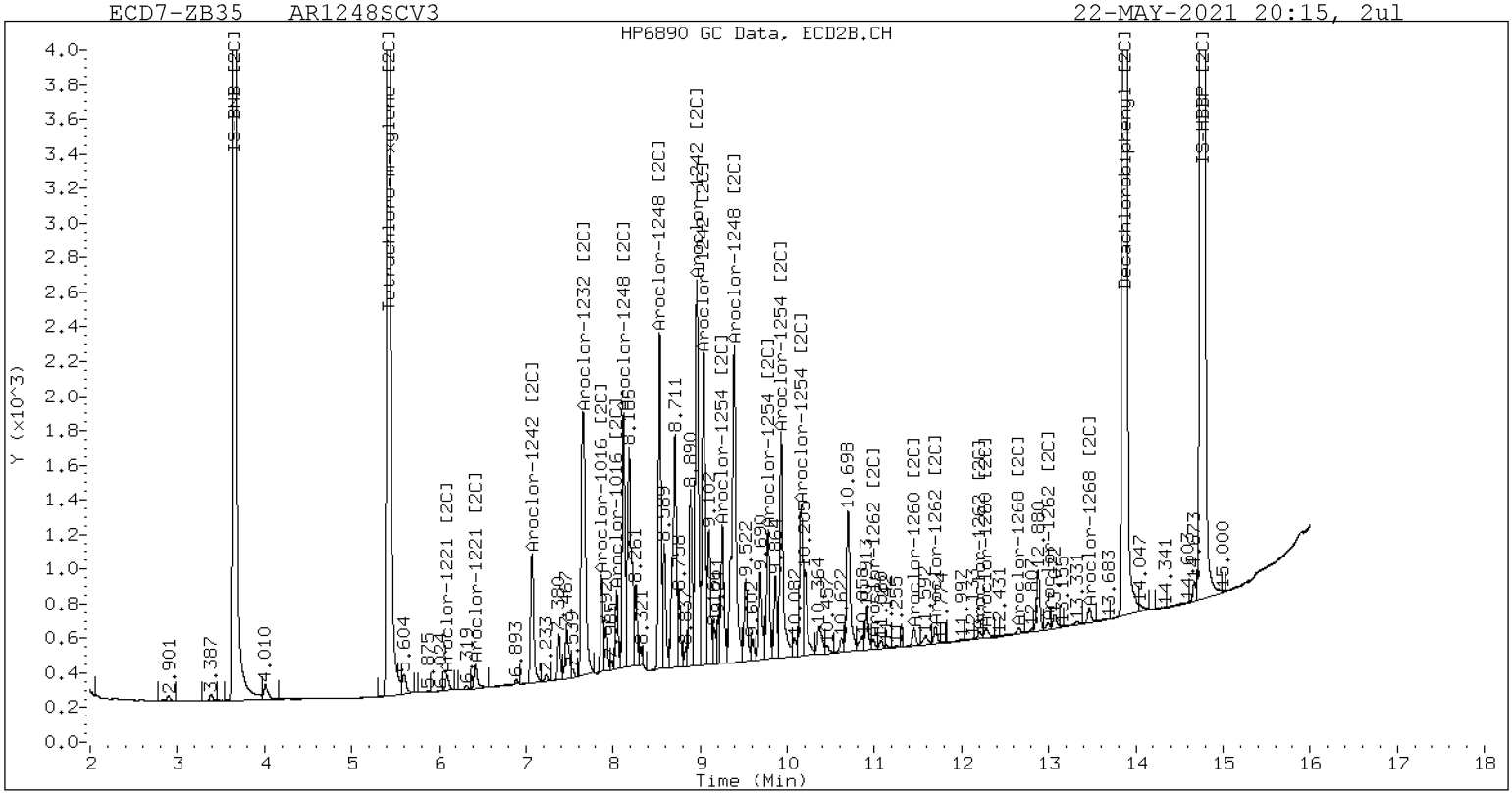
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV3 22-MAY-2021 20:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV3 22-MAY-2021 20:15, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Calibration: EE00069
Laboratory ID: SJE0321-SCV4
Sequence: SJE0321
Sequence Name: AR1254SCV4
Standard ID: J000951

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1254	250.00	235	-5.9	20.00
Aroclor 1254 [2C]	250.00	244	-2.2	20.00
Decachlorobiphenyl	40.000	40.0	0.09	20.00
Tetrachlorometaxylene	40.000	41.7	4.3	20.00
Decachlorobiphenyl [2C]	40.000	39.6	-1.0	20.00
Tetrachlorometaxylene [2C]	40.000	40.4	1.0	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: /210522.b/05222120ECD7.D
Data file 2: /210522.b/210522.b/05222120ECD7.D
Method: \\target\share\chem4\ecd7.i\210522.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV4
Client ID:
Injection Date: 22-MAY-2021 20:37
Report Date: 05/25/2021 08:47
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.074	-0.000	147480	5.423	-0.001	353436	41.7	40.4	3.2	Tetrachloro-m-xylene
13.178	0.002	169697	13.873	0.002	645388	40.0	39.6	1.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	296015	-0.1
Hexabromobiphenyl	470266	475384	1.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	709760	-0.3
Hexabromobiphenyl	867949	908548	4.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.670	0.005	136	1.5	1	7.071	0.000	986	2.7
Aroclor-1016	2	7.030	-0.005	825	2.7	2	7.655	-0.005	2851	3.5
Aroclor-1016	3	7.192	0.010	462	3.7	3	7.870	0.002	369	1.2
Aroclor-1016	4	7.290	0.000	114	1.4	4	8.044	0.004	353	1.9
Total Col1Ave (4 peaks):					2.3	Total Col2Ave (4 peaks):				2.3 RPD = 2
Corrected Ave (3 peaks):					1.8	Corrected Ave (3 peaks):				1.9 RPD = 6
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.100	0.016	3990	36.8
Aroclor-1221	3	---			0.0	3	6.417	-0.004	870	4.4
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	5.730	0.001	136	1.7	2	6.100	0.015	3990	51.0
Aroclor-1232	3	7.030	-0.004	825	6.0	3	6.417	-0.005	870	5.1
Aroclor-1232	4	8.605	-0.010	10628	259.4	4	7.655	-0.007	2851	7.9
Total Col1Ave (3 peaks):					89.0	Total Col2Ave (3 peaks):				21.3 RPD = 123*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.670	0.005	136	1.7	1	7.071	0.000	986	3.1
Aroclor-1242	2	7.030	-0.004	825	3.1	2	7.655	-0.005	2851	4.2
Aroclor-1242	3	8.324	0.053	18533	507.7	3	8.964	0.006	50428	163.7
Aroclor-1242	4	8.605	-0.006	10628	130.4	4	9.040	0.003	16173	59.7
Total Col1Ave (4 peaks):					160.7	Total Col2Ave (4 peaks):				57.7 RPD = 94*
Corrected Ave (3 peaks):					45.1	Corrected Ave (3 peaks):				22.3 RPD = 67*
Aroclor-1248	1	7.805	-0.001	11633	94.2	1	8.121	-0.000	48527	187.5
Aroclor-1248	2	7.973	0.000	4360	28.5	2	8.536	0.001	30748	87.4
Aroclor-1248	3	8.324	0.002	18533	120.8	3	8.964	0.003	50428	99.5
Aroclor-1248	4	8.605	-0.008	10628	78.4	4	9.348	-0.042	74662	138.2
Total Col1Ave (4 peaks):					80.5	Total Col2Ave (4 peaks):				128.2 RPD = 46*
Corrected Ave (3 peaks):					67.0	Corrected Ave (3 peaks):				108.4 RPD = 47*
Aroclor-1254	1	8.681	-0.000	58854	235.2	1	9.255	-0.001	141492	263.3
Aroclor-1254	2	8.753	0.001	21709	238.2	2	9.348	0.001	74662	235.6
Aroclor-1254	3	9.049	0.000	36329	236.8	3	9.780	0.000	98121	242.6
Aroclor-1254	4	9.183	0.000	70176	231.1	4	9.929	-0.001	214334	238.4
Aroclor-1254	5	9.875	-0.001	48066	234.8	5	10.161	0.000	233499	242.1
Total Col1Ave (5 peaks):					235.2	Total Col2Ave (5 peaks):				244.4 RPD = 4
Corrected Ave (4 peaks):					234.5	Corrected Ave (4 peaks):				239.7 RPD = 2
Aroclor-1260	1	10.392	0.000	2454	14.1	1	11.457	0.011	57455	101.4
Aroclor-1260	2	10.713	0.002	3392	18.9	2	11.702	0.005	38691	26.2
Aroclor-1260	3	11.063	0.003	8860	18.9	3	12.284	0.004	24630	25.6
Aroclor-1260	4	11.464	0.004	9017	37.7	4	12.991	-0.001	1502	3.6
Aroclor-1260	5	11.637	0.072	411	4.5	NS	---			----
Total Col1Ave (5 peaks):					18.8	Total Col2Ave (4 peaks):				39.2 RPD = 70*
Corrected Ave (4 peaks):					14.1	Corrected Ave (3 peaks):				18.5 RPD = 27
Aroclor-1262	1	10.392	-0.003	2454	8.2	1	10.985	-0.004	11671	12.8
Aroclor-1262	2	11.464	0.001	9017	46.7	2	11.702	0.002	38691	21.4
Aroclor-1262	3	11.637	-0.001	411	1.6	3	12.222	0.014	5172	6.0
Aroclor-1262	4	12.293	0.006	557	2.7	4	12.991	-0.002	1502	1.9
Total Col1Ave (4 peaks):					14.8	Total Col2Ave (4 peaks):				10.5 RPD = 34
Corrected Ave (3 peaks):					4.2	Corrected Ave (3 peaks):				6.9 RPD = 49*
Aroclor-1268	1	11.637	0.070	411	0.5	1	12.222	0.015	5172	2.0
Aroclor-1268	2	---			0.0	2	12.284	0.009	24630	8.6
Aroclor-1268	3	12.017	0.006	776	1.2	3	12.662	0.002	1796	0.7
Aroclor-1268	4	12.779	-0.002	1983	1.0	4	13.469	-0.004	4233	0.5
Total Col1Ave (3 peaks):					0.9	Total Col2Ave (4 peaks):				2.9 RPD = 105*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				1.1

Total PCB Area Col1 (5.174 - 13.076) = 715747 Col1 Total PCB = 0.3 ppm*

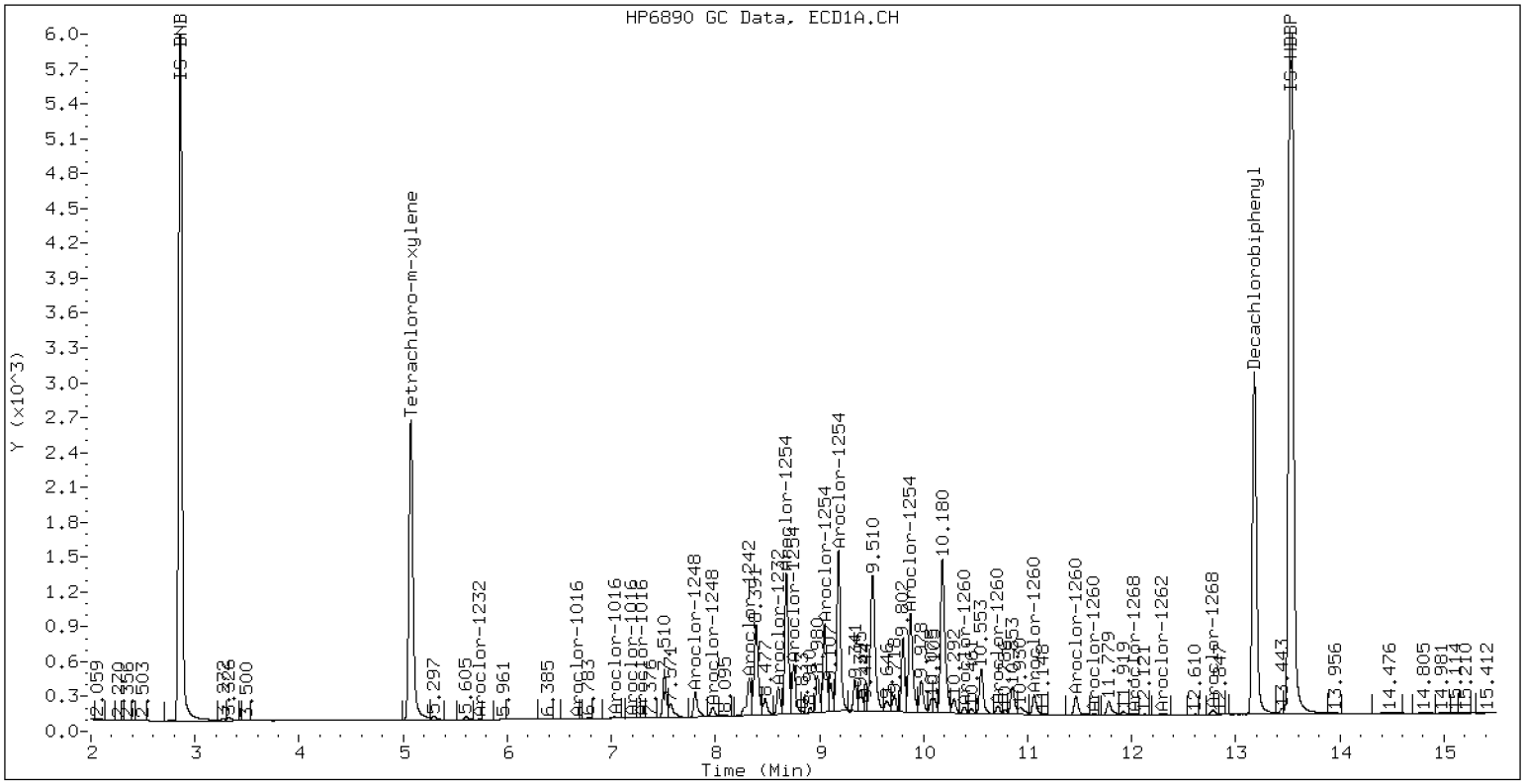
Total PCB Area Col2 (5.174 - 13.076) = 2439127 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

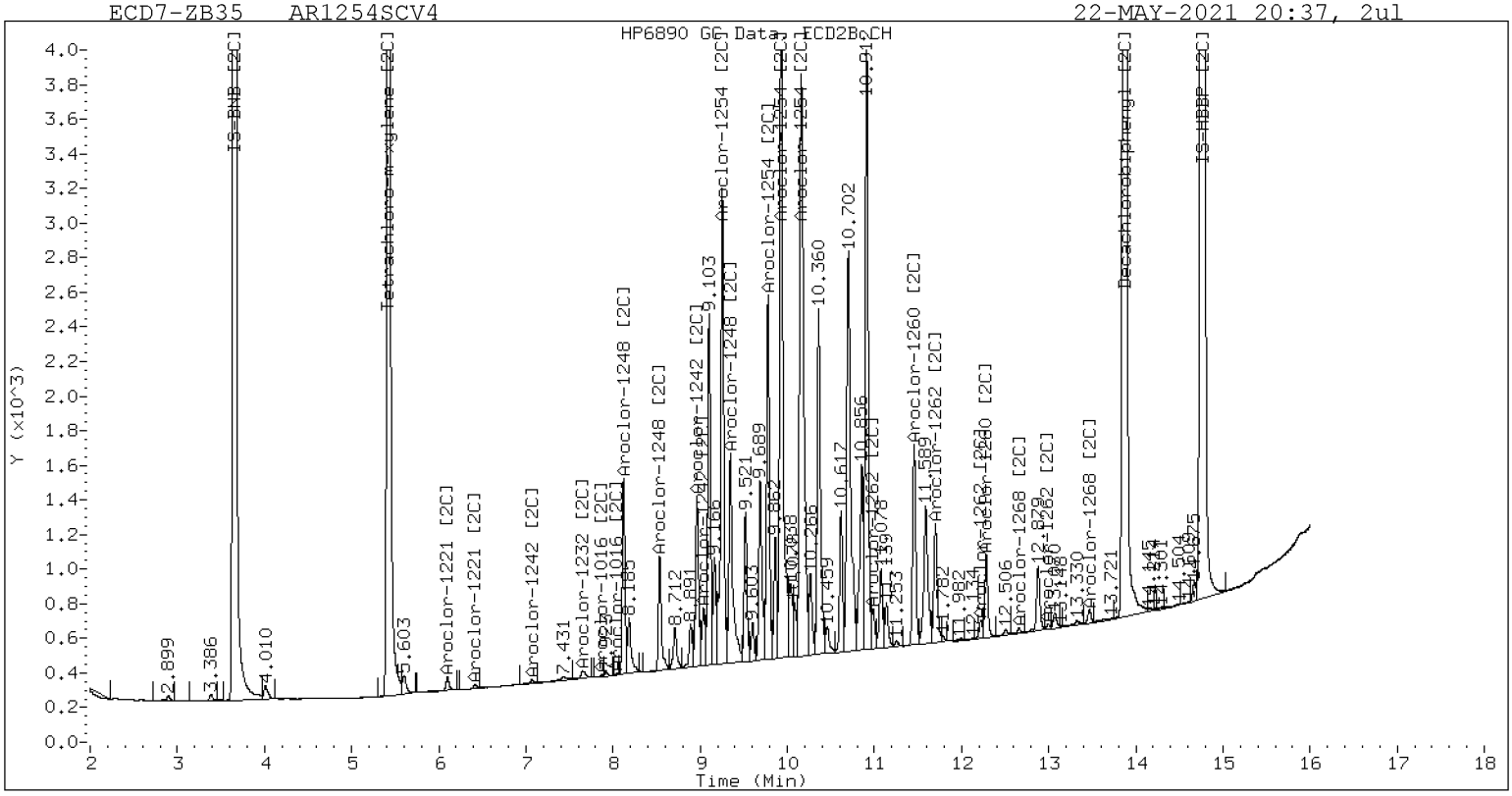
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV4 22-MAY-2021 20:37, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV4 22-MAY-2021 20:37, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.
Client: Anchor QEA, LLC
Calibration: EE00069
Sequence: SJE0321

SDG: 21G0212
Project: Lower Duwamish AOC4
Laboratory ID: SJE0321-SCV5
Sequence Name: AR2162SCV5
Standard ID: J000952

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1221	250.00	262	4.9	20.00
Aroclor 1221 [2C]	250.00	261	4.4	20.00
Aroclor 1262	250.00	253	1.1	20.00
Aroclor 1262 [2C]	250.00	252	0.7	20.00
Decachlorobiphenyl	40.000	39.7	-0.6	20.00
Tetrachlorometaxylene	40.000	41.1	2.7	20.00
Decachlorobiphenyl [2C]	40.000	39.5	-1.2	20.00
Tetrachlorometaxylene [2C]	40.000	39.1	-2.2	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: /210522.b/05222121ECD7.D
Data file 2: /210522.b/210522.b/05222121ECD7.D
Method: \\target\share\chem4\ecd7.i\210522.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV5
Client ID:
Injection Date: 22-MAY-2021 20:58
Report Date: 05/25/2021 08:47
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.074	0.000	144866	5.424	0.000	345727	41.1	39.1	4.8	Tetrachloro-m-xylene
13.178	0.002	169535	13.874	0.004	648797	39.7	39.5	0.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	295364	-0.4
Hexabromobiphenyl	470266	478364	1.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	716532	0.6
Hexabromobiphenyl	867949	915545	5.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.667	0.002	1677	18.3	1	7.081	0.010	15078	40.9
Aroclor-1016	2	7.034	0.000	4823	15.6	2	7.663	0.003	13852	17.1
Aroclor-1016	3	7.183	0.002	2249	17.9	3	7.871	0.003	5670	18.7
Aroclor-1016	4	7.292	0.002	1396	16.6	4	8.043	0.003	3078	16.5
Total Col1Ave (4 peaks):				17.1		Total Col2Ave (4 peaks):			23.3	RPD = 31
Corrected Ave (3 peaks):				16.7		Corrected Ave (3 peaks):			17.4	RPD = 4
Aroclor-1221	1	4.022	-0.001	6055	277.2	1	4.692	-0.000	12493	267.9
Aroclor-1221	2	5.455	0.000	9553	255.2	2	6.085	0.001	28588	261.0
Aroclor-1221	3	5.729	-0.000	24144	254.4	3	6.423	0.001	51294	254.1
Total Col1Ave (3 peaks):				262.3		Total Col2Ave (3 peaks):			261.0	RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.022	0.001	6055	454.0	1	4.692	0.001	12493	423.6
Aroclor-1232	2	5.729	0.000	24144	298.1	2	6.085	-0.000	28588	362.2
Aroclor-1232	3	7.034	0.001	4823	35.4	3	6.423	-0.000	51294	296.3
Aroclor-1232	4	8.610	-0.005	1062	26.0	4	7.663	0.001	13852	38.2
Total Col1Ave (4 peaks):				203.4		Total Col2Ave (4 peaks):			280.1	RPD = 32
Corrected Ave (3 peaks):				119.8		Corrected Ave (3 peaks):			232.2	RPD = 64*
Aroclor-1242	1	6.667	0.002	1677	20.6	1	7.081	0.011	15078	47.4
Aroclor-1242	2	7.034	0.001	4823	18.2	2	7.663	0.003	13852	20.1
Aroclor-1242	3	8.278	0.007	940	25.8	3	8.966	0.008	4328	13.9
Aroclor-1242	4	8.610	-0.001	1062	13.1	4	9.045	0.008	2579	9.4
Total Col1Ave (4 peaks):				19.4		Total Col2Ave (4 peaks):			22.7	RPD = 16
Corrected Ave (3 peaks):				17.3		Corrected Ave (3 peaks):			14.5	RPD = 18
Aroclor-1248	1	7.808	0.002	805	6.5	1	8.121	0.000	2819	10.8
Aroclor-1248	2	7.976	0.003	802	5.2	2	8.537	0.002	2272	6.4
Aroclor-1248	3	8.327	0.005	1117	7.3	3	8.966	0.005	4328	8.5
Aroclor-1248	4	8.610	-0.003	1062	7.8	4	9.393	0.003	7120	13.1
Total Col1Ave (4 peaks):				6.7		Total Col2Ave (4 peaks):			9.7	RPD = 36
Corrected Ave (3 peaks):				6.4		Corrected Ave (3 peaks):			8.5	RPD = 29
Aroclor-1254	1	8.681	-0.000	8014	32.1	1	9.256	0.000	22883	42.2
Aroclor-1254	2	8.749	-0.003	796	8.8	2	9.350	0.003	4670	14.6
Aroclor-1254	3	9.050	0.001	1147	7.5	3	9.781	0.001	4047	9.9
Aroclor-1254	4	9.155	-0.028	10041	33.1	4	9.947	0.018	98893	109.0
Aroclor-1254	5	9.867	-0.009	12222	59.8	5	10.176	0.015	116343	119.5
Total Col1Ave (5 peaks):				28.3		Total Col2Ave (5 peaks):			59.0	RPD = 70*
Corrected Ave (4 peaks):				20.4		Corrected Ave (4 peaks):			43.9	RPD = 73*
Aroclor-1260	1	10.395	0.003	76119	434.1	1	11.446	-0.000	188460	330.1
Aroclor-1260	2	10.711	0.001	62698	347.7	2	11.699	0.002	456681	306.6
Aroclor-1260	3	11.061	0.001	154654	327.4	3	12.280	-0.000	328604	339.3
Aroclor-1260	4	11.463	0.003	49024	203.6	4	12.993	0.002	199946	480.3
Aroclor-1260	5	11.566	0.001	59318	639.1	NS	---			----
Total Col1Ave (5 peaks):				390.4		Total Col2Ave (4 peaks):			364.1	RPD = 7
Corrected Ave (4 peaks):				328.2		Corrected Ave (3 peaks):			325.3	RPD = 1
Aroclor-1262	1	10.395	0.000	76119	253.0	1	10.989	-0.000	230478	250.7
Aroclor-1262	2	11.463	0.000	49024	252.6	2	11.699	-0.001	456681	251.1
Aroclor-1262	3	11.638	-0.000	66180	252.8	3	12.208	0.000	220057	252.3
Aroclor-1262	4	12.286	-0.001	52313	252.8	4	12.993	0.000	199946	252.7
Total Col1Ave (4 peaks):				252.8		Total Col2Ave (4 peaks):			251.7	RPD = 0
Corrected Ave (3 peaks):				252.7		Corrected Ave (3 peaks):			251.3	RPD = 1
Aroclor-1268	1	11.566	-0.001	59318	73.8	1	12.208	0.001	220057	82.7
Aroclor-1268	2	11.638	0.002	66180	81.3	2	12.280	0.005	328604	113.4
Aroclor-1268	3	12.038	0.027	23299	36.4	3	12.658	-0.002	14664	5.8
Aroclor-1268	4	12.780	-0.001	19289	9.6	4	13.468	-0.004	67959	8.3
Total Col1Ave (4 peaks):				50.3		Total Col2Ave (4 peaks):			52.5	RPD = 4

Corrected Ave (3 peaks): 40.0 Corrected Ave (3 peaks): 32.3 RPD = 21

Total PCB Area Col1 (5.174 - 13.076) = 1072965 Col1 Total PCB = 0.4 ppm*

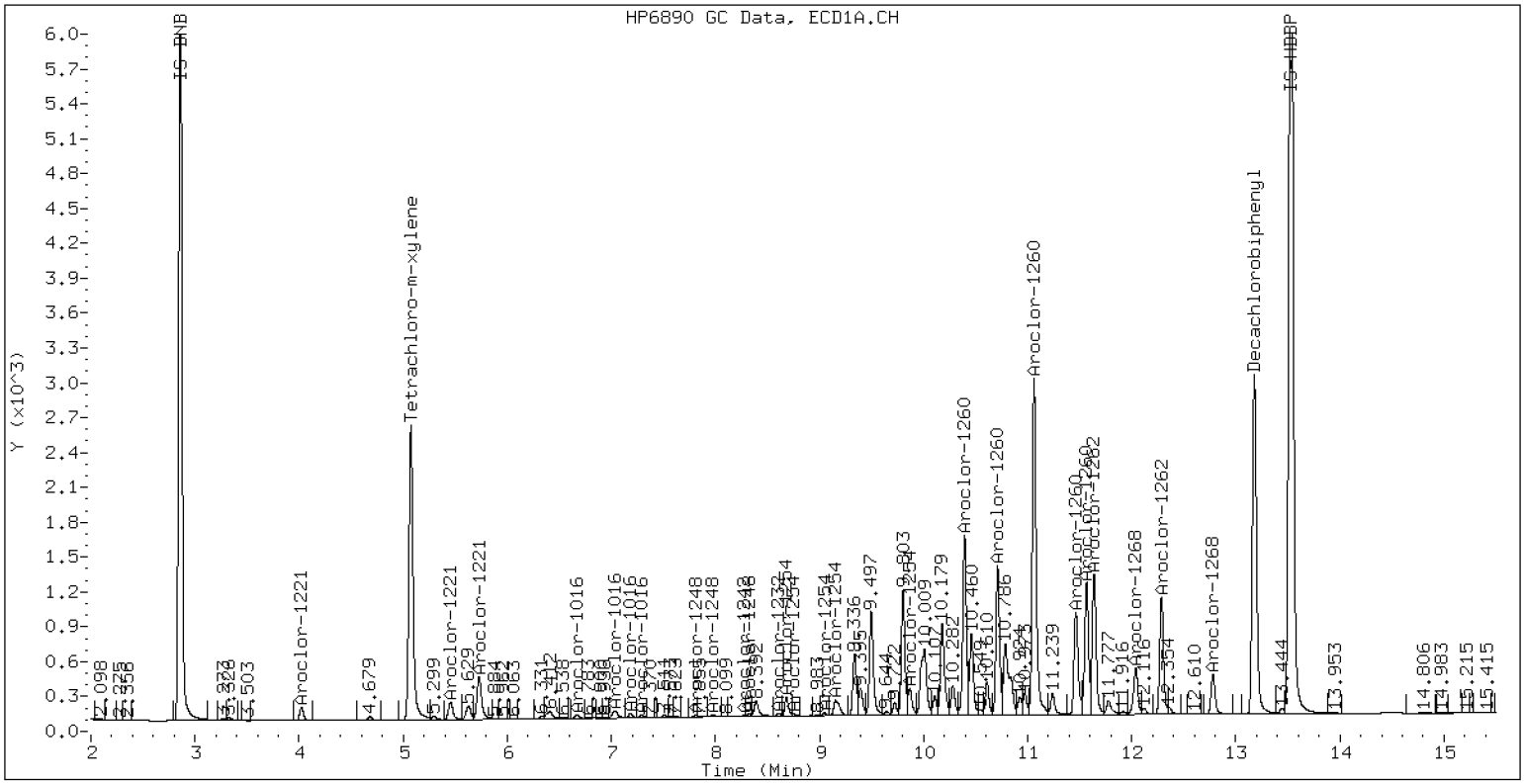
Total PCB Area Col2 (5.174 - 13.076) = 3437225 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

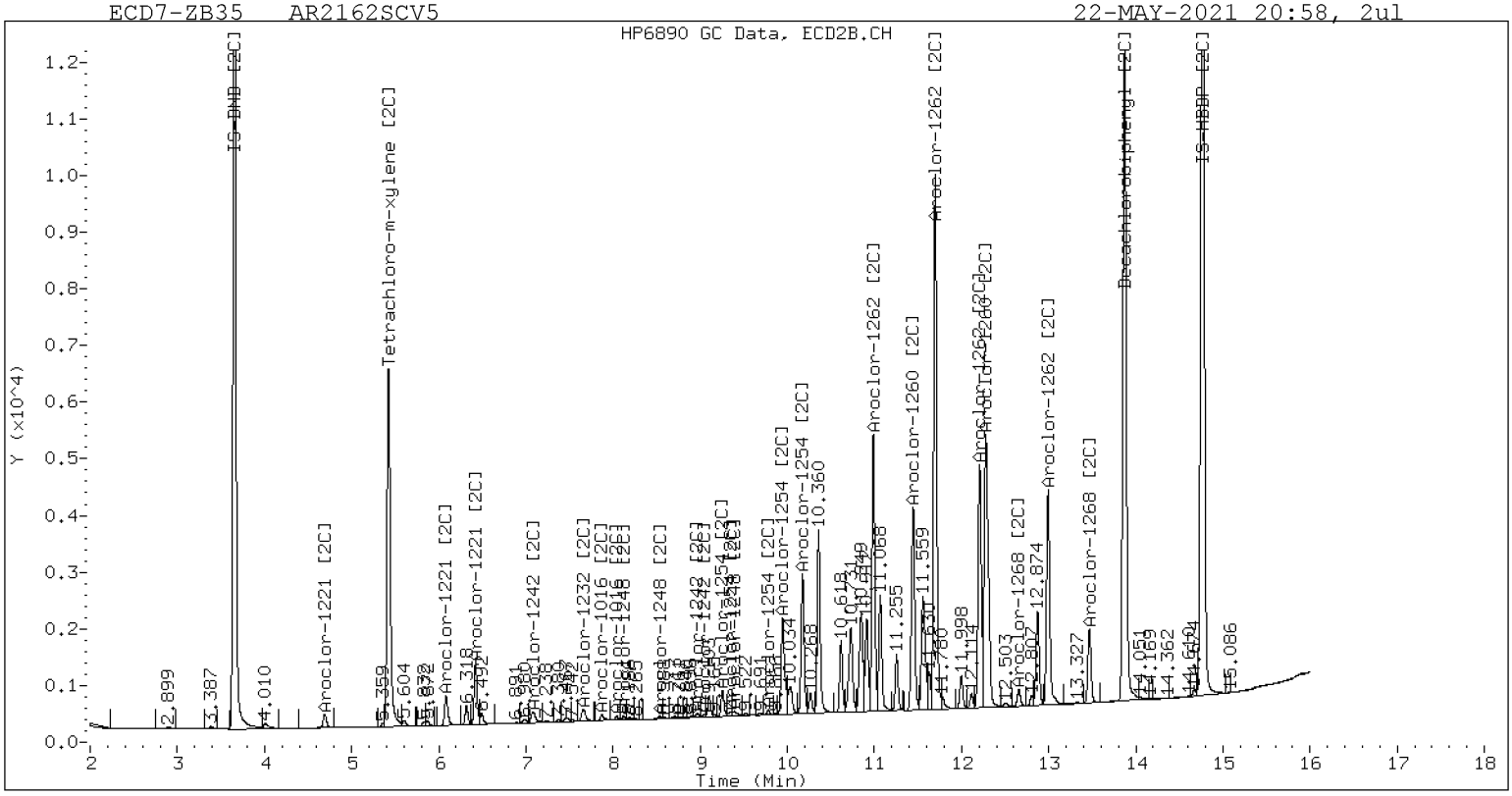
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV5 22-MAY-2021 20:58, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV5 22-MAY-2021 20:58, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, Inc.
Client: Anchor QEA, LLC
Calibration: EE00069
Sequence: SJE0321

SDG: 21G0212
Project: Lower Duwamish AOC4
Laboratory ID: SJE0321-SCV6
Sequence Name: AR3268SCV6
Standard ID: J000953

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1232	250.00	243	-2.7	20.00
Aroclor 1232 [2C]	250.00	242	-3.3	20.00
Aroclor 1268	250.00	204	-18.5	20.00
Aroclor 1268 [2C]	250.00	206	-17.7	20.00
Decachlorobiphenyl	40.000	59.7	49.2	20.00
Tetrachlorometaxylene	40.000	41.8	4.5	20.00
Decachlorobiphenyl [2C]	40.000	61.1	52.6	20.00
Tetrachlorometaxylene [2C]	40.000	40.5	1.2	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: /210522.b/05222122ECD7.D
Data file 2: /210522.b/210522.b/05222122ECD7.D
Method: \\target\share\chem4\ecd7.i\210522.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV6
Client ID:
Injection Date: 22-MAY-2021 21:20
Report Date: 05/25/2021 08:47
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.074	-0.000	148239	5.424	-0.000	355344	41.8	40.5	3.3	Tetrachloro-m-xylene
13.178	0.002	255056	13.875	0.005	1001977	59.7	61.1	2.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	296903	0.2
Hexabromobiphenyl	470266	479288	1.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	712350	0.0
Hexabromobiphenyl	867949	915257	5.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.666	0.001	10346	112.3	1	7.071	-0.000	45781	124.8
Aroclor-1016	2	7.034	0.000	34585	111.3	2	7.661	0.001	91604	113.5
Aroclor-1016	3	7.182	0.001	14354	113.7	3	7.870	0.002	34691	114.8
Aroclor-1016	4	7.291	0.002	9485	112.5	4	8.041	0.002	21844	118.1
Total Col1Ave (4 peaks):					112.4	Total Col2Ave (4 peaks):				117.8 RPD = 5
Corrected Ave (3 peaks):					112.0	Corrected Ave (3 peaks):				115.4 RPD = 3
Aroclor-1221	1	4.022	0.000	3391	154.4	1	4.692	-0.000	7248	156.3
Aroclor-1221	2	5.456	0.000	5464	145.2	2	6.086	0.002	18148	166.7
Aroclor-1221	3	5.730	0.000	18154	190.3	3	6.422	0.001	40400	201.3
Total Col1Ave (3 peaks):					163.3	Total Col2Ave (3 peaks):				174.8 RPD = 7
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.022	0.002	3391	252.9	1	4.692	0.001	7248	247.2
Aroclor-1232	2	5.730	0.001	18154	222.9	2	6.086	0.001	18148	231.2
Aroclor-1232	3	7.034	0.001	34585	252.7	3	6.422	-0.000	40400	234.8
Aroclor-1232	4	8.615	0.000	10043	244.4	4	7.661	-0.001	91604	254.3
Total Col1Ave (4 peaks):					243.2	Total Col2Ave (4 peaks):				241.9 RPD = 1
Corrected Ave (3 peaks):					240.0	Corrected Ave (3 peaks):				237.7 RPD = 1
Aroclor-1242	1	6.666	0.001	10346	126.2	1	7.071	-0.000	45781	144.8
Aroclor-1242	2	7.034	0.000	34585	129.9	2	7.661	0.001	91604	133.9
Aroclor-1242	3	8.278	0.006	4145	113.2	3	8.962	0.004	38109	123.2
Aroclor-1242	4	8.615	0.004	10043	122.8	4	9.041	0.004	32198	118.4
Total Col1Ave (4 peaks):					123.0	Total Col2Ave (4 peaks):				130.1 RPD = 6
Corrected Ave (3 peaks):					120.8	Corrected Ave (3 peaks):				125.2 RPD = 4
Aroclor-1248	1	7.808	0.001	9089	73.4	1	8.121	-0.001	18506	71.3
Aroclor-1248	2	7.975	0.002	12739	82.9	2	8.536	0.000	29545	83.7
Aroclor-1248	3	8.325	0.003	10258	66.7	3	8.962	0.001	38109	75.0
Aroclor-1248	4	8.615	0.002	10043	73.8	4	9.391	0.001	44833	82.7
Total Col1Ave (4 peaks):					74.2	Total Col2Ave (4 peaks):				78.1 RPD = 5
Corrected Ave (3 peaks):					71.3	Corrected Ave (3 peaks):				76.3 RPD = 7
Aroclor-1254	1	8.682	0.000	4617	18.4	1	9.256	0.000	10462	19.4
Aroclor-1254	2	8.753	0.000	1862	20.4	2	9.391	0.044	44833	141.0
Aroclor-1254	3	9.051	0.002	1704	11.1	3	9.781	0.001	6029	14.9
Aroclor-1254	4	9.187	0.004	3103	10.2	4	9.932	0.003	13664	15.1
Aroclor-1254	5	9.883	0.007	2229	10.9	5	10.162	0.002	13230	13.7
Total Col1Ave (5 peaks):					14.2	Total Col2Ave (5 peaks):				40.8 RPD = 97*
Corrected Ave (4 peaks):					12.6	Corrected Ave (4 peaks):				15.8 RPD = 22
Aroclor-1260	1	10.395	0.004	30116	171.4	1	11.426	-0.020	123255	215.9
Aroclor-1260	2	10.713	0.002	2096	11.6	2	11.698	0.001	56961	38.3
Aroclor-1260	3	11.062	0.002	16373	34.6	3	12.275	-0.005	585373	604.6
Aroclor-1260	4	11.463	0.003	591	2.5	4	12.993	0.001	214119	514.5
Aroclor-1260	5	11.567	0.003	163395	1757.1	NS	---			----
Total Col1Ave (5 peaks):					395.4	Total Col2Ave (4 peaks):				343.3 RPD = 14
Corrected Ave (4 peaks):					55.0	Corrected Ave (3 peaks):				256.2 RPD = 129*
Aroclor-1262	1	10.395	0.001	30116	99.9	1	10.988	-0.001	87691	95.4
Aroclor-1262	2	11.463	0.000	591	3.0	2	11.698	-0.002	56961	31.3
Aroclor-1262	3	11.636	-0.003	164716	628.0	3	12.209	0.000	570399	654.1
Aroclor-1262	4	12.286	-0.001	66330	319.9	4	12.993	0.000	214119	270.7
Total Col1Ave (4 peaks):					262.7	Total Col2Ave (4 peaks):				262.9 RPD = 0
Corrected Ave (3 peaks):					140.9	Corrected Ave (3 peaks):				132.5 RPD = 6
Aroclor-1268	1	11.567	0.000	163395	203.0	1	12.209	0.001	570399	214.5
Aroclor-1268	2	11.636	-0.001	164716	202.0	2	12.275	0.000	585373	202.0
Aroclor-1268	3	12.012	0.001	130565	203.8	3	12.658	-0.001	514356	202.2
Aroclor-1268	4	12.781	0.000	415210	206.6	4	13.474	0.002	1683012	204.7
Total Col1Ave (4 peaks):					203.9	Total Col2Ave (4 peaks):				205.8 RPD = 1

Corrected Ave (3 peaks): 202.9 Corrected Ave (3 peaks): 202.9 RPD = 0

Total PCB Area Col1 (5.174 - 13.076) = 1390907 Col1 Total PCB = 0.5 ppm*

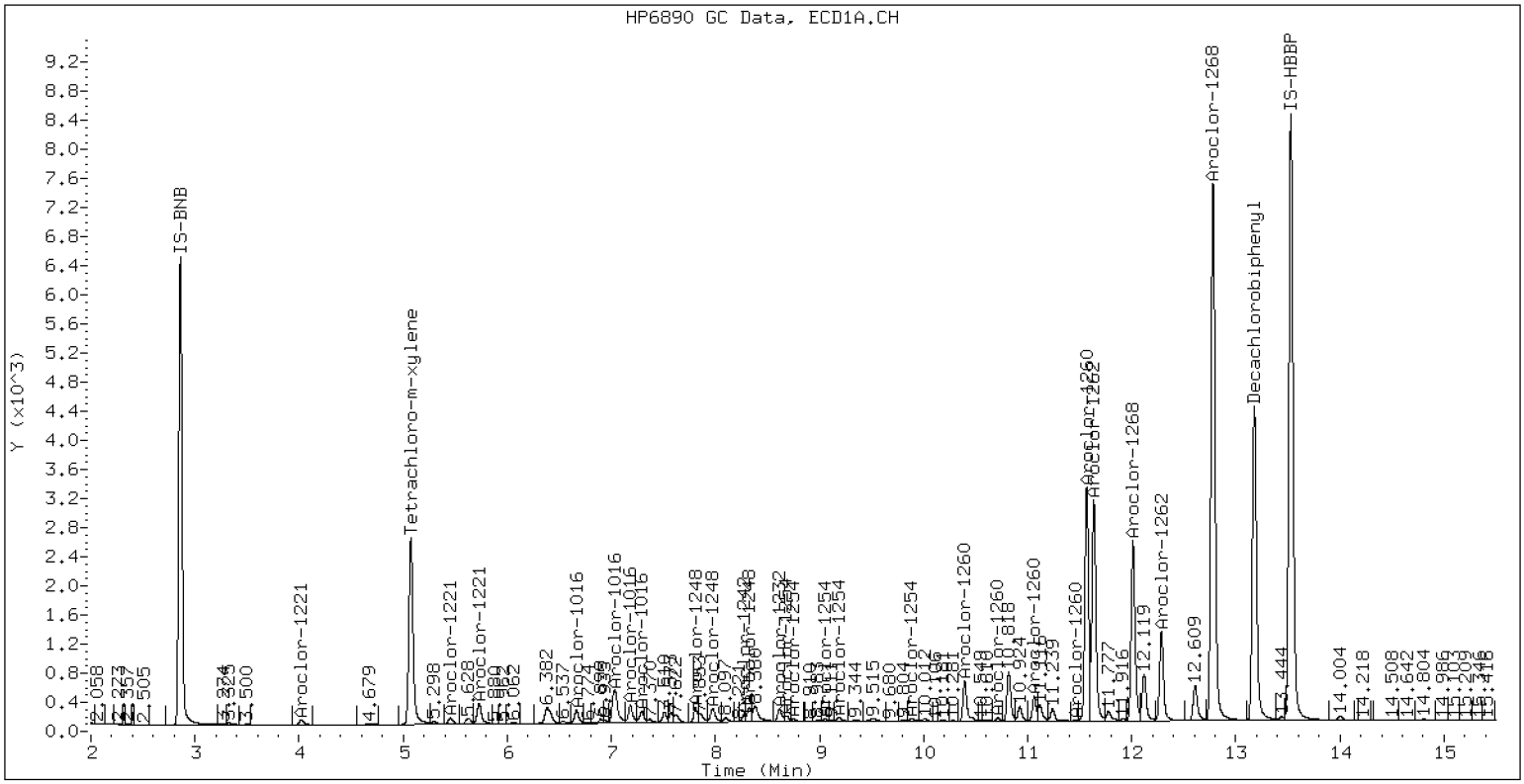
Total PCB Area Col2 (5.174 - 13.076) = 3445589 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV6 22-MAY-2021 21:20, 2ul



ZB-5 Manual Integration: NO

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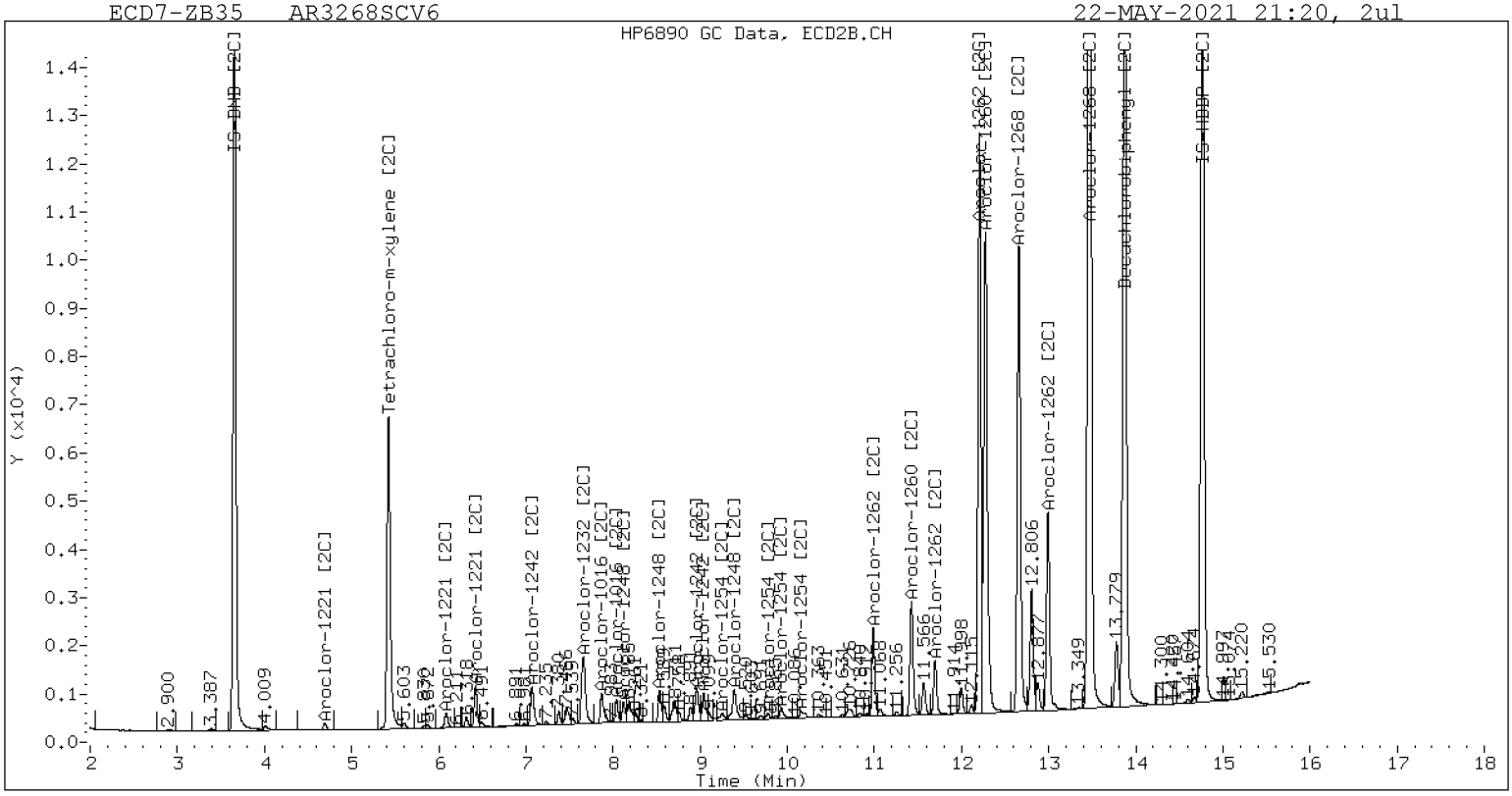


ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Instrument ID:	ECD7	Calibration:	EE00069
Lab File ID:	08062102ECD7.D	Calibration Date:	05/22/2021
Sequence:	SJH0075	Injection Date:	08/06/21
Lab Sample ID:	SJH0075-ICV1	Injection Time:	10:44
Sequence Name:	AR1254ICV1		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	234	0.0542238	0.0510783		-6.3	+/-20
Aroclor-1254 (1)	A	250.00	245	0.0676399	0.0663249			
Aroclor-1254 (2)	A	250.00	267	0.0246305	0.0263364			
Aroclor-1254 (3)	A	250.00	166	0.0414557	0.0275063			
Aroclor-1254 (4)	A	250.00	245	0.0820704	0.0803316			
Aroclor-1254 (5)	A	250.00	248	0.0553225	0.0548920			
Aroclor 1254 [2C]	A	250.00	252	0.0703814	0.0714165		0.6	+/-20
Aroclor-1254 (1) [2C]	A	250.00	276	0.0605749	0.0667820			
Aroclor-1254 (2) [2C]	A	250.00	258	0.0357212	0.0369118			
Aroclor-1254 (3) [2C]	A	250.00	214	0.0455816	0.0391173			
Aroclor-1254 (4) [2C]	A	250.00	244	0.1013365	0.0987631			
Aroclor-1254 (5) [2C]	A	250.00	266	0.1086926	0.1155083			
Decachlorobiphenyl	A	40.000	37.5	0.7132713	0.6689824		-6.3	+/-20
Tetrachlorometaxylene	A	40.000	42.6	0.9552374	1.0162780		6.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.9	1.4343710	1.3940140		-2.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	41.7	0.9862409	1.0290290		4.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /210806.b/08062102ECD7.D
Data file 2: /210806.b/210806.b/08062102ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV1
Client ID:
Injection Date: 06-AUG-2021 10:44
Report Date: 08/06/2021 13:31
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.071	0.004	161923	5.414	-0.000	415820	42.6	41.7	1.9	Tetrachloro-m-xylene
13.167	0.003	187293	13.848	-0.000	799941	37.5	38.9	3.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	318659	7.5
Hexabromobiphenyl	470266	559934	19.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	808179	13.5
Hexabromobiphenyl	867949	1147680	32.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1254	1	8.677	0.000	66047	245.1	1	9.240	0.000	168662	275.6
Aroclor-1254	2	8.747	0.000	26226	267.3	2	9.333	0.000	93223	258.3
Aroclor-1254	3	9.045	0.000	27391	165.9	3	9.764	0.000	98793	214.5
Aroclor-1254	4	9.178	0.000	79995	244.7	4	9.914	0.000	249432	243.7
Aroclor-1254	5	9.869	0.000	54662	248.1	5	10.148	0.000	291723	265.7

Total Col1Ave (5 peaks): 234.2 Total Col2Ave (5 peaks): 251.6 RPD = 7

Corrected Ave (4 peaks): 225.9 Corrected Ave (4 peaks): 245.6 RPD = 8

CalAmt %D: -6.3 CalAmt %D: 0.6

Total PCB Area Col1 (5.167 - 13.064) = 813343 Col1 Total PCB = 0.3 ppm*

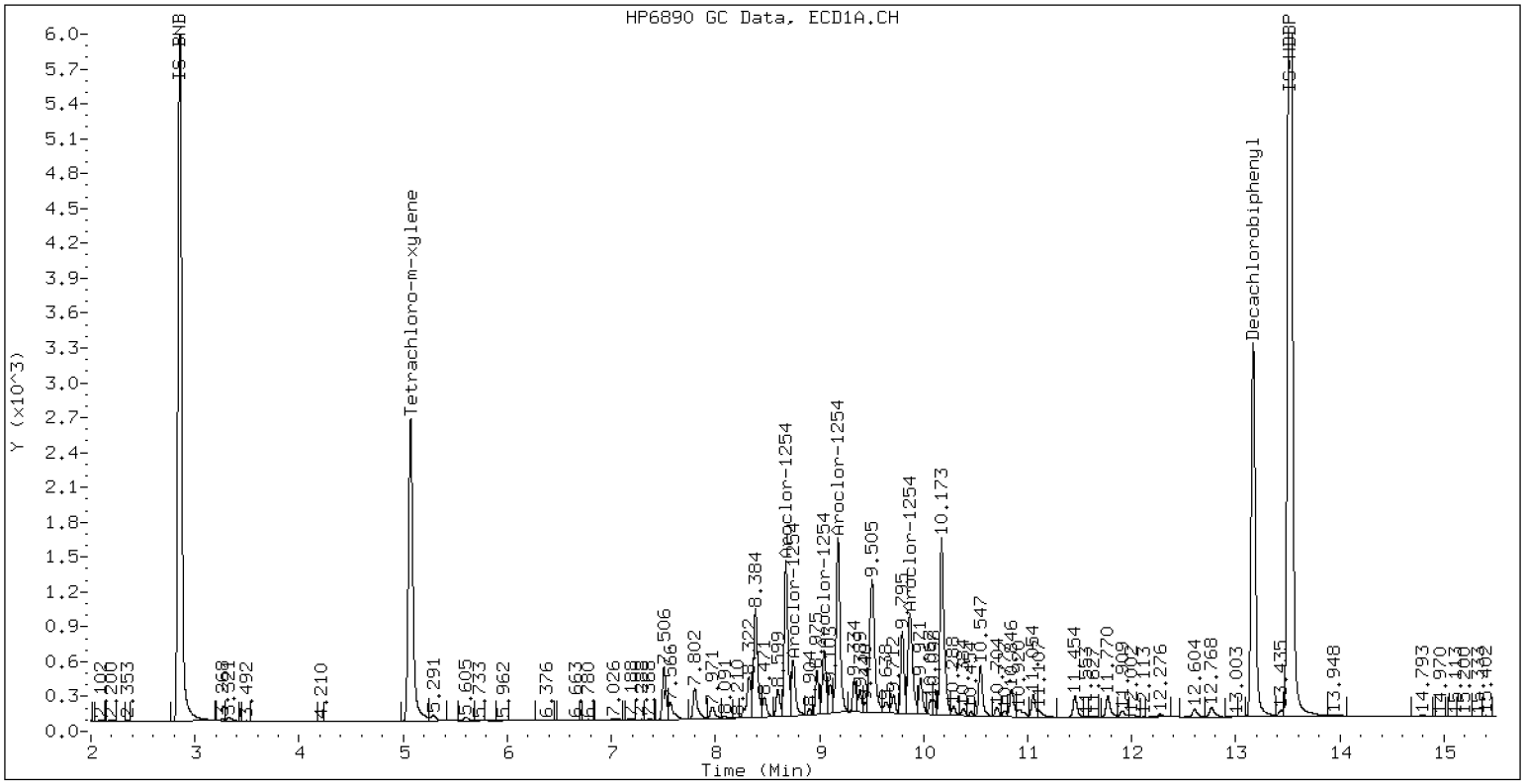
Total PCB Area Col2 (5.167 - 13.064) = 2964059 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

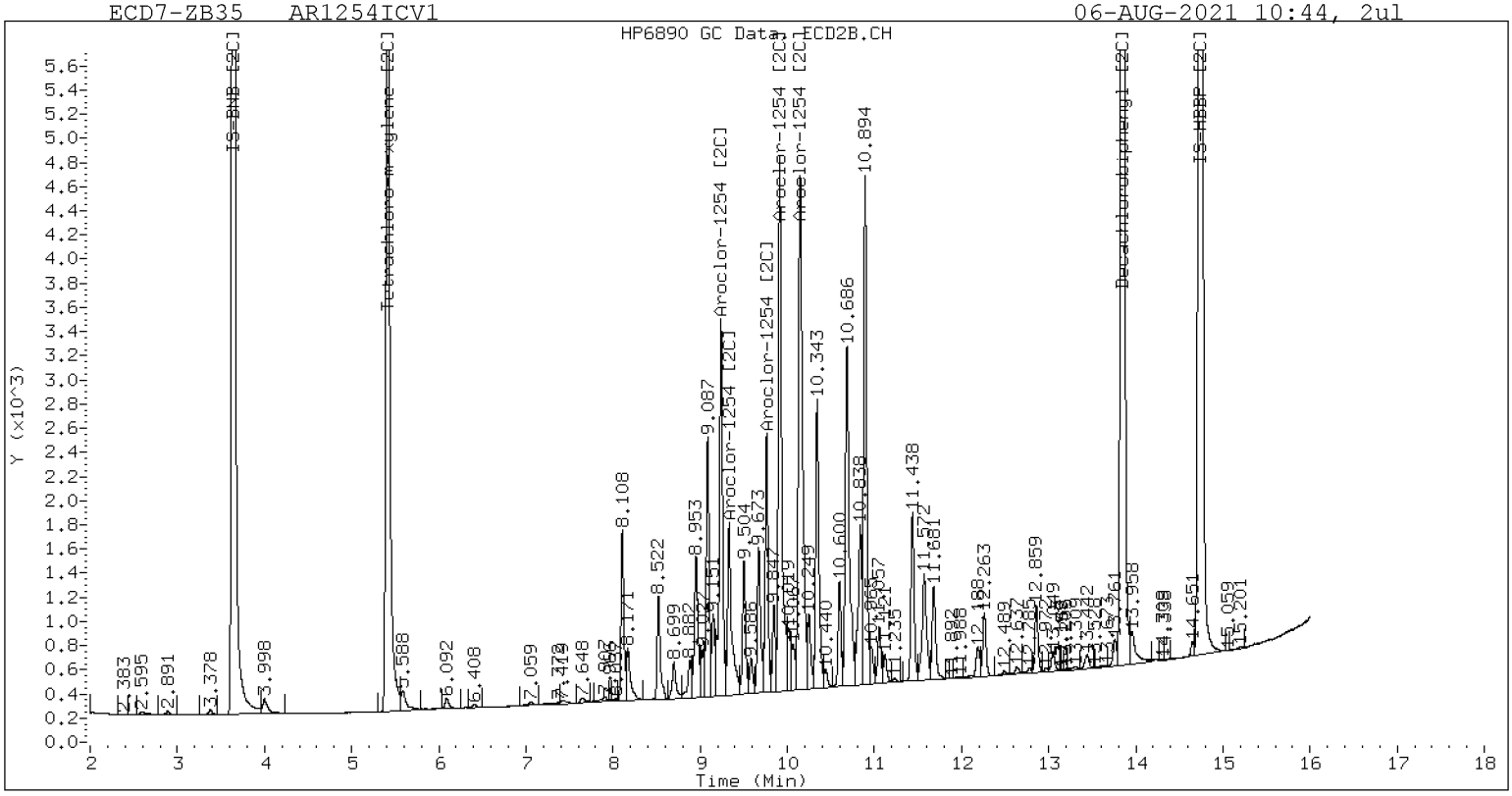
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1 06-AUG-2021 10:44, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254ICV1 06-AUG-2021 10:44, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Instrument ID:	ECD7	Calibration:	EE00069
Lab File ID:	08062103ECD7.D	Calibration Date:	05/22/2021
Sequence:	SJH0075	Injection Date:	08/06/21
Lab Sample ID:	SJH0075-ICV2	Injection Time:	11:05
Sequence Name:	AR1660ICV2		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1016	A	250.00	272	0.0413247	0.0445700		8.9	+/-20
Aroclor-1016 (1)	A	250.00	282	0.0248166	0.0280148		12.8	
Aroclor-1016 (2)	A	250.00	264	0.0837401	0.0883919		5.6	
Aroclor-1016 (3)	A	250.00	277	0.0340179	0.0376558		10.8	
Aroclor-1016 (4)	A	250.00	266	0.0227243	0.0242173		6.4	
Aroclor 1016 [2C]	A	250.00	262	0.0466427	0.0472982		4.8	+/-20
Aroclor-1016 (1) [2C]	A	250.00	271	0.0412076	0.0446642		8.4	
Aroclor-1016 (2) [2C]	A	250.00	236	0.0906438	0.0853882		-5.6	
Aroclor-1016 (3) [2C]	A	250.00	269	0.0339420	0.0365455		7.6	
Aroclor-1016 (4) [2C]	A	250.00	272	0.0207774	0.0225949		8.8	
Aroclor 1260	A	250.00	258	0.0388495	0.0403187		3.2	+/-20
Aroclor-1260 (1)	A	250.00	230	0.0293254	0.0270135		-8.0	
Aroclor-1260 (2)	A	250.00	262	0.0301531	0.0316152		4.8	
Aroclor-1260 (3)	A	250.00	265	0.0789877	0.0836855		6.0	
Aroclor-1260 (4)	A	250.00	265	0.0402598	0.0426579		6.0	
Aroclor-1260 (5)	A	250.00	268	0.0155216	0.0166216		7.2	
Aroclor 1260 [2C]	A	250.00	223	0.0752611	0.0636517		-11.0	+/-20
Aroclor-1260 (1) [2C]	A	250.00	258	0.0498903	0.0514163		3.2	
Aroclor-1260 (2) [2C]	A	250.00	190	0.1301480	0.0988514		-24.0	
Aroclor-1260 (3) [2C]	A	250.00	208	0.0846293	0.0703482		-16.8	
Aroclor-1260 (4) [2C]	A	250.00	234	0.0363769	0.0339909		-6.4	
Decachlorobiphenyl	A	40.000	42.2	0.7132713	0.7533673		5.5	+/-20
Tetrachlorometaxylene	A	40.000	43.2	0.9552374	1.0314840		8.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	41.9	1.4343710	1.5017900		4.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	42.6	0.9862409	1.0516460		6.5	+/-20

* Values outside of QC limits

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

Data file 1: /210806.b/08062103ECD7.D
Data file 2: /210806.b/210806.b/08062103ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV2
Client ID:
Injection Date: 06-AUG-2021 11:05
Report Date: 08/06/2021 13:31
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.070	0.002	122122	5.415	0.000	317636	43.2	42.7	1.3	Tetrachloro-m-xylene
13.165	0.001	151718	13.848	-0.000	625584	42.2	41.9	0.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	236789	-20.1
Hexabromobiphenyl	470266	402773	-14.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	604074	-15.2
Hexabromobiphenyl	867949	833118	-4.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.660	0.001	20730	282.2	1	7.058	-0.000	84314	271.0
Aroclor-1016	2	7.033	0.002	65407	263.9	2	7.652	0.000	161190	235.5
Aroclor-1016	3	7.179	0.001	27864	276.7	3	7.859	0.000	68988	269.2
Aroclor-1016	4	7.288	0.000	17920	266.4	4	8.030	-0.000	42653	271.9

Total Col1Ave (4 peaks): 272.3 Total Col2Ave (4 peaks): 261.9 RPD = 4
Corrected Ave (3 peaks): 269.0 Corrected Ave (3 peaks): 258.6 RPD = 4

CalAmt %D: 8.9 CalAmt %D: 4.8

Aroclor-1260	1	10.383	-0.000	34001	230.3	1	11.427	-0.000	133862	257.6
Aroclor-1260	2	10.702	-0.000	39793	262.1	2	11.678	-0.000	257359	189.9
Aroclor-1260	3	11.051	0.000	105332	264.9	3	12.261	0.000	183151	207.8
Aroclor-1260	4	11.453	0.002	53692	264.9	4	12.972	-0.001	88495	233.6
Aroclor-1260	5	11.555	0.001	20921	267.7	NS	---			----

Total Col1Ave (5 peaks): 258.0 Total Col2Ave (4 peaks): 222.2 RPD = 15
Corrected Ave (4 peaks): 255.5 Corrected Ave (3 peaks): 210.4 RPD = 19

CalAmt %D: 3.2 CalAmt %D: -11.1

Total PCB Area Col1 (5.167 - 13.064) = 1112796 Col1 Total PCB = 0.5 ppm*

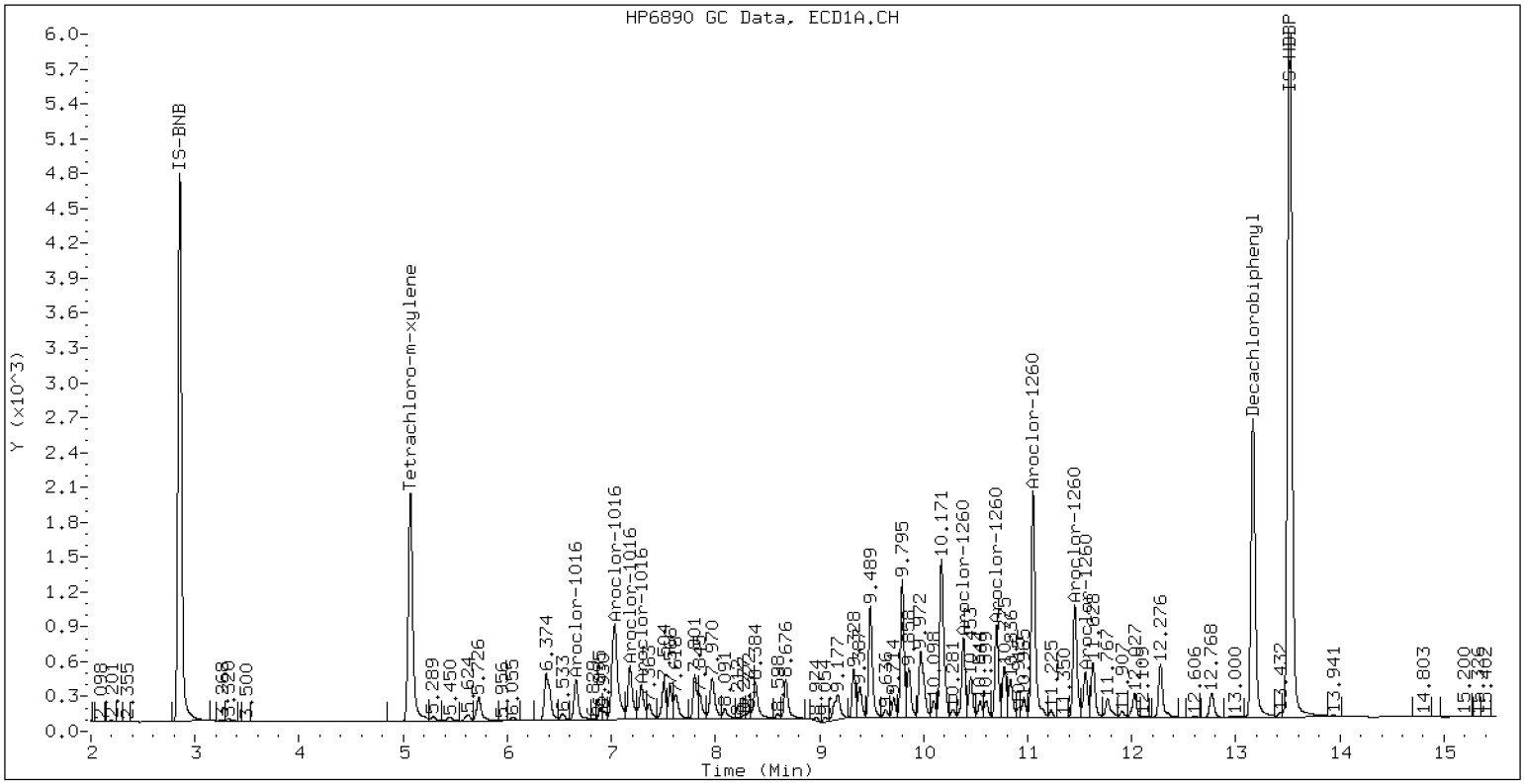
Total PCB Area Col2 (5.167 - 13.064) = 3363728 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

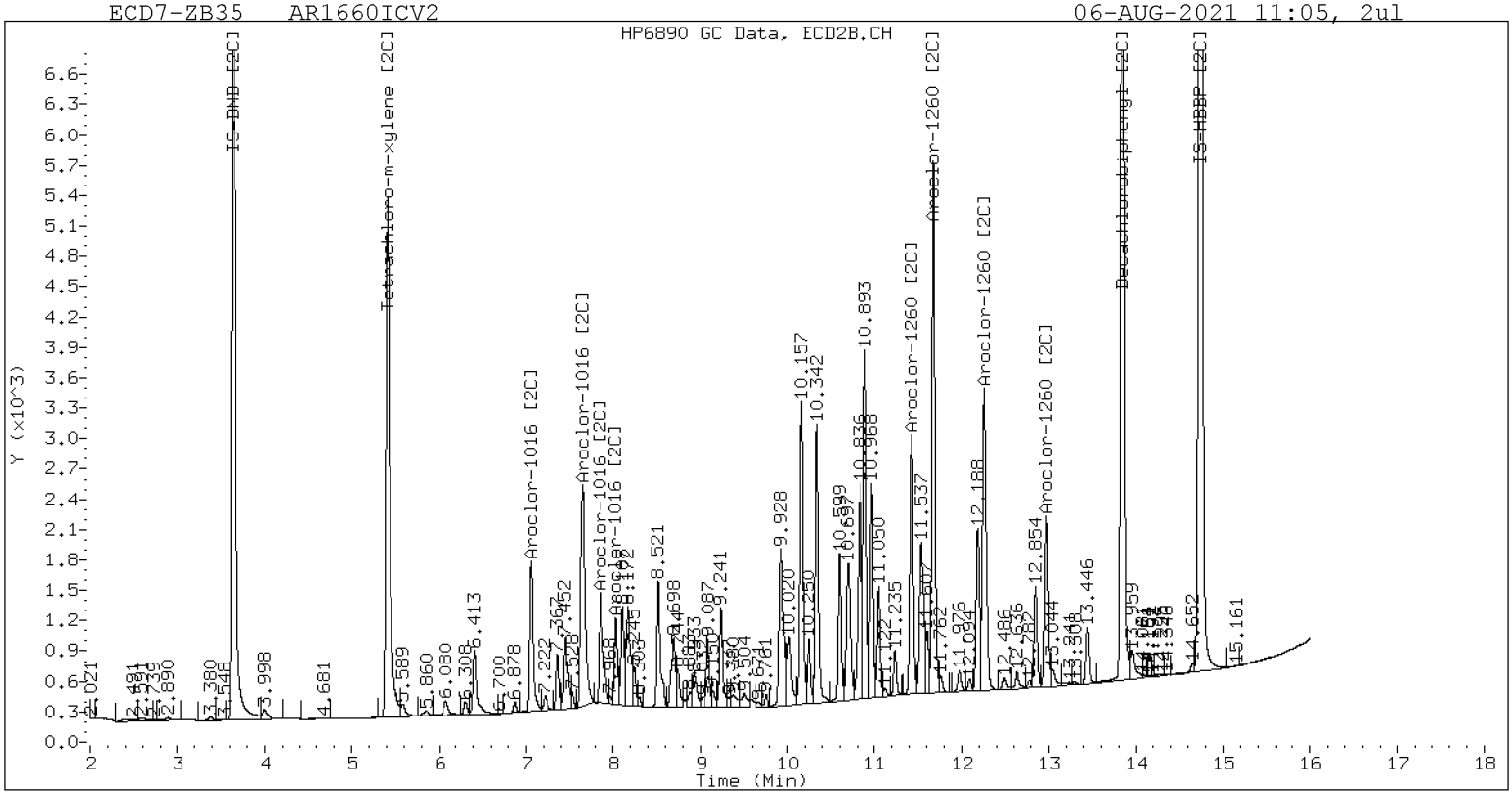
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2 06-AUG-2021 11:05, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660ICV2 06-AUG-2021 11:05, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Instrument ID:	ECD7	Calibration:	EE00069
Lab File ID:	05222117ECD7.D	Calibration Date:	05/22/2021
Sequence:	SJE0321	Injection Date:	05/22/21
Lab Sample ID:	SJE0321-SCV1	Injection Time:	19:32
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	250	0.0413247	0.0413589		-0.2	+/-20
Aroclor 1016 [2C]	A	250.00	250	0.0466427	0.0464522		0.2	+/-20
Aroclor 1260	A	250.00	295	0.0388495	0.0455628		17.8	+/-20
Aroclor 1260 [2C]	A	250.00	287	0.0752611	0.0850897		14.8	+/-20
Decachlorobiphenyl	A	40.000	39.8	0.7132713	0.7105296		-0.4	+/-20
Tetrachlorometaxylene	A	40.000	42.4	0.9552374	1.0121580		6.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.0	1.4343710	1.3995010		-2.4	+/-20
Tetrachlorometaxylene [2C]	A	40.000	40.6	0.9862409	1.0004460		1.4	+/-20

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /210522.b/05222117ECD7.D
Data file 2: /210522.b/210522.b/05222117ECD7.D
Method: \\target\share\chem4\ecd7.i\210522.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV1
Client ID:
Injection Date: 22-MAY-2021 19:32
Report Date: 05/25/2021 08:47
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.074	0.000	150100	5.424	-0.000	360043	42.4	40.6	4.4	Tetrachloro-m-xylene
13.178	0.002	171195	13.872	0.002	637856	39.8	39.0	2.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	296594	0.0
Hexabromobiphenyl	470266	481880	2.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	719765	1.1
Hexabromobiphenyl	867949	911548	5.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.666	0.001	22769	247.5	1	7.071	0.001	92068	248.3
Aroclor-1016	2	7.034	0.000	78003	251.2	2	7.661	0.001	201632	247.2
Aroclor-1016	3	7.182	0.001	31610	250.6	3	7.869	0.001	76459	250.4
Aroclor-1016	4	7.291	0.001	20953	248.7	4	8.041	0.002	47774	255.6
Total Col1Ave (4 peaks):					249.5	Total Col2Ave (4 peaks):				250.4 RPD = 0
Corrected Ave (3 peaks):					248.9	Corrected Ave (3 peaks):				248.6 RPD = 0
Aroclor-1221	1	4.026	0.004	113	5.2	1	4.692	-0.000	432	9.2
Aroclor-1221	2	5.455	-0.000	2657	70.7	2	6.089	0.005	11633	105.7
Aroclor-1221	3	5.729	0.000	16535	173.5	3	6.423	0.001	39442	194.5
Total Col1Ave (3 peaks):					83.1	Total Col2Ave (3 peaks):				103.2 RPD = 22
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.026	0.005	113	8.4	1	4.692	0.000	432	14.6
Aroclor-1232	2	5.729	0.001	16535	203.3	2	6.089	0.004	11633	146.7
Aroclor-1232	3	7.034	0.001	78003	570.6	3	6.423	0.000	39442	226.8
Aroclor-1232	4	8.606	-0.009	2061	50.2	4	7.661	-0.001	201632	554.0
Total Col1Ave (4 peaks):					208.1	Total Col2Ave (4 peaks):				235.5 RPD = 12
Corrected Ave (3 peaks):					87.3	Corrected Ave (3 peaks):				129.4 RPD = 39
Aroclor-1242	1	6.666	0.001	22769	278.0	1	7.071	0.001	92068	288.1
Aroclor-1242	2	7.034	0.000	78003	293.3	2	7.661	0.002	201632	291.7
Aroclor-1242	3	8.276	0.005	2315	63.3	3	8.950	-0.008	27869	89.2
Aroclor-1242	4	8.606	-0.005	2061	25.2	4	9.040	0.003	7790	28.3
Total Col1Ave (4 peaks):					165.0	Total Col2Ave (4 peaks):				174.3 RPD = 6
Corrected Ave (3 peaks):					122.2	Corrected Ave (3 peaks):				135.2 RPD = 10
Aroclor-1248	1	7.807	0.001	21433	173.2	1	8.122	0.001	43799	166.9
Aroclor-1248	2	7.974	0.001	29322	191.0	2	8.536	0.001	66601	186.6
Aroclor-1248	3	8.324	0.002	4130	26.9	3	8.950	-0.011	27869	54.2
Aroclor-1248	4	8.606	-0.007	2061	15.2	4	9.391	0.002	5888	10.7
Total Col1Ave (4 peaks):					101.6	Total Col2Ave (4 peaks):				104.6 RPD = 3
Corrected Ave (3 peaks):					71.7	Corrected Ave (3 peaks):				77.3 RPD = 7
Aroclor-1254	1	8.682	-0.000	16848	67.2	1	9.255	-0.000	44067	80.9
Aroclor-1254	2	---			0.0	2	9.349	0.002	2467	7.7
Aroclor-1254	3	9.050	0.001	1728	11.2	3	9.781	0.001	6046	14.7
Aroclor-1254	4	9.178	-0.005	15131	49.7	4	9.947	0.017	111904	122.7
Aroclor-1254	5	9.867	-0.008	22044	107.5	5	10.177	0.016	145643	148.9
Total Col1Ave (4 peaks):					58.9	Total Col2Ave (5 peaks):				75.0 RPD = 24
Corrected Ave (3 peaks):					42.7	Corrected Ave (4 peaks):				56.5 RPD = 28
Aroclor-1260	1	10.394	0.003	53063	300.4	1	11.446	0.000	155193	273.0
Aroclor-1260	2	10.712	0.001	53264	293.3	2	11.699	0.002	412469	278.1
Aroclor-1260	3	11.062	0.002	141369	297.1	3	12.282	0.002	271072	281.1
Aroclor-1260	4	11.463	0.004	66669	274.9	4	12.994	0.002	130808	315.6
Aroclor-1260	5	11.566	0.001	28694	306.9	NS	---			----
Total Col1Ave (5 peaks):					294.5	Total Col2Ave (4 peaks):				287.0 RPD = 3
Corrected Ave (4 peaks):					291.4	Corrected Ave (3 peaks):				277.4 RPD = 5
Aroclor-1262	1	10.394	-0.001	53063	175.1	1	10.989	-0.000	162597	177.6
Aroclor-1262	2	11.463	0.000	66669	341.0	2	11.699	-0.001	412469	227.8
Aroclor-1262	3	11.638	-0.000	37034	140.4	3	12.211	0.003	127645	147.0
Aroclor-1262	4	12.286	-0.001	33351	160.0	4	12.994	0.001	130808	166.0
Total Col1Ave (4 peaks):					204.1	Total Col2Ave (4 peaks):				179.6 RPD = 13
Corrected Ave (3 peaks):					158.5	Corrected Ave (3 peaks):				163.5 RPD = 3
Aroclor-1268	1	11.566	-0.001	28694	35.5	1	12.211	0.004	127645	48.2
Aroclor-1268	2	11.638	0.002	37034	45.2	2	12.282	0.008	271072	93.9
Aroclor-1268	3	12.040	0.029	15321	23.8	3	12.659	-0.001	4976	2.0
Aroclor-1268	4	12.781	-0.000	8326	4.1	4	13.469	-0.003	26590	3.2
Total Col1Ave (4 peaks):					27.1	Total Col2Ave (4 peaks):				36.8 RPD = 30

Corrected Ave (3 peaks): 21.1 Corrected Ave (3 peaks): 17.8 RPD = 17

Total PCB Area Col1 (5.174 - 13.076) = 1346327 Col1 Total PCB = 0.5 ppm*

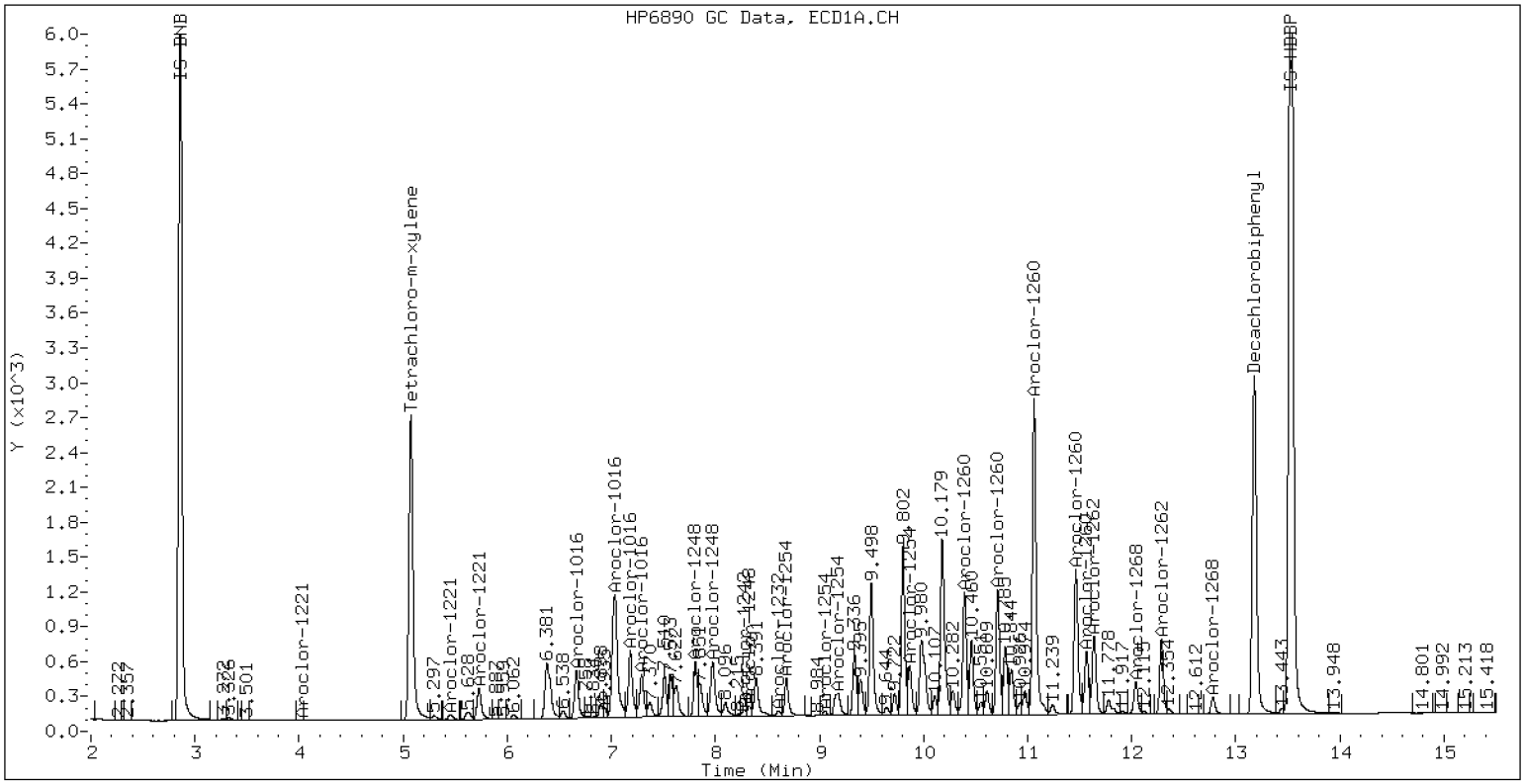
Total PCB Area Col2 (5.174 - 13.076) = 4068268 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

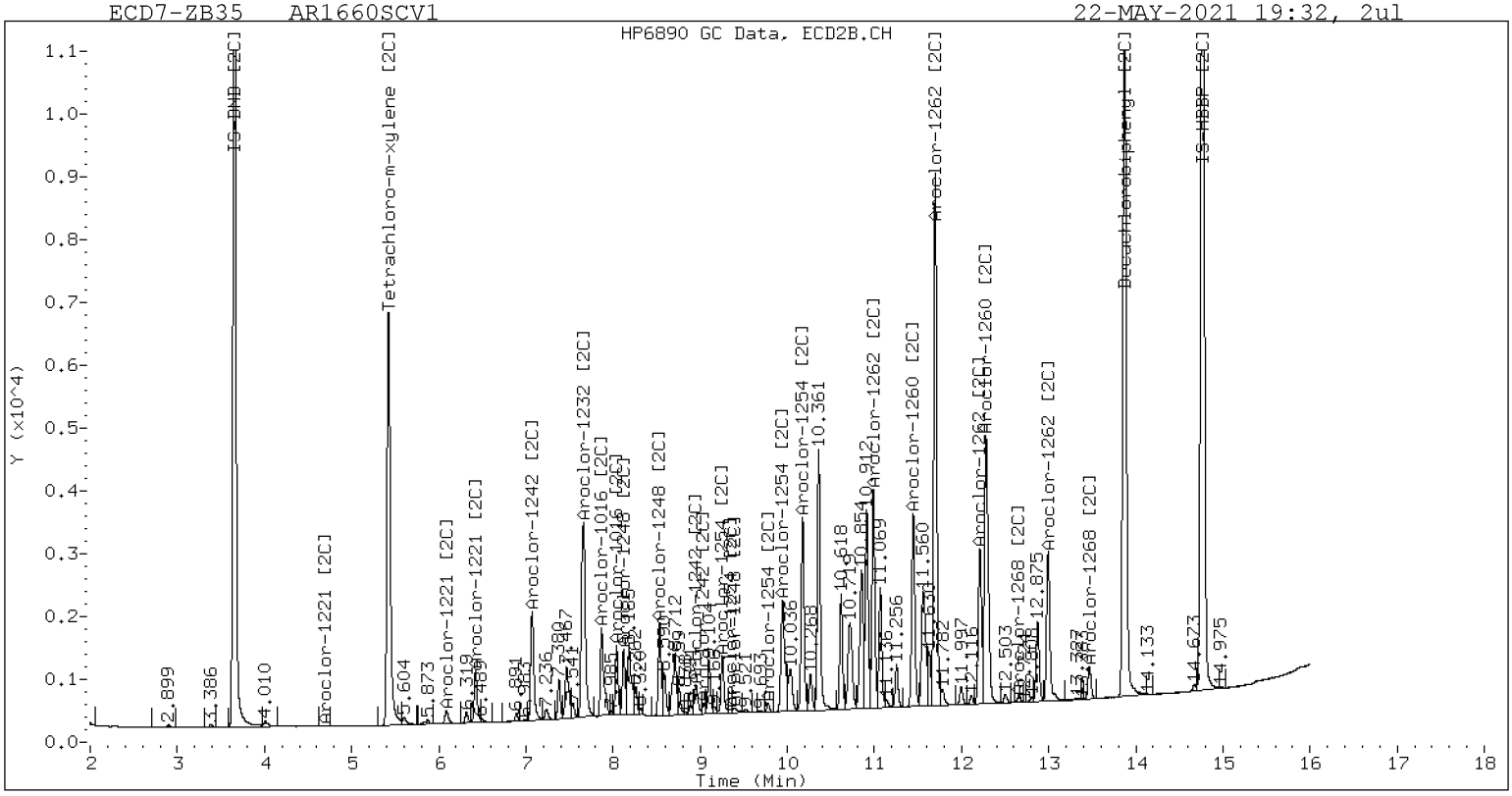
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV1 22-MAY-2021 19:32, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV1 22-MAY-2021 19:32, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Instrument ID:	ECD7	Calibration:	EE00069
Lab File ID:	05222118ECD7.D	Calibration Date:	05/22/2021
Sequence:	SJE0321	Injection Date:	05/22/21
Lab Sample ID:	SJE0321-SCV2	Injection Time:	19:53
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	226	0.0314312	0.0283653		-9.7	+/-20
Aroclor 1242 [2C]	A	250.00	222	0.0444064	0.0397477		-11.3	+/-20
Decachlorobiphenyl	A	40.000	40.3	0.7132713	0.7180920		0.7	+/-20
Tetrachlorometaxylene	A	40.000	41.8	0.9552374	0.9981255		4.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.3	1.4343710	1.4447660		0.7	+/-20
Tetrachlorometaxylene [2C]	A	40.000	40.5	0.9862409	0.9974522		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: /210522.b/05222118ECD7.D
Data file 2: /210522.b/210522.b/05222118ECD7.D
Method: \\target\share\chem4\ecd7.i\210522.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV2
Client ID:
Injection Date: 22-MAY-2021 19:53
Report Date: 05/25/2021 08:47
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.073	-0.001	148026	5.424	-0.000	355279	41.8	40.5	3.3	Tetrachloro-m-xylene
13.177	0.001	171517	13.873	0.003	654853	40.3	40.3	0.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	296608	0.1
Hexabromobiphenyl	470266	477702	1.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	712373	0.1
Hexabromobiphenyl	867949	906518	4.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.665	-0.000	18392	199.9	1	7.071	-0.000	72036	196.3
Aroclor-1016	2	7.033	-0.001	59895	192.9	2	7.660	0.000	156335	193.7
Aroclor-1016	3	7.182	0.001	24546	194.6	3	7.869	0.001	59486	196.8
Aroclor-1016	4	7.291	0.001	16263	193.0	4	8.041	0.001	37109	200.6
Total Col1Ave (4 peaks): 195.1						Total Col2Ave (4 peaks): 196.8 RPD = 1				
Corrected Ave (3 peaks): 193.5						Corrected Ave (3 peaks): 195.6 RPD = 1				
Aroclor-1221	1	4.021	-0.002	126	5.7	1	---			0.0
Aroclor-1221	2	5.453	-0.002	2075	55.2	2	6.090	0.006	9535	87.6
Aroclor-1221	3	5.729	-0.001	12906	135.4	3	6.422	0.000	30451	151.7
Total Col1Ave (3 peaks): 65.5						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.021	-0.000	126	9.4	1	---			0.0
Aroclor-1232	2	5.729	-0.000	12906	158.7	2	6.090	0.006	9535	121.5
Aroclor-1232	3	7.033	-0.001	59895	438.1	3	6.422	-0.001	30451	176.9
Aroclor-1232	4	8.614	-0.001	18633	453.8	4	7.660	-0.002	156335	434.0
Total Col1Ave (4 peaks): 265.0						Total Col2Ave (3 peaks): 244.1 RPD = 8				
Corrected Ave (3 peaks): 202.1						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.665	0.000	18392	224.6	1	7.071	-0.000	72036	227.8
Aroclor-1242	2	7.033	-0.001	59895	225.2	2	7.660	0.001	156335	228.5
Aroclor-1242	3	8.275	0.003	8247	225.5	3	8.961	0.003	69303	224.1
Aroclor-1242	4	8.614	0.003	18633	228.1	4	9.040	0.004	56266	206.9
Total Col1Ave (4 peaks): 225.8						Total Col2Ave (4 peaks): 221.8 RPD = 2				
Corrected Ave (3 peaks): 225.1						Corrected Ave (3 peaks): 219.6 RPD = 2				
Aroclor-1248	1	7.806	-0.001	17228	139.2	1	8.121	-0.001	35861	138.1
Aroclor-1248	2	7.974	0.001	24199	157.6	2	8.536	0.000	54676	154.8
Aroclor-1248	3	8.322	0.000	19391	126.2	3	8.961	0.000	69303	136.3
Aroclor-1248	4	8.614	0.001	18633	137.1	4	9.391	0.001	77643	143.2
Total Col1Ave (4 peaks): 140.0						Total Col2Ave (4 peaks): 143.1 RPD = 2				
Corrected Ave (3 peaks): 134.1						Corrected Ave (3 peaks): 139.2 RPD = 4				
Aroclor-1254	1	8.683	0.001	12254	48.9	1	9.255	-0.000	28380	52.6
Aroclor-1254	2	8.753	0.000	5283	57.9	2	9.391	0.044	77643	244.1
Aroclor-1254	3	9.050	0.002	5840	38.0	3	9.781	0.001	18362	45.2
Aroclor-1254	4	9.185	0.003	9954	32.7	4	9.930	0.000	37314	41.4
Aroclor-1254	5	9.881	0.005	6746	32.9	5	10.160	-0.000	39089	40.4
Total Col1Ave (5 peaks): 42.1						Total Col2Ave (5 peaks): 84.7 RPD = 67*				
Corrected Ave (4 peaks): 38.1						Corrected Ave (4 peaks): 44.9 RPD = 16				
Aroclor-1260	1	10.393	0.002	187	1.1	1	11.458	0.012	3982	7.0
Aroclor-1260	2	10.713	0.002	208	1.2	2	11.703	0.006	2513	1.7
Aroclor-1260	3	11.063	0.004	540	1.1	3	12.285	0.005	1926	2.0
Aroclor-1260	4	11.466	0.006	450	1.9	4	13.071	0.079	5406	13.1
Aroclor-1260	5	---			0.0	NS	---			----
Total Col1Ave (4 peaks): 1.3						Total Col2Ave (4 peaks): 6.0 RPD = 128*				
Corrected Ave (3 peaks): 1.1						Corrected Ave (3 peaks): 3.6 RPD = 105*				
Aroclor-1262	1	10.393	-0.001	187	0.6	1	10.914	-0.075	13876	15.2
Aroclor-1262	2	11.466	0.003	450	2.3	2	11.703	0.003	2513	1.4
Aroclor-1262	3	---			0.0	3	12.209	0.001	1037	1.2
Aroclor-1262	4	12.313	0.026	270	1.3	4	13.071	0.078	5406	6.9
Total Col1Ave (3 peaks): 1.4						Total Col2Ave (4 peaks): 6.2 RPD = 125*				
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks): 3.2				
Aroclor-1268	1	---			0.0	1	12.209	0.002	1037	0.4
Aroclor-1268	2	---			0.0	2	12.285	0.010	1926	0.7
Aroclor-1268	3	12.011	-0.000	683	1.1	3	12.658	-0.002	2315	0.9
Aroclor-1268	4	12.779	-0.002	1999	1.0	4	13.467	-0.005	4164	0.5
Col1Ave: <3 Quant Peaks						Col2Ave: 0.6				

Total PCB Area Col1 (5.174 - 13.076) = 451658 Col1 Total PCB = 0.2 ppm*

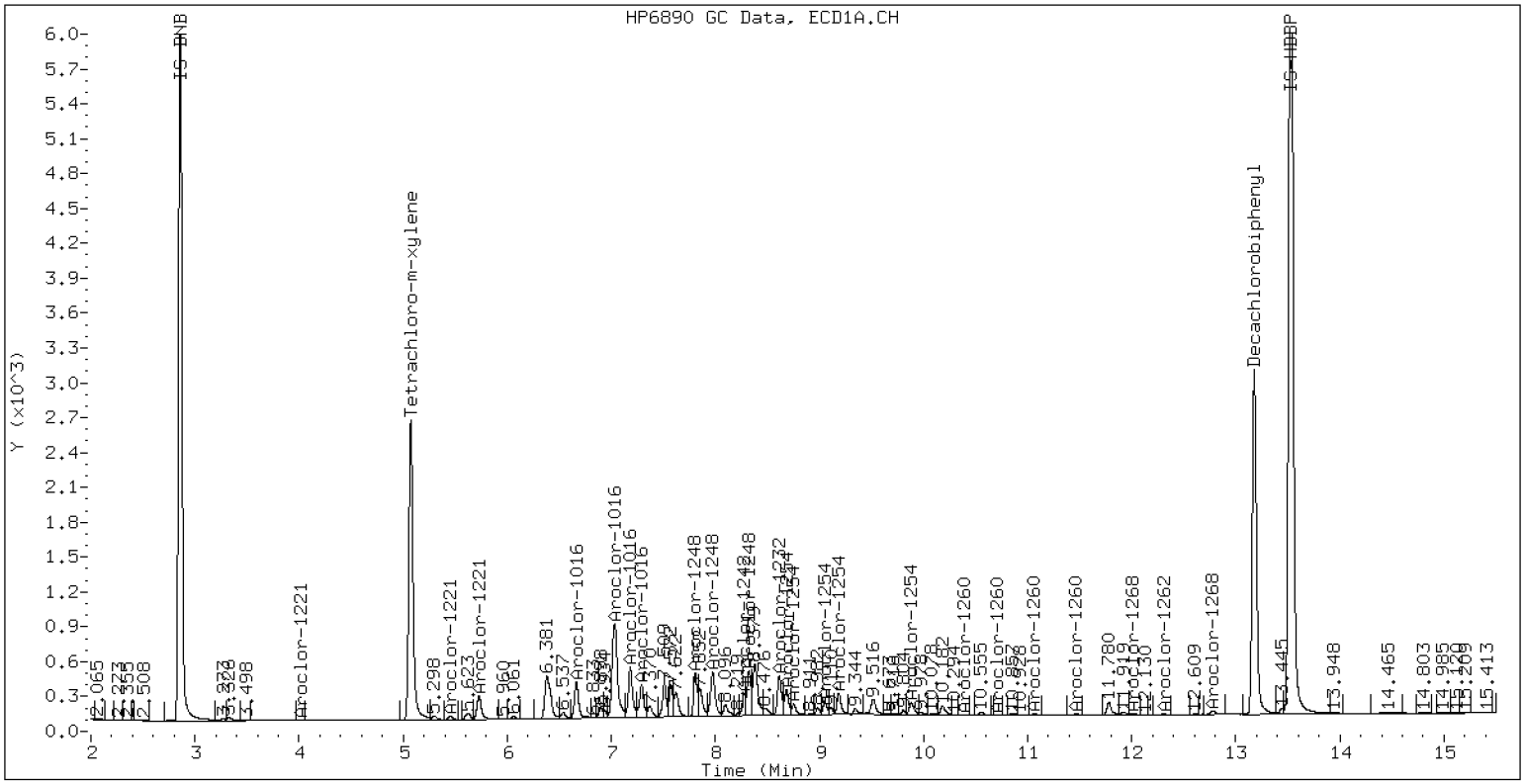
Total PCB Area Col2 (5.174 - 13.076) = 1609207 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

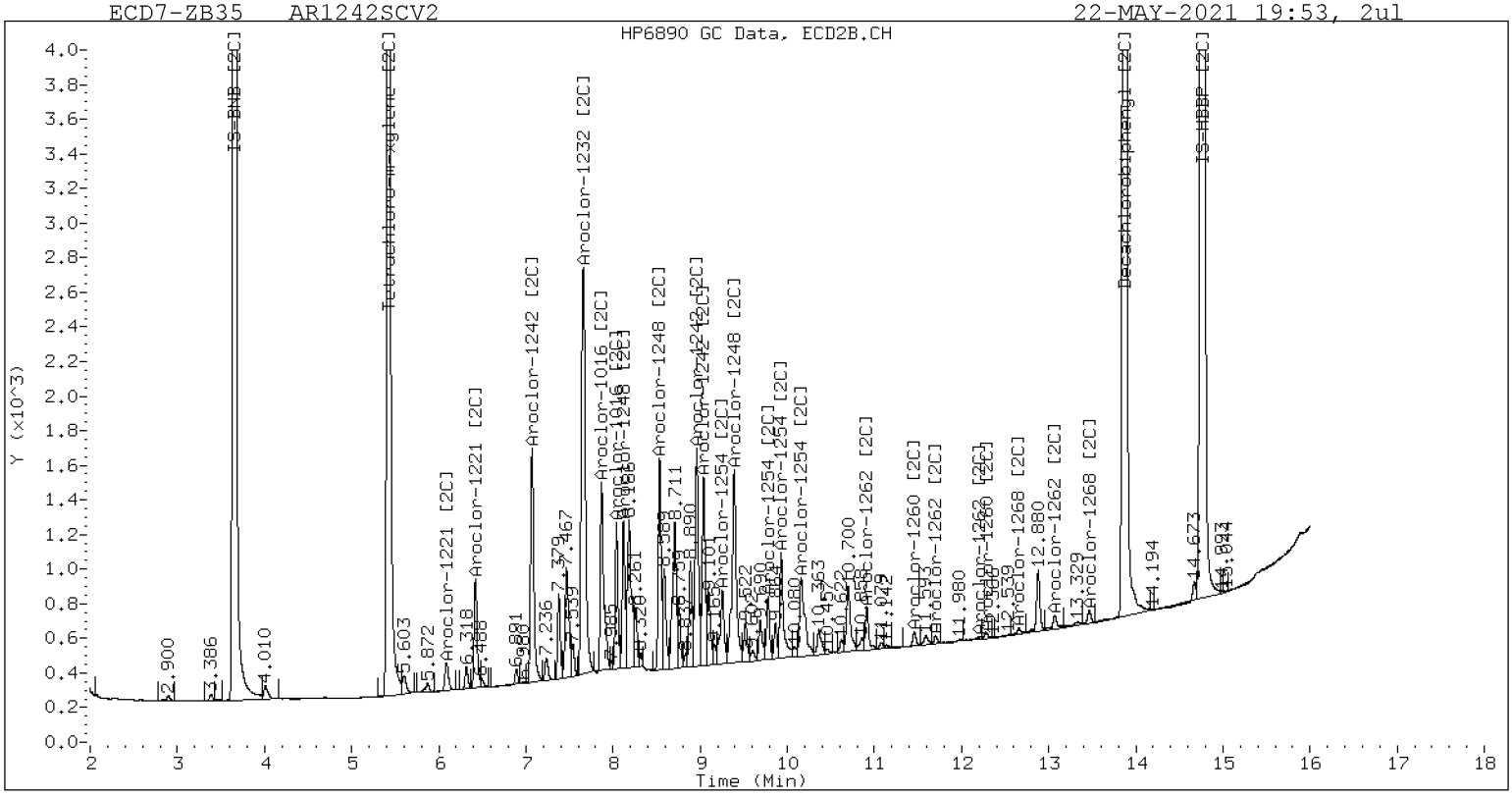
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV2 22-MAY-2021 19:53, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV2 22-MAY-2021 19:53, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Instrument ID:	ECD7	Calibration:	EE00069
Lab File ID:	05222119ECD7.D	Calibration Date:	05/22/2021
Sequence:	SJE0321	Injection Date:	05/22/21
Lab Sample ID:	SJE0321-SCV3	Injection Time:	20:15
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	239	0.0382260	0.0365000		-4.5	+/-20
Aroclor 1248 [2C]	A	250.00	240	0.0467028	0.0446313		-4.0	+/-20
Decachlorobiphenyl	A	40.000	40.5	0.7132713	0.7226260		1.3	+/-20
Tetrachlorometaxylene	A	40.000	42.7	0.9552374	1.0193710		6.7	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.4	1.4343710	1.4475630		0.9	+/-20
Tetrachlorometaxylene [2C]	A	40.000	40.8	0.9862409	1.0055270		2.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /210522.b/05222119ECD7.D
Data file 2: /210522.b/210522.b/05222119ECD7.D
Method: \\target\share\chem4\ecd7.i\210522.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV3
Client ID:
Injection Date: 22-MAY-2021 20:15
Report Date: 05/25/2021 08:47
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.075	0.001	148558	5.424	0.000	355673	42.7	40.8	4.6	Tetrachloro-m-xylene
13.177	0.001	172097	13.874	0.003	652141	40.5	40.4	0.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	291470	-1.7
Hexabromobiphenyl	470266	476310	1.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	707436	-0.6
Hexabromobiphenyl	867949	901019	3.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.665	0.000	8436	93.3	1	7.070	-0.001	37964	104.2
Aroclor-1016	2	7.032	-0.002	39299	128.8	2	7.657	-0.003	105519	131.6
Aroclor-1016	3	7.185	0.004	14510	117.1	3	7.870	0.002	23528	78.4
Aroclor-1016	4	7.290	0.001	9419	113.8	4	8.042	0.002	19521	106.2
Total Col1Ave (4 peaks): 113.2						Total Col2Ave (4 peaks): 105.1				RPD = 7
Corrected Ave (3 peaks): 108.0						Corrected Ave (3 peaks): 96.3				RPD = 12
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	5.457	0.001	514	13.9	2	6.100	0.016	4839	44.8
Aroclor-1221	3	5.730	0.001	2589	27.6	3	6.422	0.001	7431	37.3
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	5.730	0.001	2589	32.4	2	6.100	0.015	4839	62.1
Aroclor-1232	3	7.032	-0.001	39299	292.5	3	6.422	-0.000	7431	43.5
Aroclor-1232	4	8.613	-0.002	31117	771.2	4	7.657	-0.005	105519	295.0
Total Col1Ave (3 peaks): 365.4						Total Col2Ave (3 peaks): 133.5				RPD = 93*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.665	0.000	8436	104.8	1	7.070	-0.001	37964	120.9
Aroclor-1242	2	7.032	-0.002	39299	150.4	2	7.657	-0.002	105519	155.3
Aroclor-1242	3	8.274	0.003	13538	376.7	3	8.961	0.003	120141	391.2
Aroclor-1242	4	8.613	0.002	31117	387.7	4	9.040	0.003	91529	338.9
Total Col1Ave (4 peaks): 254.9						Total Col2Ave (4 peaks): 251.6				RPD = 1
Corrected Ave (3 peaks): 210.6						Corrected Ave (3 peaks): 205.0				RPD = 3
Aroclor-1248	1	7.807	0.000	29704	244.2	1	8.121	-0.000	63408	245.9
Aroclor-1248	2	7.974	0.001	35985	238.5	2	8.536	0.000	84533	241.0
Aroclor-1248	3	8.323	0.001	36177	239.5	3	8.961	0.000	120141	237.9
Aroclor-1248	4	8.613	0.000	31117	233.0	4	9.391	0.001	126590	235.1
Total Col1Ave (4 peaks): 238.8						Total Col2Ave (4 peaks): 240.0				RPD = 0
Corrected Ave (3 peaks): 237.0						Corrected Ave (3 peaks): 238.0				RPD = 0
Aroclor-1254	1	8.683	0.001	23899	97.0	1	9.255	-0.000	40453	75.5
Aroclor-1254	2	8.753	0.001	11007	122.7	2	9.391	0.044	126590	400.8
Aroclor-1254	3	9.050	0.001	12659	83.8	3	9.780	0.001	36693	91.0
Aroclor-1254	4	9.184	0.002	21298	71.2	4	9.930	0.000	71223	79.5
Aroclor-1254	5	9.881	0.006	14795	73.4	5	10.158	-0.003	48447	50.4
Total Col1Ave (5 peaks): 89.6						Total Col2Ave (5 peaks): 139.4				RPD = 44*
Corrected Ave (4 peaks): 81.4						Corrected Ave (4 peaks): 74.1				RPD = 9
Aroclor-1260	1	10.396	0.005	668	3.8	1	11.456	0.010	5225	9.3
Aroclor-1260	2	10.713	0.002	511	2.8	2	11.701	0.004	5284	3.6
Aroclor-1260	3	11.063	0.003	1423	3.0	3	12.284	0.004	3829	4.0
Aroclor-1260	4	11.464	0.004	549	2.3	4	12.994	0.002	2061	5.0
Aroclor-1260	5	11.570	0.005	526	5.7	NS	---			----
Total Col1Ave (5 peaks): 3.5						Total Col2Ave (4 peaks): 5.5				RPD = 43*
Corrected Ave (4 peaks): 3.0						Corrected Ave (3 peaks): 4.2				RPD = 34
Aroclor-1262	1	10.396	0.002	668	2.2	1	10.988	-0.001	3149	3.5
Aroclor-1262	2	11.464	0.001	549	2.8	2	11.701	0.001	5284	3.0
Aroclor-1262	3	11.638	-0.000	520	2.0	3	12.207	-0.001	2542	3.0
Aroclor-1262	4	12.292	0.005	702	3.4	4	12.994	0.001	2061	2.6
Total Col1Ave (4 peaks): 2.6						Total Col2Ave (4 peaks): 3.0				RPD = 14
Corrected Ave (3 peaks): 2.4						Corrected Ave (3 peaks): 2.9				RPD = 19
Aroclor-1268	1	11.570	0.003	526	0.7	1	12.207	-0.000	2542	1.0
Aroclor-1268	2	11.638	0.001	520	0.6	2	12.284	0.009	3829	1.3
Aroclor-1268	3	12.015	0.004	863	1.4	3	12.657	-0.002	2695	1.1
Aroclor-1268	4	12.780	-0.001	2506	1.3	4	13.467	-0.005	4780	0.6
Total Col1Ave (4 peaks): 1.0						Total Col2Ave (4 peaks): 1.0				RPD = 2
Corrected Ave (3 peaks): 0.9						Corrected Ave (3 peaks): 0.9				RPD = 3

Total PCB Area Col1 (5.174 - 13.076) = 550840 Col1 Total PCB = 0.2 ppm*

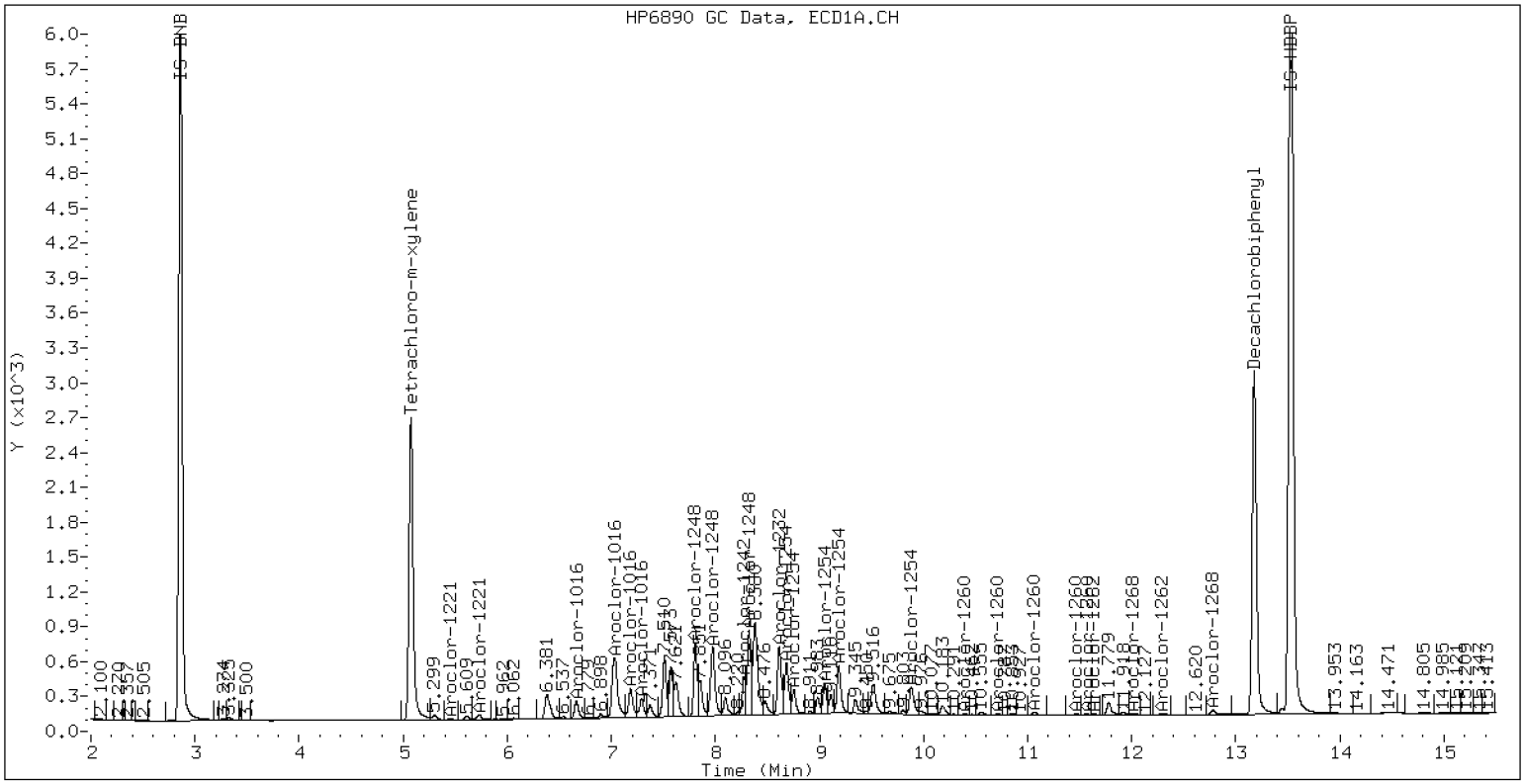
Total PCB Area Col2 (5.174 - 13.076) = 1898867 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

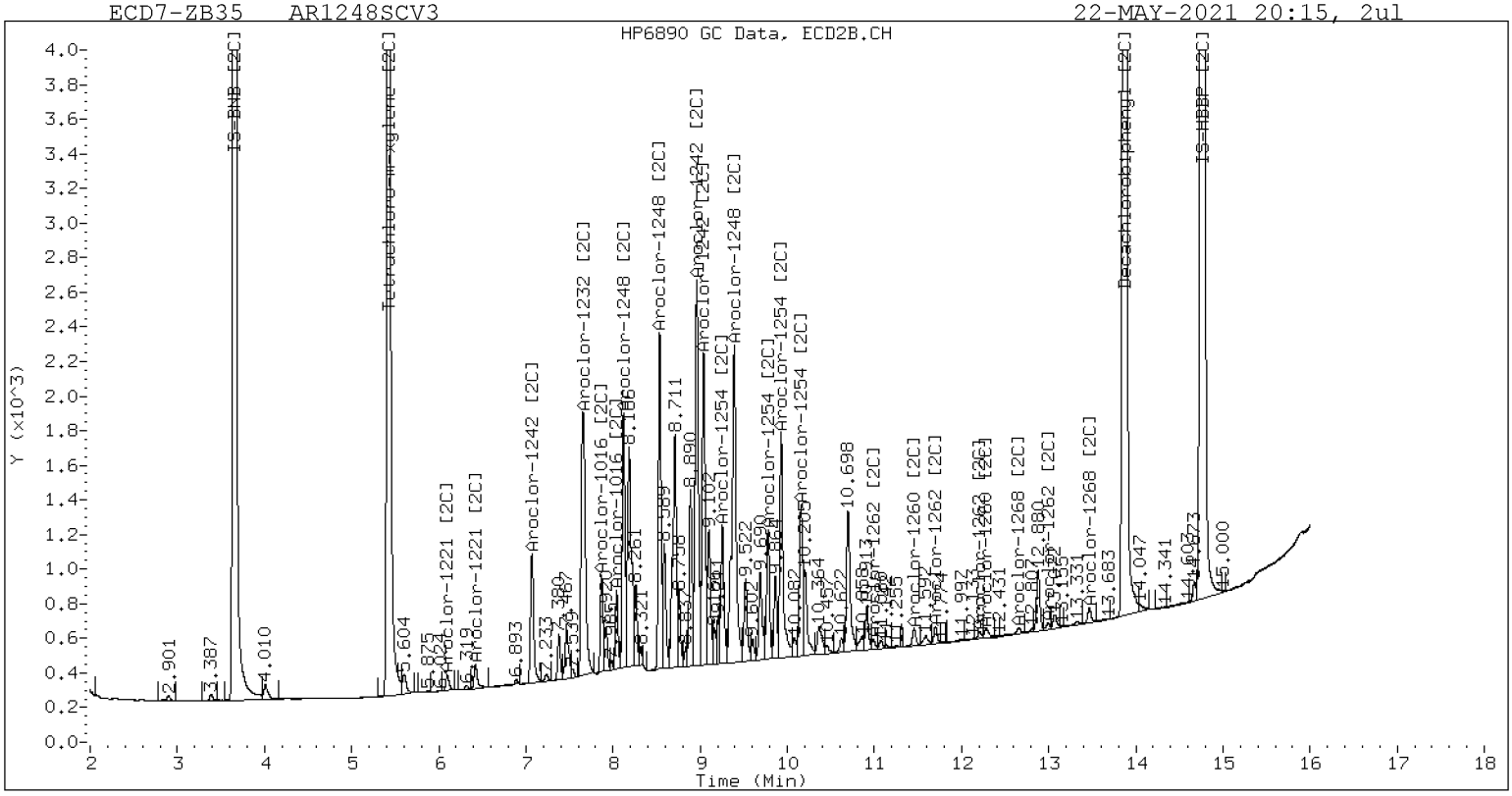
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV3 22-MAY-2021 20:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV3 22-MAY-2021 20:15, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Instrument ID:	ECD7	Calibration:	EE00069
Lab File ID:	05222120ECD7.D	Calibration Date:	05/22/2021
Sequence:	SJE0321	Injection Date:	05/22/21
Lab Sample ID:	SJE0321-SCV4	Injection Time:	20:37
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	235	0.0542238	0.0508372		-5.9	+/-20
Aroclor 1254 [2C]	A	250.00	244	0.0703814	0.0687203		-2.2	+/-20
Decachlorobiphenyl	A	40.000	40.0	0.7132713	0.7139365		0.09	+/-20
Tetrachlorometaxylene	A	40.000	41.7	0.9552374	0.9964360		4.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.6	1.4343710	1.4207020		-1.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	40.4	0.9862409	0.9959310		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: /210522.b/05222120ECD7.D
Data file 2: /210522.b/210522.b/05222120ECD7.D
Method: \\target\share\chem4\ecd7.i\210522.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV4
Client ID:
Injection Date: 22-MAY-2021 20:37
Report Date: 05/25/2021 08:47
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.074	-0.000	147480	5.423	-0.001	353436	41.7	40.4	3.2	Tetrachloro-m-xylene
13.178	0.002	169697	13.873	0.002	645388	40.0	39.6	1.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	296015	-0.1
Hexabromobiphenyl	470266	475384	1.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	709760	-0.3
Hexabromobiphenyl	867949	908548	4.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.670	0.005	136	1.5	1	7.071	0.000	986	2.7
Aroclor-1016	2	7.030	-0.005	825	2.7	2	7.655	-0.005	2851	3.5
Aroclor-1016	3	7.192	0.010	462	3.7	3	7.870	0.002	369	1.2
Aroclor-1016	4	7.290	0.000	114	1.4	4	8.044	0.004	353	1.9
Total Col1Ave (4 peaks):					2.3	Total Col2Ave (4 peaks):				2.3 RPD = 2
Corrected Ave (3 peaks):					1.8	Corrected Ave (3 peaks):				1.9 RPD = 6
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.100	0.016	3990	36.8
Aroclor-1221	3	---			0.0	3	6.417	-0.004	870	4.4
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	5.730	0.001	136	1.7	2	6.100	0.015	3990	51.0
Aroclor-1232	3	7.030	-0.004	825	6.0	3	6.417	-0.005	870	5.1
Aroclor-1232	4	8.605	-0.010	10628	259.4	4	7.655	-0.007	2851	7.9
Total Col1Ave (3 peaks):					89.0	Total Col2Ave (3 peaks):				21.3 RPD = 123*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.670	0.005	136	1.7	1	7.071	0.000	986	3.1
Aroclor-1242	2	7.030	-0.004	825	3.1	2	7.655	-0.005	2851	4.2
Aroclor-1242	3	8.324	0.053	18533	507.7	3	8.964	0.006	50428	163.7
Aroclor-1242	4	8.605	-0.006	10628	130.4	4	9.040	0.003	16173	59.7
Total Col1Ave (4 peaks):					160.7	Total Col2Ave (4 peaks):				57.7 RPD = 94*
Corrected Ave (3 peaks):					45.1	Corrected Ave (3 peaks):				22.3 RPD = 67*
Aroclor-1248	1	7.805	-0.001	11633	94.2	1	8.121	-0.000	48527	187.5
Aroclor-1248	2	7.973	0.000	4360	28.5	2	8.536	0.001	30748	87.4
Aroclor-1248	3	8.324	0.002	18533	120.8	3	8.964	0.003	50428	99.5
Aroclor-1248	4	8.605	-0.008	10628	78.4	4	9.348	-0.042	74662	138.2
Total Col1Ave (4 peaks):					80.5	Total Col2Ave (4 peaks):				128.2 RPD = 46*
Corrected Ave (3 peaks):					67.0	Corrected Ave (3 peaks):				108.4 RPD = 47*
Aroclor-1254	1	8.681	-0.000	58854	235.2	1	9.255	-0.001	141492	263.3
Aroclor-1254	2	8.753	0.001	21709	238.2	2	9.348	0.001	74662	235.6
Aroclor-1254	3	9.049	0.000	36329	236.8	3	9.780	0.000	98121	242.6
Aroclor-1254	4	9.183	0.000	70176	231.1	4	9.929	-0.001	214334	238.4
Aroclor-1254	5	9.875	-0.001	48066	234.8	5	10.161	0.000	233499	242.1
Total Col1Ave (5 peaks):					235.2	Total Col2Ave (5 peaks):				244.4 RPD = 4
Corrected Ave (4 peaks):					234.5	Corrected Ave (4 peaks):				239.7 RPD = 2
Aroclor-1260	1	10.392	0.000	2454	14.1	1	11.457	0.011	57455	101.4
Aroclor-1260	2	10.713	0.002	3392	18.9	2	11.702	0.005	38691	26.2
Aroclor-1260	3	11.063	0.003	8860	18.9	3	12.284	0.004	24630	25.6
Aroclor-1260	4	11.464	0.004	9017	37.7	4	12.991	-0.001	1502	3.6
Aroclor-1260	5	11.637	0.072	411	4.5	NS	---			----
Total Col1Ave (5 peaks):					18.8	Total Col2Ave (4 peaks):				39.2 RPD = 70*
Corrected Ave (4 peaks):					14.1	Corrected Ave (3 peaks):				18.5 RPD = 27
Aroclor-1262	1	10.392	-0.003	2454	8.2	1	10.985	-0.004	11671	12.8
Aroclor-1262	2	11.464	0.001	9017	46.7	2	11.702	0.002	38691	21.4
Aroclor-1262	3	11.637	-0.001	411	1.6	3	12.222	0.014	5172	6.0
Aroclor-1262	4	12.293	0.006	557	2.7	4	12.991	-0.002	1502	1.9
Total Col1Ave (4 peaks):					14.8	Total Col2Ave (4 peaks):				10.5 RPD = 34
Corrected Ave (3 peaks):					4.2	Corrected Ave (3 peaks):				6.9 RPD = 49*
Aroclor-1268	1	11.637	0.070	411	0.5	1	12.222	0.015	5172	2.0
Aroclor-1268	2	---			0.0	2	12.284	0.009	24630	8.6
Aroclor-1268	3	12.017	0.006	776	1.2	3	12.662	0.002	1796	0.7
Aroclor-1268	4	12.779	-0.002	1983	1.0	4	13.469	-0.004	4233	0.5
Total Col1Ave (3 peaks):					0.9	Total Col2Ave (4 peaks):				2.9 RPD = 105*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				1.1

Total PCB Area Col1 (5.174 - 13.076) = 715747 Col1 Total PCB = 0.3 ppm*

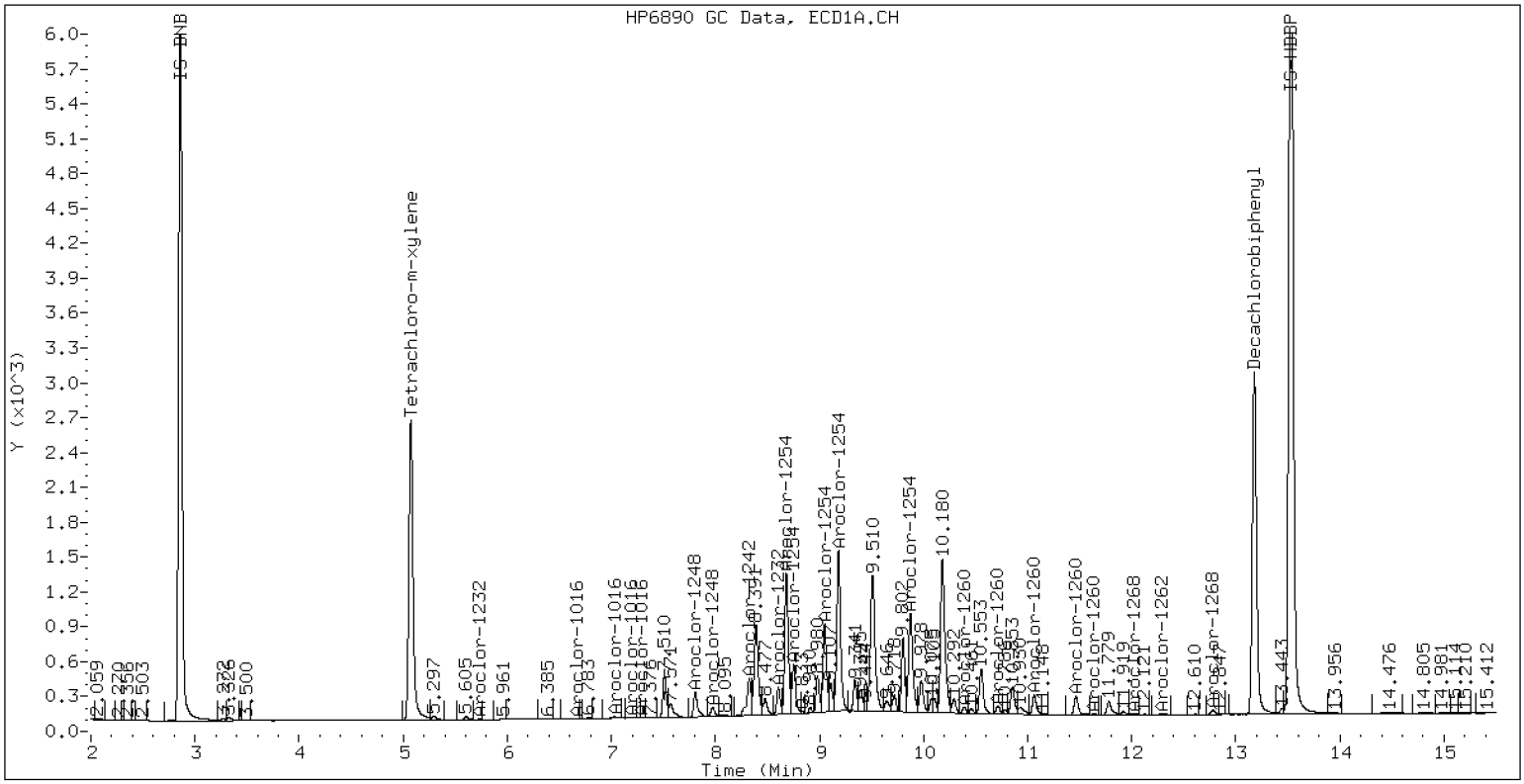
Total PCB Area Col2 (5.174 - 13.076) = 2439127 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

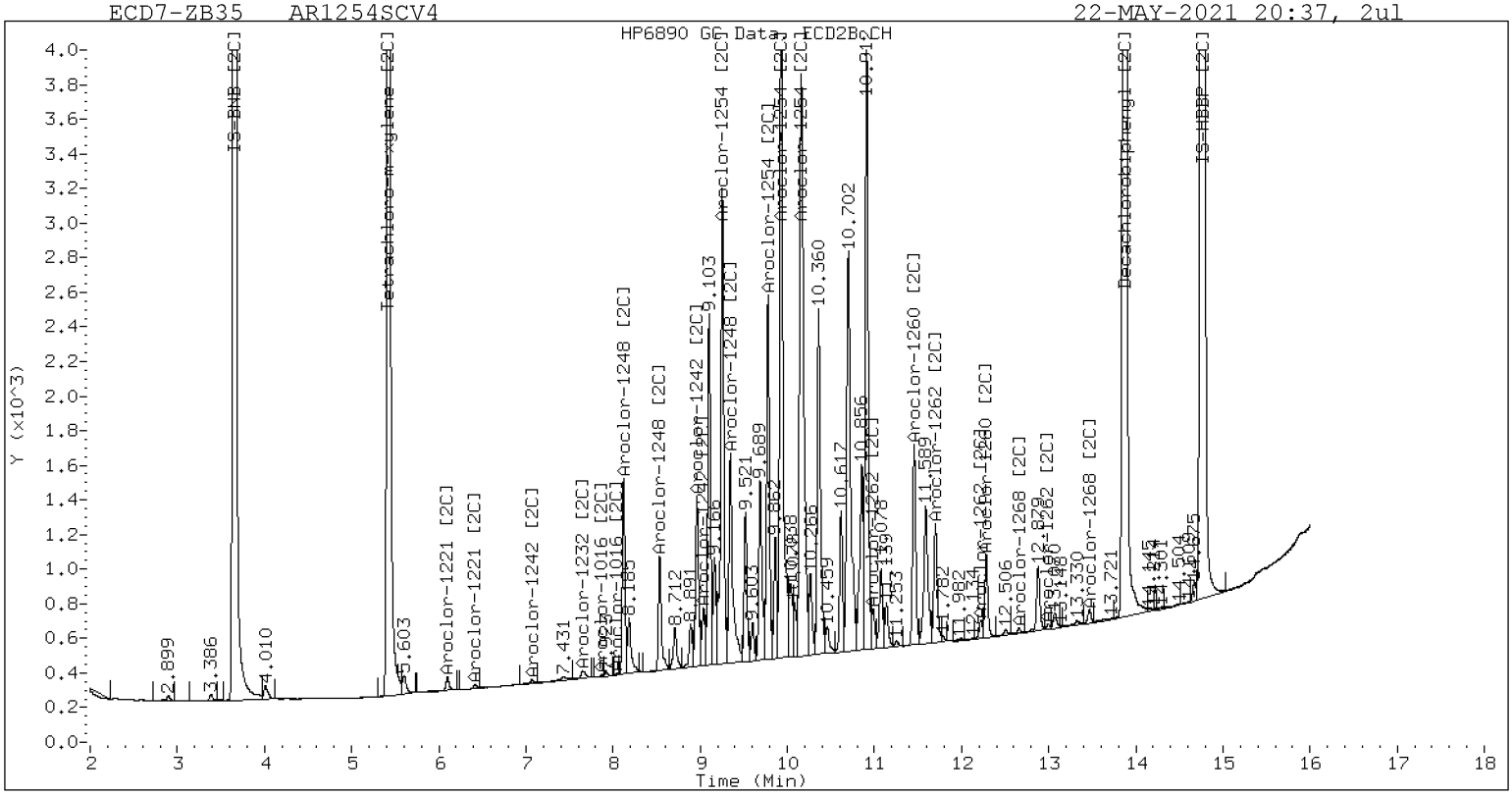
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV4 22-MAY-2021 20:37, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV4 22-MAY-2021 20:37, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Instrument ID:	ECD7	Calibration:	EE00069
Lab File ID:	05222121ECD7.D	Calibration Date:	05/22/2021
Sequence:	SJE0321	Injection Date:	05/22/21
Lab Sample ID:	SJE0321-SCV5	Injection Time:	20:58
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	262	0.0139192	0.0143559		4.9	+/-20
Aroclor 1221 [2C]	A	250.00	261	0.0133251	0.0137514		4.4	+/-20
Aroclor 1262	A	250.00	253	0.0402931	0.0407449		1.1	+/-20
Aroclor 1262 [2C]	A	250.00	252	0.0961620	0.0967434		0.7	+/-20
Decachlorobiphenyl	A	40.000	39.7	0.7132713	0.7088117		-0.6	+/-20
Tetrachlorometaxylene	A	40.000	41.1	0.9552374	0.9809320		2.7	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.5	1.4343710	1.4172910		-1.2	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.1	0.9862409	0.9650009		-2.2	+/-20

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /210522.b/05222121ECD7.D
Data file 2: /210522.b/210522.b/05222121ECD7.D
Method: \\target\share\chem4\ecd7.i\210522.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV5
Client ID:
Injection Date: 22-MAY-2021 20:58
Report Date: 05/25/2021 08:47
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.074	0.000	144866	5.424	0.000	345727	41.1	39.1	4.8	Tetrachloro-m-xylene
13.178	0.002	169535	13.874	0.004	648797	39.7	39.5	0.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	295364	-0.4
Hexabromobiphenyl	470266	478364	1.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	716532	0.6
Hexabromobiphenyl	867949	915545	5.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.667	0.002	1677	18.3	1	7.081	0.010	15078	40.9
Aroclor-1016	2	7.034	0.000	4823	15.6	2	7.663	0.003	13852	17.1
Aroclor-1016	3	7.183	0.002	2249	17.9	3	7.871	0.003	5670	18.7
Aroclor-1016	4	7.292	0.002	1396	16.6	4	8.043	0.003	3078	16.5
Total Col1Ave (4 peaks):				17.1		Total Col2Ave (4 peaks):			23.3	RPD = 31
Corrected Ave (3 peaks):				16.7		Corrected Ave (3 peaks):			17.4	RPD = 4
Aroclor-1221	1	4.022	-0.001	6055	277.2	1	4.692	-0.000	12493	267.9
Aroclor-1221	2	5.455	0.000	9553	255.2	2	6.085	0.001	28588	261.0
Aroclor-1221	3	5.729	-0.000	24144	254.4	3	6.423	0.001	51294	254.1
Total Col1Ave (3 peaks):				262.3		Total Col2Ave (3 peaks):			261.0	RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.022	0.001	6055	454.0	1	4.692	0.001	12493	423.6
Aroclor-1232	2	5.729	0.000	24144	298.1	2	6.085	-0.000	28588	362.2
Aroclor-1232	3	7.034	0.001	4823	35.4	3	6.423	-0.000	51294	296.3
Aroclor-1232	4	8.610	-0.005	1062	26.0	4	7.663	0.001	13852	38.2
Total Col1Ave (4 peaks):				203.4		Total Col2Ave (4 peaks):			280.1	RPD = 32
Corrected Ave (3 peaks):				119.8		Corrected Ave (3 peaks):			232.2	RPD = 64*
Aroclor-1242	1	6.667	0.002	1677	20.6	1	7.081	0.011	15078	47.4
Aroclor-1242	2	7.034	0.001	4823	18.2	2	7.663	0.003	13852	20.1
Aroclor-1242	3	8.278	0.007	940	25.8	3	8.966	0.008	4328	13.9
Aroclor-1242	4	8.610	-0.001	1062	13.1	4	9.045	0.008	2579	9.4
Total Col1Ave (4 peaks):				19.4		Total Col2Ave (4 peaks):			22.7	RPD = 16
Corrected Ave (3 peaks):				17.3		Corrected Ave (3 peaks):			14.5	RPD = 18
Aroclor-1248	1	7.808	0.002	805	6.5	1	8.121	0.000	2819	10.8
Aroclor-1248	2	7.976	0.003	802	5.2	2	8.537	0.002	2272	6.4
Aroclor-1248	3	8.327	0.005	1117	7.3	3	8.966	0.005	4328	8.5
Aroclor-1248	4	8.610	-0.003	1062	7.8	4	9.393	0.003	7120	13.1
Total Col1Ave (4 peaks):				6.7		Total Col2Ave (4 peaks):			9.7	RPD = 36
Corrected Ave (3 peaks):				6.4		Corrected Ave (3 peaks):			8.5	RPD = 29
Aroclor-1254	1	8.681	-0.000	8014	32.1	1	9.256	0.000	22883	42.2
Aroclor-1254	2	8.749	-0.003	796	8.8	2	9.350	0.003	4670	14.6
Aroclor-1254	3	9.050	0.001	1147	7.5	3	9.781	0.001	4047	9.9
Aroclor-1254	4	9.155	-0.028	10041	33.1	4	9.947	0.018	98893	109.0
Aroclor-1254	5	9.867	-0.009	12222	59.8	5	10.176	0.015	116343	119.5
Total Col1Ave (5 peaks):				28.3		Total Col2Ave (5 peaks):			59.0	RPD = 70*
Corrected Ave (4 peaks):				20.4		Corrected Ave (4 peaks):			43.9	RPD = 73*
Aroclor-1260	1	10.395	0.003	76119	434.1	1	11.446	-0.000	188460	330.1
Aroclor-1260	2	10.711	0.001	62698	347.7	2	11.699	0.002	456681	306.6
Aroclor-1260	3	11.061	0.001	154654	327.4	3	12.280	-0.000	328604	339.3
Aroclor-1260	4	11.463	0.003	49024	203.6	4	12.993	0.002	199946	480.3
Aroclor-1260	5	11.566	0.001	59318	639.1	NS	---			----
Total Col1Ave (5 peaks):				390.4		Total Col2Ave (4 peaks):			364.1	RPD = 7
Corrected Ave (4 peaks):				328.2		Corrected Ave (3 peaks):			325.3	RPD = 1
Aroclor-1262	1	10.395	0.000	76119	253.0	1	10.989	-0.000	230478	250.7
Aroclor-1262	2	11.463	0.000	49024	252.6	2	11.699	-0.001	456681	251.1
Aroclor-1262	3	11.638	-0.000	66180	252.8	3	12.208	0.000	220057	252.3
Aroclor-1262	4	12.286	-0.001	52313	252.8	4	12.993	0.000	199946	252.7
Total Col1Ave (4 peaks):				252.8		Total Col2Ave (4 peaks):			251.7	RPD = 0
Corrected Ave (3 peaks):				252.7		Corrected Ave (3 peaks):			251.3	RPD = 1
Aroclor-1268	1	11.566	-0.001	59318	73.8	1	12.208	0.001	220057	82.7
Aroclor-1268	2	11.638	0.002	66180	81.3	2	12.280	0.005	328604	113.4
Aroclor-1268	3	12.038	0.027	23299	36.4	3	12.658	-0.002	14664	5.8
Aroclor-1268	4	12.780	-0.001	19289	9.6	4	13.468	-0.004	67959	8.3
Total Col1Ave (4 peaks):				50.3		Total Col2Ave (4 peaks):			52.5	RPD = 4

Corrected Ave (3 peaks): 40.0 Corrected Ave (3 peaks): 32.3 RPD = 21

Total PCB Area Col1 (5.174 - 13.076) = 1072965 Col1 Total PCB = 0.4 ppm*

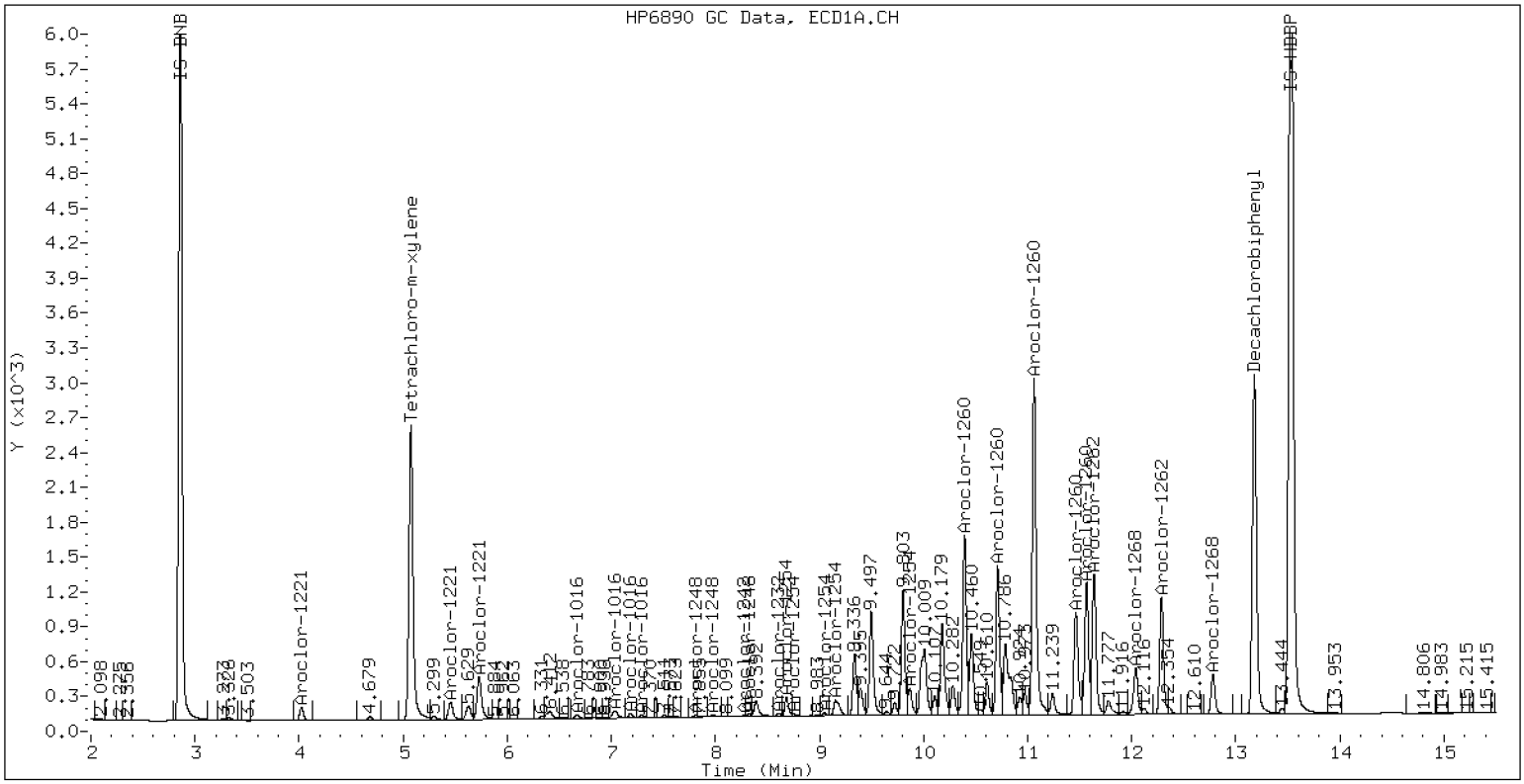
Total PCB Area Col2 (5.174 - 13.076) = 3437225 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

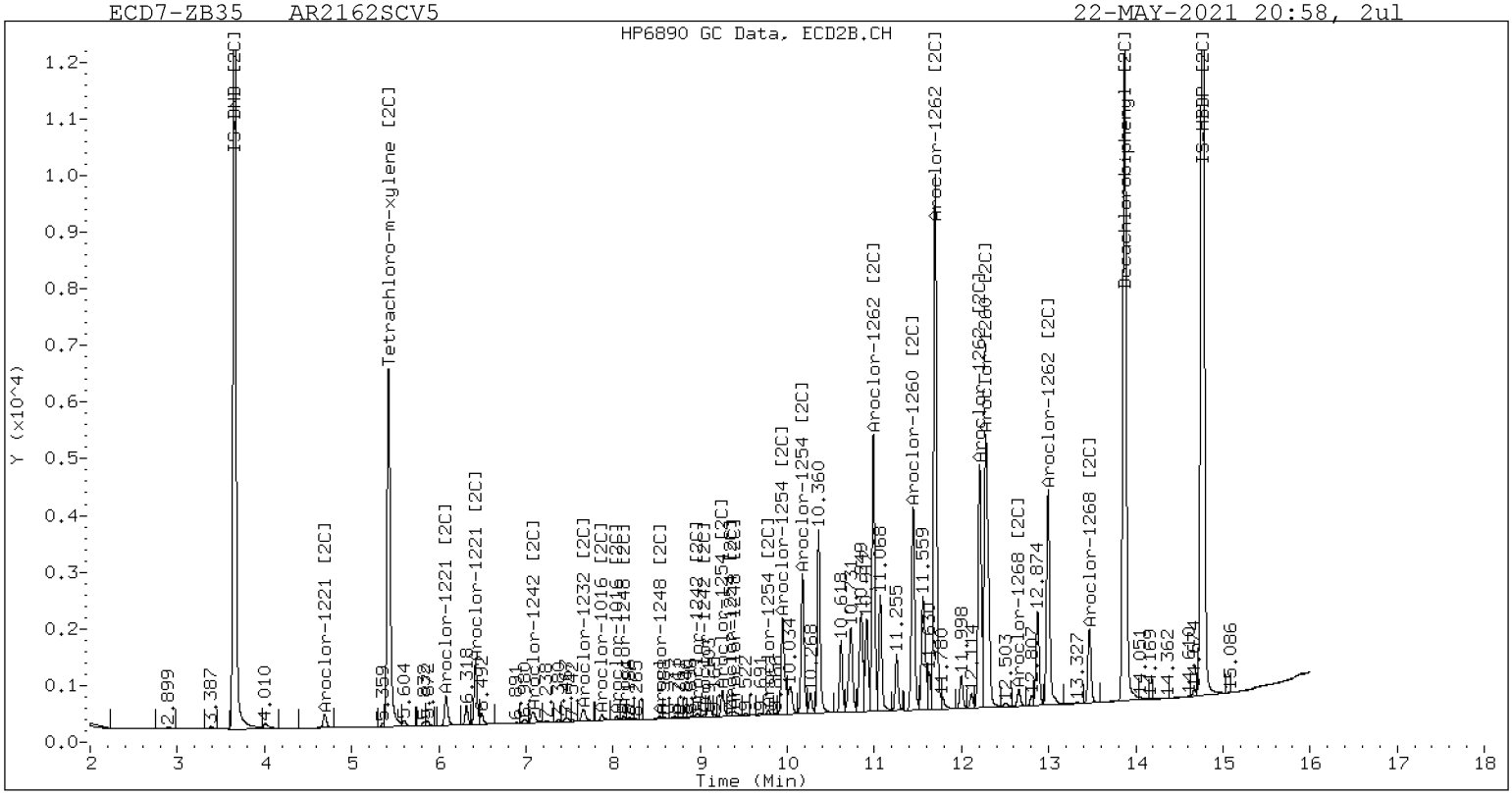
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV5 22-MAY-2021 20:58, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV5 22-MAY-2021 20:58, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Instrument ID:	ECD7	Calibration:	EE00069
Lab File ID:	05222122ECD7.D	Calibration Date:	05/22/2021
Sequence:	SJE0321	Injection Date:	05/22/21
Lab Sample ID:	SJE0321-SCV6	Injection Time:	21:20
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	243	0.0183750	0.0178302		-2.7	+/-20
Aroclor 1232 [2C]	A	250.00	242	0.0179713	0.0176767		-3.3	+/-20
Aroclor 1268	A	250.00	204	0.1782065	0.1458640		-18.5	+/-20
Aroclor 1268 [2C]	A	250.00	206	0.3567300	0.2930884		-17.7	+/-20
Decachlorobiphenyl	A	40.000	59.7	0.7132713	1.0643120		49.2	+/-20
Tetrachlorometaxylene	A	40.000	41.8	0.9552374	0.9985686		4.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	61.1	1.4343710	2.1894990		52.6	+/-20
Tetrachlorometaxylene [2C]	A	40.000	40.5	0.9862409	0.9976669		1.2	+/-20

* Values outside of QC limits

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

Data file 1: /210522.b/05222122ECD7.D
Data file 2: /210522.b/210522.b/05222122ECD7.D
Method: \\target\share\chem4\ecd7.i\210522.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV6
Client ID:
Injection Date: 22-MAY-2021 21:20
Report Date: 05/25/2021 08:47
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.074	-0.000	148239	5.424	-0.000	355344	41.8	40.5	3.3	Tetrachloro-m-xylene
13.178	0.002	255056	13.875	0.005	1001977	59.7	61.1	2.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	296903	0.2
Hexabromobiphenyl	470266	479288	1.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	712350	0.0
Hexabromobiphenyl	867949	915257	5.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.666	0.001	10346	112.3	1	7.071	-0.000	45781	124.8
Aroclor-1016	2	7.034	0.000	34585	111.3	2	7.661	0.001	91604	113.5
Aroclor-1016	3	7.182	0.001	14354	113.7	3	7.870	0.002	34691	114.8
Aroclor-1016	4	7.291	0.002	9485	112.5	4	8.041	0.002	21844	118.1
Total Col1Ave (4 peaks):					112.4	Total Col2Ave (4 peaks):				117.8 RPD = 5
Corrected Ave (3 peaks):					112.0	Corrected Ave (3 peaks):				115.4 RPD = 3
Aroclor-1221	1	4.022	0.000	3391	154.4	1	4.692	-0.000	7248	156.3
Aroclor-1221	2	5.456	0.000	5464	145.2	2	6.086	0.002	18148	166.7
Aroclor-1221	3	5.730	0.000	18154	190.3	3	6.422	0.001	40400	201.3
Total Col1Ave (3 peaks):					163.3	Total Col2Ave (3 peaks):				174.8 RPD = 7
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.022	0.002	3391	252.9	1	4.692	0.001	7248	247.2
Aroclor-1232	2	5.730	0.001	18154	222.9	2	6.086	0.001	18148	231.2
Aroclor-1232	3	7.034	0.001	34585	252.7	3	6.422	-0.000	40400	234.8
Aroclor-1232	4	8.615	0.000	10043	244.4	4	7.661	-0.001	91604	254.3
Total Col1Ave (4 peaks):					243.2	Total Col2Ave (4 peaks):				241.9 RPD = 1
Corrected Ave (3 peaks):					240.0	Corrected Ave (3 peaks):				237.7 RPD = 1
Aroclor-1242	1	6.666	0.001	10346	126.2	1	7.071	-0.000	45781	144.8
Aroclor-1242	2	7.034	0.000	34585	129.9	2	7.661	0.001	91604	133.9
Aroclor-1242	3	8.278	0.006	4145	113.2	3	8.962	0.004	38109	123.2
Aroclor-1242	4	8.615	0.004	10043	122.8	4	9.041	0.004	32198	118.4
Total Col1Ave (4 peaks):					123.0	Total Col2Ave (4 peaks):				130.1 RPD = 6
Corrected Ave (3 peaks):					120.8	Corrected Ave (3 peaks):				125.2 RPD = 4
Aroclor-1248	1	7.808	0.001	9089	73.4	1	8.121	-0.001	18506	71.3
Aroclor-1248	2	7.975	0.002	12739	82.9	2	8.536	0.000	29545	83.7
Aroclor-1248	3	8.325	0.003	10258	66.7	3	8.962	0.001	38109	75.0
Aroclor-1248	4	8.615	0.002	10043	73.8	4	9.391	0.001	44833	82.7
Total Col1Ave (4 peaks):					74.2	Total Col2Ave (4 peaks):				78.1 RPD = 5
Corrected Ave (3 peaks):					71.3	Corrected Ave (3 peaks):				76.3 RPD = 7
Aroclor-1254	1	8.682	0.000	4617	18.4	1	9.256	0.000	10462	19.4
Aroclor-1254	2	8.753	0.000	1862	20.4	2	9.391	0.044	44833	141.0
Aroclor-1254	3	9.051	0.002	1704	11.1	3	9.781	0.001	6029	14.9
Aroclor-1254	4	9.187	0.004	3103	10.2	4	9.932	0.003	13664	15.1
Aroclor-1254	5	9.883	0.007	2229	10.9	5	10.162	0.002	13230	13.7
Total Col1Ave (5 peaks):					14.2	Total Col2Ave (5 peaks):				40.8 RPD = 97*
Corrected Ave (4 peaks):					12.6	Corrected Ave (4 peaks):				15.8 RPD = 22
Aroclor-1260	1	10.395	0.004	30116	171.4	1	11.426	-0.020	123255	215.9
Aroclor-1260	2	10.713	0.002	2096	11.6	2	11.698	0.001	56961	38.3
Aroclor-1260	3	11.062	0.002	16373	34.6	3	12.275	-0.005	585373	604.6
Aroclor-1260	4	11.463	0.003	591	2.5	4	12.993	0.001	214119	514.5
Aroclor-1260	5	11.567	0.003	163395	1757.1	NS	---			----
Total Col1Ave (5 peaks):					395.4	Total Col2Ave (4 peaks):				343.3 RPD = 14
Corrected Ave (4 peaks):					55.0	Corrected Ave (3 peaks):				256.2 RPD = 129*
Aroclor-1262	1	10.395	0.001	30116	99.9	1	10.988	-0.001	87691	95.4
Aroclor-1262	2	11.463	0.000	591	3.0	2	11.698	-0.002	56961	31.3
Aroclor-1262	3	11.636	-0.003	164716	628.0	3	12.209	0.000	570399	654.1
Aroclor-1262	4	12.286	-0.001	66330	319.9	4	12.993	0.000	214119	270.7
Total Col1Ave (4 peaks):					262.7	Total Col2Ave (4 peaks):				262.9 RPD = 0
Corrected Ave (3 peaks):					140.9	Corrected Ave (3 peaks):				132.5 RPD = 6
Aroclor-1268	1	11.567	0.000	163395	203.0	1	12.209	0.001	570399	214.5
Aroclor-1268	2	11.636	-0.001	164716	202.0	2	12.275	0.000	585373	202.0
Aroclor-1268	3	12.012	0.001	130565	203.8	3	12.658	-0.001	514356	202.2
Aroclor-1268	4	12.781	0.000	415210	206.6	4	13.474	0.002	1683012	204.7
Total Col1Ave (4 peaks):					203.9	Total Col2Ave (4 peaks):				205.8 RPD = 1

Corrected Ave (3 peaks): 202.9 Corrected Ave (3 peaks): 202.9 RPD = 0

Total PCB Area Col1 (5.174 - 13.076) = 1390907 Col1 Total PCB = 0.5 ppm*

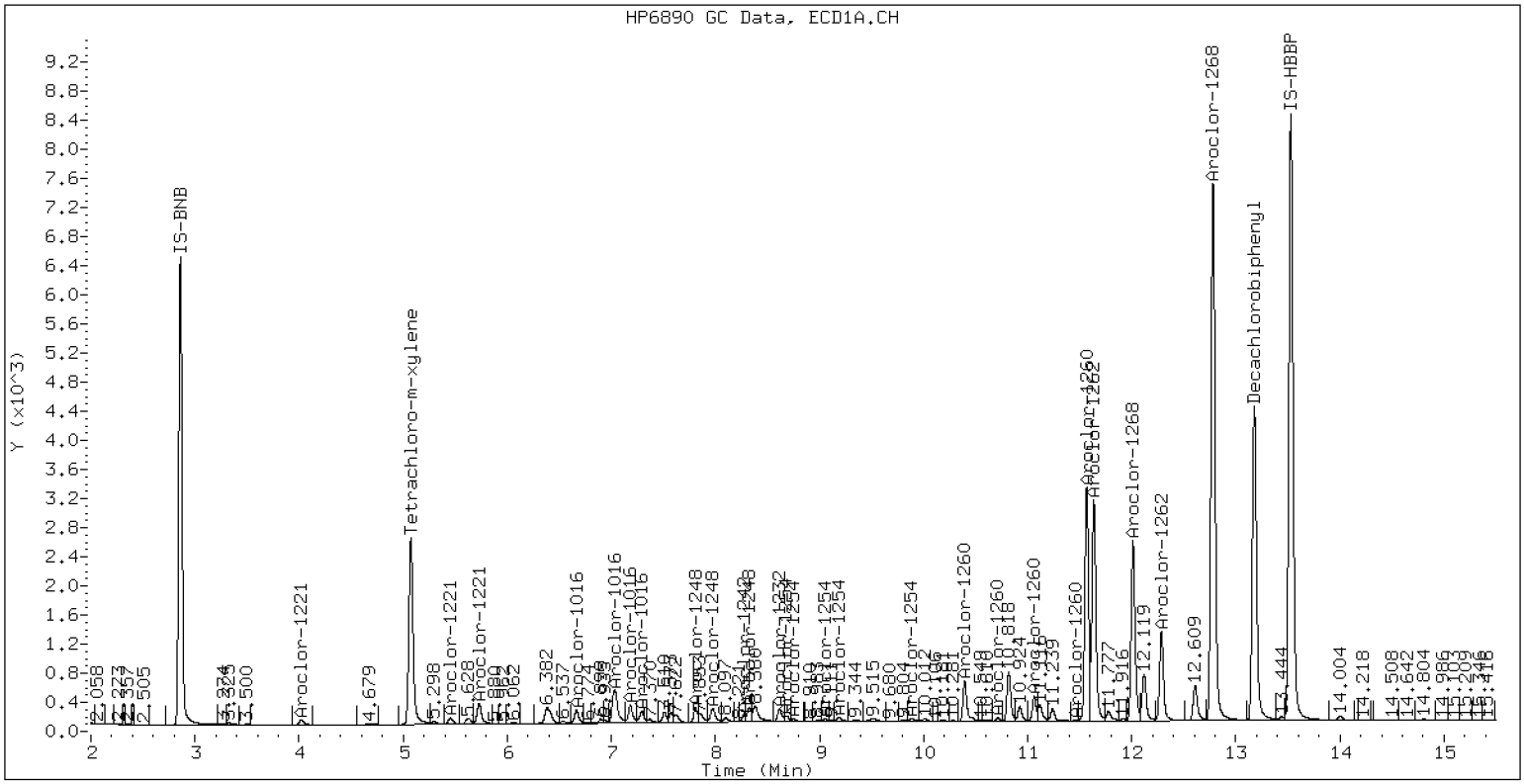
Total PCB Area Col2 (5.174 - 13.076) = 3445589 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

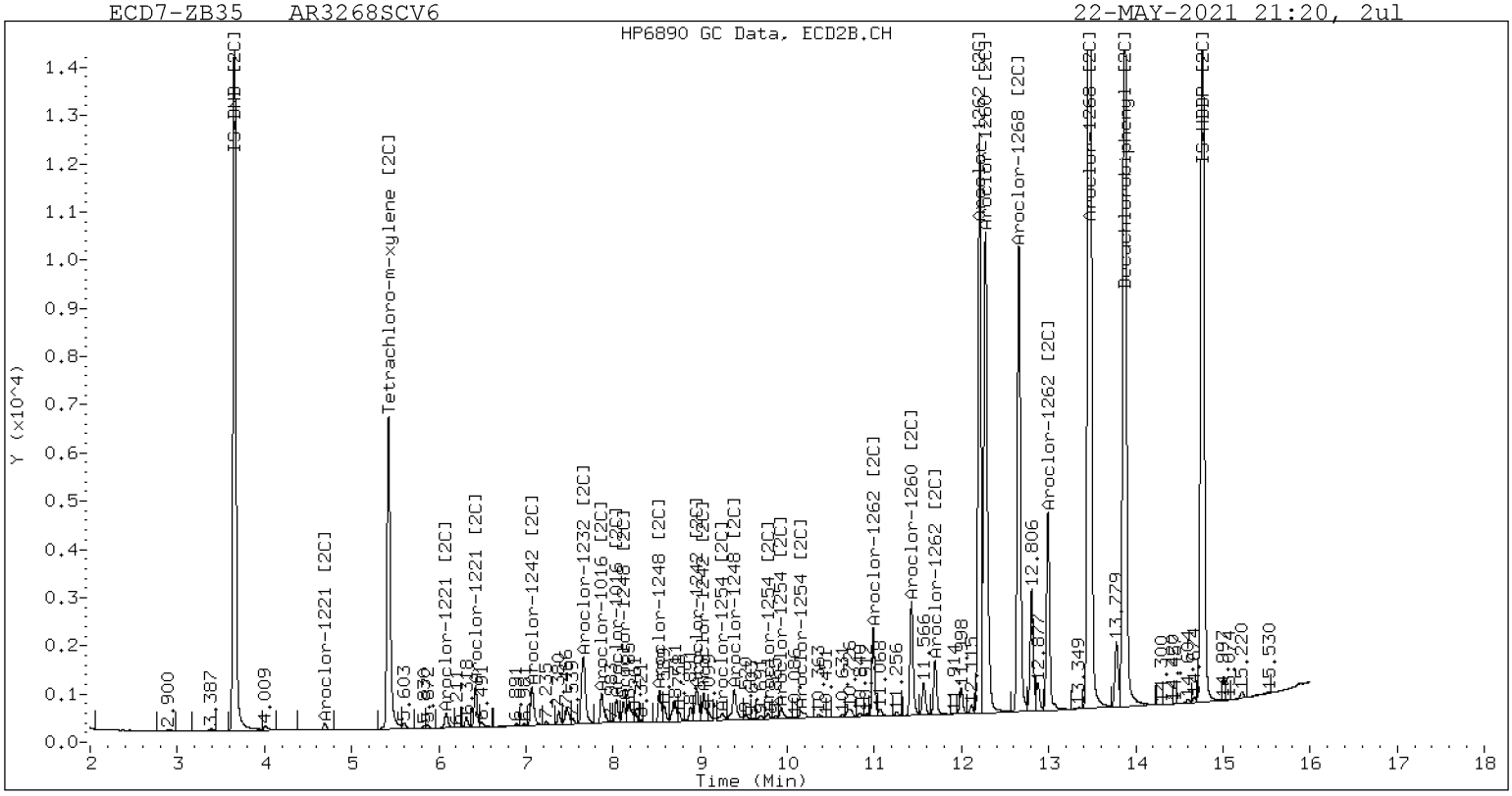
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV6 22-MAY-2021 21:20, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV6 22-MAY-2021 21:20, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Instrument ID:	ECD7	Calibration:	EE00069
Lab File ID:	08062108ECD7.D	Calibration Date:	05/22/2021
Sequence:	SJH0075	Injection Date:	08/06/21
Lab Sample ID:	SJH0075-CCV1	Injection Time:	12:47
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	244	0.0382260	0.0374063		-2.5	+/-20
Aroclor-1248 (1)	A	250.00	259		0.0346420			
Aroclor-1248 (2)	A	250.00	271		0.0449056			
Aroclor-1248 (3)	A	250.00	249		0.0413628			
Aroclor-1248 (4)	A	250.00	196		0.0287147			
Aroclor 1248 [2C]	A	250.00	258	0.0467028	0.0474048		3.1	+/-20
Aroclor-1248 (1) [2C]	A	250.00	287		0.0335223			
Aroclor-1248 (2) [2C]	A	250.00	247		0.0392356			
Aroclor-1248 (3) [2C]	A	250.00	273		0.0624083			
Aroclor-1248 (4) [2C]	A	250.00	224		0.0544527			
Decachlorobiphenyl	A	40.000	42.4	0.7132713	0.7566958		6.0	+/-20
Tetrachlorometaxylene	A	40.000	41.3	0.9552374	0.9870649		3.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	45.4	1.4343710	1.6296740		13.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	40.8	0.9862409	1.0055390		2.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /210806.b/08062108ECD7.D
Data file 2: /210806.b/210806.b/08062108ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV1
Client ID:
Injection Date: 06-AUG-2021 12:47
Report Date: 08/06/2021 13:31
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.068	0.001	123392	5.415	0.000	334934	41.3	40.8	1.3	Tetrachloro-m-xylene
13.165	0.001	150346	13.849	0.000	687223	42.4	45.4	6.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	250018	-15.7
Hexabromobiphenyl	470266	397375	-15.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	666178	-6.4
Hexabromobiphenyl	867949	843387	-2.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1248	1	7.801	0.000	27066	259.4	1	8.108	0.000	69787	287.3
Aroclor-1248	2	7.969	0.000	35085	271.1	2	8.522	0.000	81681	247.3
Aroclor-1248	3	8.321	0.000	32317	249.4	3	8.952	0.000	129922	273.2
Aroclor-1248	4	8.611	0.000	22435	195.8	4	9.380	0.000	113360	223.6

Total Col1Ave (4 peaks): 244.0 Total Col2Ave (4 peaks): 257.9 RPD = 6

Corrected Ave (3 peaks): 234.9 Corrected Ave (3 peaks): 248.0 RPD = 5

CalAmt %D: -2.4 CalAmt %D: 3.1

Total PCB Area Col1 (5.167 - 13.064) = 565761 Col1 Total PCB = 0.3 ppm*

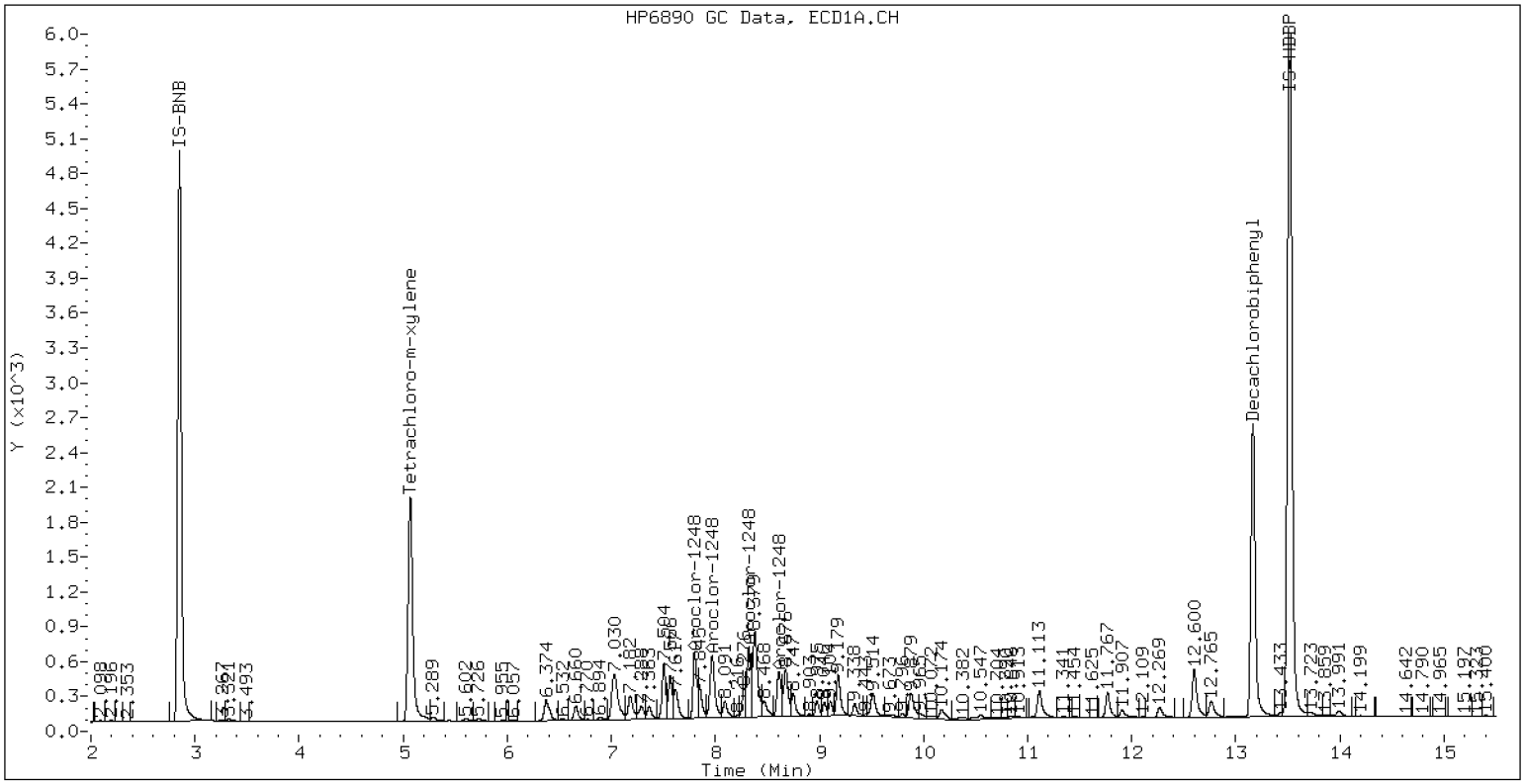
Total PCB Area Col2 (5.167 - 13.064) = 1979125 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

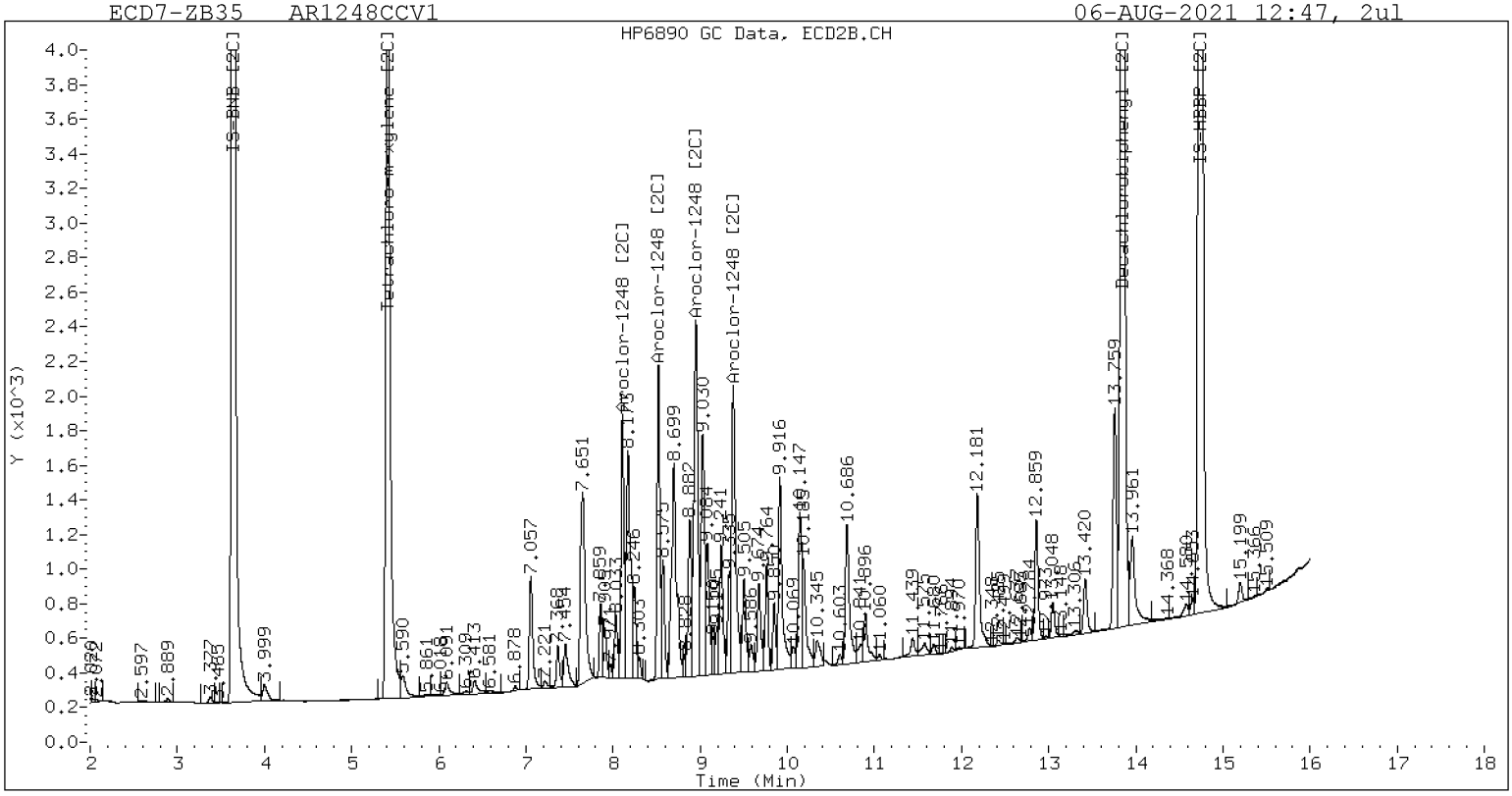
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1 06-AUG-2021 12:47, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV1 06-AUG-2021 12:47, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Instrument ID:	ECD7	Calibration:	EE00069
Lab File ID:	08062109ECD7.D	Calibration Date:	05/22/2021
Sequence:	SJH0075	Injection Date:	08/06/21
Lab Sample ID:	SJH0075-CCV2	Injection Time:	13:08
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	273	0.0413247	0.0446092		9.1	+/-20
Aroclor-1016 (1)	A	250.00	283	0.0248166	0.0281141		13.2	
Aroclor-1016 (2)	A	250.00	264	0.0837401	0.0883348		5.6	
Aroclor-1016 (3)	A	250.00	278	0.0340179	0.0378299		11.2	
Aroclor-1016 (4)	A	250.00	266	0.0227243	0.0241582		6.4	
Aroclor 1016 [2C]	A	250.00	261	0.0466427	0.0469670		4.4	+/-20
Aroclor-1016 (1) [2C]	A	250.00	271	0.0412076	0.0446185		8.4	
Aroclor-1016 (2) [2C]	A	250.00	232	0.0906438	0.0841511		-7.2	
Aroclor-1016 (3) [2C]	A	250.00	269	0.0339420	0.0365119		7.6	
Aroclor-1016 (4) [2C]	A	250.00	272	0.0207774	0.0225864		8.8	
Aroclor 1260	A	250.00	255	0.0388495	0.0398340		1.9	+/-20
Aroclor-1260 (1)	A	250.00	225	0.0293254	0.0263872		-10.0	
Aroclor-1260 (2)	A	250.00	257	0.0301531	0.0310049		2.8	
Aroclor-1260 (3)	A	250.00	262	0.0789877	0.0826567		4.8	
Aroclor-1260 (4)	A	250.00	265	0.0402598	0.0426614		6.0	
Aroclor-1260 (5)	A	250.00	265	0.0155216	0.0164596		6.0	
Aroclor 1260 [2C]	A	250.00	222	0.0752611	0.0635808		-11.3	+/-20
Aroclor-1260 (1) [2C]	A	250.00	255	0.0498903	0.0509479		2.0	
Aroclor-1260 (2) [2C]	A	250.00	190	0.1301480	0.0987973		-24.0	
Aroclor-1260 (3) [2C]	A	250.00	209	0.0846293	0.0706915		-16.4	
Aroclor-1260 (4) [2C]	A	250.00	233	0.0363769	0.0338866		-6.8	
Decachlorobiphenyl	A	40.000	41.8	0.7132713	0.7455511		4.5	+/-20
Tetrachlorometaxylene	A	40.000	43.3	0.9552374	1.0336670		8.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	43.8	1.4343710	1.5689170		9.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	42.7	0.9862409	1.0525760		6.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /210806.b/08062109ECD7.D
Data file 2: /210806.b/210806.b/08062109ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV2
Client ID:
Injection Date: 06-AUG-2021 13:08
Report Date: 08/06/2021 13:32
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.067	0.000	122119	5.414	0.000	326267	43.3	42.7	1.4	Tetrachloro-m-xylene
13.164	0.000	154404	13.849	0.000	688226	41.8	43.8	4.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	236283	-20.3
Hexabromobiphenyl	470266	414201	-11.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	619940	-12.9
Hexabromobiphenyl	867949	877326	1.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.660	0.000	20759	283.2	1	7.058	0.000	86440	270.7
Aroclor-1016	2	7.031	0.000	65225	263.7	2	7.652	0.000	163027	232.1
Aroclor-1016	3	7.178	0.000	27933	278.0	3	7.859	0.000	70735	268.9
Aroclor-1016	4	7.288	0.000	17838	265.8	4	8.030	0.000	43757	271.8

Total Col1Ave (4 peaks): 272.7 Total Col2Ave (4 peaks): 260.9 RPD = 4
Corrected Ave (3 peaks): 269.2 Corrected Ave (3 peaks): 257.2 RPD = 5

CalAmt %D: 9.1 CalAmt %D: 4.3

Aroclor-1260	1	10.383	0.000	34155	225.0	1	11.427	0.000	139681	255.3
Aroclor-1260	2	10.702	0.000	40132	257.1	2	11.678	0.000	270867	189.8
Aroclor-1260	3	11.051	0.000	106989	261.6	3	12.261	0.000	193811	208.8
Aroclor-1260	4	11.451	0.000	55220	264.9	4	12.973	0.000	92905	232.9
Aroclor-1260	5	11.554	0.000	21305	265.1	NS	---			----

Total Col1Ave (5 peaks): 254.7 Total Col2Ave (4 peaks): 221.7 RPD = 14
Corrected Ave (4 peaks): 252.1 Corrected Ave (3 peaks): 210.5 RPD = 18

CalAmt %D: 1.9 CalAmt %D: -11.3

Total PCB Area Col1 (5.167 - 13.064) = 1118627 Col1 Total PCB = 0.5 ppm*

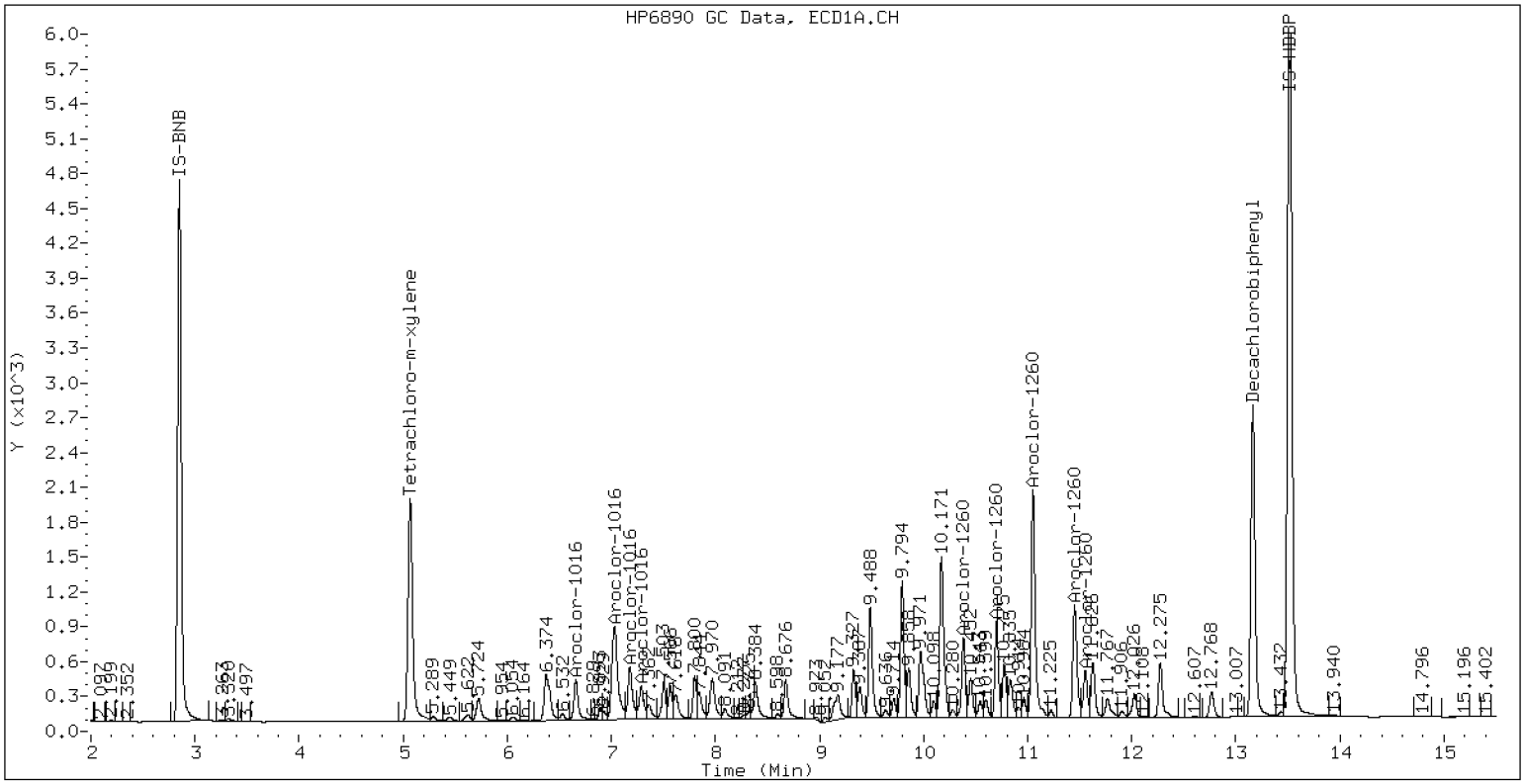
Total PCB Area Col2 (5.167 - 13.064) = 3506151 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

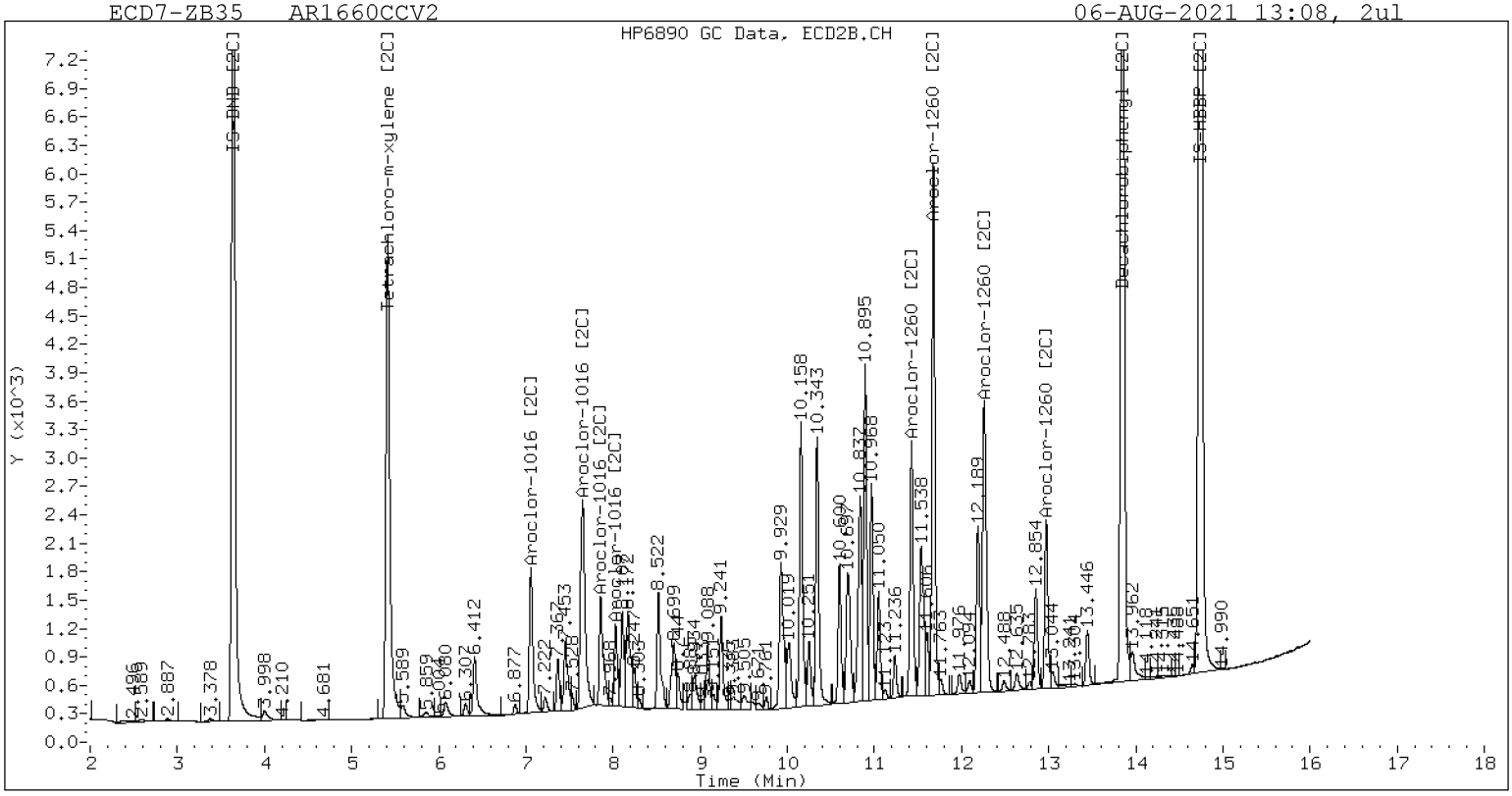
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2 06-AUG-2021 13:08, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2 06-AUG-2021 13:08, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Instrument ID:	ECD7	Calibration:	EE00069
Lab File ID:	08062115ECD7.D	Calibration Date:	05/22/2021
Sequence:	SJH0075	Injection Date:	08/06/21
Lab Sample ID:	SJH0075-CCV3	Injection Time:	16:33
Sequence Name:	AR1242CCV3		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	243	0.0314312	0.0321246		-2.7	+/-20
Aroclor-1242 (1)	A	250.00	276		0.0243694			
Aroclor-1242 (2)	A	250.00	263		0.0755550			
Aroclor-1242 (3)	A	250.00	199		0.0078602			
Aroclor-1242 (4)	A	250.00	235		0.0207137			
Aroclor 1242 [2C]	A	250.00	271	0.0444064	0.0472654		8.5	+/-20
Aroclor-1242 (1) [2C]	A	250.00	275		0.0390872			
Aroclor-1242 (2) [2C]	A	250.00	252		0.0773634			
Aroclor-1242 (3) [2C]	A	250.00	263		0.0365321			
Aroclor-1242 (4) [2C]	A	250.00	295		0.0360787			
Decachlorobiphenyl	A	40.000	45.7	0.7132713	0.8145609		14.3	+/-20
Tetrachlorometaxylene	A	40.000	45.3	0.9552374	1.0809870		13.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	48.2	1.4343710	1.7287510		20.5	+/-20 *
Tetrachlorometaxylene [2C]	A	40.000	44.2	0.9862409	1.0894480		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: /210806.b/08062115ECD7.D
Data file 2: /210806.b/210806.b/08062115ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV3
Client ID:
Injection Date: 06-AUG-2021 16:33
Report Date: 08/11/2021 08:38
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.068	-0.000	131762	5.414	-0.000	365599	45.3	44.2	2.4	Tetrachloro-m-xylene
13.163	-0.001	142226	13.850	0.003	656916	45.7	48.2	5.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	243781	-17.8
Hexabromobiphenyl	470266	349209	-25.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	671164	-5.7
Hexabromobiphenyl	867949	759989	-12.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.659	0.000	18565	275.8	1	7.058	0.000	81981	275.1
Aroclor-1242	2	7.031	-0.000	57559	263.3	2	7.651	-0.000	162261	251.7
Aroclor-1242	3	8.272	-0.005	5988	199.2	3	8.951	-0.000	76622	263.0
Aroclor-1242	4	8.611	-0.003	15780	235.1	4	9.031	-0.001	75671	295.3

Total Col1Ave (4 peaks): 243.3 Total Col2Ave (4 peaks): 271.3 RPD = 11

Corrected Ave (3 peaks): 232.5 Corrected Ave (3 peaks): 263.3 RPD = 12

CalAmt %D: -2.7 CalAmt %D: 8.5

Total PCB Area Col1 (5.168 - 13.065) = 432045 Col1 Total PCB = 0.2 ppm*

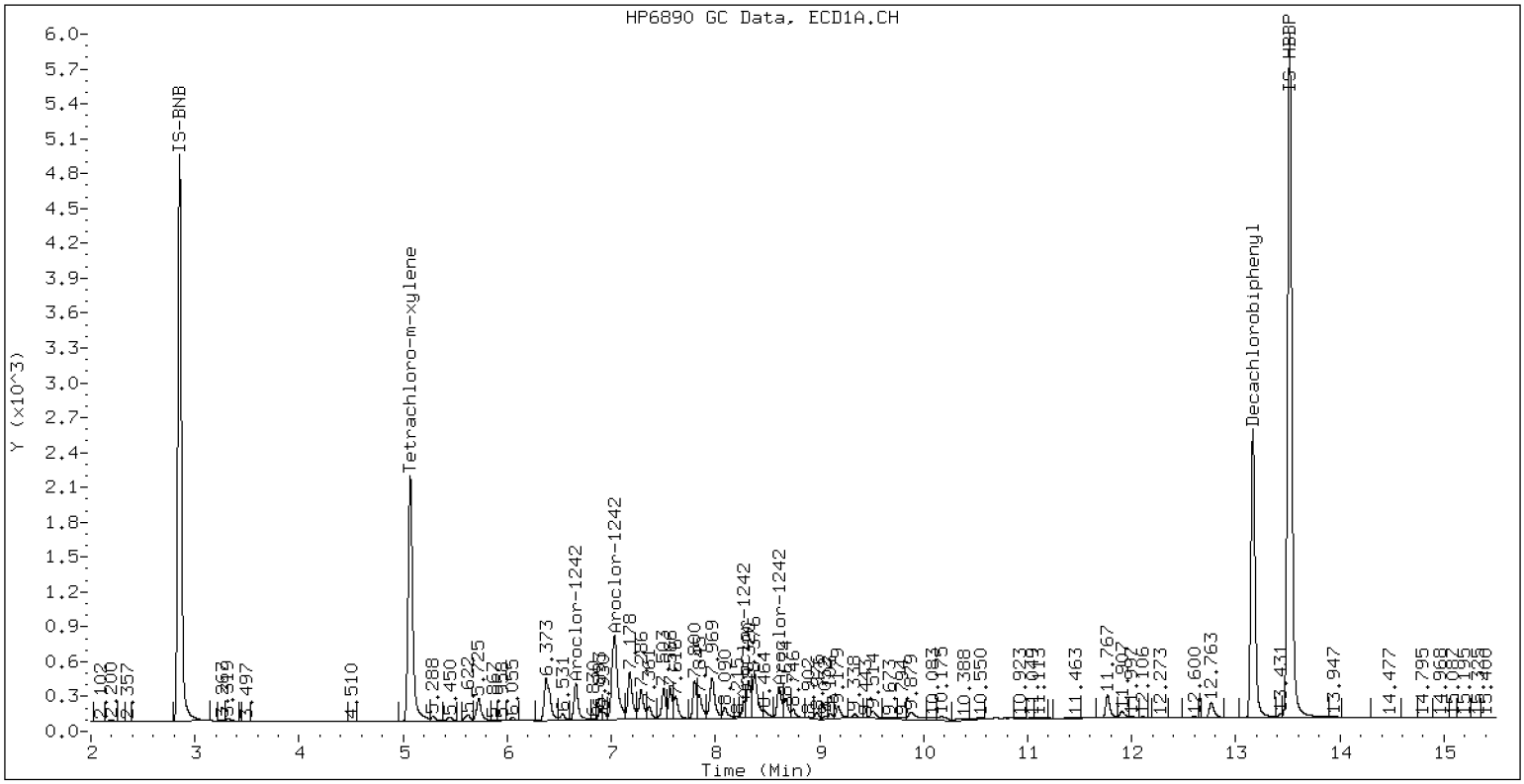
Total PCB Area Col2 (5.168 - 13.065) = 1682486 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

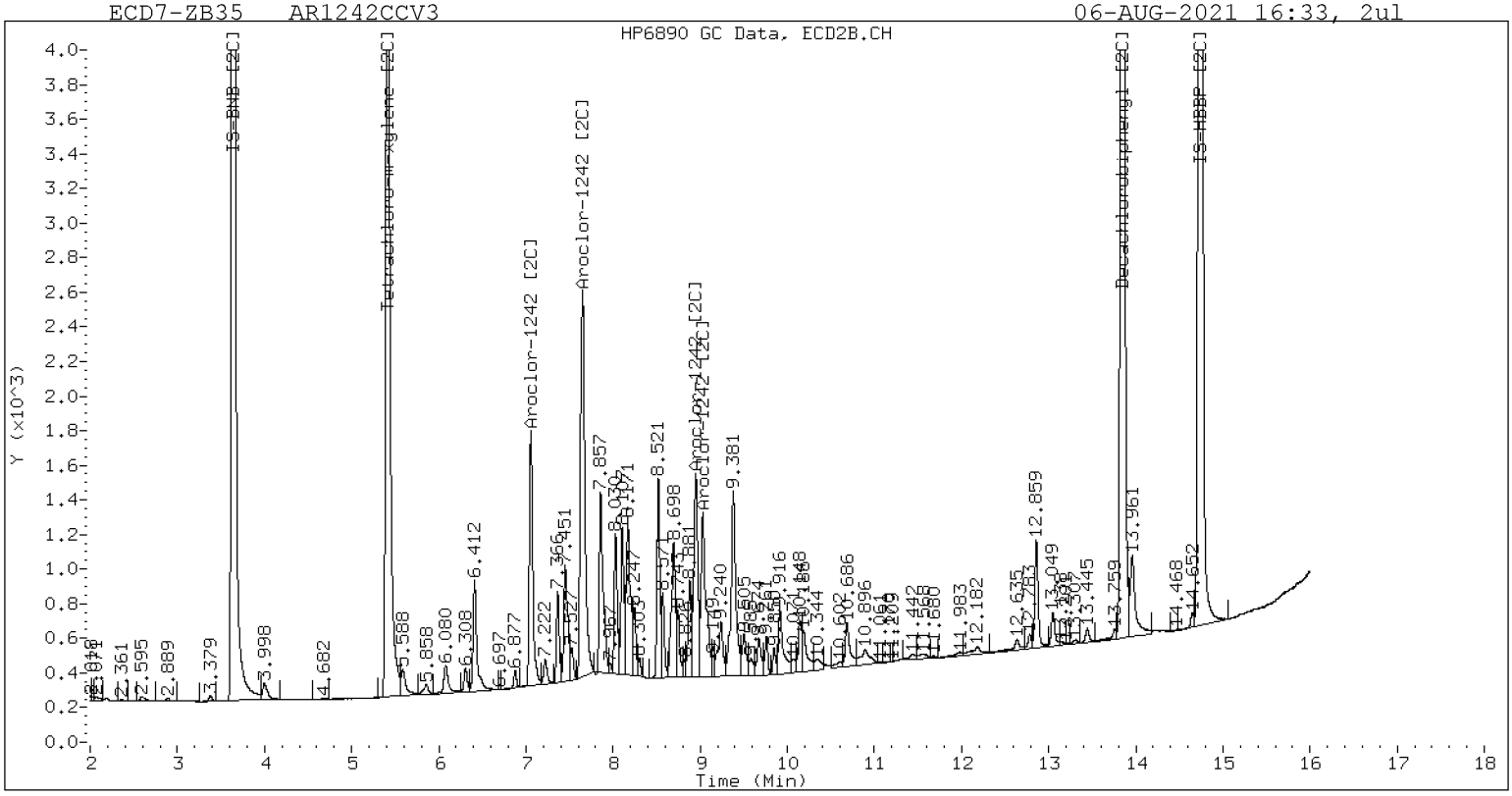
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV3 06-AUG-2021 16:33, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV3 06-AUG-2021 16:33, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Instrument ID:	ECD7	Calibration:	EE00069
Lab File ID:	08062116ECD7.D	Calibration Date:	05/22/2021
Sequence:	SJH0075	Injection Date:	08/06/21
Lab Sample ID:	SJH0075-CCV4	Injection Time:	16:54
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	273	0.0413247	0.0446614		9.1	+/-20
Aroclor-1016 (1)	A	250.00	283	0.0248166	0.0280647		13.2	
Aroclor-1016 (2)	A	250.00	265	0.0837401	0.0886807		6.0	
Aroclor-1016 (3)	A	250.00	278	0.0340179	0.0378070		11.2	
Aroclor-1016 (4)	A	250.00	265	0.0227243	0.0240930		6.0	
Aroclor 1016 [2C]	A	250.00	260	0.0466427	0.0466904		3.8	+/-20
Aroclor-1016 (1) [2C]	A	250.00	269	0.0412076	0.0443334		7.6	
Aroclor-1016 (2) [2C]	A	250.00	230	0.0906438	0.0835469		-8.0	
Aroclor-1016 (3) [2C]	A	250.00	268	0.0339420	0.0363325		7.2	
Aroclor-1016 (4) [2C]	A	250.00	271	0.0207774	0.0225487		8.4	
Aroclor 1260	A	250.00	266	0.0388495	0.0415953		6.4	+/-20
Aroclor-1260 (1)	A	250.00	240	0.0293254	0.0281865		-4.0	
Aroclor-1260 (2)	A	250.00	270	0.0301531	0.0326193		8.0	
Aroclor-1260 (3)	A	250.00	273	0.0789877	0.0862113		9.2	
Aroclor-1260 (4)	A	250.00	272	0.0402598	0.0438954		8.8	
Aroclor-1260 (5)	A	250.00	275	0.0155216	0.0170641		10.0	
Aroclor 1260 [2C]	A	250.00	233	0.0752611	0.0670554		-7.0	+/-20
Aroclor-1260 (1) [2C]	A	250.00	267	0.0498903	0.0533584		6.8	
Aroclor-1260 (2) [2C]	A	250.00	204	0.1301480	0.1060608		-18.4	
Aroclor-1260 (3) [2C]	A	250.00	217	0.0846293	0.0735027		-13.2	
Aroclor-1260 (4) [2C]	A	250.00	242	0.0363769	0.0352998		-3.2	
Decachlorobiphenyl	A	40.000	42.1	0.7132713	0.7506883		5.3	+/-20
Tetrachlorometaxylene	A	40.000	43.3	0.9552374	1.0333850		8.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	42.4	1.4343710	1.5213620		6.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	42.3	0.9862409	1.0423020		5.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /210806.b/08062116ECD7.D
Data file 2: /210806.b/210806.b/08062116ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV4
Client ID:
Injection Date: 06-AUG-2021 16:54
Report Date: 08/11/2021 08:38
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.068	0.000	123349	5.414	-0.000	338815	43.3	42.3	2.3	Tetrachloro-m-xylene
13.164	-0.001	146153	13.849	0.001	632221	42.1	42.4	0.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	238728	-19.5
Hexabromobiphenyl	470266	389384	-17.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	650128	-8.7
Hexabromobiphenyl	867949	831125	-4.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.658	-0.001	20937	282.7	1	7.058	-0.000	90070	269.0
Aroclor-1016	2	7.032	-0.000	66158	264.7	2	7.650	-0.002	169738	230.4
Aroclor-1016	3	7.177	-0.000	28205	277.8	3	7.858	-0.001	73815	267.6
Aroclor-1016	4	7.286	-0.001	17974	265.1	4	8.030	-0.000	45811	271.3
Total Col1Ave (4 peaks):				272.6		Total Col2Ave (4 peaks):			259.6	RPD = 5
Corrected Ave (3 peaks):				269.2		Corrected Ave (3 peaks):			255.7	RPD = 5
CalAmt %D:				9.0		CalAmt %D:			3.8	
Aroclor-1260	1	10.382	-0.001	34298	240.3	1	11.427	-0.001	138586	267.4
Aroclor-1260	2	10.701	-0.000	39692	270.4	2	11.678	-0.000	275468	203.7
Aroclor-1260	3	11.051	-0.001	104904	272.9	3	12.261	-0.001	190906	217.1
Aroclor-1260	4	11.452	-0.000	53413	272.6	4	12.972	0.000	91683	242.6
Aroclor-1260	5	11.555	0.001	20764	274.8	NS	---			----
Total Col1Ave (5 peaks):				266.2		Total Col2Ave (4 peaks):			232.7	RPD = 13
Corrected Ave (4 peaks):				264.0		Corrected Ave (3 peaks):			221.2	RPD = 18
CalAmt %D:				6.5		CalAmt %D:			-6.9	

Total PCB Area Col1 (5.168 - 13.065) = 1117029 Col1 Total PCB = 0.5 ppm*

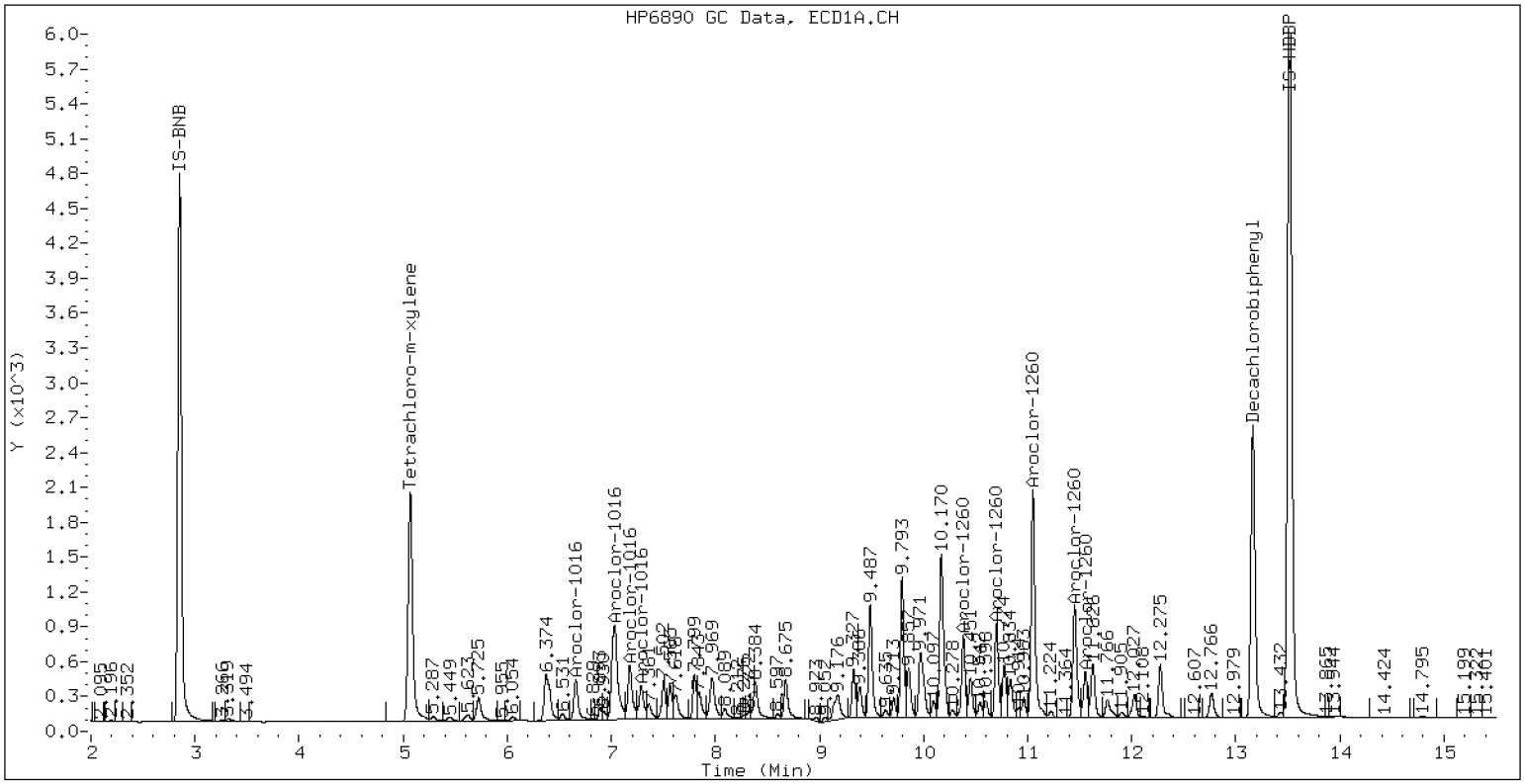
Total PCB Area Col2 (5.168 - 13.065) = 3545828 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

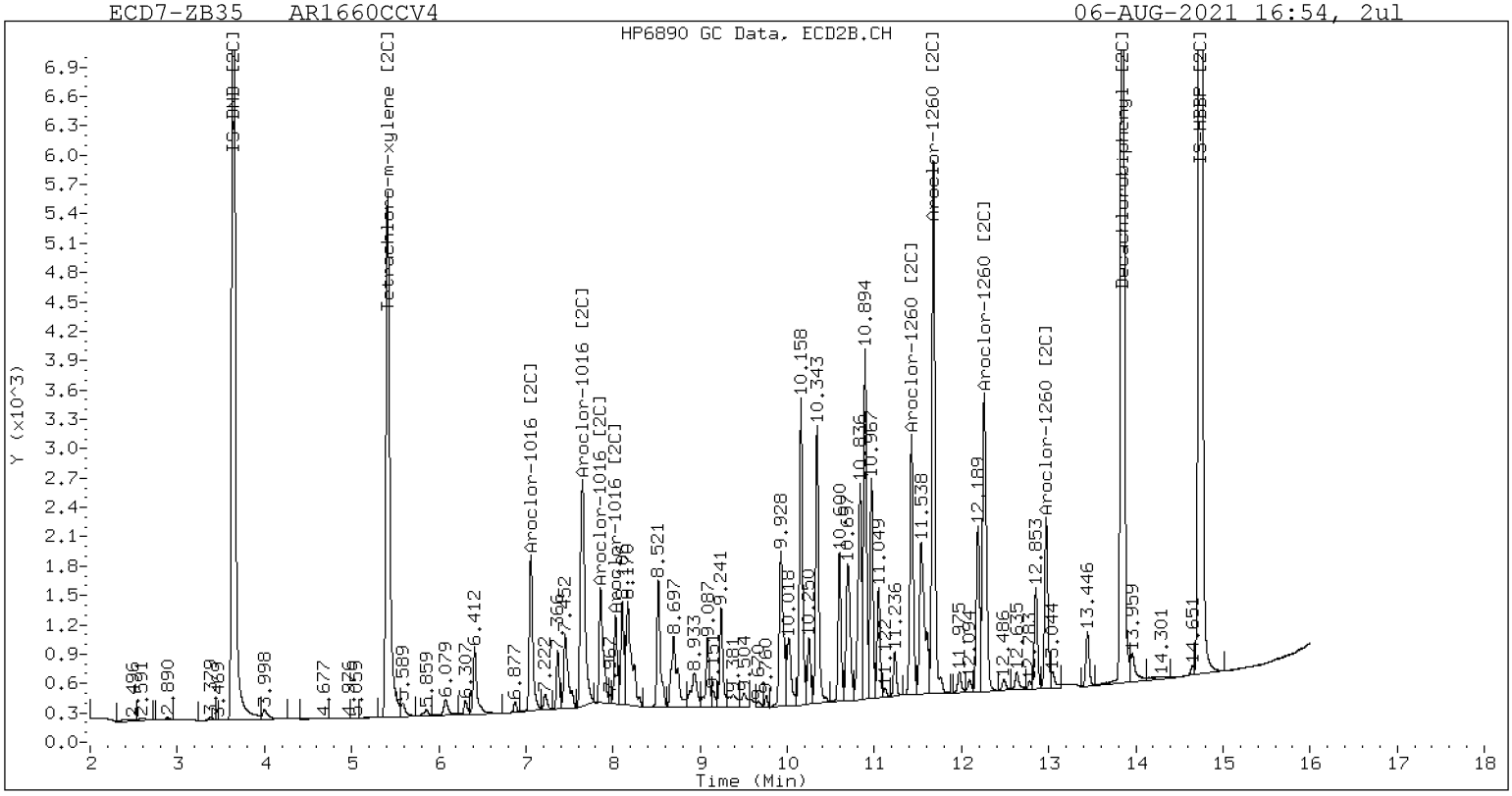
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV4 06-AUG-2021 16:54, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV4 06-AUG-2021 16:54, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Instrument ID:	ECD7	Calibration:	EE00069
Lab File ID:	08062130ECD7.D	Calibration Date:	05/22/2021
Sequence:	SJH0075	Injection Date:	08/06/21
Lab Sample ID:	SJH0075-CCV5	Injection Time:	21:40
Sequence Name:	AR1254CCV5		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	235	0.0542238	0.0512167		-5.8	+/-20
Aroclor-1254 (1)	A	250.00	243		0.0657774			
Aroclor-1254 (2)	A	250.00	274		0.0269840			
Aroclor-1254 (3)	A	250.00	163		0.0270198			
Aroclor-1254 (4)	A	250.00	245		0.0805240			
Aroclor-1254 (5)	A	250.00	252		0.0557783			
Aroclor 1254 [2C]	A	250.00	242	0.0703814	0.0687178		-3.1	+/-20
Aroclor-1254 (1) [2C]	A	250.00	243		0.0588142			
Aroclor-1254 (2) [2C]	A	250.00	255		0.0364015			
Aroclor-1254 (3) [2C]	A	250.00	217		0.0395477			
Aroclor-1254 (4) [2C]	A	250.00	232		0.0941162			
Aroclor-1254 (5) [2C]	A	250.00	264		0.1147092			
Decachlorobiphenyl	A	40.000	37.9	0.7132713	0.6753125		-5.3	+/-20
Tetrachlorometaxylene	A	40.000	42.8	0.9552374	1.0225980		7.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	41.9	1.4343710	1.5019010		4.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	41.4	0.9862409	1.0201580		3.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /210806.b/08062130ECD7.D
Data file 2: /210806.b/210806.b/08062130ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254CCV5
Client ID:
Injection Date: 06-AUG-2021 21:40
Report Date: 08/11/2021 08:39
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.067	-0.001	173905	5.413	-0.001	491983	42.8	41.4	3.4	Tetrachloro-m-xylene
13.165	0.000	207247	13.849	0.002	1049453	37.9	41.9	10.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	340124	14.7
Hexabromobiphenyl	470266	613781	30.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	964523	35.5
Hexabromobiphenyl	867949	1397500	61.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	8.675	0.000	69914	243.1	1	9.240	0.000	177274	242.7
Aroclor-1254	2	8.746	0.000	28681	273.9	2	9.332	0.000	109719	254.8
Aroclor-1254	3	9.042	0.000	28719	162.9	3	9.763	0.000	119202	216.9
Aroclor-1254	4	9.176	0.000	85588	245.3	4	9.914	0.000	283679	232.2
Aroclor-1254	5	9.868	0.000	59286	252.1	5	10.149	0.000	345749	263.8

Total Col1Ave (5 peaks): 235.5 Total Col2Ave (5 peaks): 242.1 RPD = 3

Corrected Ave (4 peaks): 225.9 Corrected Ave (4 peaks): 236.6 RPD = 5

CalAmt %D: -5.8 CalAmt %D: -3.2

Total PCB Area Col1 (5.168 - 13.065) = 878837 Col1 Total PCB = 0.3 ppm*

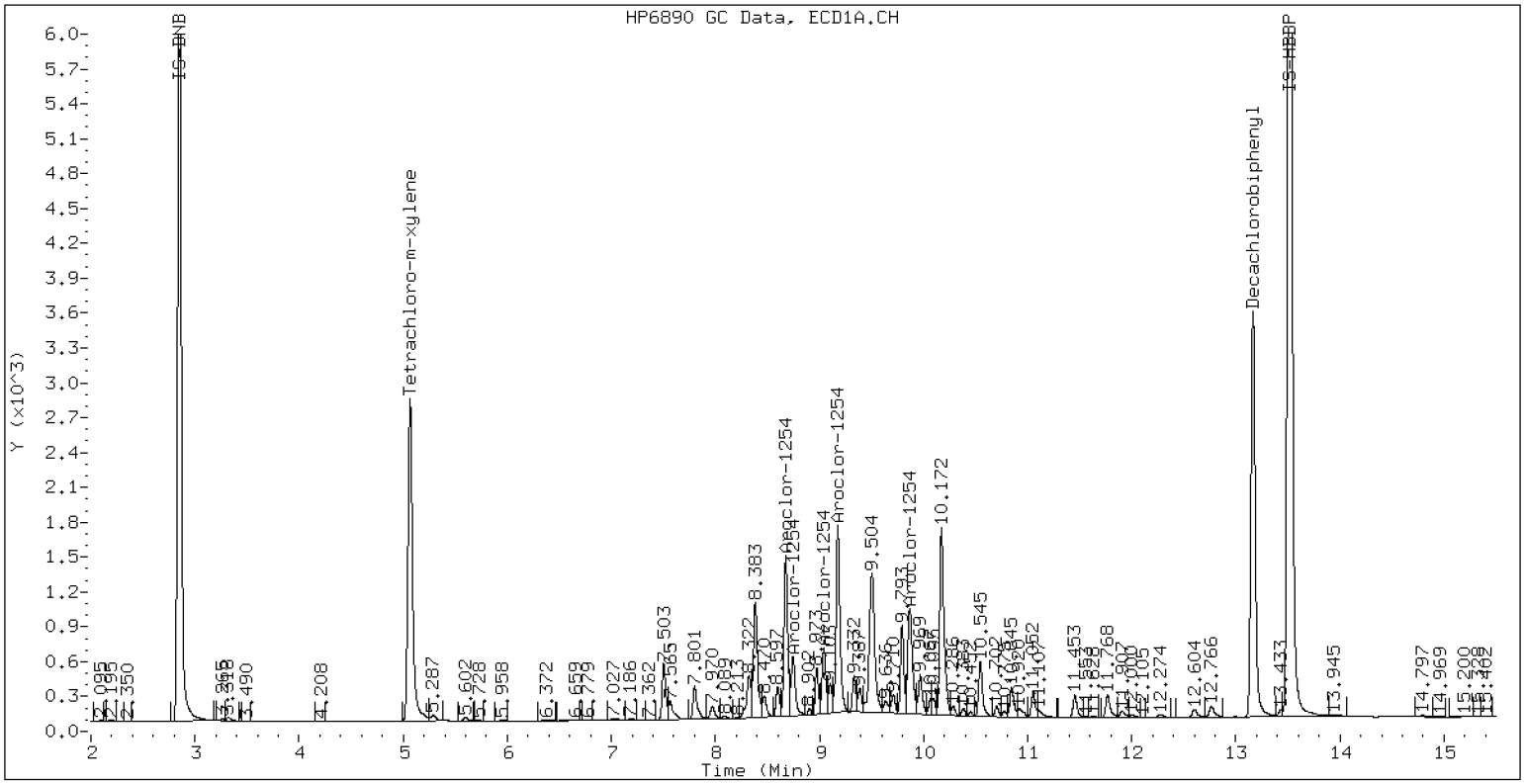
Total PCB Area Col2 (5.168 - 13.065) = 3534797 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

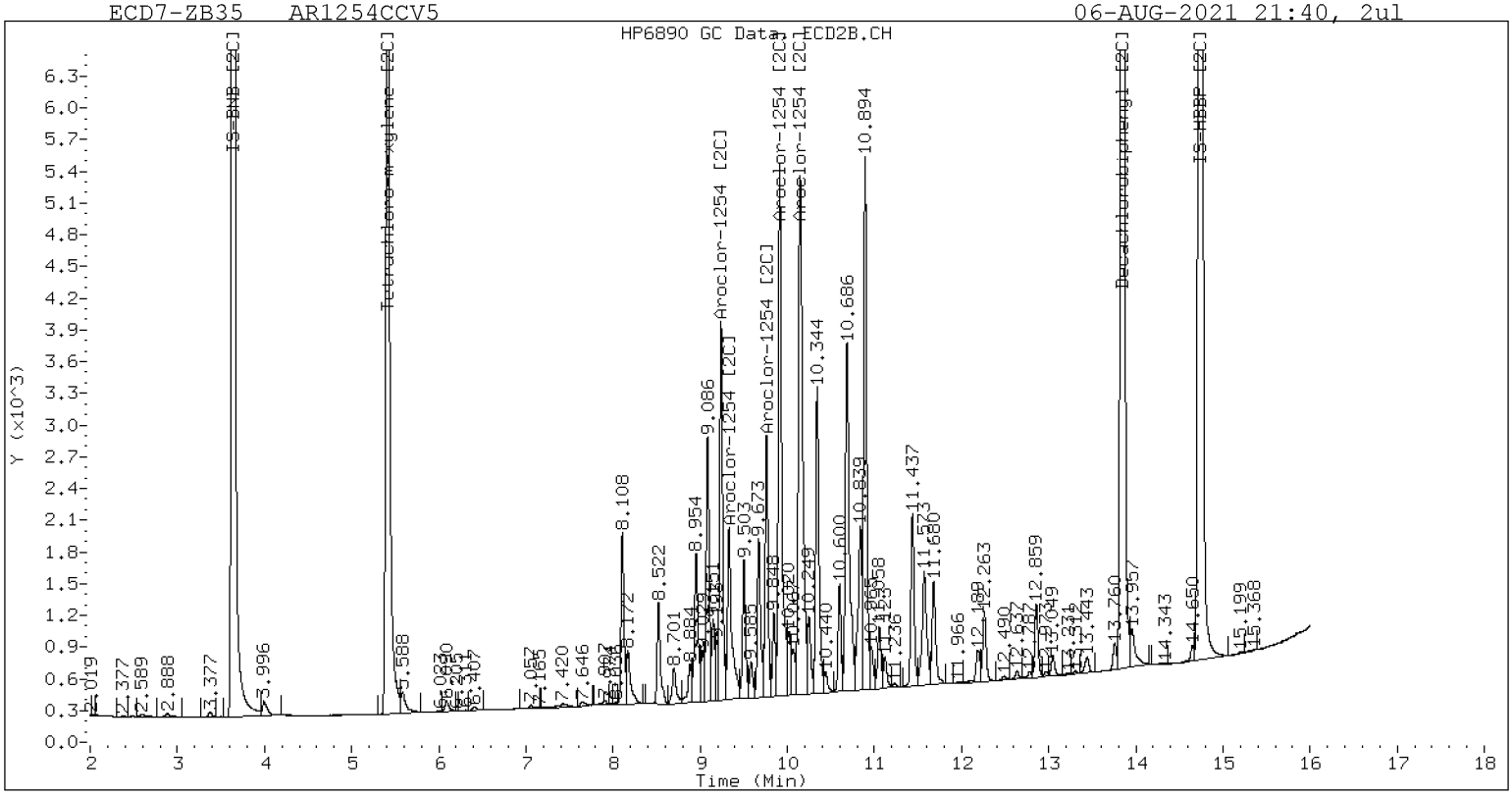
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCV5 06-AUG-2021 21:40, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254CCV5 06-AUG-2021 21:40, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Instrument ID:	ECD7	Calibration:	EE00069
Lab File ID:	08062131ECD7.D	Calibration Date:	05/22/2021
Sequence:	SJH0075	Injection Date:	08/06/21
Lab Sample ID:	SJH0075-CCV6	Injection Time:	22:01
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	271	0.0413247	0.0443813		8.3	+/-20
Aroclor-1016 (1)	A	250.00	280	0.0248166	0.0278313		12.0	
Aroclor-1016 (2)	A	250.00	263	0.0837401	0.0880327		5.2	
Aroclor-1016 (3)	A	250.00	277	0.0340179	0.0377486		10.8	
Aroclor-1016 (4)	A	250.00	263	0.0227243	0.0239126		5.2	
Aroclor 1016 [2C]	A	250.00	258	0.0466427	0.0463676		3.2	+/-20
Aroclor-1016 (1) [2C]	A	250.00	269	0.0412076	0.0443438		7.6	
Aroclor-1016 (2) [2C]	A	250.00	227	0.0906438	0.0824702		-9.2	
Aroclor-1016 (3) [2C]	A	250.00	266	0.0339420	0.0361826		6.4	
Aroclor-1016 (4) [2C]	A	250.00	270	0.0207774	0.0224738		8.0	
Aroclor 1260	A	250.00	255	0.0388495	0.0398384		1.8	+/-20
Aroclor-1260 (1)	A	250.00	224	0.0293254	0.0262875		-10.4	
Aroclor-1260 (2)	A	250.00	257	0.0301531	0.0310446		2.8	
Aroclor-1260 (3)	A	250.00	262	0.0789877	0.0827566		4.8	
Aroclor-1260 (4)	A	250.00	264	0.0402598	0.0426013		5.6	
Aroclor-1260 (5)	A	250.00	266	0.0155216	0.0165020		6.4	
Aroclor 1260 [2C]	A	250.00	223	0.0752611	0.0638751		-10.8	+/-20
Aroclor-1260 (1) [2C]	A	250.00	256	0.0498903	0.0510598		2.4	
Aroclor-1260 (2) [2C]	A	250.00	191	0.1301480	0.0992696		-23.6	
Aroclor-1260 (3) [2C]	A	250.00	210	0.0846293	0.0709401		-16.0	
Aroclor-1260 (4) [2C]	A	250.00	235	0.0363769	0.0342309		-6.0	
Decachlorobiphenyl	A	40.000	42.2	0.7132713	0.7526291		5.5	+/-20
Tetrachlorometaxylene	A	40.000	43.0	0.9552374	1.0271330		7.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	43.8	1.4343710	1.5712270		9.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	42.1	0.9862409	1.0373530		5.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /210806.b/08062131ECD7.D
Data file 2: /210806.b/210806.b/08062131ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV6
Client ID:
Injection Date: 06-AUG-2021 22:01
Report Date: 08/11/2021 08:39
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.067	-0.001	126985	5.413	-0.001	352406	43.0	42.1	2.2	Tetrachloro-m-xylene
13.163	-0.001	162563	13.847	-0.001	744379	42.2	43.8	3.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	247261	-16.6
Hexabromobiphenyl	470266	431987	-8.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	679433	-4.6
Hexabromobiphenyl	867949	947513	9.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.658	-0.001	21505	280.4	1	7.058	0.000	94152	269.0
Aroclor-1016	2	7.030	-0.002	68022	262.8	2	7.652	0.000	175103	227.5
Aroclor-1016	3	7.178	0.000	29168	277.4	3	7.857	-0.001	76824	266.5
Aroclor-1016	4	7.287	-0.000	18477	263.1	4	8.030	0.000	47717	270.4
Total Col1Ave (4 peaks):				270.9		Total Col2Ave (4 peaks):			258.3	RPD = 5
Corrected Ave (3 peaks):				267.8		Corrected Ave (3 peaks):			254.3	RPD = 5
CalAmt %D:				8.4		CalAmt %D:			3.3	
Aroclor-1260	1	10.383	0.000	35487	224.1	1	11.426	-0.002	151187	255.9
Aroclor-1260	2	10.701	-0.000	41909	257.4	2	11.677	-0.001	293935	190.7
Aroclor-1260	3	11.050	-0.002	111718	261.9	3	12.261	-0.001	210052	209.6
Aroclor-1260	4	11.451	-0.001	57510	264.5	4	12.972	-0.000	101357	235.3
Aroclor-1260	5	11.555	0.001	22277	265.8	NS	---			----
Total Col1Ave (5 peaks):				254.8		Total Col2Ave (4 peaks):			222.8	RPD = 13
Corrected Ave (4 peaks):				252.0		Corrected Ave (3 peaks):			211.8	RPD = 17
CalAmt %D:				1.9		CalAmt %D:			-10.9	

Total PCB Area Col1 (5.168 - 13.065) = 1165811 Col1 Total PCB = 0.5 ppm*

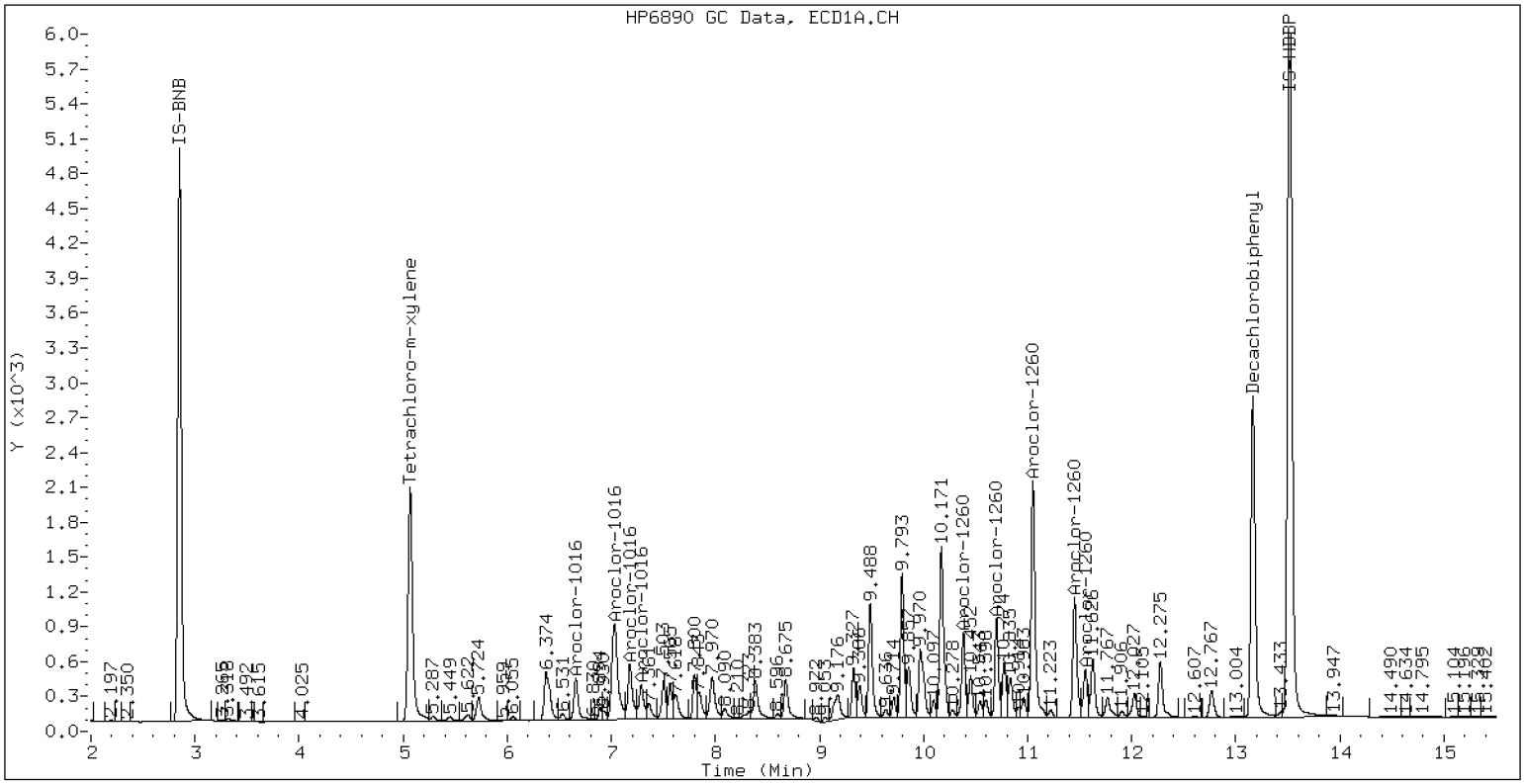
Total PCB Area Col2 (5.168 - 13.065) = 3806186 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

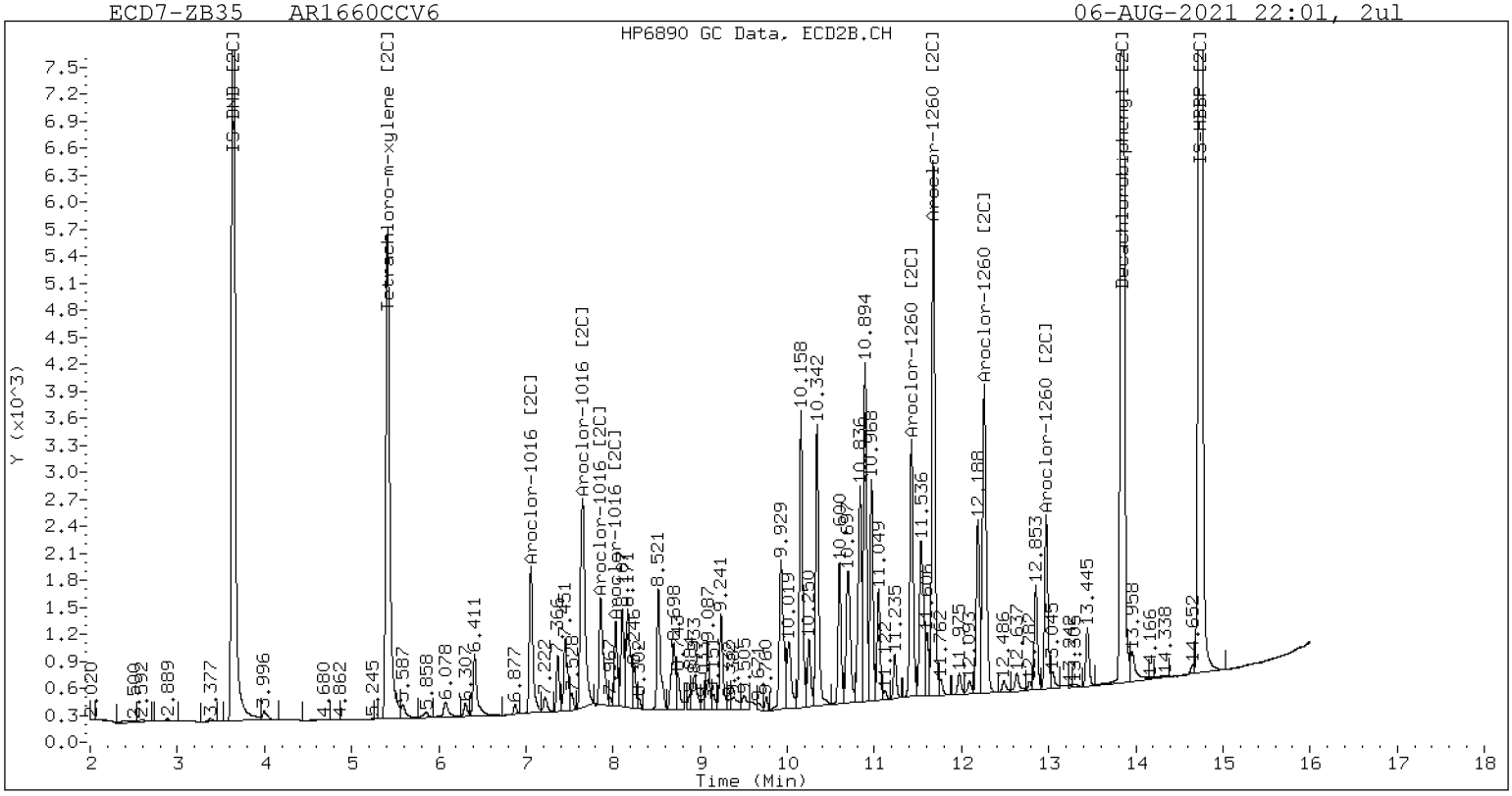
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV6 06-AUG-2021 22:01, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV6 06-AUG-2021 22:01, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Instrument ID:	ECD7	Calibration:	EE00069
Lab File ID:	08062140ECD7.D	Calibration Date:	05/22/2021
Sequence:	SJH0075	Injection Date:	08/07/21
Lab Sample ID:	SJH0075-CCV7	Injection Time:	01:05
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	245	0.0382260	0.0375143		-2.2	+/-20
Aroclor-1248 (1)	A	250.00	257		0.0342882			
Aroclor-1248 (2)	A	250.00	270		0.0446869			
Aroclor-1248 (3)	A	250.00	256		0.0424763			
Aroclor-1248 (4)	A	250.00	195		0.0286057			
Aroclor 1248 [2C]	A	250.00	262	0.0467028	0.0481376		4.6	+/-20
Aroclor-1248 (1) [2C]	A	250.00	294		0.0342827			
Aroclor-1248 (2) [2C]	A	250.00	246		0.0391096			
Aroclor-1248 (3) [2C]	A	250.00	280		0.0639777			
Aroclor-1248 (4) [2C]	A	250.00	226		0.0551803			
Decachlorobiphenyl	A	40.000	42.3	0.7132713	0.7542762		5.8	+/-20
Tetrachlorometaxylene	A	40.000	41.2	0.9552374	0.9842300		3.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	45.7	1.4343710	1.6378480		14.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	41.0	0.9862409	1.0114390		2.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /210806.b/08062140ECD7.D
Data file 2: /210806.b/210806.b/08062140ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV7
Client ID:
Injection Date: 07-AUG-2021 01:05
Report Date: 08/11/2021 08:39
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.067	-0.001	129722	5.414	-0.001	374158	41.2	41.0	0.5	Tetrachloro-m-xylene
13.164	-0.001	156633	13.848	0.000	774757	42.3	45.7	7.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	263601	-11.1
Hexabromobiphenyl	470266	415320	-11.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	739853	3.9
Hexabromobiphenyl	867949	946067	9.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1248	1	7.799	0.000	28245	256.8	1	8.107	0.000	79263	293.9
Aroclor-1248	2	7.968	0.000	36811	269.8	2	8.521	0.000	90423	246.5
Aroclor-1248	3	8.319	0.000	34990	256.1	3	8.951	0.000	147919	280.1
Aroclor-1248	4	8.610	0.000	23564	195.1	4	9.379	0.000	127579	226.6

Total Col1Ave (4 peaks): 244.5 Total Col2Ave (4 peaks): 261.8 RPD = 7

Corrected Ave (3 peaks): 236.0 Corrected Ave (3 peaks): 251.1 RPD = 6

CalAmt %D: -2.2 CalAmt %D: 4.7

Total PCB Area Col1 (5.168 - 13.065) = 593088 Col1 Total PCB = 0.3 ppm*

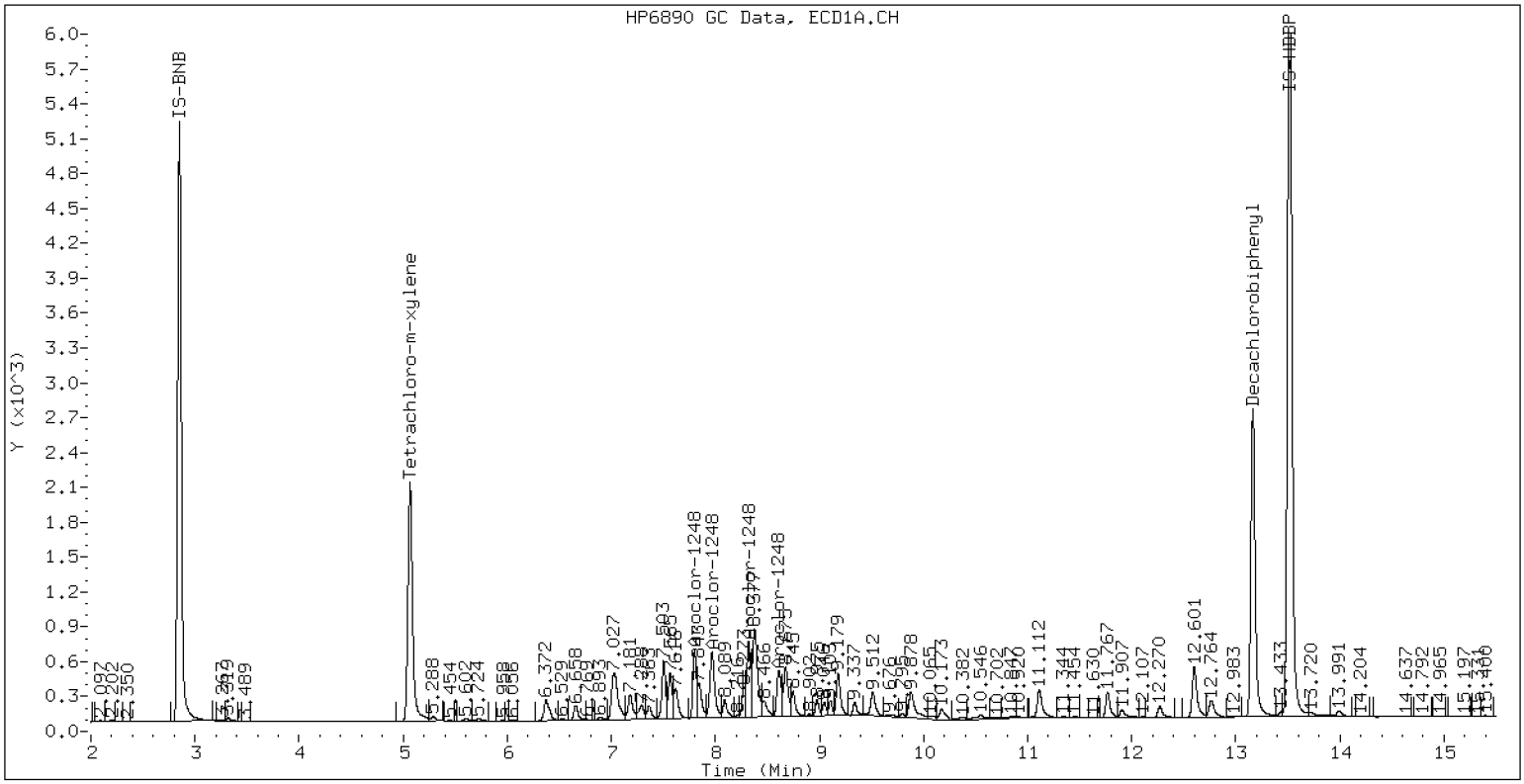
Total PCB Area Col2 (5.168 - 13.065) = 2223193 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

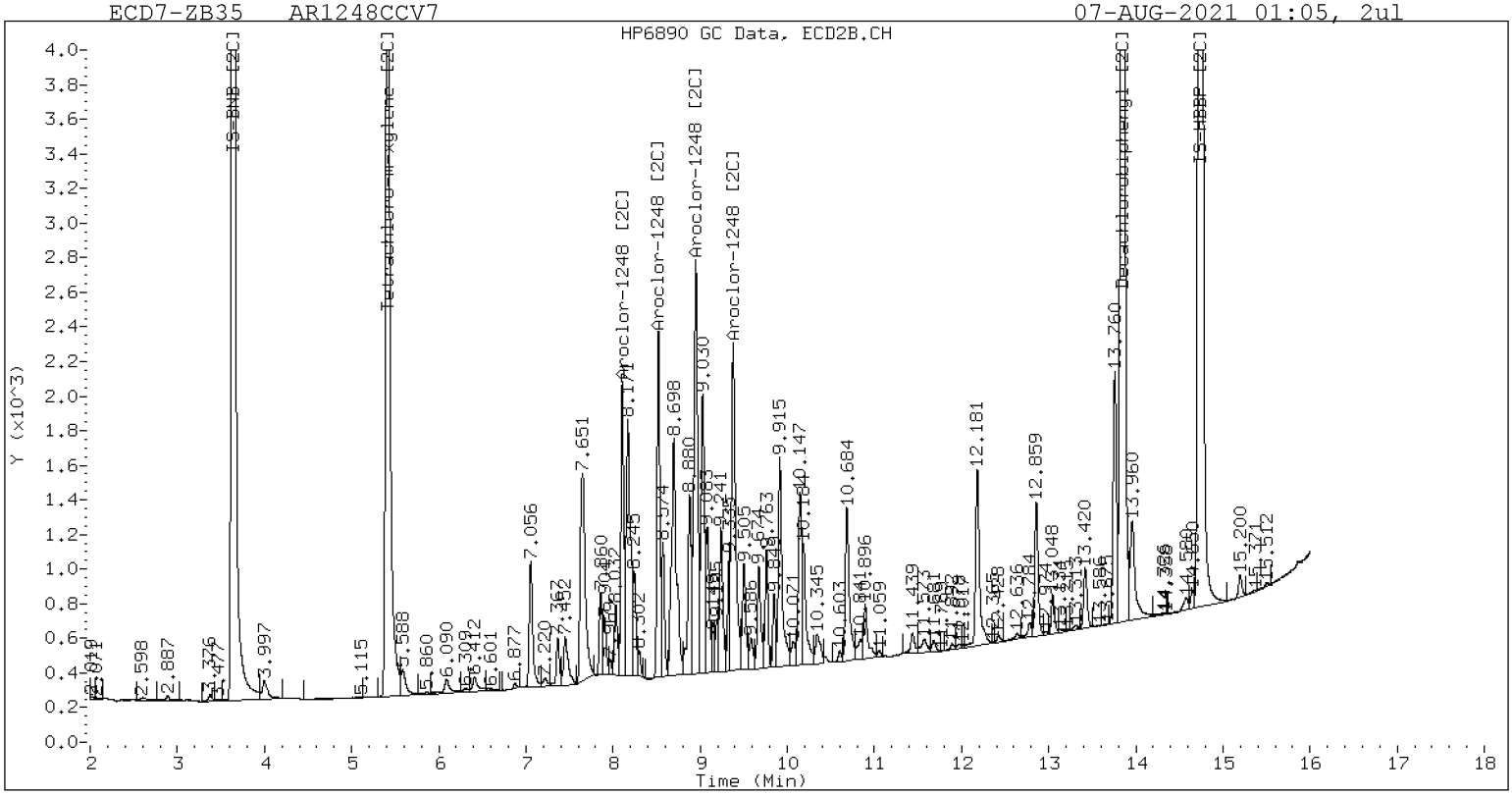
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV7 07-AUG-2021 01:05, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV7 07-AUG-2021 01:05, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Instrument ID:	ECD7	Calibration:	EE00069
Lab File ID:	08062141ECD7.D	Calibration Date:	05/22/2021
Sequence:	SJH0075	Injection Date:	08/07/21
Lab Sample ID:	SJH0075-CCV8	Injection Time:	01:26
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	0.0413247	0.0443676		8.4	+/-20
Aroclor-1016 (1)	A	250.00	280	0.0248166	0.0278137		12.0	
Aroclor-1016 (2)	A	250.00	263	0.0837401	0.0879919		5.2	
Aroclor-1016 (3)	A	250.00	276	0.0340179	0.0376018		10.4	
Aroclor-1016 (4)	A	250.00	265	0.0227243	0.0240631		6.0	
Aroclor 1016 [2C]	A	250.00	261	0.0466427	0.0467434		4.4	+/-20
Aroclor-1016 (1) [2C]	A	250.00	270	0.0412076	0.0444907		8.0	
Aroclor-1016 (2) [2C]	A	250.00	228	0.0906438	0.0827852		-8.8	
Aroclor-1016 (3) [2C]	A	250.00	272	0.0339420	0.0368857		8.8	
Aroclor-1016 (4) [2C]	A	250.00	274	0.0207774	0.0228117		9.6	
Aroclor 1260	A	250.00	251	0.0388495	0.0393562		0.6	+/-20
Aroclor-1260 (1)	A	250.00	222	0.0293254	0.0260223		-11.2	
Aroclor-1260 (2)	A	250.00	254	0.0301531	0.0306665		1.6	
Aroclor-1260 (3)	A	250.00	258	0.0789877	0.0816928		3.2	
Aroclor-1260 (4)	A	250.00	261	0.0402598	0.0421003		4.4	
Aroclor-1260 (5)	A	250.00	262	0.0155216	0.0162993		4.8	
Aroclor 1260 [2C]	A	250.00	215	0.0752611	0.0614323		-14.2	+/-20
Aroclor-1260 (1) [2C]	A	250.00	247	0.0498903	0.0493367		-1.2	
Aroclor-1260 (2) [2C]	A	250.00	183	0.1301480	0.0952539		-26.8	
Aroclor-1260 (3) [2C]	A	250.00	202	0.0846293	0.0682433		-19.2	
Aroclor-1260 (4) [2C]	A	250.00	226	0.0363769	0.0328950		-9.6	
Decachlorobiphenyl	A	40.000	41.8	0.7132713	0.7446985		4.5	+/-20
Tetrachlorometaxylene	A	40.000	43.1	0.9552374	1.0293910		7.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	42.9	1.4343710	1.5377530		7.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	42.4	0.9862409	1.0447600		6.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /210806.b/08062141ECD7.D
Data file 2: /210806.b/210806.b/08062141ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV8
Client ID:
Injection Date: 07-AUG-2021 01:26
Report Date: 08/11/2021 08:39
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.068	-0.000	128624	5.413	-0.001	360964	43.1	42.4	1.7	Tetrachloro-m-xylene
13.165	-0.000	164298	13.847	-0.001	770815	41.8	42.9	2.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	249903	-15.7
Hexabromobiphenyl	470266	441247	-6.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	690999	-2.9
Hexabromobiphenyl	867949	1002521	15.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.659	-0.000	21721	280.2	1	7.057	-0.001	96072	269.9
Aroclor-1016	2	7.032	-0.000	68717	262.7	2	7.651	-0.001	178764	228.3
Aroclor-1016	3	7.178	0.000	29365	276.3	3	7.858	-0.001	79650	271.7
Aroclor-1016	4	7.287	0.000	18792	264.7	4	8.030	0.000	49259	274.5
Total Col1Ave (4 peaks):				271.0		Total Col2Ave (4 peaks):			261.1	RPD = 4
Corrected Ave (3 peaks):				267.9		Corrected Ave (3 peaks):			256.6	RPD = 4
CalAmt %D:				8.4		CalAmt %D:			4.4	
Aroclor-1260	1	10.384	0.001	35882	221.8	1	11.428	-0.000	154566	247.2
Aroclor-1260	2	10.702	0.001	42286	254.3	2	11.678	-0.000	298419	183.0
Aroclor-1260	3	11.051	-0.001	112646	258.6	3	12.261	-0.001	213798	201.6
Aroclor-1260	4	11.453	0.001	58052	261.4	4	12.972	-0.000	103056	226.1
Aroclor-1260	5	11.555	0.001	22475	262.5	NS	---			----
Total Col1Ave (5 peaks):				251.7		Total Col2Ave (4 peaks):			214.5	RPD = 16
Corrected Ave (4 peaks):				249.0		Corrected Ave (3 peaks):			203.5	RPD = 20
CalAmt %D:				0.7		CalAmt %D:			-14.2	

Total PCB Area Col1 (5.168 - 13.065) = 1177426 Col1 Total PCB = 0.5 ppm*

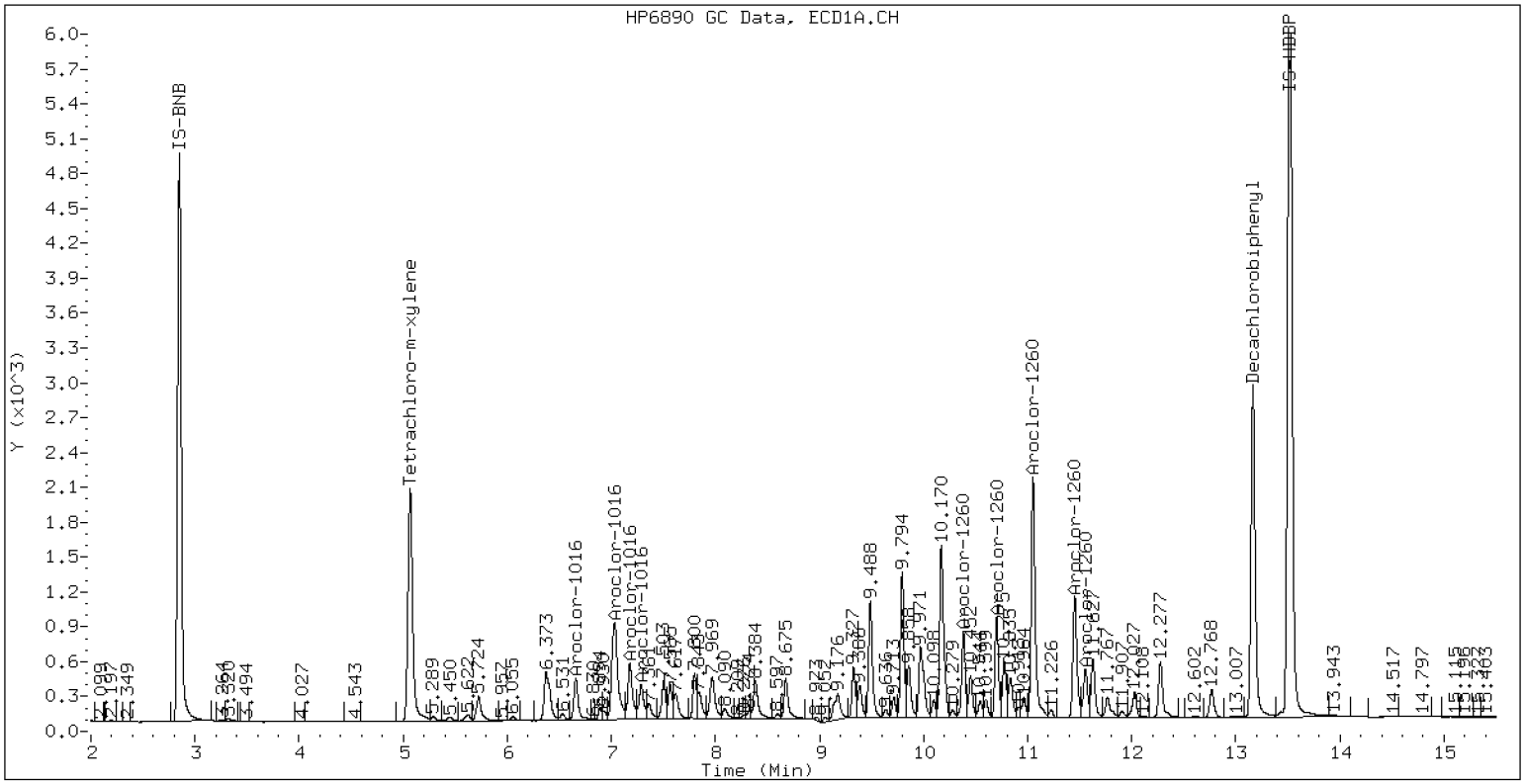
Total PCB Area Col2 (5.168 - 13.065) = 3891068 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

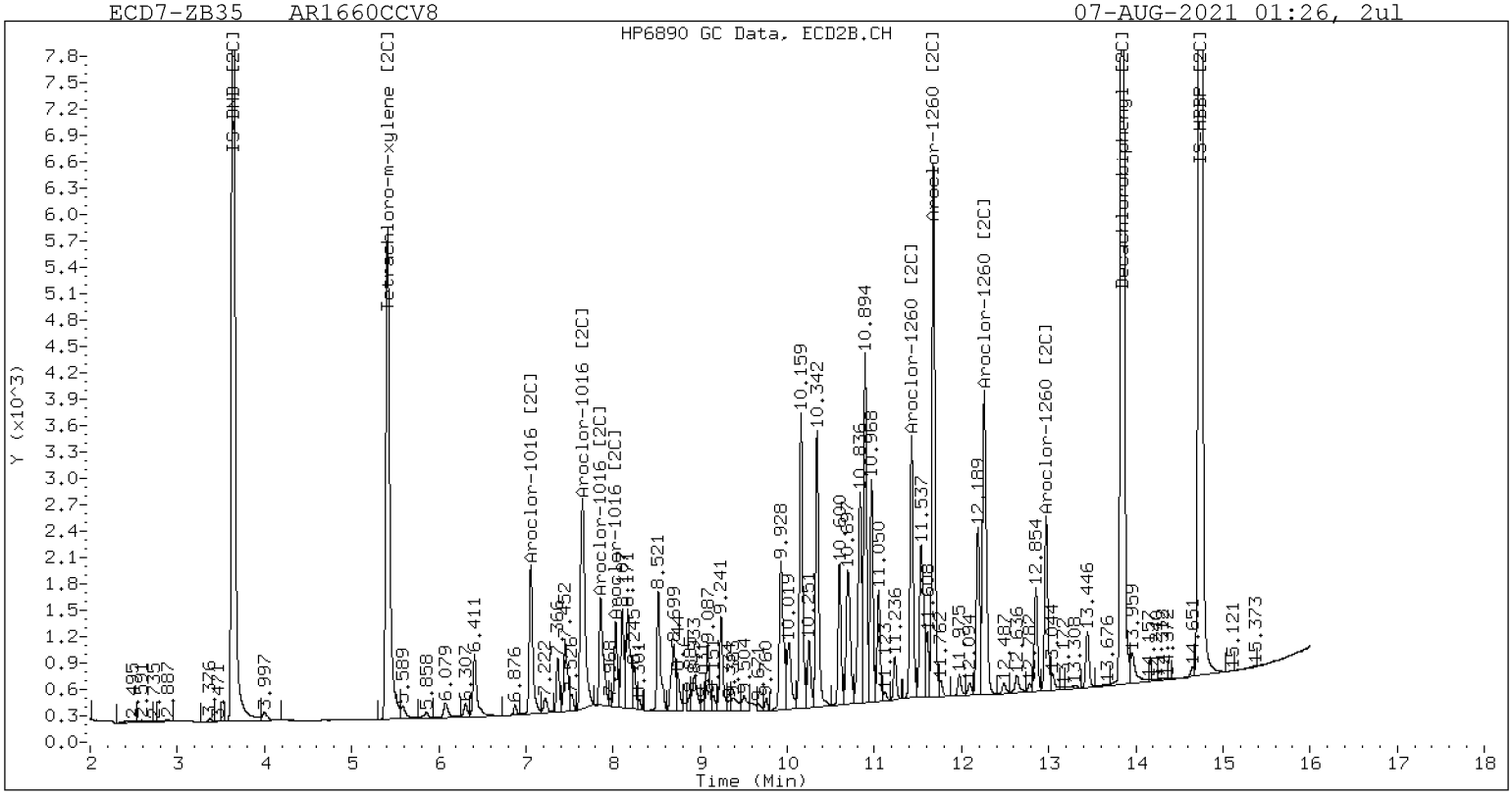
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV8 07-AUG-2021 01:26, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV8 07-AUG-2021 01:26, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Instrument ID:	ECD7	Calibration:	EE00069
Lab File ID:	08062148ECD7.D	Calibration Date:	05/22/2021
Sequence:	SJH0075	Injection Date:	08/07/21
Lab Sample ID:	SJH0075-CCV9	Injection Time:	03:49
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	241	0.0314312	0.0320357		-3.5	+/-20
Aroclor-1242 (1)	A	250.00	277		0.0245193			
Aroclor-1242 (2)	A	250.00	264		0.0756303			
Aroclor-1242 (3)	A	250.00	193		0.0076339			
Aroclor-1242 (4)	A	250.00	231		0.0203593			
Aroclor 1242 [2C]	A	250.00	282	0.0444064	0.0488233		12.7	+/-20
Aroclor-1242 (1) [2C]	A	250.00	279		0.0396296			
Aroclor-1242 (2) [2C]	A	250.00	256		0.0786934			
Aroclor-1242 (3) [2C]	A	250.00	276		0.0383578			
Aroclor-1242 (4) [2C]	A	250.00	316		0.0386123			
Decachlorobiphenyl	A	40.000	45.7	0.7132713	0.8147076		14.3	+/-20
Tetrachlorometaxylene	A	40.000	45.3	0.9552374	1.0816980		13.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	50.0	1.4343710	1.7935530		25.0	+/-20 *
Tetrachlorometaxylene [2C]	A	40.000	44.5	0.9862409	1.0970470		11.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /210806.b/08062148ECD7.D
Data file 2: /210806.b/210806.b/08062148ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV9
Client ID:
Injection Date: 07-AUG-2021 03:49
Report Date: 08/11/2021 08:39
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.067	-0.002	134713	5.414	-0.001	384087	45.3	44.5	1.8	Tetrachloro-m-xylene
13.165	-0.000	159257	13.847	-0.000	800180	45.7	50.0	9.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	249077	-16.0
Hexabromobiphenyl	470266	390955	-16.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	700220	-1.7
Hexabromobiphenyl	867949	892285	2.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1242	1	6.659	0.000	19085	277.5	1	7.058	0.000	86717	278.9
Aroclor-1242	2	7.032	0.000	58868	263.6	2	7.651	0.000	172196	256.1
Aroclor-1242	3	8.277	0.000	5942	193.5	3	8.951	0.000	83934	276.1
Aroclor-1242	4	8.613	0.000	15847	231.1	4	9.032	0.000	84491	316.0

Total Col1Ave (4 peaks): 241.4 Total Col2Ave (4 peaks): 281.8 RPD = 15

Corrected Ave (3 peaks): 229.4 Corrected Ave (3 peaks): 270.4 RPD = 16

CalAmt %D: -3.4 CalAmt %D: 12.7

Total PCB Area Col1 (5.168 - 13.065) = 445754 Col1 Total PCB = 0.2 ppm*

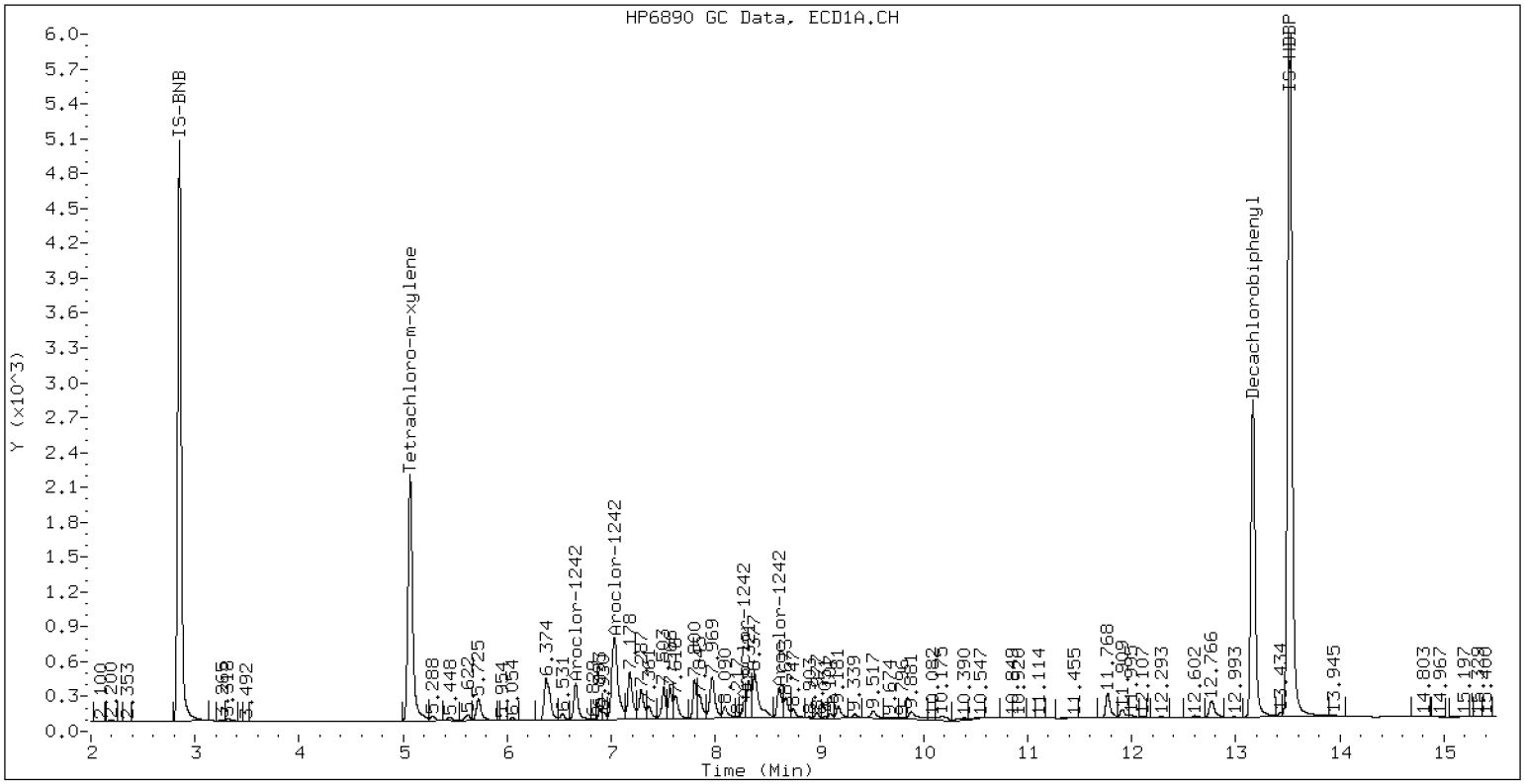
Total PCB Area Col2 (5.168 - 13.065) = 1809131 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

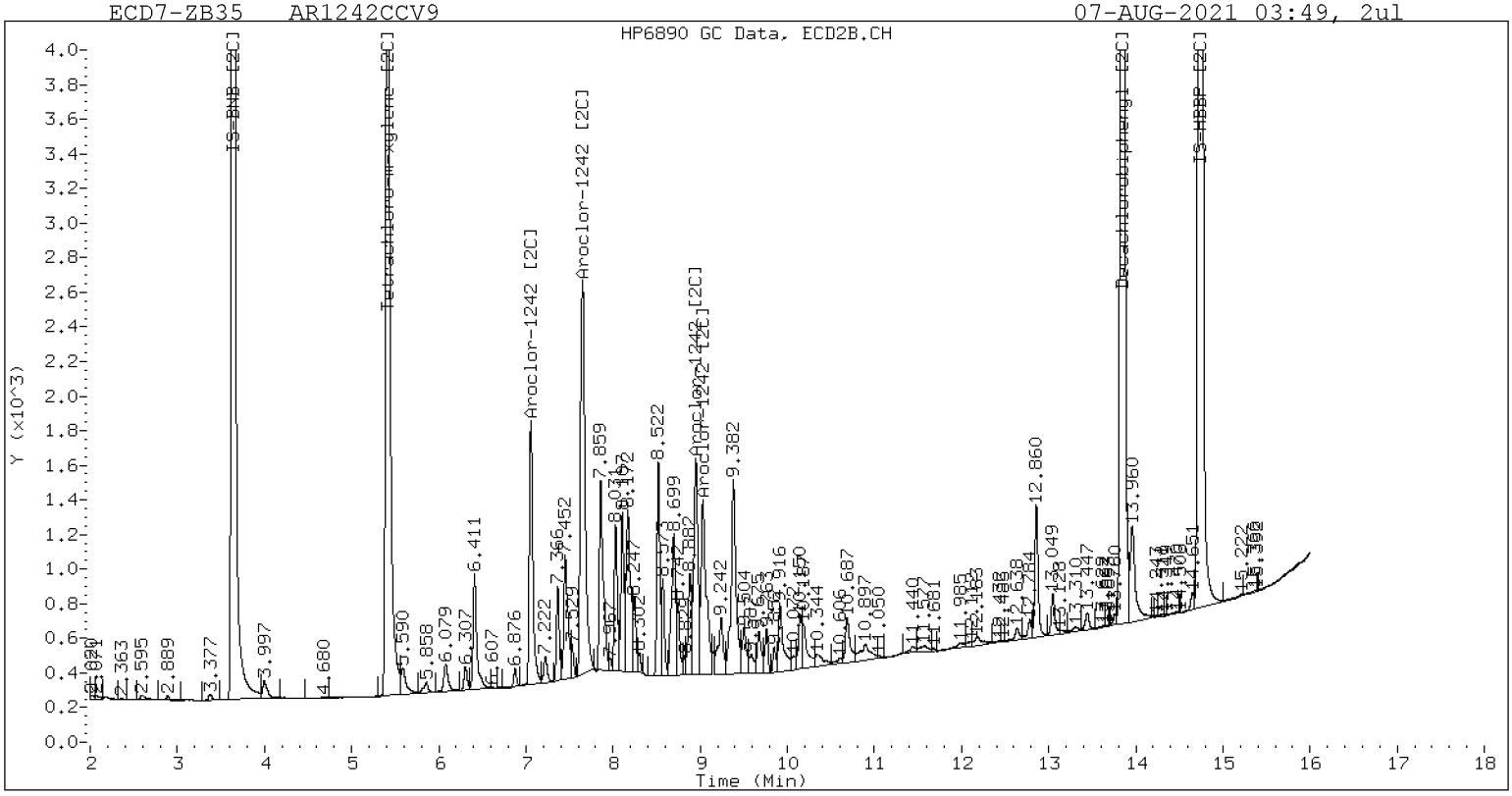
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV9 07-AUG-2021 03:49, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV9 07-AUG-2021 03:49, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Instrument ID:	ECD7	Calibration:	EE00069
Lab File ID:	08062149ECD7.D	Calibration Date:	05/22/2021
Sequence:	SJH0075	Injection Date:	08/07/21
Lab Sample ID:	SJH0075-CCVA	Injection Time:	04:09
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	272	0.0413247	0.0445142		8.8	+/-20
Aroclor-1016 (1)	A	250.00	282	0.0248166	0.0279883		12.8	
Aroclor-1016 (2)	A	250.00	264	0.0837401	0.0883719		5.6	
Aroclor-1016 (3)	A	250.00	276	0.0340179	0.0375439		10.4	
Aroclor-1016 (4)	A	250.00	266	0.0227243	0.0241527		6.4	
Aroclor 1016 [2C]	A	250.00	260	0.0466427	0.0466708		3.9	+/-20
Aroclor-1016 (1) [2C]	A	250.00	270	0.0412076	0.0445670		8.0	
Aroclor-1016 (2) [2C]	A	250.00	229	0.0906438	0.0830328		-8.4	
Aroclor-1016 (3) [2C]	A	250.00	268	0.0339420	0.0364585		7.2	
Aroclor-1016 (4) [2C]	A	250.00	272	0.0207774	0.0226251		8.8	
Aroclor 1260	A	250.00	253	0.0388495	0.0395561		1.3	+/-20
Aroclor-1260 (1)	A	250.00	224	0.0293254	0.0263060		-10.4	
Aroclor-1260 (2)	A	250.00	256	0.0301531	0.0308804		2.4	
Aroclor-1260 (3)	A	250.00	260	0.0789877	0.0821740		4.0	
Aroclor-1260 (4)	A	250.00	261	0.0402598	0.0419690		4.4	
Aroclor-1260 (5)	A	250.00	265	0.0155216	0.0164513		6.0	
Aroclor 1260 [2C]	A	250.00	213	0.0752611	0.0609449		-15.0	+/-20
Aroclor-1260 (1) [2C]	A	250.00	242	0.0498903	0.0482274		-3.2	
Aroclor-1260 (2) [2C]	A	250.00	182	0.1301480	0.0947461		-27.2	
Aroclor-1260 (3) [2C]	A	250.00	201	0.0846293	0.0680610		-19.6	
Aroclor-1260 (4) [2C]	A	250.00	225	0.0363769	0.0327450		-10.0	
Decachlorobiphenyl	A	40.000	41.7	0.7132713	0.7441921		4.3	+/-20
Tetrachlorometaxylene	A	40.000	43.3	0.9552374	1.0345040		8.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	42.4	1.4343710	1.5198400		6.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	42.5	0.9862409	1.0476340		6.3	+/-20

* Values outside of QC limits

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

Data file 1: /210806.b/08062149ECD7.D
Data file 2: /210806.b/210806.b/08062149ECD7.D
Method: \\target\share\chem4\ecd7.i\210806.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCVA
Client ID:
Injection Date: 07-AUG-2021 04:09
Report Date: 08/11/2021 08:39
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.068	0.000	128338	5.415	0.000	357238	43.3	42.5	1.9	Tetrachloro-m-xylene
13.165	0.000	161931	13.848	0.000	772069	41.7	42.4	1.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	296446	248115	-16.3
Hexabromobiphenyl	470266	435186	-7.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	711996	681990	-4.2
Hexabromobiphenyl	867949	1015987	17.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 22-MAY-2021
<- 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	6.659	0.000	21701	282.0	1	7.058	0.000	94982	270.4
Aroclor-1016	2	7.032	0.000	68520	263.8	2	7.652	0.000	176961	229.0
Aroclor-1016	3	7.178	0.000	29110	275.9	3	7.858	0.000	77701	268.5
Aroclor-1016	4	7.287	0.000	18727	265.7	4	8.030	0.000	48219	272.2

Total Col1Ave (4 peaks): 271.9 Total Col2Ave (4 peaks): 260.0 RPD = 4
Corrected Ave (3 peaks): 268.5 Corrected Ave (3 peaks): 256.0 RPD = 5

CalAmt %D: 8.7 CalAmt %D: 4.0

Aroclor-1260	1	10.383	0.000	35775	224.3	1	11.428	0.000	153120	241.7
Aroclor-1260	2	10.701	0.000	41996	256.0	2	11.678	0.000	300815	182.0
Aroclor-1260	3	11.052	0.000	111753	260.1	3	12.262	0.000	216091	201.1
Aroclor-1260	4	11.452	0.000	57076	260.6	4	12.972	0.000	103964	225.0
Aroclor-1260	5	11.554	0.000	22373	265.0	NS	---			----

Total Col1Ave (5 peaks): 253.2 Total Col2Ave (4 peaks): 212.4 RPD = 18
Corrected Ave (4 peaks): 250.2 Corrected Ave (3 peaks): 202.7 RPD = 21

CalAmt %D: 1.3 CalAmt %D: -15.0

Total PCB Area Col1 (5.168 - 13.065) = 1170230 Col1 Total PCB = 0.5 ppm*

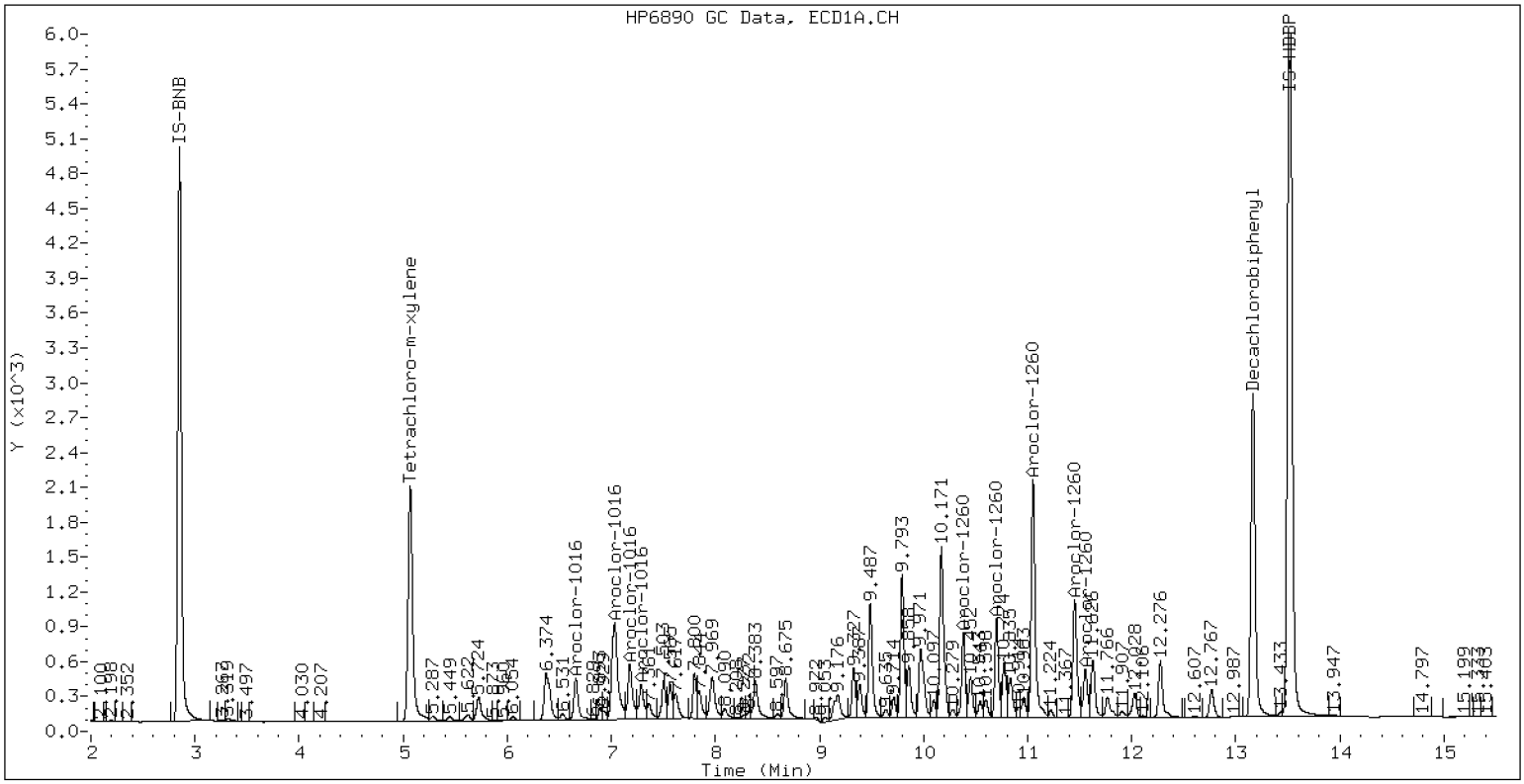
Total PCB Area Col2 (5.168 - 13.065) = 3869814 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

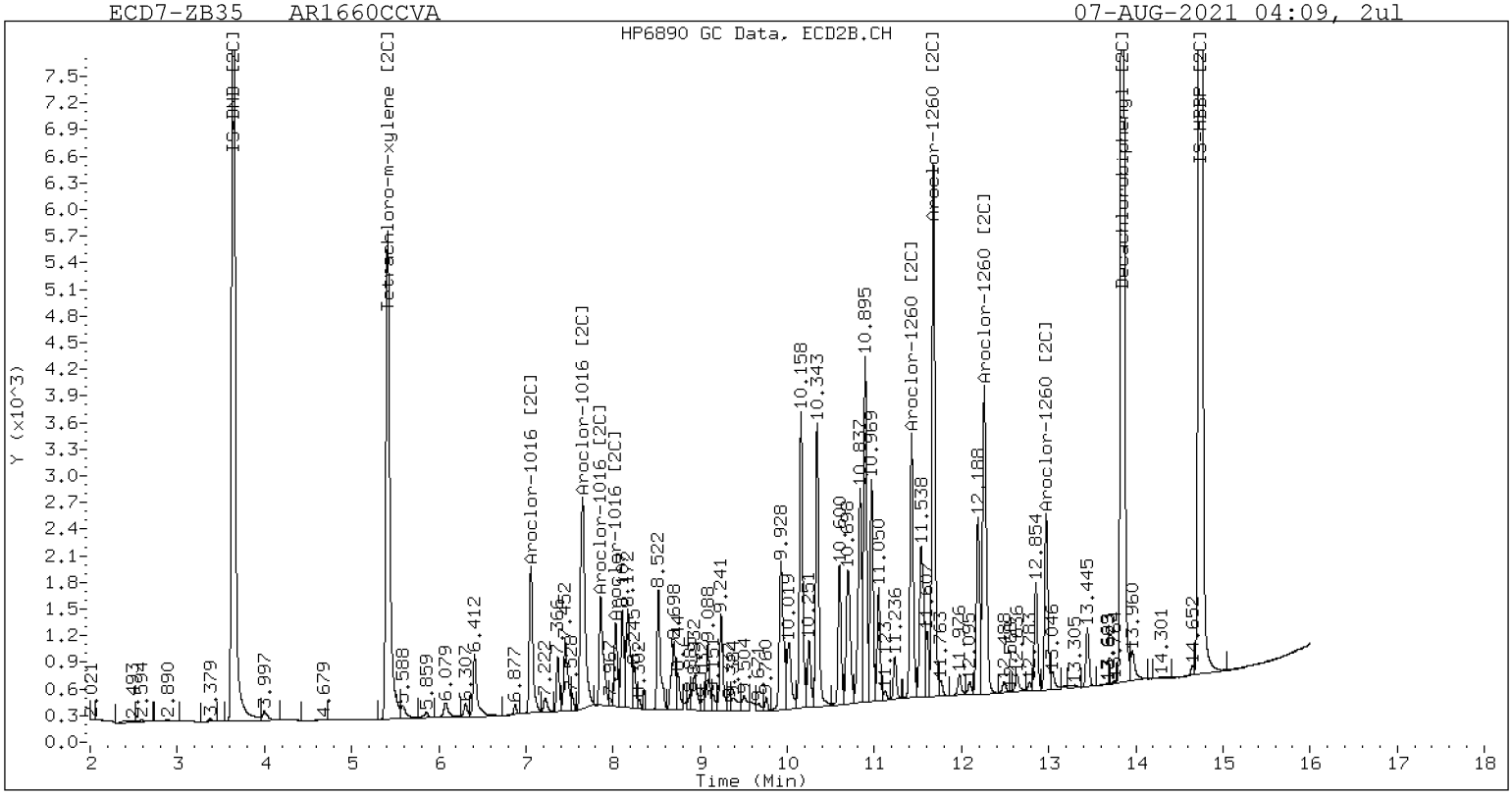
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCVA 07-AUG-2021 04:09, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCVA 07-AUG-2021 04:09, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJE0321	Instrument:	ECD7
		Calibration:	EE00069

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Cal Standard	SJE0321-CAL1	05222106ECD7.D	05222106ECD7.D	NA	05/22/21 15:34
Cal Standard	SJE0321-CAL2	05222107ECD7.D	05222107ECD7.D	NA	05/22/21 15:55
Cal Standard	SJE0321-CAL3	05222108ECD7.D	05222108ECD7.D	NA	05/22/21 16:17
Cal Standard	SJE0321-CAL4	05222109ECD7.D	05222109ECD7.D	NA	05/22/21 16:39
Cal Standard	SJE0321-CAL5	05222110ECD7.D	05222110ECD7.D	NA	05/22/21 17:00
Cal Standard	SJE0321-CAL6	05222111ECD7.D	05222111ECD7.D	NA	05/22/21 17:22
Cal Standard	SJE0321-CAL7	05222112ECD7.D	05222112ECD7.D	NA	05/22/21 17:44
Cal Standard	SJE0321-CAL8	05222113ECD7.D	05222113ECD7.D	NA	05/22/21 18:05
Cal Standard	SJE0321-CAL9	05222114ECD7.D	05222114ECD7.D	NA	05/22/21 18:27
Cal Standard	SJE0321-CALA	05222115ECD7.D	05222115ECD7.D	NA	05/22/21 18:49
Cal Standard	SJE0321-CALB	05222116ECD7.D	05222116ECD7.D	NA	05/22/21 19:10
Secondary Cal Check	SJE0321-SCV1	05222117ECD7.D	05222117ECD7.D	NA	05/22/21 19:32
Secondary Cal Check	SJE0321-SCV2	05222118ECD7.D	05222118ECD7.D	NA	05/22/21 19:53
Secondary Cal Check	SJE0321-SCV3	05222119ECD7.D	05222119ECD7.D	NA	05/22/21 20:15
Secondary Cal Check	SJE0321-SCV4	05222120ECD7.D	05222120ECD7.D	NA	05/22/21 20:37
Secondary Cal Check	SJE0321-SCV5	05222121ECD7.D	05222121ECD7.D	NA	05/22/21 20:58
Secondary Cal Check	SJE0321-SCV6	05222122ECD7.D	05222122ECD7.D	NA	05/22/21 21:20

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Printed: 5/25/2021 10:02:27AM

ANALYSIS SEQUENCE

SJE0321

Instrument: ECD7 Element Column ID: i10655i10656
Calibration ID: EE00033

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SJE0321-CAL1	0.25PPM AR1660	QC		1	J001758	J001757	
SJE0321-CAL2	0.02PPM AR1660	QC		2	J002100	J001757	
SJE0321-CAL3	0.05PPM AR1660	QC		3	J002099	J001757	
SJE0321-CAL4	1.0PPM AR1660	QC		4	J001699	J001757	
SJE0321-CAL5	0.1PPM AR1660	QC		5	J002098	J001757	
SJE0321-CAL6	0.5PPM AR1660	QC		6	J002097	J001757	
SJE0321-CAL7	0.25PPM AR1242	QC		7	J001700	J001757	
SJE0321-CAL8	0.25PPM AR1248	QC		8	J001701	J001757	
SJE0321-CAL9	0.25PPM AR1254	QC		9	J001702	J001757	
SJE0321-CALA	0.25PPM AR2162	QC		10	J001703	J001757	
SJE0321-CALB	0.25PPM AR3268	QC		11	J004709	J001757	
SJE0321-SCV1	AR1660SCV1	QC		12	J000948	J001757	
SJE0321-SCV2	AR1242SCV2	QC		13	J000949	J001757	
SJE0321-SCV3	AR1248SCV3	QC		14	J000950	J001757	
SJE0321-SCV4	AR1254SCV4	QC		15	J000951	J001757	
SJE0321-SCV5	AR2162SCV5	QC		16	J000952	J001757	
SJE0321-SCV6	AR3268SCV6	QC		17	J000953	J001757	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210522.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	22-MAY-2021 13:45	05222101ECD7.D	1	RINSE	
2	22-MAY-2021 14:07	05222102ECD7.D	1	RINSE	
3	22-MAY-2021 14:29	05222103ECD7.D	1	RINSE	
4	22-MAY-2021 14:50	05222104ECD7.D	1	RINSE	
5	22-MAY-2021 15:12	05222105ECD7.D	1	IB	
6	22-MAY-2021 15:34	05222106ECD7.D	1	0.25PPMAR1660	
7	22-MAY-2021 15:55	05222107ECD7.D	1	0.02PPMAR1660	
8	22-MAY-2021 16:17	05222108ECD7.D	1	0.05PPMAR1660	
9	22-MAY-2021 16:39	05222109ECD7.D	1	1PPMAR1660	
10	22-MAY-2021 17:00	05222110ECD7.D	1	0.1PPMAR1660	
11	22-MAY-2021 17:22	05222111ECD7.D	1	0.5PPMAR1660	
12	22-MAY-2021 17:44	05222112ECD7.D	1	AR1242	
13	22-MAY-2021 18:05	05222113ECD7.D	1	AR1248	
14	22-MAY-2021 18:27	05222114ECD7.D	1	AR1254	
15	22-MAY-2021 18:49	05222115ECD7.D	1	AR2162	
16	22-MAY-2021 19:10	05222116ECD7.D	1	AR3268	
17	22-MAY-2021 19:32	05222117ECD7.D	1	AR1660SCV1	
18	22-MAY-2021 19:53	05222118ECD7.D	1	AR1242SCV2	
19	22-MAY-2021 20:15	05222119ECD7.D	1	AR1248SCV3	
20	22-MAY-2021 20:37	05222120ECD7.D	1	AR1254SCV4	
21	22-MAY-2021 20:58	05222121ECD7.D	1	AR2162SCV5	
22	22-MAY-2021 21:20	05222122ECD7.D	1	AR3268SCV6	
23	22-MAY-2021 21:42	05222123ECD7.D	1	0.1PPMDDTS	
24	22-MAY-2021 22:03	05222124ECD7.D	1	DDT BD	
25	22-MAY-2021 22:25	05222125ECD7.D	1	AR1254ICV1	
26	22-MAY-2021 22:47	05222126ECD7.D	1	AR1660ICV2	
27	22-MAY-2021 23:08	05222127ECD7.D	1	BJE0408-BLK1	
28	22-MAY-2021 23:30	05222128ECD7.D	1	BJE0408-BS1	
29	22-MAY-2021 23:52	05222129ECD7.D	1	21E0145-01	
30	23-MAY-2021 00:13	05222130ECD7.D	1	BJE0400-BLK1	
31	23-MAY-2021 00:35	05222131ECD7.D	1	BJE0400-BS1	
32	23-MAY-2021 00:56	05222132ECD7.D	1	BJE0400-BSD1	
33	23-MAY-2021 01:18	05222133ECD7.D	1	21E0150-01	
34	23-MAY-2021 01:40	05222134ECD7.D	1	21E0150-02	
35	23-MAY-2021 02:01	05222135ECD7.D	1	21E0150-03	
36	23-MAY-2021 02:23	05222136ECD7.D	1	21E0150-04	
37	23-MAY-2021 02:45	05222137ECD7.D	1	AR1248CCV1	
38	23-MAY-2021 03:06	05222138ECD7.D	1	AR1660CCV2	
39	23-MAY-2021 03:28	05222139ECD7.D	1	BJE0481-BLK1	
40	23-MAY-2021 03:49	05222140ECD7.D	1	BJE0481-BS1	
41	23-MAY-2021 04:11	05222141ECD7.D	1	BJE0481-BSD1	
42	23-MAY-2021 04:33	05222142ECD7.D	1	21E0131-01	
43	23-MAY-2021 04:54	05222143ECD7.D	1	21E0131-02	
44	23-MAY-2021 05:16	05222144ECD7.D	1	21E0131-03	
45	23-MAY-2021 05:37	05222145ECD7.D	1	21E0131-04	
46	23-MAY-2021 05:59	05222146ECD7.D	1	21E0131-05	
47	23-MAY-2021 06:20	05222147ECD7.D	1	21E0131-06	
48	23-MAY-2021 06:42	05222148ECD7.D	1	21E0131-07	
49	23-MAY-2021 07:04	05222149ECD7.D	1	21E0131-08	
50	23-MAY-2021 07:25	05222150ECD7.D	1	21E0199-01	

	Inject Date/Time	Filename	DF	LabID	ClientID
51	23-MAY-2021 07:47	05222151ECD7.D	1	21E0199-02	
52	23-MAY-2021 08:08	05222152ECD7.D	1	AR1242CCV3	
53	23-MAY-2021 08:30	05222153ECD7.D	1	AR1660CCV4	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210522.b

ARI Job No.: RINS Method: PCB.m Instrument: ecd7.i Date: 22-MAY-2021

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1345	05222101ECD7.D	RINSE		1	NO MANUAL INTEGRATION
1407	05222102ECD7.D	RINSE		1	NO MANUAL INTEGRATION
1429	05222103ECD7.D	RINSE		1	NO MANUAL INTEGRATION
1450	05222104ECD7.D	RINSE		1	NO MANUAL INTEGRATION
1512	05222105ECD7.D	IB		1	NO MANUAL INTEGRATION
1534	05222106ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
1555	05222107ECD7.D	0.02PPMAR1660		1	NO MANUAL INTEGRATION
1617	05222108ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
1639	05222109ECD7.D	1PPMAR1660		1	NO MANUAL INTEGRATION
1700	05222110ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
1722	05222111ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
1744	05222112ECD7.D	AR1242		1	NO MANUAL INTEGRATION
1805	05222113ECD7.D	AR1248		1	NO MANUAL INTEGRATION
1827	05222114ECD7.D	AR1254		1	NO MANUAL INTEGRATION
1849	05222115ECD7.D	AR2162		1	NO MANUAL INTEGRATION
1910	05222116ECD7.D	AR3268		1	NO MANUAL INTEGRATION
1932	05222117ECD7.D	AR1660SCV1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210522.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1953	05222118ECD7.D	AR1242SCV2		1	NO MANUAL INTEGRATION
2015	05222119ECD7.D	AR1248SCV3		1	NO MANUAL INTEGRATION
2037	05222120ECD7.D	AR1254SCV4		1	NO MANUAL INTEGRATION
2058	05222121ECD7.D	AR2162SCV5		1	NO MANUAL INTEGRATION
2120	05222122ECD7.D	AR3268SCV6		1	NO MANUAL INTEGRATION
2142	05222123ECD7.D	0.1PPMDDTS		1	NO MANUAL INTEGRATION
2203	05222124ECD7.D	DDT BD		1	NO MANUAL INTEGRATION
2225	05222125ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
2247	05222126ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
2308	05222127ECD7.D	BJE0408-BLK1		1	NO MANUAL INTEGRATION
2330	05222128ECD7.D	BJE0408-BS1		1	NO MANUAL INTEGRATION
2352	05222129ECD7.D	21E0145-01		1	NO MANUAL INTEGRATION
0013	05222130ECD7.D	BJE0400-BLK1		1	NO MANUAL INTEGRATION
0035	05222131ECD7.D	BJE0400-BS1		1	NO MANUAL INTEGRATION
0056	05222132ECD7.D	BJE0400-BSD1		1	NO MANUAL INTEGRATION
0118	05222133ECD7.D	21E0150-01		1	NO MANUAL INTEGRATION
0140	05222134ECD7.D	21E0150-02		1	NO MANUAL INTEGRATION
0201	05222135ECD7.D	21E0150-03		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210522.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0223	05222136ECD7.D	21E0150-04		1	NO MANUAL INTEGRATION
0245	05222137ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
0306	05222138ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
0328	05222139ECD7.D	BJE0481-BLK1		1	NO MANUAL INTEGRATION
0349	05222140ECD7.D	BJE0481-BS1		1	NO MANUAL INTEGRATION
0411	05222141ECD7.D	BJE0481-BSD1		1	NO MANUAL INTEGRATION
0433	05222142ECD7.D	21E0131-01		1	NO MANUAL INTEGRATION
0454	05222143ECD7.D	21E0131-02		1	NO MANUAL INTEGRATION
0516	05222144ECD7.D	21E0131-03		1	NO MANUAL INTEGRATION
0537	05222145ECD7.D	21E0131-04		1	NO MANUAL INTEGRATION
0559	05222146ECD7.D	21E0131-05		1	NO MANUAL INTEGRATION
0620	05222147ECD7.D	21E0131-06		1	NO MANUAL INTEGRATION
0642	05222148ECD7.D	21E0131-07		1	NO MANUAL INTEGRATION
0704	05222149ECD7.D	21E0131-08		1	NO MANUAL INTEGRATION
0725	05222150ECD7.D	21E0199-01		1	NO MANUAL INTEGRATION
0747	05222151ECD7.D	21E0199-02		1	NO MANUAL INTEGRATION
0808	05222152ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
0830	05222153ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210522.b\210522.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1345	05222101ECD7.D	RINSE		1	NO MANUAL INTEGRATION
1407	05222102ECD7.D	RINSE		1	NO MANUAL INTEGRATION
1429	05222103ECD7.D	RINSE		1	NO MANUAL INTEGRATION
1450	05222104ECD7.D	RINSE		1	NO MANUAL INTEGRATION
1512	05222105ECD7.D	IB		1	NO MANUAL INTEGRATION
1534	05222106ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
1555	05222107ECD7.D	0.02PPMAR1660		1	NO MANUAL INTEGRATION
1617	05222108ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
1639	05222109ECD7.D	1PPMAR1660		1	NO MANUAL INTEGRATION
1700	05222110ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
1722	05222111ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
1744	05222112ECD7.D	AR1242		1	NO MANUAL INTEGRATION
1805	05222113ECD7.D	AR1248		1	NO MANUAL INTEGRATION
1827	05222114ECD7.D	AR1254		1	NO MANUAL INTEGRATION
1849	05222115ECD7.D	AR2162		1	NO MANUAL INTEGRATION
1910	05222116ECD7.D	AR3268		1	NO MANUAL INTEGRATION
1932	05222117ECD7.D	AR1660SCV1		1	NO MANUAL INTEGRATION
1953	05222118ECD7.D	AR1242SCV2		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210522.b\210522.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2015	05222119ECD7.D	AR1248SCV3		1	NO MANUAL INTEGRATION
2037	05222120ECD7.D	AR1254SCV4		1	NO MANUAL INTEGRATION
2058	05222121ECD7.D	AR2162SCV5		1	NO MANUAL INTEGRATION
2120	05222122ECD7.D	AR3268SCV6		1	NO MANUAL INTEGRATION
2142	05222123ECD7.D	0.1PPMDDTS		1	NO MANUAL INTEGRATION
2203	05222124ECD7.D	DDT BD		1	NO MANUAL INTEGRATION
2225	05222125ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
2247	05222126ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
2308	05222127ECD7.D	BJE0408-BLK1		1	NO MANUAL INTEGRATION
2330	05222128ECD7.D	BJE0408-BS1		1	NO MANUAL INTEGRATION
2352	05222129ECD7.D	21E0145-01		1	NO MANUAL INTEGRATION
0013	05222130ECD7.D	BJE0400-BLK1		1	NO MANUAL INTEGRATION
0035	05222131ECD7.D	BJE0400-BS1		1	NO MANUAL INTEGRATION
0056	05222132ECD7.D	BJE0400-BSD1		1	NO MANUAL INTEGRATION
0118	05222133ECD7.D	21E0150-01		1	NO MANUAL INTEGRATION
0140	05222134ECD7.D	21E0150-02		1	NO MANUAL INTEGRATION
0201	05222135ECD7.D	21E0150-03		1	NO MANUAL INTEGRATION
0223	05222136ECD7.D	21E0150-04		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210522.b\210522.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0245	05222137ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
0306	05222138ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
0328	05222139ECD7.D	BJE0481-BLK1		1	NO MANUAL INTEGRATION
0349	05222140ECD7.D	BJE0481-BS1		1	NO MANUAL INTEGRATION
0411	05222141ECD7.D	BJE0481-BSD1		1	NO MANUAL INTEGRATION
0433	05222142ECD7.D	21E0131-01		1	NO MANUAL INTEGRATION
0454	05222143ECD7.D	21E0131-02		1	NO MANUAL INTEGRATION
0516	05222144ECD7.D	21E0131-03		1	NO MANUAL INTEGRATION
0537	05222145ECD7.D	21E0131-04		1	NO MANUAL INTEGRATION
0559	05222146ECD7.D	21E0131-05		1	NO MANUAL INTEGRATION
0620	05222147ECD7.D	21E0131-06		1	NO MANUAL INTEGRATION
0642	05222148ECD7.D	21E0131-07		1	NO MANUAL INTEGRATION
0704	05222149ECD7.D	21E0131-08		1	NO MANUAL INTEGRATION
0725	05222150ECD7.D	21E0199-01		1	NO MANUAL INTEGRATION
0747	05222151ECD7.D	21E0199-02		1	NO MANUAL INTEGRATION
0808	05222152ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
0830	05222153ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION

Security Status Report

Date: 25-May-2021 10:16

05222101ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222102ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222103ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222104ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222105ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222106ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222107ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222108ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222109ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222110ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222111ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222112ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222113ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222114ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222115ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222116ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222117ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222118ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222119ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222120ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222121ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222122ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222123ECD7.D	Data Locked	jrains, 25-May-2021 10:16
05222124ECD7.D	Data Locked	jrains, 25-May-2021 10:16

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0075	Instrument:	ECD7
		Calibration:	EE00069

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SJH0075-ICV1	08062102ECD7.D	08062102ECD7.D	NA	08/06/21 10:44
Initial Cal Check	SJH0075-ICV2	08062103ECD7.D	08062103ECD7.D	NA	08/06/21 11:05
Calibration Check	SJH0075-CCV1	08062108ECD7.D	08062108ECD7.D	NA	08/06/21 12:47
Calibration Check	SJH0075-CCV2	08062109ECD7.D	08062109ECD7.D	NA	08/06/21 13:08
Calibration Check	SJH0075-CCV3	08062115ECD7.D	08062115ECD7.D	NA	08/06/21 16:33
Calibration Check	SJH0075-CCV4	08062116ECD7.D	08062116ECD7.D	NA	08/06/21 16:54
Blank	BJG0590-BLK1	08062117ECD7.D	08062117ECD7.D	Solid	08/06/21 17:14
LCS	BJG0590-BS1	08062118ECD7.D	08062118ECD7.D	Solid	08/06/21 17:35
Reference	BJG0590-SRM1	08062119ECD7.D	08062119ECD7.D	Solid	08/06/21 17:55
LDW21-SC524	21G0212-01	08062120ECD7.D	08062120ECD7.D	Solid	08/06/21 18:16
LDW21-SC528	21G0212-02	08062121ECD7.D	08062121ECD7.D	Solid	08/06/21 18:36
LDW21-SC538B	21G0212-03	08062122ECD7.D	08062122ECD7.D	Solid	08/06/21 18:57
LDW21-SC538C	21G0212-04	08062123ECD7.D	08062123ECD7.D	Solid	08/06/21 19:17
LDW21-SC538E	21G0212-05	08062124ECD7.D	08062124ECD7.D	Solid	08/06/21 19:37
LDW21-IT582B	21G0212-06	08062125ECD7.D	08062125ECD7.D	Solid	08/06/21 19:58
LDW21-IT582C	21G0212-07	08062126ECD7.D	08062126ECD7.D	Solid	08/06/21 20:18
LDW21-IT582E	21G0212-08	08062127ECD7.D	08062127ECD7.D	Solid	08/06/21 20:39
LDW21-IT582E	BJG0590-MS1	08062128ECD7.D	08062128ECD7.D	Solid	08/06/21 20:59
LDW21-IT582E	BJG0590-MSD1	08062129ECD7.D	08062129ECD7.D	Solid	08/06/21 21:20
Calibration Check	SJH0075-CCV5	08062130ECD7.D	08062130ECD7.D	NA	08/06/21 21:40
Calibration Check	SJH0075-CCV6	08062131ECD7.D	08062131ECD7.D	NA	08/06/21 22:01
LDW21-IT579B	21G0212-09	08062132ECD7.D	08062132ECD7.D	Solid	08/06/21 22:21
LDW21-IT597C	21G0212-11	08062134ECD7.D	08062134ECD7.D	Solid	08/06/21 23:02
LDW21-IT597E	21G0212-12	08062135ECD7.D	08062135ECD7.D	Solid	08/06/21 23:23
LDW21-SC539B	21G0212-14	08062137ECD7.D	08062137ECD7.D	Solid	08/07/21 00:04
LDW21-SC539C	21G0212-15	08062138ECD7.D	08062138ECD7.D	Solid	08/07/21 00:24
LDW21-SC539E	21G0212-16	08062139ECD7.D	08062139ECD7.D	Solid	08/07/21 00:45
Calibration Check	SJH0075-CCV7	08062140ECD7.D	08062140ECD7.D	NA	08/07/21 01:05
Calibration Check	SJH0075-CCV8	08062141ECD7.D	08062141ECD7.D	NA	08/07/21 01:26
Calibration Check	SJH0075-CCV9	08062148ECD7.D	08062148ECD7.D	NA	08/07/21 03:49

Analytical Resources, Incorporated
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Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0075	Instrument:	ECD7
		Calibration:	EE00069

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Calibration Check	SJH0075-CCVA	08062149ECD7.D	08062149ECD7.D	NA	08/07/21 04:09

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Printed: 8/6/2021 1:29:32PM

ANALYSIS SEQUENCE

SJH0075

Instrument: ECD7 Element Column ID: i10655i10656
Calibration ID: EE00069

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SJH0075-ICV1	AR1254ICV1	QC		1	J001702	J001757	
SJH0075-ICV2	AR1660ICV2	QC		2	J001758	J001757	
21G0190-04	F160 Stockpile	8082A PCB Solid 2	A 01	3		J001757	
BJG0573-BLK1	Blank	QC		4		J001757	
BJG0573-BS1	LCS	QC		5		J001757	
BJG0573-MRL1	MRL Check	QC		6		J001757	
SJH0075-CCV1	AR1248CCV1	QC		7	J006804	J001757	
SJH0075-CCV2	AR1660CCV2	QC		8	J001758	J001757	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210806.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	06-AUG-2021 10:24	08062101ECD7.D	1	DDTS	
2	06-AUG-2021 10:44	08062102ECD7.D	1	AR1254ICV1	
3	06-AUG-2021 11:05	08062103ECD7.D	1	AR1660ICV2	
4	06-AUG-2021 11:25	08062104ECD7.D	1	21G0190-04	
5	06-AUG-2021 11:46	08062105ECD7.D	1	BJG0573-BLK1	
6	06-AUG-2021 12:06	08062106ECD7.D	1	BJG0573-BS1	
7	06-AUG-2021 12:27	08062107ECD7.D	1	BJG0573-MRL1	
8	06-AUG-2021 12:47	08062108ECD7.D	1	AR1248CCV1	
9	06-AUG-2021 13:08	08062109ECD7.D	1	AR1660CCV2	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210806.b

ARI Job No.: DDTS Method: PCB.m Instrument: ecd7.i Date: 06-AUG-2021

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1024	08062101ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1044	08062102ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1105	08062103ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1125	08062104ECD7.D	21G0190-04		1	NO MANUAL INTEGRATION
1146	08062105ECD7.D	BJG0573-BLK1		1	NO MANUAL INTEGRATION
1206	08062106ECD7.D	BJG0573-BS1		1	NO MANUAL INTEGRATION
1227	08062107ECD7.D	BJG0573-MRL1		1	NO MANUAL INTEGRATION
1247	08062108ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
1308	08062109ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
1024	08062101ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1044	08062102ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1105	08062103ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1125	08062104ECD7.D	21G0190-04		1	NO MANUAL INTEGRATION
1146	08062105ECD7.D	BJG0573-BLK1		1	NO MANUAL INTEGRATION
1206	08062106ECD7.D	BJG0573-BS1		1	NO MANUAL INTEGRATION
1227	08062107ECD7.D	BJG0573-MRL1		1	NO MANUAL INTEGRATION
1247	08062108ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210806.b\210806.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1308	08062109ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION

Security Status Report

Date: 06-Aug-2021 13:53

08062101ECD7.D	Data Locked	jrains, 06-Aug-2021 13:53
08062102ECD7.D	Data Locked	jrains, 06-Aug-2021 13:53
08062103ECD7.D	Data Locked	jrains, 06-Aug-2021 13:53
08062104ECD7.D	Data Locked	jrains, 06-Aug-2021 13:53
08062105ECD7.D	Data Locked	jrains, 06-Aug-2021 13:53
08062106ECD7.D	Data Locked	jrains, 06-Aug-2021 13:53
08062107ECD7.D	Data Locked	jrains, 06-Aug-2021 13:53
08062108ECD7.D	Data Locked	jrains, 06-Aug-2021 13:53
08062109ECD7.D	Data Locked	jrains, 06-Aug-2021 13:53

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Printed: 8/11/2021 10:43:56AM

ANALYSIS SEQUENCE

SJH0075

Instrument: ECD7 Element Column ID: i10655i10656
Calibration ID: EE00069

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SJH0075-ICV1	AR1254ICV1	QC		1	J001702	J001757	
SJH0075-ICV2	AR1660ICV2	QC		2	J001758	J001757	
21G0190-04	F160 Stockpile	8082A PCB Solid 2	A 01	3		J001757	
BJG0573-BLK1	Blank	QC		4		J001757	
BJG0573-BS1	LCS	QC		5		J001757	
BJG0573-MRL1	MRL Check	QC		6		J001757	
SJH0075-CCV1	AR1248CCV1	QC		7	J006804	J001757	
SJH0075-CCV2	AR1660CCV2	QC		8	J001758	J001757	
21G0178-08	LDW21-IT545B	8082A PCB Solid 4	B 01	9		J001757	
21G0141-06	LDW21-SS705	8082A PCB Solid 4	B 02	10		J001757	
BJG0585-BLK1	Blank	QC		11		J001757	
BJG0585-BS1	LCS	QC		12		J001757	
21G0177-01	Land Fill T/P	8082A PCB (20 ug/kg) or (MTCA 0.1 ug/L)	B 01	13		J001757	
SJH0075-CCV3	AR1242CCV3	QC		14	J001700	J001757	
SJH0075-CCV4	AR1660CCV4	QC		15	J001758	J001757	
BJG0590-BLK1	Blank	QC		16		J001757	
BJG0590-BS1	LCS	QC		17		J001757	
BJG0590-SRM1	Reference	QC		18		J001757	
21G0212-01	LDW21-SC524	8082A PCB Solid 4	B 01	19		J001757	
21G0212-02	LDW21-SC528	8082A PCB Solid 4	B 01	20		J001757	
21G0212-03	LDW21-SC538B	8082A PCB Solid 4	B 01	21		J001757	
21G0212-04	LDW21-SC538C	8082A PCB Solid 4	B 01	22		J001757	

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Printed: 8/11/2021 10:43:56AM

ANALYSIS SEQUENCE

SJH0075

Instrument: ECD7 Element Column ID: i10655i10656
Calibration ID: EE00069

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
21G0212-05	LDW21-SC538E	8082A PCB Solid 4	B 01	23		J001757	
21G0212-06	LDW21-IT582B	8082A PCB Solid 4	B 01	24		J001757	
21G0212-07	LDW21-IT582C	8082A PCB Solid 4	B 01	25		J001757	
21G0212-08	LDW21-IT582E	8082A PCB Solid 4	B 01	26		J001757	
BJG0590-MS1	Matrix Spike	QC		27		J001757	
BJG0590-MSD1	Matrix Spike Dup	QC		28		J001757	
SJH0075-CCV5	AR1254CCV5	QC		29	J001702	J001757	
SJH0075-CCV6	AR1660CCV6	QC		30	J001758	J001757	
21G0212-09	LDW21-IT579B	8082A PCB Solid 4	B 01	31		J001757	
21G0212-11	LDW21-IT597C	8082A PCB Solid 4	B 01	32		J001757	
21G0212-12	LDW21-IT597E	8082A PCB Solid 4	B 01	33		J001757	
21G0212-14	LDW21-SC539B	8082A PCB Solid 4	B 01	34		J001757	
21G0212-15	LDW21-SC539C	8082A PCB Solid 4	B 01	35		J001757	
21G0212-16	LDW21-SC539E	8082A PCB Solid 4	B 01	36		J001757	
SJH0075-CCV7	AR1248CCV7	QC		37	J006804	J001757	
SJH0075-CCV8	AR1660CCV8	QC		38	J001758	J001757	
21G0141-07	LDW21-SS704	8082A PCB Solid 4	B 02	39		J001757	
21G0156-07	LDW21-IT588C	8082A PCB Solid 4	B 02	40		J001757	
21G0156-08	LDW21-IT588E	8082A PCB Solid 4	B 02	41		J001757	
21G0156-20	LDW21-SC568C	8082A PCB Solid 4	B 01	42		J001757	
21G0156-21	LDW21-SC568E-FD	8082A PCB Solid 4	B 01	43		J001757	
21G0156-22	LDW21-SC568E	8082A PCB Solid 4	B 01	44		J001757	

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ANALYSIS SEQUENCE

SJH0075

Instrument: ECD7 Element Column ID: i10655i10656
Calibration ID: EE00069

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SJH0075-CCV9	AR1242CCV9	QC		45	J001700	J001757	
SJH0075-CCVA	AR1660CCVA	QC		46	J001758	J001757	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210806.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	06-AUG-2021 10:24	08062101ECD7.D	1	DDTS	
2	06-AUG-2021 10:44	08062102ECD7.D	1	AR1254ICV1	
3	06-AUG-2021 11:05	08062103ECD7.D	1	AR1660ICV2	
4	06-AUG-2021 11:25	08062104ECD7.D	1	21G0190-04	
5	06-AUG-2021 11:46	08062105ECD7.D	1	BJG0573-BLK1	
6	06-AUG-2021 12:06	08062106ECD7.D	1	BJG0573-BS1	
7	06-AUG-2021 12:27	08062107ECD7.D	1	BJG0573-MRL1	
8	06-AUG-2021 12:47	08062108ECD7.D	1	AR1248CCV1	
9	06-AUG-2021 13:08	08062109ECD7.D	1	AR1660CCV2	
10	06-AUG-2021 14:51	08062110ECD7.D	1	21G0178-08	
11	06-AUG-2021 15:11	08062111ECD7.D	25	21G0141-06RE1	
12	06-AUG-2021 15:32	08062112ECD7.D	1	BJG0585-BLK1	
13	06-AUG-2021 15:52	08062113ECD7.D	1	BJG0585-BS1	
14	06-AUG-2021 16:13	08062114ECD7.D	1	21G0177-01	
15	06-AUG-2021 16:33	08062115ECD7.D	1	AR1242CCV3	
16	06-AUG-2021 16:54	08062116ECD7.D	1	AR1660CCV4	
17	06-AUG-2021 17:14	08062117ECD7.D	1	BJG0590-BLK1	
18	06-AUG-2021 17:35	08062118ECD7.D	1	BJG0590-BS1	
19	06-AUG-2021 17:55	08062119ECD7.D	1	BJG0590-BSD1	
20	06-AUG-2021 18:16	08062120ECD7.D	1	21G0212-01	
21	06-AUG-2021 18:36	08062121ECD7.D	1	21G0212-02	
22	06-AUG-2021 18:57	08062122ECD7.D	1	21G0212-03	
23	06-AUG-2021 19:17	08062123ECD7.D	1	21G0212-04	
24	06-AUG-2021 19:37	08062124ECD7.D	1	21G0212-05	
25	06-AUG-2021 19:58	08062125ECD7.D	1	21G0212-06	
26	06-AUG-2021 20:18	08062126ECD7.D	1	21G0212-07	
27	06-AUG-2021 20:39	08062127ECD7.D	1	21G0212-08	
28	06-AUG-2021 20:59	08062128ECD7.D	1	BJG0590-MS1	
29	06-AUG-2021 21:20	08062129ECD7.D	1	BJG0590-MSD1	
30	06-AUG-2021 21:40	08062130ECD7.D	1	AR1254CCV5	
31	06-AUG-2021 22:01	08062131ECD7.D	1	AR1660CCV6	
32	06-AUG-2021 22:21	08062132ECD7.D	1	21G0212-09	
33	06-AUG-2021 22:42	08062133ECD7.D	1	21G0212-10	
34	06-AUG-2021 23:02	08062134ECD7.D	1	21G0212-11	
35	06-AUG-2021 23:23	08062135ECD7.D	1	21G0212-12	
36	06-AUG-2021 23:43	08062136ECD7.D	1	21G0212-13	
37	07-AUG-2021 00:04	08062137ECD7.D	1	21G0212-14	
38	07-AUG-2021 00:24	08062138ECD7.D	1	21G0212-15	
39	07-AUG-2021 00:45	08062139ECD7.D	1	21G0212-16	
40	07-AUG-2021 01:05	08062140ECD7.D	1	AR1248CCV7	
41	07-AUG-2021 01:26	08062141ECD7.D	1	AR1660CCV8	
42	07-AUG-2021 01:46	08062142ECD7.D	5	21G0141-07	
43	07-AUG-2021 02:07	08062143ECD7.D	5	21G0156-07	
44	07-AUG-2021 02:27	08062144ECD7.D	5	21G0156-08	
45	07-AUG-2021 02:48	08062145ECD7.D	25	21G0156-20	
46	07-AUG-2021 03:08	08062146ECD7.D	5	21G0156-21	
47	07-AUG-2021 03:29	08062147ECD7.D	5	21G0156-22	
48	07-AUG-2021 03:49	08062148ECD7.D	1	AR1242CCV9	
49	07-AUG-2021 04:09	08062149ECD7.D	1	AR1660CCVA	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210806.b

ARI Job No.: DDTS Method: PCB.m Instrument: ecd7.i Date: 06-AUG-2021

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1024	08062101ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1044	08062102ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1105	08062103ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1125	08062104ECD7.D	21G0190-04		1	NO MANUAL INTEGRATION
1146	08062105ECD7.D	BJG0573-BLK1		1	NO MANUAL INTEGRATION
1206	08062106ECD7.D	BJG0573-BS1		1	NO MANUAL INTEGRATION
1227	08062107ECD7.D	BJG0573-MRL1		1	NO MANUAL INTEGRATION
1247	08062108ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
1308	08062109ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
1451	08062110ECD7.D	21G0178-08		1	NO MANUAL INTEGRATION
1511	08062111ECD7.D	21G0141-06RE1		25	NO MANUAL INTEGRATION
1532	08062112ECD7.D	BJG0585-BLK1		1	NO MANUAL INTEGRATION
1552	08062113ECD7.D	BJG0585-BS1		1	NO MANUAL INTEGRATION
1613	08062114ECD7.D	21G0177-01		1	Aroclor-1260,
1633	08062115ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
1654	08062116ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION
1714	08062117ECD7.D	BJG0590-BLK1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210806.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1735	08062118ECD7.D	BJG0590-BS1		1	NO MANUAL INTEGRATION
1755	08062119ECD7.D	BJG0590-BSD1		1	NO MANUAL INTEGRATION
1816	08062120ECD7.D	21G0212-01		1	NO MANUAL INTEGRATION
1836	08062121ECD7.D	21G0212-02		1	NO MANUAL INTEGRATION
1857	08062122ECD7.D	21G0212-03		1	NO MANUAL INTEGRATION
1917	08062123ECD7.D	21G0212-04		1	NO MANUAL INTEGRATION
1937	08062124ECD7.D	21G0212-05		1	NO MANUAL INTEGRATION
1958	08062125ECD7.D	21G0212-06		1	NO MANUAL INTEGRATION
2018	08062126ECD7.D	21G0212-07		1	NO MANUAL INTEGRATION
2039	08062127ECD7.D	21G0212-08		1	NO MANUAL INTEGRATION
2059	08062128ECD7.D	BJG0590-MS1		1	NO MANUAL INTEGRATION
2120	08062129ECD7.D	BJG0590-MSD1		1	NO MANUAL INTEGRATION
2140	08062130ECD7.D	AR1254CCV5		1	NO MANUAL INTEGRATION
2201	08062131ECD7.D	AR1660CCV6		1	NO MANUAL INTEGRATION
2221	08062132ECD7.D	21G0212-09		1	NO MANUAL INTEGRATION
2242	08062133ECD7.D	21G0212-10		1	NO MANUAL INTEGRATION
2302	08062134ECD7.D	21G0212-11		1	NO MANUAL INTEGRATION
2323	08062135ECD7.D	21G0212-12		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210806.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2343	08062136ECD7.D	21G0212-13		1	NO MANUAL INTEGRATION
0004	08062137ECD7.D	21G0212-14		1	NO MANUAL INTEGRATION
0024	08062138ECD7.D	21G0212-15		1	NO MANUAL INTEGRATION
0045	08062139ECD7.D	21G0212-16		1	NO MANUAL INTEGRATION
0105	08062140ECD7.D	AR1248CCV7		1	NO MANUAL INTEGRATION
0126	08062141ECD7.D	AR1660CCV8		1	NO MANUAL INTEGRATION
0146	08062142ECD7.D	21G0141-07		5	NO MANUAL INTEGRATION
0207	08062143ECD7.D	21G0156-07		5	NO MANUAL INTEGRATION
0227	08062144ECD7.D	21G0156-08		5	NO MANUAL INTEGRATION
0248	08062145ECD7.D	21G0156-20		25	NO MANUAL INTEGRATION
0308	08062146ECD7.D	21G0156-21		5	NO MANUAL INTEGRATION
0329	08062147ECD7.D	21G0156-22		5	NO MANUAL INTEGRATION
0349	08062148ECD7.D	AR1242CCV9		1	NO MANUAL INTEGRATION
0409	08062149ECD7.D	AR1660CCVA		1	NO MANUAL INTEGRATION
1024	08062101ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1044	08062102ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1105	08062103ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1125	08062104ECD7.D	21G0190-04		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210806.b\210806.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1146	08062105ECD7.D	BJG0573-BLK1		1	NO MANUAL INTEGRATION
1206	08062106ECD7.D	BJG0573-BS1		1	NO MANUAL INTEGRATION
1227	08062107ECD7.D	BJG0573-MRL1		1	NO MANUAL INTEGRATION
1247	08062108ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
1308	08062109ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
1451	08062110ECD7.D	21G0178-08		1	NO MANUAL INTEGRATION
1511	08062111ECD7.D	21G0141-06RE1		25	NO MANUAL INTEGRATION
1532	08062112ECD7.D	BJG0585-BLK1		1	NO MANUAL INTEGRATION
1552	08062113ECD7.D	BJG0585-BS1		1	NO MANUAL INTEGRATION
1613	08062114ECD7.D	21G0177-01		1	NO MANUAL INTEGRATION
1633	08062115ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
1654	08062116ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION
1714	08062117ECD7.D	BJG0590-BLK1		1	NO MANUAL INTEGRATION
1735	08062118ECD7.D	BJG0590-BS1		1	NO MANUAL INTEGRATION
1755	08062119ECD7.D	BJG0590-BSD1		1	NO MANUAL INTEGRATION
1816	08062120ECD7.D	21G0212-01		1	NO MANUAL INTEGRATION
1836	08062121ECD7.D	21G0212-02		1	Aroclor-1248 [2C], Aroclor-1254 [2C],
1857	08062122ECD7.D	21G0212-03		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210806.b\210806.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1917	08062123ECD7.D	21G0212-04		1	NO MANUAL INTEGRATION
1937	08062124ECD7.D	21G0212-05		1	NO MANUAL INTEGRATION
1958	08062125ECD7.D	21G0212-06		1	NO MANUAL INTEGRATION
2018	08062126ECD7.D	21G0212-07		1	NO MANUAL INTEGRATION
2039	08062127ECD7.D	21G0212-08		1	NO MANUAL INTEGRATION
2059	08062128ECD7.D	BJG0590-MS1		1	NO MANUAL INTEGRATION
2120	08062129ECD7.D	BJG0590-MSD1		1	NO MANUAL INTEGRATION
2140	08062130ECD7.D	AR1254CCV5		1	NO MANUAL INTEGRATION
2201	08062131ECD7.D	AR1660CCV6		1	NO MANUAL INTEGRATION
2221	08062132ECD7.D	21G0212-09		1	Aroclor-1254 [2C],
2242	08062133ECD7.D	21G0212-10		1	Aroclor-1248 [2C], Aroclor-1254 [2C],
2302	08062134ECD7.D	21G0212-11		1	Aroclor-1254 [2C],
2323	08062135ECD7.D	21G0212-12		1	NO MANUAL INTEGRATION
2343	08062136ECD7.D	21G0212-13		1	NO MANUAL INTEGRATION
0004	08062137ECD7.D	21G0212-14		1	Aroclor-1248 [2C], Aroclor-1254 [2C],
0024	08062138ECD7.D	21G0212-15		1	NO MANUAL INTEGRATION
0045	08062139ECD7.D	21G0212-16		1	NO MANUAL INTEGRATION
0105	08062140ECD7.D	AR1248CCV7		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210806.b\210806.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0126	08062141ECD7.D	AR1660CCV8		1	NO MANUAL INTEGRATION
0146	08062142ECD7.D	21G0141-07		5	Aroclor-1254 [2C],
0207	08062143ECD7.D	21G0156-07		5	NO MANUAL INTEGRATION
0227	08062144ECD7.D	21G0156-08		5	NO MANUAL INTEGRATION
0248	08062145ECD7.D	21G0156-20		25	NO MANUAL INTEGRATION
0308	08062146ECD7.D	21G0156-21		5	NO MANUAL INTEGRATION
0329	08062147ECD7.D	21G0156-22		5	NO MANUAL INTEGRATION
0349	08062148ECD7.D	AR1242CCV9		1	NO MANUAL INTEGRATION
0409	08062149ECD7.D	AR1660CCVA		1	NO MANUAL INTEGRATION

Security Status Report

Date: 11-Aug-2021 10:32

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08062103ECD7.D	Data Locked	jrains, 11-Aug-2021 09:59
08062104ECD7.D	Data Locked	jrains, 11-Aug-2021 09:59
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08062140ECD7.D	Data Locked	jrains, 11-Aug-2021 09:59
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08062142ECD7.D	Data Locked	jrains, 11-Aug-2021 09:59
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Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0101	Instrument:	ECD7
		Calibration:	EE00069

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
LDW21-IT597B	21G0212-10	08072109ECD7.D	08072109ECD7.D	Solid	08/07/21 22:12
LDW21-SC539A	21G0212-13	08072110ECD7.D	08072110ECD7.D	Solid	08/07/21 22:32

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 8/9/2021 5:07:49PM

ANALYSIS SEQUENCE

SJH0101

Instrument: ECD7 Element Column ID: i10655i10656
Calibration ID: EE00069

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SJH0101-ICV1	AR1254ICV1	QC		1	J001702	J001757	
SJH0101-ICV2	AR1660ICV2	QC		2	J001758	J001757	
BJH0137-BLK1	Blank	QC		3		J001757	
BJH0137-BS1	LCS	QC		4		J001757	
BJH0137-BSD1	LCS Dup	QC		5		J001757	
21H0026-01	9-60 Decant Station	8082A PCB Water 0.01	A 01	6		J001757	
SJH0101-CCV1	AR1248CCV1	QC		7	J006804	J001757	
SJH0101-CCV2	AR1660CCV2	QC		8	J001758	J001757	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210807.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	07-AUG-2021 19:28	08072101ECD7.D	1	DDTS	
2	07-AUG-2021 19:48	08072102ECD7.D	1	DDTS	
3	07-AUG-2021 20:09	08072103ECD7.D	1	AR1254ICV1	
4	07-AUG-2021 20:29	08072104ECD7.D	1	AR1660ICV2	
5	07-AUG-2021 20:50	08072105ECD7.D	1	BHJ0137-BLK1	
6	07-AUG-2021 21:10	08072106ECD7.D	1	BHJ0137-BS1	
7	07-AUG-2021 21:31	08072107ECD7.D	1	BHJ0137-BSD1	
8	07-AUG-2021 21:51	08072108ECD7.D	1	21H0026-01	
9	07-AUG-2021 22:12	08072109ECD7.D	5	21G0212-10	
10	07-AUG-2021 22:32	08072110ECD7.D	5	21G0212-13	
11	07-AUG-2021 22:53	08072111ECD7.D	1	BJG0567-BLK1	
12	07-AUG-2021 23:13	08072112ECD7.D	1	BJG0567-BS1	
13	07-AUG-2021 23:34	08072113ECD7.D	1	BJG0567-SRM1	
14	07-AUG-2021 23:54	08072114ECD7.D	1	21G0199-01	
15	08-AUG-2021 00:15	08072115ECD7.D	1	AR1248CCV1	
16	08-AUG-2021 00:35	08072116ECD7.D	1	AR1660CCV2	
17	08-AUG-2021 00:56	08072117ECD7.D	1	21G0199-02	
18	08-AUG-2021 01:16	08072118ECD7.D	1	21G0199-03	
19	08-AUG-2021 01:36	08072119ECD7.D	1	21G0199-04	
20	08-AUG-2021 01:57	08072120ECD7.D	1	21G0199-05	
21	08-AUG-2021 02:17	08072121ECD7.D	1	21G0199-06	
22	08-AUG-2021 02:38	08072122ECD7.D	1	21G0199-07	
23	08-AUG-2021 02:58	08072123ECD7.D	1	21G0199-08	
24	08-AUG-2021 03:19	08072124ECD7.D	1	BJG0567-MS1	
25	08-AUG-2021 03:39	08072125ECD7.D	1	BJG0567-MSD1	
26	08-AUG-2021 04:00	08072126ECD7.D	1	21G0199-09	
27	08-AUG-2021 04:20	08072127ECD7.D	1	21G0199-10	
28	08-AUG-2021 04:41	08072128ECD7.D	1	AR1242CCV3	
29	08-AUG-2021 05:01	08072129ECD7.D	1	AR1660CCV4	
30	08-AUG-2021 05:22	08072130ECD7.D	1	21G0199-11	
31	08-AUG-2021 05:42	08072131ECD7.D	1	21G0199-14	
32	08-AUG-2021 06:03	08072132ECD7.D	1	21G0213-01	
33	08-AUG-2021 06:23	08072133ECD7.D	1	21G0213-02	
34	08-AUG-2021 06:43	08072134ECD7.D	1	21G0213-03	
35	08-AUG-2021 07:04	08072135ECD7.D	1	21G0213-04	
36	08-AUG-2021 07:24	08072136ECD7.D	1	21G0213-05	
37	08-AUG-2021 07:45	08072137ECD7.D	10	21G0213-06	
38	08-AUG-2021 08:05	08072138ECD7.D	5	21G0213-07	
39	08-AUG-2021 08:26	08072139ECD7.D	1	21G0213-08	
40	08-AUG-2021 08:46	08072140ECD7.D	1	AR1254CCV5	
41	08-AUG-2021 09:07	08072141ECD7.D	1	AR1660CCV6	
42	08-AUG-2021 09:27	08072142ECD7.D	500	J008145	
43	08-AUG-2021 09:48	08072143ECD7.D	50	J008146	
44	08-AUG-2021 10:08	08072144ECD7.D	5	J008147	
45	08-AUG-2021 10:28	08072145ECD7.D	1	J008132	
46	08-AUG-2021 10:49	08072146ECD7.D	1	J008133	
47	08-AUG-2021 11:09	08072147ECD7.D	4	J008134	
48	08-AUG-2021 11:30	08072148ECD7.D	1	J008135	
49	08-AUG-2021 11:50	08072149ECD7.D	1	J008136	
50	08-AUG-2021 12:11	08072150ECD7.D	1	J008137	

	Inject Date/Time	Filename	DF	LabID	ClientID
51	08-AUG-2021 12:31	08072151ECD7.D	1	J008138	
52	08-AUG-2021 12:52	08072152ECD7.D	1	J008139	
53	08-AUG-2021 13:12	08072153ECD7.D	1	J008140	
54	08-AUG-2021 13:33	08072154ECD7.D	1	J008141	
55	08-AUG-2021 13:53	08072155ECD7.D	1	J008142	
56	08-AUG-2021 14:14	08072156ECD7.D	1	J008143	
57	08-AUG-2021 14:34	08072157ECD7.D	1	J008144	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210807.b

ARI Job No.: DDTS Method: PCB.m Instrument: ecd7.i Date: 07-AUG-2021

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1928	08072101ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1948	08072102ECD7.D	DDTS		1	NO MANUAL INTEGRATION
2009	08072103ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
2029	08072104ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
2050	08072105ECD7.D	BHJ0137-BLK1		1	NO MANUAL INTEGRATION
2110	08072106ECD7.D	BHJ0137-BS1		1	NO MANUAL INTEGRATION
2131	08072107ECD7.D	BHJ0137-BSD1		1	NO MANUAL INTEGRATION
2151	08072108ECD7.D	21H0026-01		1	NO MANUAL INTEGRATION
2212	08072109ECD7.D	21G0212-10		5	NO MANUAL INTEGRATION
2232	08072110ECD7.D	21G0212-13		5	NO MANUAL INTEGRATION
2253	08072111ECD7.D	BJG0567-BLK1		1	NO MANUAL INTEGRATION
2313	08072112ECD7.D	BJG0567-BS1		1	NO MANUAL INTEGRATION
2334	08072113ECD7.D	BJG0567-SRM1		1	NO MANUAL INTEGRATION
2354	08072114ECD7.D	21G0199-01		1	NO MANUAL INTEGRATION
0015	08072115ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
0035	08072116ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
0056	08072117ECD7.D	21G0199-02		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210807.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0116	08072118ECD7.D	21G0199-03		1	NO MANUAL INTEGRATION
0136	08072119ECD7.D	21G0199-04		1	NO MANUAL INTEGRATION
0157	08072120ECD7.D	21G0199-05		1	NO MANUAL INTEGRATION
0217	08072121ECD7.D	21G0199-06		1	NO MANUAL INTEGRATION
0238	08072122ECD7.D	21G0199-07		1	NO MANUAL INTEGRATION
0258	08072123ECD7.D	21G0199-08		1	NO MANUAL INTEGRATION
0319	08072124ECD7.D	BJG0567-MS1		1	NO MANUAL INTEGRATION
0339	08072125ECD7.D	BJG0567-MSD1		1	NO MANUAL INTEGRATION
0400	08072126ECD7.D	21G0199-09		1	NO MANUAL INTEGRATION
0420	08072127ECD7.D	21G0199-10		1	NO MANUAL INTEGRATION
0441	08072128ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
0501	08072129ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION
0522	08072130ECD7.D	21G0199-11		1	NO MANUAL INTEGRATION
0542	08072131ECD7.D	21G0199-14		1	NO MANUAL INTEGRATION
0603	08072132ECD7.D	21G0213-01		1	NO MANUAL INTEGRATION
0623	08072133ECD7.D	21G0213-02		1	NO MANUAL INTEGRATION
0643	08072134ECD7.D	21G0213-03		1	NO MANUAL INTEGRATION
0704	08072135ECD7.D	21G0213-04		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210807.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0724	08072136ECD7.D	21G0213-05		1	NO MANUAL INTEGRATION
0745	08072137ECD7.D	21G0213-06		10	NO MANUAL INTEGRATION
0805	08072138ECD7.D	21G0213-07		5	NO MANUAL INTEGRATION
0826	08072139ECD7.D	21G0213-08		1	NO MANUAL INTEGRATION
0846	08072140ECD7.D	AR1254CCV5		1	NO MANUAL INTEGRATION
0907	08072141ECD7.D	AR1660CCV6		1	NO MANUAL INTEGRATION
0927	08072142ECD7.D	J008145		500	NO MANUAL INTEGRATION
0948	08072143ECD7.D	J008146		50	NO MANUAL INTEGRATION
1008	08072144ECD7.D	J008147		5	NO MANUAL INTEGRATION
1028	08072145ECD7.D	J008132		1	NO MANUAL INTEGRATION
1049	08072146ECD7.D	J008133		1	NO MANUAL INTEGRATION
1109	08072147ECD7.D	J008134		4	NO MANUAL INTEGRATION
1130	08072148ECD7.D	J008135		1	NO MANUAL INTEGRATION
1150	08072149ECD7.D	J008136		1	NO MANUAL INTEGRATION
1211	08072150ECD7.D	J008137		1	NO MANUAL INTEGRATION
1231	08072151ECD7.D	J008138		1	NO MANUAL INTEGRATION
1252	08072152ECD7.D	J008139		1	NO MANUAL INTEGRATION
1312	08072153ECD7.D	J008140		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210807.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1333	08072154ECD7.D	J008141		1	NO MANUAL INTEGRATION
1353	08072155ECD7.D	J008142		1	NO MANUAL INTEGRATION
1414	08072156ECD7.D	J008143		1	NO MANUAL INTEGRATION
1434	08072157ECD7.D	J008144		1	NO MANUAL INTEGRATION
1928	08072101ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1948	08072102ECD7.D	DDTS		1	NO MANUAL INTEGRATION
2009	08072103ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
2029	08072104ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
2050	08072105ECD7.D	BHJ0137-BLK1		1	NO MANUAL INTEGRATION
2110	08072106ECD7.D	BHJ0137-BS1		1	NO MANUAL INTEGRATION
2131	08072107ECD7.D	BHJ0137-BSD1		1	NO MANUAL INTEGRATION
2151	08072108ECD7.D	21H0026-01		1	NO MANUAL INTEGRATION
2212	08072109ECD7.D	21G0212-10		5	NO MANUAL INTEGRATION
2232	08072110ECD7.D	21G0212-13		5	NO MANUAL INTEGRATION
2253	08072111ECD7.D	BJG0567-BLK1		1	NO MANUAL INTEGRATION
2313	08072112ECD7.D	BJG0567-BS1		1	NO MANUAL INTEGRATION
2334	08072113ECD7.D	BJG0567-SRM1		1	NO MANUAL INTEGRATION
2354	08072114ECD7.D	21G0199-01		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210807.b\210807.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0015	08072115ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
0035	08072116ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
0056	08072117ECD7.D	21G0199-02		1	NO MANUAL INTEGRATION
0116	08072118ECD7.D	21G0199-03		1	NO MANUAL INTEGRATION
0136	08072119ECD7.D	21G0199-04		1	NO MANUAL INTEGRATION
0157	08072120ECD7.D	21G0199-05		1	NO MANUAL INTEGRATION
0217	08072121ECD7.D	21G0199-06		1	NO MANUAL INTEGRATION
0238	08072122ECD7.D	21G0199-07		1	NO MANUAL INTEGRATION
0258	08072123ECD7.D	21G0199-08		1	NO MANUAL INTEGRATION
0319	08072124ECD7.D	BJG0567-MS1		1	NO MANUAL INTEGRATION
0339	08072125ECD7.D	BJG0567-MSD1		1	NO MANUAL INTEGRATION
0400	08072126ECD7.D	21G0199-09		1	NO MANUAL INTEGRATION
0420	08072127ECD7.D	21G0199-10		1	NO MANUAL INTEGRATION
0441	08072128ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
0501	08072129ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION
0522	08072130ECD7.D	21G0199-11		1	NO MANUAL INTEGRATION
0542	08072131ECD7.D	21G0199-14		1	NO MANUAL INTEGRATION
0603	08072132ECD7.D	21G0213-01		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210807.b\210807.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0623	08072133ECD7.D	21G0213-02		1	NO MANUAL INTEGRATION
0643	08072134ECD7.D	21G0213-03		1	NO MANUAL INTEGRATION
0704	08072135ECD7.D	21G0213-04		1	NO MANUAL INTEGRATION
0724	08072136ECD7.D	21G0213-05		1	NO MANUAL INTEGRATION
0745	08072137ECD7.D	21G0213-06		10	NO MANUAL INTEGRATION
0805	08072138ECD7.D	21G0213-07		5	NO MANUAL INTEGRATION
0826	08072139ECD7.D	21G0213-08		1	NO MANUAL INTEGRATION
0846	08072140ECD7.D	AR1254CCV5		1	NO MANUAL INTEGRATION
0907	08072141ECD7.D	AR1660CCV6		1	NO MANUAL INTEGRATION
0927	08072142ECD7.D	J008145		500	NO MANUAL INTEGRATION
0948	08072143ECD7.D	J008146		50	NO MANUAL INTEGRATION
1008	08072144ECD7.D	J008147		5	NO MANUAL INTEGRATION
1028	08072145ECD7.D	J008132		1	NO MANUAL INTEGRATION
1049	08072146ECD7.D	J008133		1	NO MANUAL INTEGRATION
1109	08072147ECD7.D	J008134		4	NO MANUAL INTEGRATION
1130	08072148ECD7.D	J008135		1	NO MANUAL INTEGRATION
1150	08072149ECD7.D	J008136		1	NO MANUAL INTEGRATION
1211	08072150ECD7.D	J008137		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\210807.b\210807.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1231	08072151ECD7.D	J008138		1	NO MANUAL INTEGRATION
1252	08072152ECD7.D	J008139		1	NO MANUAL INTEGRATION
1312	08072153ECD7.D	J008140		1	NO MANUAL INTEGRATION
1333	08072154ECD7.D	J008141		1	NO MANUAL INTEGRATION
1353	08072155ECD7.D	J008142		1	NO MANUAL INTEGRATION
1414	08072156ECD7.D	J008143		1	NO MANUAL INTEGRATION
1434	08072157ECD7.D	J008144		1	NO MANUAL INTEGRATION

Security Status Report

Date: 09-Aug-2021 17:07

08072103ECD7.D	Data Locked	jrains, 09-Aug-2021 17:07
08072104ECD7.D	Data Locked	jrains, 09-Aug-2021 17:07
08072105ECD7.D	Data Locked	jrains, 09-Aug-2021 17:07
08072106ECD7.D	Data Locked	jrains, 09-Aug-2021 17:07
08072107ECD7.D	Data Locked	jrains, 09-Aug-2021 17:07
08072108ECD7.D	Data Locked	jrains, 09-Aug-2021 17:07
08072115ECD7.D	Data Locked	jrains, 09-Aug-2021 17:07
08072116ECD7.D	Data Locked	jrains, 09-Aug-2021 17:07

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJE0321	Instrument:	ECD7
Calibration:	EE00069	Calibration Date:	05/22/2021

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SJE0321-SCV1 (Water)			Lab File ID: 05222117ECD7.D				Analyzed: 05/22/21 19:32	
Decachlorobiphenyl	40.000	99.6	80 - 120	13.177	13.1765	0.0005	N/A	
Tetrachlorometaxylene	40.000	106	80 - 120	5.074	5.072667	0.0013	N/A	
Decachlorobiphenyl [2C]	40.000	97.6	80 - 120	13.872	13.8715	0.0005	N/A	
Tetrachlorometaxylene [2C]	40.000	101	80 - 120	5.423	5.423333	-0.0003	N/A	
SJE0321-SCV2 (Water)			Lab File ID: 05222118ECD7.D				Analyzed: 05/22/21 19:53	
Decachlorobiphenyl	40.000	101	80 - 120	13.176	13.1765	-0.0005	N/A	
Tetrachlorometaxylene	40.000	104	80 - 120	5.072	5.072667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	101	80 - 120	13.873	13.8715	0.0015	N/A	
Tetrachlorometaxylene [2C]	40.000	101	80 - 120	5.423	5.423333	-0.0003	N/A	
SJE0321-SCV3 (Water)			Lab File ID: 05222119ECD7.D				Analyzed: 05/22/21 20:15	
Decachlorobiphenyl	40.000	101	80 - 120	13.176	13.1765	-0.0005	N/A	
Tetrachlorometaxylene	40.000	107	80 - 120	5.074	5.072667	0.0013	N/A	
Decachlorobiphenyl [2C]	40.000	101	80 - 120	13.873	13.8715	0.0015	N/A	
Tetrachlorometaxylene [2C]	40.000	102	80 - 120	5.424	5.423333	0.0007	N/A	
SJE0321-SCV4 (Water)			Lab File ID: 05222120ECD7.D				Analyzed: 05/22/21 20:37	
Decachlorobiphenyl	40.000	100	80 - 120	13.177	13.1765	0.0005	N/A	
Tetrachlorometaxylene	40.000	104	80 - 120	5.073	5.072667	0.0003	N/A	
Decachlorobiphenyl [2C]	40.000	99.0	80 - 120	13.872	13.8715	0.0005	N/A	
Tetrachlorometaxylene [2C]	40.000	101	80 - 120	5.423	5.423333	-0.0003	N/A	
SJE0321-SCV5 (Water)			Lab File ID: 05222121ECD7.D				Analyzed: 05/22/21 20:58	
Decachlorobiphenyl	40.000	99.4	80 - 120	13.178	13.1765	0.0015	N/A	
Tetrachlorometaxylene	40.000	103	80 - 120	5.074	5.072667	0.0013	N/A	
Decachlorobiphenyl [2C]	40.000	98.8	80 - 120	13.874	13.8715	0.0025	N/A	
Tetrachlorometaxylene [2C]	40.000	97.8	80 - 120	5.423	5.423333	-0.0003	N/A	
SJE0321-SCV6 (Water)			Lab File ID: 05222122ECD7.D				Analyzed: 05/22/21 21:20	
Decachlorobiphenyl	40.000	149	80 - 200	13.177	13.1765	0.0005	N/A	
Tetrachlorometaxylene	40.000	105	80 - 120	5.073	5.072667	0.0003	N/A	
Decachlorobiphenyl [2C]	40.000	153	80 - 200	13.875	13.8715	0.0035	N/A	
Tetrachlorometaxylene [2C]	40.000	101	80 - 120	5.423	5.423333	-0.0003	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0075	Instrument:	ECD7
Calibration:	EE00069	Calibration Date:	05/22/2021

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SJH0075-ICV1 (Solid)			Lab File ID: 08062102ECD7.D				Analyzed: 08/06/21 10:44	
Decachlorobiphenyl	40.000	93.8	80 - 120	13.167	13.1765	-0.0095	N/A	
Tetrachlorometaxylene	40.000	107	80 - 120	5.071	5.072667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	97.3	80 - 120	13.848	13.8715	-0.0235	N/A	
Tetrachlorometaxylene [2C]	40.000	104	80 - 120	5.414	5.423333	-0.0093	N/A	
SJH0075-ICV2 (Solid)			Lab File ID: 08062103ECD7.D				Analyzed: 08/06/21 11:05	
Decachlorobiphenyl	40.000	106	80 - 120	13.164	13.1765	-0.0125	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	5.069	5.072667	-0.0037	N/A	
Decachlorobiphenyl [2C]	40.000	105	80 - 120	13.848	13.8715	-0.0235	N/A	
Tetrachlorometaxylene [2C]	40.000	107	80 - 120	5.414	5.423333	-0.0093	N/A	
SJH0075-CCV1 (Solid)			Lab File ID: 08062108ECD7.D				Analyzed: 08/06/21 12:47	
Decachlorobiphenyl	40.000	106	80 - 120	13.164	13.1765	-0.0125	N/A	
Tetrachlorometaxylene	40.000	103	80 - 120	5.068	5.072667	-0.0047	N/A	
Decachlorobiphenyl [2C]	40.000	114	80 - 120	13.848	13.8715	-0.0235	N/A	
Tetrachlorometaxylene [2C]	40.000	102	80 - 120	5.414	5.423333	-0.0093	N/A	
SJH0075-CCV2 (Solid)			Lab File ID: 08062109ECD7.D				Analyzed: 08/06/21 13:08	
Decachlorobiphenyl	40.000	105	80 - 120	13.164	13.1765	-0.0125	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	5.067	5.072667	-0.0057	N/A	
Decachlorobiphenyl [2C]	40.000	110	80 - 120	13.848	13.8715	-0.0235	N/A	
Tetrachlorometaxylene [2C]	40.000	107	80 - 120	5.414	5.423333	-0.0093	N/A	
SJH0075-CCV3 (Solid)			Lab File ID: 08062115ECD7.D				Analyzed: 08/06/21 16:33	
Decachlorobiphenyl	40.000	114	80 - 120	13.163	13.1765	-0.0135	N/A	
Tetrachlorometaxylene	40.000	113	80 - 120	5.068	5.072667	-0.0047	N/A	
Decachlorobiphenyl [2C]	40.000	121	80 - 120	13.85	13.8715	-0.0215	N/A	*
Tetrachlorometaxylene [2C]	40.000	111	80 - 120	5.414	5.423333	-0.0093	N/A	
SJH0075-CCV4 (Solid)			Lab File ID: 08062116ECD7.D				Analyzed: 08/06/21 16:54	
Decachlorobiphenyl	40.000	105	80 - 120	13.163	13.1765	-0.0135	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	5.068	5.072667	-0.0047	N/A	
Decachlorobiphenyl [2C]	40.000	106	80 - 120	13.848	13.8715	-0.0235	N/A	
Tetrachlorometaxylene [2C]	40.000	106	80 - 120	5.414	5.423333	-0.0093	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0075	Instrument:	ECD7
Calibration:	EE00069	Calibration Date:	05/22/2021

Surrogate Compound	Spike Level ug/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BJG0590-BLK1 (Solid)			Lab File ID: 08062117ECD7.D				Analyzed: 08/06/21 17:14	
Decachlorobiphenyl	8.0000	94.8	40 - 126	13.164	13.1765	-0.0125	N/A	
Tetrachlorometaxylene	8.0000	87.6	44 - 120	5.067	5.072667	-0.0057	N/A	
Decachlorobiphenyl [2C]	8.0000	105	40 - 126	13.848	13.8715	-0.0235	N/A	
Tetrachlorometaxylene [2C]	8.0000	83.7	44 - 120	5.412	5.423333	-0.0113	N/A	
BJG0590-BS1 (Solid)			Lab File ID: 08062118ECD7.D				Analyzed: 08/06/21 17:35	
Decachlorobiphenyl	8.0000	102	40 - 126	13.164	13.1765	-0.0125	N/A	
Tetrachlorometaxylene	8.0000	92.7	44 - 120	5.066	5.072667	-0.0067	N/A	
Decachlorobiphenyl [2C]	8.0000	114	40 - 126	13.847	13.8715	-0.0245	N/A	
Tetrachlorometaxylene [2C]	8.0000	87.2	44 - 120	5.412	5.423333	-0.0113	N/A	
BJG0590-SRM1 (Solid)			Lab File ID: 08062119ECD7.D				Analyzed: 08/06/21 17:55	
Decachlorobiphenyl	40.000	84.0	40 - 126	13.158	13.1765	-0.0185	N/A	
Tetrachlorometaxylene	40.000	78.0	44 - 120	5.065	5.072667	-0.0077	N/A	
Decachlorobiphenyl [2C]	40.000	85.5	40 - 126	13.843	13.8715	-0.0285	N/A	
Tetrachlorometaxylene [2C]	40.000	73.3	44 - 120	5.41	5.423333	-0.0133	N/A	
21G0212-01 (Solid)			Lab File ID: 08062120ECD7.D				Analyzed: 08/06/21 18:16	
Decachlorobiphenyl	8.0014	81.0	40 - 126	13.151	13.1765	-0.0255	N/A	
Tetrachlorometaxylene	8.0014	70.8	44 - 120	5.064	5.072667	-0.0087	N/A	
Decachlorobiphenyl [2C]	8.0014	72.3	40 - 126	13.838	13.8715	-0.0335	N/A	
Tetrachlorometaxylene [2C]	8.0014	65.4	44 - 120	5.409	5.423333	-0.0143	N/A	
21G0212-02 (Solid)			Lab File ID: 08062121ECD7.D				Analyzed: 08/06/21 18:36	
Decachlorobiphenyl	7.9970	86.2	40 - 126	13.152	13.1765	-0.0245	N/A	
Tetrachlorometaxylene	7.9970	76.1	44 - 120	5.064	5.072667	-0.0087	N/A	
Decachlorobiphenyl [2C]	7.9970	77.1	40 - 126	13.838	13.8715	-0.0335	N/A	
Tetrachlorometaxylene [2C]	7.9970	69.9	44 - 120	5.408	5.423333	-0.0153	N/A	
21G0212-03 (Solid)			Lab File ID: 08062122ECD7.D				Analyzed: 08/06/21 18:57	
Decachlorobiphenyl	7.9968	94.2	40 - 126	13.161	13.1765	-0.0155	N/A	
Tetrachlorometaxylene	7.9968	80.6	44 - 120	5.064	5.072667	-0.0087	N/A	
Decachlorobiphenyl [2C]	7.9968	89.1	40 - 126	13.845	13.8715	-0.0265	N/A	
Tetrachlorometaxylene [2C]	7.9968	78.8	44 - 120	5.41	5.423333	-0.0133	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0075	Instrument:	ECD7
Calibration:	EE00069	Calibration Date:	05/22/2021

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
21G0212-04 (Solid)			Lab File ID: 08062123ECD7.D				Analyzed: 08/06/21 19:17	
Decachlorobiphenyl	7.9975	90.5	40 - 126	13.16	13.1765	-0.0165	N/A	
Tetrachlorometaxylene	7.9975	76.0	44 - 120	5.064	5.072667	-0.0087	N/A	
Decachlorobiphenyl [2C]	7.9975	88.2	40 - 126	13.845	13.8715	-0.0265	N/A	
Tetrachlorometaxylene [2C]	7.9975	75.1	44 - 120	5.41	5.423333	-0.0133	N/A	
21G0212-05 (Solid)			Lab File ID: 08062124ECD7.D				Analyzed: 08/06/21 19:37	
Decachlorobiphenyl	7.9974	86.6	40 - 126	13.162	13.1765	-0.0145	N/A	
Tetrachlorometaxylene	7.9974	80.7	44 - 120	5.065	5.072667	-0.0077	N/A	
Decachlorobiphenyl [2C]	7.9974	89.3	40 - 126	13.846	13.8715	-0.0255	N/A	
Tetrachlorometaxylene [2C]	7.9974	79.8	44 - 120	5.411	5.423333	-0.0123	N/A	
21G0212-06 (Solid)			Lab File ID: 08062125ECD7.D				Analyzed: 08/06/21 19:58	
Decachlorobiphenyl	7.9919	82.0	40 - 126	13.156	13.1765	-0.0205	N/A	
Tetrachlorometaxylene	7.9919	76.5	44 - 120	5.064	5.072667	-0.0087	N/A	
Decachlorobiphenyl [2C]	7.9919	78.8	40 - 126	13.84	13.8715	-0.0315	N/A	
Tetrachlorometaxylene [2C]	7.9919	73.1	44 - 120	5.409	5.423333	-0.0143	N/A	
21G0212-07 (Solid)			Lab File ID: 08062126ECD7.D				Analyzed: 08/06/21 20:18	
Decachlorobiphenyl	7.5375	86.9	40 - 126	13.156	13.1765	-0.0205	N/A	
Tetrachlorometaxylene	7.5375	74.4	44 - 120	5.064	5.072667	-0.0087	N/A	
Decachlorobiphenyl [2C]	7.5375	83.6	40 - 126	13.842	13.8715	-0.0295	N/A	
Tetrachlorometaxylene [2C]	7.5375	71.1	44 - 120	5.409	5.423333	-0.0143	N/A	
21G0212-08 (Solid)			Lab File ID: 08062127ECD7.D				Analyzed: 08/06/21 20:39	
Decachlorobiphenyl	7.9920	85.5	40 - 126	13.158	13.1765	-0.0185	N/A	
Tetrachlorometaxylene	7.9920	73.7	44 - 120	5.064	5.072667	-0.0087	N/A	
Decachlorobiphenyl [2C]	7.9920	80.3	40 - 126	13.842	13.8715	-0.0295	N/A	
Tetrachlorometaxylene [2C]	7.9920	72.9	44 - 120	5.41	5.423333	-0.0133	N/A	
BJG0590-MS1 (Solid)			Lab File ID: 08062128ECD7.D				Analyzed: 08/06/21 20:59	
Decachlorobiphenyl	8.0020	91.6	40 - 126	13.156	13.1765	-0.0205	N/A	
Tetrachlorometaxylene	8.0020	76.7	44 - 120	5.063	5.072667	-0.0097	N/A	
Decachlorobiphenyl [2C]	8.0020	88.6	40 - 126	13.841	13.8715	-0.0305	N/A	
Tetrachlorometaxylene [2C]	8.0020	75.1	44 - 120	5.409	5.423333	-0.0143	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0075	Instrument:	ECD7
Calibration:	EE00069	Calibration Date:	05/22/2021

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BJG0590-MSD1 (Solid)			Lab File ID: 08062129ECD7.D				Analyzed: 08/06/21 21:20	
Decachlorobiphenyl	8.0020	80.2	40 - 126	13.158	13.1765	-0.0185	N/A	
Tetrachlorometaxylene	8.0020	68.4	44 - 120	5.063	5.072667	-0.0097	N/A	
Decachlorobiphenyl [2C]	8.0020	77.5	40 - 126	13.843	13.8715	-0.0285	N/A	
Tetrachlorometaxylene [2C]	8.0020	66.8	44 - 120	5.409	5.423333	-0.0143	N/A	
SJH0075-CCV5 (Solid)			Lab File ID: 08062130ECD7.D				Analyzed: 08/06/21 21:40	
Decachlorobiphenyl	40.000	94.8	80 - 120	13.165	13.1765	-0.0115	N/A	
Tetrachlorometaxylene	40.000	107	80 - 120	5.066	5.072667	-0.0067	N/A	
Decachlorobiphenyl [2C]	40.000	105	80 - 120	13.849	13.8715	-0.0225	N/A	
Tetrachlorometaxylene [2C]	40.000	104	80 - 120	5.413	5.423333	-0.0103	N/A	
SJH0075-CCV6 (Solid)			Lab File ID: 08062131ECD7.D				Analyzed: 08/06/21 22:01	
Decachlorobiphenyl	40.000	106	80 - 120	13.163	13.1765	-0.0135	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	5.067	5.072667	-0.0057	N/A	
Decachlorobiphenyl [2C]	40.000	110	80 - 120	13.846	13.8715	-0.0255	N/A	
Tetrachlorometaxylene [2C]	40.000	105	80 - 120	5.413	5.423333	-0.0103	N/A	
21G0212-09 (Solid)			Lab File ID: 08062132ECD7.D				Analyzed: 08/06/21 22:21	
Decachlorobiphenyl	7.9532	91.9	40 - 126	13.151	13.1765	-0.0255	N/A	
Tetrachlorometaxylene	7.9532	70.4	44 - 120	5.063	5.072667	-0.0097	N/A	
Decachlorobiphenyl [2C]	7.9532	85.2	40 - 126	13.838	13.8715	-0.0335	N/A	
Tetrachlorometaxylene [2C]	7.9532	68.6	44 - 120	5.407	5.423333	-0.0163	N/A	
21G0212-11 (Solid)			Lab File ID: 08062134ECD7.D				Analyzed: 08/06/21 23:02	
Decachlorobiphenyl	7.9752	88.9	40 - 126	13.154	13.1765	-0.0225	N/A	
Tetrachlorometaxylene	7.9752	72.1	44 - 120	5.063	5.072667	-0.0097	N/A	
Decachlorobiphenyl [2C]	7.9752	85.1	40 - 126	13.84	13.8715	-0.0315	N/A	
Tetrachlorometaxylene [2C]	7.9752	71.8	44 - 120	5.407	5.423333	-0.0163	N/A	
21G0212-12 (Solid)			Lab File ID: 08062135ECD7.D				Analyzed: 08/06/21 23:23	
Decachlorobiphenyl	7.9878	92.3	40 - 126	13.162	13.1765	-0.0145	N/A	
Tetrachlorometaxylene	7.9878	83.8	44 - 120	5.066	5.072667	-0.0067	N/A	
Decachlorobiphenyl [2C]	7.9878	98.2	40 - 126	13.846	13.8715	-0.0255	N/A	
Tetrachlorometaxylene [2C]	7.9878	79.9	44 - 120	5.41	5.423333	-0.0133	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0075	Instrument:	ECD7
Calibration:	EE00069	Calibration Date:	05/22/2021

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
21G0212-14 (Solid)			Lab File ID: 08062137ECD7.D				Analyzed: 08/07/21 00:04	
Decachlorobiphenyl	8.0014	93.3	40 - 126	13.16	13.1765	-0.0165	N/A	
Tetrachlorometaxylene	8.0014	86.1	44 - 120	5.065	5.072667	-0.0077	N/A	
Decachlorobiphenyl [2C]	8.0014	93.7	40 - 126	13.845	13.8715	-0.0265	N/A	
Tetrachlorometaxylene [2C]	8.0014	79.2	44 - 120	5.41	5.423333	-0.0133	N/A	
21G0212-15 (Solid)			Lab File ID: 08062138ECD7.D				Analyzed: 08/07/21 00:24	
Decachlorobiphenyl	7.9961	91.8	40 - 126	13.159	13.1765	-0.0175	N/A	
Tetrachlorometaxylene	7.9961	81.7	44 - 120	5.065	5.072667	-0.0077	N/A	
Decachlorobiphenyl [2C]	7.9961	83.6	40 - 126	13.844	13.8715	-0.0275	N/A	
Tetrachlorometaxylene [2C]	7.9961	76.9	44 - 120	5.411	5.423333	-0.0123	N/A	
21G0212-16 (Solid)			Lab File ID: 08062139ECD7.D				Analyzed: 08/07/21 00:45	
Decachlorobiphenyl	7.9993	91.4	40 - 126	13.164	13.1765	-0.0125	N/A	
Tetrachlorometaxylene	7.9993	82.3	44 - 120	5.066	5.072667	-0.0067	N/A	
Decachlorobiphenyl [2C]	7.9993	99.7	40 - 126	13.847	13.8715	-0.0245	N/A	
Tetrachlorometaxylene [2C]	7.9993	78.7	44 - 120	5.411	5.423333	-0.0123	N/A	
SJH0075-CCV7 (Solid)			Lab File ID: 08062140ECD7.D				Analyzed: 08/07/21 01:05	
Decachlorobiphenyl	40.000	106	80 - 120	13.164	13.1765	-0.0125	N/A	
Tetrachlorometaxylene	40.000	103	80 - 120	5.066	5.072667	-0.0067	N/A	
Decachlorobiphenyl [2C]	40.000	114	80 - 120	13.847	13.8715	-0.0245	N/A	
Tetrachlorometaxylene [2C]	40.000	103	80 - 120	5.413	5.423333	-0.0103	N/A	
SJH0075-CCV8 (Solid)			Lab File ID: 08062141ECD7.D				Analyzed: 08/07/21 01:26	
Decachlorobiphenyl	40.000	105	80 - 120	13.164	13.1765	-0.0125	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	5.067	5.072667	-0.0057	N/A	
Decachlorobiphenyl [2C]	40.000	107	80 - 120	13.846	13.8715	-0.0255	N/A	
Tetrachlorometaxylene [2C]	40.000	106	80 - 120	5.413	5.423333	-0.0103	N/A	
SJH0075-CCV9 (Solid)			Lab File ID: 08062148ECD7.D				Analyzed: 08/07/21 03:49	
Decachlorobiphenyl	40.000	114	80 - 120	13.164	13.1765	-0.0125	N/A	
Tetrachlorometaxylene	40.000	113	80 - 120	5.066	5.072667	-0.0067	N/A	
Decachlorobiphenyl [2C]	40.000	125	80 - 120	13.847	13.8715	-0.0245	N/A	*
Tetrachlorometaxylene [2C]	40.000	111	80 - 120	5.413	5.423333	-0.0103	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0075	Instrument:	ECD7
Calibration:	EE00069	Calibration Date:	05/22/2021

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SJH0075-CCVA (Solid)			Lab File ID: 08062149ECD7.D				Analyzed: 08/07/21 04:09	
Decachlorobiphenyl	40.000	104	80 - 120	13.164	13.1765	-0.0125	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	5.068	5.072667	-0.0047	N/A	
Decachlorobiphenyl [2C]	40.000	106	80 - 120	13.847	13.8715	-0.0245	N/A	
Tetrachlorometaxylene [2C]	40.000	106	80 - 120	5.414	5.423333	-0.0093	N/A	

Analytical Resources, Incorporated
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SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG/WO:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0101	Instrument:	ECD7
Calibration:	EE00069	Calibration Date:	05/22/2021

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
21G0212-10 (Solid)			Lab File ID: 08072109ECD7.D				Analyzed: 08/07/21 22:12	
Decachlorobiphenyl	7.9715	94.6	40 - 126	13.156	13.1765	-0.0205	N/A	
Tetrachlorometaxylene	7.9715	72.9	44 - 120	5.065	5.072667	-0.0077	N/A	
Decachlorobiphenyl [2C]	7.9715	83.3	40 - 126	13.84	13.8715	-0.0315	N/A	
Tetrachlorometaxylene [2C]	7.9715	72.3	44 - 120	5.409	5.423333	-0.0143	N/A	
21G0212-13 (Solid)			Lab File ID: 08072110ECD7.D				Analyzed: 08/07/21 22:32	
Decachlorobiphenyl	7.9808	95.1	40 - 126	13.16	13.1765	-0.0165	N/A	
Tetrachlorometaxylene	7.9808	84.0	44 - 120	5.065	5.072667	-0.0077	N/A	
Decachlorobiphenyl [2C]	7.9808	85.5	40 - 126	13.842	13.8715	-0.0295	N/A	
Tetrachlorometaxylene [2C]	7.9808	85.8	44 - 120	5.411	5.423333	-0.0123	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJE0321	Instrument:	ECD7
		Calibration:	EE00069

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SJE0321-SCV1)		(Water)		Lab File ID: 05222117ECD7.D				Analyzed: 05/22/21 19:32	
1-Bromo-2-Nitrobenzene	296594	2.858	296446	2.859	100	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	481880	13.529	470266	13.529	102	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	719765	3.655	711996	3.656	101	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	911548	14.767	867949	14.766	105	50 - 200	0.001	+/-0.50	
Secondary Cal Check (SJE0321-SCV2)		(Water)		Lab File ID: 05222118ECD7.D				Analyzed: 05/22/21 19:53	
1-Bromo-2-Nitrobenzene	296608	2.858	296446	2.859	100	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	477702	13.529	470266	13.529	102	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	712373	3.655	711996	3.656	100	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	906518	14.765	867949	14.766	104	50 - 200	-0.001	+/-0.50	
Secondary Cal Check (SJE0321-SCV3)		(Water)		Lab File ID: 05222119ECD7.D				Analyzed: 05/22/21 20:15	
1-Bromo-2-Nitrobenzene	291470	2.86	296446	2.859	98	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	476310	13.529	470266	13.529	101	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	707436	3.657	711996	3.656	99	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	901019	14.766	867949	14.766	104	50 - 200	0.000	+/-0.50	
Secondary Cal Check (SJE0321-SCV4)		(Water)		Lab File ID: 05222120ECD7.D				Analyzed: 05/22/21 20:37	
1-Bromo-2-Nitrobenzene	296015	2.859	296446	2.859	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	475384	13.529	470266	13.529	101	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	709760	3.656	711996	3.656	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	908548	14.767	867949	14.766	105	50 - 200	0.001	+/-0.50	
Secondary Cal Check (SJE0321-SCV5)		(Water)		Lab File ID: 05222121ECD7.D				Analyzed: 05/22/21 20:58	
1-Bromo-2-Nitrobenzene	295364	2.859	296446	2.859	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	478364	13.529	470266	13.529	102	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	716532	3.656	711996	3.656	101	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	915545	14.765	867949	14.766	105	50 - 200	-0.001	+/-0.50	
Secondary Cal Check (SJE0321-SCV6)		(Water)		Lab File ID: 05222122ECD7.D				Analyzed: 05/22/21 21:20	
1-Bromo-2-Nitrobenzene	296903	2.859	296446	2.859	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	479288	13.528	470266	13.529	102	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	712350	3.656	711996	3.656	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	915257	14.765	867949	14.766	105	50 - 200	-0.001	+/-0.50	

Analytical Resources, Incorporated
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INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0075	Instrument:	ECD7
		Calibration:	EE00069

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SJH0075-ICV1)		(Solid)		Lab File ID: 08062102ECD7.D				Analyzed: 08/06/21 10:44	
1-Bromo-2-Nitrobenzene	318659	2.854	318659	2.854	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	559934	13.519	559934	13.519	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	808179	3.644	808179	3.644	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	1147680	14.742	1147680	14.742	100	50 - 200	0.000	+/-0.50	
Initial Cal Check (SJH0075-ICV2)		(Solid)		Lab File ID: 08062103ECD7.D				Analyzed: 08/06/21 11:05	
1-Bromo-2-Nitrobenzene	236789	2.854	318659	2.854	74	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	402773	13.518	559934	13.519	72	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	604074	3.645	808179	3.644	75	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	833118	14.742	1147680	14.742	73	50 - 200	0.000	+/-0.50	
Blank (BJG0590-BLK1)		(Solid)		Lab File ID: 08062117ECD7.D				Analyzed: 08/06/21 17:14	
1-Bromo-2-Nitrobenzene	271975	2.851	318659	2.854	85	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	452247	13.517	559934	13.519	81	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	737656	3.642	808179	3.644	91	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	994192	14.745	1147680	14.742	87	50 - 200	0.003	+/-0.50	
LCS (BJG0590-BS1)		(Solid)		Lab File ID: 08062118ECD7.D				Analyzed: 08/06/21 17:35	
1-Bromo-2-Nitrobenzene	271089	2.851	318659	2.854	85	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	457285	13.518	559934	13.519	82	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	743114	3.641	808179	3.644	92	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl [2C]	1002413	14.743	1147680	14.742	87	50 - 200	0.001	+/-0.50	
Reference (BJG0590-SRM1)		(Solid)		Lab File ID: 08062119ECD7.D				Analyzed: 08/06/21 17:55	
1-Bromo-2-Nitrobenzene	273482	2.85	318659	2.854	86	50 - 200	-0.004	+/-0.50	
Hexabromobiphenyl	395941	13.51	559934	13.519	71	50 - 200	-0.009	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	735011	3.641	808179	3.644	91	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl [2C]	967054	14.739	1147680	14.742	84	50 - 200	-0.003	+/-0.50	
LDW21-SC524 (21G0212-01)		(Solid)		Lab File ID: 08062120ECD7.D				Analyzed: 08/06/21 18:16	
1-Bromo-2-Nitrobenzene	278552	2.852	318659	2.854	87	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	300838	13.503	559934	13.519	54	50 - 200	-0.016	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	717083	3.642	808179	3.644	89	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	791658	14.734	1147680	14.742	69	50 - 200	-0.008	+/-0.50	

Analytical Resources, Incorporated
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INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0075	Instrument:	ECD7
		Calibration:	EE00069

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW21-SC528 (21G0212-02)		(Solid)		Lab File ID: 08062121ECD7.D				Analyzed: 08/06/21 18:36	
1-Bromo-2-Nitrobenzene	271919	2.851	318659	2.854	85	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	298114	13.503	559934	13.519	53	50 - 200	-0.016	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	710484	3.641	808179	3.644	88	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl [2C]	777283	14.734	1147680	14.742	68	50 - 200	-0.008	+/-0.50	
LDW21-SC538B (21G0212-03)		(Solid)		Lab File ID: 08062122ECD7.D				Analyzed: 08/06/21 18:57	
1-Bromo-2-Nitrobenzene	270478	2.852	318659	2.854	85	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	390029	13.512	559934	13.519	70	50 - 200	-0.007	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	707918	3.642	808179	3.644	88	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	976616	14.741	1147680	14.742	85	50 - 200	-0.001	+/-0.50	
LDW21-SC538C (21G0212-04)		(Solid)		Lab File ID: 08062123ECD7.D				Analyzed: 08/06/21 19:17	
1-Bromo-2-Nitrobenzene	278541	2.85	318659	2.854	87	50 - 200	-0.004	+/-0.50	
Hexabromobiphenyl	387562	13.512	559934	13.519	69	50 - 200	-0.007	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	719229	3.64	808179	3.644	89	50 - 200	-0.004	+/-0.50	
Hexabromobiphenyl [2C]	983704	14.74	1147680	14.742	86	50 - 200	-0.002	+/-0.50	
LDW21-SC538E (21G0212-05)		(Solid)		Lab File ID: 08062124ECD7.D				Analyzed: 08/06/21 19:37	
1-Bromo-2-Nitrobenzene	286008	2.851	318659	2.854	90	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	454891	13.514	559934	13.519	81	50 - 200	-0.005	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	768222	3.642	808179	3.644	95	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	1087786	14.741	1147680	14.742	95	50 - 200	-0.001	+/-0.50	
LDW21-IT582B (21G0212-06)		(Solid)		Lab File ID: 08062125ECD7.D				Analyzed: 08/06/21 19:58	
1-Bromo-2-Nitrobenzene	279408	2.851	318659	2.854	88	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	320409	13.507	559934	13.519	57	50 - 200	-0.012	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	732590	3.641	808179	3.644	91	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl [2C]	844795	14.736	1147680	14.742	74	50 - 200	-0.006	+/-0.50	
LDW21-IT582C (21G0212-07)		(Solid)		Lab File ID: 08062126ECD7.D				Analyzed: 08/06/21 20:18	
1-Bromo-2-Nitrobenzene	277530	2.85	318659	2.854	87	50 - 200	-0.004	+/-0.50	
Hexabromobiphenyl	315977	13.508	559934	13.519	56	50 - 200	-0.011	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	716169	3.641	808179	3.644	89	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl [2C]	827251	14.736	1147680	14.742	72	50 - 200	-0.006	+/-0.50	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0075	Instrument:	ECD7
		Calibration:	EE00069

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW21-IT582E (21G0212-08)		(Solid)		Lab File ID: 08062127ECD7.D				Analyzed: 08/06/21 20:39	
1-Bromo-2-Nitrobenzene	277412	2.851	318659	2.854	87	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	356885	13.51	559934	13.519	64	50 - 200	-0.009	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	742421	3.641	808179	3.644	92	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl [2C]	941826	14.741	1147680	14.742	82	50 - 200	-0.001	+/-0.50	
Matrix Spike (BJG0590-MS1)		(Solid)		Lab File ID: 08062128ECD7.D				Analyzed: 08/06/21 20:59	
1-Bromo-2-Nitrobenzene	270427	2.852	318659	2.854	85	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	319377	13.508	559934	13.519	57	50 - 200	-0.011	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	716488	3.642	808179	3.644	89	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	841163	14.736	1147680	14.742	73	50 - 200	-0.006	+/-0.50	
Matrix Spike Dup (BJG0590-MSD1)		(Solid)		Lab File ID: 08062129ECD7.D				Analyzed: 08/06/21 21:20	
1-Bromo-2-Nitrobenzene	276051	2.851	318659	2.854	87	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	353944	13.509	559934	13.519	63	50 - 200	-0.010	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	743962	3.641	808179	3.644	92	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl [2C]	934113	14.74	1147680	14.742	81	50 - 200	-0.002	+/-0.50	
LDW21-IT579B (21G0212-09)		(Solid)		Lab File ID: 08062132ECD7.D				Analyzed: 08/06/21 22:21	
1-Bromo-2-Nitrobenzene	276303	2.85	318659	2.854	87	50 - 200	-0.004	+/-0.50	
Hexabromobiphenyl	291273	13.503	559934	13.519	52	50 - 200	-0.016	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	680724	3.641	808179	3.644	84	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl [2C]	773964	14.733	1147680	14.742	67	50 - 200	-0.009	+/-0.50	
LDW21-IT597C (21G0212-11)		(Solid)		Lab File ID: 08062134ECD7.D				Analyzed: 08/06/21 23:02	
1-Bromo-2-Nitrobenzene	280090	2.85	318659	2.854	88	50 - 200	-0.004	+/-0.50	
Hexabromobiphenyl	319103	13.505	559934	13.519	57	50 - 200	-0.014	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	708173	3.64	808179	3.644	88	50 - 200	-0.004	+/-0.50	
Hexabromobiphenyl [2C]	816372	14.735	1147680	14.742	71	50 - 200	-0.007	+/-0.50	
LDW21-IT597E (21G0212-12)		(Solid)		Lab File ID: 08062135ECD7.D				Analyzed: 08/06/21 23:23	
1-Bromo-2-Nitrobenzene	279925	2.851	318659	2.854	88	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	420000	13.514	559934	13.519	75	50 - 200	-0.005	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	770842	3.641	808179	3.644	95	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl [2C]	1011143	14.742	1147680	14.742	88	50 - 200	0.000	+/-0.50	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0075	Instrument:	ECD7
		Calibration:	EE00069

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW21-SC539B (21G0212-14)		(Solid)		Lab File ID: 08062137ECD7.D				Analyzed: 08/07/21 00:04	
1-Bromo-2-Nitrobenzene	270719	2.85	318659	2.854	85	50 - 200	-0.004	+/-0.50	
Hexabromobiphenyl	391669	13.511	559934	13.519	70	50 - 200	-0.008	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	743710	3.641	808179	3.644	92	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl [2C]	1002288	14.739	1147680	14.742	87	50 - 200	-0.003	+/-0.50	
LDW21-SC539C (21G0212-15)		(Solid)		Lab File ID: 08062138ECD7.D				Analyzed: 08/07/21 00:24	
1-Bromo-2-Nitrobenzene	271188	2.852	318659	2.854	85	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	382666	13.511	559934	13.519	68	50 - 200	-0.008	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	718240	3.642	808179	3.644	89	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	1021397	14.739	1147680	14.742	89	50 - 200	-0.003	+/-0.50	
LDW21-SC539E (21G0212-16)		(Solid)		Lab File ID: 08062139ECD7.D				Analyzed: 08/07/21 00:45	
1-Bromo-2-Nitrobenzene	282091	2.85	318659	2.854	89	50 - 200	-0.004	+/-0.50	
Hexabromobiphenyl	468895	13.515	559934	13.519	84	50 - 200	-0.004	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	776627	3.641	808179	3.644	96	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl [2C]	1109280	14.741	1147680	14.742	97	50 - 200	-0.001	+/-0.50	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0101	Instrument:	ECD7
		Calibration:	EE00069

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW21-IT597B (21G0212-10)		(Solid)		Lab File ID: 08072109ECD7.D				Analyzed: 08/07/21 22:12	
1-Bromo-2-Nitrobenzene	275533	2.852				50 - 200		+/-0.50	
Hexabromobiphenyl	358649	13.509				50 - 200		+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	686198	3.642				50 - 200		+/-0.50	
Hexabromobiphenyl [2C]	886284	14.736				50 - 200		+/-0.50	
LDW21-SC539A (21G0212-13)		(Solid)		Lab File ID: 08072110ECD7.D				Analyzed: 08/07/21 22:32	
1-Bromo-2-Nitrobenzene	281618	2.852				50 - 200		+/-0.50	
Hexabromobiphenyl	402963	13.511				50 - 200		+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	731884	3.642				50 - 200		+/-0.50	
Hexabromobiphenyl [2C]	1015631	14.739				50 - 200		+/-0.50	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC			Project:	Lower Duwamish AOC4
Matrix:	Sediment	Laboratory ID:	21G0212-01	File ID:	08062120ECD7.D
Sampled:	07/15/21 14:55	Prepared:	07/27/21 14:38	Analyzed:	08/06/21 18:16
Solids:	56.50	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BJG0590	Sequence:	SJH0075		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.581	8.613	0.032	20500.25	30.9	1.9
	* 2	9.355	9.389	0.034	60958.25	31.5	
Aroclor 1254	* 1	9.839	9.874	0.035	60128.2	64.0	10.
	2	10.135	10.16	0.025	201588.6	57.9	
Aroclor 1260	* 1	11.537	11.56567	0.0287	66156.6	94.1	8.6
	2	12.96	12.993	0.033	303505.8	86.3	

* Column used for quantitation

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC			Project:	Lower Duwamish AOC4
Matrix:	Sediment	Laboratory ID:	21G0212-02	File ID:	08062121ECD7.D
Sampled:	07/15/21 15:20	Prepared:	07/27/21 14:38	Analyzed:	08/06/21 18:36
Solids:	59.86	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BJG0590	Sequence:	SJH0075		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.581	8.613	0.032	21118.75	32.6	.6
	* 2	9.357	9.389	0.032	63141.5	32.8	
Aroclor 1254	* 1	9.84	9.874	0.034	60023	65.3	9.8
	2	10.135	10.16	0.025	203276	59.2	
Aroclor 1260	* 1	11.538	11.56567	0.0277	54387	76.4	9.3
	2	12.96	12.993	0.033	242456.8	69.6	

* Column used for quantitation

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC			Project:	Lower Duwamish AOC4
Matrix:	Sediment	Laboratory ID:	21G0212-09	File ID:	08062132ECD7.D
Sampled:	07/16/21 11:23	Prepared:	07/27/21 14:38	Analyzed:	08/06/21 22:21
Solids:	71.36	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BJG0590	Sequence:	SJH0075		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1254	* 1	9.839	9.874	0.035	77208.8	81.2	9.3
	2	10.12	10.16	0.04	238874.2	74.0	
Aroclor 1260	1	11.537	11.56567	0.0287	48130.6	60.7	19.2
	* 2	12.959	12.993	0.034	242198	73.6	

* Column used for quantitation

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC			Project:	Lower Duwamish AOC4
Matrix:	Sediment	Laboratory ID:	21G0212-11	File ID:	08062134ECD7.D
Sampled:	07/16/21 14:07	Prepared:	07/27/21 14:38	Analyzed:	08/06/21 23:02
Solids:	74.77	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BJG0590	Sequence:	SJH0075		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1254	* 1	9.845	9.874	0.029	117767	122	9.4
	2	10.127	10.16	0.033	371413.6	111	
Aroclor 1260	1	11.542	11.56567	0.0237	42290.4	55.8	17.8
	* 2	12.962	12.993	0.031	233570.8	66.7	

* Column used for quantitation

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC			Project:	Lower Duwamish AOC4
Matrix:	Sediment	Laboratory ID:	21G0212-12	File ID:	08062135ECD7.D
Sampled:	07/16/21 14:07	Prepared:	07/27/21 14:38	Analyzed:	08/06/21 23:23
Solids:	82.58	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BJG0590	Sequence:	SJH0075		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1254	1	9.858	9.874	0.016	1778	2.0	.
	* 2	10.148	10.16	0.012	6676.4	2.0	
Aroclor 1260	1	11.551	11.56567	0.0147	1710.6	1.8	32.6
	* 2	12.968	12.993	0.025	11145.75	2.5	

* Column used for quantitation

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC			Project:	Lower Duwamish AOC4
Matrix:	Sediment	Laboratory ID:	21G0212-14	File ID:	08062137ECD7.D
Sampled:	07/16/21 15:45	Prepared:	07/27/21 14:38	Analyzed:	08/07/21 00:04
Solids:	79.15	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BJG0590	Sequence:	SJH0075		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.591	8.613	0.022	7416.25	11.8	36.
	2	9.362	9.389	0.027	23764.5	8.2	
Aroclor 1254	1	9.854	9.874	0.02	17777.6	19.5	2.5
	* 2	10.144	10.16	0.016	68748.6	20.0	
Aroclor 1260	1	11.549	11.56567	0.0167	10491.6	11.7	8.2
	* 2	12.966	12.993	0.027	57135.75	12.7	

* Column used for quantitation

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC			Project:	Lower Duwamish AOC4
Matrix:	Sediment	Laboratory ID:	21G0212-10	File ID:	08072109ECD7.D
Sampled:	07/16/21 14:07	Prepared:	07/27/21 14:38	Analyzed:	08/07/21 22:12
Solids:	58.62	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BJG0590	Sequence:	SJH0101		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1254	* 1	9.848	9.874	0.026	146540.4	769	8.
	2	10.129	10.16	0.031	454104	710	
Aroclor 1260	1	11.544	11.56567	0.0217	32999.4	192	12.2
	* 2	12.962	12.993	0.031	164987.8	217	

* Column used for quantitation

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC			Project:	Lower Duwamish AOC4
Matrix:	Sediment	Laboratory ID:	21G0212-13	File ID:	08072110ECD7.D
Sampled:	07/16/21 15:45	Prepared:	07/27/21 14:38	Analyzed:	08/07/21 22:32
Solids:	55.15	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BJG0590	Sequence:	SJH0101		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1254	1	9.851	9.874	0.023	28236.8	150	10.7
	* 2	10.15	10.16	0.01	116823.8	167	
Aroclor 1260	* 1	11.549	11.56567	0.0167	62365.8	302	6.8
	2	12.965	12.993	0.028	272740.3	282	

* Column used for quantitation

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HOLDING TIME SUMMARY

Analysis: EPA 8082A

Laboratory: Analytical Resources, Inc. SDG: 21G0212

Client: Anchor QEA, LLC Project: Lower Duwamish AOC4

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
LDW21-SC524 21G0212-01	07/15/21 14:55	07/16/21 17:39	07/27/21 14:38	11	14	08/06/21 18:16	10	40	
LDW21-SC528 21G0212-02	07/15/21 15:20	07/16/21 17:39	07/27/21 14:38	11	14	08/06/21 18:36	10	40	
LDW21-SC538B 21G0212-03	07/15/21 16:21	07/16/21 17:39	07/27/21 14:38	11	14	08/06/21 18:57	10	40	
LDW21-SC538C 21G0212-04	07/15/21 16:21	07/16/21 17:39	07/27/21 14:38	11	14	08/06/21 19:17	10	40	
LDW21-SC538E 21G0212-05	07/15/21 16:21	07/16/21 17:39	07/27/21 14:38	11	14	08/06/21 19:37	10	40	
LDW21-IT582B 21G0212-06	07/16/21 08:16	07/16/21 17:39	07/27/21 14:38	11	14	08/06/21 19:58	10	40	
LDW21-IT582C 21G0212-07	07/16/21 08:16	07/16/21 17:39	07/27/21 14:38	11	14	08/06/21 20:18	10	40	
LDW21-IT582E 21G0212-08	07/16/21 08:16	07/16/21 17:39	07/27/21 14:38	11	14	08/06/21 20:39	10	40	
LDW21-IT579B 21G0212-09	07/16/21 11:23	07/16/21 17:39	07/27/21 14:38	11	14	08/06/21 22:21	10	40	
LDW21-IT597B 21G0212-10	07/16/21 14:07	07/16/21 17:39	07/27/21 14:38	11	14	08/07/21 22:12	11	40	
LDW21-IT597C 21G0212-11	07/16/21 14:07	07/16/21 17:39	07/27/21 14:38	11	14	08/06/21 23:02	10	40	
LDW21-IT597E 21G0212-12	07/16/21 14:07	07/16/21 17:39	07/27/21 14:38	11	14	08/06/21 23:23	10	40	
LDW21-SC539A 21G0212-13	07/16/21 15:45	07/16/21 17:39	07/27/21 14:38	10	14	08/07/21 22:32	11	40	
LDW21-SC539B 21G0212-14	07/16/21 15:45	07/16/21 17:39	07/27/21 14:38	10	14	08/07/21 00:04	10	40	
LDW21-SC539C 21G0212-15	07/16/21 15:45	07/16/21 17:39	07/27/21 14:38	10	14	08/07/21 00:24	10	40	
LDW21-SC539E 21G0212-16	07/16/21 15:45	07/16/21 17:39	07/27/21 14:38	10	14	08/07/21 00:45	10	40	
Matrix Spike BJG0590-MS1	07/16/21 08:16	07/16/21 17:39	07/27/21 14:38	11	14	08/06/21 20:59	10	40	
Matrix Spike Dup BJG0590-MSD1	07/16/21 08:16	07/16/21 17:39	07/27/21 14:38	11	14	08/06/21 21:20	10	40	

* Indicates hold time exceedance.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

METHOD DETECTION AND REPORTING LIMITS

EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

METHOD DETECTION AND REPORTING LIMITS

EPA 8082A

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Matrix: Water
Instrument: ECD7

Analyte	MDL	RL	Units
Aroclor 1016	1.56	4.00	ug/kg
Aroclor 1016 [2C]	1.56	4.00	ug/kg
Aroclor 1221	1.56	4.00	ug/kg
Aroclor 1221 [2C]	1.56	4.00	ug/kg
Aroclor 1232	1.56	4.00	ug/kg
Aroclor 1232 [2C]	1.56	4.00	ug/kg
Aroclor 1242	1.56	4.00	ug/kg
Aroclor 1242 [2C]	1.56	4.00	ug/kg
Aroclor 1248	1.56	4.00	ug/kg
Aroclor 1248 [2C]	1.56	4.00	ug/kg
Aroclor 1254	1.56	4.00	ug/kg
Aroclor 1254 [2C]	1.56	4.00	ug/kg
Aroclor 1260	0.589	4.00	ug/kg
Aroclor 1260 [2C]	0.589	4.00	ug/kg
Aroclor 1262	0.589	4.00	ug/kg
Aroclor 1262 [2C]	0.589	4.00	ug/kg
Aroclor 1268	0.589	4.00	ug/kg
Aroclor 1268 [2C]	0.589	4.00	ug/kg

AccuStandard
125 Market Street
New Haven, CT 06513
(203) 786-5290

CERTIFICATE OF PRODUCT DATA

PRODUCT: S-279N
DESCRIPTION: Volatile Organic Compound (TCMx)
LOT #: 0052481B-1
SOLVENT: N/A

EXPIRATION: July 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/FID)	Prepared Concentration[1]	Certified Analyte Concentration[2]
Tetrachloro-meta-xylene (TCMX)	877-09-8	96.0	N/A	N/A

Te

* I1769A

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 ~ 4-6-09 (18)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Standard Record

Standard ID: C000147 **Printed: 4/23/2015 11:52:09AM**

Description:	tetrachlormetaxylene	Expires:	15-Jan-2020
Standard Type:	Other	Prepared:	15-Jan-2014
Solvent:	n/a	Prepared By:	Joshua Rains
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	27-Feb-2015 13:01 by JGR
Vendor:	Accustandard	Lot #:	0052481b-1
Vendor Catalog #:			

Comments

see I1769a
updated for calibration TCX DCBP 06/12/14 sdrd

Analyte	CAS Number	Concentration	Units
Tetrachlorometaxylene [2C]	877-09-8	1000000	ug/mL
Tetrachlorometaxylene	877-09-8	1000000	ug/mL
TCX 1660 [2C]	877-09-8	1000000	ug/mL
TCX 1660	877-09-8	1000000	ug/mL
TCX [2C]	877-09-8	1000000	ug/mL
TCX (A) [2C]	877-09-8	1000000	ug/mL
TCX (A)	877-09-8	1000000	ug/mL
TCX	877-09-8	1000000	ug/mL

Reviewed By Date

AccuStandard
125 Market Street
New Haven, CT 06513
(203) 786-5290

CERTIFICATE OF PRODUCT DATA

PRODUCT: C-209N
EXPIRATION: Jul 28, 2015
DESCRIPTION: 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl
LOT #: 990521LB-AC
SOLVENT: N/A

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

2,

* 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 Resources, Incorporated
Analytical Chemists and Consultants

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

H008387

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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.: AL0-101467
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%

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Reference Material Producer
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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)

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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.: AL0-101467
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%

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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)

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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.: AL0-101467
Description: Aroclor 1016
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL12908
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%

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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/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)

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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.: AL0-101462
Description: Aroclor 1260
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL13054
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 1260	11096-82-5	1000	± 0.520%

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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.: AL0-101468
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%

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Reference Material Producer
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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/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)

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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	**Lot Number:**	CL14914
Description:	Aroclor 1232	**Certification Date:**	January 31, 2020
Storage:	4 °C	**Expiration Date:**	January 31, 2028
Provided As:	1 mL in 2 mL Ampoule in Isooctane		

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%

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Reference Material Producer
Certicate No. 2427.02

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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/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)

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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	**Lot Number:**	CL14018
Description:	Aroclor 1242	**Certification Date:**	August 20, 2019
Storage:	4 °C	**Expiration Date:**	August 31, 2027
Provided As:	1 mL in 2 mL Ampoule in Isooctane		

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 009076

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Certicate No. 2427.02

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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	**Lot Number:**	CL15384
Description:	Aroclor 1248	**Certification Date:**	June 19, 2020
Storage:	4 °C	**Expiration Date:**	June 30, 2028
Provided As:	1 mL in 2 mL Ampoule in Isooctane		

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 009077

ACCREDITED
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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/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:

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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	**Lot Number:**	CL15384
Description:	Aroclor 1248	**Certification Date:**	June 19, 2020
Storage:	4 °C	**Expiration Date:**	June 30, 2028
Provided As:	1 mL in 2 mL Ampoule in Isooctane		

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 009077

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

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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.
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[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 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%

I009078

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Reference Material Producer
Certificate No. 2427.02

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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/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.

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[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 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 009079

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Reference Material Producer
Certificate No. 2427.02

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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.

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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/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:

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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 0090800 10/04/20

IL111110613_US

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

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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.

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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).

J000580

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.

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 9001
Registered
TUV USA, Inc.

John Russo
President

Monica Bourgeois
Director of QA/RA

250 Smith Street North Kingstown, Rhode Island 02852 **www.agilent.com/quality**

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).

J000581

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

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert No. AT-1937

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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).

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

2021/15/21
J000582

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
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).

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

J 000583

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

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Certificate of Analysis
ISO Guide 34

Aroclor 1248 Standard

Product Number: PP-342 **Page:** 1 of 1

Lot Number: CT-0774 **Lot Issue Date:** 08-Mar-2019 **Expiration Date:** 31-Mar-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 1248	012672-29-6	NT01718	100.3 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

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

J000584
01/15/21

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

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Certificate of Analysis

Aroclor 1254 Solution

Product Number:	PP-352			**Page:**	1 of 1
Lot Number:	CK-4250	**Lot Issue Date:**	31-Dec-2013	**Expiration Date:**	31-Jan-2022

This certified 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	100.0 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15-30°C).

J000585

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.

ACCREDITED

ISO 17025:2005 Accredited A2LA Cert. No. 0851-01

ISO 9001:2008 Registered TUV USA, Inc. Cert. No. 09-1009

250 Smith Street, North Kingstown, RI 02852 USA
401-294-9400 Fax: 295-2330
wwww.ultrasci.com

William J. Leary
Quality Assurance Manager

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).

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

J000 587

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

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Certificate of Analysis
ISO 17034

Aroclor 1268 Standard

Product Number: PP-382-1 **Page:** 1 of 1

Lot Number: 0006478417 **Lot Issue Date:** 24-Jul-2019 **Expiration Date:** 31-Aug-2027

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 1268	011100-14-4	RM00937	100.3 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

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

J000588

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

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Recipient Copy

CHAIN-OF-CUSTODY RECORD

COC No. 15130

Order Number: CB014550

Date Shipped: 6/30/2021

AirBill No(s): 460843969796

From: QATS LABORATORY
2700 CHANDLER AVENUE, BLDG. C
LAS VEGAS, NV 89120
PHONE: 1-702-895-8712
FAX: 1-702-795-8210

To: SUE DUNNIHOO
ANALYTICAL RESOURCES INC.
4611 S. 134TH PLACE SUITE 100
TUKWILA WA 98168
250-695-6207

Sample ID	Qty	Description/Remarks	→ Catalogue Number
PSRM0134 - J006840	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0135 - J006841	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0136 - J006842	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0137 - J006843	1	PUGET SOUND SEDIMENT RM	PS-SRM
		6/30/2021	
		DUWAMISH AOC4	

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 6/30/2021	Received by: (Signature)	Date/Time 07/01/2021 1042
Custody Seal(s): Present/Absent	Remarks:		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

Report No. 00, 9/11/2014

SMP Version 3.3

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW21-SC524

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-01 C	SDG:	21G0212
Sampled:	07/15/21 14:55	Prepared:	07/21/21 11:39	File ID:	
% Solids:	56.38	Preparation:	No Prep Wet Chem	Analyzed:	07/21/21 11:41
Batch:	BJG0502	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	56.38	1	0.04	0.04	

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Form I
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SM 2540 G-97

LDW21-SC528

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-02 C	SDG:	21G0212
Sampled:	07/15/21 15:20	Prepared:	07/21/21 11:39	File ID:	
% Solids:	58.39	Preparation:	No Prep Wet Chem	Analyzed:	07/21/21 11:41
Batch:	BJG0502	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	58.39	1	0.04	0.04	

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Form I
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SM 2540 G-97

LDW21-SC538B

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-03 C	SDG:	21G0212
Sampled:	07/15/21 16:21	Prepared:	07/21/21 11:39	File ID:	
% Solids:	75.56	Preparation:	No Prep Wet Chem	Analyzed:	07/21/21 11:41
Batch:	BJG0502	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	75.56	1	0.04	0.04	

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Form I
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SM 2540 G-97

LDW21-SC538C

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-04 C	SDG:	21G0212
Sampled:	07/15/21 16:21	Prepared:	07/21/21 11:39	File ID:	
% Solids:	73.33	Preparation:	No Prep Wet Chem	Analyzed:	07/21/21 11:41
Batch:	BJG0502	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	73.33	1	0.04	0.04	

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LDW21-SC538E

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-05 C	SDG:	21G0212
Sampled:	07/15/21 16:21	Prepared:	07/21/21 11:39	File ID:	
% Solids:	74.24	Preparation:	No Prep Wet Chem	Analyzed:	07/21/21 11:41
Batch:	BJG0502	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	74.24	1	0.04	0.04	

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SM 2540 G-97

LDW21-IT582B

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-06 C	SDG:	21G0212
Sampled:	07/16/21 08:16	Prepared:	07/21/21 11:39	File ID:	
% Solids:	69.55	Preparation:	No Prep Wet Chem	Analyzed:	07/21/21 11:41
Batch:	BJG0502	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	69.55	1	0.04	0.04	

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Form I
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LDW21-IT582C

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-07 C	SDG:	21G0212
Sampled:	07/16/21 08:16	Prepared:	07/21/21 11:39	File ID:	
% Solids:	69.77	Preparation:	No Prep Wet Chem	Analyzed:	07/21/21 11:41
Batch:	BJG0502	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	69.77	1	0.04	0.04	

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LDW21-IT582E

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-08 C	SDG:	21G0212
Sampled:	07/16/21 08:16	Prepared:	07/21/21 11:39	File ID:	
% Solids:	72.02	Preparation:	No Prep Wet Chem	Analyzed:	07/21/21 11:41
Batch:	BJG0502	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	72.02	1	0.04	0.04	

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LDW21-IT579B

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-09 C	SDG:	21G0212
Sampled:	07/16/21 11:23	Prepared:	07/21/21 11:39	File ID:	
% Solids:	69.95	Preparation:	No Prep Wet Chem	Analyzed:	07/21/21 11:41
Batch:	BJG0502	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	69.95	1	0.04	0.04	

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Form I
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LDW21-IT597B

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-10 C	SDG:	21G0212
Sampled:	07/16/21 14:07	Prepared:	07/21/21 11:39	File ID:	
% Solids:	59.76	Preparation:	No Prep Wet Chem	Analyzed:	07/21/21 11:41
Batch:	BJG0502	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	59.76	1	0.04	0.04	

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SM 2540 G-97

LDW21-IT597C

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-11 C	SDG:	21G0212
Sampled:	07/16/21 14:07	Prepared:	07/21/21 11:39	File ID:	
% Solids:	75.15	Preparation:	No Prep Wet Chem	Analyzed:	07/21/21 11:41
Batch:	BJG0502	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	75.15	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW21-IT597E

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-12 C	SDG:	21G0212
Sampled:	07/16/21 14:07	Prepared:	07/21/21 11:39	File ID:	
% Solids:	81.85	Preparation:	No Prep Wet Chem	Analyzed:	07/21/21 11:41
Batch:	BJG0502	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	81.85	1	0.04	0.04	

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Form I
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SM 2540 G-97

LDW21-SC539A

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-13 C	SDG:	21G0212
Sampled:	07/16/21 15:45	Prepared:	07/21/21 11:39	File ID:	
% Solids:	54.64	Preparation:	No Prep Wet Chem	Analyzed:	07/21/21 11:41
Batch:	BJG0502	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	54.64	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW21-SC539B

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-14 C	SDG:	21G0212
Sampled:	07/16/21 15:45	Prepared:	07/21/21 11:39	File ID:	
% Solids:	74.12	Preparation:	No Prep Wet Chem	Analyzed:	07/21/21 11:41
Batch:	BJG0502	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	74.12	1	0.04	0.04	

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Form I
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SM 2540 G-97

LDW21-SC539C

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-15 C	SDG:	21G0212
Sampled:	07/16/21 15:45	Prepared:	07/21/21 11:39	File ID:	
% Solids:	62.92	Preparation:	No Prep Wet Chem	Analyzed:	07/21/21 11:41
Batch:	BJG0502	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	62.92	1	0.04	0.04	

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INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW21-SC539E

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-16 C	SDG:	21G0212
Sampled:	07/16/21 15:45	Prepared:	07/21/21 11:39	File ID:	
% Solids:	78.49	Preparation:	No Prep Wet Chem	Analyzed:	07/21/21 11:41
Batch:	BJG0502	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	78.49	1	0.04	0.04	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

SM 2540 G-97

Laboratory: Analytical Resources, Inc. SDG: 21G0212

Client: Anchor QEA, LLC Project: Lower Duwamish AOC4

Batch: BJG0502 Batch Matrix: Solid Preparation: No Prep Wet Chem

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW21-SC524	21G0212-01		07/21/21 11:39	
LDW21-SC528	21G0212-02		07/21/21 11:39	
LDW21-SC538B	21G0212-03		07/21/21 11:39	
LDW21-SC538C	21G0212-04		07/21/21 11:39	
LDW21-SC538E	21G0212-05		07/21/21 11:39	
LDW21-IT582B	21G0212-06		07/21/21 11:39	
LDW21-IT582C	21G0212-07		07/21/21 11:39	
LDW21-IT582E	21G0212-08		07/21/21 11:39	
LDW21-IT579B	21G0212-09		07/21/21 11:39	
LDW21-IT597B	21G0212-10		07/21/21 11:39	
LDW21-IT597C	21G0212-11		07/21/21 11:39	
LDW21-IT597E	21G0212-12		07/21/21 11:39	
LDW21-SC539A	21G0212-13		07/21/21 11:39	
LDW21-SC539B	21G0212-14		07/21/21 11:39	
LDW21-SC539C	21G0212-15		07/21/21 11:39	
LDW21-SC539E	21G0212-16		07/21/21 11:39	
Blank	BJG0502-BLK1		07/21/21 11:39	
LDW21-SC524	BJG0502-DUP1		07/21/21 11:39	
LDW21-SC524	BJG0502-DUP2		07/21/21 11:39	

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:	BJG0502
Date:	7/21/2021 11:41
Analyst:	DOE

Instrumentation

Drying Ovens:	12	**Analytical Balance:**	BAL2
Muffle Furnace:	2		

Batch drying time				**Oven Temps, °C**	
record times as mm/dd/yy hh:mm			TS (%) calculated as:	Start Temp	105
date/time in oven:	7/21/2021 12:25		Final dry wt (g) = (Dry Wt - Tare Wt)	Dry Cycle 1	105
date/time out:	7/22/2021 9:25		TS = (Final Dry Wt)/ (grams Sample-Tare)	Dry Cycle 2	
elapsed hrs =	21.0	OK		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:	7/21/21 11:50	7/21/21 11:55	7/22/21 10:10							
Cal Wt (g):	10.0000	9.9999	9.9999	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)	TVS (%)	Notes	Fixed (%)
BJG0502-BLK1	1	0.8154	0.0000	0.8154			0.0000	0.00%									
21G0212-01	2	0.8060	5.4548	3.4268			2.6208	56.38%									
BJG0502-DUP1	3	0.8046	5.7356	3.5793			2.7747	56.27%	RPD=0.2								
BJG0502-DUP2	4	0.7944	5.5386	3.4809			2.6865	56.63%	RSD=0.3								
21G0212-02	5	0.7891	7.3530	4.6220			3.8329	58.39%									
21G0212-03	6	0.7928	7.2614	5.6804			4.8876	75.56%									
21G0212-04	7	0.8070	8.6819	6.5816			5.7746	73.33%									
21G0212-05	8	0.7773	5.8550	4.5469			3.7696	74.24%									
21G0212-06	9	0.8053	8.3765	6.0712			5.2659	69.55%									
21G0212-07	10	0.8026	7.2397	5.2937			4.4911	69.77%									
21G0212-08	11	0.8046	9.4723	7.0470			6.2424	72.02%									
21G0212-09	12	0.8051	7.5600	5.5301			4.7250	69.95%									
21G0212-10	13	0.8058	4.8025	3.1942			2.3884	59.76%									
21G0212-11	14	0.7826	5.9280	4.6495			3.8669	75.15%									
21G0212-12	15	0.7963	5.4486	4.6044			3.8081	81.85%									
21G0212-13	16	0.7985	6.5070	3.9177			3.1192	54.64%									
21G0212-14	17	0.7989	7.1192	5.4837			4.6848	74.12%									
21G0212-15	18	0.7857	6.2006	4.1926			3.4069	62.92%									
21G0212-16	19	0.8177	7.0640	5.7207			4.9030	78.49%									
21G0217-01	20	0.7962	5.4178	1.2675			0.4713	10.20%									
21G0217-02	21	0.7915	5.3473	1.2686			0.4771	10.47%									
21G0220-01	22	0.7904	5.5974	1.9844			1.1940	24.84%									

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

SM 2540 G-97

TotalAnalytes

Blank

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Batch: BJG0502
Laboratory ID: BJG0502-BLK1
Prepared: 07/21/21 11:39
Matrix: Solid
Preparation: No Prep Wet Chem
Analyzed: 07/21/21 11:41
Sequence:
Calibration:
Instrument: BAL2

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	ND	1	0.04	0.04	U

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LDW21-SC524

DUPLICATES
SM 2540 G-97

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Matrix: Solid
Laboratory ID: BJG0502-DUP1
Batch: BJG0502
Lab Source ID: 21G0212-01
Preparation: No Prep Wet Chem
Initial/Final: 5 g / 5 g
Source Sample Name: LDW21-SC524
% Solids: 56.38

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Total Solids	20	56.38	56.27	0.187	

*: 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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LDW21-SC524

DUPLICATES
SM 2540 G-97

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Matrix: Solid
Laboratory ID: BJG0502-DUP2
Batch: BJG0502
Lab Source ID: 21G0212-01
Preparation: No Prep Wet Chem
Initial/Final: 5 g / 5 g
Source Sample Name: LDW21-SC524
% Solids: 56.38

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Total Solids	20	56.38	56.63	0.445	

*: 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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HOLDING TIME SUMMARY

Analysis: SM 2540 G-97

Laboratory: Analytical Resources, Inc. SDG: 21G0212

Client: Anchor QEA, LLC Project: Lower Duwamish AOC4

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
LDW21-SC524 21G0212-01	07/15/21 14:55	07/16/21 17:39	07/21/21 11:39	5	28	07/21/21 11:41	6	28	
LDW21-SC528 21G0212-02	07/15/21 15:20	07/16/21 17:39	07/21/21 11:39	5	28	07/21/21 11:41	6	28	
LDW21-SC538B 21G0212-03	07/15/21 16:21	07/16/21 17:39	07/21/21 11:39	5	28	07/21/21 11:41	6	28	
LDW21-SC538C 21G0212-04	07/15/21 16:21	07/16/21 17:39	07/21/21 11:39	5	28	07/21/21 11:41	6	28	
LDW21-SC538E 21G0212-05	07/15/21 16:21	07/16/21 17:39	07/21/21 11:39	5	28	07/21/21 11:41	6	28	
LDW21-IT582B 21G0212-06	07/16/21 08:16	07/16/21 17:39	07/21/21 11:39	5	28	07/21/21 11:41	5	28	
LDW21-IT582C 21G0212-07	07/16/21 08:16	07/16/21 17:39	07/21/21 11:39	5	28	07/21/21 11:41	5	28	
LDW21-IT582E 21G0212-08	07/16/21 08:16	07/16/21 17:39	07/21/21 11:39	5	28	07/21/21 11:41	5	28	
LDW21-IT579B 21G0212-09	07/16/21 11:23	07/16/21 17:39	07/21/21 11:39	5	28	07/21/21 11:41	5	28	
LDW21-IT597B 21G0212-10	07/16/21 14:07	07/16/21 17:39	07/21/21 11:39	4	28	07/21/21 11:41	5	28	
LDW21-IT597C 21G0212-11	07/16/21 14:07	07/16/21 17:39	07/21/21 11:39	4	28	07/21/21 11:41	5	28	
LDW21-IT597E 21G0212-12	07/16/21 14:07	07/16/21 17:39	07/21/21 11:39	4	28	07/21/21 11:41	5	28	
LDW21-SC539A 21G0212-13	07/16/21 15:45	07/16/21 17:39	07/21/21 11:39	4	28	07/21/21 11:41	5	28	
LDW21-SC539B 21G0212-14	07/16/21 15:45	07/16/21 17:39	07/21/21 11:39	4	28	07/21/21 11:41	5	28	
LDW21-SC539C 21G0212-15	07/16/21 15:45	07/16/21 17:39	07/21/21 11:39	4	28	07/21/21 11:41	5	28	
LDW21-SC539E 21G0212-16	07/16/21 15:45	07/16/21 17:39	07/21/21 11:39	4	28	07/21/21 11:41	5	28	
Duplicate BJG0502-DUP1	07/15/21 14:55	07/16/21 17:39	07/21/21 11:39	5	28	07/21/21 11:41	6	28	
Duplicate BJG0502-DUP2	07/15/21 14:55	07/16/21 17:39	07/21/21 11:39	5	28	07/21/21 11:41	6	28	

* Indicates hold time exceedance.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

METHOD DETECTION AND REPORTING LIMITS

SM 2540 G-97

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Matrix: Solid
Instrument:

Analyte	MDL	RL	Units
Total Solids	0.04	0.04	%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED
Total Metals

LDW21-IT582B

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-06RE1 C	SDG:	21G0212
Sampled:	07/16/21 08:16	Prepared:	08/02/21 11:35	File ID:	XDT_m1210803-090
% Solids:	69.55	Preparation:	SWN EPA 3050B	Analyzed:	08/03/21 23:57
Batch:	BJG0747	Sequence:	SJH0041	Initial/Final:	1 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	EH00007

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	703	100	0.27	1.44	D

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED
Total Metals

LDW21-IT582C

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-07 C	SDG:	21G0212
Sampled:	07/16/21 08:16	Prepared:	08/02/21 11:35	File ID:	XDT_m1210803-088
% Solids:	69.77	Preparation:	SWN EPA 3050B	Analyzed:	08/03/21 23:49
Batch:	BJG0747	Sequence:	SJH0041	Initial/Final:	1 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	EH00007

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	1000	100	0.27	1.43	D

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED
Total Metals

LDW21-IT582E

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-08 C	SDG:	21G0212
Sampled:	07/16/21 08:16	Prepared:	08/02/21 11:35	File ID:	XDT_m1210803-089
% Solids:	72.02	Preparation:	SWN EPA 3050B	Analyzed:	08/03/21 23:53
Batch:	BJG0747	Sequence:	SJH0041	Initial/Final:	1 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	EH00007

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	901	100	0.26	1.39	D

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Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED
Total Metals

LDW21-IT579B

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-09 C	SDG:	21G0212
Sampled:	07/16/21 11:23	Prepared:	08/02/21 11:35	File ID:	XDT_m1210803-048
% Solids:	69.95	Preparation:	SWN EPA 3050B	Analyzed:	08/03/21 20:14
Batch:	BJG0747	Sequence:	SJH0041	Initial/Final:	1 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	EH00007

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	25.1	20	0.05	0.29	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED
Total Metals

LDW21-IT597B

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-10 C	SDG:	21G0212
Sampled:	07/16/21 14:07	Prepared:	08/02/21 11:35	File ID:	XDT_m1210803-049
% Solids:	59.76	Preparation:	SWN EPA 3050B	Analyzed:	08/03/21 20:19
Batch:	BJG0747	Sequence:	SJH0041	Initial/Final:	1 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	EH00007

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	19.0	20	0.06	0.33	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED
Total Metals

LDW21-IT597C

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-11 C	SDG:	21G0212
Sampled:	07/16/21 14:07	Prepared:	08/02/21 11:35	File ID:	XDT_m1210803-050
% Solids:	75.15	Preparation:	SWN EPA 3050B	Analyzed:	08/03/21 20:23
Batch:	BJG0747	Sequence:	SJH0041	Initial/Final:	1 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	EH00007

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	15.9	20	0.05	0.27	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED
Total Metals

LDW21-IT597E

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-12 C	SDG:	21G0212
Sampled:	07/16/21 14:07	Prepared:	08/02/21 11:35	File ID:	XDT_m1210803-087
% Solids:	81.85	Preparation:	SWN EPA 3050B	Analyzed:	08/03/21 23:44
Batch:	BJG0747	Sequence:	SJH0041	Initial/Final:	1 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	EH00007

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	7.13	20	0.05	0.24	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Batch:	BJG0747 Batch Matrix: Solid	Preparation:	SWN EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW21-IT582B	21G0212-06RE1	XDT_m1210803-090	08/02/21 11:35	Added 8/4/2021 by MCB
LDW21-IT582C	21G0212-07	XDT_m1210803-088	08/02/21 11:35	
LDW21-IT582E	21G0212-08	XDT_m1210803-089	08/02/21 11:35	
LDW21-IT579B	21G0212-09	XDT_m1210803-048	08/02/21 11:35	
LDW21-IT597B	21G0212-10	XDT_m1210803-049	08/02/21 11:35	
LDW21-IT597C	21G0212-11	XDT_m1210803-050	08/02/21 11:35	
LDW21-IT597E	21G0212-12	XDT_m1210803-087	08/02/21 11:35	
Blank	BJG0747-BLK1	XDT_m1210803-054	08/02/21 11:35	BJG0747 SWN
LCS	BJG0747-BS1	XDT_m1210803-055	08/02/21 11:35	BJG0747 SWN
LDW21-IT582B	BJG0747-DUP2	XDT_m1210803-091	08/02/21 11:35	Added 8/4/2021 by MCB
LDW21-IT582B	BJG0747-MS2	XDT_m1210803-092	08/02/21 11:35	Added 8/4/2021 by MCB
LDW21-IT582B	BJG0747-MSD2	XDT_m1210803-093	08/02/21 11:35	Added 8/4/2021 by MCB

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: MM Date: 8/2/21 Time: 1135-1730

Matrix: Soil Block ID: 6 Block Temp: ~~1135~~ 93C Thermometer: ~~1730~~ MM 8/6/21 20-3

ARI Sample ID	Btl #	pH<2	Prep Code: SW N Initial Wt (g) Vol (mL)	Prep Code: SW N Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
216199-4	D		1.020	50			
-9	C		1.085				
216212-6	C		1.065				
-7			1.092				
-8			1.026				
-9			1.004				
-10			1.045				
-11			1.053				
-12			1.036				
216382-1	A		1.018				
BJ6747-BLK	—		—				
-BS1	—		—				
-MS1	—		1.062				216212-6
-MSD1	—		1.068				
-DUP1	—		1.069				
-DUP2	—		1.022				21F199-4
-MSD2	—		1.024				

Chemical/Reagent ID:

HNO_3: ~~J7647~~ 1:1 HNO_3: J7646 HCl: — H_2O_2: I9826

Tube Lot#: 214009 Boiling Chip Lot#: — (DoD Only)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

EPA 6020B UCT-KED

Total Metals

Blank

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC			Project:	Lower Duwamish AOC4
Batch:	BJG0747	Laboratory ID:	BJG0747-BLK1	Prepared:	08/02/21 11:35
Matrix:	Solid	Preparation:	SWN EPA 3050B	Analyzed:	08/03/21 20:48
Sequence:	SJH0041	Calibration:	EH00007	Instrument:	ICPMS1

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic-75a	ND	20	0.04	0.20	U

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LCS / LCS DUPLICATE RECOVERY

EPA 6020B UCT-KED

Total Metals

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Matrix:	Solid	Analyzed:	08/03/21 20:53
Batch:	BJG0747	Laboratory ID:	BJG0747-BS1
Preparation:	SWN EPA 3050B	Sequence Name:	LCS
Initial/Final:	1 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Arsenic-75a	25.0	21.7		86.8	80 - 120

* Indicates values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LDW21-IT582B

DUPLICATES

EPA 6020B UCT-KED

Total Metals

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Matrix: Solid
Laboratory ID: BJG0747-DUP2
Batch: BJG0747
Lab Source ID: 21G0212-06RE1
Preparation: SWN EPA 3050B
Initial/Final: 1 g / 50 mL
Source Sample Name: LDW21-IT582B
% Solids: 69.55

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Arsenic-75a	20	703	741	5.28	

*: 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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LDW21-IT582B

MS / MS DUPLICATE RECOVERY
EPA 6020B UCT-KED
Total Metals

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Matrix:	Solid	Analyzed:	08/04/21 00:05
Batch:	BJG0747	Laboratory ID:	BJG0747-MS2
Preparation:	SWN EPA 3050B	Sequence Name:	Matrix Spike
Initial/Final:	1 g / 50 mL	Source Sample:	LDW21-IT582B

COMPOUND	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	Q	MS CONCENTRATION (mg/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Arsenic-75a	35.9	703	D	803	HC, D	278 *	75 - 125

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LDW21-IT582B

MS / MS DUPLICATE RECOVERY
EPA 6020B UCT-KED
Total Metals

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Matrix:	Solid	Analyzed:	08/04/21 00:09
Batch:	BJG0747	Laboratory ID:	BJG0747-MSD2
Preparation:	SWN EPA 3050B	Sequence Name:	Matrix Spike Dup
Initial/Final:	1 g / 50 mL	Source Sample:	LDW21-IT582B

COMPOUND	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Arsenic-75a	35.9	994	HC, D	812 *	21.3 *	20	75 - 125

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EH00007	Instrument:	ICPMS1
Calibration Date:	08/03/2021 16:05		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Arsenic-75a	0	0	0.2	285	10	263.3	20	265.6	50	259.46	100	258.82

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EH00007	Instrument:	ICPMS1
Calibration Date:	08/03/2021 16:05		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Arsenic-75a	222.03	49.2	1.0000		0.998	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 8/3/21 **Analyst:** MB **Sequence:** SJHØØ41 **Cal:** EHØØØØ7

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CAL1	J7779		
		-CAL2	J7660		
		-CAL3	J7661		
		-CAL4	J7662		
		-CAL5	J7663		
		-CAL6	J7664		
		-IBL1	—		
		-ICV1	J6292		
		-ICB1	J7779		
		-CCV1	J7663		
		-CCB1	J7779		
		-CRL1	J7660		
		-IFA1	J7152		Cr53↑
		-IFB1	J7153		
		-HCV1	J7549		
		-HCV2	J7893		
		-IBL2	—		
		-IBL3	—		
		-CCV2			
		-CCB2			
	✓	-CAL1			
		-CCV3			
		-CCB3			
	✓	BJGØ6ØD-BLK2	REN		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 8/3/21 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
	✓	BJG0600-BS2	REN		
	✓	BJH0017-BLK1	↓		
	✓	↓ -BS1	↓		
	✓	21G0248-02	↓		Int. STDs↓ - Salty!
		SEQ-IBL4			(Cr^{53}↑)
		-IBL5			↓
		-IBL6			↓
		-IBL7			↓
		-IBL8			↓
		-CCV4			Al, Cr^{53}, Fe^{54} ↑
		↓ -CCB4			Cr^{53}↑
		BJH0024-BLK1	REN		No Al, Fe
		↓ -BS1	↓		↓
		BJH0026-BLK1	↓		↓
		↓ -BS1	↓		↓
	✓	21G0212-07	SWN	20	As↑
	✓	-08	↓	↓	As↑
		-09	↓	↓	As only
		-10	↓	↓	↓
		↓ -11	↓	↓	↓
		SEQ-IBL9			
		-CCV5			Cr^{52}, Fe^{54} ↑
		↓ -CCB5			(Cr^{53} > ½RL)
		BJG0747-BLK1	SWN	20	No Cr

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 8/3/21 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		BJGΦ747-BS1	SWN	20	Zn 67% R↓ - Re-run 8/4 - OK; No Cr
		21GΦ382-Φ1	↓	↓	Cr, Cu, Zn↑; ↓/Cu, Zn NR
		SEQ-IBLA			
		21GΦ212-Φ6	SWN	20	As↑; No Cr/As NR
		BJGΦ747-DUP1	↓	↓	↓
		-MS1			↓ /Al STL/Mo (73-74%) % R↓/ ↓
		-MSD1			↓
	✓	-PS1	↓	↓	~~0.060 mL 5733Φ~~ No spike
		SEQ-IBLB			
		-CCV6			Cr53, Fe54↑
		-CCB6			
	✓	-CAL1			Co, Fe, Mo removed
	✓	-CCV7			Tb noisy/Al, Cr↑
		-CCV7			Al, Cr↑
		-CCB7			
		21GΦ382-Φ1RE1	SWN	200	Cr↑; Cu, Zn only
		21GΦ156-Φ6	↓	100	Zn only
		BJGΦ666-DUP2		↓	↓
		-MS2			Zn STL
		-MSD2		↓	↓
		-DUP3		20	Cd only
		-MSD1		↓	Zn↑/Al, As STL/Ba, Cu, Ni, Pb % R↓/No Zn, Cr
		-PS1			0.060 mL 5733Φ; Ag, Pb only
	✓	BJGΦ747-PS1	↓	↓	↓/Not Needed

Analytical Resources, Incorporated
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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 8/3/21 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-IBLC			
		-CCV8			Al↑
		-CCB8			In-1 sl. noisy - %R + Analytes OK
	✓	-CAL1			Al, Ba, Cr, Ni: removed
		-CCV9			
		-CCB9			In sl. noisy - %R + Analytes OK
		BJG0740-BLK2	REN		Mn only
		-BS2			
		21G0212-12	SWN	20	As only
		-07		100	
		-08			
		-06RE1			
		BJG0747-DUP2			
		-MS2			As STL
		-MSD2			
		SEQ-IBLD			
		-CCVA			
		-CCBA			
		21G0156-07	SWN	100	As only
		-10			
		21G0199-04		20	No Cr
		-09			
		21G0206-17	REN	2	Mn only
		-21			

Analytical Resources, Incorporated
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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 8/3/21 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		21G0206-22	REN	2	Mn only
		B5G0740-DUP2	↓	↓	↓
		↓ -MS2	↓	↓	↓
		SEQ-IBLE			
		-CCVB			
		↓ -CCBB			
		21G0206-02	REN		Mn only
		-04	↓		↓
		-06	↓		↓
		-08	↓		↓
		-10	↓		↓
		-12	↓		↓
		-14	↓		↓
		-16	↓		↓
		↓ -18	↓		↓
		SEQ-IBLF			
		-CCVC			
		↓ -CCBC			
		21G0206-19	REN		Mn only
		↓ -20	↓		↓
		21G0324-01	↓		Cu, Zn only
		↓ -03	↓		↓
		21G0205-04	↓		Cd, Pb, Zn only ~~No Cu~~
		↓ -02	↓	Zn↑	Cd, Pb only

Analytical Resources, Incorporated
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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 8/3/21 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		BJH0026-DUP1	REN		Zn↑ Cd, Pb only
		-MS1			
		-MSD1			
		SEQ-IBLG			
		-CCVD			Cu63↓
		-CCBD			
	✓	-CAL1			
		-CCVE			
		-CCBE			
		21G0205-06	REN		Cd,Cu,Pb,Zn only
		-08			
		-10			Cd ND Cu,Pb,Zn only / Cd NR
		-12			Zn↑ Cd,Cu,Pb only
		-14			Cd ND Cu,Pb,Zn only / Cd NR
		-16			Cd,Cu,Pb,Zn only
		-18			Zn66↑ Cd,Cu,Pb only
	✓	-20			Ge,In,In115,Tb↓
		-22			Zn↑ Cd,Cu,Pb only
		SEQ-IBLH			(STD node no.3y)
		-CCVF			
		-CCBF			
	✓	21G0205-24	REN		Zn↑
	✓	-26			
	✓	-28			Zn↑

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 8/3/21 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
	✓	21G0205-30	REN		Zn↑
	✓	↓ -03			
	✓	↓ -01			AS Error / Zn↑
	✓	SEQ-CCVG			
		Rinse / DI			
			MB 8/3/21		

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Tuesday, August 03, 2021 13:28:47
Sample Description:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\STD Performance Check.11469
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	3713.7	3713.683	25.970	0.7	Standard
	In	114.9	87725.1	-1539955.884	723.183	0.0	Standard
	U	238.1	143907.4	143907.380	2597.265	1.8	Standard
⌈	CeO	155.9	1884.2	0.017	0.000	1.3	Standard
| >	Ce	139.9	107806.3	107806.255	506.101	0.5	Standard
⌊	Ce++	70.0	723.4	0.007	0.000	3.2	Standard
	Bkgd	220.0	1.7	1.667	0.553	33.2	Standard

Current Conditions File Data

Current Value	Description
0.97	Nebulizer Gas Flow STD/KED [NEB]
1.25	Auxiliary Gas Flow
17.50	Plasma Gas Flow
-10.75	Deflector Voltage
1600.00	ICP RF Power
-1881.00	Analog Stage Voltage
1600.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-17.00	Cell Rod Offset STD [CRO]
14.00	Discriminator Threshold
-2.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.97	DRC Mode NEB
-7.50	DRC Mode QRO
-2.00	DRC Mode CRO
-5.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
200.00	Axial Field Voltage
-11.00	KED Mode CRO
-12.00	KED Mode QRO
-11.00	KED Mode Cell Entrance Voltage
-33.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
125.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Start Time: 8/3/2021 1:28:43 PM
End Time: 8/3/2021 1:38:05 PM

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 3713.68
Obtained Intensity (In 115): 87725.07
Obtained Intensity (U 238): 143907.38
Obtained Intensity (Bkgd 220): 1.67
Obtained Formula (Ce++ 70 / Ce 140): 0.007 (=723.35 / 107806.25)
Obtained Formula (CeO 156 / Ce 140): 0.017 (=1884.19 / 107806.25)
Obtained RSD (Be 9): 0.0070
Obtained RSD (In 115): 0.0005
Obtained RSD (U 238): 0.0180

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
1.91 mm	0.09 mm	111485.32

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 0.97
Obtained Intensity (In 115): 95360.22
Obtained Formula (CeO 156 / Ce 140): 0.0201 (=2201.17 / 109482.93)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.700)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.691)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.703)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.691)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 0.985; Intercept = -15.95

KED Mode QID - Optimum value(s): Correlation Coefficient = 0.997; Intercept = -14.98

SmartTune Wizard - Details

```
Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Optimization Status

Start Time: 8/3/2021 1:28:43 PM

STD Performance Check
        Optimization Settings:
                Method: STD Performance Check.mth.
                Intensity Criterion: Be 9 > 2000
                Intensity Criterion: In 115 > 40000
                Intensity Criterion: U 238 > 30000
                Intensity Criterion: Bkgd 220 <= 5
                Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
                Formula Criterion: CeO 156 / Ce 140 <= 0.025
                RSD Criterion: Be 9.0122 < 0.05
                RSD Criterion: In 114.904 < 0.05
                RSD Criterion: U 238.05 < 0.05

        Optimization Results:
        Initial Try
                Obtained Intensity (Be 9): 3713.68
                Obtained Intensity (In 115): 87725.07
                Obtained Intensity (U 238): 143907.38
                Obtained Intensity (Bkgd 220): 1.67
                Obtained Formula (Ce++ 70 / Ce 140): 0.007 (=723.35 / 107806.25)
                Obtained Formula (CeO 156 / Ce 140): 0.017 (=1884.19 / 107806.25)
                Obtained RSD (Be 9): 0.0070
                Obtained RSD (In 115): 0.0005
                Obtained RSD (U 238): 0.0180

[Passed]  Optimum value(s): N/A

Torch Alignment
        Optimization Settings:
                Method: Torch Alignment.mth.
                Intensity Criterion: In 115 Maximum

        Optimization Results:
                Vertical      Horizontal      Intensity
[Passed]        1.91 mm     0.09 mm       111485.32

Nebulizer Gas Flow STD/KED [NEB]
        Optimization Settings:
                Method: Optimize.mth.
                        Initial Try - Start/End/Step: 0.95/1/0.01.
                Intensity Criterion: In 115 Maximum
                Formula Criterion: CeO 156 / Ce 140 <= 0.023

        Optimization Results:
        Initial Try

                Obtained Intensity (In 115): 95360.22
                Obtained Formula (CeO 156 / Ce 140): 0.0201 (=2201.17 / 109482.93)
[Passed]  Optimum value(s): 0.97
```

Mass Calibration and Resolution

Optimization Settings:

Method: Tuning.mth.

MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Iterations: 6

Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution

Peak height (%) for Res. Opt.: 10

Optimization Results:

Initial Try

Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.697)

Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.670) - <Target not achieved>

Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.706)

Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.685)

[Failed]

Retry 1

Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.700)

Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.691)

Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.703)

Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.691)

[Passed] Optimum value(s): N/A

QID STD/DRC

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.985; Intercept = -15.95

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-16.5	15660.6
Mg	24	41	-17.5	35002.8
In	115	41	-12	94467.3
Ce	140	41	-12	113247
Pb	208	41	-11.5	82179.7
U	238	41	-11.5	156585

KED Mode QID

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.997; Intercept = -14.98

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-15	20362.5
Mg	24	41	-15	51552.9
In	115	41	-11.5	126417
Ce	140	41	-11	113146
Pb	208	41	-10	66446.2
U	238	41	-10.5	133339

End Time: 8/3/2021 1:38:05 PM

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDual.swz

Start Time: 8/3/2021 2:00:41 PM
End Time: 8/3/2021 2:08:02 PM

Detector Voltages - [Passed]
    Pulse Stage Voltage - [Passed] Optimum value(s): 1400
    Analog Stage Voltage - [Passed] Optimum value(s): -1825
    Pulse Stage Voltage (Fine-tune) - [Passed] Optimum value(s): 1550
    Analog Stage Voltage (Fine-tune) - [Passed] Optimum value(s): -1862

SmartTune Wizard - Details

```
Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDual.swz

Optimization Status

Start Time: 8/3/2021 2:00:41 PM

Detector Voltages
        Pulse Stage Voltage Optimization Settings:
                Method: Pulse Stage Optimization.mth.
                        Initial Try - Start/End/Step: 600/1300/50.
                        Retry 1 - Start/End/Step: 600/1800/50.
                Optimization Criterion (Pulse 76): 0.1

        Analog Stage Voltage Optimization Settings:
                Method: Analog Stage Optimization.mth.
                Initial Try - Start/End: -1300/-1900.
                Retry 1 - Start/End: -1300/-2400.
                Optimization Criterion (Analog 80): Target Gain 10000




        Pulse Stage Voltage Results:
        Initial Try

                [Failed]
        Retry 1

                Intensity Obtained For Criterion (Pulse 76): 18720.26
[Passed]  Optimum value(s): 1400
        Analog Stage Voltage Results:
        Initial Try
                Interim Gain Values: 6565.08 (-1600V), 7713.89 (-1750V), 9408.12 (-1825V)
                Analyte: Analog 80
                ACEM(volts): -1825
                Achieved Gain: 9408.12
                Achieved NMax: 1.33072e+009
                Conversion Factor: 0.0961883
                Passes: 3
                Points Collected: 31
                Points Used: 4
                Coefficient: 0.999999
[Passed]  Optimum value(s): -1825
        Pulse Stage Voltage  (Fine-tune) Results:
        Initial Try

                [Failed]
        Retry 1

                Intensity Obtained For Criterion (Pulse 76): 20342.47
[Passed]  Optimum value(s): 1550
        Analog Stage Voltage (Fine-tune) Results:
        Initial Try
                Interim Gain Values: 3951.32 (-1600V), 6400.37 (-1750V), 8350.58 (-1825V), 9470.21 (-1862.5V)
                Analyte: Analog 80
                ACEM(volts): -1862
```

```
                Achieved Gain: 9470.21
                Achieved NMax: 1.322e+009
                Conversion Factor: 0.0968231
                Passes: 4
                Points Collected: 31
                Points Used: 3
                Coefficient: 1
[Passed]  Optimum value(s): -1862

End Time: 8/3/2021 2:08:02 PM
```

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDual.swz

Start Time: 8/3/2021 2:13:13 PM
End Time: 8/3/2021 2:20:43 PM

Dual Detector Calibration
    Points Collected: 401
    Calibration unsuccessful for some masses due to insufficient pulse/analog crossover points

SmartTune Wizard - Details

```
Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDual.swz

Optimization Status

Start Time: 8/3/2021 2:13:13 PM

Dual Detector Calibration
        Optimization Settings:
                Method: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\DualDetectorNew.mth.
                        Initial Try - Start/End/Step: -20/0/0.05.

        Optimization Results:
        Initial Try
        Points Collected: 401
        Calibration unsuccessful for some masses due to insufficient pulse/analog crossover points


End Time: 8/3/2021 2:20:43 PM
```

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDual.swz

Start Time: 8/3/2021 2:21:23 PM
End Time: 8/3/2021 2:28:53 PM

Dual Detector Calibration
    Points Collected: 401
    Calibration unsuccessful for some masses due to insufficient pulse/analog crossover points

SmartTune Wizard - Details

```
Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDual.swz

Optimization Status

Start Time: 8/3/2021 2:21:23 PM

Dual Detector Calibration
        Optimization Settings:
                Method: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\DualDetectorNew.mth.
                        Initial Try - Start/End/Step: -20/0/0.05.

        Optimization Results:
        Initial Try
        Points Collected: 401
        Calibration unsuccessful for some masses due to insufficient pulse/analog crossover points


End Time: 8/3/2021 2:28:53 PM
```

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Tuesday, August 03, 2021 14:40:16
Sample Description:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\STD Performance Check.11494
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	3257.4	3257.438	33.264	1.0	Standard
	In	114.9	76957.9	76957.866	217.653	0.3	Standard
	U	238.1	111705.4	111705.373	505.218	0.5	Standard
⌈	CeO	155.9	1633.1	0.016	0.000	2.3	Standard
| >	Ce	139.9	99107.7	99107.671	639.450	0.6	Standard
⌊	Ce++	70.0	772.2	0.008	0.000	3.8	Standard
	Bkgd	220.0	2.4	2.400	2.805	116.9	Standard

Current Conditions File Data

Current Value	Description
0.97	Nebulizer Gas Flow STD/KED [NEB]
1.25	Auxiliary Gas Flow
17.50	Plasma Gas Flow
-10.75	Deflector Voltage
1600.00	ICP RF Power
-1862.00	Analog Stage Voltage
1550.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-17.00	Cell Rod Offset STD [CRO]
14.00	Discriminator Threshold
-2.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.97	DRC Mode NEB
-7.50	DRC Mode QRO
-2.00	DRC Mode CRO
-5.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
200.00	Axial Field Voltage
-11.00	KED Mode CRO
-12.00	KED Mode QRO
-11.00	KED Mode Cell Entrance Voltage
-33.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
125.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDual.swz

Start Time: 8/3/2021 2:40:14 PM
End Time: 8/3/2021 2:42:20 PM

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 3257.44
Obtained Intensity (In 115): 76957.87
Obtained Intensity (U 238): 111705.37
Obtained Intensity (Bkgd 220): 2.40
Obtained Formula (Ce++ 70 / Ce 140): 0.008 (=772.15 / 99107.67)
Obtained Formula (CeO 156 / Ce 140): 0.016 (=1633.09 / 99107.67)

SmartTune Wizard - Details

```
Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDual.swz

Optimization Status

Start Time: 8/3/2021 2:40:14 PM

STD Performance Check
        Optimization Settings:
                Method: STD Performance Check.mth.
                Intensity Criterion: Be 9 > 2000
                Intensity Criterion: In 115 > 40000
                Intensity Criterion: U 238 > 30000
                Intensity Criterion: Bkgd 220 <= 10
                Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
                Formula Criterion: CeO 156 / Ce 140 <= 0.025

        Optimization Results:
        Initial Try
                Obtained Intensity (Be 9): 3257.44
                Obtained Intensity (In 115): 76957.87
                Obtained Intensity (U 238): 111705.37
                Obtained Intensity (Bkgd 220): 2.40
                Obtained Formula (Ce++ 70 / Ce 140): 0.008 (=772.15 / 99107.67)
                Obtained Formula (CeO 156 / Ce 140): 0.016 (=1633.09 / 99107.67)

[Passed]  Optimum value(s): N/A

End Time: 8/3/2021 2:42:20 PM
```

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Start Time: 8/3/2021 2:45:45 PM
End Time: 8/3/2021 2:48:32 PM

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
2.33 mm	-0.49 mm	96345.80

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 0.97
Obtained Intensity (In 115): 80499.17
Obtained Formula (CeO 156 / Ce 140): 0.0162 (=1610.09 / 99408.67)

SmartTune Wizard - Details

```
Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Optimization Status

Start Time: 8/3/2021 2:45:45 PM

Torch Alignment
        Optimization Settings:
                Method: Torch Alignment.mth.
                Intensity Criterion: In 115 Maximum

        Optimization Results:
                Vertical      Horizontal      Intensity
[Passed]        2.33 mm     -0.49 mm       96345.80

Nebulizer Gas Flow STD/KED [NEB]
        Optimization Settings:
                Method: Optimize.mth.
                        Initial Try - Start/End/Step: 0.95/1/0.01.
                Intensity Criterion: In 115 Maximum
                Formula Criterion: CeO 156 / Ce 140 <= 0.023

        Optimization Results:
        Initial Try

                Obtained Intensity (In 115): 80499.17
                Obtained Formula (CeO 156 / Ce 140): 0.0162 (=1610.09 / 99408.67)
[Passed]  Optimum value(s): 0.97

End Time: 8/3/2021 2:48:32 PM
```

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Start Time: 8/3/2021 2:49:08 PM
End Time: 8/3/2021 2:53:52 PM

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 0.975
Obtained Intensity (In 115): 86290.83
Obtained Formula (CeO 156 / Ce 140): 0.0203 (=2145.16 / 105426.59)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.704)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.716)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.694)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.704)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 0.992; Intercept = -16.99

KED Mode QID - Optimum value(s): Correlation Coefficient = 0.998; Intercept = -15.57

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Optimization Status

Start Time: 8/3/2021 2:49:08 PM

Nebulizer Gas Flow STD/KED [NEB]
Optimization Settings:
Method: Optimize.mth.
Initial Try - Start/End/Step: 0.97/0.985/0.005.
Intensity Criterion: In 115 Maximum
Formula Criterion: CeO 156 / Ce 140 <= 0.023

Optimization Results:
Initial Try

Obtained Intensity (In 115): 86290.83
Obtained Formula (CeO 156 / Ce 140): 0.0203 (=2145.16 / 105426.59)
[Passed] Optimum value(s): 0.975

Mass Calibration and Resolution
Optimization Settings:
Method: Tuning.mth.
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Iterations: 6
Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution
Peak height (%) for Res. Opt.: 10

Optimization Results:
Initial Try
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.704)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.716)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.694)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.704)
[Passed] Optimum value(s): N/A

QID STD/DRC
Optimization Settings:
Method: QID Calibration.mth.
Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:
Initial Try

Optimum value(s): Correlation Coefficient = 0.992; Intercept = -16.99

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-17	17951.3
Mg	24	41	-17	40208.5
In	115	41	-12	93678.1
Ce	140	41	-12	106745
Pb	208	41	-11.5	81137.8
U	238	41	-11.5	159319

KED Mode QID

Optimization Settings:
Method: QID Calibration.mth.
Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:
Initial Try

Optimum value(s): Correlation Coefficient = 0.998; Intercept = -15.57

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-15.5	25334.4
Mg	24	41	-15	59118.1
In	115	41	-12	120889
Ce	140	41	-11	109708
Pb	208	41	-10.5	66960.6
U	238	41	-10.5	138609

End Time: 8/3/2021 2:53:52 PM

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Start Time: 8/3/2021 2:58:11 PM
End Time: 8/3/2021 2:59:17 PM

QID STD/DRC - Optimum value(s): Correlation Coefficient = 1.000; Intercept = -17.18

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Optimization Status

Start Time: 8/3/2021 2:58:11 PM

QID STD/DRC

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 1.000; Intercept = -17.18

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-17	19120.8
Mg	24	41	-16.5	40553.5
In	115	41	-12.5	91073.4
Ce	140	41	-12	105081
Pb	208	41	-11	82159.6
U	238	41	-10.5	156509

End Time: 8/3/2021 2:59:17 PM

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Tuesday, August 03, 2021 14:59:28
Sample Description:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\STD Performance Check.11505
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	3465.5	3465.487	12.600	0.4	Standard
	In	114.9	88718.7	88718.661	1025.927	1.2	Standard
	U	238.1	152516.0	152515.989	1187.951	0.8	Standard
⌈	CeO	155.9	2172.2	0.020	0.001	3.8	Standard
| >	Ce	139.9	107596.1	107596.145	466.134	0.4	Standard
⌊	Ce++	70.0	824.4	0.008	0.000	3.0	Standard
	Bkgd	220.0	0.9	0.900	0.450	50.0	Standard

Current Conditions File Data

Current Value	Description
0.97	Nebulizer Gas Flow STD/KED [NEB]
1.25	Auxiliary Gas Flow
17.50	Plasma Gas Flow
-10.75	Deflector Voltage
1600.00	ICP RF Power
-1862.00	Analog Stage Voltage
1550.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-17.00	Cell Rod Offset STD [CRO]
14.00	Discriminator Threshold
-2.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.97	DRC Mode NEB
-7.50	DRC Mode QRO
-2.00	DRC Mode CRO
-5.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
200.00	Axial Field Voltage
-11.00	KED Mode CRO
-12.00	KED Mode QRO
-11.00	KED Mode Cell Entrance Voltage
-33.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
125.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Start Time: 8/3/2021 2:59:26 PM
End Time: 8/3/2021 3:01:32 PM

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 3465.49
Obtained Intensity (In 115): 88718.66
Obtained Intensity (U 238): 152515.99
Obtained Intensity (Bkgd 220): 0.90
Obtained Formula (Ce++ 70 / Ce 140): 0.008 (=824.36 / 107596.15)
Obtained Formula (CeO 156 / Ce 140): 0.020 (=2172.17 / 107596.15)
Obtained RSD (Be 9): 0.0036
Obtained RSD (In 115): 0.0116
Obtained RSD (U 238): 0.0078

SmartTune Wizard - Details

```
Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Optimization Status

Start Time: 8/3/2021 2:59:26 PM

STD Performance Check
        Optimization Settings:
                Method: STD Performance Check.mth.
                Intensity Criterion: Be 9 > 2000
                Intensity Criterion: In 115 > 40000
                Intensity Criterion: U 238 > 30000
                Intensity Criterion: Bkgd 220 <= 5
                Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
                Formula Criterion: CeO 156 / Ce 140 <= 0.025
                RSD Criterion: Be 9.0122 < 0.05
                RSD Criterion: In 114.904 < 0.05
                RSD Criterion: U 238.05 < 0.05

        Optimization Results:
        Initial Try
                Obtained Intensity (Be 9): 3465.49
                Obtained Intensity (In 115): 88718.66
                Obtained Intensity (U 238): 152515.99
                Obtained Intensity (Bkgd 220): 0.90
                Obtained Formula (Ce++ 70 / Ce 140): 0.008 (=824.36 / 107596.15)
                Obtained Formula (CeO 156 / Ce 140): 0.020 (=2172.17 / 107596.15)
                Obtained RSD (Be 9): 0.0036
                Obtained RSD (In 115): 0.0116
                Obtained RSD (U 238): 0.0078

[Passed]  Optimum value(s): N/A

End Time: 8/3/2021 3:01:32 PM
```

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 16:05:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				9908	0	Standard
	Cl	**37**		ug/L				2331855	1	Standard
>	**Sc**	**45**		ug/L				542905	0	Standard
	Al	**27**		ug/L				3552	3	Standard
	Cr	**52**		ug/L				8170	1	Standard
	Cr	**53**		ug/L				88	2	Standard
	Fe	**54**		ug/L				56918	1	Standard
	Fe	**57**		ug/L				12370	0	Standard
	Mn	**55**		ug/L				273	9	Standard
>	**Ge**	**72**		ug/L				63581	3	KED
	Co	**59**		ug/L				10	21	KED
	Ni	**60**		ug/L				59	14	KED
	Ni	**62**		ug/L				12	22	KED
	Cu	**63**		ug/L				111	9	KED
	Cu	**65**		ug/L				50	21	KED
	Zn	**66**		ug/L				224	13	KED
	Zn	**67**		ug/L				39	26	KED
	As	**75**		ug/L				3	17	KED
	Y	**89**		ug/L				326706	2	Standard
	Kr	**83**		ug/L				76	6	Standard
>	**In-1**	**115**		ug/L				17436	0	KED
	Mo	**98**		ug/L				3	98	KED
	Cd	**111**		ug/L				1		KED
	Cd	**114**		ug/L				3	96	KED
>	**In**	**115**		ug/L				1087183	0	Standard
	Ag	**107**		ug/L				48	9	Standard
	Ba	**135**		ug/L				49	23	Standard
	Ba	**137**		ug/L				72	13	Standard
>	**Tb**	**159**		ug/L				2467046	0	Standard
	Pb	**208**		ug/L				587	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 16:09:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			9908	9431	0	Standard
	Cl	**37**		ug/L			2331855	2236187	1	Standard
>	**Sc**	**45**		ug/L			542905	532101	1	Standard
	Al	**27**	**20.000**	ug/L	0.793	3	3552	409463	3	Standard
	Cr	**52**	**0.500**	ug/L	0.010	2	8170	13698	2	Standard
	Cr	**53**	**0.500**	ug/L	0.030	6	88	694	4	Standard
	Fe	**54**	**36.000**	ug/L	2.497	6	56918	127860	3	Standard
	Fe	**57**	**36.000**	ug/L	1.279	3	12370	41273	1	Standard
	Mn	**55**	**0.500**	ug/L	0.006	1	273	8133	0	Standard
>	**Ge**	**72**		ug/L			63581	67125	0	KED
	Co	**59**	**0.200**	ug/L	0.006	3	10	1067	2	KED
	Ni	**60**	**0.500**	ug/L	0.052	10	59	834	9	KED
	Ni	**62**	**0.500**	ug/L	0.061	12	12	140	11	KED
	Cu	**63**	**0.500**	ug/L	0.005	0	111	2415	0	KED
	Cu	**65**	**0.500**	ug/L	0.015	3	50	1243	2	KED
	Zn	**66**	**6.000**	ug/L	0.073	1	224	3479	1	KED
	Zn	**67**	**6.000**	ug/L	0.205	3	39	521	3	KED
	As	**75**	**0.200**	ug/L	0.010	5	3	57	4	KED
	Y	**89**		ug/L			326706	334820	6	Standard
	Kr	**83**		ug/L			76	73	15	Standard
>	**In-1**	**115**		ug/L			17436	17383	0	KED
	Mo	**98**	**0.200**	ug/L	0.027	13	3	247	14	KED
	Cd	**111**	**0.100**	ug/L	0.021	20	1	35	18	KED
	Cd	**114**	**0.100**	ug/L	0.015	14	3	80	13	KED
>	**In**	**115**		ug/L			1087183	1056242	1	Standard
	Ag	**107**	**0.200**	ug/L	0.006	3	48	3257	2	Standard
	Ba	**135**	**0.500**	ug/L	0.001	0	49	2739	1	Standard
	Ba	**137**	**0.500**	ug/L	0.014	2	72	4919	1	Standard
>	**Tb**	**159**		ug/L			2467046	2459624	3	Standard
	Pb	**208**	**0.100**	ug/L	0.004	3	587	12774	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 16:14:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			9908	15019	3	Standard
	Cl	**37**		ug/L			2331855	2254456	3	Standard
>	**Sc**	**45**		ug/L			542905	541732	1	Standard
	Al	**27**	**999.982**	ug/L	28.159	2	3552	19795473	1	Standard
	Cr	**52**	**9.999**	ug/L	0.172	1	8170	118347	2	Standard
	Cr	**53**	**10.001**	ug/L	0.148	1	88	12929	1	Standard
	Fe	**54**	**999.676**	ug/L	25.067	2	56918	1686547	1	Standard
	Fe	**57**	**1000.001**	ug/L	31.385	3	12370	837557	1	Standard
	Mn	**55**	**10.000**	ug/L	0.189	1	273	158400	0	Standard
>	**Ge**	**72**		ug/L			63581	66508	1	KED
	Co	**59**	**10.000**	ug/L	0.312	3	10	51072	2	KED
	Ni	**60**	**10.001**	ug/L	0.210	2	59	15808	1	KED
	Ni	**62**	**10.000**	ug/L	0.569	5	12	2520	4	KED
	Cu	**63**	**10.001**	ug/L	0.114	1	111	46819	1	KED
	Cu	**65**	**10.000**	ug/L	0.279	2	50	23859	3	KED
	Zn	**66**	**10.174**	ug/L	0.357	3	224	5959	4	KED
	Zn	**67**	**10.298**	ug/L	0.311	3	39	932	4	KED
	As	**75**	**10.000**	ug/L	0.112	1	3	2633	1	KED
	Y	**89**		ug/L			326706	340751	0	Standard
	Kr	**83**		ug/L			76	71	16	Standard
>	**In-1**	**115**		ug/L			17436	17460	2	KED
	Mo	**98**	**10.000**	ug/L	0.373	3	3	12722	1	KED
	Cd	**111**	**10.000**	ug/L	0.069	0	1	2980	3	KED
	Cd	**114**	**10.000**	ug/L	0.372	3	3	7817	2	KED
>	**In**	**115**		ug/L			1087183	1077973	1	Standard
	Ag	**107**	**10.000**	ug/L	0.514	5	48	160892	4	Standard
	Ba	**135**	**10.001**	ug/L	0.230	2	49	57110	1	Standard
	Ba	**137**	**10.000**	ug/L	0.184	1	72	99685	1	Standard
>	**Tb**	**159**		ug/L			2467046	2468753	0	Standard
	Pb	**208**	**10.000**	ug/L	0.034	0	587	1182262	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 16:18:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			9908	15543	1	Standard
	Cl	**37**		ug/L			2331855	2338723	3	Standard
>	**Sc**	**45**		ug/L			542905	550046	1	Standard
	Al	**27**	**1999.278**	ug/L	80.649	4	3552	40121208	2	Standard
	Cr	**52**	**20.031**	ug/L	0.444	2	8170	233833	1	Standard
	Cr	**53**	**19.990**	ug/L	0.361	1	88	26101	1	Standard
	Fe	**54**	**2004.012**	ug/L	18.567	0	56918	3402261	0	Standard
	Fe	**57**	**1995.892**	ug/L	44.914	2	12370	1671643	1	Standard
	Mn	**55**	**20.009**	ug/L	0.413	2	273	322169	1	Standard
>	**Ge**	**72**		ug/L			63581	67178	0	KED
	Co	**59**	**20.009**	ug/L	0.162	0	10	103408	0	KED
	Ni	**60**	**19.934**	ug/L	0.256	1	59	31353	0	KED
	Ni	**62**	**20.022**	ug/L	0.193	0	12	5108	1	KED
	Cu	**63**	**19.938**	ug/L	0.275	1	111	93019	1	KED
	Cu	**65**	**19.856**	ug/L	0.159	0	50	46451	0	KED
	Zn	**66**	**20.016**	ug/L	0.624	3	224	11637	2	KED
	Zn	**67**	**20.414**	ug/L	0.649	3	39	1940	3	KED
	As	**75**	**19.997**	ug/L	0.344	1	3	5312	1	KED
	Y	**89**		ug/L			326706	339055	0	Standard
	Kr	**83**		ug/L			76	77	14	Standard
>	**In-1**	**115**		ug/L			17436	17453	1	KED
	Mo	**98**	**20.054**	ug/L	0.173	0	3	25796	1	KED
	Cd	**111**	**20.034**	ug/L	0.218	1	1	6006	1	KED
	Cd	**114**	**19.920**	ug/L	0.291	1	3	15324	0	KED
>	**In**	**115**		ug/L			1087183	1106083	2	Standard
	Ag	**107**	**19.910**	ug/L	1.026	5	48	322727	3	Standard
	Ba	**135**	**19.948**	ug/L	0.642	3	49	115598	1	Standard
	Ba	**137**	**20.008**	ug/L	0.832	4	72	204759	1	Standard
>	**Tb**	**159**		ug/L			2467046	2581935	0	Standard
	Pb	**208**	**19.805**	ug/L	0.341	1	587	2356274	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL5
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 16:23:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			9908	10241	0	Standard
	Cl	**37**		ug/L			2331855	2291814	1	Standard
>	**Sc**	**45**		ug/L			542905	543892	0	Standard
	Al	**27**	**4958.314**	ug/L	68.041	1	3552	94471044	0	Standard
	Cr	**52**	**49.916**	ug/L	1.316	2	8170	559300	1	Standard
	Cr	**53**	**49.663**	ug/L	0.534	1	88	61909	0	Standard
	Fe	**54**	**4992.199**	ug/L	188.527	3	56918	8230380	2	Standard
	Fe	**57**	**5022.010**	ug/L	154.880	3	12370	4232998	2	Standard
	Mn	**55**	**49.677**	ug/L	1.042	2	273	765810	1	Standard
>	**Ge**	**72**		ug/L			63581	65789	1	KED
	Co	**59**	**50.014**	ug/L	0.502	1	10	253492	1	KED
	Ni	**60**	**49.923**	ug/L	0.519	1	59	76236	2	KED
	Ni	**62**	**49.878**	ug/L	1.245	2	12	12292	1	KED
	Cu	**63**	**49.784**	ug/L	0.114	0	111	222480	1	KED
	Cu	**65**	**49.740**	ug/L	0.801	1	50	111014	2	KED
	Zn	**66**	**49.781**	ug/L	0.865	1	224	27447	2	KED
	Zn	**67**	**50.057**	ug/L	1.560	3	39	4624	2	KED
	As	**75**	**49.980**	ug/L	0.288	0	3	12973	0	KED
	Y	**89**		ug/L			326706	330043	1	Standard
	Kr	**83**		ug/L			76	100	16	Standard
>	**In-1**	**115**		ug/L			17436	17218	1	KED
	Mo	**98**	**50.037**	ug/L	0.365	0	3	63718	1	KED
	Cd	**111**	**49.788**	ug/L	0.353	0	1	14416	1	KED
	Cd	**114**	**49.974**	ug/L	1.264	2	3	37817	0	KED
>	**In**	**115**		ug/L			1087183	1034193	0	Standard
	Ag	**107**	**49.521**	ug/L	0.920	1	48	716769	2	Standard
	Ba	**135**	**50.315**	ug/L	0.507	1	49	281541	1	Standard
	Ba	**137**	**50.439**	ug/L	0.509	1	72	505081	1	Standard
>	**Tb**	**159**		ug/L			2467046	2523194	3	Standard
	Pb	**208**	**49.876**	ug/L	2.345	4	587	5721639	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL6
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 16:29:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			9908	13590	2	Standard
	Cl	**37**		ug/L			2331855	2339251	0	Standard
>	**Sc**	**45**		ug/L			542905	557176	0	Standard
	Al	**27**	**9853.334**	ug/L	349.453	3	3552	183345652	3	Standard
	Cr	**52**	**98.855**	ug/L	1.490	1	8170	1085553	1	Standard
	Cr	**53**	**99.926**	ug/L	1.215	1	88	127207	0	Standard
	Fe	**54**	**9967.147**	ug/L	212.751	2	56918	16597414	1	Standard
	Fe	**57**	**9948.524**	ug/L	445.423	4	12370	8433581	3	Standard
	Mn	**55**	**99.976**	ug/L	2.794	2	273	1577314	2	Standard
>	**Ge**	**72**		ug/L			63581	64203	3	KED
	Co	**59**	**100.066**	ug/L	0.856	0	10	495960	2	KED
	Ni	**60**	**100.076**	ug/L	4.164	4	59	149312	0	KED
	Ni	**62**	**99.676**	ug/L	3.991	4	12	23686	0	KED
	Cu	**63**	**100.084**	ug/L	5.120	5	111	437118	1	KED
	Cu	**65**	**100.227**	ug/L	2.614	2	50	219783	1	KED
	Zn	**66**	**100.188**	ug/L	2.364	2	224	53990	2	KED
	Zn	**67**	**99.983**	ug/L	2.746	2	39	8965	0	KED
	As	**75**	**100.513**	ug/L	3.484	3	3	25882	1	KED
	Y	**89**		ug/L			326706	329503	2	Standard
	Kr	**83**		ug/L			76	75	11	Standard
>	**In-1**	**115**		ug/L			17436	17383	1	KED
	Mo	**98**	**99.970**	ug/L	1.091	1	3	128386	0	KED
	Cd	**111**	**99.888**	ug/L	1.317	1	1	29089	1	KED
	Cd	**114**	**100.349**	ug/L	1.130	1	3	77579	0	KED
>	**In**	**115**		ug/L			1087183	990794	1	Standard
	Ag	**107**	**99.510**	ug/L	2.392	2	48	1357362	2	Standard
	Ba	**135**	**101.568**	ug/L	3.036	2	49	574286	1	Standard
	Ba	**137**	**101.336**	ug/L	2.154	2	72	1017329	2	Standard
>	**Tb**	**159**		ug/L			2467046	2573375	0	Standard
	Pb	**208**	**99.011**	ug/L	0.455	0	587	11225302	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 16:36:50
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			9908	10237	4	Standard
	Cl	**37**		ug/L			2331855	2259920	1	Standard
>	**Sc**	**45**		ug/L			542905	576513	0	Standard
	Al	**27**	**0.144**	ug/L	0.035	24	3552	6550	9	Standard
	Cr	**52**	**-0.009**	ug/L	0.020	231	8170	8580	2	Standard
	Cr	**53**	**-0.003**	ug/L	0.007	195	88	89	10	Standard
	Fe	**54**	**0.750**	ug/L	0.916	122	56918	61731	2	Standard
	Fe	**57**	**1.979**	ug/L	0.267	13	12370	14870	1	Standard
	Mn	**55**	**-0.001**	ug/L	0.001	61	273	275	3	Standard
>	**Ge**	**72**		ug/L			63581	69480	1	KED
	Co	**59**	**0.000**	ug/L	0.001	1034	10	11	28	KED
	Ni	**60**	**-0.009**	ug/L	0.008	83	59	49	24	KED
	Ni	**62**	**-0.002**	ug/L	0.026	1347	12	13	49	KED
	Cu	**63**	**-0.003**	ug/L	0.005	164	111	108	20	KED
	Cu	**65**	**0.000**	ug/L	0.002	472	50	55	8	KED
	Zn	**66**	**-0.110**	ug/L	0.020	18	224	180	5	KED
	Zn	**67**	**-0.156**	ug/L	0.048	30	39	27	15	KED
	As	**75**	**0.005**	ug/L	0.002	39	3	4	10	KED
	Y	**89**		ug/L			326706	332365	2	Standard
	Kr	**83**		ug/L			76	64	19	Standard
>	**In-1**	**115**		ug/L			17436	18149	2	KED
	Mo	**98**	**0.036**	ug/L	0.009	23	3	51	20	KED
	Cd	**111**	**0.008**	ug/L	0.002	19	1	4	12	KED
	Cd	**114**	**0.003**	ug/L	0.002	77	3	5	35	KED
>	**In**	**115**		ug/L			1087183	1077726	1	Standard
	Ag	**107**	**0.005**	ug/L	0.001	17	48	128	9	Standard
	Ba	**135**	**0.001**	ug/L	0.003	204	49	56	26	Standard
	Ba	**137**	**0.001**	ug/L	0.000	39	72	84	4	Standard
>	**Tb**	**159**		ug/L			2467046	2613484	1	Standard
	Pb	**208**	**0.001**	ug/L	0.001	60	587	747	9	Standard

Sample Information

Sample Date/Time: Tuesday, August 03, 2021 16:29:48
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.m
Mass Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

Calibration

Analyte	Mass	**r Corr Coef**	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
C	13							
Cl	37							
Sc	45							
Al	27	**0.9996**	0.033	20.00	1000	2000	5000	10000
Cr	52	**0.9998**	0.020	0.50	10	20	50	100
Cr	53	**1.0000**	0.002	0.50	10	20	50	100
Fe	54	**1.0000**	0.003	36.00	1000	2000	5000	10000
Fe	57	**0.9999**	0.002	36.00	1000	2000	5000	10000
Mn	55	**1.0000**	0.028	0.50	10	20	50	100
Ge	72							
Co	59	**1.0000**	0.077	0.20	10	20	50	100
Ni	60	**1.0000**	0.023	0.50	10	20	50	100
Ni	62	**1.0000**	0.004	0.50	10	20	50	100
Cu	63	**1.0000**	0.068	0.50	10	20	50	100
Cu	65	**1.0000**	0.034	0.50	10	20	50	100
Zn	66	**1.0000**	0.008	6.00	10	20	50	100
Zn	67	**1.0000**	0.001	6.00	10	20	50	100
As	75	**1.0000**	0.004	0.20	10	20	50	100
Y	89							
Kr	83							
In-1	115							
Mo	98	**1.0000**	0.074	0.20	10	20	50	100
Cd	111	**1.0000**	0.017	0.10	10	20	50	100
Cd	114	**1.0000**	0.044	0.10	10	20	50	100
In	115							
Ag	107	**0.9999**	0.014	0.20	10	20	50	100
Ba	135	**0.9996**	0.006	0.50	10	20	50	100
Ba	137	**0.9997**	0.010	0.50	10	20	50	100
Tb	159							
Pb	208	**0.9998**	0.044	0.10	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICV1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 16:42:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			9908	11418	1	Standard
	Cl	**37**		ug/L			2331855	2357186	0	Standard
>	**Sc**	**45**		ug/L			542905	571049	3	Standard
	Al	**27**	**5008.530**	ug/L	257.742	5	3552	95418622	1	Standard
	Cr	**52**	**50.932**	ug/L	1.970	3	8170	576937	1	Standard
	Cr	**53**	**49.675**	ug/L	1.386	2	88	64820	0	Standard
	Fe	**54**	**4895.113**	ug/L	171.591	3	56918	8378739	0	Standard
	Fe	**57**	**4807.646**	ug/L	109.740	2	12370	4182312	1	Standard
	Mn	**55**	**48.395**	ug/L	1.960	4	273	782059	0	Standard
>	**Ge**	**72**		ug/L			63581	67366	2	KED
	Co	**59**	**50.595**	ug/L	0.842	1	10	263101	0	KED
	Ni	**60**	**50.598**	ug/L	1.064	2	59	79299	1	KED
	Ni	**62**	**49.005**	ug/L	0.922	1	12	12238	3	KED
	Cu	**63**	**49.708**	ug/L	0.639	1	111	228067	0	KED
	Cu	**65**	**48.964**	ug/L	1.252	2	50	112716	1	KED
	Zn	**66**	**48.775**	ug/L	1.737	3	224	27698	1	KED
	Zn	**67**	**47.054**	ug/L	1.432	3	39	4452	4	KED
	As	**75**	**49.003**	ug/L	0.074	0	3	13251	2	KED
	Y	**89**		ug/L			326706	344136	0	Standard
	Kr	**83**		ug/L			76	74	4	Standard
>	**In-1**	**115**		ug/L			17436	18176	1	KED
	Mo	**98**	**48.561**	ug/L	1.694	3	3	65188	1	KED
	Cd	**111**	**48.522**	ug/L	0.988	2	1	14773	0	KED
	Cd	**114**	**47.694**	ug/L	1.175	2	3	38547	0	KED
>	**In**	**115**		ug/L			1087183	1050790	2	Standard
	Ag	**107**	**50.809**	ug/L	1.562	3	48	734902	2	Standard
	Ba	**135**	**48.145**	ug/L	0.827	1	49	288753	1	Standard
	Ba	**137**	**48.319**	ug/L	0.657	1	72	514420	1	Standard
>	**Tb**	**159**		ug/L			2467046	2636376	2	Standard
	Pb	**208**	**49.219**	ug/L	1.158	2	587	5714982	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICB1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 16:49:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			9908	10360	4	Standard
	Cl	**37**		ug/L			2331855	2231349	1	Standard
>	**Sc**	**45**		ug/L			542905	576308	1	Standard
	Al	**27**	**0.057**	ug/L	0.014	24	3552	4857	4	Standard
	Cr	**52**	**-0.012**	ug/L	0.025	218	8170	8541	2	Standard
	Cr	**53**	**-0.013**	ug/L	0.006	50	88	77	11	Standard
	Fe	**54**	**1.642**	ug/L	0.852	51	56918	63232	1	Standard
	Fe	**57**	**1.882**	ug/L	0.382	20	12370	14780	2	Standard
	Mn	**55**	**-0.000**	ug/L	0.000	291	273	288	1	Standard
>	**Ge**	**72**		ug/L			63581	69593	0	KED
	Co	**59**	**0.000**	ug/L	0.002	2408	10	11	72	KED
	Ni	**60**	**-0.011**	ug/L	0.007	65	59	47	24	KED
	Ni	**62**	**-0.017**	ug/L	0.019	113	12	9	52	KED
	Cu	**63**	**-0.005**	ug/L	0.000	7	111	96	2	KED
	Cu	**65**	**-0.004**	ug/L	0.002	37	50	45	8	KED
	Zn	**66**	**-0.068**	ug/L	0.023	33	224	205	5	KED
	Zn	**67**	**-0.103**	ug/L	0.168	162	39	33	48	KED
	As	**75**	**0.003**	ug/L	0.008	257	3	4	48	KED
	Y	**89**		ug/L			326706	324774	1	Standard
	Kr	**83**		ug/L			76	97	11	Standard
>	**In-1**	**115**		ug/L			17436	18466	1	KED
	Mo	**98**	**0.016**	ug/L	0.002	15	3	25	12	KED
	Cd	**111**	**0.001**	ug/L	0.002	257	1	2	24	KED
	Cd	**114**	**-0.002**	ug/L	0.002	120	3	1	104	KED
>	**In**	**115**		ug/L			1087183	1082426	0	Standard
	Ag	**107**	**0.002**	ug/L	0.001	53	48	77	19	Standard
	Ba	**135**	**-0.000**	ug/L	0.002	842	49	47	31	Standard
	Ba	**137**	**0.002**	ug/L	0.002	95	72	94	22	Standard
>	**Tb**	**159**		ug/L			2467046	2609859	1	Standard
	Pb	**208**	**0.004**	ug/L	0.001	18	587	1069	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 16:53:52
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			9908	10362	4	Standard
	Cl	**37**		ug/L			2331855	2331702	2	Standard
>	**Sc**	**45**		ug/L			542905	560836	2	Standard
	Al	**27**	**5087.595**	ug/L	112.620	2	3552	95278059	1	Standard
	Cr	**52**	**51.653**	ug/L	1.405	2	8170	574867	2	Standard
	Cr	**53**	**50.144**	ug/L	1.018	2	88	64293	2	Standard
	Fe	**54**	**5129.817**	ug/L	98.326	1	56918	8625318	1	Standard
	Fe	**57**	**5025.438**	ug/L	121.525	2	12370	4294618	2	Standard
	Mn	**55**	**49.552**	ug/L	0.528	1	273	787127	2	Standard
>	**Ge**	**72**		ug/L			63581	69468	0	KED
	Co	**59**	**49.294**	ug/L	0.420	0	10	264396	1	KED
	Ni	**60**	**48.955**	ug/L	1.070	2	59	79124	1	KED
	Ni	**62**	**47.919**	ug/L	2.284	4	12	12335	3	KED
	Cu	**63**	**47.933**	ug/L	0.827	1	111	226811	0	KED
	Cu	**65**	**48.471**	ug/L	0.477	0	50	115083	0	KED
	Zn	**66**	**49.872**	ug/L	1.505	3	224	29208	2	KED
	Zn	**67**	**48.838**	ug/L	1.300	2	39	4763	3	KED
	As	**75**	**48.777**	ug/L	0.449	0	3	13601	0	KED
	Y	**89**		ug/L			326706	329540	2	Standard
	Kr	**83**		ug/L			76	70	39	Standard
>	**In-1**	**115**		ug/L			17436	17614	1	KED
	Mo	**98**	**50.964**	ug/L	0.522	1	3	66323	0	KED
	Cd	**111**	**50.558**	ug/L	1.520	3	1	14917	1	KED
	Cd	**114**	**50.857**	ug/L	0.129	0	3	39846	1	KED
>	**In**	**115**		ug/L			1087183	1065247	0	Standard
	Ag	**107**	**51.329**	ug/L	2.784	5	48	752648	4	Standard
	Ba	**135**	**48.746**	ug/L	0.570	1	49	296424	0	Standard
	Ba	**137**	**49.190**	ug/L	1.359	2	72	530958	2	Standard
>	**Tb**	**159**		ug/L			2467046	2615671	1	Standard
	Pb	**208**	**49.813**	ug/L	0.291	0	587	5740175	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 17:02:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			9908	10362	3	Standard
	Cl	**37**		ug/L			2331855	2205544	2	Standard
>	**Sc**	**45**		ug/L			542905	578928	2	Standard
	Al	**27**	**0.008**	ug/L	0.010	127	3552	3936	3	Standard
	Cr	**52**	**0.001**	ug/L	0.011	1506	8170	8719	1	Standard
	Cr	**53**	**-0.004**	ug/L	0.006	142	88	88	10	Standard
	Fe	**54**	**1.627**	ug/L	1.663	102	56918	63456	2	Standard
	Fe	**57**	**2.502**	ug/L	0.563	22	12370	15382	0	Standard
	Mn	**55**	**-0.001**	ug/L	0.001	106	273	277	8	Standard
>	**Ge**	**72**		ug/L			63581	70104	1	KED
	Co	**59**	**-0.001**	ug/L	0.000	21	10	6	17	KED
	Ni	**60**	**-0.004**	ug/L	0.008	204	59	59	22	KED
	Ni	**62**	**-0.010**	ug/L	0.026	258	12	11	60	KED
	Cu	**63**	**-0.007**	ug/L	0.002	33	111	91	11	KED
	Cu	**65**	**-0.001**	ug/L	0.004	718	50	53	19	KED
	Zn	**66**	**-0.031**	ug/L	0.015	50	224	229	5	KED
	Zn	**67**	**-0.100**	ug/L	0.065	65	39	33	18	KED
	As	**75**	**-0.002**	ug/L	0.004	261	3	3	39	KED
	Y	**89**		ug/L			326706	331615	2	Standard
	Kr	**83**		ug/L			76	80	22	Standard
>	**In-1**	**115**		ug/L			17436	18545	1	KED
	Mo	**98**	**0.023**	ug/L	0.007	28	3	35	26	KED
	Cd	**111**	**0.003**	ug/L	0.000	3	1	2	0	KED
	Cd	**114**	**-0.002**	ug/L	0.002	126	3	1	112	KED
>	**In**	**115**		ug/L			1087183	1111224	2	Standard
	Ag	**107**	**0.003**	ug/L	0.001	25	48	90	10	Standard
	Ba	**135**	**0.000**	ug/L	0.002	465	49	53	23	Standard
	Ba	**137**	**0.002**	ug/L	0.001	72	72	95	14	Standard
>	**Tb**	**159**		ug/L			2467046	2664991	3	Standard
	Pb	**208**	**0.004**	ug/L	0.000	7	587	1084	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CRL1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 17:10:30
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			9908	11063	0	Standard
	Cl	**37**		ug/L			2331855	2260490	1	Standard
>	**Sc**	**45**		ug/L			542905	596449	0	Standard
	Al	**27**	**20.146**	ug/L	0.284	1	3552	405249	2	Standard
	Cr	**52**	**0.451**	ug/L	0.033	7	8170	14234	2	Standard
	Cr	**53**	**0.463**	ug/L	0.012	2	88	727	2	Standard
	Fe	**54**	**43.761**	ug/L	0.995	2	56918	140260	0	Standard
	Fe	**57**	**35.766**	ug/L	0.970	2	12370	46004	2	Standard
	Mn	**55**	**0.461**	ug/L	0.004	0	273	8081	1	Standard
>	**Ge**	**72**		ug/L			63581	71121	1	KED
	Co	**59**	**0.190**	ug/L	0.012	6	10	1055	5	KED
	Ni	**60**	**0.469**	ug/L	0.016	3	59	841	3	KED
	Ni	**62**	**0.432**	ug/L	0.059	13	12	128	14	KED
	Cu	**63**	**0.488**	ug/L	0.009	1	111	2486	1	KED
	Cu	**65**	**0.492**	ug/L	0.003	0	50	1252	1	KED
	Zn	**66**	**5.505**	ug/L	0.204	3	224	3522	1	KED
	Zn	**67**	**5.474**	ug/L	0.322	5	39	585	4	KED
	As	**75**	**0.167**	ug/L	0.019	11	3	51	8	KED
	Y	**89**		ug/L			326706	334486	1	Standard
	Kr	**83**		ug/L			76	71	31	Standard
>	**In-1**	**115**		ug/L			17436	18714	1	KED
	Mo	**98**	**0.196**	ug/L	0.040	20	3	274	19	KED
	Cd	**111**	**0.103**	ug/L	0.004	4	1	34	2	KED
	Cd	**114**	**0.100**	ug/L	0.024	24	3	86	24	KED
>	**In**	**115**		ug/L			1087183	1102852	0	Standard
	Ag	**107**	**0.188**	ug/L	0.003	1	48	2909	1	Standard
	Ba	**135**	**0.458**	ug/L	0.012	2	49	2935	1	Standard
	Ba	**137**	**0.449**	ug/L	0.024	5	72	5085	4	Standard
>	**Tb**	**159**		ug/L			2467046	2593405	0	Standard
	Pb	**208**	**0.104**	ug/L	0.003	3	587	12518	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFA1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 17:14:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			9908	48340	1	Standard
	Cl	**37**		ug/L			2331855	5616314	2	Standard
>	**Sc**	**45**		ug/L			542905	526313	1	Standard
	Al	**27**	**20029.211**	ug/L	185.600	0	3552	352093154	1	Standard
	Cr	**52**	**0.490**	ug/L	0.029	5	8170	12959	1	Standard
	Cr	**53**	**1.904**	ug/L	0.044	2	88	2373	1	Standard
	Fe	**54**	**20109.586**	ug/L	571.810	2	56918	31570466	1	Standard
	Fe	**57**	**19689.189**	ug/L	633.745	3	12370	15759511	3	Standard
	Mn	**55**	**0.089**	ug/L	0.003	3	273	1588	1	Standard
>	**Ge**	**72**		ug/L			63581	62657	1	KED
	Co	**59**	**0.041**	ug/L	0.003	7	10	206	6	KED
	Ni	**60**	**0.042**	ug/L	0.008	19	59	119	9	KED
	Ni	**62**	**0.080**	ug/L	0.052	65	12	31	39	KED
	Cu	**63**	**0.052**	ug/L	0.010	19	111	332	12	KED
	Cu	**65**	**0.069**	ug/L	0.001	1	50	196	1	KED
	Zn	**66**	**0.487**	ug/L	0.051	10	224	476	6	KED
	Zn	**67**	**0.335**	ug/L	0.130	38	39	67	15	KED
	As	**75**	**0.019**	ug/L	0.001	5	3	7	3	KED
	Y	**89**		ug/L			326706	315405	1	Standard
	Kr	**83**		ug/L			76	121	5	Standard
>	**In-1**	**115**		ug/L			17436	16680	0	KED
	Mo	**98**	**407.385**	ug/L	7.661	1	3	502031	1	KED
	Cd	**111**	**0.032**	ug/L	0.002	6	1	10	5	KED
	Cd	**114**	**0.032**	ug/L	0.018	56	3	26	51	KED
>	**In**	**115**		ug/L			1087183	966031	1	Standard
	Ag	**107**	**0.006**	ug/L	0.003	46	48	120	28	Standard
	Ba	**135**	**0.040**	ug/L	0.003	7	49	266	6	Standard
	Ba	**137**	**0.037**	ug/L	0.002	6	72	426	4	Standard
>	**Tb**	**159**		ug/L			2467046	2420832	1	Standard
	Pb	**208**	**0.025**	ug/L	0.001	3	587	3198	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFB1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 17:19:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			9908	47079	2	Standard
	Cl	**37**		ug/L			2331855	5464644	5	Standard
>	**Sc**	**45**		ug/L			542905	528397	0	Standard
	Al	**27**	**19066.031**	ug/L	581.413	3	3552	336501028	3	Standard
	Cr	**52**	**20.687**	ug/L	0.309	1	8170	221714	1	Standard
	Cr	**53**	**21.996**	ug/L	0.083	0	88	26623	0	Standard
	Fe	**54**	**19508.425**	ug/L	234.589	1	56918	30757354	1	Standard
	Fe	**57**	**19868.956**	ug/L	340.459	1	12370	15963631	1	Standard
	Mn	**55**	**20.170**	ug/L	0.058	0	273	302029	0	Standard
>	**Ge**	**72**		ug/L			63581	63591	1	KED
	Co	**59**	**19.866**	ug/L	0.191	0	10	97538	0	KED
	Ni	**60**	**20.079**	ug/L	0.398	1	59	29742	1	KED
	Ni	**62**	**19.813**	ug/L	0.946	4	12	4675	3	KED
	Cu	**63**	**19.481**	ug/L	0.407	2	111	84448	1	KED
	Cu	**65**	**19.271**	ug/L	0.243	1	50	41916	1	KED
	Zn	**66**	**21.553**	ug/L	0.411	1	224	11682	0	KED
	Zn	**67**	**19.242**	ug/L	0.064	0	39	1741	1	KED
	As	**75**	**21.130**	ug/L	0.199	0	3	5395	1	KED
	Y	**89**		ug/L			326706	318720	0	Standard
	Kr	**83**		ug/L			76	125	3	Standard
>	**In-1**	**115**		ug/L			17436	16503	1	KED
	Mo	**98**	**418.427**	ug/L	3.202	0	3	510185	0	KED
	Cd	**111**	**21.432**	ug/L	0.473	2	1	5926	1	KED
	Cd	**114**	**20.855**	ug/L	0.950	4	3	15304	3	KED
>	**In**	**115**		ug/L			1087183	958643	1	Standard
	Ag	**107**	**19.454**	ug/L	0.542	2	48	256801	2	Standard
	Ba	**135**	**0.126**	ug/L	0.012	9	49	732	7	Standard
	Ba	**137**	**0.118**	ug/L	0.004	3	72	1211	1	Standard
>	**Tb**	**159**		ug/L			2467046	2410760	2	Standard
	Pb	**208**	**0.114**	ug/L	0.004	3	587	12673	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 17:23:35
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			9908	12378	3	Standard
	Cl	**37**		ug/L			2331855	2235353	1	Standard
>	**Sc**	**45**		ug/L			542905	541837	0	Standard
	Al	**27**	**18905.180**	ug/L	338.203	1	3552	342111810	1	Standard
	Cr	**52**	**200.752**	ug/L	3.869	1	8170	2135484	2	Standard
	Cr	**53**	**198.467**	ug/L	4.113	2	88	245620	2	Standard
	Fe	**54**	**19470.425**	ug/L	182.615	0	56918	31476340	0	Standard
	Fe	**57**	**19697.714**	ug/L	385.010	1	12370	16228096	1	Standard
	Mn	**55**	**194.809**	ug/L	1.425	0	273	2988996	1	Standard
>	**Ge**	**72**		ug/L			63581	64570	1	KED
	Co	**59**	**198.017**	ug/L	7.416	3	10	986870	2	KED
	Ni	**60**	**190.086**	ug/L	5.932	3	59	285380	2	KED
	Ni	**62**	**192.657**	ug/L	4.177	2	12	46062	1	KED
	Cu	**63**	**187.331**	ug/L	5.287	2	111	823461	2	KED
	Cu	**65**	**187.434**	ug/L	5.975	3	50	413397	2	KED
	Zn	**66**	**193.533**	ug/L	4.733	2	224	104692	1	KED
	Zn	**67**	**185.892**	ug/L	3.299	1	39	16735	0	KED
	As	**75**	**196.777**	ug/L	2.287	1	3	50986	0	KED
	Y	**89**		ug/L			326706	323489	1	Standard
	Kr	**83**		ug/L			76	91	21	Standard
>	**In-1**	**115**		ug/L			17436	16902	0	KED
	Mo	**98**	**209.296**	ug/L	1.458	0	3	261380	1	KED
	Cd	**111**	**198.499**	ug/L	1.097	0	1	56209	0	KED
	Cd	**114**	**196.507**	ug/L	2.498	1	3	147734	1	KED
>	**In**	**115**		ug/L			1087183	945907	0	Standard
	Ag	**107**	**198.807**	ug/L	8.450	4	48	2588718	3	Standard
	Ba	**135**	**196.278**	ug/L	0.348	0	49	1059786	0	Standard
	Ba	**137**	**196.056**	ug/L	1.263	0	72	1879107	1	Standard
>	**Tb**	**159**		ug/L			2467046	2459331	1	Standard
	Pb	**208**	**196.984**	ug/L	1.511	0	587	21341730	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 17:27:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			9908	12151	1	Standard
	Cl	**37**		ug/L			2331855	2359828	0	Standard
>	**Sc**	**45**		ug/L			542905	534021	0	Standard
	Al	**27**	**28578.550**	ug/L	228.024	0	3552	509720852	0	Standard
	Cr	**52**	**302.280**	ug/L	1.712	0	8170	3164851	0	Standard
	Cr	**53**	**292.663**	ug/L	0.764	0	88	356932	0	Standard
	Fe	**54**	**30590.813**	ug/L	296.651	0	56918	48708127	0	Standard
	Fe	**57**	**30347.578**	ug/L	503.051	1	12370	24634822	1	Standard
	Mn	**55**	**289.908**	ug/L	5.627	1	273	4383433	1	Standard
>	**Ge**	**72**		ug/L			63581	61913	0	KED
	Co	**59**	**300.691**	ug/L	3.131	1	10	1437290	0	KED
	Ni	**60**	**291.852**	ug/L	4.443	1	59	420156	1	KED
	Ni	**62**	**287.667**	ug/L	7.410	2	12	65945	1	KED
	Cu	**63**	**277.826**	ug/L	4.647	1	111	1171139	1	KED
	Cu	**65**	**276.998**	ug/L	5.851	2	50	585883	1	KED
	Zn	**66**	**273.913**	ug/L	2.703	0	224	142010	0	KED
	Zn	**67**	**271.518**	ug/L	8.128	2	39	23423	2	KED
	As	**75**	**295.721**	ug/L	1.849	0	3	73481	1	KED
	Y	**89**		ug/L			326706	316111	1	Standard
	Kr	**83**		ug/L			76	152	18	Standard
>	**In-1**	**115**		ug/L			17436	17003	2	KED
	Mo	**98**	**304.046**	ug/L	5.394	1	3	381840	1	KED
	Cd	**111**	**284.363**	ug/L	6.841	2	1	80969	1	KED
	Cd	**114**	**279.107**	ug/L	6.871	2	3	210991	1	KED
>	**In**	**115**		ug/L			1087183	867445	0	Standard
	Ag	**107**	**290.915**	ug/L	2.487	0	48	3474642	1	Standard
	Ba	**135**	**286.903**	ug/L	2.167	0	49	1420636	1	Standard
	Ba	**137**	**283.713**	ug/L	5.512	1	72	2493389	1	Standard
>	**Tb**	**159**		ug/L			2467046	2328753	0	Standard
	Pb	**208**	**291.011**	ug/L	2.354	0	587	29854435	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 17:34:52
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			9908	11458	4	Standard
	Cl	**37**		ug/L			2331855	2301268	1	Standard
>	**Sc**	**45**		ug/L			542905	613847	1	Standard
	Al	**27**	**0.545**	ug/L	0.166	30	3552	15176	21	Standard
	Cr	**52**	**0.019**	ug/L	0.010	49	8170	9466	0	Standard
	Cr	**53**	**0.014**	ug/L	0.000	1	88	119	1	Standard
	Fe	**54**	**2.211**	ug/L	0.345	15	56918	68395	1	Standard
	Fe	**57**	**1.475**	ug/L	0.021	1	12370	15363	1	Standard
	Mn	**55**	**0.002**	ug/L	0.001	59	273	342	4	Standard
>	**Ge**	**72**		ug/L			63581	74506	1	KED
	Co	**59**	**0.004**	ug/L	0.001	26	10	36	16	KED
	Ni	**60**	**-0.022**	ug/L	0.004	17	59	31	19	KED
	Ni	**62**	**-0.036**	ug/L	0.004	11	12	5	21	KED
	Cu	**63**	**-0.002**	ug/L	0.003	132	111	121	10	KED
	Cu	**65**	**0.001**	ug/L	0.003	574	50	60	14	KED
	Zn	**66**	**-0.262**	ug/L	0.014	5	224	99	8	KED
	Zn	**67**	**-0.267**	ug/L	0.076	28	39	18	43	KED
	As	**75**	**0.011**	ug/L	0.007	62	3	6	28	KED
	Y	**89**		ug/L			326706	351227	1	Standard
	Kr	**83**		ug/L			76	85	16	Standard
>	**In-1**	**115**		ug/L			17436	19327	0	KED
	Mo	**98**	**0.132**	ug/L	0.070	53	3	191	51	KED
	Cd	**111**	**0.036**	ug/L	0.053	147	1	13	124	KED
	Cd	**114**	**0.044**	ug/L	0.064	146	3	41	134	KED
>	**In**	**115**		ug/L			1087183	1113381	0	Standard
	Ag	**107**	**0.010**	ug/L	0.002	18	48	199	13	Standard
	Ba	**135**	**0.001**	ug/L	0.002	137	49	59	19	Standard
	Ba	**137**	**0.003**	ug/L	0.001	16	72	111	5	Standard
>	**Tb**	**159**		ug/L			2467046	2772441	0	Standard
	Pb	**208**	**0.005**	ug/L	0.001	22	587	1222	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 17:41:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			9908	11763	1	Standard
	Cl	**37**		ug/L			2331855	2284139	1	Standard
>	**Sc**	**45**		ug/L			542905	623948	1	Standard
	Al	**27**	**0.102**	ug/L	0.015	15	3552	6207	4	Standard
	Cr	**52**	**-0.022**	ug/L	0.009	40	8170	9127	1	Standard
	Cr	**53**	**-0.005**	ug/L	0.008	153	88	94	11	Standard
	Fe	**54**	**0.172**	ug/L	0.666	386	56918	65732	1	Standard
	Fe	**57**	**2.075**	ug/L	0.770	37	12370	16179	3	Standard
	Mn	**55**	**-0.003**	ug/L	0.001	23	273	266	3	Standard
>	**Ge**	**72**		ug/L			63581	75697	1	KED
	Co	**59**	**0.000**	ug/L	0.001	738	10	13	65	KED
	Ni	**60**	**-0.017**	ug/L	0.008	45	59	40	32	KED
	Ni	**62**	**-0.031**	ug/L	0.004	11	12	6	17	KED
	Cu	**63**	**-0.006**	ug/L	0.004	67	111	102	20	KED
	Cu	**65**	**-0.006**	ug/L	0.004	63	50	43	25	KED
	Zn	**66**	**-0.296**	ug/L	0.022	7	224	79	19	KED
	Zn	**67**	**-0.306**	ug/L	0.054	17	39	14	39	KED
	As	**75**	**-0.001**	ug/L	0.006	632	3	3	55	KED
	Y	**89**		ug/L			326706	351559	1	Standard
	Kr	**83**		ug/L			76	70	16	Standard
>	**In-1**	**115**		ug/L			17436	19910	1	KED
	Mo	**98**	**0.026**	ug/L	0.008	31	3	41	29	KED
	Cd	**111**	**-0.001**	ug/L	0.003	336	1	1	50	KED
	Cd	**114**	**0.004**	ug/L	0.004	113	3	6	57	KED
>	**In**	**115**		ug/L			1087183	1127809	1	Standard
	Ag	**107**	**0.003**	ug/L	0.001	46	48	90	20	Standard
	Ba	**135**	**-0.001**	ug/L	0.002	300	49	46	25	Standard
	Ba	**137**	**-0.000**	ug/L	0.002	1144	72	73	26	Standard
>	**Tb**	**159**		ug/L			2467046	2762166	2	Standard
	Pb	**208**	**0.001**	ug/L	0.001	93	587	727	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 17:47:17
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			9908	11248	0	Standard
	Cl	**37**		ug/L			2331855	2478130	1	Standard
>	**Sc**	**45**		ug/L			542905	632721	0	Standard
	Al	**27**	**4783.541**	ug/L	84.548	1	3552	101086283	1	Standard
	Cr	**52**	**50.396**	ug/L	0.972	1	8170	633050	1	Standard
	Cr	**53**	**49.270**	ug/L	0.156	0	88	71281	1	Standard
	Fe	**54**	**4928.678**	ug/L	69.973	1	56918	9353611	1	Standard
	Fe	**57**	**4857.196**	ug/L	20.069	0	12370	4683939	0	Standard
	Mn	**55**	**48.036**	ug/L	0.493	1	273	860834	0	Standard
>	**Ge**	**72**		ug/L			63581	74642	1	KED
	Co	**59**	**48.985**	ug/L	0.780	1	10	282339	2	KED
	Ni	**60**	**48.292**	ug/L	1.163	2	59	83878	2	KED
	Ni	**62**	**48.605**	ug/L	0.561	1	12	13447	1	KED
	Cu	**63**	**48.856**	ug/L	0.823	1	111	248422	2	KED
	Cu	**65**	**48.354**	ug/L	0.956	1	50	123362	2	KED
	Zn	**66**	**50.189**	ug/L	0.739	1	224	31587	2	KED
	Zn	**67**	**48.964**	ug/L	0.654	1	39	5130	0	KED
	As	**75**	**49.044**	ug/L	0.553	1	3	14693	0	KED
	Y	**89**		ug/L			326706	355471	2	Standard
	Kr	**83**		ug/L			76	85	14	Standard
>	**In-1**	**115**		ug/L			17436	19416	3	KED
	Mo	**98**	**49.063**	ug/L	1.968	4	3	70326	1	KED
	Cd	**111**	**50.290**	ug/L	1.500	2	1	16349	0	KED
	Cd	**114**	**49.408**	ug/L	1.193	2	3	42647	1	KED
>	**In**	**115**		ug/L			1087183	1097218	0	Standard
	Ag	**107**	**50.350**	ug/L	0.894	1	48	760703	2	Standard
	Ba	**135**	**50.669**	ug/L	1.621	3	49	317373	3	Standard
	Ba	**137**	**51.302**	ug/L	0.354	0	72	570384	0	Standard
>	**Tb**	**159**		ug/L			2467046	2789862	1	Standard
	Pb	**208**	**49.983**	ug/L	0.669	1	587	6143328	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 17:54:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			9908	10826	3	Standard
	Cl	**37**		ug/L			2331855	2309498	2	Standard
>	**Sc**	**45**		ug/L			542905	632818	0	Standard
	Al	**27**	**0.220**	ug/L	0.044	19	3552	8780	9	Standard
	Cr	**52**	**-0.037**	ug/L	0.015	40	8170	9072	2	Standard
	Cr	**53**	**0.003**	ug/L	0.006	178	88	108	8	Standard
	Fe	**54**	**1.060**	ug/L	1.043	98	56918	68336	2	Standard
	Fe	**57**	**1.466**	ug/L	0.134	9	12370	15828	1	Standard
	Mn	**55**	**0.003**	ug/L	0.001	41	273	369	5	Standard
>	**Ge**	**72**		ug/L			63581	76419	1	KED
	Co	**59**	**0.001**	ug/L	0.001	57	10	20	24	KED
	Ni	**60**	**-0.005**	ug/L	0.008	164	59	62	21	KED
	Ni	**62**	**-0.016**	ug/L	0.027	176	12	10	71	KED
	Cu	**63**	**-0.003**	ug/L	0.003	100	111	117	14	KED
	Cu	**65**	**-0.000**	ug/L	0.006	20783	50	60	25	KED
	Zn	**66**	**-0.036**	ug/L	0.014	38	224	246	3	KED
	Zn	**67**	**-0.152**	ug/L	0.075	49	39	31	24	KED
	As	**75**	**-0.002**	ug/L	0.001	42	3	3	8	KED
	Y	**89**		ug/L			326706	350058	0	Standard
	Kr	**83**		ug/L			76	78	21	Standard
>	**In-1**	**115**		ug/L			17436	20144	2	KED
	Mo	**98**	**0.036**	ug/L	0.006	17	3	57	17	KED
	Cd	**111**	**-0.002**	ug/L	0.002	95	1	1	34	KED
	Cd	**114**	**0.002**	ug/L	0.005	343	3	4	96	KED
>	**In**	**115**		ug/L			1087183	1142838	2	Standard
	Ag	**107**	**0.004**	ug/L	0.001	20	48	108	11	Standard
	Ba	**135**	**0.003**	ug/L	0.002	51	49	72	16	Standard
	Ba	**137**	**0.004**	ug/L	0.000	11	72	122	3	Standard
>	**Tb**	**159**		ug/L			2467046	2785326	1	Standard
	Pb	**208**	**0.008**	ug/L	0.001	7	587	1652	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 17:59:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L				10710	2	Standard
	Cl	37		ug/L				2261004	1	Standard
>	Sc	45		ug/L				634798	2	Standard
	Al	27		ug/L				6918	4	Standard
	Cr	52		ug/L				9179	1	Standard
	Cr	53		ug/L				101	3	Standard
	Fe	54		ug/L				67448	2	Standard
	Fe	57		ug/L				16480	3	Standard
	Mn	55		ug/L				303	1	Standard
>	Ge	72		ug/L				75441	1	KED
	Co	59		ug/L				17	6	KED
	Ni	60		ug/L				64	7	KED
	Ni	62		ug/L				6	41	KED
	Cu	63		ug/L				112	15	KED
	Cu	65		ug/L				55	17	KED
	Zn	66		ug/L				248	11	KED
	Zn	67		ug/L				33	34	KED
	As	75		ug/L				3	41	KED
	Y	89		ug/L				344601	1	Standard
	Kr	83		ug/L				73	21	Standard
>	In-1	115		ug/L				19732	2	KED
	Mo	98		ug/L				20	19	KED
	Cd	111		ug/L				3	45	KED
	Cd	114		ug/L				4	27	KED
>	In	115		ug/L				1114786	0	Standard
	Ag	107		ug/L				86	12	Standard
	Ba	135		ug/L				64	1	Standard
	Ba	137		ug/L				120	17	Standard
>	Tb	159		ug/L				2758248	0	Standard
	Pb	208		ug/L				1233	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 18:04:11
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10710	11391	3	Standard
	Cl	**37**		ug/L			2261004	2405722	2	Standard
>	**Sc**	**45**		ug/L			634798	619413	0	Standard
	Al	**27**	**4869.949**	ug/L	107.850	2	6918	100763559	2	Standard
	Cr	**52**	**50.215**	ug/L	0.487	0	9179	617229	0	Standard
	Cr	**53**	**49.614**	ug/L	0.600	1	101	70264	0	Standard
	Fe	**54**	**5072.688**	ug/L	92.866	1	67448	9423487	1	Standard
	Fe	**57**	**5046.616**	ug/L	66.562	1	16480	4765480	0	Standard
	Mn	**55**	**48.339**	ug/L	0.861	1	303	848024	1	Standard
>	**Ge**	**72**		ug/L			75441	74910	1	KED
	Co	**59**	**49.168**	ug/L	1.190	2	17	284329	1	KED
	Ni	**60**	**48.919**	ug/L	1.396	2	64	85239	1	KED
	Ni	**62**	**48.652**	ug/L	1.149	2	6	13504	3	KED
	Cu	**63**	**48.210**	ug/L	1.036	2	112	246048	3	KED
	Cu	**65**	**48.490**	ug/L	1.180	2	55	124122	1	KED
	Zn	**66**	**50.673**	ug/L	0.810	1	248	31986	2	KED
	Zn	**67**	**49.560**	ug/L	2.558	5	33	5200	6	KED
	As	**75**	**48.864**	ug/L	0.564	1	3	14691	0	KED
	Y	**89**		ug/L			344601	360371	0	Standard
	Kr	**83**		ug/L			73	81	10	Standard
>	**In-1**	**115**		ug/L			19732	19105	4	KED
	Mo	**98**	**50.597**	ug/L	2.023	3	20	71368	1	KED
	Cd	**111**	**50.895**	ug/L	1.738	3	3	16277	0	KED
	Cd	**114**	**50.662**	ug/L	1.270	2	4	43023	2	KED
>	**In**	**115**		ug/L			1114786	1103789	2	Standard
	Ag	**107**	**49.542**	ug/L	0.966	1	86	752761	0	Standard
	Ba	**135**	**50.087**	ug/L	1.106	2	64	315534	0	Standard
	Ba	**137**	**50.924**	ug/L	1.130	2	120	569449	0	Standard
>	**Tb**	**159**		ug/L			2758248	2786936	1	Standard
	Pb	**208**	**50.628**	ug/L	0.925	1	1233	6216091	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 18:11:13
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10710	10700	1	Standard
	Cl	**37**		ug/L			2261004	2286795	0	Standard
>	**Sc**	**45**		ug/L			634798	628826	0	Standard
	Al	**27**	**-0.010**	ug/L	0.019	193	6918	6640	5	Standard
	Cr	**52**	**-0.015**	ug/L	0.022	145	9179	8910	3	Standard
	Cr	**53**	**-0.000**	ug/L	0.004	961	101	100	5	Standard
	Fe	**54**	**-0.666**	ug/L	0.247	37	67448	65567	1	Standard
	Fe	**57**	**-0.577**	ug/L	0.829	143	16480	15770	4	Standard
	Mn	**55**	**0.001**	ug/L	0.001	93	303	313	3	Standard
>	**Ge**	**72**		ug/L			75441	76099	2	KED
	Co	**59**	**-0.001**	ug/L	0.001	67	17	12	36	KED
	Ni	**60**	**0.002**	ug/L	0.006	294	64	68	12	KED
	Ni	**62**	**0.011**	ug/L	0.011	97	6	10	28	KED
	Cu	**63**	**-0.003**	ug/L	0.002	81	112	99	10	KED
	Cu	**65**	**-0.003**	ug/L	0.001	46	55	48	4	KED
	Zn	**66**	**-0.003**	ug/L	0.003	88	248	248	2	KED
	Zn	**67**	**0.058**	ug/L	0.084	144	33	40	20	KED
	As	**75**	**0.006**	ug/L	0.007	118	3	5	43	KED
	Y	**89**		ug/L			344601	342622	1	Standard
	Kr	**83**		ug/L			73	79	22	Standard
>	**In-1**	**115**		ug/L			19732	19973	0	KED
	Mo	**98**	**0.015**	ug/L	0.008	54	20	43	28	KED
	Cd	**111**	**-0.001**	ug/L	0.003	265	3	2	33	KED
	Cd	**114**	**0.001**	ug/L	0.003	527	4	4	60	KED
>	**In**	**115**		ug/L			1114786	1137046	1	Standard
	Ag	**107**	**-0.000**	ug/L	0.001	331	86	85	13	Standard
	Ba	**135**	**-0.001**	ug/L	0.001	64	64	56	10	Standard
	Ba	**137**	**-0.001**	ug/L	0.001	82	120	108	11	Standard
>	**Tb**	**159**		ug/L			2758248	2781359	1	Standard
	Pb	**208**	**0.001**	ug/L	0.001	47	1233	1410	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0600-BLK2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 18:16:20

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10710	26219	1	Standard
	Cl	**37**		ug/L			2261004	2311556	1	Standard
>	**Sc**	**45**		ug/L			634798	622925	1	Standard
	Al	**27**	**1.388**	ug/L	0.072	5	6918	35647	2	Standard
	Cr	**52**	**0.201**	ug/L	0.044	21	9179	11447	3	Standard
	Cr	**53**	**0.144**	ug/L	0.028	19	101	305	14	Standard
	Fe	**54**	**2.568**	ug/L	0.405	15	67448	70942	0	Standard
	Fe	**57**	**0.879**	ug/L	0.541	61	16480	17004	3	Standard
	Mn	**55**	**0.103**	ug/L	0.004	3	303	2116	4	Standard
>	**Ge**	**72**		ug/L			75441	76866	1	KED
	Co	**59**	**-0.001**	ug/L	0.001	50	17	10	39	KED
	Ni	**60**	**-0.023**	ug/L	0.005	19	64	24	33	KED
	Ni	**62**	**-0.009**	ug/L	0.008	83	6	4	49	KED
	Cu	**63**	**0.038**	ug/L	0.007	17	112	311	12	KED
	Cu	**65**	**0.031**	ug/L	0.002	7	55	138	5	KED
	Zn	**66**	**-0.253**	ug/L	0.015	5	248	90	9	KED
	Zn	**67**	**-0.113**	ug/L	0.055	48	33	22	27	KED
	As	**75**	**-0.001**	ug/L	0.003	388	3	3	24	KED
	Y	**89**		ug/L			344601	353373	0	Standard
	Kr	**83**		ug/L			73	67	20	Standard
>	**In-1**	**115**		ug/L			19732	19750	0	KED
	Mo	**98**	**0.012**	ug/L	0.001	11	20	37	4	KED
	Cd	**111**	**-0.005**	ug/L	0.003	68	3	1	69	KED
	Cd	**114**	**-0.003**	ug/L	0.002	70	4	1	109	KED
>	**In**	**115**		ug/L			1114786	1132762	2	Standard
	Ag	**107**	**-0.002**	ug/L	0.001	85	86	64	30	Standard
	Ba	**135**	**-0.001**	ug/L	0.002	305	64	59	24	Standard
	Ba	**137**	**-0.002**	ug/L	0.001	30	120	94	11	Standard
>	**Tb**	**159**		ug/L			2758248	2798780	2	Standard
	Pb	**208**	**-0.001**	ug/L	0.001	41	1233	1080	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0600-BS2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 18:20:38

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10710	31181	0	Standard
	Cl	**37**		ug/L			2261004	2417693	0	Standard
>	**Sc**	**45**		ug/L			634798	638239	0	Standard
	Al	**27**	**4761.461**	ug/L	227.086	4	6918	101506483	4	Standard
	Cr	**52**	**24.365**	ug/L	0.130	0	9179	313350	0	Standard
	Cr	**53**	**23.462**	ug/L	0.411	1	101	34292	1	Standard
	Fe	**54**	**4837.237**	ug/L	68.757	1	67448	9262754	1	Standard
	Fe	**57**	**4800.175**	ug/L	27.173	0	16480	4671568	0	Standard
	Mn	**55**	**23.829**	ug/L	0.166	0	303	430916	0	Standard
>	**Ge**	**72**		ug/L			75441	75794	0	KED
	Co	**59**	**24.480**	ug/L	0.241	0	17	143269	0	KED
	Ni	**60**	**23.894**	ug/L	0.313	1	64	42172	1	KED
	Ni	**62**	**24.348**	ug/L	0.083	0	6	6839	0	KED
	Cu	**63**	**24.359**	ug/L	0.638	2	112	125823	2	KED
	Cu	**65**	**24.002**	ug/L	0.846	3	55	62200	3	KED
	Zn	**66**	**74.705**	ug/L	1.484	1	248	47591	1	KED
	Zn	**67**	**68.804**	ug/L	1.379	2	33	7288	1	KED
	As	**75**	**24.238**	ug/L	0.253	1	3	7375	1	KED
	Y	**89**		ug/L			344601	360548	3	Standard
	Kr	**83**		ug/L			73	73	18	Standard
>	**In-1**	**115**		ug/L			19732	19287	2	KED
	Mo	**98**	**-0.005**	ug/L	0.001	21	20	13	13	KED
	Cd	**111**	**25.146**	ug/L	0.812	3	3	8125	2	KED
	Cd	**114**	**24.620**	ug/L	0.394	1	4	21121	1	KED
>	**In**	**115**		ug/L			1114786	1107550	1	Standard
	Ag	**107**	**24.820**	ug/L	0.273	1	86	378531	0	Standard
	Ba	**135**	**25.183**	ug/L	0.721	2	64	159221	1	Standard
	Ba	**137**	**25.515**	ug/L	0.227	0	120	286422	1	Standard
>	**Tb**	**159**		ug/L			2758248	2818526	1	Standard
	Pb	**208**	**25.153**	ug/L	0.265	1	1233	3124080	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0017-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 18:24:55

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10710	17240	1	Standard
	Cl	**37**		ug/L			2261004	2357020	4	Standard
>	**Sc**	**45**		ug/L			634798	633510	2	Standard
	Al	**27**	**1.457**	ug/L	0.044	3	6918	37742	4	Standard
	Cr	**52**	**0.118**	ug/L	0.011	9	9179	10617	2	Standard
	Cr	**53**	**0.092**	ug/L	0.012	12	101	234	9	Standard
	Fe	**54**	**6.658**	ug/L	1.587	23	67448	79842	2	Standard
	Fe	**57**	**-0.173**	ug/L	0.593	341	16480	16271	1	Standard
	Mn	**55**	**0.514**	ug/L	0.014	2	303	9518	0	Standard
>	**Ge**	**72**		ug/L			75441	76443	0	KED
	Co	**59**	**-0.002**	ug/L	0.001	67	17	8	68	KED
	Ni	**60**	**-0.022**	ug/L	0.005	22	64	26	34	KED
	Ni	**62**	**-0.007**	ug/L	0.008	113	6	5	43	KED
	Cu	**63**	**0.018**	ug/L	0.004	22	112	206	10	KED
	Cu	**65**	**0.019**	ug/L	0.002	12	55	105	5	KED
	Zn	**66**	**0.088**	ug/L	0.039	43	248	307	7	KED
	Zn	**67**	**0.109**	ug/L	0.045	41	33	45	11	KED
	As	**75**	**0.000**	ug/L	0.003	866	3	3	27	KED
	Y	**89**		ug/L			344601	352985	0	Standard
	Kr	**83**		ug/L			73	85	25	Standard
>	**In-1**	**115**		ug/L			19732	20306	2	KED
	Mo	**98**	**-0.007**	ug/L	0.003	39	20	11	33	KED
	Cd	**111**	**-0.005**	ug/L	0.002	32	3	1	34	KED
	Cd	**114**	**-0.007**	ug/L	0.005	63	4	-2	194	KED
>	**In**	**115**		ug/L			1114786	1153724	1	Standard
	Ag	**107**	**-0.001**	ug/L	0.001	80	86	70	23	Standard
	Ba	**135**	**-0.006**	ug/L	0.001	13	64	28	17	Standard
	Ba	**137**	**-0.005**	ug/L	0.001	12	120	60	13	Standard
>	**Tb**	**159**		ug/L			2758248	2832386	0	Standard
	Pb	**208**	**-0.002**	ug/L	0.000	16	1233	1005	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0017-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 18:29:12

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10710	18623	0	Standard
	Cl	**37**		ug/L			2261004	2471248	2	Standard
>	**Sc**	**45**		ug/L			634798	632783	0	Standard
	Al	**27**	**4855.039**	ug/L	226.132	4	6918	102627962	5	Standard
	Cr	**52**	**24.718**	ug/L	0.226	0	9179	315029	0	Standard
	Cr	**53**	**24.485**	ug/L	0.681	2	101	35474	2	Standard
	Fe	**54**	**4975.689**	ug/L	154.310	3	67448	9442860	2	Standard
	Fe	**57**	**4679.706**	ug/L	157.337	3	16480	4515466	3	Standard
	Mn	**55**	**23.930**	ug/L	0.622	2	303	428981	1	Standard
>	**Ge**	**72**		ug/L			75441	75817	2	KED
	Co	**59**	**24.163**	ug/L	0.765	3	17	141430	2	KED
	Ni	**60**	**24.707**	ug/L	0.306	1	64	43609	0	KED
	Ni	**62**	**24.119**	ug/L	0.880	3	6	6774	1	KED
	Cu	**63**	**24.437**	ug/L	0.981	4	112	126188	1	KED
	Cu	**65**	**24.224**	ug/L	0.826	3	55	62771	1	KED
	Zn	**66**	**74.422**	ug/L	2.750	3	248	47406	2	KED
	Zn	**67**	**68.628**	ug/L	2.917	4	33	7269	2	KED
	As	**75**	**23.893**	ug/L	0.556	2	3	7271	1	KED
	Y	**89**		ug/L			344601	370181	0	Standard
	Kr	**83**		ug/L			73	91	16	Standard
>	**In-1**	**115**		ug/L			19732	19107	1	KED
	Mo	**98**	**-0.004**	ug/L	0.004	90	20	13	41	KED
	Cd	**111**	**24.949**	ug/L	0.313	1	3	7988	0	KED
	Cd	**114**	**25.061**	ug/L	0.611	2	4	21295	1	KED
>	**In**	**115**		ug/L			1114786	1124450	1	Standard
	Ag	**107**	**24.427**	ug/L	0.610	2	86	378158	0	Standard
	Ba	**135**	**25.191**	ug/L	0.065	0	64	161746	1	Standard
	Ba	**137**	**25.533**	ug/L	0.564	2	120	290952	0	Standard
>	**Tb**	**159**		ug/L			2758248	2864317	1	Standard
	Pb	**208**	**24.569**	ug/L	0.232	0	1233	3101287	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0248-02
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 18:33:35

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			10710	19301	5	Standard
Cl	37		ug/L			2261004	83959594	6	Standard
> Sc	45		ug/L			634798	398039	3	Standard
Al	27	1.872	ug/L	0.103	5	6918	29193	3	Standard
Cr	52	1.060	ug/L	0.047	4	9179	14000	2	Standard
Cr	53	60.769	ug/L	0.499	0	101	55283	2	Standard
Fe	54	24.878	ug/L	1.519	6	67448	71758	2	Standard
Fe	57	642.906	ug/L	7.986	1	16480	399071	2	Standard
Mn	55	1055.628	ug/L	26.750	2	303	11890149	0	Standard
> Ge	72		ug/L			75441	28400	2	KED
Co	59	1.806	ug/L	0.034	1	17	3966	4	KED
Ni	60	3.938	ug/L	0.057	1	64	2625	2	KED
Ni	62	6.135	ug/L	0.258	4	6	647	4	KED
Cu	63	1.907	ug/L	0.032	1	112	3730	3	KED
Cu	65	1.655	ug/L	0.055	3	55	1626	3	KED
Zn	66	2.929	ug/L	0.178	6	248	788	4	KED
Zn	67	20.780	ug/L	0.177	0	33	833	1	KED
As	75	0.516	ug/L	0.042	8	3	60	9	KED
Y	89		ug/L			344601	199075	3	Standard
Kr	83		ug/L			73	15557	4	Standard
> In-1	115		ug/L			19732	8538	1	KED
Mo	98	5.580	ug/L	0.031	0	20	3529	0	KED
Cd	111	0.095	ug/L	0.014	14	3	14	13	KED
Cd	114	0.089	ug/L	0.021	23	4	35	22	KED
> In	115		ug/L			1114786	416737	1	Standard
Ag	107	0.010	ug/L	0.001	11	86	88	7	Standard
Ba	135	598.507	ug/L	18.188	3	64	1423411	2	Standard
Ba	137	599.216	ug/L	3.369	0	120	2530074	0	Standard
> Tb	159		ug/L			2758248	1226944	1	Standard
Pb	208	0.033	ug/L	0.003	10	1233	2304	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 18:39:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	14612	1	Standard
	Cl	37		ug/L			2261004	3573047	1	Standard
>	Sc	45		ug/L			634798	689733	1	Standard
	Al	27	-0.047	ug/L	0.001	2	6918	6424	2	Standard
	Cr	52	0.210	ug/L	0.005	2	9179	12808	1	Standard
	Cr	53	3.571	ug/L	0.041	1	101	5733	2	Standard
	Fe	54	7.087	ug/L	0.601	8	67448	87828	0	Standard
	Fe	57	2.914	ug/L	0.602	20	16480	20955	2	Standard
	Mn	55	0.020	ug/L	0.002	9	303	725	4	Standard
>	Ge	72		ug/L			75441	89317	2	KED
	Co	59	-0.002	ug/L	0.001	54	17	7	100	KED
	Ni	60	-0.020	ug/L	0.005	25	64	34	30	KED
	Ni	62	-0.010	ug/L	0.009	90	6	5	57	KED
	Cu	63	-0.002	ug/L	0.001	28	112	121	1	KED
	Cu	65	-0.002	ug/L	0.004	191	55	58	24	KED
	Zn	66	-0.243	ug/L	0.024	9	248	112	14	KED
	Zn	67	-0.208	ug/L	0.064	30	33	13	55	KED
	As	75	-0.002	ug/L	0.004	240	3	3	47	KED
	Y	89		ug/L			344601	378977	1	Standard
	Kr	83		ug/L			73	89	18	Standard
>	In-1	115		ug/L			19732	23367	1	KED
	Mo	98	-0.011	ug/L	0.002	15	20	6	48	KED
	Cd	111	-0.003	ug/L	0.001	46	3	2	21	KED
	Cd	114	-0.000	ug/L	0.004	4675	4	4	79	KED
>	In	115		ug/L			1114786	1161182	5	Standard
	Ag	107	-0.002	ug/L	0.001	24	86	53	11	Standard
	Ba	135	0.000	ug/L	0.001	414	64	67	4	Standard
	Ba	137	-0.000	ug/L	0.001	2897	120	124	4	Standard
>	Tb	159		ug/L			2758248	2934016	1	Standard
	Pb	208	0.003	ug/L	0.000	14	1233	1730	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL5
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 18:44:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	14207	3	Standard
	Cl	37		ug/L			2261004	3487320	0	Standard
>	Sc	45		ug/L			634798	688326	0	Standard
	Al	27	-0.047	ug/L	0.015	31	6918	6408	4	Standard
	Cr	52	0.148	ug/L	0.017	11	9179	11948	1	Standard
	Cr	53	2.153	ug/L	0.002	0	101	3494	0	Standard
	Fe	54	5.887	ug/L	0.919	15	67448	85213	2	Standard
	Fe	57	0.875	ug/L	0.620	70	16480	18782	2	Standard
	Mn	55	0.010	ug/L	0.001	6	303	530	1	Standard
>	Ge	72		ug/L			75441	89359	2	KED
	Co	59	-0.002	ug/L	0.000	7	17	5	21	KED
	Ni	60	-0.019	ug/L	0.004	21	64	37	19	KED
	Ni	62	-0.016	ug/L	0.012	74	6	3	124	KED
	Cu	63	-0.004	ug/L	0.003	70	112	111	16	KED
	Cu	65	-0.002	ug/L	0.001	23	55	57	1	KED
	Zn	66	-0.242	ug/L	0.015	6	248	113	12	KED
	Zn	67	-0.168	ug/L	0.042	25	33	19	30	KED
	As	75	0.004	ug/L	0.004	110	3	5	25	KED
	Y	89		ug/L			344601	361988	2	Standard
	Kr	83		ug/L			73	101	6	Standard
>	In-1	115		ug/L			19732	22844	1	KED
	Mo	98	-0.010	ug/L	0.003	29	20	7	65	KED
	Cd	111	0.000	ug/L	0.011	3874	3	3	114	KED
	Cd	114	-0.001	ug/L	0.006	888	4	4	145	KED
>	In	115		ug/L			1114786	1196100	0	Standard
	Ag	107	-0.003	ug/L	0.001	20	86	49	17	Standard
	Ba	135	-0.003	ug/L	0.000	9	64	49	3	Standard
	Ba	137	-0.002	ug/L	0.001	73	120	106	15	Standard
>	Tb	159		ug/L			2758248	2909352	2	Standard
	Pb	208	-0.001	ug/L	0.001	83	1233	1208	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL6
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 18:57:28
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	14248	1	Standard
	Cl	37		ug/L			2261004	3420752	0	Standard
>	Sc	45		ug/L			634798	674907	2	Standard
	Al	27	-0.064	ug/L	0.009	14	6918	5898	1	Standard
	Cr	52	0.135	ug/L	0.022	16	9179	11538	1	Standard
	Cr	53	1.132	ug/L	0.026	2	101	1851	0	Standard
	Fe	54	6.292	ug/L	0.285	4	67448	84353	2	Standard
	Fe	57	0.158	ug/L	0.442	279	16480	17680	2	Standard
	Mn	55	0.004	ug/L	0.002	42	303	394	9	Standard
>	Ge	72		ug/L			75441	84381	3	KED
	Co	59	-0.002	ug/L	0.000	12	17	3	50	KED
	Ni	60	-0.022	ug/L	0.003	15	64	29	19	KED
	Ni	62	-0.009	ug/L	0.004	44	6	5	21	KED
	Cu	63	-0.005	ug/L	0.003	45	112	93	12	KED
	Cu	65	-0.004	ug/L	0.002	57	55	51	14	KED
	Zn	66	-0.251	ug/L	0.002	0	248	100	4	KED
	Zn	67	-0.190	ug/L	0.037	19	33	15	25	KED
	As	75	-0.002	ug/L	0.006	331	3	3	62	KED
	Y	89		ug/L			344601	369681	0	Standard
	Kr	83		ug/L			73	88	21	Standard
>	In-1	115		ug/L			19732	23127	2	KED
	Mo	98	-0.012	ug/L	0.001	8	20	4	37	KED
	Cd	111	0.000	ug/L	0.004	1780	3	3	43	KED
	Cd	114	-0.001	ug/L	0.003	218	4	3	94	KED
>	In	115		ug/L			1114786	1210471	1	Standard
	Ag	107	-0.003	ug/L	0.000	7	86	46	6	Standard
	Ba	135	-0.005	ug/L	0.001	23	64	34	24	Standard
	Ba	137	-0.005	ug/L	0.002	42	120	69	37	Standard
>	Tb	159		ug/L			2758248	2906637	0	Standard
	Pb	208	-0.003	ug/L	0.000	11	1233	869	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL7
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 19:13:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	13784	3	Standard
	Cl	37		ug/L			2261004	3417207	2	Standard
>	Sc	45		ug/L			634798	668142	2	Standard
	Al	27	-0.154	ug/L	0.011	7	6918	3843	4	Standard
	Cr	52	0.136	ug/L	0.032	23	9179	11431	0	Standard
	Cr	53	0.737	ug/L	0.026	3	101	1229	0	Standard
	Fe	54	6.636	ug/L	1.379	20	67448	84142	0	Standard
	Fe	57	-0.602	ug/L	0.772	128	16480	16725	3	Standard
	Mn	55	0.000	ug/L	0.000	254	303	321	4	Standard
>	Ge	72		ug/L			75441	83996	3	KED
	Co	59	-0.002	ug/L	0.000	20	17	4	65	KED
	Ni	60	-0.021	ug/L	0.004	19	64	30	22	KED
	Ni	62	-0.011	ug/L	0.004	33	6	4	24	KED
	Cu	63	-0.004	ug/L	0.003	73	112	101	14	KED
	Cu	65	-0.007	ug/L	0.001	18	55	41	7	KED
	Zn	66	-0.241	ug/L	0.030	12	248	106	15	KED
	Zn	67	-0.179	ug/L	0.054	30	33	16	37	KED
	As	75	0.002	ug/L	0.002	121	3	4	12	KED
	Y	89		ug/L			344601	366758	2	Standard
	Kr	83		ug/L			73	84	19	Standard
>	In-1	115		ug/L			19732	20816	18	KED
	Mo	98	-0.009	ug/L	0.001	9	20	8	13	KED
	Cd	111	-0.001	ug/L	0.009	676	3	2	94	KED
	Cd	114	-0.005	ug/L	0.000	1	4	0	69	KED
>	In	115		ug/L			1114786	1181236	2	Standard
	Ag	107	-0.003	ug/L	0.000	6	86	36	10	Standard
	Ba	135	-0.004	ug/L	0.001	39	64	43	22	Standard
	Ba	137	-0.006	ug/L	0.001	12	120	58	13	Standard
>	Tb	159		ug/L			2758248	2888176	1	Standard
	Pb	208	-0.006	ug/L	0.000	3	1233	578	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL8
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 19:18:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10710	13973	4	Standard
	Cl	**37**		ug/L			2261004	3376679	2	Standard
>	**Sc**	**45**		ug/L			634798	672193	2	Standard
	Al	**27**	**-0.159**	ug/L	0.007	4	6918	3754	2	Standard
	Cr	**52**	**0.105**	ug/L	0.025	23	9179	11091	0	Standard
	Cr	**53**	**0.655**	ug/L	0.021	3	101	1112	3	Standard
	Fe	**54**	**6.386**	ug/L	1.532	23	67448	84162	1	Standard
	Fe	**57**	**-0.558**	ug/L	0.135	24	16480	16883	2	Standard
	Mn	**55**	**0.001**	ug/L	0.001	114	303	340	4	Standard
>	**Ge**	**72**		ug/L			75441	84841	0	KED
	Co	**59**	**-0.002**	ug/L	0.000	18	17	4	65	KED
	Ni	**60**	**-0.021**	ug/L	0.006	26	64	31	34	KED
	Ni	**62**	**0.005**	ug/L	0.016	301	6	9	52	KED
	Cu	**63**	**-0.008**	ug/L	0.002	22	112	77	13	KED
	Cu	**65**	**-0.010**	ug/L	0.006	66	55	34	53	KED
	Zn	**66**	**-0.251**	ug/L	0.004	1	248	100	3	KED
	Zn	**67**	**-0.148**	ug/L	0.080	54	33	20	46	KED
	As	**75**	**0.003**	ug/L	0.006	172	3	5	39	KED
	Y	**89**		ug/L			344601	360843	0	Standard
	Kr	**83**		ug/L			73	88	13	Standard
>	**In-1**	**115**		ug/L			19732	22326	0	KED
	Mo	**98**	**-0.010**	ug/L	0.002	20	20	7	44	KED
	Cd	**111**	**-0.004**	ug/L	0.002	41	3	2	24	KED
	Cd	**114**	**-0.004**	ug/L	0.002	56	4	1	177	KED
>	**In**	**115**		ug/L			1114786	1190549	2	Standard
	Ag	**107**	**-0.003**	ug/L	0.000	7	86	39	10	Standard
	Ba	**135**	**-0.004**	ug/L	0.001	13	64	38	13	Standard
	Ba	**137**	**-0.006**	ug/L	0.001	10	120	52	14	Standard
>	**Tb**	**159**		ug/L			2758248	2895183	1	Standard
	Pb	**208**	**-0.006**	ug/L	0.000	6	1233	562	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 19:24:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	13956	1	Standard
	Cl	37		ug/L			2261004	3471526	2	Standard
>	Sc	45		ug/L			634798	646004	0	Standard
	Al	27	5591.217	ug/L	33.489	0	6918	120644570	0	Standard
	Cr	52	54.552	ug/L	0.458	0	9179	698549	1	Standard
	Cr	53	55.605	ug/L	0.556	0	101	82119	1	Standard
	Fe	54	5858.438	ug/L	141.566	2	67448	11339217	1	Standard
	Fe	57	5359.388	ug/L	105.724	1	16480	5277302	2	Standard
	Mn	55	52.299	ug/L	0.200	0	303	956893	0	Standard
>	Ge	72		ug/L			75441	85649	1	KED
	Co	59	46.297	ug/L	0.785	1	17	306147	1	KED
	Ni	60	46.605	ug/L	0.757	1	64	92866	0	KED
	Ni	62	46.017	ug/L	0.856	1	6	14597	0	KED
	Cu	63	45.109	ug/L	0.127	0	112	263178	1	KED
	Cu	65	45.428	ug/L	0.450	0	55	132998	2	KED
	Zn	66	47.792	ug/L	0.530	1	248	34505	1	KED
	Zn	67	46.886	ug/L	2.250	4	33	5623	4	KED
	As	75	47.846	ug/L	0.490	1	3	16448	0	KED
	Y	89		ug/L			344601	369680	2	Standard
	Kr	83		ug/L			73	81	5	Standard
>	In-1	115		ug/L			19732	21577	2	KED
	Mo	98	48.181	ug/L	0.145	0	20	76833	2	KED
	Cd	111	47.607	ug/L	0.848	1	3	17209	1	KED
	Cd	114	48.244	ug/L	2.258	4	4	46280	3	KED
>	In	115		ug/L			1114786	1158140	2	Standard
	Ag	107	48.908	ug/L	1.104	2	86	780148	4	Standard
	Ba	135	50.702	ug/L	0.113	0	64	335235	2	Standard
	Ba	137	51.242	ug/L	0.960	1	120	601366	2	Standard
>	Tb	159		ug/L			2758248	2916839	1	Standard
	Pb	208	46.581	ug/L	0.644	1	1233	5986384	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 19:31:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	13361	2	Standard
	Cl	37		ug/L			2261004	3432625	0	Standard
>	Sc	45		ug/L			634798	655715	1	Standard
	Al	27	-0.026	ug/L	0.012	47	6918	6586	3	Standard
	Cr	52	0.096	ug/L	0.003	3	9179	10713	1	Standard
	Cr	53	0.726	ug/L	0.010	1	101	1192	2	Standard
	Fe	54	6.524	ug/L	1.581	24	67448	82386	2	Standard
	Fe	57	-1.761	ug/L	0.581	33	16480	15264	2	Standard
	Mn	55	0.006	ug/L	0.001	20	303	432	4	Standard
>	Ge	72		ug/L			75441	85728	1	KED
	Co	59	-0.001	ug/L	0.001	55	17	13	28	KED
	Ni	60	-0.002	ug/L	0.003	212	64	70	9	KED
	Ni	62	0.023	ug/L	0.016	70	6	15	33	KED
	Cu	63	-0.002	ug/L	0.000	8	112	116	1	KED
	Cu	65	0.000	ug/L	0.005	1041	55	64	22	KED
	Zn	66	-0.017	ug/L	0.021	125	248	269	5	KED
	Zn	67	0.015	ug/L	0.046	306	33	40	12	KED
	As	75	0.003	ug/L	0.005	139	3	5	30	KED
	Y	89		ug/L			344601	368632	1	Standard
	Kr	83		ug/L			73	87	36	Standard
>	In-1	115		ug/L			19732	21912	3	KED
	Mo	98	0.014	ug/L	0.006	38	20	46	18	KED
	Cd	111	-0.000	ug/L	0.008	16774	3	3	83	KED
	Cd	114	0.001	ug/L	0.004	551	4	5	68	KED
>	In	115		ug/L			1114786	1237322	1	Standard
	Ag	107	-0.001	ug/L	0.001	83	86	75	21	Standard
	Ba	135	-0.000	ug/L	0.001	243	64	67	11	Standard
	Ba	137	0.001	ug/L	0.001	251	120	140	11	Standard
>	Tb	159		ug/L			2758248	2905881	2	Standard
	Pb	208	0.002	ug/L	0.000	17	1233	1557	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0024-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 19:40:52
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	17807	2	Standard
	Cl	37		ug/L			2261004	3453271	0	Standard
>	Sc	45		ug/L			634798	655448	0	Standard
	Al	27	1.023	ug/L	0.017	1	6918	29540	1	Standard
	Cr	52	0.158	ug/L	0.014	9	9179	11510	2	Standard
	Cr	53	0.560	ug/L	0.040	7	101	943	5	Standard
	Fe	54	7.972	ug/L	1.688	21	67448	85190	3	Standard
	Fe	57	-1.342	ug/L	0.200	14	16480	15678	0	Standard
	Mn	55	0.167	ug/L	0.003	1	303	3404	0	Standard
>	Ge	72		ug/L			75441	84981	2	KED
	Co	59	-0.002	ug/L	0.001	40	17	6	86	KED
	Ni	60	-0.024	ug/L	0.001	5	64	25	11	KED
	Ni	62	-0.005	ug/L	0.009	186	6	6	45	KED
	Cu	63	0.011	ug/L	0.002	18	112	193	7	KED
	Cu	65	0.013	ug/L	0.007	56	55	99	19	KED
	Zn	66	-0.027	ug/L	0.035	131	248	260	11	KED
	Zn	67	0.033	ug/L	0.049	147	33	41	15	KED
	As	75	0.001	ug/L	0.003	522	3	4	24	KED
	Y	89		ug/L			344601	367324	2	Standard
	Kr	83		ug/L			73	76	14	Standard
>	In-1	115		ug/L			19732	22704	0	KED
	Mo	98	0.001	ug/L	0.003	259	20	25	19	KED
	Cd	111	0.001	ug/L	0.008	603	3	4	70	KED
	Cd	114	0.001	ug/L	0.004	381	4	5	67	KED
>	In	115		ug/L			1114786	1247188	2	Standard
	Ag	107	-0.002	ug/L	0.001	57	86	66	24	Standard
	Ba	135	-0.003	ug/L	0.002	54	64	47	24	Standard
	Ba	137	-0.005	ug/L	0.001	15	120	68	17	Standard
>	Tb	159		ug/L			2758248	2885258	0	Standard
	Pb	208	-0.002	ug/L	0.001	22	1233	972	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0024-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 19:45:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	21107	1	Standard
	Cl	37		ug/L			2261004	3475266	0	Standard
>	Sc	45		ug/L			634798	656844	0	Standard
	Al	27	5481.480	ug/L	68.151	1	6918	120261568	1	Standard
	Cr	52	27.526	ug/L	0.764	2	9179	363063	2	Standard
	Cr	53	27.767	ug/L	0.163	0	101	41748	1	Standard
	Fe	54	5616.767	ug/L	38.675	0	67448	11057531	0	Standard
	Fe	57	5319.034	ug/L	84.451	1	16480	5325528	1	Standard
	Mn	55	25.655	ug/L	0.436	1	303	477454	2	Standard
>	Ge	72		ug/L			75441	83312	0	KED
	Co	59	23.367	ug/L	0.109	0	17	150318	0	KED
	Ni	60	22.990	ug/L	0.156	0	64	44604	1	KED
	Ni	62	23.609	ug/L	0.138	0	6	7290	1	KED
	Cu	63	23.121	ug/L	0.167	0	112	131274	1	KED
	Cu	65	23.326	ug/L	0.447	1	55	66446	1	KED
	Zn	66	74.730	ug/L	1.777	2	248	52331	2	KED
	Zn	67	71.672	ug/L	1.237	1	33	8344	1	KED
	As	75	24.335	ug/L	0.144	0	3	8140	1	KED
	Y	89		ug/L			344601	369346	1	Standard
	Kr	83		ug/L			73	90	27	Standard
>	In-1	115		ug/L			19732	21917	1	KED
	Mo	98	-0.006	ug/L	0.001	10	20	12	7	KED
	Cd	111	24.255	ug/L	0.508	2	3	8908	1	KED
	Cd	114	23.635	ug/L	0.438	1	4	23043	1	KED
>	In	115		ug/L			1114786	1194368	0	Standard
	Ag	107	24.370	ug/L	0.147	0	86	400838	1	Standard
	Ba	135	24.921	ug/L	0.478	1	64	169955	1	Standard
	Ba	137	25.096	ug/L	0.405	1	120	303822	1	Standard
>	Tb	159		ug/L			2758248	2874340	1	Standard
	Pb	208	23.926	ug/L	0.398	1	1233	3030355	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0026-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 19:49:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	18626	1	Standard
	Cl	37		ug/L			2261004	3287017	1	Standard
>	Sc	45		ug/L			634798	643377	1	Standard
	Al	27	1.563	ug/L	0.038	2	6918	40582	1	Standard
	Cr	52	0.170	ug/L	0.023	13	9179	11443	4	Standard
	Cr	53	0.616	ug/L	0.024	3	101	1008	4	Standard
	Fe	54	8.450	ug/L	1.276	15	67448	84530	1	Standard
	Fe	57	0.306	ug/L	0.316	103	16480	16999	0	Standard
	Mn	55	0.031	ug/L	0.001	1	303	871	2	Standard
>	Ge	72		ug/L			75441	85851	1	KED
	Co	59	-0.001	ug/L	0.000	20	17	13	7	KED
	Ni	60	-0.025	ug/L	0.002	8	64	22	16	KED
	Ni	62	-0.009	ug/L	0.012	137	6	5	78	KED
	Cu	63	0.127	ug/L	0.011	8	112	869	7	KED
	Cu	65	0.110	ug/L	0.009	8	55	385	7	KED
	Zn	66	-0.156	ug/L	0.005	3	248	170	1	KED
	Zn	67	-0.102	ug/L	0.043	42	33	26	18	KED
	As	75	0.001	ug/L	0.004	308	3	4	32	KED
	Y	89		ug/L			344601	362181	3	Standard
	Kr	83		ug/L			73	90	5	Standard
>	In-1	115		ug/L			19732	22365	1	KED
	Mo	98	-0.007	ug/L	0.002	25	20	11	25	KED
	Cd	111	0.001	ug/L	0.003	446	3	3	25	KED
	Cd	114	0.001	ug/L	0.004	312	4	6	65	KED
>	In	115		ug/L			1114786	1212081	2	Standard
	Ag	107	-0.001	ug/L	0.000	32	86	73	6	Standard
	Ba	135	-0.001	ug/L	0.002	169	64	60	28	Standard
	Ba	137	-0.002	ug/L	0.000	16	120	104	1	Standard
>	Tb	159		ug/L			2758248	2843555	2	Standard
	Pb	208	0.001	ug/L	0.000	10	1233	1422	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0026-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 19:53:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	23164	3	Standard
	Cl	37		ug/L			2261004	3429122	1	Standard
>	Sc	45		ug/L			634798	665021	1	Standard
	Al	27	5341.993	ug/L	28.972	0	6918	118659895	1	Standard
	Cr	52	26.697	ug/L	0.892	3	9179	356759	2	Standard
	Cr	53	27.274	ug/L	0.568	2	101	41512	1	Standard
	Fe	54	5670.415	ug/L	87.002	1	67448	11301687	2	Standard
	Fe	57	5291.174	ug/L	178.470	3	16480	5362159	2	Standard
	Mn	55	26.143	ug/L	0.653	2	303	492466	1	Standard
>	Ge	72		ug/L			75441	83147	2	KED
	Co	59	23.305	ug/L	0.641	2	17	149586	1	KED
	Ni	60	23.885	ug/L	0.447	1	64	46234	0	KED
	Ni	62	23.617	ug/L	0.787	3	6	7275	2	KED
	Cu	63	23.436	ug/L	0.639	2	112	132745	0	KED
	Cu	65	23.467	ug/L	0.789	3	55	66691	1	KED
	Zn	66	76.463	ug/L	1.950	2	248	53417	1	KED
	Zn	67	71.607	ug/L	2.794	3	33	8316	1	KED
	As	75	24.291	ug/L	0.557	2	3	8107	1	KED
	Y	89		ug/L			344601	363583	1	Standard
	Kr	83		ug/L			73	89	15	Standard
>	In-1	115		ug/L			19732	21770	0	KED
	Mo	98	-0.006	ug/L	0.002	34	20	13	24	KED
	Cd	111	24.212	ug/L	0.481	1	3	8833	1	KED
	Cd	114	23.842	ug/L	0.061	0	4	23089	0	KED
>	In	115		ug/L			1114786	1205072	2	Standard
	Ag	107	24.946	ug/L	0.830	3	86	413855	2	Standard
	Ba	135	24.758	ug/L	0.716	2	64	170284	0	Standard
	Ba	137	24.761	ug/L	0.870	3	120	302383	3	Standard
>	Tb	159		ug/L			2758248	2886339	0	Standard
	Pb	208	24.158	ug/L	0.260	1	1233	3072920	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0212-07
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, August 03, 2021 20:03:21

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	21152	0	Standard
	Cl	37		ug/L			2261004	3291383	2	Standard
>	Sc	45		ug/L			634798	687609	2	Standard
	Al	27	6144.418	ug/L	230.938	3	6918	141019567	1	Standard
	Cr	52	7.560	ug/L	0.196	2	9179	111563	1	Standard
	Cr	53	7.983	ug/L	0.213	2	101	12637	0	Standard
	Fe	54	7440.654	ug/L	111.812	1	67448	15311691	3	Standard
	Fe	57	7053.664	ug/L	194.911	2	16480	7385614	2	Standard
	Mn	55	57.235	ug/L	0.950	1	303	1114298	1	Standard
>	Ge	72		ug/L			75441	84108	2	KED
	Co	59	2.857	ug/L	0.053	1	17	18567	2	KED
	Ni	60	5.748	ug/L	0.044	0	64	11313	2	KED
	Ni	62	5.961	ug/L	0.212	3	6	1862	1	KED
	Cu	63	12.510	ug/L	0.122	0	112	71754	1	KED
	Cu	65	12.589	ug/L	0.215	1	55	36225	1	KED
	Zn	66	17.054	ug/L	0.148	0	248	12269	2	KED
	Zn	67	17.046	ug/L	0.542	3	33	2033	5	KED
	As	75	689.854	ug/L	6.496	0	3	232819	1	KED
	Y	89		ug/L			344601	456867	3	Standard
	Kr	83		ug/L			73	105	12	Standard
>	In-1	115		ug/L			19732	22330	3	KED
	Mo	98	0.817	ug/L	0.012	1	20	1371	4	KED
	Cd	111	0.011	ug/L	0.011	101	3	7	54	KED
	Cd	114	0.026	ug/L	0.004	16	4	30	15	KED
>	In	115		ug/L			1114786	1211550	3	Standard
	Ag	107	0.033	ug/L	0.003	9	86	648	4	Standard
	Ba	135	11.185	ug/L	0.217	1	64	77389	1	Standard
	Ba	137	11.332	ug/L	0.150	1	120	139202	1	Standard
>	Tb	159		ug/L			2758248	2909198	1	Standard
	Pb	208	4.372	ug/L	0.041	0	1233	561552	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0212-08
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, August 03, 2021 20:09:27

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10710	17142	3	Standard
	Cl	**37**		ug/L			2261004	3346175	1	Standard
>	**Sc**	**45**		ug/L			634798	691104	1	Standard
	Al	**27**	**6035.424**	ug/L	202.685	3	6918	139280278	2	Standard
	Cr	**52**	**14.437**	ug/L	0.256	1	9179	205097	1	Standard
	Cr	**53**	**14.506**	ug/L	0.391	2	101	22995	1	Standard
	Fe	**54**	**6651.348**	ug/L	62.319	0	67448	13763180	0	Standard
	Fe	**57**	**6209.507**	ug/L	128.260	2	16480	6537153	0	Standard
	Mn	**55**	**58.270**	ug/L	0.416	0	303	1140565	1	Standard
>	**Ge**	**72**		ug/L			75441	84593	2	KED
	Co	**59**	**3.324**	ug/L	0.102	3	17	21715	1	KED
	Ni	**60**	**5.702**	ug/L	0.092	1	64	11285	1	KED
	Ni	**62**	**5.944**	ug/L	0.036	0	6	1869	2	KED
	Cu	**63**	**19.853**	ug/L	0.778	3	112	114387	1	KED
	Cu	**65**	**19.452**	ug/L	0.618	3	55	56250	1	KED
	Zn	**66**	**16.995**	ug/L	0.504	2	248	12296	3	KED
	Zn	**67**	**16.802**	ug/L	1.025	6	33	2016	8	KED
	As	**75**	**636.684**	ug/L	11.594	1	3	216076	1	KED
	Y	**89**		ug/L			344601	454011	3	Standard
	Kr	**83**		ug/L			73	111	12	Standard
>	**In-1**	**115**		ug/L			19732	22361	1	KED
	Mo	**98**	**0.458**	ug/L	0.041	9	20	779	7	KED
	Cd	**111**	**0.046**	ug/L	0.008	17	3	20	13	KED
	Cd	**114**	**0.047**	ug/L	0.011	23	4	52	22	KED
>	**In**	**115**		ug/L			1114786	1208625	1	Standard
	Ag	**107**	**0.050**	ug/L	0.004	8	86	925	7	Standard
	Ba	**135**	**11.430**	ug/L	0.094	0	64	78919	1	Standard
	Ba	**137**	**11.395**	ug/L	0.053	0	120	139661	1	Standard
>	**Tb**	**159**		ug/L			2758248	2935780	1	Standard
	Pb	**208**	**2.151**	ug/L	0.039	1	1233	279424	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0212-09
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, August 03, 2021 20:14:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	20452	5	Standard
	Cl	37		ug/L			2261004	3376164	0	Standard
>	Sc	45		ug/L			634798	713608	1	Standard
	Al	27	8501.254	ug/L	57.885	0	6918	202616727	1	Standard
	Cr	52	14.072	ug/L	0.381	2	9179	206641	0	Standard
	Cr	53	14.612	ug/L	0.421	2	101	23915	1	Standard
	Fe	54	17775.734	ug/L	158.377	0	67448	37859143	2	Standard
	Fe	57	16884.177	ug/L	285.265	1	16480	18322482	0	Standard
	Mn	55	226.025	ug/L	4.338	1	303	4566212	0	Standard
>	Ge	72		ug/L			75441	82854	1	KED
	Co	59	7.484	ug/L	0.137	1	17	47886	0	KED
	Ni	60	10.802	ug/L	0.404	3	64	20874	2	KED
	Ni	62	11.061	ug/L	0.289	2	6	3401	2	KED
	Cu	63	26.092	ug/L	0.636	2	112	147285	1	KED
	Cu	65	26.309	ug/L	0.377	1	55	74523	0	KED
	Zn	66	54.903	ug/L	1.013	1	248	38303	0	KED
	Zn	67	51.889	ug/L	1.466	2	33	6017	1	KED
	As	75	17.586	ug/L	0.600	3	3	5849	2	KED
	Y	89		ug/L			344601	509885	2	Standard
	Kr	83		ug/L			73	110	21	Standard
>	In-1	115		ug/L			19732	21503	3	KED
	Mo	98	1.688	ug/L	0.070	4	20	2702	1	KED
	Cd	111	0.161	ug/L	0.026	16	3	61	13	KED
	Cd	114	0.172	ug/L	0.030	17	4	169	17	KED
>	In	115		ug/L			1114786	1143803	1	Standard
	Ag	107	0.113	ug/L	0.008	7	86	1875	8	Standard
	Ba	135	13.696	ug/L	0.288	2	64	89468	1	Standard
	Ba	137	13.611	ug/L	0.230	1	120	157839	0	Standard
>	Tb	159		ug/L			2758248	2764987	0	Standard
	Pb	208	25.438	ug/L	0.085	0	1233	3099820	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0212-10
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, August 03, 2021 20:19:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10710	21921	1	Standard
	Cl	**37**		ug/L			2261004	3187206	1	Standard
>	**Sc**	**45**		ug/L			634798	743751	2	Standard
	Al	**27**	**14346.572**	ug/L	253.947	1	6918	356458343	3	Standard
	Cr	**52**	**18.686**	ug/L	0.177	0	9179	282516	1	Standard
	Cr	**53**	**18.938**	ug/L	0.642	3	101	32265	1	Standard
	Fe	**54**	**17375.886**	ug/L	445.805	2	67448	38555275	0	Standard
	Fe	**57**	**16382.951**	ug/L	339.734	2	16480	18532117	2	Standard
	Mn	**55**	**156.982**	ug/L	3.208	2	303	3305929	2	Standard
>	**Ge**	**72**		ug/L			75441	83700	0	KED
	Co	**59**	**6.188**	ug/L	0.206	3	17	40007	3	KED
	Ni	**60**	**11.839**	ug/L	0.263	2	64	23109	2	KED
	Ni	**62**	**12.266**	ug/L	0.461	3	6	3808	3	KED
	Cu	**63**	**26.210**	ug/L	0.528	2	112	149486	2	KED
	Cu	**65**	**26.618**	ug/L	0.232	0	55	76173	1	KED
	Zn	**66**	**60.198**	ug/L	1.107	1	248	42400	1	KED
	Zn	**67**	**59.767**	ug/L	2.526	4	33	6997	4	KED
	As	**75**	**11.337**	ug/L	0.216	1	3	3811	1	KED
	Y	**89**		ug/L			344601	526850	1	Standard
	Kr	**83**		ug/L			73	145	12	Standard
>	**In-1**	**115**		ug/L			19732	21303	1	KED
	Mo	**98**	**0.188**	ug/L	0.017	8	20	318	9	KED
	Cd	**111**	**0.265**	ug/L	0.016	6	3	98	4	KED
	Cd	**114**	**0.286**	ug/L	0.039	13	4	275	12	KED
>	**In**	**115**		ug/L			1114786	1153830	5	Standard
	Ag	**107**	**0.235**	ug/L	0.009	3	86	3824	4	Standard
	Ba	**135**	**54.113**	ug/L	2.851	5	64	355803	0	Standard
	Ba	**137**	**53.238**	ug/L	2.573	4	120	621509	1	Standard
>	**Tb**	**159**		ug/L			2758248	2762638	1	Standard
	Pb	**208**	**17.629**	ug/L	0.157	0	1233	2146590	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0212-11
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, August 03, 2021 20:23:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	20529	1	Standard
	Cl	37		ug/L			2261004	3150113	0	Standard
>	Sc	45		ug/L			634798	708826	0	Standard
	Al	27	11334.988	ug/L	166.919	1	6918	268352291	1	Standard
	Cr	52	16.434	ug/L	0.384	2	9179	238070	2	Standard
	Cr	53	16.744	ug/L	0.350	2	101	27212	2	Standard
	Fe	54	14743.754	ug/L	144.921	0	67448	31201473	1	Standard
	Fe	57	13800.288	ug/L	132.156	0	16480	14881135	0	Standard
	Mn	55	132.839	ug/L	2.300	1	303	2666462	2	Standard
>	Ge	72		ug/L			75441	83912	0	KED
	Co	59	4.450	ug/L	0.052	1	17	28850	1	KED
	Ni	60	9.792	ug/L	0.201	2	64	19174	1	KED
	Ni	62	9.494	ug/L	0.345	3	6	2957	3	KED
	Cu	63	17.840	ug/L	0.227	1	112	102039	0	KED
	Cu	65	17.641	ug/L	0.286	1	55	50633	1	KED
	Zn	66	54.509	ug/L	0.756	1	248	38521	1	KED
	Zn	67	53.502	ug/L	0.656	1	33	6283	1	KED
	As	75	11.949	ug/L	0.194	1	3	4027	0	KED
	Y	89		ug/L			344601	484345	0	Standard
	Kr	83		ug/L			73	135	6	Standard
>	In-1	115		ug/L			19732	21646	2	KED
	Mo	98	0.115	ug/L	0.010	8	20	206	5	KED
	Cd	111	0.153	ug/L	0.020	13	3	59	12	KED
	Cd	114	0.138	ug/L	0.012	8	4	137	5	KED
>	In	115		ug/L			1114786	1153348	2	Standard
	Ag	107	0.169	ug/L	0.006	3	86	2778	3	Standard
	Ba	135	30.976	ug/L	1.470	4	64	203822	2	Standard
	Ba	137	31.078	ug/L	0.897	2	120	363094	0	Standard
>	Tb	159		ug/L			2758248	2841864	1	Standard
	Pb	208	12.724	ug/L	0.261	2	1233	1593965	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL9
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 20:29:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10710	13838	1	Standard
	Cl	**37**		ug/L			2261004	3151461	0	Standard
>	**Sc**	**45**		ug/L			634798	653214	3	Standard
	Al	**27**	**0.100**	ug/L	0.028	27	6918	9277	3	Standard
	Cr	**52**	**0.062**	ug/L	0.030	48	9179	10224	0	Standard
	Cr	**53**	**0.361**	ug/L	0.021	5	101	642	5	Standard
	Fe	**54**	**6.818**	ug/L	2.215	32	67448	82580	2	Standard
	Fe	**57**	**1.459**	ug/L	0.795	54	16480	18390	1	Standard
	Mn	**55**	**0.004**	ug/L	0.002	48	303	381	5	Standard
>	**Ge**	**72**		ug/L			75441	84018	0	KED
	Co	**59**	**-0.002**	ug/L	0.001	35	17	6	75	KED
	Ni	**60**	**-0.020**	ug/L	0.001	5	64	33	6	KED
	Ni	**62**	**-0.013**	ug/L	0.006	47	6	3	50	KED
	Cu	**63**	**-0.008**	ug/L	0.003	44	112	80	24	KED
	Cu	**65**	**-0.005**	ug/L	0.002	49	55	47	14	KED
	Zn	**66**	**-0.248**	ug/L	0.017	6	248	102	12	KED
	Zn	**67**	**-0.174**	ug/L	0.065	37	33	17	44	KED
	As	**75**	**0.000**	ug/L	0.004	1841	3	3	36	KED
	Y	**89**		ug/L			344601	360777	1	Standard
	Kr	**83**		ug/L			73	95	10	Standard
>	**In-1**	**115**		ug/L			19732	22523	1	KED
	Mo	**98**	**-0.014**	ug/L	0.001	9	20	1	189	KED
	Cd	**111**	**-0.009**	ug/L	0.001	16	3	0	173	KED
	Cd	**114**	**-0.004**	ug/L	0.001	27	4	0	248	KED
>	**In**	**115**		ug/L			1114786	1234377	2	Standard
	Ag	**107**	**-0.003**	ug/L	0.001	18	86	42	22	Standard
	Ba	**135**	**-0.004**	ug/L	0.000	10	64	43	8	Standard
	Ba	**137**	**-0.005**	ug/L	0.000	7	120	64	9	Standard
>	**Tb**	**159**		ug/L			2758248	2885371	0	Standard
	Pb	**208**	**-0.005**	ug/L	0.000	8	1233	666	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 20:34:13
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	13609	1	Standard
	Cl	37		ug/L			2261004	3288950	1	Standard
>	Sc	45		ug/L			634798	647754	1	Standard
	Al	27	5481.810	ug/L	333.173	6	6918	118511989	4	Standard
	Cr	52	55.452	ug/L	1.569	2	9179	711571	0	Standard
	Cr	53	54.766	ug/L	0.913	1	101	81089	1	Standard
	Fe	54	5782.901	ug/L	48.018	0	67448	11224664	1	Standard
	Fe	57	5355.899	ug/L	195.814	3	16480	5286088	2	Standard
	Mn	55	51.490	ug/L	1.348	2	303	944381	1	Standard
>	Ge	72		ug/L			75441	82709	2	KED
	Co	59	46.726	ug/L	1.015	2	17	298382	2	KED
	Ni	60	46.393	ug/L	1.269	2	64	89248	1	KED
	Ni	62	46.427	ug/L	1.006	2	6	14220	1	KED
	Cu	63	46.749	ug/L	1.272	2	112	263254	0	KED
	Cu	65	47.263	ug/L	0.482	1	55	133588	1	KED
	Zn	66	49.256	ug/L	0.904	1	248	34325	0	KED
	Zn	67	49.003	ug/L	0.387	0	33	5676	3	KED
	As	75	48.665	ug/L	0.169	0	3	16155	2	KED
	Y	89		ug/L			344601	355785	0	Standard
	Kr	83		ug/L			73	99	5	Standard
>	In-1	115		ug/L			19732	21546	0	KED
	Mo	98	48.066	ug/L	0.260	0	20	76540	0	KED
	Cd	111	48.588	ug/L	0.937	1	3	17540	1	KED
	Cd	114	47.493	ug/L	0.411	0	4	45515	0	KED
>	In	115		ug/L			1114786	1181794	3	Standard
	Ag	107	49.980	ug/L	0.408	0	86	813347	3	Standard
	Ba	135	49.938	ug/L	1.073	2	64	336774	1	Standard
	Ba	137	49.649	ug/L	1.538	3	120	594239	0	Standard
>	Tb	159		ug/L			2758248	2871617	0	Standard
	Pb	208	47.167	ug/L	0.464	0	1233	5967852	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 20:42:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10710	12410	0	Standard
	Cl	**37**		ug/L			2261004	3140492	2	Standard
>	**Sc**	**45**		ug/L			634798	645279	1	Standard
	Al	**27**	**0.208**	ug/L	0.119	57	6918	11506	21	Standard
	Cr	**52**	**0.074**	ug/L	0.011	15	9179	10258	0	Standard
	Cr	**53**	**0.305**	ug/L	0.024	7	101	551	5	Standard
	Fe	**54**	**6.879**	ug/L	1.260	18	67448	81774	2	Standard
	Fe	**57**	**1.119**	ug/L	0.453	40	16480	17847	1	Standard
	Mn	**55**	**0.009**	ug/L	0.003	29	303	469	9	Standard
>	**Ge**	**72**		ug/L			75441	80775	2	KED
	Co	**59**	**-0.002**	ug/L	0.001	39	17	6	75	KED
	Ni	**60**	**-0.000**	ug/L	0.001	241	64	68	4	KED
	Ni	**62**	**0.022**	ug/L	0.039	174	6	13	79	KED
	Cu	**63**	**0.001**	ug/L	0.002	330	112	123	10	KED
	Cu	**65**	**0.001**	ug/L	0.003	371	55	60	9	KED
	Zn	**66**	**0.023**	ug/L	0.038	163	248	281	11	KED
	Zn	**67**	**0.046**	ug/L	0.093	202	33	41	26	KED
	As	**75**	**0.014**	ug/L	0.008	54	3	8	29	KED
	Y	**89**		ug/L			344601	356542	2	Standard
	Kr	**83**		ug/L			73	90	11	Standard
>	**In-1**	**115**		ug/L			19732	21724	1	KED
	Mo	**98**	**0.004**	ug/L	0.005	110	20	29	23	KED
	Cd	**111**	**-0.002**	ug/L	0.005	271	3	2	57	KED
	Cd	**114**	**-0.001**	ug/L	0.005	368	4	3	147	KED
>	**In**	**115**		ug/L			1114786	1197414	2	Standard
	Ag	**107**	**-0.001**	ug/L	0.001	181	86	80	27	Standard
	Ba	**135**	**0.002**	ug/L	0.002	93	64	83	14	Standard
	Ba	**137**	**0.002**	ug/L	0.001	61	120	157	8	Standard
>	**Tb**	**159**		ug/L			2758248	2813908	1	Standard
	Pb	**208**	**0.002**	ug/L	0.001	34	1233	1549	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0747-BLK1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, August 03, 2021 20:48:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	16557	2	Standard
	Cl	37		ug/L			2261004	3103884	3	Standard
>	Sc	45		ug/L			634798	654331	1	Standard
	Al	27	0.720	ug/L	0.006	0	6918	22859	0	Standard
	Cr	52	0.132	ug/L	0.004	2	9179	11145	0	Standard
	Cr	53	0.279	ug/L	0.003	1	101	521	1	Standard
	Fe	54	14.831	ug/L	0.305	2	67448	98429	1	Standard
	Fe	57	2.929	ug/L	0.433	14	16480	19898	1	Standard
	Mn	55	0.056	ug/L	0.000	0	303	1349	1	Standard
>	Ge	72		ug/L			75441	83990	1	KED
	Co	59	-0.001	ug/L	0.000	31	17	10	26	KED
	Ni	60	-0.005	ug/L	0.003	64	64	62	10	KED
	Ni	62	0.022	ug/L	0.012	55	6	14	27	KED
	Cu	63	0.012	ug/L	0.003	26	112	194	10	KED
	Cu	65	0.010	ug/L	0.005	54	55	90	18	KED
	Zn	66	0.112	ug/L	0.032	28	248	354	6	KED
	Zn	67	0.119	ug/L	0.143	120	33	51	33	KED
	As	75	0.005	ug/L	0.003	70	3	5	21	KED
	Y	89		ug/L			344601	365918	1	Standard
	Kr	83		ug/L			73	88	10	Standard
>	In-1	115		ug/L			19732	21799	2	KED
	Mo	98	-0.006	ug/L	0.004	68	20	13	51	KED
	Cd	111	-0.006	ug/L	0.004	64	3	1	114	KED
	Cd	114	-0.001	ug/L	0.004	267	4	3	96	KED
>	In	115		ug/L			1114786	1203452	1	Standard
	Ag	107	-0.002	ug/L	0.001	39	86	59	21	Standard
	Ba	135	0.013	ug/L	0.003	22	64	159	13	Standard
	Ba	137	0.011	ug/L	0.002	20	120	268	9	Standard
>	Tb	159		ug/L			2758248	2859862	1	Standard
	Pb	208	0.001	ug/L	0.000	38	1233	1346	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0747-BS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, August 03, 2021 20:53:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	15803	2	Standard
	Cl	37		ug/L			2261004	3169452	1	Standard
>	Sc	45		ug/L			634798	648949	0	Standard
	Al	27	501.608	ug/L	5.420	1	6918	10879097	1	Standard
	Cr	52	24.984	ug/L	0.731	2	9179	326422	2	Standard
	Cr	53	24.817	ug/L	0.375	1	101	36872	0	Standard
	Fe	54	668.826	ug/L	22.268	3	67448	1361475	2	Standard
	Fe	57	474.564	ug/L	5.390	1	16480	484759	0	Standard
	Mn	55	23.800	ug/L	0.396	1	303	437636	2	Standard
>	Ge	72		ug/L			75441	83338	1	KED
	Co	59	21.252	ug/L	0.487	2	17	136729	0	KED
	Ni	60	21.560	ug/L	0.137	0	64	41844	1	KED
	Ni	62	21.342	ug/L	0.081	0	6	6592	1	KED
	Cu	63	21.440	ug/L	0.448	2	112	121749	0	KED
	Cu	65	21.135	ug/L	0.372	1	55	60225	0	KED
	Zn	66	66.987	ug/L	0.674	1	248	46950	1	KED
	Zn	67	63.722	ug/L	2.106	3	33	7425	3	KED
	As	75	21.693	ug/L	0.317	1	3	7258	1	KED
	Y	89		ug/L			344601	370535	0	Standard
	Kr	83		ug/L			73	86	5	Standard
>	In-1	115		ug/L			19732	22001	2	KED
	Mo	98	21.434	ug/L	0.704	3	20	34844	0	KED
	Cd	111	21.618	ug/L	0.706	3	3	7967	1	KED
	Cd	114	20.971	ug/L	0.181	0	4	20523	1	KED
>	In	115		ug/L			1114786	1200459	2	Standard
	Ag	107	23.700	ug/L	1.136	4	86	391823	5	Standard
	Ba	135	22.430	ug/L	0.609	2	64	153683	0	Standard
	Ba	137	22.622	ug/L	0.961	4	120	275065	1	Standard
>	Tb	159		ug/L			2758248	2890038	1	Standard
	Pb	208	21.880	ug/L	0.374	1	1233	2786460	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0382-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, August 03, 2021 20:57:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	19975	4	Standard
	Cl	37		ug/L			2261004	3413063	2	Standard
>	Sc	45		ug/L			634798	640951	1	Standard
	Al	27	12769.919	ug/L	87.522	0	6918	273357444	0	Standard
	Cr	52	6279.927	ug/L	135.123	2	9179	78709458	0	Standard
	Cr	53	5635.234	ug/L	160.412	2	101	8245102	1	Standard
	Fe	54	10438.305	ug/L	151.695	1	67448	19991742	0	Standard
	Fe	57	10473.145	ug/L	250.563	2	16480	10213800	1	Standard
	Mn	55	126.092	ug/L	2.694	2	303	2288109	0	Standard
>	Ge	72		ug/L			75441	81665	1	KED
	Co	59	4.475	ug/L	0.050	1	17	28233	0	KED
	Ni	60	61.158	ug/L	0.805	1	64	116184	0	KED
	Ni	62	63.060	ug/L	0.716	1	6	19073	0	KED
	Cu	63	278.557	ug/L	1.582	0	112	1548895	0	KED
	Cu	65	275.195	ug/L	5.537	2	55	767818	1	KED
	Zn	66	862.018	ug/L	10.716	1	248	588839	0	KED
	Zn	67	783.893	ug/L	6.577	0	33	89098	1	KED
	As	75	0.517	ug/L	0.021	4	3	173	4	KED
	Y	89		ug/L			344601	374124	0	Standard
	Kr	83		ug/L			73	132	1	Standard
>	In-1	115		ug/L			19732	21198	2	KED
	Mo	98	4.091	ug/L	0.091	2	20	6428	2	KED
	Cd	111	0.168	ug/L	0.027	16	3	63	15	KED
	Cd	114	0.144	ug/L	0.033	23	4	140	22	KED
>	In	115		ug/L			1114786	1136972	0	Standard
	Ag	107	0.439	ug/L	0.010	2	86	6962	1	Standard
	Ba	135	4.049	ug/L	0.094	2	64	26344	2	Standard
	Ba	137	3.990	ug/L	0.097	2	120	46089	3	Standard
>	Tb	159		ug/L			2758248	2710132	0	Standard
	Pb	208	2.673	ug/L	0.013	0	1233	320363	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLA
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 21:04:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10710	13223	2	Standard
	Cl	**37**		ug/L			2261004	3269708	2	Standard
>	**Sc**	**45**		ug/L			634798	646096	1	Standard
	Al	**27**	**0.160**	ug/L	0.011	6	6918	10502	2	Standard
	Cr	**52**	**0.224**	ug/L	0.029	12	9179	12170	2	Standard
	Cr	**53**	**0.389**	ug/L	0.010	2	101	677	2	Standard
	Fe	**54**	**6.311**	ug/L	1.361	21	67448	80782	2	Standard
	Fe	**57**	**-1.345**	ug/L	0.336	24	16480	15451	1	Standard
	Mn	**55**	**0.002**	ug/L	0.001	63	303	340	4	Standard
>	**Ge**	**72**		ug/L			75441	83248	0	KED
	Co	**59**	**-0.002**	ug/L	0.000	8	17	6	17	KED
	Ni	**60**	**-0.017**	ug/L	0.004	21	64	38	18	KED
	Ni	**62**	**-0.002**	ug/L	0.004	157	6	6	15	KED
	Cu	**63**	**0.015**	ug/L	0.003	21	112	208	8	KED
	Cu	**65**	**0.013**	ug/L	0.006	48	55	99	18	KED
	Zn	**66**	**-0.218**	ug/L	0.032	14	248	122	18	KED
	Zn	**67**	**-0.200**	ug/L	0.026	12	33	13	20	KED
	As	**75**	**0.000**	ug/L	0.001	222	3	3	6	KED
	Y	**89**		ug/L			344601	356287	2	Standard
	Kr	**83**		ug/L			73	96	17	Standard
>	**In-1**	**115**		ug/L			19732	21705	1	KED
	Mo	**98**	**-0.008**	ug/L	0.001	17	20	10	20	KED
	Cd	**111**	**-0.006**	ug/L	0.002	24	3	1	43	KED
	Cd	**114**	**-0.000**	ug/L	0.003	624	4	4	65	KED
>	**In**	**115**		ug/L			1114786	1206123	0	Standard
	Ag	**107**	**-0.003**	ug/L	0.000	8	86	46	9	Standard
	Ba	**135**	**-0.004**	ug/L	0.001	20	64	39	14	Standard
	Ba	**137**	**-0.006**	ug/L	0.001	14	120	61	15	Standard
>	**Tb**	**159**		ug/L			2758248	2843254	0	Standard
	Pb	**208**	**-0.005**	ug/L	0.001	11	1233	633	11	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0212-06
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, August 03, 2021 21:12:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	20578	1	Standard
	Cl	37		ug/L			2261004	3226914	1	Standard
>	Sc	45		ug/L			634798	696328	1	Standard
	Al	27	7298.718	ug/L	71.087	0	6918	169751391	1	Standard
	Cr	52	9.700	ug/L	0.202	2	9179	142139	1	Standard
	Cr	53	9.618	ug/L	0.224	2	101	15400	1	Standard
	Fe	54	10477.768	ug/L	170.584	1	67448	21802019	1	Standard
	Fe	57	9734.584	ug/L	410.031	4	16480	10315519	3	Standard
	Mn	55	82.246	ug/L	2.547	3	303	1621486	2	Standard
>	Ge	72		ug/L			75441	83518	2	KED
	Co	59	2.816	ug/L	0.127	4	17	18166	2	KED
	Ni	60	6.116	ug/L	0.146	2	64	11943	1	KED
	Ni	62	6.287	ug/L	0.363	5	6	1949	3	KED
	Cu	63	12.185	ug/L	0.292	2	112	69383	1	KED
	Cu	65	11.959	ug/L	0.310	2	55	34167	0	KED
	Zn	66	21.275	ug/L	0.973	4	248	15121	2	KED
	Zn	67	20.090	ug/L	0.474	2	33	2372	4	KED
	As	75	474.027	ug/L	10.408	2	3	158834	1	KED
	Y	89		ug/L			344601	454368	0	Standard
	Kr	83		ug/L			73	104	20	Standard
>	In-1	115		ug/L			19732	22121	0	KED
	Mo	98	0.965	ug/L	0.020	2	20	1600	1	KED
	Cd	111	0.032	ug/L	0.014	43	3	15	33	KED
	Cd	114	0.036	ug/L	0.007	20	4	39	18	KED
>	In	115		ug/L			1114786	1212366	1	Standard
	Ag	107	0.035	ug/L	0.005	14	86	683	12	Standard
	Ba	135	15.161	ug/L	0.471	3	64	104959	1	Standard
	Ba	137	15.229	ug/L	0.425	2	120	187154	1	Standard
>	Tb	159		ug/L			2758248	2861187	1	Standard
	Pb	208	4.179	ug/L	0.096	2	1233	527878	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0747-DUP1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, August 03, 2021 21:18:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	23301	2	Standard
	Cl	37		ug/L			2261004	3262520	0	Standard
>	Sc	45		ug/L			634798	681160	3	Standard
	Al	27	8060.914	ug/L	438.588	5	6918	183167299	2	Standard
	Cr	52	10.199	ug/L	0.345	3	9179	145611	1	Standard
	Cr	53	10.425	ug/L	0.469	4	101	16305	1	Standard
	Fe	54	11048.679	ug/L	121.558	1	67448	22481456	2	Standard
	Fe	57	10288.427	ug/L	134.432	1	16480	10663813	2	Standard
	Mn	55	84.875	ug/L	2.518	2	303	1636164	0	Standard
>	Ge	72		ug/L			75441	82880	2	KED
	Co	59	3.069	ug/L	0.044	1	17	19653	0	KED
	Ni	60	6.639	ug/L	0.171	2	64	12859	0	KED
	Ni	62	6.798	ug/L	0.115	1	6	2094	3	KED
	Cu	63	12.486	ug/L	0.356	2	112	70552	1	KED
	Cu	65	12.357	ug/L	0.121	0	55	35045	1	KED
	Zn	66	21.962	ug/L	0.849	3	248	15492	4	KED
	Zn	67	21.530	ug/L	0.945	4	33	2519	4	KED
	As	75	510.082	ug/L	5.343	1	3	169639	1	KED
	Y	89		ug/L			344601	453800	2	Standard
	Kr	83		ug/L			73	98	8	Standard
>	In-1	115		ug/L			19732	21748	2	KED
	Mo	98	1.058	ug/L	0.036	3	20	1722	1	KED
	Cd	111	0.036	ug/L	0.005	15	3	16	14	KED
	Cd	114	0.035	ug/L	0.002	5	4	38	6	KED
>	In	115		ug/L			1114786	1172127	1	Standard
	Ag	107	0.040	ug/L	0.002	5	86	733	3	Standard
	Ba	135	17.163	ug/L	0.297	1	64	114873	0	Standard
	Ba	137	17.227	ug/L	0.269	1	120	204682	0	Standard
>	Tb	159		ug/L			2758248	2823338	0	Standard
	Pb	208	4.756	ug/L	0.047	0	1233	592759	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0747-MS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, August 03, 2021 21:22:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass		Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			10710	19621	3	Standard
	Cl	37			ug/L			2261004	3130189	1	Standard
>	Sc	45			ug/L			634798	690982	2	Standard
	Al	27	STL	8700.674	ug/L	157.781	1	6918	200754805	0	Standard
	Cr	52		33.195	ug/L	1.171	3	9179	458390	2	Standard
	Cr	53		33.028	ug/L	1.321	4	101	52190	2	Standard
	Fe	54		10811.530	ug/L	275.551	2	67448	22315365	0	Standard
	Fe	57		10431.676	ug/L	248.134	2	16480	10968165	2	Standard
	Mn	55		102.554	ug/L	2.487	2	303	2006099	0	Standard
>	Ge	72			ug/L			75441	82431	0	KED
	Co	59		24.371	ug/L	0.089	0	17	155122	0	KED
	Ni	60		27.928	ug/L	0.228	0	64	53594	0	KED
	Ni	62		27.577	ug/L	0.481	1	6	8424	1	KED
	Cu	63		34.075	ug/L	0.620	1	112	191356	1	KED
	Cu	65		33.853	ug/L	0.391	1	55	95394	0	KED
	Zn	66		87.556	ug/L	1.074	1	248	60616	0	KED
	Zn	67		84.962	ug/L	0.272	0	33	9780	0	KED
	As	75		553.273	ug/L	2.801	0	3	183028	0	KED
	Y	89			ug/L			344601	455826	0	Standard
	Kr	83			ug/L			73	105	7	Standard
>	In-1	115			ug/L			19732	21495	0	KED
	Mo	98		19.170	ug/L	0.293	1	20	30467	1	KED
	Cd	111		22.128	ug/L	0.233	1	3	7972	1	KED
	Cd	114		21.435	ug/L	0.322	1	4	20496	0	KED
>	In	115			ug/L			1114786	1183410	0	Standard
	Ag	107		22.454	ug/L	0.096	0	86	365943	1	Standard
	Ba	135		41.155	ug/L	0.758	1	64	278034	1	Standard
	Ba	137		41.716	ug/L	1.322	3	120	500216	2	Standard
>	Tb	159			ug/L			2758248	2820875	1	Standard
	Pb	208		26.485	ug/L	0.202	0	1233	3292422	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0747-MSD1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, August 03, 2021 21:27:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	20077	1	Standard
	Cl	37		ug/L			2261004	3077886	3	Standard
>	Sc	45		ug/L			634798	676598	2	Standard
	Al	27	STL 8619.722	ug/L	78.397	0	6918	194769128	1	Standard
	Cr	52	34.168	ug/L	0.080	0	9179	461897	2	Standard
	Cr	53	33.980	ug/L	0.300	0	101	52595	1	Standard
	Fe	54	11653.329	ug/L	250.604	2	67448	23546988	0	Standard
	Fe	57	11137.083	ug/L	87.124	0	16480	11465564	1	Standard
	Mn	55	103.180	ug/L	1.592	1	303	1977268	3	Standard
>	Ge	72		ug/L			75441	82882	1	KED
	Co	59	23.659	ug/L	0.362	1	17	151403	0	KED
	Ni	60	26.763	ug/L	0.367	1	64	51641	1	KED
	Ni	62	26.715	ug/L	0.310	1	6	8205	1	KED
	Cu	63	32.634	ug/L	0.440	1	112	184258	0	KED
	Cu	65	33.090	ug/L	0.874	2	55	93736	1	KED
	Zn	66	83.947	ug/L	1.647	1	248	58442	1	KED
	Zn	67	81.514	ug/L	0.999	1	33	9435	0	KED
	As	75	663.154	ug/L	6.965	1	3	220566	0	KED
	Y	89		ug/L			344601	456918	1	Standard
	Kr	83		ug/L			73	107	21	Standard
>	In-1	115		ug/L			19732	21575	2	KED
	Mo	98	19.478	ug/L	0.373	1	20	31061	1	KED
	Cd	111	21.390	ug/L	0.593	2	3	7731	1	KED
	Cd	114	20.531	ug/L	0.407	1	4	19699	1	KED
>	In	115		ug/L			1114786	1201787	2	Standard
	Ag	107	21.507	ug/L	0.766	3	86	355887	3	Standard
	Ba	135	36.282	ug/L	1.474	4	64	248821	2	Standard
	Ba	137	36.740	ug/L	0.503	1	120	447432	1	Standard
>	Tb	159		ug/L			2758248	2808462	0	Standard
	Pb	208	26.239	ug/L	0.275	1	1233	3247534	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0747-PS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, August 03, 2021 21:32:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

DEL

NO SPIKE

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10710	20551	2	Standard
	Cl	**37**		ug/L			2261004	3080847	3	Standard
>	**Sc**	**45**		ug/L			634798	680471	2	Standard
	Al	**27**	**7333.152**	ug/L	397.888	5	6918	166524965	3	Standard
	Cr	**52**	**9.478**	ug/L	0.305	3	9179	135905	0	Standard
	Cr	**53**	**9.643**	ug/L	0.204	2	101	15085	0	Standard
	Fe	**54**	**10110.742**	ug/L	358.628	3	67448	20551650	1	Standard
	Fe	**57**	**9779.440**	ug/L	529.190	5	16480	10120431	3	Standard
	Mn	**55**	**80.456**	ug/L	2.471	3	303	1549742	1	Standard
>	**Ge**	**72**		ug/L			75441	83068	0	KED
	Co	**59**	**2.838**	ug/L	0.037	1	17	18220	0	KED
	Ni	**60**	**6.239**	ug/L	0.198	3	64	12119	2	KED
	Ni	**62**	**6.170**	ug/L	0.258	4	6	1904	3	KED
	Cu	**63**	**12.208**	ug/L	0.037	0	112	69170	1	KED
	Cu	**65**	**12.250**	ug/L	0.110	0	55	34822	0	KED
	Zn	**66**	**20.676**	ug/L	0.408	1	248	14632	0	KED
	Zn	**67**	**20.382**	ug/L	0.929	4	33	2391	3	KED
	As	**75**	**473.254**	ug/L	10.390	2	3	157757	1	KED
	Y	**89**		ug/L			344601	452921	1	Standard
	Kr	**83**		ug/L			73	107	10	Standard
>	**In-1**	**115**		ug/L			19732	21182	1	KED
	Mo	**98**	**0.982**	ug/L	0.046	4	20	1558	3	KED
	Cd	**111**	**0.039**	ug/L	0.023	58	3	17	45	KED
	Cd	**114**	**0.024**	ug/L	0.013	53	4	27	44	KED
>	**In**	**115**		ug/L			1114786	1218323	2	Standard
	Ag	**107**	**0.036**	ug/L	0.001	3	86	691	4	Standard
	Ba	**135**	**14.586**	ug/L	0.128	0	64	101493	1	Standard
	Ba	**137**	**14.993**	ug/L	0.415	2	120	185184	2	Standard
>	**Tb**	**159**		ug/L			2758248	2843206	1	Standard
	Pb	**208**	**4.104**	ug/L	0.062	1	1233	515203	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLB
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 21:37:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10710	12994	0	Standard
	Cl	**37**		ug/L			2261004	3005158	1	Standard
>	**Sc**	**45**		ug/L			634798	652103	1	Standard
	Al	**27**	**0.459**	ug/L	0.481	104	6918	16987	59	Standard
	Cr	**52**	**0.035**	ug/L	0.025	71	9179	9868	1	Standard
	Cr	**53**	**0.203**	ug/L	0.008	3	101	406	3	Standard
	Fe	**54**	**5.916**	ug/L	1.915	32	67448	80736	3	Standard
	Fe	**57**	**1.494**	ug/L	0.995	66	16480	18399	3	Standard
	Mn	**55**	**0.006**	ug/L	0.005	89	303	418	21	Standard
>	**Ge**	**72**		ug/L			75441	80852	1	KED
	Co	**59**	**-0.002**	ug/L	0.000	15	17	4	49	KED
	Ni	**60**	**-0.019**	ug/L	0.003	17	64	33	19	KED
	Ni	**62**	**-0.004**	ug/L	0.013	337	6	6	62	KED
	Cu	**63**	**-0.000**	ug/L	0.003	1318	112	119	13	KED
	Cu	**65**	**0.001**	ug/L	0.003	229	55	62	13	KED
	Zn	**66**	**-0.255**	ug/L	0.014	5	248	93	8	KED
	Zn	**67**	**-0.185**	ug/L	0.001	0	33	15	0	KED
	As	**75**	**0.049**	ug/L	0.008	15	3	19	12	KED
	Y	**89**		ug/L			344601	360960	1	Standard
	Kr	**83**		ug/L			73	73	15	Standard
>	**In-1**	**115**		ug/L			19732	21119	0	KED
	Mo	**98**	**-0.008**	ug/L	0.004	51	20	9	69	KED
	Cd	**111**	**-0.002**	ug/L	0.009	621	3	2	115	KED
	Cd	**114**	**-0.002**	ug/L	0.002	140	4	3	72	KED
>	**In**	**115**		ug/L			1114786	1212868	1	Standard
	Ag	**107**	**-0.003**	ug/L	0.001	32	86	45	33	Standard
	Ba	**135**	**-0.003**	ug/L	0.001	29	64	45	15	Standard
	Ba	**137**	**-0.003**	ug/L	0.002	52	120	89	22	Standard
>	**Tb**	**159**		ug/L			2758248	2862529	0	Standard
	Pb	**208**	**-0.004**	ug/L	0.001	14	1233	769	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 21:43:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10710	11091	3	Standard
	Cl	37		ug/L			2261004	3187860	1	Standard
>	Sc	45		ug/L			634798	632505	1	Standard
	Al	27	5519.317	ug/L	219.157	3	6918	116557909	2	Standard
	Cr	52	54.567	ug/L	1.196	2	9179	683975	0	Standard
	Cr	53	55.252	ug/L	0.874	1	101	79889	1	Standard
	Fe	54	5790.415	ug/L	64.485	1	67448	10974409	1	Standard
	Fe	57	5475.852	ug/L	94.144	1	16480	5278275	1	Standard
	Mn	55	53.209	ug/L	0.450	0	303	953125	0	Standard
>	Ge	72		ug/L			75441	78255	1	KED
	Co	59	49.188	ug/L	0.968	1	17	297145	1	KED
	Ni	60	48.544	ug/L	0.392	0	64	88382	1	KED
	Ni	62	48.138	ug/L	1.358	2	6	13952	2	KED
	Cu	63	48.003	ug/L	0.766	1	112	255849	1	KED
	Cu	65	47.921	ug/L	1.285	2	55	128130	0	KED
	Zn	66	50.509	ug/L	1.398	2	248	33294	0	KED
	Zn	67	49.934	ug/L	0.591	1	33	5472	3	KED
	As	75	49.670	ug/L	0.027	0	3	15602	1	KED
	Y	89		ug/L			344601	354930	1	Standard
	Kr	83		ug/L			73	98	12	Standard
>	In-1	115		ug/L			19732	20587	1	KED
	Mo	98	49.804	ug/L	0.735	1	20	75773	1	KED
	Cd	111	49.789	ug/L	0.965	1	3	17173	1	KED
	Cd	114	48.898	ug/L	0.834	1	4	44771	0	KED
>	In	115		ug/L			1114786	1152855	1	Standard
	Ag	107	50.479	ug/L	0.774	1	86	801211	1	Standard
	Ba	135	51.056	ug/L	0.812	1	64	335968	0	Standard
	Ba	137	50.695	ug/L	1.572	3	120	592113	2	Standard
>	Tb	159		ug/L			2758248	2721553	1	Standard
	Pb	208	49.857	ug/L	1.800	3	1233	5976842	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 21:50:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10710	12923	1	Standard
	Cl	**37**		ug/L			2261004	3062244	3	Standard
>	**Sc**	**45**		ug/L			634798	646513	2	Standard
	Al	**27**	**0.003**	ug/L	0.008	324	6918	7102	3	Standard
	Cr	**52**	**0.057**	ug/L	0.024	42	9179	10064	2	Standard
	Cr	**53**	**0.167**	ug/L	0.003	1	101	350	1	Standard
	Fe	**54**	**4.233**	ug/L	0.263	6	67448	76837	1	Standard
	Fe	**57**	**0.872**	ug/L	0.592	67	16480	17633	1	Standard
	Mn	**55**	**0.004**	ug/L	0.001	29	303	378	4	Standard
>	**Ge**	**72**		ug/L			75441	80720	0	KED
	Co	**59**	**-0.002**	ug/L	0.000	21	17	8	24	KED
	Ni	**60**	**-0.003**	ug/L	0.001	36	64	63	3	KED
	Ni	**62**	**0.007**	ug/L	0.013	184	6	9	40	KED
	Cu	**63**	**0.002**	ug/L	0.001	56	112	130	4	KED
	Cu	**65**	**0.001**	ug/L	0.002	355	55	60	11	KED
	Zn	**66**	**-0.002**	ug/L	0.007	309	248	264	1	KED
	Zn	**67**	**0.075**	ug/L	0.068	90	33	44	17	KED
	As	**75**	**0.012**	ug/L	0.004	28	3	7	15	KED
	Y	**89**		ug/L			344601	353202	2	Standard
	Kr	**83**		ug/L			73	86	12	Standard
>	**In-1**	**115**		ug/L			19732	21557	1	KED
	Mo	**98**	**0.007**	ug/L	0.001	15	20	33	6	KED
	Cd	**111**	**-0.001**	ug/L	0.008	906	3	3	96	KED
	Cd	**114**	**0.001**	ug/L	0.006	446	4	6	100	KED
>	**In**	**115**		ug/L			1114786	1161140	0	Standard
	Ag	**107**	**-0.000**	ug/L	0.001	280	86	83	26	Standard
	Ba	**135**	**0.006**	ug/L	0.003	51	64	104	17	Standard
	Ba	**137**	**0.003**	ug/L	0.001	33	120	160	7	Standard
>	**Tb**	**159**		ug/L			2758248	2780262	1	Standard
	Pb	**208**	**0.002**	ug/L	0.000	17	1233	1466	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 21:58:52
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L				11415	6	Standard
	Cl	37		ug/L				3112101	0	Standard
>	Sc	45		ug/L				631685	1	Standard
	Al	27		ug/L				6962	14	Standard
	Cr	52		ug/L				9879	1	Standard
	Cr	53		ug/L				366	3	Standard
	Mn	55		ug/L				319	6	Standard
>	Ge	72		ug/L				80234	2	KED
	Ni	60		ug/L				33	31	KED
	Ni	62		ug/L				3	50	KED
	Cu	63		ug/L				118	19	KED
	Cu	65		ug/L				45	9	KED
	Zn	66		ug/L				164	9	KED
	Zn	67		ug/L				26	46	KED
	As	75		ug/L				6	14	KED
	Y	89		ug/L				362159	0	Standard
	Kr	83		ug/L				76	7	Standard
>	In-1	115		ug/L				21007	2	KED
	Cd	111		ug/L				1	34	KED
	Cd	114		ug/L				6	98	KED
>	In	115		ug/L				1210911	2	Standard
	Ag	107		ug/L				61	12	Standard
	Ba	135		ug/L				66	12	Standard
	Ba	137		ug/L				121	9	Standard
>	Tb	159		ug/L				2822045	3	Standard
	Pb	208		ug/L				838	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV7
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Tuesday, August 03, 2021 22:05:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			11415	10834	4	Standard
	Cl	**37**		ug/L			3112101	3182034	1	Standard
>	**Sc**	**45**		ug/L			631685	613334	2	Standard
	Al	**27**	**5707.145**	ug/L	80.609	1	6962	116895342	1	Standard
	Cr	**52**	**56.475**	ug/L	2.108	3	9879	686640	1	Standard
	Cr	**53**	**55.398**	ug/L	1.396	2	366	77934	3	Standard
	Mn	**55**	**53.023**	ug/L	0.449	0	319	921118	2	Standard
>	**Ge**	**72**		ug/L			80234	80807	3	KED
	Ni	**60**	**46.286**	ug/L	2.464	5	33	86903	2	KED
	Ni	**62**	**45.997**	ug/L	2.310	5	3	13755	3	KED
	Cu	**63**	**46.169**	ug/L	1.300	2	118	253999	1	KED
	Cu	**65**	**47.202**	ug/L	1.700	3	45	130262	1	KED
	Zn	**66**	**49.225**	ug/L	2.489	5	164	33399	3	KED
	Zn	**67**	**49.409**	ug/L	0.911	1	26	5579	1	KED
	As	**75**	**48.539**	ug/L	1.651	3	6	15737	1	KED
	Y	**89**		ug/L			362159	350205	3	Standard
	Kr	**83**		ug/L			76	92	15	Standard
>	**In-1**	**115**		ug/L			21007	21171	1	KED
	Cd	**111**	**48.496**	ug/L	0.469	0	1	17202	1	KED
	Cd	**114**	**46.941**	ug/L	0.828	1	6	44204	1	KED
>	**In**	**115**		ug/L			1210911	1151154	2	Standard
	Ag	**107**	**50.254**	ug/L	1.310	2	61	796343	2	Standard
	Ba	**135**	**49.865**	ug/L	2.970	5	66	327405	3	Standard
	Ba	**137**	**50.420**	ug/L	2.865	5	121	587805	4	Standard
>	**Tb**	**159**		ug/L			2822045	3013121	17	Standard
	Pb	**208**	**45.007**	ug/L	7.465	16	838	5861525	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 22:12:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			11415	11115	0	Standard
	Cl	**37**		ug/L			3112101	3287587	0	Standard
>	**Sc**	**45**		ug/L			631685	613938	1	Standard
	Al	**27**	**5699.313**	ug/L	245.081	4	6962	116810573	2	Standard
	Cr	**52**	**57.125**	ug/L	2.009	3	9879	695172	1	Standard
	Cr	**53**	**56.548**	ug/L	1.392	2	366	79630	3	Standard
	Mn	**55**	**53.768**	ug/L	1.274	2	319	934866	2	Standard
>	**Ge**	**72**		ug/L			80234	79093	0	KED
	Ni	**60**	**46.932**	ug/L	0.326	0	33	86336	0	KED
	Ni	**62**	**47.196**	ug/L	0.331	0	3	13824	0	KED
	Cu	**63**	**48.307**	ug/L	0.204	0	118	260254	0	KED
	Cu	**65**	**46.750**	ug/L	0.800	1	45	126375	2	KED
	Zn	**66**	**49.823**	ug/L	0.734	1	164	33112	1	KED
	Zn	**67**	**49.018**	ug/L	1.402	2	26	5420	2	KED
	As	**75**	**49.585**	ug/L	0.510	1	6	15745	1	KED
	Y	**89**		ug/L			362159	356549	0	Standard
	Kr	**83**		ug/L			76	101	14	Standard
>	**In-1**	**115**		ug/L			21007	20550	1	KED
	Cd	**111**	**49.976**	ug/L	0.715	1	1	17205	1	KED
	Cd	**114**	**49.022**	ug/L	0.278	0	6	44810	1	KED
>	**In**	**115**		ug/L			1210911	1168979	1	Standard
	Ag	**107**	**49.299**	ug/L	1.844	3	61	793483	3	Standard
	Ba	**135**	**50.885**	ug/L	0.923	1	66	339544	0	Standard
	Ba	**137**	**50.771**	ug/L	1.349	2	121	601460	2	Standard
>	**Tb**	**159**		ug/L			2822045	2763938	0	Standard
	Pb	**208**	**49.539**	ug/L	0.666	1	838	6032378	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 22:19:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			11415	11309	4	Standard
	Cl	**37**		ug/L			3112101	3091525	0	Standard
⌈>	**Sc**	**45**		ug/L			631685	625258	3	Standard
|	**Al**	**27**	**-0.034**	ug/L	0.022	64	6962	6193	10	Standard
|	**Cr**	**52**	**0.001**	ug/L	0.031	2116	9879	9793	3	Standard
|	**Cr**	**53**	**-0.031**	ug/L	0.020	64	366	318	6	Standard
⌊	**Mn**	**55**	**0.002**	ug/L	0.001	33	319	360	7	Standard
⌈>	**Ge**	**72**		ug/L			80234	80953	1	KED
|	**Ni**	**60**	**0.002**	ug/L	0.006	345	33	37	32	KED
|	**Ni**	**62**	**0.010**	ug/L	0.016	151	3	6	68	KED
|	**Cu**	**63**	**0.001**	ug/L	0.003	335	118	125	17	KED
|	**Cu**	**65**	**0.005**	ug/L	0.005	87	45	60	21	KED
|	**Zn**	**66**	**-0.031**	ug/L	0.028	89	164	144	11	KED
|	**Zn**	**67**	**-0.002**	ug/L	0.048	2819	26	26	18	KED
⌊	**As**	**75**	**-0.001**	ug/L	0.005	720	6	6	27	KED
	Y	**89**		ug/L			362159	356128	3	Standard
	Kr	**83**		ug/L			76	84	8	Standard
⌈>	**In-1**	**115**		ug/L			21007	21012	2	KED
|	**Cd**	**111**	**0.005**	ug/L	0.007	127	1	3	68	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.004	140	6	3	107	KED
⌈>	**In**	**115**		ug/L			1210911	1186645	1	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.002	68	61	96	25	Standard
|	**Ba**	**135**	**0.000**	ug/L	0.002	548	66	67	20	Standard
⌊	**Ba**	**137**	**-0.001**	ug/L	0.001	264	121	113	15	Standard
⌈>	**Tb**	**159**		ug/L			2822045	2801349	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	21	838	1015	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0382-01RE1
Sample Dil Factor: 200
Comments:
Sample Date/Time: Tuesday, August 03, 2021 22:26:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			11415	13650	2	Standard
	Cl	37		ug/L			3112101	3271015	1	Standard
>	Sc	45		ug/L			631685	640650	1	Standard
	Al	27	1306.793	ug/L	18.030	1	6962	27968660	1	Standard
	Cr	52	652.561	ug/L	22.346	3	9879	8183873	2	Standard
	Cr	53	655.522	ug/L	5.544	0	366	959184	0	Standard
	Mn	55	12.899	ug/L	0.229	1	319	234320	2	Standard
>	Ge	72		ug/L			80234	80348	1	KED
	Ni	60	6.351	ug/L	0.242	3	33	11897	3	KED
	Ni	62	6.506	ug/L	0.076	1	3	1939	1	KED
	Cu	63	29.531	ug/L	0.264	0	118	161667	1	KED
	Cu	65	29.370	ug/L	0.649	2	45	80652	1	KED
	Zn	66	93.379	ug/L	0.731	0	164	62894	0	KED
	Zn	67	86.006	ug/L	2.313	2	26	9640	2	KED
	As	75	0.047	ug/L	0.007	14	6	21	11	KED
	Y	89		ug/L			362159	366289	1	Standard
	Kr	83		ug/L			76	89	13	Standard
>	In-1	115		ug/L			21007	21326	0	KED
	Cd	111	0.017	ug/L	0.005	27	1	7	21	KED
	Cd	114	0.011	ug/L	0.008	74	6	16	46	KED
>	In	115		ug/L			1210911	1200499	1	Standard
	Ag	107	0.042	ug/L	0.004	10	61	749	10	Standard
	Ba	135	0.402	ug/L	0.021	5	66	2821	5	Standard
	Ba	137	0.414	ug/L	0.005	1	121	5162	2	Standard
>	Tb	159		ug/L			2822045	2886379	1	Standard
	Pb	208	0.266	ug/L	0.005	1	838	34638	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0156-06
Sample Dil Factor: 100
Comments:
Sample Date/Time: Tuesday, August 03, 2021 22:30:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			11415	17618	7	Standard
	Cl	37		ug/L			3112101	3260685	0	Standard
>	Sc	45		ug/L			631685	648153	3	Standard
	Al	27	2701.109	ug/L	57.315	2	6962	58467627	3	Standard
	Cr	52	4.864	ug/L	0.244	5	9879	71721	0	Standard
	Cr	53	4.834	ug/L	0.185	3	366	7524	1	Standard
	Mn	55	34.499	ug/L	0.787	2	319	633146	1	Standard
>	Ge	72		ug/L			80234	81634	1	KED
	Ni	60	2.279	ug/L	0.069	3	33	4357	1	KED
	Ni	62	2.250	ug/L	0.221	9	3	683	8	KED
	Cu	63	5.857	ug/L	0.070	1	118	32669	1	KED
	Cu	65	5.837	ug/L	0.060	1	45	16322	0	KED
	Zn	66	100.391	ug/L	0.989	0	164	68685	0	KED
	Zn	67	94.257	ug/L	0.525	0	26	10732	1	KED
	As	75	29.724	ug/L	0.311	1	6	9743	0	KED
	Y	89		ug/L			362159	389752	2	Standard
	Kr	83		ug/L			76	98	19	Standard
>	In-1	115		ug/L			21007	21193	0	KED
	Cd	111	0.246	ug/L	0.004	1	1	88	1	KED
	Cd	114	0.217	ug/L	0.020	9	6	210	8	KED
>	In	115		ug/L			1210911	1177203	4	Standard
	Ag	107	0.048	ug/L	0.001	2	61	833	5	Standard
	Ba	135	9.561	ug/L	0.490	5	66	64215	0	Standard
	Ba	137	9.617	ug/L	0.488	5	121	114655	1	Standard
>	Tb	159		ug/L			2822045	2865309	3	Standard
	Pb	208	6.117	ug/L	0.228	3	838	772423	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0666-DUP2
Sample Dil Factor: 100
Comments:
Sample Date/Time: Tuesday, August 03, 2021 22:34:58
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			11415	18243	3	Standard
	Cl	37		ug/L			3112101	3147123	2	Standard
>	Sc	45		ug/L			631685	649387	1	Standard
	Al	27	2978.709	ug/L	90.844	3	6962	64594948	1	Standard
	Cr	52	5.286	ug/L	0.182	3	9879	77274	1	Standard
	Cr	53	5.161	ug/L	0.084	1	366	8027	0	Standard
	Mn	55	37.497	ug/L	0.734	1	319	689671	1	Standard
>	Ge	72		ug/L			80234	83160	1	KED
	Ni	60	2.456	ug/L	0.026	1	33	4783	1	KED
	Ni	62	2.545	ug/L	0.050	1	3	787	0	KED
	Cu	63	6.336	ug/L	0.045	0	118	35996	1	KED
	Cu	65	6.212	ug/L	0.160	2	45	17699	3	KED
	Zn	66	106.165	ug/L	1.504	1	164	73981	0	KED
	Zn	67	97.432	ug/L	1.886	1	26	11298	0	KED
	As	75	30.675	ug/L	0.298	0	6	10243	0	KED
	Y	89		ug/L			362159	396051	1	Standard
	Kr	83		ug/L			76	95	14	Standard
>	In-1	115		ug/L			21007	21112	1	KED
	Cd	111	0.234	ug/L	0.015	6	1	84	4	KED
	Cd	114	0.240	ug/L	0.022	9	6	231	9	KED
>	In	115		ug/L			1210911	1176314	1	Standard
	Ag	107	0.056	ug/L	0.001	2	61	965	2	Standard
	Ba	135	10.391	ug/L	0.300	2	66	69807	1	Standard
	Ba	137	10.647	ug/L	0.112	1	121	127006	1	Standard
>	Tb	159		ug/L			2822045	2882128	1	Standard
	Pb	208	6.806	ug/L	0.092	1	838	865003	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0666-MS2
Sample Dil Factor: 100
Comments:
Sample Date/Time: Tuesday, August 03, 2021 22:39:01
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD.cal

	Analyte	Mass		Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			11415	17409	1	Standard
	Cl	37			ug/L			3112101	3138809	2	Standard
>	Sc	45			ug/L			631685	647060	0	Standard
	Al	27		2872.635	ug/L	54.083	1	6962	62089068	2	Standard
	Cr	52		9.264	ug/L	0.154	1	9879	127352	2	Standard
	Cr	53		9.143	ug/L	0.034	0	366	13883	0	Standard
	Mn	55		38.478	ug/L	0.589	1	319	705300	1	Standard
>	Ge	72			ug/L			80234	83881	0	KED
	Ni	60		5.981	ug/L	0.024	0	33	11700	1	KED
	Ni	62		5.969	ug/L	0.202	3	3	1857	3	KED
	Cu	63		9.357	ug/L	0.153	1	118	53555	0	KED
	Cu	65		9.359	ug/L	0.055	0	45	26868	1	KED
	Zn	66		107.836	ug/L	0.329	0	164	75803	0	KED
	Zn	67	STL	99.956	ug/L	1.346	1	26	11691	0	KED
	As	75		32.393	ug/L	0.302	0	6	10910	0	KED
	Y	89			ug/L			362159	386979	0	Standard
	Kr	83			ug/L			76	108	14	Standard
>	In-1	115			ug/L			21007	21222	0	KED
	Cd	111		4.200	ug/L	0.103	2	1	1494	2	KED
	Cd	114		4.028	ug/L	0.190	4	6	3807	4	KED
>	In	115			ug/L			1210911	1197702	2	Standard
	Ag	107		4.053	ug/L	0.195	4	61	66852	2	Standard
	Ba	135		13.293	ug/L	0.297	2	66	90919	1	Standard
	Ba	137		13.617	ug/L	0.428	3	121	165290	1	Standard
>	Tb	159			ug/L			2822045	2894061	0	Standard
	Pb	208		10.030	ug/L	0.212	2	838	1279470	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0666-MSD2
Sample Dil Factor: 100
Comments:
Sample Date/Time: Tuesday, August 03, 2021 22:43:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD.cal

	Analyte	Mass		Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			11415	17359	2	Standard
	Cl	37			ug/L			3112101	3116119	1	Standard
>	Sc	45			ug/L			631685	649040	1	Standard
	Al	27		2767.513	ug/L	64.838	2	6962	59992856	2	Standard
	Cr	52		8.646	ug/L	0.091	1	9879	119895	2	Standard
	Cr	53		8.604	ug/L	0.231	2	366	13124	1	Standard
	Mn	55		37.550	ug/L	1.071	2	319	690246	2	Standard
>	Ge	72			ug/L			80234	83575	0	KED
	Ni	60		5.776	ug/L	0.231	4	33	11257	3	KED
	Ni	62		5.779	ug/L	0.302	5	3	1792	5	KED
	Cu	63		9.095	ug/L	0.192	2	118	51873	1	KED
	Cu	65		9.025	ug/L	0.269	2	45	25813	2	KED
	Zn	66		102.970	ug/L	1.669	1	164	72123	1	KED
	Zn	67	STL	97.776	ug/L	1.426	1	26	11396	1	KED
	As	75		31.161	ug/L	0.161	0	6	10458	0	KED
	Y	89			ug/L			362159	389263	1	Standard
	Kr	83			ug/L			76	94	19	Standard
>	In-1	115			ug/L			21007	21162	1	KED
	Cd	111		4.158	ug/L	0.169	4	1	1474	2	KED
	Cd	114		3.967	ug/L	0.138	3	6	3739	2	KED
>	In	115			ug/L			1210911	1213162	2	Standard
	Ag	107		3.911	ug/L	0.109	2	61	65356	1	Standard
	Ba	135		12.939	ug/L	0.492	3	66	89630	2	Standard
	Ba	137		12.993	ug/L	0.114	0	121	159812	1	Standard
>	Tb	159			ug/L			2822045	2853269	1	Standard
	Pb	208		9.945	ug/L	0.150	1	838	1250732	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0666-DUP3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, August 03, 2021 22:47:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			11415	24629	3	Standard
	Cl	**37**		ug/L			3112101	3127812	2	Standard
⌈>	**Sc**	**45**		ug/L			631685	716696	2	Standard
|	**Al**	**27**	**13126.026**	ug/L	455.227	3	6962	314144723	3	Standard
|	**Cr**	**52**	**23.310**	ug/L	0.273	1	9879	337975	3	Standard
|	**Cr**	**53**	**23.318**	ug/L	0.352	1	366	38567	1	Standard
⌊	**Mn**	**55**	**166.260**	ug/L	3.802	2	319	3373302	1	Standard
⌈>	**Ge**	**72**		ug/L			80234	81070	2	KED
|	**Ni**	**60**	**11.685**	ug/L	0.148	1	33	22055	1	KED
|	**Ni**	**62**	**11.930**	ug/L	0.138	1	3	3584	1	KED
|	**Cu**	**63**	**30.567**	ug/L	0.402	1	118	168830	2	KED
|	**Cu**	**65**	**31.110**	ug/L	0.542	1	45	86192	1	KED
|	**Zn**	**66**	**507.891**	ug/L	9.836	1	164	344354	0	KED
|	**Zn**	**67**	**478.674**	ug/L	7.157	1	26	54008	1	KED
⌊	**As**	**75**	**153.011**	ug/L	2.701	1	6	49775	0	KED
	Y	**89**		ug/L			362159	519940	1	Standard
	Kr	**83**		ug/L			76	130	5	Standard
⌈>	**In-1**	**115**		ug/L			21007	20862	4	KED
|	**Cd**	**111**	**1.242**	ug/L	0.068	5	1	434	2	KED
⌊	**Cd**	**114**	**1.214**	ug/L	0.020	1	6	1132	3	KED
⌈>	**In**	**115**		ug/L			1210911	1154824	2	Standard
|	**Ag**	**107**	**0.265**	ug/L	0.006	2	61	4270	3	Standard
|	**Ba**	**135**	**46.902**	ug/L	1.296	2	66	309109	0	Standard
⌊	**Ba**	**137**	**48.614**	ug/L	1.898	3	121	568645	2	Standard
⌈>	**Tb**	**159**		ug/L			2822045	2759874	1	Standard
⌊	**Pb**	**208**	**34.510**	ug/L	0.299	0	838	4196398	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0666-MSD1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, August 03, 2021 22:51:13
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD.cal

	Analyte	Mass		Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			11415	22239	2	Standard
	Cl	37			ug/L			3112101	3106165	0	Standard
>	Sc	45	STL		ug/L			631685	702728	0	Standard
	Al	27		12333.800	ug/L	88.925	0	6962	289481023	0	Standard
	Cr	52		40.612	ug/L	0.296	0	9879	569099	0	Standard
	Cr	53		40.242	ug/L	0.203	0	366	64977	1	Standard
	Mn	55		167.705	ug/L	3.244	1	319	3337539	2	Standard
>	Ge	72			ug/L			80234	82411	0	KED
	Ni	60		28.501	ug/L	0.532	1	33	54642	1	KED
	Ni	62		28.667	ug/L	0.700	2	3	8750	2	KED
	Cu	63		44.512	ug/L	0.676	1	118	249864	1	KED
	Cu	65		44.049	ug/L	0.853	1	45	124060	1	KED
	Zn	66		492.111	ug/L	12.577	2	164	339264	2	KED
	Zn	67		458.702	ug/L	3.831	0	26	52619	0	KED
	As	75	STL	153.167	ug/L	1.219	0	6	50664	1	KED
	Y	89			ug/L			362159	510543	1	Standard
	Kr	83			ug/L			76	139	8	Standard
>	In-1	115			ug/L			21007	20750	4	KED
	Cd	111		20.190	ug/L	0.988	4	1	7010	1	KED
	Cd	114		19.641	ug/L	0.882	4	6	18110	0	KED
>	In	115			ug/L			1210911	1166851	3	Standard
	Ag	107		19.272	ug/L	0.480	2	61	309475	1	Standard
	Ba	135		62.218	ug/L	3.089	4	66	413924	1	Standard
	Ba	137		61.605	ug/L	2.575	4	121	727641	0	Standard
>	Tb	159			ug/L			2822045	2845750	0	Standard
	Pb	208		47.928	ug/L	0.573	1	838	6009829	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0666-PS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, August 03, 2021 22:55:17
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			11415	23768	4	Standard
	Cl	37		ug/L			3112101	3067389	1	Standard
>	Sc	45		ug/L			631685	698558	1	Standard
	Al	27	12189.780	ug/L	98.566	0	6962	284420542	1	Standard
	Cr	52	45.989	ug/L	0.863	1	9879	639122	1	Standard
	Cr	53	45.987	ug/L	0.902	1	366	73740	0	Standard
	Mn	55	180.858	ug/L	6.616	3	319	3576423	2	Standard
>	Ge	72		ug/L			80234	82483	0	KED
	Ni	60	32.793	ug/L	0.932	2	33	62923	2	KED
	Ni	62	34.410	ug/L	0.167	0	3	10512	0	KED
	Cu	63	50.112	ug/L	1.112	2	118	281526	1	KED
	Cu	65	50.042	ug/L	0.527	1	45	141059	1	KED
	Zn	66	537.016	ug/L	9.317	1	164	370515	1	KED
	Zn	67	493.064	ug/L	3.677	0	26	56607	0	KED
	As	75	165.807	ug/L	1.800	1	6	54890	0	KED
	Y	89		ug/L			362159	507115	1	Standard
	Kr	83		ug/L			76	114	6	Standard
>	In-1	115		ug/L			21007	20815	2	KED
	Cd	111	24.490	ug/L	0.642	2	1	8538	1	KED
	Cd	114	23.681	ug/L	0.082	0	6	21929	2	KED
>	In	115		ug/L			1210911	1170559	2	Standard
	Ag	107	25.389	ug/L	1.265	4	61	408979	3	Standard
	Ba	135	66.732	ug/L	0.134	0	66	445944	2	Standard
	Ba	137	66.552	ug/L	0.717	1	121	789377	1	Standard
>	Tb	159		ug/L			2822045	2774027	1	Standard
	Pb	208	54.455	ug/L	1.218	2	838	6654214	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0747-PS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, August 03, 2021 22:59:44

DEL

NOT NEEDED

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			11415	17901	5	Standard
	Cl	**37**		ug/L			3112101	3100951	1	Standard
⌈>	**Sc**	**45**		ug/L			631685	660746	1	Standard
|	**Al**	**27**	**7465.448**	ug/L	214.385	2	6962	164718744	1	Standard
|	**Cr**	**52**	**33.784**	ug/L	0.803	2	9879	446782	0	Standard
|	**Cr**	**53**	**33.760**	ug/L	0.127	0	366	51315	1	Standard
⌊	**Mn**	**55**	**106.856**	ug/L	1.045	0	319	1999600	2	Standard
⌈>	**Ge**	**72**		ug/L			80234	82411	2	KED
|	**Ni**	**60**	**28.142**	ug/L	0.848	3	33	53935	1	KED
|	**Ni**	**62**	**28.959**	ug/L	1.039	3	3	8835	1	KED
|	**Cu**	**63**	**34.432**	ug/L	0.663	1	118	193272	1	KED
|	**Cu**	**65**	**34.487**	ug/L	0.749	2	45	97118	1	KED
|	**Zn**	**66**	**88.909**	ug/L	1.048	1	164	61423	1	KED
|	**Zn**	**67**	**84.713**	ug/L	1.736	2	26	9737	1	KED
⌊	**As**	**75**	**506.462**	ug/L	8.562	1	6	167478	1	KED
	Y	**89**		ug/L			362159	454638	1	Standard
	Kr	**83**		ug/L			76	105	10	Standard
⌈>	**In-1**	**115**		ug/L			21007	21291	1	KED
|	**Cd**	**111**	**22.685**	ug/L	0.621	2	1	8092	2	KED
⌊	**Cd**	**114**	**21.887**	ug/L	0.500	2	6	20730	2	KED
⌈>	**In**	**115**		ug/L			1210911	1212509	3	Standard
|	**Ag**	**107**	**23.158**	ug/L	1.120	4	61	386227	2	Standard
|	**Ba**	**135**	**36.189**	ug/L	1.215	3	66	250309	1	Standard
⌊	**Ba**	**137**	**36.811**	ug/L	1.372	3	121	451908	0	Standard
⌈>	**Tb**	**159**		ug/L			2822045	2854749	0	Standard
⌊	**Pb**	**208**	**26.517**	ug/L	0.156	0	838	3335661	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLC
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 23:04:13
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			11415	13204	2	Standard
	Cl	**37**		ug/L			3112101	2971318	2	Standard
⌈>	**Sc**	**45**		ug/L			631685	635711	1	Standard
|	**Al**	**27**	**0.438**	ug/L	0.033	7	6962	16301	3	Standard
|	**Cr**	**52**	**-0.020**	ug/L	0.019	96	9879	9697	1	Standard
|	**Cr**	**53**	**-0.065**	ug/L	0.013	19	366	273	6	Standard
⌊	**Mn**	**55**	**0.011**	ug/L	0.001	11	319	526	3	Standard
⌈>	**Ge**	**72**		ug/L			80234	82096	2	KED
|	**Ni**	**60**	**0.004**	ug/L	0.004	84	33	42	14	KED
|	**Ni**	**62**	**0.008**	ug/L	0.026	310	3	6	121	KED
|	**Cu**	**63**	**0.005**	ug/L	0.003	62	118	147	9	KED
|	**Cu**	**65**	**0.006**	ug/L	0.005	76	45	64	19	KED
|	**Zn**	**66**	**-0.019**	ug/L	0.028	147	164	154	11	KED
|	**Zn**	**67**	**-0.033**	ug/L	0.012	36	26	23	4	KED
⌊	**As**	**75**	**0.034**	ug/L	0.001	3	6	17	4	KED
	Y	**89**		ug/L			362159	355898	2	Standard
	Kr	**83**		ug/L			76	92	11	Standard
⌈>	**In-1**	**115**		ug/L			21007	21122	1	KED
|	**Cd**	**111**	**0.008**	ug/L	0.010	125	1	4	81	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.002	103	6	4	49	KED
⌈>	**In**	**115**		ug/L			1210911	1211657	1	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.001	40	61	84	11	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.002	169	66	73	14	Standard
⌊	**Ba**	**137**	**-0.001**	ug/L	0.002	183	121	108	21	Standard
⌈>	**Tb**	**159**		ug/L			2822045	2833914	0	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	15	838	1113	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV8
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 23:08:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			11415	11377	3	Standard
	Cl	37		ug/L			3112101	3150238	2	Standard
>	Sc	45		ug/L			631685	618658	2	Standard
	Al	27	5540.056	ug/L	62.254	1	6962	114463834	1	Standard
	Cr	52	54.525	ug/L	1.661	3	9879	669036	1	Standard
	Cr	53	54.691	ug/L	1.666	3	366	77572	0	Standard
	Mn	55	52.833	ug/L	0.252	0	319	925699	2	Standard
>	Ge	72		ug/L			80234	81269	1	KED
	Ni	60	46.071	ug/L	0.319	0	33	87080	0	KED
	Ni	62	46.470	ug/L	1.334	2	3	13982	1	KED
	Cu	63	46.751	ug/L	0.523	1	118	258809	2	KED
	Cu	65	46.759	ug/L	1.052	2	45	129847	1	KED
	Zn	66	49.379	ug/L	1.698	3	164	33711	2	KED
	Zn	67	49.278	ug/L	2.006	4	26	5596	2	KED
	As	75	48.427	ug/L	1.089	2	6	15797	1	KED
	Y	89		ug/L			362159	357602	2	Standard
	Kr	83		ug/L			76	99	7	Standard
>	In-1	115		ug/L			21007	20614	1	KED
	Cd	111	48.718	ug/L	0.452	0	1	16827	1	KED
	Cd	114	48.706	ug/L	0.869	1	6	44659	1	KED
>	In	115		ug/L			1210911	1172176	2	Standard
	Ag	107	50.829	ug/L	1.905	3	61	820041	3	Standard
	Ba	135	49.691	ug/L	1.960	3	66	332287	1	Standard
	Ba	137	49.997	ug/L	1.931	3	121	593471	1	Standard
>	Tb	159		ug/L			2822045	2768011	1	Standard
	Pb	208	48.264	ug/L	0.646	1	838	5885361	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB8
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 23:15:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			11415	11009	0	Standard
	Cl	**37**		ug/L			3112101	3001696	2	Standard
⌈>	**Sc**	**45**		ug/L			631685	616633	0	Standard
|	**Al**	**27**	**0.177**	ug/L	0.019	10	6962	10442	3	Standard
|	**Cr**	**52**	**0.002**	ug/L	0.028	1824	9879	9661	2	Standard
|	**Cr**	**53**	**-0.084**	ug/L	0.008	9	366	240	4	Standard
⌊	**Mn**	**55**	**0.005**	ug/L	0.002	32	319	395	6	Standard
⌈>	**Ge**	**72**		ug/L			80234	81249	0	KED
|	**Ni**	**60**	**0.005**	ug/L	0.006	115	33	43	26	KED
|	**Ni**	**62**	**0.019**	ug/L	0.011	59	3	9	34	KED
|	**Cu**	**63**	**-0.002**	ug/L	0.003	152	118	107	16	KED
|	**Cu**	**65**	**0.003**	ug/L	0.004	130	45	53	18	KED
|	**Zn**	**66**	**0.039**	ug/L	0.006	15	164	193	1	KED
|	**Zn**	**67**	**0.048**	ug/L	0.029	61	26	32	10	KED
⌊	**As**	**75**	**-0.003**	ug/L	0.006	195	6	5	36	KED
	Y	**89**		ug/L			362159	354295	0	Standard
	Kr	**83**		ug/L			76	87	18	Standard
⌈>	**In-1**	**115**		ug/L			21007	20357	6	KED
|	**Cd**	**111**	**0.006**	ug/L	0.005	82	1	3	41	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.002	72	6	3	55	KED
⌈>	**In**	**115**		ug/L			1210911	1196893	0	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.001	53	61	83	14	Standard
|	**Ba**	**135**	**0.004**	ug/L	0.003	74	66	93	22	Standard
⌊	**Ba**	**137**	**0.003**	ug/L	0.001	37	121	155	9	Standard
⌈>	**Tb**	**159**		ug/L			2822045	2857212	2	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	46	838	1029	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 23:21:30
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				10367	2	Standard
	Cl	**37**		ug/L				3100979	1	Standard
>	**Sc**	**45**		ug/L				619331	1	Standard
	Mn	**55**		ug/L				377	4	Standard
>	**Ge**	**72**		ug/L				81434	1	KED
	Cu	**63**		ug/L				101	10	KED
	Cu	**65**		ug/L				43	10	KED
	Zn	**66**		ug/L				120	22	KED
	Zn	**67**		ug/L				24	12	KED
	As	**75**		ug/L				6	31	KED
	Y	**89**		ug/L				364136	0	Standard
	Kr	**83**		ug/L				82	20	Standard
>	**In-1**	**115**		ug/L				20535	3	KED
	Cd	**111**		ug/L				0	100	KED
	Cd	**114**		ug/L				2	124	KED
>	**In**	**115**		ug/L				1197866	1	Standard
	Ag	**107**		ug/L				66	11	Standard
>	**Tb**	**159**		ug/L				2824882	0	Standard
	Pb	**208**		ug/L				756	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV9
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 23:25:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	10966	3	Standard
	Cl	**37**		ug/L			3100979	3336387	2	Standard
⌈>	**Sc**	**45**		ug/L			619331	662380	1	Standard
⌊	**Mn**	**55**	**53.945**	ug/L	0.821	1	377	1011969	1	Standard
⌈>	**Ge**	**72**		ug/L			81434	87286	1	KED
|	**Cu**	**63**	**47.024**	ug/L	0.789	1	101	279511	0	KED
|	**Cu**	**65**	**46.140**	ug/L	1.561	3	43	137587	1	KED
|	**Zn**	**66**	**48.487**	ug/L	1.744	3	120	35503	2	KED
|	**Zn**	**67**	**49.580**	ug/L	1.653	3	24	6044	1	KED
⌊	**As**	**75**	**48.682**	ug/L	0.726	1	6	17057	1	KED
	Y	**89**		ug/L			364136	389399	0	Standard
	Kr	**83**		ug/L			82	101	30	Standard
⌈>	**In-1**	**115**		ug/L			20535	22022	0	KED
|	**Cd**	**111**	**49.239**	ug/L	1.634	3	0	18164	2	KED
⌊	**Cd**	**114**	**48.497**	ug/L	0.454	0	2	47503	1	KED
⌈>	**In**	**115**		ug/L			1197866	1289038	2	Standard
⌊	**Ag**	**107**	**52.057**	ug/L	2.310	4	66	923378	2	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3010373	2	Standard
⌊	**Pb**	**208**	**48.136**	ug/L	1.162	2	756	6382490	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB9
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 23:32:11
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	10851	5	Standard
	Cl	**37**		ug/L			3100979	3103912	4	Standard
⌈>	**Sc**	**45**		ug/L			619331	671813	3	Standard
⌊	**Mn**	**55**	**-0.003**	ug/L	0.001	27	377	355	3	Standard
⌈>	**Ge**	**72**		ug/L			81434	86750	1	KED
|	**Cu**	**63**	**-0.000**	ug/L	0.003	1392	101	106	17	KED
|	**Cu**	**65**	**0.000**	ug/L	0.002	2562	43	46	17	KED
|	**Zn**	**66**	**0.011**	ug/L	0.020	183	120	135	12	KED
|	**Zn**	**67**	**-0.019**	ug/L	0.062	328	24	23	33	KED
⌊	**As**	**75**	**-0.003**	ug/L	0.005	174	6	5	33	KED
	Y	**89**		ug/L			364136	389603	2	Standard
	Kr	**83**		ug/L			82	80	19	Standard
⌈>	**In-1**	**115**		ug/L			20535	22278	2	KED
|	**Cd**	**111**	**0.001**	ug/L	0.004	582	0	1	114	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.005	210	2	4	97	KED
⌈>	**In**	**115**		ug/L			1197866	1274915	6	Standard
⌊	**Ag**	**107**	**0.002**	ug/L	0.000	19	66	106	12	Standard
⌈>	**Tb**	**159**		ug/L			2824882	2911596	4	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	37	756	913	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0740-BLK2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 23:36:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	23867	2	Standard
	Cl	**37**		ug/L			3100979	3093179	0	Standard
⌈>	**Sc**	**45**		ug/L			619331	687798	1	Standard
⌊	**Mn**	**55**	**0.069**	ug/L	0.001	1	377	1763	0	Standard
⌈>	**Ge**	**72**		ug/L			81434	87973	1	KED
|	**Cu**	**63**	**0.020**	ug/L	0.005	26	101	229	12	KED
|	**Cu**	**65**	**0.027**	ug/L	0.005	20	43	126	11	KED
|	**Zn**	**66**	**0.282**	ug/L	0.074	26	120	337	15	KED
|	**Zn**	**67**	**0.182**	ug/L	0.096	52	24	48	22	KED
⌊	**As**	**75**	**-0.004**	ug/L	0.005	140	6	5	32	KED
	Y	**89**		ug/L			364136	398954	1	Standard
	Kr	**83**		ug/L			82	89	36	Standard
⌈>	**In-1**	**115**		ug/L			20535	22860	1	KED
|	**Cd**	**111**	**0.003**	ug/L	0.006	189	0	2	98	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.005	586	2	3	144	KED
⌈>	**In**	**115**		ug/L			1197866	1381947	2	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.001	163	66	62	34	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3016242	1	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	23	756	1081	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0740-BS2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, August 03, 2021 23:40:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	24091	3	Standard
	Cl	**37**		ug/L			3100979	3186177	1	Standard
⌈>	**Sc**	**45**		ug/L			619331	686526	0	Standard
⌊	**Mn**	**55**	**27.736**	ug/L	0.845	3	377	539605	3	Standard
⌈>	**Ge**	**72**		ug/L			81434	89053	1	KED
|	**Cu**	**63**	**23.916**	ug/L	0.433	1	101	145123	2	KED
|	**Cu**	**65**	**24.055**	ug/L	0.448	1	43	73224	1	KED
|	**Zn**	**66**	**73.360**	ug/L	0.756	1	120	54749	0	KED
|	**Zn**	**67**	**70.053**	ug/L	0.629	0	24	8705	1	KED
⌊	**As**	**75**	**23.576**	ug/L	0.448	1	6	8430	0	KED
	Y	**89**		ug/L			364136	394343	0	Standard
	Kr	**83**		ug/L			82	99	8	Standard
⌈>	**In-1**	**115**		ug/L			20535	22540	1	KED
|	**Cd**	**111**	**24.529**	ug/L	0.468	1	0	9263	2	KED
⌊	**Cd**	**114**	**24.096**	ug/L	0.201	0	2	24159	1	KED
⌈>	**In**	**115**		ug/L			1197866	1314795	1	Standard
⌊	**Ag**	**107**	**26.811**	ug/L	0.600	2	66	485445	2	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3036403	1	Standard
⌊	**Pb**	**208**	**24.898**	ug/L	0.165	0	756	3331124	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0212-12
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, August 03, 2021 23:44:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	21026	2	Standard
	Cl	**37**		ug/L			3100979	3165156	2	Standard
⌈>	**Sc**	**45**		ug/L			619331	720071	2	Standard
⌊	**Mn**	**55**	**113.254**	ug/L	0.441	0	377	2309536	3	Standard
⌈>	**Ge**	**72**		ug/L			81434	88370	1	KED
|	**Cu**	**63**	**8.333**	ug/L	0.131	1	101	50241	0	KED
|	**Cu**	**65**	**8.328**	ug/L	0.255	3	43	25183	2	KED
|	**Zn**	**66**	**30.181**	ug/L	0.264	0	120	22430	1	KED
|	**Zn**	**67**	**28.945**	ug/L	0.917	3	24	3583	2	KED
⌊	**As**	**75**	**5.840**	ug/L	0.048	0	6	2077	0	KED
	Y	**89**		ug/L			364136	495862	1	Standard
	Kr	**83**		ug/L			82	108	7	Standard
⌈>	**In-1**	**115**		ug/L			20535	21450	3	KED
|	**Cd**	**111**	**0.079**	ug/L	0.014	17	0	29	16	KED
⌊	**Cd**	**114**	**0.067**	ug/L	0.021	30	2	65	26	KED
⌈>	**In**	**115**		ug/L			1197866	1276278	2	Standard
⌊	**Ag**	**107**	**0.031**	ug/L	0.002	4	66	623	6	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3049921	0	Standard
⌊	**Pb**	**208**	**2.063**	ug/L	0.046	2	756	277990	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0212-07
Sample Dil Factor: 100
Comments:
Sample Date/Time: Tuesday, August 03, 2021 23:49:49
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	15897	2	Standard
	Cl	**37**		ug/L			3100979	3095737	2	Standard
⌈>	**Sc**	**45**		ug/L			619331	679554	1	Standard
⌊	**Mn**	**55**	**12.125**	ug/L	0.314	2	377	233646	1	Standard
⌈>	**Ge**	**72**		ug/L			81434	87297	1	KED
|	**Cu**	**63**	**2.568**	ug/L	0.033	1	101	15373	2	KED
|	**Cu**	**65**	**2.573**	ug/L	0.059	2	43	7718	1	KED
|	**Zn**	**66**	**3.516**	ug/L	0.114	3	120	2695	4	KED
|	**Zn**	**67**	**3.202**	ug/L	0.439	13	24	415	14	KED
⌊	**As**	**75**	**139.658**	ug/L	2.039	1	6	48929	1	KED
	Y	**89**		ug/L			364136	415713	0	Standard
	Kr	**83**		ug/L			82	106	7	Standard
⌈>	**In-1**	**115**		ug/L			20535	22845	3	KED
|	**Cd**	**111**	**0.005**	ug/L	0.005	106	0	2	66	KED
⌊	**Cd**	**114**	**0.008**	ug/L	0.004	51	2	10	37	KED
⌈>	**In**	**115**		ug/L			1197866	1285076	3	Standard
⌊	**Ag**	**107**	**0.006**	ug/L	0.002	35	66	178	20	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3010885	1	Standard
⌊	**Pb**	**208**	**0.891**	ug/L	0.014	1	756	118990	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0212-08
Sample Dil Factor: 100
Comments:
Sample Date/Time: Tuesday, August 03, 2021 23:53:39
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	15645	4	Standard
	Cl	**37**		ug/L			3100979	3086144	2	Standard
⌈>	**Sc**	**45**		ug/L			619331	675957	1	Standard
⌊	**Mn**	**55**	**12.264**	ug/L	0.516	4	377	235105	3	Standard
⌈>	**Ge**	**72**		ug/L			81434	86335	1	KED
|	**Cu**	**63**	**4.021**	ug/L	0.016	0	101	23742	1	KED
|	**Cu**	**65**	**4.012**	ug/L	0.157	3	43	11877	2	KED
|	**Zn**	**66**	**3.475**	ug/L	0.065	1	120	2635	2	KED
|	**Zn**	**67**	**3.448**	ug/L	0.243	7	24	440	7	KED
⌊	**As**	**75**	**129.825**	ug/L	1.555	1	6	44983	0	KED
	Y	**89**		ug/L			364136	410651	1	Standard
	Kr	**83**		ug/L			82	105	20	Standard
⌈>	**In-1**	**115**		ug/L			20535	22545	1	KED
|	**Cd**	**111**	**0.019**	ug/L	0.005	25	0	8	24	KED
⌊	**Cd**	**114**	**0.011**	ug/L	0.003	23	2	14	19	KED
⌈>	**In**	**115**		ug/L			1197866	1310096	2	Standard
⌊	**Ag**	**107**	**0.010**	ug/L	0.002	22	66	246	15	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3011812	1	Standard
⌊	**Pb**	**208**	**0.436**	ug/L	0.007	1	756	58684	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0212-06RE1
Sample Dil Factor: 100
Comments:
Sample Date/Time: Tuesday, August 03, 2021 23:57:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	15152	4	Standard
	Cl	**37**		ug/L			3100979	3130982	3	Standard
⌈>	**Sc**	**45**		ug/L			619331	672996	1	Standard
⌊	**Mn**	**55**	**17.470**	ug/L	0.214	1	377	333266	0	Standard
⌈>	**Ge**	**72**		ug/L			81434	88929	0	KED
|	**Cu**	**63**	**2.533**	ug/L	0.054	2	101	15444	1	KED
|	**Cu**	**65**	**2.477**	ug/L	0.036	1	43	7573	1	KED
|	**Zn**	**66**	**4.285**	ug/L	0.073	1	120	3317	1	KED
|	**Zn**	**67**	**4.223**	ug/L	0.432	10	24	548	9	KED
⌊	**As**	**75**	**97.735**	ug/L	0.714	0	6	34886	0	KED
	Y	**89**		ug/L			364136	415367	1	Standard
	Kr	**83**		ug/L			82	91	18	Standard
⌈>	**In-1**	**115**		ug/L			20535	22575	1	KED
|	**Cd**	**111**	**0.019**	ug/L	0.008	39	0	8	35	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.003	42	2	8	30	KED
⌈>	**In**	**115**		ug/L			1197866	1287051	2	Standard
⌊	**Ag**	**107**	**0.007**	ug/L	0.001	21	66	191	11	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3029208	2	Standard
⌊	**Pb**	**208**	**0.843**	ug/L	0.020	2	756	113248	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0747-DUP2
Sample Dil Factor: 100
Comments:
Sample Date/Time: Wednesday, August 04, 2021 00:01:17
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	15144	3	Standard
	Cl	**37**		ug/L			3100979	3097225	1	Standard
⌈>	**Sc**	**45**		ug/L			619331	661012	0	Standard
⌊	**Mn**	**55**	**17.930**	ug/L	0.244	1	377	335975	1	Standard
⌈>	**Ge**	**72**		ug/L			81434	88843	0	KED
|	**Cu**	**63**	**2.502**	ug/L	0.025	0	101	15243	1	KED
|	**Cu**	**65**	**2.532**	ug/L	0.057	2	43	7731	2	KED
|	**Zn**	**66**	**4.469**	ug/L	0.113	2	120	3450	2	KED
|	**Zn**	**67**	**4.189**	ug/L	0.269	6	24	544	6	KED
⌊	**As**	**75**	**103.039**	ug/L	0.884	0	6	36744	1	KED
	Y	**89**		ug/L			364136	400619	3	Standard
	Kr	**83**		ug/L			82	88	10	Standard
⌈>	**In-1**	**115**		ug/L			20535	22534	0	KED
|	**Cd**	**111**	**0.012**	ug/L	0.006	55	0	5	44	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.003	67	2	7	42	KED
⌈>	**In**	**115**		ug/L			1197866	1282346	1	Standard
⌊	**Ag**	**107**	**0.008**	ug/L	0.000	4	66	208	3	Standard
⌈>	**Tb**	**159**		ug/L			2824882	2997895	2	Standard
⌊	**Pb**	**208**	**0.958**	ug/L	0.011	1	756	127367	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0747-MS2
Sample Dil Factor: 100
Comments:
Sample Date/Time: Wednesday, August 04, 2021 00:05:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	15317	5	Standard
	Cl	**37**		ug/L			3100979	3091274	0	Standard
>	**Sc**	**45**		ug/L			619331	666717	1	Standard
	Mn	**55**	**22.564**	ug/L	0.229	1	377	426312	0	Standard
>	**Ge**	**72**		ug/L			81434	89140	0	KED
	Cu	**63**	**6.940**	ug/L	0.072	1	101	42229	1	KED
	Cu	**65**	**6.764**	ug/L	0.114	1	43	20645	1	KED
	Zn	**66**	**18.401**	ug/L	0.281	1	120	13846	1	KED
	Zn	**67**	**18.116**	ug/L	0.104	0	24	2273	1	KED
	As	**75**	STL **111.655**	ug/L	0.263	0	6	39948	0	KED
	Y	**89**		ug/L			364136	398090	2	Standard
	Kr	**83**		ug/L			82	92	18	Standard
>	**In-1**	**115**		ug/L			20535	22224	1	KED
	Cd	**111**	**4.498**	ug/L	0.163	3	0	1675	2	KED
	Cd	**114**	**4.592**	ug/L	0.023	0	2	4541	1	KED
>	**In**	**115**		ug/L			1197866	1271703	2	Standard
	Ag	**107**	**4.636**	ug/L	0.101	2	66	81270	4	Standard
>	**Tb**	**159**		ug/L			2824882	3003610	1	Standard
	Pb	**208**	**5.399**	ug/L	0.050	0	756	715227	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0747-MSD2
Sample Dil Factor: 100
Comments:
Sample Date/Time: Wednesday, August 04, 2021 00:09:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	14977	2	Standard
	Cl	**37**		ug/L			3100979	3077079	0	Standard
>	**Sc**	**45**		ug/L			619331	665029	1	Standard
	Mn	**55**	**22.482**	ug/L	0.229	1	377	423679	0	Standard
>	**Ge**	**72**		ug/L			81434	86460	1	KED
	Cu	**63**	**6.821**	ug/L	0.162	2	101	40250	0	KED
	Cu	**65**	**6.716**	ug/L	0.072	1	43	19886	2	KED
	Zn	**66**	**18.258**	ug/L	0.435	2	120	13328	3	KED
	Zn	**67**	**17.362**	ug/L	0.252	1	24	2113	0	KED
	As	**75**	STL **138.311**	ug/L	1.582	1	6	47991	0	KED
	Y	**89**		ug/L			364136	403097	1	Standard
	Kr	**83**		ug/L			82	98	9	Standard
>	**In-1**	**115**		ug/L			20535	22353	1	KED
	Cd	**111**	**4.518**	ug/L	0.109	2	0	1692	1	KED
	Cd	**114**	**4.421**	ug/L	0.091	2	2	4396	0	KED
>	**In**	**115**		ug/L			1197866	1268135	0	Standard
	Ag	**107**	**4.559**	ug/L	0.126	2	66	79667	2	Standard
>	**Tb**	**159**		ug/L			2824882	2996334	1	Standard
	Pb	**208**	**5.258**	ug/L	0.138	2	756	694698	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLD
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 00:13:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	12503	3	Standard
	Cl	**37**		ug/L			3100979	3046158	1	Standard
⌈>	**Sc**	**45**		ug/L			619331	662706	1	Standard
⌊	**Mn**	**55**	**0.003**	ug/L	0.001	51	377	453	4	Standard
⌈>	**Ge**	**72**		ug/L			81434	86895	1	KED
|	**Cu**	**63**	**0.000**	ug/L	0.003	2622	101	109	18	KED
|	**Cu**	**65**	**0.001**	ug/L	0.003	247	43	49	16	KED
|	**Zn**	**66**	**0.089**	ug/L	0.034	38	120	193	14	KED
|	**Zn**	**67**	**-0.003**	ug/L	0.053	2118	24	25	24	KED
⌊	**As**	**75**	**0.007**	ug/L	0.010	150	6	8	38	KED
	Y	**89**		ug/L			364136	380457	0	Standard
	Kr	**83**		ug/L			82	102	7	Standard
⌈>	**In-1**	**115**		ug/L			20535	22526	0	KED
|	**Cd**	**111**	**0.005**	ug/L	0.000	1	0	2	0	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.003	709	2	3	94	KED
⌈>	**In**	**115**		ug/L			1197866	1291453	2	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.001	69	66	47	38	Standard
⌈>	**Tb**	**159**		ug/L			2824882	2925237	2	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	12	756	918	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVA
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 00:17:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	11074	3	Standard
	Cl	**37**		ug/L			3100979	3286100	5	Standard
⌈>	**Sc**	**45**		ug/L			619331	654894	0	Standard
⌊	**Mn**	**55**	**55.080**	ug/L	1.472	2	377	1021574	1	Standard
⌈>	**Ge**	**72**		ug/L			81434	85525	0	KED
|	**Cu**	**63**	**46.849**	ug/L	1.110	2	101	272877	1	KED
|	**Cu**	**65**	**46.473**	ug/L	0.275	0	43	135831	1	KED
|	**Zn**	**66**	**48.864**	ug/L	1.359	2	120	35063	1	KED
|	**Zn**	**67**	**50.412**	ug/L	1.094	2	24	6022	1	KED
⌊	**As**	**75**	**48.573**	ug/L	1.040	2	6	16675	1	KED
	Y	**89**		ug/L			364136	384247	3	Standard
	Kr	**83**		ug/L			82	95	9	Standard
⌈>	**In-1**	**115**		ug/L			20535	21730	0	KED
|	**Cd**	**111**	**49.853**	ug/L	1.686	3	0	18147	2	KED
⌊	**Cd**	**114**	**49.324**	ug/L	1.098	2	2	47669	1	KED
⌈>	**In**	**115**		ug/L			1197866	1240815	0	Standard
⌊	**Ag**	**107**	**51.868**	ug/L	1.597	3	66	886041	2	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3002480	1	Standard
⌊	**Pb**	**208**	**48.139**	ug/L	1.040	2	756	6366891	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBA
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 00:24:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	11099	2	Standard
	Cl	**37**		ug/L			3100979	3212496	1	Standard
⌈>	**Sc**	**45**		ug/L			619331	660978	0	Standard
⌊	**Mn**	**55**	**-0.003**	ug/L	0.000	10	377	354	2	Standard
⌈>	**Ge**	**72**		ug/L			81434	86588	2	KED
|	**Cu**	**63**	**-0.002**	ug/L	0.004	165	101	95	20	KED
|	**Cu**	**65**	**0.003**	ug/L	0.004	132	43	53	18	KED
|	**Zn**	**66**	**-0.003**	ug/L	0.022	699	120	125	11	KED
|	**Zn**	**67**	**-0.024**	ug/L	0.080	331	24	22	43	KED
⌊	**As**	**75**	**0.002**	ug/L	0.005	298	6	6	25	KED
	Y	**89**		ug/L			364136	385793	1	Standard
	Kr	**83**		ug/L			82	85	12	Standard
⌈>	**In-1**	**115**		ug/L			20535	22070	1	KED
|	**Cd**	**111**	**0.004**	ug/L	0.001	36	0	2	21	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.003	744	2	2	96	KED
⌈>	**In**	**115**		ug/L			1197866	1288003	3	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.001	87	66	85	12	Standard
⌈>	**Tb**	**159**		ug/L			2824882	2984246	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	142	756	829	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0156-07
Sample Dil Factor: 100
Comments:
Sample Date/Time: Wednesday, August 04, 2021 00:28:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	16803	3	Standard
	Cl	**37**		ug/L			3100979	3114785	2	Standard
⌈>	**Sc**	**45**		ug/L			619331	686156	1	Standard
⌊	**Mn**	**55**	**34.018**	ug/L	0.782	2	377	661203	1	Standard
⌈>	**Ge**	**72**		ug/L			81434	87915	1	KED
|	**Cu**	**63**	**6.155**	ug/L	0.186	3	101	36944	2	KED
|	**Cu**	**65**	**6.024**	ug/L	0.030	0	43	18137	0	KED
|	**Zn**	**66**	**66.806**	ug/L	1.258	1	120	49232	1	KED
|	**Zn**	**67**	**62.559**	ug/L	1.134	1	24	7676	1	KED
⌊	**As**	**75**	**77.258**	ug/L	0.699	0	6	27262	0	KED
	Y	**89**		ug/L			364136	421871	1	Standard
	Kr	**83**		ug/L			82	106	16	Standard
⌈>	**In-1**	**115**		ug/L			20535	22200	1	KED
|	**Cd**	**111**	**0.174**	ug/L	0.009	5	0	65	4	KED
⌊	**Cd**	**114**	**0.188**	ug/L	0.008	4	2	188	5	KED
⌈>	**In**	**115**		ug/L			1197866	1269101	2	Standard
⌊	**Ag**	**107**	**0.043**	ug/L	0.002	5	66	829	3	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3024306	0	Standard
⌊	**Pb**	**208**	**3.616**	ug/L	0.043	1	756	482558	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0156-10
Sample Dil Factor: 100
Comments:
Sample Date/Time: Wednesday, August 04, 2021 00:31:58
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	16496	4	Standard
	Cl	**37**		ug/L			3100979	3143703	1	Standard
⌈>	**Sc**	**45**		ug/L			619331	679912	2	Standard
⌊	**Mn**	**55**	**38.076**	ug/L	1.020	2	377	733182	1	Standard
⌈>	**Ge**	**72**		ug/L			81434	88528	0	KED
|	**Cu**	**63**	**6.307**	ug/L	0.052	0	101	38123	0	KED
|	**Cu**	**65**	**6.236**	ug/L	0.161	2	43	18905	2	KED
|	**Zn**	**66**	**7.931**	ug/L	0.083	1	120	6001	0	KED
|	**Zn**	**67**	**8.753**	ug/L	0.389	4	24	1104	4	KED
⌊	**As**	**75**	**110.814**	ug/L	0.435	0	6	39375	0	KED
	Y	**89**		ug/L			364136	407262	1	Standard
	Kr	**83**		ug/L			82	97	8	Standard
⌈>	**In-1**	**115**		ug/L			20535	22174	1	KED
|	**Cd**	**111**	**0.075**	ug/L	0.018	24	0	28	24	KED
⌊	**Cd**	**114**	**0.090**	ug/L	0.015	16	2	91	14	KED
⌈>	**In**	**115**		ug/L			1197866	1289948	1	Standard
⌊	**Ag**	**107**	**0.032**	ug/L	0.002	5	66	648	6	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3016698	1	Standard
⌊	**Pb**	**208**	**2.870**	ug/L	0.090	3	756	382065	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0199-04
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 00:35:47
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10367	17695	5	Standard
	Cl	37		ug/L			3100979	3188152	1	Standard
⌈>	Sc	45		ug/L			619331	694405	2	Standard
⌊	Mn	55	165.219	ug/L	4.526	2	377	3247603	0	Standard
⌈>	Ge	72		ug/L			81434	85557	0	KED
|	Cu	63	11.524	ug/L	0.033	0	101	67235	0	KED
|	Cu	65	11.325	ug/L	0.117	1	43	33146	0	KED
|	Zn	66	40.303	ug/L	0.620	1	120	28956	1	KED
|	Zn	67	38.332	ug/L	0.582	1	24	4588	1	KED
⌊	As	75	3.840	ug/L	0.102	2	6	1324	2	KED
	Y	89		ug/L			364136	477521	0	Standard
	Kr	83		ug/L			82	106	7	Standard
⌈>	In-1	115		ug/L			20535	21307	5	KED
|	Cd	111	0.054	ug/L	0.012	22	0	20	21	KED
⌊	Cd	114	0.071	ug/L	0.006	8	2	69	6	KED
⌈>	In	115		ug/L			1197866	1229857	1	Standard
⌊	Ag	107	0.061	ug/L	0.000	0	66	1095	2	Standard
⌈>	Tb	159		ug/L			2824882	3011641	1	Standard
⌊	Pb	208	6.893	ug/L	0.139	2	756	915071	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0199-09
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 00:39:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10367	18963	5	Standard
	Cl	37		ug/L			3100979	3065706	1	Standard
>	Sc	45		ug/L			619331	691863	3	Standard
	Mn	55	115.405	ug/L	2.281	1	377	2260087	1	Standard
>	Ge	72		ug/L			81434	87107	0	KED
	Cu	63	14.014	ug/L	0.154	1	101	83216	0	KED
	Cu	65	13.984	ug/L	0.045	0	43	41661	0	KED
	Zn	66	32.417	ug/L	0.710	2	120	23735	1	KED
	Zn	67	31.138	ug/L	0.120	0	24	3799	0	KED
	As	75	3.952	ug/L	0.091	2	6	1388	1	KED
	Y	89		ug/L			364136	475998	3	Standard
	Kr	83		ug/L			82	110	9	Standard
>	In-1	115		ug/L			20535	22166	2	KED
	Cd	111	0.041	ug/L	0.002	4	0	16	5	KED
	Cd	114	0.044	ug/L	0.018	40	2	46	37	KED
>	In	115		ug/L			1197866	1233916	3	Standard
	Ag	107	0.056	ug/L	0.002	3	66	1014	4	Standard
>	Tb	159		ug/L			2824882	2973085	2	Standard
	Pb	208	6.911	ug/L	0.089	1	756	905811	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0206-17
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, August 04, 2021 00:44:49
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	21679	4	Standard
	Cl	**37**		ug/L			3100979	2977296	1	Standard
⌈>	**Sc**	**45**		ug/L			619331	676253	3	Standard
⌊	**Mn**	**55**	**53.513**	ug/L	1.302	2	377	1025511	5	Standard
⌈>	**Ge**	**72**		ug/L			81434	85240	2	KED
|	**Cu**	**63**	**1.772**	ug/L	0.058	3	101	10384	1	KED
|	**Cu**	**65**	**1.788**	ug/L	0.070	3	43	5250	3	KED
|	**Zn**	**66**	**22.861**	ug/L	0.433	1	120	16420	3	KED
|	**Zn**	**67**	**20.390**	ug/L	0.444	2	24	2442	1	KED
⌊	**As**	**75**	**0.015**	ug/L	0.006	41	6	11	18	KED
	Y	**89**		ug/L			364136	381720	1	Standard
	Kr	**83**		ug/L			82	160	84	Standard
⌈>	**In-1**	**115**		ug/L			20535	22107	0	KED
|	**Cd**	**111**	**0.021**	ug/L	0.006	30	0	8	26	KED
⌊	**Cd**	**114**	**0.011**	ug/L	0.005	42	2	13	34	KED
⌈>	**In**	**115**		ug/L			1197866	1234906	3	Standard
⌊	**Ag**	**107**	**0.004**	ug/L	0.008	199	66	130	93	Standard
⌈>	**Tb**	**159**		ug/L			2824882	2944982	3	Standard
⌊	**Pb**	**208**	**0.080**	ug/L	0.003	3	756	11129	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0206-21
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, August 04, 2021 00:48:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	20118	0	Standard
	Cl	**37**		ug/L			3100979	2970650	1	Standard
⌈>	**Sc**	**45**		ug/L			619331	686742	1	Standard
⌊	**Mn**	**55**	**216.874**	ug/L	2.472	1	377	4217591	2	Standard
⌈>	**Ge**	**72**		ug/L			81434	85659	2	KED
|	**Cu**	**63**	**6.309**	ug/L	0.044	0	101	36894	1	KED
|	**Cu**	**65**	**6.232**	ug/L	0.075	1	43	18279	1	KED
|	**Zn**	**66**	**1.254**	ug/L	0.085	6	120	1024	6	KED
|	**Zn**	**67**	**1.074**	ug/L	0.186	17	24	153	16	KED
⌊	**As**	**75**	**0.010**	ug/L	0.001	8	6	9	2	KED
	Y	**89**		ug/L			364136	387065	0	Standard
	Kr	**83**		ug/L			82	85	26	Standard
⌈>	**In-1**	**115**		ug/L			20535	21974	1	KED
|	**Cd**	**111**	**0.008**	ug/L	0.003	34	0	4	26	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.004	154	2	5	78	KED
⌈>	**In**	**115**		ug/L			1197866	1282027	1	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	24	66	55	9	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3009365	1	Standard
⌊	**Pb**	**208**	**0.060**	ug/L	0.002	2	756	8752	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0206-22
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, August 04, 2021 00:52:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	21260	4	Standard
	Cl	**37**		ug/L			3100979	3007382	0	Standard
⌈>	**Sc**	**45**		ug/L			619331	674517	1	Standard
⌊	**Mn**	**55**	**196.924**	ug/L	8.227	4	377	3759813	2	Standard
⌈>	**Ge**	**72**		ug/L			81434	84494	0	KED
|	**Cu**	**63**	**0.409**	ug/L	0.002	0	101	2456	1	KED
|	**Cu**	**65**	**0.409**	ug/L	0.022	5	43	1225	5	KED
|	**Zn**	**66**	**0.607**	ug/L	0.011	1	120	553	2	KED
|	**Zn**	**67**	**0.517**	ug/L	0.091	17	24	85	11	KED
⌊	**As**	**75**	**0.008**	ug/L	0.004	49	6	9	15	KED
	Y	**89**		ug/L			364136	375838	1	Standard
	Kr	**83**		ug/L			82	86	12	Standard
⌈>	**In-1**	**115**		ug/L			20535	21786	1	KED
|	**Cd**	**111**	**-0.000**	ug/L	0.000	17	0	0		KED
⌊	**Cd**	**114**	**-0.000**	ug/L	0.002	684	2	2	98	KED
⌈>	**In**	**115**		ug/L			1197866	1280466	1	Standard
⌊	**Ag**	**107**	**-0.002**	ug/L	0.000	13	66	32	15	Standard
⌈>	**Tb**	**159**		ug/L			2824882	2981003	0	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	9	756	1077	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0740-DUP2
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, August 04, 2021 00:56:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	21118	1	Standard
	Cl	**37**		ug/L			3100979	3094222	3	Standard
⌈>	**Sc**	**45**		ug/L			619331	700754	1	Standard
⌊	**Mn**	**55**	**202.749**	ug/L	1.848	0	377	4023176	1	Standard
⌈>	**Ge**	**72**		ug/L			81434	86893	0	KED
|	**Cu**	**63**	**0.407**	ug/L	0.000	0	101	2518	0	KED
|	**Cu**	**65**	**0.408**	ug/L	0.030	7	43	1256	6	KED
|	**Zn**	**66**	**0.696**	ug/L	0.044	6	120	633	4	KED
|	**Zn**	**67**	**0.548**	ug/L	0.078	14	24	92	10	KED
⌊	**As**	**75**	**-0.004**	ug/L	0.001	21	6	5	5	KED
	Y	**89**		ug/L			364136	388356	1	Standard
	Kr	**83**		ug/L			82	95	8	Standard
⌈>	**In-1**	**115**		ug/L			20535	22199	0	KED
|	**Cd**	**111**	**0.001**	ug/L	0.001	228	0	1	43	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.002	204	2	3	51	KED
⌈>	**In**	**115**		ug/L			1197866	1250247	0	Standard
⌊	**Ag**	**107**	**-0.002**	ug/L	0.000	25	66	36	22	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3019266	0	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	27	756	1042	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0740-MS2
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, August 04, 2021 01:00:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	20516	3	Standard
	Cl	**37**		ug/L			3100979	3163626	0	Standard
⌈>	**Sc**	**45**		ug/L			619331	696770	1	Standard
⌊	**Mn**	**55**	**211.130**	ug/L	5.781	2	377	4165290	2	Standard
⌈>	**Ge**	**72**		ug/L			81434	87017	0	KED
|	**Cu**	**63**	**12.041**	ug/L	0.193	1	101	71442	1	KED
|	**Cu**	**65**	**12.009**	ug/L	0.138	1	43	35746	0	KED
|	**Zn**	**66**	**38.118**	ug/L	0.764	2	120	27861	1	KED
|	**Zn**	**67**	**35.949**	ug/L	0.148	0	24	4377	0	KED
⌊	**As**	**75**	**11.907**	ug/L	0.065	0	6	4164	0	KED
	Y	**89**		ug/L			364136	388037	0	Standard
	Kr	**83**		ug/L			82	95	9	Standard
⌈>	**In-1**	**115**		ug/L			20535	21986	0	KED
|	**Cd**	**111**	**12.393**	ug/L	0.271	2	0	4565	1	KED
⌊	**Cd**	**114**	**12.105**	ug/L	0.150	1	2	11839	0	KED
⌈>	**In**	**115**		ug/L			1197866	1219545	1	Standard
⌊	**Ag**	**107**	**12.953**	ug/L	0.391	3	66	217476	1	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3026079	1	Standard
⌊	**Pb**	**208**	**12.074**	ug/L	0.156	1	756	1610254	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLE
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 01:06:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	13210	5	Standard
	Cl	**37**		ug/L			3100979	3040611	2	Standard
⌈>	**Sc**	**45**		ug/L			619331	676795	0	Standard
⌊	**Mn**	**55**	**0.014**	ug/L	0.001	5	377	683	2	Standard
⌈>	**Ge**	**72**		ug/L			81434	85949	0	KED
|	**Cu**	**63**	**0.003**	ug/L	0.001	31	101	126	5	KED
|	**Cu**	**65**	**0.005**	ug/L	0.001	22	43	61	6	KED
|	**Zn**	**66**	**0.092**	ug/L	0.032	34	120	193	12	KED
|	**Zn**	**67**	**0.095**	ug/L	0.053	56	24	36	16	KED
⌊	**As**	**75**	**-0.006**	ug/L	0.006	102	6	4	43	KED
	Y	**89**		ug/L			364136	382491	1	Standard
	Kr	**83**		ug/L			82	106	4	Standard
⌈>	**In-1**	**115**		ug/L			20535	22728	2	KED
|	**Cd**	**111**	**0.004**	ug/L	0.003	77	0	2	43	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.003	322	2	3	88	KED
⌈>	**In**	**115**		ug/L			1197866	1299159	2	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	33	66	48	16	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3031712	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	72	756	944	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVB
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 01:10:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	11029	0	Standard
	Cl	**37**		ug/L			3100979	3271418	1	Standard
⌈>	**Sc**	**45**		ug/L			619331	666551	0	Standard
⌊	**Mn**	**55**	**53.290**	ug/L	1.659	3	377	1006150	3	Standard
⌈>	**Ge**	**72**		ug/L			81434	86352	1	KED
|	**Cu**	**63**	**47.229**	ug/L	1.038	2	101	277747	1	KED
|	**Cu**	**65**	**46.040**	ug/L	0.342	0	43	135873	1	KED
|	**Zn**	**66**	**50.123**	ug/L	1.409	2	120	36311	2	KED
|	**Zn**	**67**	**50.740**	ug/L	0.309	0	24	6121	1	KED
⌊	**As**	**75**	**49.010**	ug/L	0.518	1	6	16989	0	KED
	Y	**89**		ug/L			364136	385139	4	Standard
	Kr	**83**		ug/L			82	90	6	Standard
⌈>	**In-1**	**115**		ug/L			20535	21543	2	KED
|	**Cd**	**111**	**49.674**	ug/L	1.930	3	0	17932	5	KED
⌊	**Cd**	**114**	**48.953**	ug/L	2.029	4	2	46917	5	KED
⌈>	**In**	**115**		ug/L			1197866	1240225	0	Standard
⌊	**Ag**	**107**	**49.956**	ug/L	1.173	2	66	853104	2	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3088779	1	Standard
⌊	**Pb**	**208**	**47.067**	ug/L	0.809	1	756	6404096	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBB
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 01:16:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	11070	5	Standard
	Cl	**37**		ug/L			3100979	3131176	1	Standard
⌈>	**Sc**	**45**		ug/L			619331	666008	1	Standard
⌊	**Mn**	**55**	**-0.001**	ug/L	0.001	92	377	385	3	Standard
⌈>	**Ge**	**72**		ug/L			81434	87418	2	KED
|	**Cu**	**63**	**-0.003**	ug/L	0.003	85	101	90	15	KED
|	**Cu**	**65**	**0.003**	ug/L	0.002	50	43	56	7	KED
|	**Zn**	**66**	**0.016**	ug/L	0.032	200	120	140	15	KED
|	**Zn**	**67**	**0.012**	ug/L	0.033	287	24	27	14	KED
⌊	**As**	**75**	**-0.000**	ug/L	0.002	693	6	6	11	KED
	Y	**89**		ug/L			364136	378701	1	Standard
	Kr	**83**		ug/L			82	98	21	Standard
⌈>	**In-1**	**115**		ug/L			20535	22432	1	KED
|	**Cd**	**111**	**0.005**	ug/L	0.003	54	0	2	33	KED
⌊	**Cd**	**114**	**-0.000**	ug/L	0.001	334	2	2	45	KED
⌈>	**In**	**115**		ug/L			1197866	1275301	1	Standard
⌊	**Ag**	**107**	**0.000**	ug/L	0.001	272	66	75	17	Standard
⌈>	**Tb**	**159**		ug/L			2824882	2987473	1	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	79	756	770	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0206-02
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 01:20:44
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	27865	2	Standard
	Cl	**37**		ug/L			3100979	3022759	0	Standard
⌈>	**Sc**	**45**		ug/L			619331	715136	1	Standard
⌊	**Mn**	**55**	**51.102**	ug/L	0.180	0	377	1035171	1	Standard
⌈>	**Ge**	**72**		ug/L			81434	83623	0	KED
|	**Cu**	**63**	**5.357**	ug/L	0.029	0	101	30604	0	KED
|	**Cu**	**65**	**5.315**	ug/L	0.083	1	43	15227	1	KED
|	**Zn**	**66**	**113.055**	ug/L	1.434	1	120	79171	1	KED
|	**Zn**	**67**	**102.363**	ug/L	2.786	2	24	11933	2	KED
⌊	**As**	**75**	**0.029**	ug/L	0.017	59	6	15	36	KED
	Y	**89**		ug/L			364136	379696	0	Standard
	Kr	**83**		ug/L			82	97	11	Standard
⌈>	**In-1**	**115**		ug/L			20535	21657	1	KED
|	**Cd**	**111**	**0.012**	ug/L	0.012	102	0	5	83	KED
⌊	**Cd**	**114**	**0.012**	ug/L	0.006	50	2	13	43	KED
⌈>	**In**	**115**		ug/L			1197866	1214331	3	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.001	360	66	62	22	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3012942	1	Standard
⌊	**Pb**	**208**	**0.067**	ug/L	0.001	1	756	9753	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0206-04
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 01:24:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	27970	5	Standard
	Cl	**37**		ug/L			3100979	2983956	1	Standard
⌈>	**Sc**	**45**		ug/L			619331	730633	2	Standard
⌊	**Mn**	**55**	**110.017**	ug/L	4.634	4	377	2275155	3	Standard
⌈>	**Ge**	**72**		ug/L			81434	86965	1	KED
|	**Cu**	**63**	**0.309**	ug/L	0.008	2	101	1936	2	KED
|	**Cu**	**65**	**0.320**	ug/L	0.011	3	43	997	2	KED
|	**Zn**	**66**	**50.682**	ug/L	0.085	0	120	36981	0	KED
|	**Zn**	**67**	**45.985**	ug/L	2.059	4	24	5587	3	KED
⌊	**As**	**75**	**0.037**	ug/L	0.005	14	6	19	10	KED
	Y	**89**		ug/L			364136	385233	2	Standard
	Kr	**83**		ug/L			82	84	17	Standard
⌈>	**In-1**	**115**		ug/L			20535	22187	0	KED
|	**Cd**	**111**	**0.007**	ug/L	0.007	90	0	3	66	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.001	78	2	3	25	KED
⌈>	**In**	**115**		ug/L			1197866	1208982	2	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.000	66	66	60	9	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3041825	3	Standard
⌊	**Pb**	**208**	**0.026**	ug/L	0.003	9	756	4357	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0206-06
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 01:28:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	27381	3	Standard
	Cl	**37**		ug/L			3100979	2968718	0	Standard
⌈>	**Sc**	**45**		ug/L			619331	714749	4	Standard
⌊	**Mn**	**55**	**28.047**	ug/L	1.096	3	377	567393	1	Standard
⌈>	**Ge**	**72**		ug/L			81434	85642	1	KED
|	**Cu**	**63**	**0.275**	ug/L	0.015	5	101	1710	3	KED
|	**Cu**	**65**	**0.277**	ug/L	0.017	6	43	855	5	KED
|	**Zn**	**66**	**7.439**	ug/L	0.221	2	120	5453	3	KED
|	**Zn**	**67**	**6.781**	ug/L	0.558	8	24	833	8	KED
⌊	**As**	**75**	**0.040**	ug/L	0.009	22	6	20	16	KED
	Y	**89**		ug/L			364136	386046	4	Standard
	Kr	**83**		ug/L			82	100	9	Standard
⌈>	**In-1**	**115**		ug/L			20535	21574	5	KED
|	**Cd**	**111**	**0.010**	ug/L	0.007	67	0	4	49	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.006	218	2	4	107	KED
⌈>	**In**	**115**		ug/L			1197866	1188689	2	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.001	202	66	59	27	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3011698	3	Standard
⌊	**Pb**	**208**	**0.034**	ug/L	0.003	8	756	5371	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0206-08
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 01:32:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	23249	6	Standard
	Cl	**37**		ug/L			3100979	3063051	1	Standard
⌈>	**Sc**	**45**		ug/L			619331	712683	0	Standard
⌊	**Mn**	**55**	**0.557**	ug/L	0.011	1	377	11678	2	Standard
⌈>	**Ge**	**72**		ug/L			81434	88199	1	KED
|	**Cu**	**63**	**0.902**	ug/L	0.009	0	101	5523	1	KED
|	**Cu**	**65**	**0.908**	ug/L	0.029	3	43	2784	4	KED
|	**Zn**	**66**	**1.307**	ug/L	0.040	3	120	1094	4	KED
|	**Zn**	**67**	**1.248**	ug/L	0.168	13	24	179	9	KED
⌊	**As**	**75**	**0.733**	ug/L	0.021	2	6	266	4	KED
	Y	**89**		ug/L			364136	383499	2	Standard
	Kr	**83**		ug/L			82	98	7	Standard
⌈>	**In-1**	**115**		ug/L			20535	22920	0	KED
|	**Cd**	**111**	**0.001**	ug/L	0.003	209	0	1	69	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.002	166	2	1	149	KED
⌈>	**In**	**115**		ug/L			1197866	1261257	2	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	28	66	51	9	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3106842	2	Standard
⌊	**Pb**	**208**	**0.020**	ug/L	0.001	5	756	3515	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0206-10
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 01:36:01
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	22619	1	Standard
	Cl	**37**		ug/L			3100979	3069669	4	Standard
⌈>	**Sc**	**45**		ug/L			619331	710331	1	Standard
⌊	**Mn**	**55**	**0.517**	ug/L	0.023	4	377	10817	2	Standard
⌈>	**Ge**	**72**		ug/L			81434	88531	1	KED
|	**Cu**	**63**	**4.372**	ug/L	0.024	0	101	26464	0	KED
|	**Cu**	**65**	**4.457**	ug/L	0.146	3	43	13524	1	KED
|	**Zn**	**66**	**1.720**	ug/L	0.039	2	120	1403	3	KED
|	**Zn**	**67**	**1.422**	ug/L	0.137	9	24	201	7	KED
⌊	**As**	**75**	**0.744**	ug/L	0.034	4	6	270	3	KED
	Y	**89**		ug/L			364136	387875	0	Standard
	Kr	**83**		ug/L			82	111	19	Standard
⌈>	**In-1**	**115**		ug/L			20535	22792	0	KED
|	**Cd**	**111**	**0.001**	ug/L	0.004	680	0	1	114	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.003	2400	2	2	107	KED
⌈>	**In**	**115**		ug/L			1197866	1283738	1	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.000	80	66	64	8	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3083226	1	Standard
⌊	**Pb**	**208**	**0.041**	ug/L	0.001	1	756	6455	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0206-12
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 01:39:50
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	28304	2	Standard
	Cl	**37**		ug/L			3100979	3177516	1	Standard
⌈>	**Sc**	**45**		ug/L			619331	733793	0	Standard
⌊	**Mn**	**55**	**77.832**	ug/L	1.970	2	377	1617526	2	Standard
⌈>	**Ge**	**72**		ug/L			81434	86476	1	KED
|	**Cu**	**63**	**0.141**	ug/L	0.011	7	101	935	7	KED
|	**Cu**	**65**	**0.146**	ug/L	0.005	3	43	478	3	KED
|	**Zn**	**66**	**48.746**	ug/L	0.330	0	120	35375	2	KED
|	**Zn**	**67**	**43.751**	ug/L	1.602	3	24	5287	2	KED
⌊	**As**	**75**	**0.033**	ug/L	0.008	25	6	17	16	KED
	Y	**89**		ug/L			364136	390044	0	Standard
	Kr	**83**		ug/L			82	80	14	Standard
⌈>	**In-1**	**115**		ug/L			20535	22254	1	KED
|	**Cd**	**111**	**0.007**	ug/L	0.003	42	0	3	31	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.003	256	2	3	79	KED
⌈>	**In**	**115**		ug/L			1197866	1208684	1	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	6	66	51	3	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3096761	1	Standard
⌊	**Pb**	**208**	**0.047**	ug/L	0.001	1	756	7181	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0206-14
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 01:43:39
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	27343	5	Standard
	Cl	**37**		ug/L			3100979	3034271	0	Standard
>	**Sc**	**45**		ug/L			619331	749324	2	Standard
	Mn	**55**	**77.723**	ug/L	1.464	1	377	1649179	1	Standard
>	**Ge**	**72**		ug/L			81434	87568	1	KED
	Cu	**63**	**0.478**	ug/L	0.016	3	101	2959	1	KED
	Cu	**65**	**0.480**	ug/L	0.018	3	43	1483	4	KED
	Zn	**66**	**22.962**	ug/L	0.235	1	120	16940	1	KED
	Zn	**67**	**21.823**	ug/L	0.455	2	24	2684	2	KED
	As	**75**	**0.039**	ug/L	0.006	15	6	20	9	KED
	Y	**89**		ug/L			364136	407764	1	Standard
	Kr	**83**		ug/L			82	93	8	Standard
>	**In-1**	**115**		ug/L			20535	22805	1	KED
	Cd	**111**	**0.007**	ug/L	0.003	35	0	3	25	KED
	Cd	**114**	**0.003**	ug/L	0.006	201	2	5	101	KED
>	**In**	**115**		ug/L			1197866	1233382	4	Standard
	Ag	**107**	**-0.001**	ug/L	0.001	42	66	46	20	Standard
>	**Tb**	**159**		ug/L			2824882	3108736	1	Standard
	Pb	**208**	**0.029**	ug/L	0.000	0	756	4856	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0206-16
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 01:47:52
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	29198	2	Standard
	Cl	**37**		ug/L			3100979	3097517	2	Standard
>	**Sc**	**45**		ug/L			619331	753431	1	Standard
	Mn	**55**	**106.760**	ug/L	1.353	1	377	2278181	2	Standard
>	**Ge**	**72**		ug/L			81434	87491	0	KED
	Cu	**63**	**0.226**	ug/L	0.003	1	101	1456	1	KED
	Cu	**65**	**0.230**	ug/L	0.011	4	43	733	4	KED
	Zn	**66**	**21.600**	ug/L	0.602	2	120	15929	2	KED
	Zn	**67**	**20.706**	ug/L	0.298	1	24	2546	1	KED
	As	**75**	**0.026**	ug/L	0.012	45	6	15	26	KED
	Y	**89**		ug/L			364136	404358	1	Standard
	Kr	**83**		ug/L			82	100	21	Standard
>	**In-1**	**115**		ug/L			20535	22597	1	KED
	Cd	**111**	**0.008**	ug/L	0.007	89	0	4	66	KED
	Cd	**114**	**0.003**	ug/L	0.004	147	2	5	75	KED
>	**In**	**115**		ug/L			1197866	1244313	4	Standard
	Ag	**107**	**-0.001**	ug/L	0.000	10	66	47	4	Standard
>	**Tb**	**159**		ug/L			2824882	3137098	0	Standard
	Pb	**208**	**0.015**	ug/L	0.000	3	756	2930	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0206-18
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 01:52:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	29000	3	Standard
	Cl	**37**		ug/L			3100979	3076064	3	Standard
⌈>	**Sc**	**45**		ug/L			619331	750063	0	Standard
⌊	**Mn**	**55**	**93.643**	ug/L	3.597	3	377	1989124	3	Standard
⌈>	**Ge**	**72**		ug/L			81434	88328	0	KED
|	**Cu**	**63**	**0.922**	ug/L	0.036	3	101	5653	3	KED
|	**Cu**	**65**	**0.935**	ug/L	0.037	3	43	2867	3	KED
|	**Zn**	**66**	**31.517**	ug/L	0.623	1	120	23405	1	KED
|	**Zn**	**67**	**29.286**	ug/L	0.567	1	24	3625	2	KED
⌊	**As**	**75**	**0.047**	ug/L	0.008	15	6	23	11	KED
	Y	**89**		ug/L			364136	394509	2	Standard
	Kr	**83**		ug/L			82	93	7	Standard
⌈>	**In-1**	**115**		ug/L			20535	23212	1	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.001	70	0	0	173	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.002	372	2	3	56	KED
⌈>	**In**	**115**		ug/L			1197866	1228758	3	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.001	68	66	47	34	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3100964	0	Standard
⌊	**Pb**	**208**	**0.059**	ug/L	0.001	1	756	8919	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLF
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 01:59:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	13315	2	Standard
	Cl	**37**		ug/L			3100979	2995982	1	Standard
⌈>	**Sc**	**45**		ug/L			619331	711279	0	Standard
⌊	**Mn**	**55**	**0.004**	ug/L	0.003	85	377	515	13	Standard
⌈>	**Ge**	**72**		ug/L			81434	92463	1	KED
|	**Cu**	**63**	**0.005**	ug/L	0.002	36	101	144	8	KED
|	**Cu**	**65**	**0.002**	ug/L	0.003	210	43	53	19	KED
|	**Zn**	**66**	**0.093**	ug/L	0.015	15	120	208	5	KED
|	**Zn**	**67**	**0.009**	ug/L	0.017	180	24	28	6	KED
⌊	**As**	**75**	**-0.012**	ug/L	0.005	41	6	2	80	KED
	Y	**89**		ug/L			364136	394287	1	Standard
	Kr	**83**		ug/L			82	109	19	Standard
⌈>	**In-1**	**115**		ug/L			20535	24011	0	KED
|	**Cd**	**111**	**0.003**	ug/L	0.003	98	0	2	49	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.001	1361	2	2	42	KED
⌈>	**In**	**115**		ug/L			1197866	1288997	3	Standard
⌊	**Ag**	**107**	**-0.003**	ug/L	0.001	19	66	22	43	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3126343	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	52	756	922	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVC
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 02:03:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	12059	3	Standard
	Cl	**37**		ug/L			3100979	3314671	0	Standard
⌈>	**Sc**	**45**		ug/L			619331	688039	2	Standard
⌊	**Mn**	**55**	**54.345**	ug/L	2.292	4	377	1058553	2	Standard
⌈>	**Ge**	**72**		ug/L			81434	91297	0	KED
|	**Cu**	**63**	**45.876**	ug/L	0.291	0	101	285274	0	KED
|	**Cu**	**65**	**45.314**	ug/L	0.505	1	43	141383	1	KED
|	**Zn**	**66**	**47.913**	ug/L	0.394	0	120	36709	0	KED
|	**Zn**	**67**	**47.761**	ug/L	1.299	2	24	6093	2	KED
⌊	**As**	**75**	**48.474**	ug/L	0.355	0	6	17766	0	KED
	Y	**89**		ug/L			364136	389924	0	Standard
	Kr	**83**		ug/L			82	101	7	Standard
⌈>	**In-1**	**115**		ug/L			20535	23843	1	KED
|	**Cd**	**111**	**47.336**	ug/L	0.821	1	0	18906	1	KED
⌊	**Cd**	**114**	**46.959**	ug/L	1.133	2	2	49793	2	KED
⌈>	**In**	**115**		ug/L			1197866	1214004	1	Standard
⌊	**Ag**	**107**	**46.547**	ug/L	0.661	1	66	778175	2	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3090226	0	Standard
⌊	**Pb**	**208**	**48.038**	ug/L	0.616	1	756	6540359	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBC
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 02:10:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	11623	4	Standard
	Cl	**37**		ug/L			3100979	3164183	2	Standard
⌈>	**Sc**	**45**		ug/L			619331	705252	1	Standard
⌊	**Mn**	**55**	**-0.004**	ug/L	0.000	6	377	357	1	Standard
⌈>	**Ge**	**72**		ug/L			81434	90694	2	KED
|	**Cu**	**63**	**-0.002**	ug/L	0.003	164	101	102	17	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.004	417	43	45	24	KED
|	**Zn**	**66**	**0.025**	ug/L	0.019	79	120	152	10	KED
|	**Zn**	**67**	**-0.032**	ug/L	0.028	89	24	22	14	KED
⌊	**As**	**75**	**-0.008**	ug/L	0.003	42	6	3	30	KED
	Y	**89**		ug/L			364136	394046	2	Standard
	Kr	**83**		ug/L			82	98	2	Standard
⌈>	**In-1**	**115**		ug/L			20535	23604	2	KED
|	**Cd**	**111**	**0.004**	ug/L	0.003	56	0	2	33	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.003	1124	2	2	98	KED
⌈>	**In**	**115**		ug/L			1197866	1270678	3	Standard
⌊	**Ag**	**107**	**0.000**	ug/L	0.001	243	66	76	16	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3069131	2	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	271	756	834	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0206-19
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 02:13:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	23301	4	Standard
	Cl	**37**		ug/L			3100979	3196827	2	Standard
⌈>	**Sc**	**45**		ug/L			619331	742347	1	Standard
⌊	**Mn**	**55**	**4.865**	ug/L	0.146	3	377	102692	2	Standard
⌈>	**Ge**	**72**		ug/L			81434	93730	1	KED
|	**Cu**	**63**	**3.268**	ug/L	0.127	3	101	20960	2	KED
|	**Cu**	**65**	**3.342**	ug/L	0.026	0	43	10752	2	KED
|	**Zn**	**66**	**3.434**	ug/L	0.173	5	120	2828	3	KED
|	**Zn**	**67**	**3.252**	ug/L	0.323	9	24	451	7	KED
⌊	**As**	**75**	**0.793**	ug/L	0.016	2	6	305	2	KED
	Y	**89**		ug/L			364136	402123	1	Standard
	Kr	**83**		ug/L			82	88	13	Standard
⌈>	**In-1**	**115**		ug/L			20535	24144	3	KED
|	**Cd**	**111**	**-0.000**	ug/L	0.000	17	0	0		KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.001	94	2	4	28	KED
⌈>	**In**	**115**		ug/L			1197866	1319486	3	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	26	66	55	12	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3214479	1	Standard
⌊	**Pb**	**208**	**0.065**	ug/L	0.002	2	756	10101	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0206-20
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 02:17:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	22625	3	Standard
	Cl	**37**		ug/L			3100979	3164627	2	Standard
⌈>	**Sc**	**45**		ug/L			619331	741010	1	Standard
⌊	**Mn**	**55**	**0.508**	ug/L	0.004	0	377	11101	1	Standard
⌈>	**Ge**	**72**		ug/L			81434	92984	0	KED
|	**Cu**	**63**	**2.252**	ug/L	0.019	0	101	14369	0	KED
|	**Cu**	**65**	**2.270**	ug/L	0.011	0	43	7258	1	KED
|	**Zn**	**66**	**3.206**	ug/L	0.097	3	120	2629	2	KED
|	**Zn**	**67**	**3.086**	ug/L	0.073	2	24	426	1	KED
⌊	**As**	**75**	**0.694**	ug/L	0.032	4	6	265	5	KED
	Y	**89**		ug/L			364136	403779	2	Standard
	Kr	**83**		ug/L			82	76	15	Standard
⌈>	**In-1**	**115**		ug/L			20535	23434	1	KED
|	**Cd**	**111**	**0.003**	ug/L	0.004	126	0	2	65	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.001	102	2	3	30	KED
⌈>	**In**	**115**		ug/L			1197866	1313699	2	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.001	92	66	48	47	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3202261	1	Standard
⌊	**Pb**	**208**	**0.015**	ug/L	0.001	9	756	2961	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0324-01
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 02:21:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	26481	2	Standard
	Cl	**37**		ug/L			3100979	3014223	4	Standard
⌈>	**Sc**	**45**		ug/L			619331	758348	3	Standard
⌊	**Mn**	**55**	**31.323**	ug/L	0.877	2	377	672681	2	Standard
⌈>	**Ge**	**72**		ug/L			81434	93263	1	KED
|	**Cu**	**63**	**6.008**	ug/L	0.083	1	101	38258	1	KED
|	**Cu**	**65**	**5.952**	ug/L	0.180	3	43	19009	1	KED
|	**Zn**	**66**	**3.753**	ug/L	0.023	0	120	3063	2	KED
|	**Zn**	**67**	**5.468**	ug/L	0.126	2	24	737	2	KED
⌊	**As**	**75**	**1.033**	ug/L	0.048	4	6	393	4	KED
	Y	**89**		ug/L			364136	440169	2	Standard
	Kr	**83**		ug/L			82	108	12	Standard
⌈>	**In-1**	**115**		ug/L			20535	24196	1	KED
|	**Cd**	**111**	**0.014**	ug/L	0.007	50	0	6	41	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.001	16	2	9	12	KED
⌈>	**In**	**115**		ug/L			1197866	1307623	3	Standard
⌊	**Ag**	**107**	**0.010**	ug/L	0.002	20	66	258	16	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3214740	1	Standard
⌊	**Pb**	**208**	**0.700**	ug/L	0.007	0	756	100056	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0324-03
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 02:25:50
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	26189	6	Standard
	Cl	**37**		ug/L			3100979	2925076	2	Standard
>	**Sc**	**45**		ug/L			619331	753525	2	Standard
	Mn	**55**	**29.716**	ug/L	0.598	2	377	634289	0	Standard
>	**Ge**	**72**		ug/L			81434	93101	1	KED
	Cu	**63**	**5.602**	ug/L	0.038	0	101	35624	1	KED
	Cu	**65**	**5.776**	ug/L	0.075	1	43	18419	1	KED
	Zn	**66**	**3.498**	ug/L	0.103	2	120	2861	4	KED
	Zn	**67**	**5.219**	ug/L	0.096	1	24	703	0	KED
	As	**75**	**1.029**	ug/L	0.088	8	6	391	8	KED
	Y	**89**		ug/L			364136	447190	0	Standard
	Kr	**83**		ug/L			82	128	12	Standard
>	**In-1**	**115**		ug/L			20535	23921	0	KED
	Cd	**111**	**0.020**	ug/L	0.008	37	0	9	33	KED
	Cd	**114**	**0.014**	ug/L	0.001	6	2	18	5	KED
>	**In**	**115**		ug/L			1197866	1297057	2	Standard
	Ag	**107**	**0.010**	ug/L	0.002	20	66	244	14	Standard
>	**Tb**	**159**		ug/L			2824882	3231803	0	Standard
	Pb	**208**	**0.691**	ug/L	0.005	0	756	99183	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-04
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 02:30:03
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	22021	5	Standard
	Cl	**37**		ug/L			3100979	3062967	1	Standard
⌈>	**Sc**	**45**		ug/L			619331	697684	1	Standard
⌊	**Mn**	**55**	**83.894**	ug/L	2.178	2	377	1657187	1	Standard
⌈>	**Ge**	**72**		ug/L			81434	89130	0	KED
|	**Cu**	**63**	**0.188**	ug/L	0.005	2	101	1249	3	KED
|	**Cu**	**65**	**0.191**	ug/L	0.004	2	43	629	2	KED
|	**Zn**	**66**	**2.990**	ug/L	0.047	1	120	2359	1	KED
|	**Zn**	**67**	**3.817**	ug/L	0.135	3	24	499	2	KED
⌊	**As**	**75**	**-0.002**	ug/L	0.003	191	6	6	18	KED
	Y	**89**		ug/L			364136	404986	1	Standard
	Kr	**83**		ug/L			82	90	15	Standard
⌈>	**In-1**	**115**		ug/L			20535	22555	0	KED
|	**Cd**	**111**	**0.957**	ug/L	0.035	3	0	362	3	KED
⌊	**Cd**	**114**	**0.885**	ug/L	0.013	1	2	890	1	KED
⌈>	**In**	**115**		ug/L			1197866	1283734	1	Standard
⌊	**Ag**	**107**	**-0.002**	ug/L	0.001	29	66	40	23	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3113125	1	Standard
⌊	**Pb**	**208**	**0.003**	ug/L	0.001	23	756	1177	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-02
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 02:33:52
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	21260	1	Standard
	Cl	**37**		ug/L			3100979	2891722	3	Standard
⌈>	**Sc**	**45**		ug/L			619331	697271	1	Standard
⌊	**Mn**	**55**	**2916.211**	ug/L	12.390	0	377	57571691	1	Standard
⌈>	**Ge**	**72**		ug/L			81434	86410	1	KED
|	**Cu**	**63**	**24.845**	ug/L	0.690	2	101	146231	1	KED
|	**Cu**	**65**	**24.816**	ug/L	0.465	1	43	73290	0	KED
|	**Zn**	**66**	**368.001**	ug/L	8.064	2	120	265961	1	KED
|	**Zn**	**67**	**333.974**	ug/L	5.152	1	24	40168	0	KED
⌊	**As**	**75**	**0.040**	ug/L	0.003	8	6	20	7	KED
	Y	**89**		ug/L			364136	505333	1	Standard
	Kr	**83**		ug/L			82	129	9	Standard
⌈>	**In-1**	**115**		ug/L			20535	22128	0	KED
|	**Cd**	**111**	**5.220**	ug/L	0.090	1	0	1936	1	KED
⌊	**Cd**	**114**	**5.094**	ug/L	0.110	2	2	5015	2	KED
⌈>	**In**	**115**		ug/L			1197866	1269368	3	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	75	66	59	11	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3109841	0	Standard
⌊	**Pb**	**208**	**0.047**	ug/L	0.000	0	756	7306	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0026-DUP1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 02:37:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	19675	0	Standard
	Cl	**37**		ug/L			3100979	2814879	2	Standard
>	**Sc**	**45**		ug/L			619331	704029	0	Standard
	Mn	**55**	**2876.572**	ug/L	15.904	0	377	57342156	0	Standard
>	**Ge**	**72**		ug/L			81434	84229	0	KED
	Cu	**63**	**25.421**	ug/L	0.374	1	101	145880	1	KED
	Cu	**65**	**24.968**	ug/L	0.355	1	43	71892	1	KED
	Zn	**66**	**372.629**	ug/L	5.616	1	120	262545	1	KED
	Zn	**67**	**338.469**	ug/L	1.849	0	24	39688	0	KED
	As	**75**	**0.045**	ug/L	0.008	17	6	21	12	KED
	Y	**89**		ug/L			364136	498747	0	Standard
	Kr	**83**		ug/L			82	138	5	Standard
>	**In-1**	**115**		ug/L			20535	21389	0	KED
	Cd	**111**	**5.140**	ug/L	0.130	2	0	1842	1	KED
	Cd	**114**	**4.980**	ug/L	0.180	3	2	4739	2	KED
>	**In**	**115**		ug/L			1197866	1268924	1	Standard
	Ag	**107**	**-0.001**	ug/L	0.001	107	66	55	29	Standard
>	**Tb**	**159**		ug/L			2824882	3071781	0	Standard
	Pb	**208**	**0.053**	ug/L	0.001	2	756	7985	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0026-MS1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 02:41:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	19791	5	Standard
	Cl	**37**		ug/L			3100979	2646901	2	Standard
⌈>	**Sc**	**45**		ug/L			619331	693162	0	Standard
⌊	**Mn**	**55**	**2910.271**	ug/L	41.600	1	377	57112872	0	Standard
⌈>	**Ge**	**72**		ug/L			81434	83186	1	KED
|	**Cu**	**63**	**45.903**	ug/L	1.999	4	101	260080	4	KED
|	**Cu**	**65**	**45.630**	ug/L	1.100	2	43	129716	2	KED
|	**Zn**	**66**	**416.910**	ug/L	12.175	2	120	290071	2	KED
|	**Zn**	**67**	**388.432**	ug/L	13.303	3	24	44981	3	KED
⌊	**As**	**75**	**23.260**	ug/L	0.897	3	6	7769	3	KED
	Y	**89**		ug/L			364136	502200	0	Standard
	Kr	**83**		ug/L			82	116	4	Standard
⌈>	**In-1**	**115**		ug/L			20535	21087	1	KED
|	**Cd**	**111**	**28.334**	ug/L	0.699	2	0	10007	0	KED
⌊	**Cd**	**114**	**28.066**	ug/L	1.060	3	2	26315	2	KED
⌈>	**In**	**115**		ug/L			1197866	1243540	1	Standard
⌊	**Ag**	**107**	**24.815**	ug/L	0.876	3	66	424778	2	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3037151	0	Standard
⌊	**Pb**	**208**	**23.606**	ug/L	0.174	0	756	3159165	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0026-MSD1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 02:47:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	18972	2	Standard
	Cl	**37**		ug/L			3100979	2646567	1	Standard
⌈>	**Sc**	**45**		ug/L			619331	680671	1	Standard
⌊	**Mn**	**55**	**2999.015**	ug/L	53.930	1	377	57790497	0	Standard
⌈>	**Ge**	**72**		ug/L			81434	80854	1	KED
|	**Cu**	**63**	**49.342**	ug/L	0.989	2	101	271684	1	KED
|	**Cu**	**65**	**48.868**	ug/L	1.467	3	43	134996	1	KED
|	**Zn**	**66**	**446.357**	ug/L	3.013	0	120	301861	0	KED
|	**Zn**	**67**	**412.472**	ug/L	8.001	1	24	46414	0	KED
⌊	**As**	**75**	**24.802**	ug/L	0.281	1	6	8052	0	KED
	Y	**89**		ug/L			364136	497200	1	Standard
	Kr	**83**		ug/L			82	148	5	Standard
⌈>	**In-1**	**115**		ug/L			20535	20436	2	KED
|	**Cd**	**111**	**30.168**	ug/L	0.988	3	0	10324	1	KED
⌊	**Cd**	**114**	**29.265**	ug/L	0.228	0	2	26602	2	KED
⌈>	**In**	**115**		ug/L			1197866	1229777	0	Standard
⌊	**Ag**	**107**	**25.706**	ug/L	0.867	3	66	435283	2	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3025339	1	Standard
⌊	**Pb**	**208**	**24.415**	ug/L	0.600	2	756	3253678	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLG
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 02:54:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	12176	2	Standard
	Cl	**37**		ug/L			3100979	3212343	2	Standard
⌈>	**Sc**	**45**		ug/L			619331	699050	2	Standard
⌊	**Mn**	**55**	**0.106**	ug/L	0.001	1	377	2532	2	Standard
⌈>	**Ge**	**72**		ug/L			81434	89961	3	KED
|	**Cu**	**63**	**0.004**	ug/L	0.001	18	101	135	5	KED
|	**Cu**	**65**	**0.005**	ug/L	0.004	82	43	62	19	KED
|	**Zn**	**66**	**0.124**	ug/L	0.010	7	120	226	5	KED
|	**Zn**	**67**	**0.042**	ug/L	0.041	98	24	31	12	KED
⌊	**As**	**75**	**-0.012**	ug/L	0.007	56	6	2	96	KED
	Y	**89**		ug/L			364136	397355	0	Standard
	Kr	**83**		ug/L			82	96	3	Standard
⌈>	**In-1**	**115**		ug/L			20535	23327	0	KED
|	**Cd**	**111**	**0.005**	ug/L	0.007	161	0	2	100	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.002	100	2	4	44	KED
⌈>	**In**	**115**		ug/L			1197866	1329613	1	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	28	66	61	4	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3161868	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	51	756	1001	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVD
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 02:58:35
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	10867	2	Standard
	Cl	**37**		ug/L			3100979	3196466	3	Standard
>	**Sc**	**45**		ug/L			619331	697318	0	Standard
	Mn	**55**	**52.050**	ug/L	1.190	2	377	1028135	2	Standard
>	**Ge**	**72**		ug/L			81434	90502	0	KED
	Cu	**63**	**44.680**	ug/L	0.920	2	101	275451	2	KED
	Cu	**65**	**45.485**	ug/L	0.360	0	43	140678	0	KED
	Zn	**66**	**48.844**	ug/L	0.965	1	120	37090	1	KED
	Zn	**67**	**48.838**	ug/L	0.804	1	24	6176	2	KED
	As	**75**	**47.314**	ug/L	0.347	0	6	17190	0	KED
	Y	**89**		ug/L			364136	399383	1	Standard
	Kr	**83**		ug/L			82	100	11	Standard
>	**In-1**	**115**		ug/L			20535	22513	2	KED
	Cd	**111**	**49.457**	ug/L	1.386	2	0	18647	0	KED
	Cd	**114**	**48.773**	ug/L	0.752	1	2	48830	1	KED
>	**In**	**115**		ug/L			1197866	1254308	2	Standard
	Ag	**107**	**50.326**	ug/L	0.753	1	66	869179	3	Standard
>	**Tb**	**159**		ug/L			2824882	3171102	1	Standard
	Pb	**208**	**48.614**	ug/L	0.542	1	756	6791565	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBD
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 03:05:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10367	10511	2	Standard
	Cl	**37**		ug/L			3100979	3154840	2	Standard
⌈>	**Sc**	**45**		ug/L			619331	685878	2	Standard
⌊	**Mn**	**55**	**0.026**	ug/L	0.004	14	377	915	6	Standard
⌈>	**Ge**	**72**		ug/L			81434	87884	0	KED
|	**Cu**	**63**	**-0.003**	ug/L	0.001	32	101	94	5	KED
|	**Cu**	**65**	**0.002**	ug/L	0.003	150	43	53	18	KED
|	**Zn**	**66**	**0.032**	ug/L	0.011	33	120	153	5	KED
|	**Zn**	**67**	**-0.083**	ug/L	0.024	28	24	15	18	KED
⌊	**As**	**75**	**-0.008**	ug/L	0.006	69	6	3	54	KED
	Y	**89**		ug/L			364136	395297	2	Standard
	Kr	**83**		ug/L			82	91	11	Standard
⌈>	**In-1**	**115**		ug/L			20535	23324	1	KED
|	**Cd**	**111**	**0.004**	ug/L	0.004	92	0	2	57	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.003	345	2	3	90	KED
⌈>	**In**	**115**		ug/L			1197866	1321320	1	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.001	213	66	67	18	Standard
⌈>	**Tb**	**159**		ug/L			2824882	3145081	1	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	55	756	789	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 03:08:58
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				10464	5	Standard
	Cl	**37**		ug/L				3156619	1	Standard
⌈>	**Sc**	**45**		ug/L				686929	2	Standard
⌊	**Mn**	**55**		ug/L				741	2	Standard
⌈>	**Ge**	**72**		ug/L				88693	5	KED
⎢	**Cu**	**63**		ug/L				102	26	KED
⎢	**Cu**	**65**		ug/L				50	7	KED
⎢	**Zn**	**66**		ug/L				121	8	KED
⎢	**Zn**	**67**		ug/L				22	22	KED
⌊	**As**	**75**		ug/L				3	31	KED
	Y	**89**		ug/L				390806	2	Standard
	Kr	**83**		ug/L				107	13	Standard
⌈>	**In-1**	**115**		ug/L				22855	1	KED
⎢	**Cd**	**111**		ug/L				1	50	KED
⌊	**Cd**	**114**		ug/L				2	72	KED
⌈>	**In**	**115**		ug/L				1304823	0	Standard
⌊	**Ag**	**107**		ug/L				57	6	Standard
⌈>	**Tb**	**159**		ug/L				3126417	0	Standard
⌊	**Pb**	**208**		ug/L				749	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVE
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 03:12:47
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10464	10662	4	Standard
	Cl	**37**		ug/L			3156619	3248158	1	Standard
⌈>	**Sc**	**45**		ug/L			686929	691234	1	Standard
⌊	**Mn**	**55**	**52.794**	ug/L	0.725	1	741	1033992	1	Standard
⌈>	**Ge**	**72**		ug/L			88693	88676	0	KED
|	**Cu**	**63**	**46.386**	ug/L	0.184	0	102	280154	0	KED
|	**Cu**	**65**	**46.533**	ug/L	0.443	0	50	141023	1	KED
|	**Zn**	**66**	**49.373**	ug/L	0.306	0	121	36729	0	KED
|	**Zn**	**67**	**48.431**	ug/L	1.373	2	22	5998	3	KED
⌊	**As**	**75**	**49.004**	ug/L	0.735	1	3	17442	1	KED
	Y	**89**		ug/L			390806	387232	0	Standard
	Kr	**83**		ug/L			107	85	11	Standard
⌈>	**In-1**	**115**		ug/L			22855	22693	0	KED
|	**Cd**	**111**	**49.285**	ug/L	0.775	1	1	18738	1	KED
⌊	**Cd**	**114**	**48.480**	ug/L	0.732	1	2	48936	1	KED
⌈>	**In**	**115**		ug/L			1304823	1276832	1	Standard
⌊	**Ag**	**107**	**48.187**	ug/L	0.758	1	57	847215	2	Standard
⌈>	**Tb**	**159**		ug/L			3126417	3100826	2	Standard
⌊	**Pb**	**208**	**49.490**	ug/L	1.333	2	749	6758500	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBE
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 03:19:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10464	10356	4	Standard
	Cl	**37**		ug/L			3156619	3152115	2	Standard
⌈>	**Sc**	**45**		ug/L			686929	685648	2	Standard
⌊	**Mn**	**55**	**-0.008**	ug/L	0.001	15	741	584	2	Standard
⌈>	**Ge**	**72**		ug/L			88693	89190	2	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.003	400	102	98	13	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.001	77	50	46	4	KED
|	**Zn**	**66**	**0.031**	ug/L	0.005	15	121	144	1	KED
|	**Zn**	**67**	**0.010**	ug/L	0.042	427	22	24	19	KED
⌊	**As**	**75**	**0.005**	ug/L	0.000	8	3	4	5	KED
	Y	**89**		ug/L			390806	392588	0	Standard
	Kr	**83**		ug/L			107	90	13	Standard
⌈>	**In-1**	**115**		ug/L			22855	23097	0	KED
|	**Cd**	**111**	**0.003**	ug/L	0.005	158	1	3	62	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.001	217	2	2	48	KED
⌈>	**In**	**115**		ug/L			1304823	1314620	0	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.001	192	57	67	25	Standard
⌈>	**Tb**	**159**		ug/L			3126417	3117962	0	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	108	749	781	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-06
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 03:23:11
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10464	19333	0	Standard
	Cl	37		ug/L			3156619	2748241	1	Standard
⌈>	Sc	45		ug/L			686929	698460	2	Standard
⌊	Mn	55	1443.406	ug/L	31.861	2	741	28534723	1	Standard
⌈>	Ge	72		ug/L			88693	85581	0	KED
|	Cu	63	23.389	ug/L	0.627	2	102	136369	2	KED
|	Cu	65	23.533	ug/L	0.202	0	50	68855	1	KED
|	Zn	66	191.910	ug/L	0.531	0	121	137445	0	KED
|	Zn	67	177.955	ug/L	2.324	1	22	21209	0	KED
⌊	As	75	0.050	ug/L	0.006	11	3	20	9	KED
	Y	89		ug/L			390806	466749	1	Standard
	Kr	83		ug/L			107	144	8	Standard
⌈>	In-1	115		ug/L			22855	21414	2	KED
|	Cd	111	2.070	ug/L	0.038	1	1	744	1	KED
⌊	Cd	114	2.031	ug/L	0.097	4	2	1935	3	KED
⌈>	In	115		ug/L			1304823	1281766	1	Standard
⌊	Ag	107	0.001	ug/L	0.001	47	57	81	16	Standard
⌈>	Tb	159		ug/L			3126417	3078999	0	Standard
⌊	Pb	208	0.087	ug/L	0.002	1	749	12526	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-08
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 03:27:01
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10464	19678	1	Standard
	Cl	37		ug/L			3156619	2766218	1	Standard
>	Sc	45		ug/L			686929	696632	1	Standard
	Mn	55	588.778	ug/L	29.376	4	741	11610287	4	Standard
>	Ge	72		ug/L			88693	88856	0	KED
	Cu	63	12.386	ug/L	0.105	0	102	75036	1	KED
	Cu	65	12.495	ug/L	0.304	2	50	37981	2	KED
	Zn	66	187.005	ug/L	4.777	2	121	139066	2	KED
	Zn	67	173.062	ug/L	2.975	1	22	21417	2	KED
	As	75	0.039	ug/L	0.009	23	3	17	19	KED
	Y	89		ug/L			390806	464845	1	Standard
	Kr	83		ug/L			107	116	10	Standard
>	In-1	115		ug/L			22855	21595	1	KED
	Cd	111	1.814	ug/L	0.098	5	1	657	3	KED
	Cd	114	1.851	ug/L	0.065	3	2	1780	1	KED
>	In	115		ug/L			1304823	1309795	1	Standard
	Ag	107	0.002	ug/L	0.001	24	57	102	10	Standard
>	Tb	159		ug/L			3126417	3164095	0	Standard
	Pb	208	0.019	ug/L	0.000	1	749	3348	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-10
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 03:30:50
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10464	20344	3	Standard
	Cl	37		ug/L			3156619	2907752	1	Standard
>	Sc	45		ug/L			686929	693111	3	Standard
	Mn	55	0.433	ug/L	0.009	2	741	9233	2	Standard
>	Ge	72		ug/L			88693	89149	0	KED
	Cu	63	0.592	ug/L	0.011	1	102	3698	2	KED
	Cu	65	0.603	ug/L	0.024	4	50	1888	4	KED
	Zn	66	72.875	ug/L	1.289	1	121	54440	1	KED
	Zn	67	66.175	ug/L	0.454	0	22	8230	1	KED
	As	75	0.026	ug/L	0.006	23	3	12	16	KED
	Y	89		ug/L			390806	389752	1	Standard
	Kr	83		ug/L			107	85	5	Standard
>	In-1	115		ug/L			22855	21678	0	KED
	Cd	111	0.094	ug/L	0.025	26	1	35	24	KED
	Cd	114	0.084	ug/L	0.007	8	2	83	7	KED
>	In	115		ug/L			1304823	1313796	0	Standard
	Ag	107	-0.000	ug/L	0.001	450	57	55	24	Standard
>	Tb	159		ug/L			3126417	3110630	0	Standard
	Pb	208	0.079	ug/L	0.003	3	749	11519	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-12
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 03:34:39
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10464	19818	3	Standard
	Cl	37		ug/L			3156619	2602021	3	Standard
>	Sc	45		ug/L			686929	671957	1	Standard
	Mn	55	751.384	ug/L	12.643	1	741	14295946	2	Standard
>	Ge	72		ug/L			88693	83057	1	KED
	Cu	63	25.403	ug/L	0.426	1	102	143729	0	KED
	Cu	65	25.630	ug/L	0.283	1	50	72772	1	KED
	Zn	66	376.129	ug/L	12.179	3	121	261262	2	KED
	Zn	67	338.731	ug/L	6.874	2	22	39159	1	KED
	As	75	0.071	ug/L	0.013	18	3	26	15	KED
	Y	89		ug/L			390806	471503	0	Standard
	Kr	83		ug/L			107	144	10	Standard
>	In-1	115		ug/L			22855	19885	1	KED
	Cd	111	2.944	ug/L	0.105	3	1	982	2	KED
	Cd	114	3.028	ug/L	0.113	3	2	2679	2	KED
>	In	115		ug/L			1304823	1174289	1	Standard
	Ag	107	0.009	ug/L	0.001	16	57	191	12	Standard
>	Tb	159		ug/L			3126417	2903231	1	Standard
	Pb	208	0.130	ug/L	0.002	1	749	17383	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-14
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 03:38:28
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10464	19359	1	Standard
	Cl	**37**		ug/L			3156619	2752092	2	Standard
>	**Sc**	**45**		ug/L			686929	709327	1	Standard
	Mn	**55**	**20.002**	ug/L	0.197	0	741	402461	1	Standard
>	**Ge**	**72**		ug/L			88693	82663	1	KED
	Cu	**63**	**0.197**	ug/L	0.014	6	102	1203	5	KED
	Cu	**65**	**0.204**	ug/L	0.004	2	50	624	1	KED
	Zn	**66**	**0.712**	ug/L	0.007	1	121	605	2	KED
	Zn	**67**	**2.134**	ug/L	0.173	8	22	266	6	KED
	As	**75**	**0.061**	ug/L	0.007	12	3	23	11	KED
	Y	**89**		ug/L			390806	388766	0	Standard
	Kr	**83**		ug/L			107	95	8	Standard
>	**In-1**	**115**		ug/L			22855	20679	1	KED
	Cd	**111**	**0.058**	ug/L	0.001	1	1	21		KED
	Cd	**114**	**0.077**	ug/L	0.009	11	2	73	9	KED
>	**In**	**115**		ug/L			1304823	1304431	1	Standard
	Ag	**107**	**-0.000**	ug/L	0.000	182	57	53	16	Standard
>	**Tb**	**159**		ug/L			3126417	3058189	0	Standard
	Pb	**208**	**0.003**	ug/L	0.000	7	749	1201	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-16
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 03:42:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10464	21223	1	Standard
	Cl	**37**		ug/L			3156619	2904221	2	Standard
⌈>	**Sc**	**45**		ug/L			686929	698615	1	Standard
⌊	**Mn**	**55**	**21.043**	ug/L	0.051	0	741	417010	1	Standard
⌈>	**Ge**	**72**		ug/L			88693	88432	0	KED
|	**Cu**	**63**	**1.554**	ug/L	0.008	0	102	9459	0	KED
|	**Cu**	**65**	**1.561**	ug/L	0.036	2	50	4765	1	KED
|	**Zn**	**66**	**7.501**	ug/L	0.180	2	121	5667	2	KED
|	**Zn**	**67**	**7.179**	ug/L	0.093	1	22	906	1	KED
⌊	**As**	**75**	**0.009**	ug/L	0.005	55	3	6	27	KED
	Y	**89**		ug/L			390806	405284	1	Standard
	Kr	**83**		ug/L			107	102	16	Standard
⌈>	**In-1**	**115**		ug/L			22855	21875	1	KED
|	**Cd**	**111**	**0.159**	ug/L	0.010	6	1	60	5	KED
⌊	**Cd**	**114**	**0.126**	ug/L	0.009	6	2	125	8	KED
⌈>	**In**	**115**		ug/L			1304823	1363433	2	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.000	517	57	58	13	Standard
⌈>	**Tb**	**159**		ug/L			3126417	3132042	0	Standard
⌊	**Pb**	**208**	**0.007**	ug/L	0.001	12	749	1782	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-18
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 03:46:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10464	19551	4	Standard
	Cl	37		ug/L			3156619	2663168	1	Standard
⌈>	Sc	45		ug/L			686929	697511	1	Standard
⌊	Mn	55	535.827	ug/L	12.533	2	741	10580652	0	Standard
⌈>	Ge	72		ug/L			88693	84286	2	KED
|	Cu	63	57.945	ug/L	0.618	1	102	332575	1	KED
|	Cu	65	57.071	ug/L	1.979	3	50	164303	1	KED
|	Zn	66	281.717	ug/L	8.384	2	121	198568	0	KED
|	Zn	67	260.523	ug/L	5.908	2	22	30563	1	KED
⌊	As	75	0.117	ug/L	0.016	13	3	42	10	KED
	Y	89		ug/L			390806	552958	1	Standard
	Kr	83		ug/L			107	142	13	Standard
⌈>	In-1	115		ug/L			22855	20747	0	KED
|	Cd	111	2.170	ug/L	0.090	4	1	755	3	KED
⌊	Cd	114	2.113	ug/L	0.095	4	2	1952	4	KED
⌈>	In	115		ug/L			1304823	1290493	2	Standard
⌊	Ag	107	-0.000	ug/L	0.000	210	57	53	12	Standard
⌈>	Tb	159		ug/L			3126417	3138391	0	Standard
⌊	Pb	208	0.095	ug/L	0.003	3	749	13821	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-20
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 03:50:22

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10464	14192	3	Standard
	Cl	**37**		ug/L			3156619	1856974	0	Standard
>	**Sc**	**45**		ug/L			686929	534080	2	Standard
	Mn	**55**	**2511.691**	ug/L	65.053	2	741	37967305	0	Standard
>	**Ge**	**72**		ug/L			88693	56994	0	KED
	Cu	**63**	**0.049**	ug/L	0.002	4	102	257	4	KED
	Cu	**65**	**0.065**	ug/L	0.006	9	50	158	7	KED
	Zn	**66**	**19.678**	ug/L	0.138	0	121	9455	0	KED
	Zn	**67**	**18.456**	ug/L	0.553	2	22	1478	3	KED
	As	**75**	**0.022**	ug/L	0.006	25	3	7	17	KED
	Y	**89**		ug/L			390806	312775	1	Standard
	Kr	**83**		ug/L			107	101	15	Standard
>	**In-1**	**115**		ug/L			22855	15696	0	KED
	Cd	**111**	**0.123**	ug/L	0.009	7	1	33	7	KED
	Cd	**114**	**0.107**	ug/L	0.006	5	2	76	5	KED
>	**In**	**115**		ug/L			1304823	650541	1	Standard
	Ag	**107**	**-0.000**	ug/L	0.000	88	57	24	13	Standard
>	**Tb**	**159**		ug/L			3126417	2117615	0	Standard
	Pb	**208**	**0.006**	ug/L	0.000	4	749	1097	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-22
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 03:55:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			10464	22419	4	Standard
	Cl	37		ug/L			3156619	2747268	4	Standard
>	Sc	45		ug/L			686929	756868	0	Standard
	Mn	55	205.422	ug/L	2.547	1	741	4403136	1	Standard
>	Ge	72		ug/L			88693	89970	0	KED
	Cu	63	80.763	ug/L	1.035	1	102	494841	2	KED
	Cu	65	81.157	ug/L	1.615	1	50	249471	1	KED
	Zn	66	432.545	ug/L	9.601	2	121	325484	1	KED
	Zn	67	403.367	ug/L	7.603	1	22	50515	2	KED
	As	75	0.013	ug/L	0.005	41	3	7	24	KED
	Y	89		ug/L			390806	458769	2	Standard
	Kr	83		ug/L			107	114	14	Standard
>	In-1	115		ug/L			22855	22530	1	KED
	Cd	111	2.841	ug/L	0.051	1	1	1074	0	KED
	Cd	114	2.788	ug/L	0.103	3	2	2796	3	KED
>	In	115		ug/L			1304823	1439558	0	Standard
	Ag	107	0.002	ug/L	0.000	17	57	96	5	Standard
>	Tb	159		ug/L			3126417	3310842	0	Standard
	Pb	208	0.012	ug/L	0.000	3	749	2551	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLH
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 04:02:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10464	11828	2	Standard
	Cl	**37**		ug/L			3156619	3172566	4	Standard
⌈>	**Sc**	**45**		ug/L			686929	646514	9	Standard
⌊	**Mn**	**55**	**0.030**	ug/L	0.024	78	741	1274	43	Standard
⌈>	**Ge**	**72**		ug/L			88693	85464	4	KED
|	**Cu**	**63**	**0.004**	ug/L	0.001	24	102	119	1	KED
|	**Cu**	**65**	**0.002**	ug/L	0.005	224	50	54	23	KED
|	**Zn**	**66**	**0.112**	ug/L	0.060	53	121	197	25	KED
|	**Zn**	**67**	**0.060**	ug/L	0.119	197	22	29	48	KED
⌊	**As**	**75**	**-0.000**	ug/L	0.003	4419	3	3	24	KED
	Y	**89**		ug/L			390806	350354	9	Standard
	Kr	**83**		ug/L			107	82	25	Standard
⌈>	**In-1**	**115**		ug/L			22855	22551	1	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.005	645	1	1	124	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.001	47	2	0	313	KED
⌈>	**In**	**115**		ug/L			1304823	1163033	9	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.001	43	57	32	32	Standard
⌈>	**Tb**	**159**		ug/L			3126417	2838865	8	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.001	30	749	887	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVF
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 04:07:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10464	10645	4	Standard
	Cl	**37**		ug/L			3156619	3115716	1	Standard
⌈>	**Sc**	**45**		ug/L			686929	687505	1	Standard
⌊	**Mn**	**55**	**51.921**	ug/L	0.149	0	741	1011442	1	Standard
⌈>	**Ge**	**72**		ug/L			88693	85772	1	KED
|	**Cu**	**63**	**45.952**	ug/L	0.926	2	102	268409	1	KED
|	**Cu**	**65**	**47.020**	ug/L	0.999	2	50	137808	0	KED
|	**Zn**	**66**	**49.249**	ug/L	0.006	0	121	35437	1	KED
|	**Zn**	**67**	**48.928**	ug/L	0.643	1	22	5860	0	KED
⌊	**As**	**75**	**49.012**	ug/L	0.353	0	3	16873	1	KED
	Y	**89**		ug/L			390806	378648	0	Standard
	Kr	**83**		ug/L			107	89	5	Standard
⌈>	**In-1**	**115**		ug/L			22855	22127	0	KED
|	**Cd**	**111**	**49.078**	ug/L	0.170	0	1	18195	1	KED
⌊	**Cd**	**114**	**48.483**	ug/L	0.893	1	2	47718	2	KED
⌈>	**In**	**115**		ug/L			1304823	1252291	1	Standard
⌊	**Ag**	**107**	**49.599**	ug/L	0.697	1	57	855230	2	Standard
⌈>	**Tb**	**159**		ug/L			3126417	3101745	3	Standard
⌊	**Pb**	**208**	**48.968**	ug/L	1.915	3	749	6686002	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBF
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 04:13:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10464	10127	1	Standard
	Cl	**37**		ug/L			3156619	3130620	1	Standard
⌈>	**Sc**	**45**		ug/L			686929	692825	3	Standard
⌊	**Mn**	**55**	**-0.013**	ug/L	0.002	18	741	492	11	Standard
⌈>	**Ge**	**72**		ug/L			88693	87919	1	KED
|	**Cu**	**63**	**-0.000**	ug/L	0.003	573	102	98	17	KED
|	**Cu**	**65**	**0.002**	ug/L	0.004	180	50	56	21	KED
|	**Zn**	**66**	**0.033**	ug/L	0.013	38	121	144	6	KED
|	**Zn**	**67**	**-0.045**	ug/L	0.028	62	22	17	19	KED
⌊	**As**	**75**	**0.001**	ug/L	0.002	203	3	3	20	KED
	Y	**89**		ug/L			390806	380017	0	Standard
	Kr	**83**		ug/L			107	85	11	Standard
⌈>	**In-1**	**115**		ug/L			22855	22492	1	KED
|	**Cd**	**111**	**0.001**	ug/L	0.002	163	1	2	24	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.004	119	2	6	63	KED
⌈>	**In**	**115**		ug/L			1304823	1319224	2	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.000	5	57	73	3	Standard
⌈>	**Tb**	**159**		ug/L			3126417	3072594	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	31	749	859	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-24
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 04:17:26

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10464	20002	3	Standard
	Cl	**37**		ug/L			3156619	2783500	1	Standard
>	**Sc**	**45**		ug/L			686929	687122	0	Standard
	Mn	**55**	**3046.479**	ug/L	26.012	0	741	59267819	0	Standard
>	**Ge**	**72**		ug/L			88693	84211	2	KED
	Cu	**63**	**39.028**	ug/L	0.630	1	102	223823	1	KED
	Cu	**65**	**38.589**	ug/L	1.487	3	50	110997	1	KED
	Zn	**66**	**448.583**	ug/L	13.824	3	121	315815	0	KED
	Zn	**67**	**414.314**	ug/L	8.772	2	22	48560	3	KED
	As	**75**	**0.075**	ug/L	0.020	26	3	28	21	KED
	Y	**89**		ug/L			390806	497904	2	Standard
	Kr	**83**		ug/L			107	111	3	Standard
>	**In-1**	**115**		ug/L			22855	21173	0	KED
	Cd	**111**	**5.785**	ug/L	0.018	0	1	2053	0	KED
	Cd	**114**	**5.710**	ug/L	0.161	2	2	5380	3	KED
>	**In**	**115**		ug/L			1304823	1267316	1	Standard
	Ag	**107**	**0.000**	ug/L	0.001	315	57	62	30	Standard
>	**Tb**	**159**		ug/L			3126417	3014169	1	Standard
	Pb	**208**	**0.028**	ug/L	0.001	5	749	4373	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-26
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 04:21:15

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10464	18507	3	Standard
	Cl	**37**		ug/L			3156619	2736215	1	Standard
⌈>	**Sc**	**45**		ug/L			686929	707911	0	Standard
⌊	**Mn**	**55**	**4000.694**	ug/L	34.832	0	741	80189401	0	Standard
⌈>	**Ge**	**72**		ug/L			88693	80985	0	KED
|	**Cu**	**63**	**0.398**	ug/L	0.006	1	102	2286	0	KED
|	**Cu**	**65**	**0.378**	ug/L	0.017	4	50	1092	4	KED
|	**Zn**	**66**	**20.039**	ug/L	0.166	0	121	13679	0	KED
|	**Zn**	**67**	**20.728**	ug/L	0.751	3	22	2356	3	KED
⌊	**As**	**75**	**0.097**	ug/L	0.013	13	3	34	11	KED
	Y	**89**		ug/L			390806	487307	1	Standard
	Kr	**83**		ug/L			107	123	17	Standard
⌈>	**In-1**	**115**		ug/L			22855	21035	1	KED
|	**Cd**	**111**	**6.433**	ug/L	0.136	2	1	2268	0	KED
⌊	**Cd**	**114**	**6.299**	ug/L	0.091	1	2	5895	0	KED
⌈>	**In**	**115**		ug/L			1304823	1220895	2	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.001	127	57	45	23	Standard
⌈>	**Tb**	**159**		ug/L			3126417	3025160	0	Standard
⌊	**Pb**	**208**	**0.009**	ug/L	0.000	4	749	1875	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-28
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 04:25:04

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10464	18937	5	Standard
	Cl	**37**		ug/L			3156619	2499221	1	Standard
>	**Sc**	**45**		ug/L			686929	684058	1	Standard
	Mn	**55**	**1366.593**	ug/L	19.055	1	741	26468169	1	Standard
>	**Ge**	**72**		ug/L			88693	81573	2	KED
	Cu	**63**	**52.348**	ug/L	2.098	4	102	290673	2	KED
	Cu	**65**	**51.419**	ug/L	1.957	3	50	143278	2	KED
	Zn	**66**	**388.519**	ug/L	2.072	0	121	265122	2	KED
	Zn	**67**	**356.391**	ug/L	7.179	2	22	40457	0	KED
	As	**75**	**0.171**	ug/L	0.021	12	3	58	10	KED
	Y	**89**		ug/L			390806	576103	1	Standard
	Kr	**83**		ug/L			107	177	12	Standard
>	**In-1**	**115**		ug/L			22855	20558	1	KED
	Cd	**111**	**1.807**	ug/L	0.096	5	1	623	4	KED
	Cd	**114**	**1.783**	ug/L	0.034	1	2	1632	0	KED
>	**In**	**115**		ug/L			1304823	1106709	0	Standard
	Ag	**107**	**0.000**	ug/L	0.001	199	57	53	18	Standard
>	**Tb**	**159**		ug/L			3126417	2867796	1	Standard
	Pb	**208**	**0.108**	ug/L	0.003	2	749	14330	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-30
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 04:28:53

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10464	19638	2	Standard
	Cl	**37**		ug/L			3156619	2451478	1	Standard
>	**Sc**	**45**		ug/L			686929	693506	0	Standard
	Mn	**55**	**1448.506**	ug/L	20.390	1	741	28445777	2	Standard
>	**Ge**	**72**		ug/L			88693	81059	1	KED
	Cu	**63**	**49.017**	ug/L	0.830	1	102	270584	0	KED
	Cu	**65**	**49.315**	ug/L	0.504	1	50	136620	1	KED
	Zn	**66**	**317.931**	ug/L	6.331	1	121	215563	0	KED
	Zn	**67**	**291.534**	ug/L	6.194	2	22	32894	1	KED
	As	**75**	**0.106**	ug/L	0.017	15	3	37	13	KED
	Y	**89**		ug/L			390806	506121	1	Standard
	Kr	**83**		ug/L			107	128	11	Standard
>	**In-1**	**115**		ug/L			22855	20628	0	KED
	Cd	**111**	**2.144**	ug/L	0.054	2	1	742	2	KED
	Cd	**114**	**2.145**	ug/L	0.066	3	2	1970	3	KED
>	**In**	**115**		ug/L			1304823	1135210	0	Standard
	Ag	**107**	**0.002**	ug/L	0.000	13	57	86	5	Standard
>	**Tb**	**159**		ug/L			3126417	2927090	0	Standard
	Pb	**208**	**0.110**	ug/L	0.002	1	749	14835	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-03
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 04:32:42

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10464	19319	1	Standard
	Cl	**37**		ug/L			3156619	2807121	1	Standard
⌈>	**Sc**	**45**		ug/L			686929	750584	1	Standard
⌊	**Mn**	**55**	**74.870**	ug/L	2.482	3	741	1591524	2	Standard
⌈>	**Ge**	**72**		ug/L			88693	87219	1	KED
|	**Cu**	**63**	**0.481**	ug/L	0.015	3	102	2958	1	KED
|	**Cu**	**65**	**0.484**	ug/L	0.018	3	50	1490	1	KED
|	**Zn**	**66**	**2.596**	ug/L	0.133	5	121	2011	3	KED
|	**Zn**	**67**	**3.164**	ug/L	0.063	1	22	406	0	KED
⌊	**As**	**75**	**0.009**	ug/L	0.003	34	3	6	15	KED
	Y	**89**		ug/L			390806	431837	1	Standard
	Kr	**83**		ug/L			107	90	20	Standard
⌈>	**In-1**	**115**		ug/L			22855	22286	3	KED
|	**Cd**	**111**	**0.858**	ug/L	0.026	3	1	321	2	KED
⌊	**Cd**	**114**	**0.882**	ug/L	0.027	3	2	876	0	KED
⌈>	**In**	**115**		ug/L			1304823	1364575	1	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.001	86	57	45	28	Standard
⌈>	**Tb**	**159**		ug/L			3126417	3254068	0	Standard
⌊	**Pb**	**208**	**0.049**	ug/L	0.001	2	749	7822	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-01
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 04:36:31

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10464	18949	4	Standard
	Cl	**37**		ug/L			3156619	2740998	0	Standard
⌈>	**Sc**	**45**		ug/L			686929	720973	1	Standard
⌊	**Mn**	**55**	**2909.792**	ug/L	42.988	1	741	59398531	1	Standard
⌈>	**Ge**	**72**		ug/L			88693	84697	1	KED
|	**Cu**	**63**	**25.051**	ug/L	0.428	1	102	144544	1	KED
|	**Cu**	**65**	**25.222**	ug/L	0.521	2	50	73015	0	KED
|	**Zn**	**66**	**363.703**	ug/L	11.739	3	121	257605	1	KED
|	**Zn**	**67**	**339.729**	ug/L	10.405	3	22	40043	1	KED
⌊	**As**	**75**	**0.044**	ug/L	0.003	7	3	18	6	KED
	Y	**89**		ug/L			390806	500131	0	Standard
	Kr	**83**		ug/L			107	139	6	Standard
⌈>	**In-1**	**115**		ug/L			22855	21029	0	KED
|	**Cd**	**111**	**5.206**	ug/L	0.123	2	1	1835	2	KED
⌊	**Cd**	**114**	**5.133**	ug/L	0.047	0	2	4804	1	KED
⌈>	**In**	**115**		ug/L			1304823	1298585	1	Standard
⌊	**Ag**	**107**	**0.003**	ug/L	0.000	12	57	110	4	Standard
⌈>	**Tb**	**159**		ug/L			3126417	3097054	2	Standard
⌊	**Pb**	**208**	**0.053**	ug/L	0.002	3	749	7961	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVG
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 11:18:42

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10464	13249	3	Standard
	Cl	**37**		ug/L			3156619	4064552	4	Standard
>	**Sc**	**45**		ug/L			686929	803618	1	Standard
	Mn	**55**	**55.658**	ug/L	1.243	2	741	1267467	3	Standard
>	**Ge**	**72**		ug/L			88693	138491	52	KED
	Cu	**63**	**6.586**	ug/L	10.497	159	102	59741	152	KED
	Cu	**65**	**6.519**	ug/L	10.334	158	50	29697	151	KED
	Zn	**66**	**6.939**	ug/L	11.124	160	121	7913	150	KED
	Zn	**67**	**7.268**	ug/L	11.593	159	22	1382	148	KED
	As	**75**	**7.219**	ug/L	11.357	157	3	3869	150	KED
	Y	**89**		ug/L			390806	453519	1	Standard
	Kr	**83**		ug/L			107	100	21	Standard
>	**In-1**	**115**		ug/L			22855	28445	1	KED
	Cd	**111**	**41.399**	ug/L	1.617	3	1	19727	3	KED
	Cd	**114**	**40.718**	ug/L	1.593	3	2	51503	2	KED
>	**In**	**115**		ug/L			1304823	1428324	2	Standard
	Ag	**107**	**45.751**	ug/L	0.546	1	57	899741	2	Standard
>	**Tb**	**159**		ug/L			3126417	3543197	1	Standard
	Pb	**208**	**47.607**	ug/L	0.341	0	749	7431660	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 11:25:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10464	17081	0	Standard
	Cl	**37**		ug/L			3156619	3922837	1	Standard
⌈>	**Sc**	**45**		ug/L			686929	1073	3	Standard
⌊	**Mn**	**55**	**58.874**	ug/L	3.516	5	741	1787	2	Standard
⌈>	**Ge**	**72**		ug/L			88693	109	8	KED
|	**Cu**	**63**	**42.480**	ug/L	1.195	2	102	315	6	KED
|	**Cu**	**65**	**44.140**	ug/L	1.679	3	50	165	11	KED
|	**Zn**	**66**	**460.221**	ug/L	64.915	14	121	417	5	KED
|	**Zn**	**67**	**415.754**	ug/L	46.327	11	22	62	6	KED
⌊	**As**	**75**	**5.612**	ug/L	4.701	83	3	2	84	KED
	Y	**89**		ug/L			390806	265	1	Standard
	Kr	**83**		ug/L			107	95	23	Standard
⌈>	**In-1**	**115**		ug/L			22855	20	46	KED
|	**Cd**	**111**	**8.529**	ug/L	6.814	79	1	2	49	KED
⌊	**Cd**	**114**	**5.165**	ug/L	5.272	102	2	3	130	KED
⌈>	**In**	**115**		ug/L			1304823	1085	3	Standard
⌊	**Ag**	**107**	**5.696**	ug/L	0.766	13	57	85	12	Standard
⌈>	**Tb**	**159**		ug/L			3126417	2160	4	Standard
⌊	**Pb**	**208**	**32.893**	ug/L	1.866	5	749	3125	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 11:29:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10464	16566	1	Standard
	Cl	**37**		ug/L			3156619	3787128	1	Standard
⌈>	**Sc**	**45**		ug/L			686929	890	4	Standard
⌊	**Mn**	**55**	**68.863**	ug/L	3.821	5	741	1735	1	Standard
⌈>	**Ge**	**72**		ug/L			88693	78	15	KED
|	**Cu**	**63**	**57.810**	ug/L	8.663	14	102	302	5	KED
|	**Cu**	**65**	**62.968**	ug/L	18.520	29	50	163	13	KED
|	**Zn**	**66**	**597.424**	ug/L	143.535	24	121	380	9	KED
|	**Zn**	**67**	**583.881**	ug/L	161.882	27	22	61	10	KED
⌊	**As**	**75**	**6.063**	ug/L	1.169	19	3	1	25	KED
	Y	**89**		ug/L			390806	264	1	Standard
	Kr	**83**		ug/L			107	102	1	Standard
⌈>	**In-1**	**115**		ug/L			22855	20	16	KED
|	**Cd**	**111**	**7.146**	ug/L	1.847	25	1	2	43	KED
⌊	**Cd**	**114**	**3.897**	ug/L	2.580	66	2	3	79	KED
⌈>	**In**	**115**		ug/L			1304823	1008	5	Standard
⌊	**Ag**	**107**	**4.006**	ug/L	0.496	12	57	55	16	Standard
⌈>	**Tb**	**159**		ug/L			3126417	1925	0	Standard
⌊	**Pb**	**208**	**33.614**	ug/L	0.619	1	749	2852	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 11:32:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10464	16231	2	Standard
	Cl	**37**		ug/L			3156619	3801463	3	Standard
⌈>	**Sc**	**45**		ug/L			686929	842	7	Standard
⌊	**Mn**	**55**	**73.623**	ug/L	7.623	10	741	1748	4	Standard
⌈>	**Ge**	**72**		ug/L			88693	66	6	KED
|	**Cu**	**63**	**64.036**	ug/L	6.132	9	102	286	4	KED
|	**Cu**	**65**	**66.213**	ug/L	11.888	17	50	148	14	KED
|	**Zn**	**66**	**640.728**	ug/L	9.216	1	121	353	4	KED
|	**Zn**	**67**	**626.204**	ug/L	89.773	14	22	57	18	KED
⌊	**As**	**75**	**6.573**	ug/L	5.882	89	3	1	87	KED
	Y	**89**		ug/L			390806	258	10	Standard
	Kr	**83**		ug/L			107	104	5	Standard
⌈>	**In-1**	**115**		ug/L			22855	20	9	KED
|	**Cd**	**111**	**1.927**	ug/L	1.679	87	1	0	86	KED
⌊	**Cd**	**114**	**3.274**	ug/L	3.492	106	2	3	103	KED
⌈>	**In**	**115**		ug/L			1304823	952	5	Standard
⌊	**Ag**	**107**	**2.886**	ug/L	1.179	40	57	37	37	Standard
⌈>	**Tb**	**159**		ug/L			3126417	2029	8	Standard
⌊	**Pb**	**208**	**32.821**	ug/L	2.643	8	749	2920	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 11:36:42
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080321_MOD2.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			10464	11625	3	Standard
	Cl	**37**		ug/L			3156619	3649223	2	Standard
⌈>	**Sc**	**45**		ug/L			686929	736	1	Standard
⌊	**Mn**	**55**	**23.336**	ug/L	1.191	5	741	487	4	Standard
⌈>	**Ge**	**72**		ug/L			88693	80	10	KED
|	**Cu**	**63**	**23.739**	ug/L	4.306	18	102	128	9	KED
|	**Cu**	**65**	**25.709**	ug/L	5.167	20	50	69	8	KED
|	**Zn**	**66**	**355.616**	ug/L	37.733	10	121	238	3	KED
|	**Zn**	**67**	**280.274**	ug/L	77.080	27	22	31	24	KED
⌊	**As**	**75**	**6.027**	ug/L	2.927	48	3	1	43	KED
	Y	**89**		ug/L			390806	253	2	Standard
	Kr	**83**		ug/L			107	98	26	Standard
⌈>	**In-1**	**115**		ug/L			22855	15	37	KED
|	**Cd**	**111**	**13.254**	ug/L	6.990	52	1	3	66	KED
⌊	**Cd**	**114**	**3.414**	ug/L	4.395	128	2	1	112	KED
⌈>	**In**	**115**		ug/L			1304823	807	3	Standard
⌊	**Ag**	**107**	**2.835**	ug/L	0.617	21	57	31	24	Standard
⌈>	**Tb**	**159**		ug/L			3126417	1777	1	Standard
⌊	**Pb**	**208**	**15.196**	ug/L	0.439	2	749	1189	1	Standard

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EH00009	Instrument:	ICPMS1
Calibration Date:	08/04/2021 14:06		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Arsenic-75a	0	0	0.2	435	10	403.9	20	395.4	50	388.86	100	381.27

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EH00009	Instrument:	ICPMS1
Calibration Date:	08/04/2021 14:06		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Arsenic-75a	334.0717	49.3	0.9999		0.998	

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 8/4/21 **Analyst:** MB **Sequence:** SJHØØ67 **Cal:** EHØØØØ9

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CAL1	J8Ø96		
		-CAL2	J766Ø		
		-CAL3	J7661		
		-CAL4	J7662		
		-CAL5	J8Ø97		
		-CAL6	J7664		
		-IBL1	—		
		-ICV1	J6292		
		-ICB1	J8Ø96		
		-CCV1	J8Ø97		
		-CCB1	J8Ø96		
		-CRL1	J766Ø		
		-IFA1	J8Ø98		Cr53↑
		-IFB1	J8Ø99		
		-HCV1	J7549		
	✓	-HCV2	—		Zn67↓
		-HCV2	J7893		
		-IBL2+3	—		
		-CCV2			
		-CCB2			
		BJGØ6ØØ-BLK2	REN		Fe only
		-BS2			
		BJHØØ17-BLK1			
		-BS1			

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 8/4/21 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		BJGΦ747-BLK2	SWN	20	Cr only
	✓	↓ -BS2	↓	↓	Zn^{67}%R ↓
		21GΦ382-Φ1	↓	2000	Cr only
		BJGΦ666-MS03	↓	20	↓
		↓ -PS2	↓	↓	0.060 mL 5733Φ ↓
		SEQ-IBL4			
		↓ -CCV3			
		↓ -CCB3			
		BJHΦ1Φ1-BLK1	REN		
		↓ -BS1	↓		
		BJGΦ747-BS2	SWN	20	Cr, Zn^{67} only
		21GΦ248-Φ2	REN	↓	Fe only
		↓ -Φ1	↓	↓	↓
		21GΦ17Φ-Φ7	↓		↓
		BJGΦ6ΦΦ-DUP2	↓		↓
		↓ -MS2	↓		↓
		21GΦ38Φ-Φ1	↓	5	Mo only
		SEQ-IBL5			
		↓ -CCV4			
		↓ -CCB4			
		BJGΦ1Φ3-BLK1	REN		
		↓ -BS1	↓		
		21GΦ258-Φ1	↓		
		21GΦ371-Φ1	↓		

Analytical Resources, Incorporated
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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 8/4/21 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted. MB 8/4/21

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		21HΦΦ22-Φ1	REN		
		21HΦΦ21-Φ1	↓		
		21GΦ262-Φ1	↓		
		BJHΦ1Φ3-DUP1	↓		
		↓ -MS1	↓		
		SEQ-IBL6			
		-CCV5			
		↓ -CCB5			
		21GΦ385-Φ1	REN		
		SEQ-IBL7			
		21GΦ386-Φ1	REN		
		-Φ2	↓		
		↓ -Φ3	↓		
		~~21HΦ~~SEQ-IBL8			
		21HΦΦ28-Φ1	REN		
		BJHΦ1Φ1-DUP1	↓		
		↓ -MS1	↓		
		SEQ-IBL9			
		-CCV6			
		-CCB6			
	✓	-CAL1			Ag, Ba, Fe, Mn, Mo removed
		-CCV7			
		↓ -CCB7			
	✓	BJHΦΦ23-BLK1	SWN	20	

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 8/4/21 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
	✓	BJH0023-BS1	SWN	20	Cu, Zn %R↓
		21G0199-04			Cr only
		-09			
		21G0212-06			
		BJG0747-DUP3			
		-MS3			
		-MSD3			
	✓	-PS3			0.060 mL / Not 57330 / Needed
		SEQ-IBLA			(Se, Tb noisy)
		-CCV8			
		-CCB8			
	✓	21G0253-02	SWN	20	
		-03			
		-04			
		-05			
		-06			
		-01			
		BJH0023-DUP1			
		-MS1			
		-MSD1			
		SEQ-IBLB			
		-CCV9			
		-CCB9			
	✓	21G0253-07	SWN	20	

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 8/4/21 **Analyst:** MB **Sequence:** ——— **Cal:** ———

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
	✓	21GΦ253-Φ8	SWN	20	
	✓	↓ -Φ9	↓	↓	
		21HΦΦ19-Φ3	REN		
REI		-Φ2REI		200	Zn only
		-Φ1		20	↓
		-Φ2		↓	Zn↑ Zn NR
		SEQ-IBLC			
	✓	21HΦΦ19-Φ1	REN		In⁻¹, Tb↓
		SEQ-IBLD			
		-CCVA			
		-CCBA			
		21GΦ318-Φ1	REN		Cr only
		21GΦ339-Φ1			
		-Φ2			
		-Φ4			
		-Φ5			
		21HΦΦ28-Φ2			
		-Φ3			
		-Φ4			
		21GΦ2Φ5-Φ3			
		SEQ-IBLE			
		-CCVB			
		-CCBB			
	✓	-CAL1			

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 8/4/21 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments	
		SEQ-CCVC				
		↓ -CCBC				
		21GΦ2Φ5-Φ5	REN			
		-Φ7				
		-Φ9			Cd ND	Cd NR
		-11			Zn↑	No Zn
		-13				
		-15				
		-17			Zn↑	No Zn
	✓	-19			Int. STDs↓	
		-21			Zn↑	No Zn
		SEQ-IBLF				
		-CCVD				
		↓ -CCBD				
		21GΦ2Φ5-23	REN		Zn↑	No Zn
		-25				
		-27			Zn↑	No Zn
		-29			Cd''' sl. noisy - Isotopes agree / Zn↑	↓
		-26			Ge noisy	Cd, Pb only
		-Φ1			Zn↑	No Zn
		BJHΦΦ24-DUP1				
		-MS1				
		-MSD1				
		SEQ-IBLG				

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 8/4/21 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CCVE			
		↓ -CCBE			
		21G0205-24	REN		Zn↑ No Zn
		↓ -28	↓		↓ ↓
		↓ -30	↓		↓ /Cd no Zn No Cd, Zn
		SEQ-IBLH			
		21G0262-02	REN		
		↓ -03	↓		
		↓ -04	↓		
		↓ -05	↓		
		↓ -06	↓		
		SEQ-IBLI			
		↓ -CCVF			
		↓ -CCBF			
		21G0262-07	REN		
		↓ -08	↓		
		↓ -09	↓		
		↓ -10	↓		
		↓ -11	↓		
		SEQ-IBLJ			
		↓ -CCVG			
		↓ -CCBG			
		Rinse/DI			
		MB 8/4/21			

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Wednesday, August 04, 2021 13:14:04
Sample Description:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\STD Performance Check.11506
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	1514.7	1514.680	49.835	3.3	Standard
	In	114.9	37647.3	-1267176.666	1175.088	0.1	Standard
	U	238.1	80799.6	80799.650	2139.763	2.6	Standard
⌈	CeO	155.9	1012.9	0.013	0.000	0.9	Standard
| >	Ce	139.9	78978.4	78978.445	1526.278	1.9	Standard
⌊	Ce++	70.0	247.3	0.003	0.000	8.2	Standard
	Bkgd	220.0	4.1	4.100	0.384	9.4	Standard

Current Conditions File Data

Current Value	Description
0.97	Nebulizer Gas Flow STD/KED [NEB]
1.25	Auxiliary Gas Flow
17.50	Plasma Gas Flow
-10.75	Deflector Voltage
1600.00	ICP RF Power
-1862.00	Analog Stage Voltage
1550.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-17.00	Cell Rod Offset STD [CRO]
14.00	Discriminator Threshold
-2.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.97	DRC Mode NEB
-7.50	DRC Mode QRO
-2.00	DRC Mode CRO
-5.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
200.00	Axial Field Voltage
-11.00	KED Mode CRO
-12.00	KED Mode QRO
-11.00	KED Mode Cell Entrance Voltage
-33.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
125.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Start Time: 8/4/2021 1:13:43 PM
End Time: 8/4/2021 1:17:25 PM

STD Performance Check - [Failed]
Obtained Intensity (Be 9): 1514.68 - <Target not achieved>
Obtained Intensity (In 115): 37647.31 - <Target not achieved>
Obtained Intensity (U 238): 80799.65
Obtained Intensity (Bkgd 220): 4.10
Obtained Formula (Ce++ 70 / Ce 140): 0.003 (=247.27 / 78978.45)
Obtained Formula (CeO 156 / Ce 140): 0.013 (=1012.90 / 78978.45)
Obtained RSD (Be 9): 0.0329
Obtained RSD (In 115): 0.0009
Obtained RSD (U 238): 0.0265

SmartTune Wizard - Details

```
Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Optimization Status

Start Time: 8/4/2021 1:13:43 PM

STD Performance Check
        Optimization Settings:
                Method: STD Performance Check.mth.
                Intensity Criterion: Be 9 > 2000
                Intensity Criterion: In 115 > 40000
                Intensity Criterion: U 238 > 30000
                Intensity Criterion: Bkgd 220 <= 5
                Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
                Formula Criterion: CeO 156 / Ce 140 <= 0.025
                RSD Criterion: Be 9.0122 < 0.05
                RSD Criterion: In 114.904 < 0.05
                RSD Criterion: U 238.05 < 0.05

        Optimization Results:
        Initial Try
                Obtained Intensity (Be 9): 1514.68 - <Target not achieved>
                Obtained Intensity (In 115): 37647.31 - <Target not achieved>
                Obtained Intensity (U 238): 80799.65
                Obtained Intensity (Bkgd 220): 4.10
                Obtained Formula (Ce++ 70 / Ce 140): 0.003 (=247.27 / 78978.45)
                Obtained Formula (CeO 156 / Ce 140): 0.013 (=1012.90 / 78978.45)
                Obtained RSD (Be 9): 0.0329
                Obtained RSD (In 115): 0.0009
                Obtained RSD (U 238): 0.0265

                [Failed]
[Failed]

Torch Alignment
        Optimization Settings:
                Method: Torch Alignment.mth.
                Intensity Criterion: In 115 Maximum

        Optimization Results:

[Cancelled]

End Time: 8/4/2021 1:17:25 PM
```

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Start Time: 8/4/2021 1:17:32 PM
End Time: 8/4/2021 1:20:16 PM

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
2.38 mm	-0.77 mm	32139.11

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1
Obtained Intensity (In 115): 48182.12
Obtained Formula (CeO 156 / Ce 140): 0.0142 (=1289.06 / 90740.27)

SmartTune Wizard - Details

```
Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Optimization Status

Start Time: 8/4/2021 1:17:32 PM

Torch Alignment
        Optimization Settings:
                Method: Torch Alignment.mth.
                Intensity Criterion: In 115 Maximum

        Optimization Results:
                Vertical      Horizontal      Intensity
[Passed]        2.38 mm     -0.77 mm       32139.11

Nebulizer Gas Flow STD/KED [NEB]
        Optimization Settings:
                Method: Optimize.mth.
                        Initial Try - Start/End/Step: 0.95/1/0.01.
                Intensity Criterion: In 115 Maximum
                Formula Criterion: CeO 156 / Ce 140 <= 0.023

        Optimization Results:
        Initial Try

                Obtained Intensity (In 115): 48182.12
                Obtained Formula (CeO 156 / Ce 140): 0.0142 (=1289.06 / 90740.27)
[Passed]  Optimum value(s): 1

End Time: 8/4/2021 1:20:16 PM
```

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Start Time: 8/4/2021 1:20:31 PM
End Time: 8/4/2021 1:22:37 PM

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1.05
Obtained Intensity (In 115): 128170.40
Obtained Formula (CeO 156 / Ce 140): 0.0174 (=2818.28 / 161979.13)

SmartTune Wizard - Details

```
Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Optimization Status

Start Time: 8/4/2021 1:20:31 PM

Nebulizer Gas Flow STD/KED [NEB]
        Optimization Settings:
                Method: Optimize.mth.
                        Initial Try - Start/End/Step: 1/1.05/0.01.
                Intensity Criterion: In 115 Maximum
                Formula Criterion: CeO 156 / Ce 140 <= 0.023

        Optimization Results:
        Initial Try

                Obtained Intensity (In 115): 128170.40
                Obtained Formula (CeO 156 / Ce 140): 0.0174 (=2818.28 / 161979.13)
[Passed]  Optimum value(s): 1.05

End Time: 8/4/2021 1:22:37 PM
```

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Start Time: 8/4/2021 1:23:01 PM
End Time: 8/4/2021 1:28:07 PM

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1.06
Obtained Intensity (In 115): 157715.82
Obtained Formula (CeO 156 / Ce 140): 0.0212 (=3818.51 / 179967.49)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.703)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.728)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.705)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.705)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 0.989; Intercept = -15.06

KED Mode QID - Optimum value(s): Correlation Coefficient = 0.996; Intercept = -12.87

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Optimization Status

Start Time: 8/4/2021 1:23:01 PM

Nebulizer Gas Flow STD/KED [NEB]
Optimization Settings:
Method: Optimize.mth.
Initial Try - Start/End/Step: 1.05/1.075/0.005.
Intensity Criterion: In 115 Maximum
Formula Criterion: CeO 156 / Ce 140 <= 0.023

Optimization Results:
Initial Try

Obtained Intensity (In 115): 157715.82
Obtained Formula (CeO 156 / Ce 140): 0.0212 (=3818.51 / 179967.49)
[Passed] Optimum value(s): 1.06

Mass Calibration and Resolution
Optimization Settings:
Method: Tuning.mth.
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Iterations: 6
Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution
Peak height (%) for Res. Opt.: 10

Optimization Results:
Initial Try
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.703)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.728)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.705)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.705)
[Passed] Optimum value(s): N/A

QID STD/DRC
Optimization Settings:
Method: QID Calibration.mth.
Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:
Initial Try

Optimum value(s): Correlation Coefficient = 0.989; Intercept = -15.06

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-15	27646.7
Mg	24	41	-15	66136.7
In	115	41	-12	155704
Ce	140	41	-12	181145
Pb	208	41	-11	113328
U	238	41	-11	212773

KED Mode QID

Optimization Settings:
Method: QID Calibration.mth.
Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:
Initial Try

Optimum value(s): Correlation Coefficient = 0.996; Intercept = -12.87

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-13.5	25687.1
Mg	24	41	-14.5	67483
In	115	41	-11.5	176674
Ce	140	41	-11	149365
Pb	208	41	-10.5	79778.1
U	238	41	-10.5	154919

End Time: 8/4/2021 1:28:07 PM

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Start Time: 8/4/2021 1:29:31 PM
End Time: 8/4/2021 1:30:37 PM

QID STD/DRC - Optimum value(s): Correlation Coefficient = 0.999; Intercept = -15.69

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Optimization Status

Start Time: 8/4/2021 1:29:31 PM

QID STD/DRC

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.999; Intercept = -15.69

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-15.5	29354.1
Mg	24	41	-15	68347.1
In	115	41	-12.5	155069
Ce	140	41	-11.5	176977
Pb	208	41	-10.5	116570
U	238	41	-11.5	212306

End Time: 8/4/2021 1:30:37 PM

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Start Time: 8/4/2021 1:30:51 PM
End Time: 8/4/2021 1:32:56 PM

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 6592.45
Obtained Intensity (In 115): 142994.21
Obtained Intensity (U 238): 207772.72
Obtained Intensity (Bkgd 220): 1.07
Obtained Formula (Ce++ 70 / Ce 140): 0.008 (=1325.73 / 176539.98)
Obtained Formula (CeO 156 / Ce 140): 0.021 (=3778.63 / 176539.98)
Obtained RSD (Be 9): 0.0132
Obtained RSD (In 115): 0.0210
Obtained RSD (U 238): 0.0048

SmartTune Wizard - Details

```
Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Optimization Status

Start Time: 8/4/2021 1:30:51 PM

STD Performance Check
        Optimization Settings:
                Method: STD Performance Check.mth.
                Intensity Criterion: Be 9 > 2000
                Intensity Criterion: In 115 > 40000
                Intensity Criterion: U 238 > 30000
                Intensity Criterion: Bkgd 220 <= 5
                Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
                Formula Criterion: CeO 156 / Ce 140 <= 0.025
                RSD Criterion: Be 9.0122 < 0.05
                RSD Criterion: In 114.904 < 0.05
                RSD Criterion: U 238.05 < 0.05

        Optimization Results:
        Initial Try
                Obtained Intensity (Be 9): 6592.45
                Obtained Intensity (In 115): 142994.21
                Obtained Intensity (U 238): 207772.72
                Obtained Intensity (Bkgd 220): 1.07
                Obtained Formula (Ce++ 70 / Ce 140): 0.008 (=1325.73 / 176539.98)
                Obtained Formula (CeO 156 / Ce 140): 0.021 (=3778.63 / 176539.98)
                Obtained RSD (Be 9): 0.0132
                Obtained RSD (In 115): 0.0210
                Obtained RSD (U 238): 0.0048

[Passed]  Optimum value(s): N/A

End Time: 8/4/2021 1:32:56 PM
```

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Wednesday, August 04, 2021 13:30:52
Sample Description:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\STD Performance Check.11517
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	6592.5	6592.454	87.221	1.3	Standard
	In	114.9	142994.2	142994.209	3008.277	2.1	Standard
	U	238.1	207772.7	207772.718	1000.517	0.5	Standard
⌈	CeO	155.9	3778.6	0.021	0.000	2.1	Standard
| >	Ce	139.9	176540.0	176539.978	1405.404	0.8	Standard
⌊	Ce++	70.0	1325.7	0.008	0.000	1.4	Standard
	Bkgd	220.0	1.1	1.067	0.683	64.0	Standard

Current Conditions File Data

Current Value	Description
1.06	Nebulizer Gas Flow STD/KED [NEB]
1.25	Auxiliary Gas Flow
17.50	Plasma Gas Flow
-10.75	Deflector Voltage
1600.00	ICP RF Power
-1862.00	Analog Stage Voltage
1550.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-17.00	Cell Rod Offset STD [CRO]
14.00	Discriminator Threshold
-2.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
1.06	DRC Mode NEB
-7.50	DRC Mode QRO
-2.00	DRC Mode CRO
-5.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
200.00	Axial Field Voltage
-11.00	KED Mode CRO
-12.00	KED Mode QRO
-11.00	KED Mode Cell Entrance Voltage
-33.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
125.00	KED Mode Axial Field Voltage

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 14:06:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L				16458	1	Standard
	Cl	37		ug/L				4174110	1	Standard
>	Sc	45		ug/L				942872	2	Standard
	Cr	52		ug/L				14556	0	Standard
	Cr	53		ug/L				151	7	Standard
	Fe	54		ug/L				114141	2	Standard
	Fe	57		ug/L				19328	0	Standard
	Mn	55		ug/L				382	3	Standard
>	Ge	72		ug/L				103798	2	KED
	Ni	60		ug/L				27	21	KED
	Ni	62		ug/L				9	20	KED
	Cu	63		ug/L				92	6	KED
	Cu	65		ug/L				52	16	KED
	Zn	66		ug/L				93	9	KED
	Zn	67		ug/L				14	37	KED
	As	75		ug/L				2	36	KED
	Y	89		ug/L				512459	3	Standard
	Kr	83		ug/L				98	15	Standard
>	In-1	115		ug/L				28389	2	KED
	Mo	98		ug/L				6	23	KED
	Cd	111		ug/L				1	34	KED
	Cd	114		ug/L				1	116	KED
>	In	115		ug/L				1825516	2	Standard
	Ag	107		ug/L				30	31	Standard
	Ba	135		ug/L				78	18	Standard
	Ba	137		ug/L				142	3	Standard
>	Tb	159		ug/L				3788380	1	Standard
	Pb	208		ug/L				478	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 14:10:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	19640	4	Standard
	Cl	**37**		ug/L			4174110	4135028	0	Standard
>	**Sc**	**45**		ug/L			942872	954089	2	Standard
	Cr	**52**	**0.500**	ug/L	0.017	3	14556	24171	1	Standard
	Cr	**53**	**0.500**	ug/L	0.004	0	151	1308	2	Standard
	Fe	**54**	**36.000**	ug/L	2.141	5	114141	255805	1	Standard
	Fe	**57**	**36.000**	ug/L	1.247	3	19328	73199	0	Standard
	Mn	**55**	**0.500**	ug/L	0.002	0	382	15337	2	Standard
>	**Ge**	**72**		ug/L			103798	104775	1	KED
	Ni	**60**	**0.500**	ug/L	0.021	4	27	1157	2	KED
	Ni	**62**	**0.500**	ug/L	0.019	3	9	176	3	KED
	Cu	**63**	**0.500**	ug/L	0.015	3	92	3442	2	KED
	Cu	**65**	**0.500**	ug/L	0.027	5	52	1743	5	KED
	Zn	**66**	**6.000**	ug/L	0.129	2	93	5132	1	KED
	Zn	**67**	**6.000**	ug/L	0.326	5	14	791	5	KED
	As	**75**	**0.200**	ug/L	0.016	8	2	87	6	KED
	Y	**89**		ug/L			512459	530052	0	Standard
	Kr	**83**		ug/L			98	118	2	Standard
>	**In-1**	**115**		ug/L			28389	28251	3	KED
	Mo	**98**	**0.200**	ug/L	0.003	1	6	396	2	KED
	Cd	**111**	**0.100**	ug/L	0.016	16	1	44	18	KED
	Cd	**114**	**0.100**	ug/L	0.017	16	1	133	18	KED
>	**In**	**115**		ug/L			1825516	1876764	1	Standard
	Ag	**107**	**0.200**	ug/L	0.005	2	30	5244	1	Standard
	Ba	**135**	**0.500**	ug/L	0.014	2	78	4665	2	Standard
	Ba	**137**	**0.500**	ug/L	0.019	3	142	8531	2	Standard
>	**Tb**	**159**		ug/L			3788380	3813556	0	Standard
	Pb	**208**	**0.100**	ug/L	0.002	1	478	17627	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 14:14:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	31423	3	Standard
	Cl	**37**		ug/L			4174110	4292203	3	Standard
>	**Sc**	**45**		ug/L			942872	972585	1	Standard
	Cr	**52**	**10.001**	ug/L	0.217	2	14556	216951	0	Standard
	Cr	**53**	**10.001**	ug/L	0.298	2	151	24284	2	Standard
	Fe	**54**	**999.717**	ug/L	32.024	3	114141	3378863	1	Standard
	Fe	**57**	**1000.005**	ug/L	16.462	1	19328	1545737	1	Standard
	Mn	**55**	**9.999**	ug/L	0.224	2	382	298389	0	Standard
>	**Ge**	**72**		ug/L			103798	108253	0	KED
	Ni	**60**	**9.999**	ug/L	0.135	1	27	22830	2	KED
	Ni	**62**	**10.001**	ug/L	0.020	0	9	3652	0	KED
	Cu	**63**	**9.999**	ug/L	0.262	2	92	66293	2	KED
	Cu	**65**	**9.999**	ug/L	0.091	0	52	33663	1	KED
	Zn	**66**	**10.011**	ug/L	0.402	4	93	8809	4	KED
	Zn	**67**	**10.224**	ug/L	0.456	4	14	1473	5	KED
	As	**75**	**10.000**	ug/L	0.092	0	2	4039	1	KED
	Y	**89**		ug/L			512459	532166	1	Standard
	Kr	**83**		ug/L			98	92	9	Standard
>	**In-1**	**115**		ug/L			28389	29101	1	KED
	Mo	**98**	**10.000**	ug/L	0.317	3	6	19696	1	KED
	Cd	**111**	**10.000**	ug/L	0.215	2	1	4684	1	KED
	Cd	**114**	**10.000**	ug/L	0.165	1	1	12360	0	KED
>	**In**	**115**		ug/L			1825516	1854583	1	Standard
	Ag	**107**	**10.000**	ug/L	0.335	3	30	250462	4	Standard
	Ba	**135**	**10.001**	ug/L	0.137	1	78	95662	0	Standard
	Ba	**137**	**10.001**	ug/L	0.024	0	142	172788	1	Standard
>	**Tb**	**159**		ug/L			3788380	3900514	0	Standard
	Pb	**208**	**10.000**	ug/L	0.123	1	478	1605960	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL4
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 14:19:22
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	30588	1	Standard
	Cl	**37**		ug/L			4174110	4292342	1	Standard
>	**Sc**	**45**		ug/L			942872	917770	6	Standard
	Cr	**52**	**20.214**	ug/L	1.200	5	14556	415508	1	Standard
	Cr	**53**	**20.184**	ug/L	1.323	6	151	47715	1	Standard
	Fe	**54**	**2014.148**	ug/L	157.068	7	114141	6470065	0	Standard
	Fe	**57**	**2020.375**	ug/L	143.041	7	19328	3041545	1	Standard
	Mn	**55**	**20.172**	ug/L	1.316	6	382	586189	0	Standard
>	**Ge**	**72**		ug/L			103798	105963	1	KED
	Ni	**60**	**19.988**	ug/L	0.298	1	27	44525	0	KED
	Ni	**62**	**19.952**	ug/L	0.311	1	9	7055	2	KED
	Cu	**63**	**20.010**	ug/L	0.346	1	92	130037	1	KED
	Cu	**65**	**20.065**	ug/L	0.399	1	52	66923	0	KED
	Zn	**66**	**19.926**	ug/L	0.458	2	93	16882	1	KED
	Zn	**67**	**20.075**	ug/L	0.488	2	14	2847	1	KED
	As	**75**	**20.002**	ug/L	0.185	0	2	7908	0	KED
	Y	**89**		ug/L			512459	502510	8	Standard
	Kr	**83**		ug/L			98	120	17	Standard
>	**In-1**	**115**		ug/L			28389	29028	2	KED
	Mo	**98**	**20.040**	ug/L	0.442	2	6	39685	0	KED
	Cd	**111**	**20.054**	ug/L	0.780	3	1	9469	2	KED
	Cd	**114**	**19.942**	ug/L	0.786	3	1	24296	1	KED
>	**In**	**115**		ug/L			1825516	1743997	6	Standard
	Ag	**107**	**20.238**	ug/L	0.805	3	30	499568	2	Standard
	Ba	**135**	**20.177**	ug/L	1.125	5	78	187646	1	Standard
	Ba	**137**	**20.141**	ug/L	1.075	5	142	335865	2	Standard
>	**Tb**	**159**		ug/L			3788380	3709422	5	Standard
	Pb	**208**	**20.118**	ug/L	1.081	5	478	3139227	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL5
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 14:24:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	17798	1	Standard
	Cl	**37**		ug/L			4174110	4338807	1	Standard
>	**Sc**	**45**		ug/L			942872	937435	3	Standard
	Cr	**52**	**49.845**	ug/L	1.750	3	14556	1011857	1	Standard
	Cr	**53**	**49.776**	ug/L	1.686	3	151	117603	0	Standard
	Fe	**54**	**4998.777**	ug/L	78.335	1	114141	16266313	1	Standard
	Fe	**57**	**4998.397**	ug/L	81.393	1	19328	7668020	2	Standard
	Mn	**55**	**49.788**	ug/L	1.903	3	382	1449659	1	Standard
>	**Ge**	**72**		ug/L			103798	102102	1	KED
	Ni	**60**	**50.238**	ug/L	1.051	2	27	110413	0	KED
	Ni	**62**	**50.135**	ug/L	1.007	2	9	17299	0	KED
	Cu	**63**	**50.082**	ug/L	0.980	1	92	316037	0	KED
	Cu	**65**	**50.014**	ug/L	0.689	1	52	160896	1	KED
	Zn	**66**	**49.823**	ug/L	1.071	2	93	39888	2	KED
	Zn	**67**	**49.769**	ug/L	2.404	4	14	6637	4	KED
	As	**75**	**50.171**	ug/L	0.735	1	2	19443	1	KED
	Y	**89**		ug/L			512459	519450	0	Standard
	Kr	**83**		ug/L			98	95	5	Standard
>	**In-1**	**115**		ug/L			28389	27520	0	KED
	Mo	**98**	**50.290**	ug/L	0.482	0	6	97263	1	KED
	Cd	**111**	**50.112**	ug/L	0.542	1	1	22697	1	KED
	Cd	**114**	**50.162**	ug/L	0.210	0	1	58928	0	KED
>	**In**	**115**		ug/L			1825516	1759521	0	Standard
	Ag	**107**	**49.903**	ug/L	0.565	1	30	1232887	1	Standard
	Ba	**135**	**49.898**	ug/L	1.090	2	78	464306	1	Standard
	Ba	**137**	**49.890**	ug/L	1.017	2	142	831624	1	Standard
>	**Tb**	**159**		ug/L			3788380	3781324	0	Standard
	Pb	**208**	**49.653**	ug/L	0.454	0	478	7649096	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL6
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 14:30:17
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	25804	1	Standard
	Cl	**37**		ug/L			4174110	4434029	1	Standard
>	**Sc**	**45**		ug/L			942872	917957	2	Standard
	Cr	**52**	**99.791**	ug/L	2.336	2	14556	1956813	1	Standard
	Cr	**53**	**99.868**	ug/L	1.886	1	151	230018	0	Standard
	Fe	**54**	**10036.280**	ug/L	214.463	2	114141	32258995	0	Standard
	Fe	**57**	**10032.696**	ug/L	162.258	1	19328	15219434	0	Standard
	Mn	**55**	**100.296**	ug/L	2.492	2	382	2889266	0	Standard
>	**Ge**	**72**		ug/L			103798	98717	0	KED
	Ni	**60**	**100.219**	ug/L	0.749	0	27	214533	0	KED
	Ni	**62**	**100.456**	ug/L	1.896	1	9	34030	2	KED
	Cu	**63**	**100.066**	ug/L	0.385	0	92	611874	1	KED
	Cu	**65**	**99.630**	ug/L	0.929	0	52	306083	1	KED
	Zn	**66**	**100.090**	ug/L	0.721	0	93	77612	0	KED
	Zn	**67**	**99.970**	ug/L	0.180	0	14	12866	0	KED
	As	**75**	**100.401**	ug/L	0.860	0	2	38127	0	KED
	Y	**89**		ug/L			512459	501230	2	Standard
	Kr	**83**		ug/L			98	123	18	Standard
>	**In-1**	**115**		ug/L			28389	27335	0	KED
	Mo	**98**	**100.141**	ug/L	1.395	1	6	193282	1	KED
	Cd	**111**	**99.555**	ug/L	0.854	0	1	44133	0	KED
	Cd	**114**	**99.916**	ug/L	0.591	0	1	116265	0	KED
>	**In**	**115**		ug/L			1825516	1696971	0	Standard
	Ag	**107**	**99.258**	ug/L	3.393	3	30	2307707	3	Standard
	Ba	**135**	**99.990**	ug/L	0.429	0	78	897075	0	Standard
	Ba	**137**	**99.418**	ug/L	1.270	1	142	1567877	1	Standard
>	**Tb**	**159**		ug/L			3788380	3670581	0	Standard
	Pb	**208**	**100.005**	ug/L	1.451	1	478	14956154	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 14:37:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	16317	0	Standard
	Cl	**37**		ug/L			4174110	4237897	1	Standard
>	**Sc**	**45**		ug/L			942872	950753	1	Standard
	Cr	**52**	**-0.010**	ug/L	0.020	208	14556	14477	1	Standard
	Cr	**53**	**-0.008**	ug/L	0.002	26	151	133	2	Standard
	Fe	**54**	**-0.191**	ug/L	1.151	603	114141	114425	1	Standard
	Fe	**57**	**1.385**	ug/L	0.516	37	19328	21657	2	Standard
	Mn	**55**	**0.002**	ug/L	0.001	32	382	442	2	Standard
>	**Ge**	**72**		ug/L			103798	105212	1	KED
	Ni	**60**	**0.001**	ug/L	0.002	108	27	31	12	KED
	Ni	**62**	**-0.013**	ug/L	0.006	48	9	5	43	KED
	Cu	**63**	**0.002**	ug/L	0.002	95	92	107	12	KED
	Cu	**65**	**-0.001**	ug/L	0.004	251	52	48	25	KED
	Zn	**66**	**0.010**	ug/L	0.013	130	93	103	11	KED
	Zn	**67**	**-0.001**	ug/L	0.016	1155	14	14	15	KED
	As	**75**	**0.007**	ug/L	0.005	72	2	5	35	KED
	Y	**89**		ug/L			512459	514009	0	Standard
	Kr	**83**		ug/L			98	97	21	Standard
>	**In-1**	**115**		ug/L			28389	27559	6	KED
	Mo	**98**	**0.037**	ug/L	0.007	19	6	78	23	KED
	Cd	**111**	**0.004**	ug/L	0.003	71	1	3	34	KED
	Cd	**114**	**0.002**	ug/L	0.002	108	1	3	75	KED
>	**In**	**115**		ug/L			1825516	1829795	0	Standard
	Ag	**107**	**0.006**	ug/L	0.001	9	30	176	7	Standard
	Ba	**135**	**-0.000**	ug/L	0.001	837	78	78	8	Standard
	Ba	**137**	**-0.001**	ug/L	0.001	113	142	128	12	Standard
>	**Tb**	**159**		ug/L			3788380	3833903	0	Standard
	Pb	**208**	**0.002**	ug/L	0.000	13	478	820	5	Standard

Sample Information

Sample Date/Time: Wednesday, August 04, 2021 14:30:17
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.m
Mass Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

Calibration

Analyte	Mass	**r Corr Coef**	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
C	13							
Cl	37							
Sc	45							
Cr	52	**1.0000**	0.021	0.50	10	20	50	100
Cr	53	**1.0000**	0.003	0.50	10	20	50	100
Fe	54	**1.0000**	0.003	36.00	1000	2000	5000	10000
Fe	57	**1.0000**	0.002	36.00	1000	2000	5000	10000
Mn	55	**1.0000**	0.031	0.50	10	20	50	100
Ge	72							
Ni	60	**1.0000**	0.022	0.50	10	20	50	100
Ni	62	**1.0000**	0.003	0.50	10	20	50	100
Cu	63	**1.0000**	0.062	0.50	10	20	50	100
Cu	65	**1.0000**	0.031	0.50	10	20	50	100
Zn	66	**1.0000**	0.008	6.00	10	20	50	100
Zn	67	**1.0000**	0.001	6.00	10	20	50	100
As	75	**1.0000**	0.004	0.20	10	20	50	100
Y	89							
Kr	83							
In-1	115							
Mo	98	**1.0000**	0.071	0.20	10	20	50	100
Cd	111	**1.0000**	0.016	0.10	10	20	50	100
Cd	114	**1.0000**	0.043	0.10	10	20	50	100
In	115							
Ag	107	**0.9999**	0.014	0.20	10	20	50	100
Ba	135	**1.0000**	0.005	0.50	10	20	50	100
Ba	137	**0.9999**	0.009	0.50	10	20	50	100
Tb	159							
Pb	208	**1.0000**	0.041	0.10	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICV1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 14:42:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	20786	2	Standard
	Cl	**37**		ug/L			4174110	4397700	1	Standard
>	**Sc**	**45**		ug/L			942872	972443	0	Standard
	Cr	**52**	**47.616**	ug/L	0.458	0	14556	997208	0	Standard
	Cr	**53**	**48.030**	ug/L	0.570	1	151	117302	1	Standard
	Fe	**54**	**4693.578**	ug/L	110.808	2	114141	16047676	1	Standard
	Fe	**57**	**4788.605**	ug/L	101.824	2	19328	7706716	1	Standard
	Mn	**55**	**47.926**	ug/L	0.328	0	382	1463281	1	Standard
>	**Ge**	**72**		ug/L			103798	103437	1	KED
	Ni	**60**	**48.692**	ug/L	0.850	1	27	109228	1	KED
	Ni	**62**	**49.387**	ug/L	0.622	1	9	17534	1	KED
	Cu	**63**	**48.803**	ug/L	0.495	1	92	312708	0	KED
	Cu	**65**	**48.861**	ug/L	0.846	1	52	157300	0	KED
	Zn	**66**	**46.981**	ug/L	0.690	1	93	38219	0	KED
	Zn	**67**	**47.530**	ug/L	0.449	0	14	6417	1	KED
	As	**75**	**47.135**	ug/L	0.489	1	2	18756	0	KED
	Y	**89**		ug/L			512459	527235	1	Standard
	Kr	**83**		ug/L			98	102	16	Standard
>	**In-1**	**115**		ug/L			28389	28401	1	KED
	Mo	**98**	**48.660**	ug/L	0.508	1	6	97582	1	KED
	Cd	**111**	**48.503**	ug/L	0.685	1	1	22339	1	KED
	Cd	**114**	**48.179**	ug/L	0.568	1	1	58240	0	KED
>	**In**	**115**		ug/L			1825516	1842886	1	Standard
	Ag	**107**	**46.977**	ug/L	0.907	1	30	1186089	1	Standard
	Ba	**135**	**46.348**	ug/L	0.323	0	78	451612	1	Standard
	Ba	**137**	**47.041**	ug/L	0.525	1	142	805709	0	Standard
>	**Tb**	**159**		ug/L			3788380	3909382	1	Standard
	Pb	**208**	**48.219**	ug/L	0.488	1	478	7681123	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICB1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 14:49:52
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	16469	1	Standard
	Cl	**37**		ug/L			4174110	4223897	1	Standard
>	**Sc**	**45**		ug/L			942872	939481	1	Standard
	Cr	**52**	**-0.011**	ug/L	0.014	128	14556	14277	0	Standard
	Cr	**53**	**-0.012**	ug/L	0.007	61	151	123	12	Standard
	Fe	**54**	**-0.094**	ug/L	0.248	262	114141	113415	0	Standard
	Fe	**57**	**1.498**	ug/L	0.323	21	19328	21580	1	Standard
	Mn	**55**	**0.002**	ug/L	0.000	21	382	425	1	Standard
>	**Ge**	**72**		ug/L			103798	103625	0	KED
	Ni	**60**	**0.000**	ug/L	0.005	1541	27	27	37	KED
	Ni	**62**	**-0.018**	ug/L	0.003	17	9	3	34	KED
	Cu	**63**	**0.003**	ug/L	0.001	22	92	114	4	KED
	Cu	**65**	**0.001**	ug/L	0.002	388	52	53	14	KED
	Zn	**66**	**-0.002**	ug/L	0.021	949	93	92	18	KED
	Zn	**67**	**0.033**	ug/L	0.073	220	14	19	51	KED
	As	**75**	**0.003**	ug/L	0.005	186	2	3	54	KED
	Y	**89**		ug/L			512459	520877	2	Standard
	Kr	**83**		ug/L			98	106	9	Standard
>	**In-1**	**115**		ug/L			28389	28704	1	KED
	Mo	**98**	**0.023**	ug/L	0.005	22	6	52	18	KED
	Cd	**111**	**0.008**	ug/L	0.004	54	1	5	36	KED
	Cd	**114**	**0.001**	ug/L	0.002	165	1	2	102	KED
>	**In**	**115**		ug/L			1825516	1812672	3	Standard
	Ag	**107**	**0.004**	ug/L	0.001	18	30	141	16	Standard
	Ba	**135**	**0.000**	ug/L	0.001	282	78	81	10	Standard
	Ba	**137**	**0.000**	ug/L	0.001	1134	142	142	7	Standard
>	**Tb**	**159**		ug/L			3788380	3861624	0	Standard
	Pb	**208**	**0.002**	ug/L	0.000	4	478	800	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 14:55:11
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	17094	2	Standard
	Cl	**37**		ug/L			4174110	4323624	0	Standard
>	**Sc**	**45**		ug/L			942872	930898	0	Standard
	Cr	**52**	**49.925**	ug/L	0.552	1	14556	1000228	0	Standard
	Cr	**53**	**49.794**	ug/L	0.444	0	151	116405	0	Standard
	Fe	**54**	**4932.327**	ug/L	20.661	0	114141	16139051	0	Standard
	Fe	**57**	**4918.830**	ug/L	98.565	2	19328	7578040	1	Standard
	Mn	**55**	**49.352**	ug/L	0.928	1	382	1442380	1	Standard
>	**Ge**	**72**		ug/L			103798	102981	1	KED
	Ni	**60**	**48.787**	ug/L	0.458	0	27	108959	0	KED
	Ni	**62**	**49.202**	ug/L	0.927	1	9	17392	2	KED
	Cu	**63**	**49.261**	ug/L	0.581	1	92	314275	1	KED
	Cu	**65**	**49.680**	ug/L	0.586	1	52	159237	0	KED
	Zn	**66**	**49.551**	ug/L	0.582	1	93	40131	1	KED
	Zn	**67**	**50.362**	ug/L	0.601	1	14	6768	1	KED
	As	**75**	**48.328**	ug/L	0.301	0	2	19148	1	KED
	Y	**89**		ug/L			512459	512761	2	Standard
	Kr	**83**		ug/L			98	108	7	Standard
>	**In-1**	**115**		ug/L			28389	27907	0	KED
	Mo	**98**	**48.652**	ug/L	0.779	1	6	95872	1	KED
	Cd	**111**	**49.588**	ug/L	0.145	0	1	22443	0	KED
	Cd	**114**	**49.617**	ug/L	0.756	1	1	58941	0	KED
>	**In**	**115**		ug/L			1825516	1765658	1	Standard
	Ag	**107**	**47.981**	ug/L	1.100	2	30	1160680	2	Standard
	Ba	**135**	**49.366**	ug/L	0.300	0	78	460845	0	Standard
	Ba	**137**	**49.837**	ug/L	1.200	2	142	817731	1	Standard
>	**Tb**	**159**		ug/L			3788380	3787031	1	Standard
	Pb	**208**	**49.417**	ug/L	0.691	1	478	7624867	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 15:02:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	16442	0	Standard
	Cl	**37**		ug/L			4174110	4170495	2	Standard
>	**Sc**	**45**		ug/L			942872	944067	1	Standard
	Cr	**52**	**-0.016**	ug/L	0.014	87	14556	14245	0	Standard
	Cr	**53**	**-0.013**	ug/L	0.006	50	151	121	13	Standard
	Fe	**54**	**-0.103**	ug/L	0.890	867	114141	113913	0	Standard
	Fe	**57**	**1.272**	ug/L	0.411	32	19328	21333	2	Standard
	Mn	**55**	**0.002**	ug/L	0.000	6	382	434	1	Standard
>	**Ge**	**72**		ug/L			103798	102838	0	KED
	Ni	**60**	**-0.001**	ug/L	0.002	272	27	25	18	KED
	Ni	**62**	**-0.002**	ug/L	0.025	1466	9	8	98	KED
	Cu	**63**	**0.004**	ug/L	0.004	100	92	117	23	KED
	Cu	**65**	**-0.001**	ug/L	0.001	221	52	49	10	KED
	Zn	**66**	**-0.002**	ug/L	0.006	302	93	91	5	KED
	Zn	**67**	**-0.013**	ug/L	0.008	57	14	12	8	KED
	As	**75**	**0.007**	ug/L	0.004	61	2	5	30	KED
	Y	**89**		ug/L			512459	516459	0	Standard
	Kr	**83**		ug/L			98	107	5	Standard
>	**In-1**	**115**		ug/L			28389	28531	1	KED
	Mo	**98**	**0.026**	ug/L	0.002	7	6	57	8	KED
	Cd	**111**	**0.001**	ug/L	0.001	83	1	2	24	KED
	Cd	**114**	**0.002**	ug/L	0.001	55	1	3	35	KED
>	**In**	**115**		ug/L			1825516	1806951	2	Standard
	Ag	**107**	**0.004**	ug/L	0.000	5	30	139	4	Standard
	Ba	**135**	**-0.001**	ug/L	0.001	71	78	67	12	Standard
	Ba	**137**	**-0.001**	ug/L	0.001	65	142	118	10	Standard
>	**Tb**	**159**		ug/L			3788380	3807541	0	Standard
	Pb	**208**	**0.002**	ug/L	0.000	13	478	853	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CRL1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 15:07:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	20511	3	Standard
	Cl	**37**		ug/L			4174110	4197648	0	Standard
>	**Sc**	**45**		ug/L			942872	924524	1	Standard
	Cr	**52**	**0.504**	ug/L	0.015	2	14556	24166	1	Standard
	Cr	**53**	**0.476**	ug/L	0.009	1	151	1251	2	Standard
	Fe	**54**	**44.305**	ug/L	1.647	3	114141	254859	1	Standard
	Fe	**57**	**35.402**	ug/L	0.973	2	19328	72976	1	Standard
	Mn	**55**	**0.496**	ug/L	0.011	2	382	14757	1	Standard
>	**Ge**	**72**		ug/L			103798	103285	2	KED
	Ni	**60**	**0.460**	ug/L	0.011	2	27	1058	4	KED
	Ni	**62**	**0.435**	ug/L	0.032	7	9	163	9	KED
	Cu	**63**	**0.502**	ug/L	0.010	1	92	3300	2	KED
	Cu	**65**	**0.503**	ug/L	0.009	1	52	1667	3	KED
	Zn	**66**	**5.868**	ug/L	0.204	3	93	4847	2	KED
	Zn	**67**	**5.679**	ug/L	0.174	3	14	778	3	KED
	As	**75**	**0.193**	ug/L	0.021	10	2	79	10	KED
	Y	**89**		ug/L			512459	508768	1	Standard
	Kr	**83**		ug/L			98	116	7	Standard
>	**In-1**	**115**		ug/L			28389	28556	1	KED
	Mo	**98**	**0.172**	ug/L	0.010	5	6	352	4	KED
	Cd	**111**	**0.105**	ug/L	0.008	7	1	50	7	KED
	Cd	**114**	**0.099**	ug/L	0.013	12	1	121	13	KED
>	**In**	**115**		ug/L			1825516	1815845	2	Standard
	Ag	**107**	**0.200**	ug/L	0.004	2	30	5001	1	Standard
	Ba	**135**	**0.482**	ug/L	0.017	3	78	4698	1	Standard
	Ba	**137**	**0.474**	ug/L	0.017	3	142	8135	0	Standard
>	**Tb**	**159**		ug/L			3788380	3768033	0	Standard
	Pb	**208**	**0.107**	ug/L	0.002	1	478	16898	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFA1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 15:14:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	92576	0	Standard
	Cl	**37**		ug/L			4174110	10409130	1	Standard
>	**Sc**	**45**		ug/L			942872	884329	0	Standard
	Cr	**52**	**0.424**	ug/L	0.010	2	14556	21605	1	Standard
	Cr	**53**	**1.816**	ug/L	0.050	2	151	4171	3	Standard
	Fe	**54**	**19140.336**	ug/L	127.516	0	114141	59189800	1	Standard
	Fe	**57**	**19667.177**	ug/L	286.108	1	19328	28732037	2	Standard
	Mn	**55**	**0.059**	ug/L	0.002	3	382	2000	1	Standard
>	**Ge**	**72**		ug/L			103798	94371	1	KED
	Ni	**60**	**0.048**	ug/L	0.003	5	27	122	3	KED
	Ni	**62**	**0.083**	ug/L	0.016	19	9	35	13	KED
	Cu	**63**	**0.049**	ug/L	0.000	0	92	368	1	KED
	Cu	**65**	**0.050**	ug/L	0.006	11	52	193	8	KED
	Zn	**66**	**0.270**	ug/L	0.024	8	93	285	6	KED
	Zn	**67**	**0.171**	ug/L	0.023	13	14	34	9	KED
	As	**75**	**0.027**	ug/L	0.005	17	2	12	12	KED
	Y	**89**		ug/L			512459	503452	0	Standard
	Kr	**83**		ug/L			98	122	8	Standard
>	**In-1**	**115**		ug/L			28389	25265	2	KED
	Mo	**98**	**414.498**	ug/L	8.892	2	6	739190	0	KED
	Cd	**111**	**0.047**	ug/L	0.008	16	1	20	13	KED
	Cd	**114**	**0.037**	ug/L	0.005	13	1	41	13	KED
>	**In**	**115**		ug/L			1825516	1576064	1	Standard
	Ag	**107**	**0.009**	ug/L	0.001	8	30	217	7	Standard
	Ba	**135**	**0.034**	ug/L	0.002	7	78	352	6	Standard
	Ba	**137**	**0.031**	ug/L	0.002	8	142	572	5	Standard
>	**Tb**	**159**		ug/L			3788380	3384395	2	Standard
	Pb	**208**	**0.019**	ug/L	0.001	2	478	3036	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFB1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 15:19:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	88821	1	Standard
	Cl	**37**		ug/L			4174110	10018395	0	Standard
>	**Sc**	**45**		ug/L			942872	905782	2	Standard
	Cr	**52**	**19.220**	ug/L	0.174	0	14556	383244	1	Standard
	Cr	**53**	**20.403**	ug/L	0.489	2	151	46486	1	Standard
	Fe	**54**	**18266.557**	ug/L	438.085	2	114141	57840977	0	Standard
	Fe	**57**	**19427.591**	ug/L	198.286	1	19328	29065062	1	Standard
	Mn	**55**	**18.673**	ug/L	0.318	1	382	531127	0	Standard
>	**Ge**	**72**		ug/L			103798	94715	1	KED
	Ni	**60**	**20.110**	ug/L	0.205	1	27	41321	0	KED
	Ni	**62**	**20.727**	ug/L	0.709	3	9	6742	3	KED
	Cu	**63**	**20.212**	ug/L	0.151	0	92	118645	1	KED
	Cu	**65**	**20.416**	ug/L	0.504	2	52	60205	1	KED
	Zn	**66**	**19.331**	ug/L	0.282	1	93	14450	1	KED
	Zn	**67**	**17.775**	ug/L	0.858	4	14	2205	4	KED
	As	**75**	**19.489**	ug/L	0.315	1	2	7102	1	KED
	Y	**89**		ug/L			512459	512714	1	Standard
	Kr	**83**		ug/L			98	131	24	Standard
>	**In-1**	**115**		ug/L			28389	24396	0	KED
	Mo	**98**	**414.230**	ug/L	3.914	0	6	713484	0	KED
	Cd	**111**	**20.299**	ug/L	0.059	0	1	8032	0	KED
	Cd	**114**	**20.057**	ug/L	0.334	1	1	20830	1	KED
>	**In**	**115**		ug/L			1825516	1560303	2	Standard
	Ag	**107**	**21.601**	ug/L	0.633	2	30	461692	2	Standard
	Ba	**135**	**0.034**	ug/L	0.004	10	78	348	10	Standard
	Ba	**137**	**0.025**	ug/L	0.002	8	142	485	4	Standard
>	**Tb**	**159**		ug/L			3788380	3364551	0	Standard
	Pb	**208**	**0.014**	ug/L	0.001	5	478	2276	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 15:23:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	22989	0	Standard
	Cl	**37**		ug/L			4174110	4044254	1	Standard
>	**Sc**	**45**		ug/L			942872	879085	0	Standard
	Cr	**52**	**189.988**	ug/L	4.013	2	14556	3556518	2	Standard
	Cr	**53**	**186.084**	ug/L	2.269	1	151	410415	0	Standard
	Fe	**54**	**18627.566**	ug/L	265.170	1	114141	57262649	1	Standard
	Fe	**57**	**19404.580**	ug/L	198.421	1	19328	28178767	0	Standard
	Mn	**55**	**187.884**	ug/L	4.812	2	382	5184642	2	Standard
>	**Ge**	**72**		ug/L			103798	95281	2	KED
	Ni	**60**	**193.983**	ug/L	2.663	1	27	400708	0	KED
	Ni	**62**	**195.082**	ug/L	4.732	2	9	63754	1	KED
	Cu	**63**	**194.104**	ug/L	3.298	1	92	1145217	0	KED
	Cu	**65**	**191.675**	ug/L	2.600	1	52	568237	1	KED
	Zn	**66**	**186.832**	ug/L	1.608	0	93	139744	1	KED
	Zn	**67**	**187.915**	ug/L	1.676	0	14	23328	1	KED
	As	**75**	**191.891**	ug/L	1.514	0	2	70328	1	KED
	Y	**89**		ug/L			512459	479724	1	Standard
	Kr	**83**		ug/L			98	132	3	Standard
>	**In-1**	**115**		ug/L			28389	24563	0	KED
	Mo	**98**	**208.709**	ug/L	1.906	0	6	361950	0	KED
	Cd	**111**	**199.911**	ug/L	0.669	0	1	79633	0	KED
	Cd	**114**	**198.174**	ug/L	0.945	0	1	207213	1	KED
>	**In**	**115**		ug/L			1825516	1509783	2	Standard
	Ag	**107**	**212.149**	ug/L	3.862	1	30	4389535	4	Standard
	Ba	**135**	**190.388**	ug/L	1.133	0	78	1519666	2	Standard
	Ba	**137**	**193.654**	ug/L	3.319	1	142	2716632	1	Standard
>	**Tb**	**159**		ug/L			3788380	3326970	1	Standard
	Pb	**208**	**197.828**	ug/L	0.564	0	478	26816598	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 15:27:52

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	20630	3	Standard
	Cl	**37**		ug/L			4174110	4028293	1	Standard
>	**Sc**	**45**		ug/L			942872	824368	3	Standard
	Cr	**52**	**292.717**	ug/L	8.557	2	14556	5128936	1	Standard
	Cr	**53**	**290.016**	ug/L	10.801	3	151	599365	1	Standard
	Fe	**54**	**30004.091**	ug/L	528.384	1	114141	86413006	2	Standard
	Fe	**57**	**31726.111**	ug/L	924.653	2	19328	43177834	2	Standard
	Mn	**55**	**290.496**	ug/L	6.931	2	382	7513876	1	Standard
>	**Ge**	**72**		ug/L			103798	92314	0	KED
	Ni	**60**	**280.091**	ug/L	2.698	0	27	560650	0	KED
	Ni	**62**	**284.515**	ug/L	3.858	1	9	90111	1	KED
	Cu	**63**	**279.288**	ug/L	2.317	0	92	1596855	1	KED
	Cu	**65**	**279.278**	ug/L	1.036	0	52	802272	0	KED
	Zn	**66**	**272.625**	ug/L	2.963	1	93	197545	0	KED
	Zn	**67**	**269.644**	ug/L	2.707	1	14	32429	0	KED
	As	**75**	**283.467**	ug/L	3.715	1	2	100666	1	KED
	Y	**89**		ug/L			512459	460291	2	Standard
	Kr	**83**		ug/L			98	192	8	Standard
>	**In-1**	**115**		ug/L			28389	24684	1	KED
	Mo	**98**	**298.539**	ug/L	3.821	1	6	520236	1	KED
	Cd	**111**	**282.036**	ug/L	6.831	2	1	112866	0	KED
	Cd	**114**	**279.875**	ug/L	7.197	2	1	293985	0	KED
>	**In**	**115**		ug/L			1825516	1407446	0	Standard
	Ag	**107**	**289.898**	ug/L	2.224	0	30	5590165	0	Standard
	Ba	**135**	**281.293**	ug/L	2.808	0	78	2093036	1	Standard
	Ba	**137**	**275.655**	ug/L	1.969	0	142	3605498	1	Standard
>	**Tb**	**159**		ug/L			3788380	3089421	3	Standard
	Pb	**208**	**299.298**	ug/L	10.082	3	478	37648970	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 15:34:50
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	21799	2	Standard
	Cl	**37**		ug/L			4174110	4090148	1	Standard
>	**Sc**	**45**		ug/L			942872	859769	1	Standard
	Cr	**52**	**287.996**	ug/L	6.823	2	14556	5264298	0	Standard
	Cr	**53**	**285.815**	ug/L	4.804	1	151	616406	1	Standard
	Fe	**54**	**29228.673**	ug/L	700.824	2	114141	87795074	0	Standard
	Fe	**57**	**30874.906**	ug/L	688.059	2	19328	43828601	0	Standard
	Mn	**55**	**282.755**	ug/L	6.113	2	382	7629045	0	Standard
>	**Ge**	**72**		ug/L			103798	89404	0	KED
	Ni	**60**	**291.011**	ug/L	5.390	1	27	564152	1	KED
	Ni	**62**	**291.688**	ug/L	3.188	1	9	89470	1	KED
	Cu	**63**	**282.562**	ug/L	5.372	1	92	1564615	1	KED
	Cu	**65**	**282.606**	ug/L	3.386	1	52	786251	1	KED
	Zn	**66**	**276.428**	ug/L	6.215	2	93	193989	2	KED
	Zn	**67**	**272.817**	ug/L	1.846	0	14	31777	0	KED
	As	**75**	**291.965**	ug/L	6.836	2	2	100413	2	KED
	Y	**89**		ug/L			512459	475364	0	Standard
	Kr	**83**		ug/L			98	154	19	Standard
>	**In-1**	**115**		ug/L			28389	24678	0	KED
	Mo	**98**	**303.459**	ug/L	2.273	0	6	528755	0	KED
	Cd	**111**	**284.269**	ug/L	3.751	1	1	113765	0	KED
	Cd	**114**	**281.398**	ug/L	3.866	1	1	295603	0	KED
>	**In**	**115**		ug/L			1825516	1435643	2	Standard
	Ag	**107**	**277.924**	ug/L	11.967	4	30	5463791	2	Standard
	Ba	**135**	**282.838**	ug/L	7.925	2	78	2145993	1	Standard
	Ba	**137**	**275.366**	ug/L	6.753	2	142	3672909	1	Standard
>	**Tb**	**159**		ug/L			3788380	3191645	0	Standard
	Pb	**208**	**292.217**	ug/L	3.569	1	478	37999118	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 15:41:47
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	21939	1	Standard
	Cl	**37**		ug/L			4174110	4188930	0	Standard
>	**Sc**	**45**		ug/L			942872	942094	0	Standard
	Cr	**52**	**0.000**	ug/L	0.008	2267	14556	14551	1	Standard
	Cr	**53**	**0.021**	ug/L	0.011	49	151	201	12	Standard
	Fe	**54**	**-0.568**	ug/L	0.326	57	114141	112177	0	Standard
	Fe	**57**	**2.058**	ug/L	0.142	6	19328	22512	0	Standard
	Mn	**55**	**0.010**	ug/L	0.001	13	382	691	6	Standard
>	**Ge**	**72**		ug/L			103798	102586	2	KED
	Ni	**60**	**0.010**	ug/L	0.003	32	27	48	13	KED
	Ni	**62**	**0.002**	ug/L	0.014	616	9	10	47	KED
	Cu	**63**	**0.010**	ug/L	0.002	23	92	153	11	KED
	Cu	**65**	**0.010**	ug/L	0.008	84	52	83	32	KED
	Zn	**66**	**0.101**	ug/L	0.019	18	93	173	9	KED
	Zn	**67**	**0.049**	ug/L	0.011	22	14	20	9	KED
	As	**75**	**0.016**	ug/L	0.004	24	2	9	15	KED
	Y	**89**		ug/L			512459	511839	2	Standard
	Kr	**83**		ug/L			98	98	19	Standard
>	**In-1**	**115**		ug/L			28389	28078	0	KED
	Mo	**98**	**0.093**	ug/L	0.012	12	6	190	13	KED
	Cd	**111**	**0.010**	ug/L	0.007	69	1	6	52	KED
	Cd	**114**	**0.008**	ug/L	0.003	31	1	10	27	KED
>	**In**	**115**		ug/L			1825516	1816814	1	Standard
	Ag	**107**	**0.015**	ug/L	0.001	7	30	394	8	Standard
	Ba	**135**	**0.007**	ug/L	0.002	24	78	144	11	Standard
	Ba	**137**	**0.007**	ug/L	0.002	28	142	256	13	Standard
>	**Tb**	**159**		ug/L			3788380	3745101	0	Standard
	Pb	**208**	**0.008**	ug/L	0.000	4	478	1641	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 15:47:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	21853	1	Standard
	Cl	**37**		ug/L			4174110	4083628	3	Standard
>	**Sc**	**45**		ug/L			942872	934798	3	Standard
	Cr	**52**	**0.010**	ug/L	0.016	162	14556	14623	1	Standard
	Cr	**53**	**-0.004**	ug/L	0.002	60	151	141	0	Standard
	Fe	**54**	**-0.362**	ug/L	1.434	395	114141	111891	1	Standard
	Fe	**57**	**1.634**	ug/L	0.127	7	19328	21680	2	Standard
	Mn	**55**	**0.004**	ug/L	0.000	13	382	484	2	Standard
>	**Ge**	**72**		ug/L			103798	101631	0	KED
	Ni	**60**	**0.006**	ug/L	0.003	49	27	39	15	KED
	Ni	**62**	**-0.005**	ug/L	0.016	329	9	7	75	KED
	Cu	**63**	**0.004**	ug/L	0.004	88	92	115	19	KED
	Cu	**65**	**0.003**	ug/L	0.003	103	52	59	15	KED
	Zn	**66**	**0.083**	ug/L	0.022	26	93	158	10	KED
	Zn	**67**	**0.089**	ug/L	0.022	24	14	26	11	KED
	As	**75**	**0.013**	ug/L	0.004	33	2	7	21	KED
	Y	**89**		ug/L			512459	502557	2	Standard
	Kr	**83**		ug/L			98	95	15	Standard
>	**In-1**	**115**		ug/L			28389	28255	0	KED
	Mo	**98**	**0.018**	ug/L	0.005	29	6	42	24	KED
	Cd	**111**	**0.006**	ug/L	0.001	22	1	4	13	KED
	Cd	**114**	**0.006**	ug/L	0.003	56	1	8	48	KED
>	**In**	**115**		ug/L			1825516	1792392	1	Standard
	Ag	**107**	**0.005**	ug/L	0.001	21	30	140	15	Standard
	Ba	**135**	**0.003**	ug/L	0.002	55	78	110	17	Standard
	Ba	**137**	**0.002**	ug/L	0.001	28	142	173	3	Standard
>	**Tb**	**159**		ug/L			3788380	3675702	3	Standard
	Pb	**208**	**0.004**	ug/L	0.002	64	478	1009	30	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 15:54:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	18162	2	Standard
	Cl	**37**		ug/L			4174110	4386105	1	Standard
>	**Sc**	**45**		ug/L			942872	944731	0	Standard
	Cr	**52**	**49.942**	ug/L	0.682	1	14556	1015387	1	Standard
	Cr	**53**	**49.998**	ug/L	0.672	1	151	118612	0	Standard
	Fe	**54**	**4859.704**	ug/L	33.990	0	114141	16139109	0	Standard
	Fe	**57**	**4858.232**	ug/L	73.246	1	19328	7595713	0	Standard
	Mn	**55**	**49.234**	ug/L	0.545	1	382	1460255	0	Standard
>	**Ge**	**72**		ug/L			103798	102320	1	KED
	Ni	**60**	**48.340**	ug/L	0.801	1	27	107263	1	KED
	Ni	**62**	**48.636**	ug/L	0.473	0	9	17080	0	KED
	Cu	**63**	**49.004**	ug/L	0.773	1	92	310587	0	KED
	Cu	**65**	**49.292**	ug/L	0.489	0	52	156979	0	KED
	Zn	**66**	**49.228**	ug/L	1.552	3	93	39603	1	KED
	Zn	**67**	**49.718**	ug/L	1.432	2	14	6638	2	KED
	As	**75**	**48.353**	ug/L	0.837	1	2	19031	0	KED
	Y	**89**		ug/L			512459	517734	0	Standard
	Kr	**83**		ug/L			98	92	19	Standard
>	**In-1**	**115**		ug/L			28389	27318	0	KED
	Mo	**98**	**49.908**	ug/L	0.967	1	6	96272	2	KED
	Cd	**111**	**50.575**	ug/L	0.536	1	1	22408	1	KED
	Cd	**114**	**50.609**	ug/L	0.644	1	1	58856	1	KED
>	**In**	**115**		ug/L			1825516	1737490	2	Standard
	Ag	**107**	**49.585**	ug/L	0.898	1	30	1180137	0	Standard
	Ba	**135**	**50.367**	ug/L	0.490	0	78	462643	1	Standard
	Ba	**137**	**50.684**	ug/L	0.701	1	142	818361	1	Standard
>	**Tb**	**159**		ug/L			3788380	3775902	0	Standard
	Pb	**208**	**49.570**	ug/L	0.328	0	478	7626645	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 16:01:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	16555	2	Standard
	Cl	**37**		ug/L			4174110	4149904	1	Standard
>	**Sc**	**45**		ug/L			942872	965073	0	Standard
	Cr	**52**	**-0.024**	ug/L	0.002	7	14556	14412	0	Standard
	Cr	**53**	**0.001**	ug/L	0.003	527	151	156	4	Standard
	Fe	**54**	**-0.725**	ug/L	0.517	71	114141	114382	1	Standard
	Fe	**57**	**1.821**	ug/L	0.025	1	19328	22685	0	Standard
	Mn	**55**	**0.003**	ug/L	0.001	31	382	481	6	Standard
>	**Ge**	**72**		ug/L			103798	103038	0	KED
	Ni	**60**	**0.002**	ug/L	0.002	98	27	31	12	KED
	Ni	**62**	**-0.003**	ug/L	0.014	401	9	8	58	KED
	Cu	**63**	**0.004**	ug/L	0.003	91	92	115	19	KED
	Cu	**65**	**0.005**	ug/L	0.001	18	52	67	4	KED
	Zn	**66**	**0.044**	ug/L	0.017	37	93	128	10	KED
	Zn	**67**	**0.024**	ug/L	0.050	204	14	17	37	KED
	As	**75**	**0.010**	ug/L	0.003	33	2	6	20	KED
	Y	**89**		ug/L			512459	520455	1	Standard
	Kr	**83**		ug/L			98	111	10	Standard
>	**In-1**	**115**		ug/L			28389	28164	0	KED
	Mo	**98**	**0.031**	ug/L	0.003	8	6	67	7	KED
	Cd	**111**	**0.004**	ug/L	0.002	68	1	3	34	KED
	Cd	**114**	**0.004**	ug/L	0.004	93	1	6	77	KED
>	**In**	**115**		ug/L			1825516	1802433	2	Standard
	Ag	**107**	**0.005**	ug/L	0.001	20	30	161	18	Standard
	Ba	**135**	**-0.001**	ug/L	0.001	179	78	72	15	Standard
	Ba	**137**	**-0.000**	ug/L	0.002	414	142	133	23	Standard
>	**Tb**	**159**		ug/L			3788380	3840187	1	Standard
	Pb	**208**	**0.004**	ug/L	0.000	4	478	1078	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0600-BLK2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 16:06:03
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	29104	0	Standard
	Cl	**37**		ug/L			4174110	4105831	0	Standard
>	**Sc**	**45**		ug/L			942872	952945	0	Standard
	Cr	**52**	**0.156**	ug/L	0.006	4	14556	17859	0	Standard
	Cr	**53**	**0.136**	ug/L	0.005	3	151	477	2	Standard
	Fe	**54**	**2.040**	ug/L	0.203	9	114141	122145	0	Standard
	Fe	**57**	**3.194**	ug/L	0.433	13	19328	24560	2	Standard
	Mn	**55**	**0.112**	ug/L	0.001	1	382	3751	1	Standard
>	**Ge**	**72**		ug/L			103798	104303	1	KED
	Ni	**60**	**0.001**	ug/L	0.001	288	27	28	11	KED
	Ni	**62**	**0.002**	ug/L	0.003	202	9	10	10	KED
	Cu	**63**	**0.044**	ug/L	0.007	16	92	379	11	KED
	Cu	**65**	**0.051**	ug/L	0.005	10	52	216	9	KED
	Zn	**66**	**0.041**	ug/L	0.015	35	93	128	8	KED
	Zn	**67**	**0.032**	ug/L	0.055	171	14	19	40	KED
	As	**75**	**0.003**	ug/L	0.002	88	2	3	25	KED
	Y	**89**		ug/L			512459	523734	0	Standard
	Kr	**83**		ug/L			98	97	20	Standard
>	**In-1**	**115**		ug/L			28389	28527	1	KED
	Mo	**98**	**0.029**	ug/L	0.007	23	6	63	20	KED
	Cd	**111**	**0.007**	ug/L	0.004	61	1	4	40	KED
	Cd	**114**	**0.003**	ug/L	0.002	55	1	4	43	KED
>	**In**	**115**		ug/L			1825516	1826254	1	Standard
	Ag	**107**	**0.004**	ug/L	0.001	16	30	121	14	Standard
	Ba	**135**	**-0.001**	ug/L	0.001	121	78	71	10	Standard
	Ba	**137**	**0.001**	ug/L	0.001	133	142	158	12	Standard
>	**Tb**	**159**		ug/L			3788380	3831205	1	Standard
	Pb	**208**	**0.006**	ug/L	0.001	11	478	1349	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0600-BS2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 16:10:17
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	31242	1	Standard
	Cl	**37**		ug/L			4174110	4284139	1	Standard
>	**Sc**	**45**		ug/L			942872	979029	1	Standard
	Cr	**52**	**24.249**	ug/L	0.344	1	14556	518657	1	Standard
	Cr	**53**	**24.419**	ug/L	0.417	1	151	60106	0	Standard
	Fe	**54**	**4757.849**	ug/L	127.366	2	114141	16372683	1	Standard
	Fe	**57**	**4779.220**	ug/L	134.952	2	19328	7742676	2	Standard
	Mn	**55**	**24.421**	ug/L	0.590	2	382	750661	1	Standard
>	**Ge**	**72**		ug/L			103798	103829	0	KED
	Ni	**60**	**24.291**	ug/L	0.417	1	27	54710	1	KED
	Ni	**62**	**24.323**	ug/L	0.304	1	9	8673	1	KED
	Cu	**63**	**24.436**	ug/L	0.431	1	92	157221	1	KED
	Cu	**65**	**24.704**	ug/L	0.240	0	52	79862	0	KED
	Zn	**66**	**74.337**	ug/L	1.633	2	93	60657	2	KED
	Zn	**67**	**71.254**	ug/L	1.500	2	14	9648	1	KED
	As	**75**	**24.283**	ug/L	0.169	0	2	9701	0	KED
	Y	**89**		ug/L			512459	523066	1	Standard
	Kr	**83**		ug/L			98	102	4	Standard
>	**In-1**	**115**		ug/L			28389	28188	0	KED
	Mo	**98**	**0.013**	ug/L	0.002	18	6	31	14	KED
	Cd	**111**	**24.754**	ug/L	0.613	2	1	11316	1	KED
	Cd	**114**	**24.697**	ug/L	0.212	0	1	29636	1	KED
>	**In**	**115**		ug/L			1825516	1794479	1	Standard
	Ag	**107**	**24.374**	ug/L	0.512	2	30	599157	0	Standard
	Ba	**135**	**24.574**	ug/L	0.617	2	78	233127	0	Standard
	Ba	**137**	**24.765**	ug/L	0.497	2	142	413010	0	Standard
>	**Tb**	**159**		ug/L			3788380	3801753	0	Standard
	Pb	**208**	**24.836**	ug/L	0.261	1	478	3847406	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0017-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 16:14:30
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	30163	2	Standard
	Cl	**37**		ug/L			4174110	4200762	2	Standard
>	**Sc**	**45**		ug/L			942872	977803	2	Standard
	Cr	**52**	**0.121**	ug/L	0.011	9	14556	17597	1	Standard
	Cr	**53**	**0.089**	ug/L	0.006	6	151	376	5	Standard
	Fe	**54**	**6.288**	ug/L	0.791	12	114141	139788	0	Standard
	Fe	**57**	**2.340**	ug/L	0.430	18	19328	23810	0	Standard
	Mn	**55**	**0.533**	ug/L	0.014	2	382	16748	0	Standard
>	**Ge**	**72**		ug/L			103798	104804	1	KED
	Ni	**60**	**0.004**	ug/L	0.003	73	27	35	17	KED
	Ni	**62**	**-0.007**	ug/L	0.011	154	9	6	56	KED
	Cu	**63**	**0.029**	ug/L	0.003	9	92	283	5	KED
	Cu	**65**	**0.030**	ug/L	0.001	2	52	149	1	KED
	Zn	**66**	**0.362**	ug/L	0.024	6	93	392	4	KED
	Zn	**67**	**0.408**	ug/L	0.165	40	14	70	32	KED
	As	**75**	**0.004**	ug/L	0.001	15	2	4	6	KED
	Y	**89**		ug/L			512459	534265	1	Standard
	Kr	**83**		ug/L			98	102	8	Standard
>	**In-1**	**115**		ug/L			28389	28291	1	KED
	Mo	**98**	**0.010**	ug/L	0.003	25	6	25	18	KED
	Cd	**111**	**0.001**	ug/L	0.002	296	1	1	50	KED
	Cd	**114**	**0.007**	ug/L	0.006	83	1	9	73	KED
>	**In**	**115**		ug/L			1825516	1875892	2	Standard
	Ag	**107**	**0.004**	ug/L	0.000	11	30	133	9	Standard
	Ba	**135**	**-0.001**	ug/L	0.001	102	78	73	8	Standard
	Ba	**137**	**-0.002**	ug/L	0.001	27	142	102	12	Standard
>	**Tb**	**159**		ug/L			3788380	3883272	1	Standard
	Pb	**208**	**0.006**	ug/L	0.000	8	478	1427	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0017-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 16:18:44
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	33715	4	Standard
	Cl	**37**		ug/L			4174110	4320885	2	Standard
>	**Sc**	**45**		ug/L			942872	963457	3	Standard
	Cr	**52**	**25.055**	ug/L	0.734	2	14556	526567	1	Standard
	Cr	**53**	**24.760**	ug/L	0.495	1	151	59957	1	Standard
	Fe	**54**	**4805.901**	ug/L	210.477	4	114141	16260635	0	Standard
	Fe	**57**	**4701.757**	ug/L	298.852	6	19328	7486483	2	Standard
	Mn	**55**	**24.719**	ug/L	0.694	2	382	747395	1	Standard
>	**Ge**	**72**		ug/L			103798	104946	0	KED
	Ni	**60**	**24.313**	ug/L	0.337	1	27	55350	0	KED
	Ni	**62**	**24.269**	ug/L	0.246	1	9	8746	0	KED
	Cu	**63**	**24.379**	ug/L	0.072	0	92	158545	0	KED
	Cu	**65**	**24.685**	ug/L	0.049	0	52	80664	0	KED
	Zn	**66**	**72.222**	ug/L	1.982	2	93	59560	2	KED
	Zn	**67**	**68.266**	ug/L	0.462	0	14	9344	0	KED
	As	**75**	**23.543**	ug/L	0.460	1	2	9506	1	KED
	Y	**89**		ug/L			512459	526858	1	Standard
	Kr	**83**		ug/L			98	107	15	Standard
>	**In-1**	**115**		ug/L			28389	28155	0	KED
	Mo	**98**	**0.007**	ug/L	0.002	35	6	19	23	KED
	Cd	**111**	**24.218**	ug/L	0.145	0	1	11059	1	KED
	Cd	**114**	**24.076**	ug/L	0.024	0	1	28856	0	KED
>	**In**	**115**		ug/L			1825516	1801255	3	Standard
	Ag	**107**	**24.565**	ug/L	0.588	2	30	606552	5	Standard
	Ba	**135**	**24.575**	ug/L	0.855	3	78	233917	1	Standard
	Ba	**137**	**25.002**	ug/L	0.766	3	142	418345	1	Standard
>	**Tb**	**159**		ug/L			3788380	3847105	0	Standard
	Pb	**208**	**25.200**	ug/L	0.135	0	478	3950480	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0747-BLK2
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 16:23:49
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	23718	1	Standard
	Cl	**37**		ug/L			4174110	4177182	2	Standard
>	**Sc**	**45**		ug/L			942872	974360	1	Standard
	Cr	**52**	**0.006**	ug/L	0.025	442	14556	15157	3	Standard
	Cr	**53**	**-0.003**	ug/L	0.005	155	151	149	8	Standard
	Fe	**54**	**5.412**	ug/L	0.429	7	114141	136344	1	Standard
	Fe	**57**	**2.518**	ug/L	0.178	7	19328	24023	1	Standard
	Mn	**55**	**0.014**	ug/L	0.001	10	382	810	3	Standard
>	**Ge**	**72**		ug/L			103798	105576	0	KED
	Ni	**60**	**0.007**	ug/L	0.006	87	27	43	31	KED
	Ni	**62**	**-0.004**	ug/L	0.011	282	9	8	48	KED
	Cu	**63**	**0.014**	ug/L	0.001	10	92	182	4	KED
	Cu	**65**	**0.010**	ug/L	0.003	30	52	86	11	KED
	Zn	**66**	**0.155**	ug/L	0.032	20	93	224	11	KED
	Zn	**67**	**0.174**	ug/L	0.097	55	14	38	33	KED
	As	**75**	**0.004**	ug/L	0.003	83	2	4	29	KED
	Y	**89**		ug/L			512459	534552	3	Standard
	Kr	**83**		ug/L			98	105	5	Standard
>	**In-1**	**115**		ug/L			28389	29284	1	KED
	Mo	**98**	**0.004**	ug/L	0.002	64	6	13	33	KED
	Cd	**111**	**0.002**	ug/L	0.004	220	1	2	78	KED
	Cd	**114**	**0.004**	ug/L	0.001	17	1	6	15	KED
>	**In**	**115**		ug/L			1825516	1867819	2	Standard
	Ag	**107**	**0.003**	ug/L	0.001	29	30	115	19	Standard
	Ba	**135**	**0.004**	ug/L	0.001	30	78	120	8	Standard
	Ba	**137**	**0.003**	ug/L	0.002	50	142	196	11	Standard
>	**Tb**	**159**		ug/L			3788380	3907058	0	Standard
	Pb	**208**	**0.006**	ug/L	0.000	4	478	1464	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0747-BS2
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 16:28:03

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	21026	0	Standard
	Cl	37		ug/L			4174110	4281553	1	Standard
>	Sc	45		ug/L			942872	964428	1	Standard
	Cr	52	23.417	ug/L	0.489	2	14556	493898	1	Standard
	Cr	53	23.450	ug/L	0.270	1	151	56873	0	Standard
	Fe	54	459.799	ug/L	4.596	0	114141	1664466	0	Standard
	Fe	57	443.175	ug/L	3.005	0	19328	725348	0	Standard
	Mn	55	23.584	ug/L	0.158	0	382	714285	0	Standard
>	Ge	72		ug/L			103798	106724	1	KED
	Ni	60	22.202	ug/L	0.478	2	27	51393	0	KED
	Ni	62	21.997	ug/L	0.352	1	9	8061	0	KED
	Cu	63	22.882	ug/L	0.439	1	92	151312	1	KED
	Cu	65	22.920	ug/L	0.179	0	52	76160	0	KED
	Zn	66	67.521	ug/L	0.909	1	93	56637	2	KED
	Zn	67	63.645	ug/L	0.242	0	14	8861	1	KED
	As	75	21.631	ug/L	0.231	1	2	8882	0	KED
	Y	89		ug/L			512459	525400	3	Standard
	Kr	83		ug/L			98	93	21	Standard
>	In-1	115		ug/L			28389	28523	1	KED
	Mo	98	22.602	ug/L	0.193	0	6	45524	1	KED
	Cd	111	23.037	ug/L	0.443	1	1	10659	3	KED
	Cd	114	22.928	ug/L	0.085	0	1	27840	1	KED
>	In	115		ug/L			1825516	1828502	0	Standard
	Ag	107	23.287	ug/L	0.555	2	30	583404	2	Standard
	Ba	135	23.001	ug/L	0.151	0	78	222416	1	Standard
	Ba	137	23.072	ug/L	0.281	1	142	392159	0	Standard
>	Tb	159		ug/L			3788380	3870208	0	Standard
	Pb	208	23.289	ug/L	0.209	0	478	3672717	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0382-01
Sample Dil Factor: 2000
Comments:
Sample Date/Time: Wednesday, August 04, 2021 16:33:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	34369	1	Standard
	Cl	**37**		ug/L			4174110	4326558	1	Standard
>	**Sc**	**45**		ug/L			942872	955822	0	Standard
	Cr	**52**	**59.966**	ug/L	0.519	0	14556	1230598	0	Standard
	Cr	**53**	**59.090**	ug/L	1.147	1	151	141812	2	Standard
	Fe	**54**	**116.339**	ug/L	3.149	2	114141	503857	2	Standard
	Fe	**57**	**92.422**	ug/L	0.518	0	19328	165431	0	Standard
	Mn	**55**	**1.213**	ug/L	0.002	0	382	36771	0	Standard
>	**Ge**	**72**		ug/L			103798	104791	1	KED
	Ni	**60**	**0.671**	ug/L	0.017	2	27	1553	1	KED
	Ni	**62**	**0.690**	ug/L	0.025	3	9	257	3	KED
	Cu	**63**	**3.084**	ug/L	0.084	2	92	20106	1	KED
	Cu	**65**	**3.072**	ug/L	0.061	1	52	10067	0	KED
	Zn	**66**	**9.269**	ug/L	0.174	1	93	7714	0	KED
	Zn	**67**	**8.262**	ug/L	0.339	4	14	1142	4	KED
	As	**75**	**0.008**	ug/L	0.002	24	2	6	12	KED
	Y	**89**		ug/L			512459	526499	1	Standard
	Kr	**83**		ug/L			98	100	10	Standard
>	**In-1**	**115**		ug/L			28389	28304	2	KED
	Mo	**98**	**0.051**	ug/L	0.005	10	6	107	7	KED
	Cd	**111**	**0.010**	ug/L	0.001	15	1	6	9	KED
	Cd	**114**	**0.006**	ug/L	0.002	30	1	7	27	KED
>	**In**	**115**		ug/L			1825516	1853538	2	Standard
	Ag	**107**	**0.007**	ug/L	0.001	9	30	220	7	Standard
	Ba	**135**	**0.037**	ug/L	0.001	2	78	439	0	Standard
	Ba	**137**	**0.037**	ug/L	0.003	9	142	779	6	Standard
>	**Tb**	**159**		ug/L			3788380	3879492	1	Standard
	Pb	**208**	**0.029**	ug/L	0.001	3	478	5054	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0666-MSD3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 16:37:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	28612	1	Standard
	Cl	37		ug/L			4174110	4220616	0	Standard
>	Sc	45		ug/L			942872	1068358	0	Standard
	Cr	52	36.782	ug/L	0.331	0	14556	850072	1	Standard
	Cr	53	36.132	ug/L	0.151	0	151	96990	0	Standard
	Fe	54	14381.830	ug/L	150.599	1	114141	53758981	0	Standard
	Fe	57	14965.549	ug/L	116.713	0	19328	26416847	0	Standard
	Mn	55	162.316	ug/L	0.659	0	382	5443587	0	Standard
>	Ge	72		ug/L			103798	104875	1	KED
	Ni	60	30.072	ug/L	0.416	1	27	68400	0	KED
	Ni	62	30.685	ug/L	0.920	2	9	11045	1	KED
	Cu	63	47.893	ug/L	1.674	3	92	311047	1	KED
	Cu	65	48.685	ug/L	0.947	1	52	158897	0	KED
	Zn	66	509.895	ug/L	11.580	2	93	419601	1	KED
	Zn	67	477.749	ug/L	9.829	2	14	65260	2	KED
	As	75	157.284	ug/L	3.258	2	2	63441	0	KED
	Y	89		ug/L			512459	726260	0	Standard
	Kr	83		ug/L			98	160	13	Standard
>	In-1	115		ug/L			28389	27834	1	KED
	Mo	98	0.285	ug/L	0.012	4	6	565	5	KED
	Cd	111	20.695	ug/L	0.078	0	1	9343	1	KED
	Cd	114	20.740	ug/L	0.179	0	1	24575	1	KED
>	In	115		ug/L			1825516	1722347	0	Standard
	Ag	107	19.933	ug/L	0.709	3	30	470342	2	Standard
	Ba	135	64.138	ug/L	1.480	2	78	584043	2	Standard
	Ba	137	64.824	ug/L	0.835	1	142	1037648	1	Standard
>	Tb	159		ug/L			3788380	3748572	0	Standard
	Pb	208	51.644	ug/L	0.520	1	478	7887998	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0666-PS2
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 16:42:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	30572	0	Standard
	Cl	37		ug/L			4174110	4188082	2	Standard
>	Sc	45		ug/L			942872	1062699	0	Standard
	Cr	52	42.146	ug/L	0.533	1	14556	966435	0	Standard
	Cr	53	41.917	ug/L	0.533	1	151	111900	1	Standard
	Fe	54	14443.674	ug/L	105.810	0	114141	53703112	0	Standard
	Fe	57	14888.402	ug/L	252.648	1	19328	26144256	2	Standard
	Mn	55	171.405	ug/L	1.155	0	382	5717760	0	Standard
>	Ge	72		ug/L			103798	102918	0	KED
	Ni	60	35.735	ug/L	0.537	1	27	79775	2	KED
	Ni	62	36.110	ug/L	0.479	1	9	12758	1	KED
	Cu	63	54.748	ug/L	0.219	0	92	349047	0	KED
	Cu	65	55.206	ug/L	0.213	0	52	176846	0	KED
	Zn	66	552.775	ug/L	11.179	2	93	446476	2	KED
	Zn	67	509.916	ug/L	2.839	0	14	68358	0	KED
	As	75	170.176	ug/L	2.138	1	2	67372	0	KED
	Y	89		ug/L			512459	735389	1	Standard
	Kr	83		ug/L			98	151	8	Standard
>	In-1	115		ug/L			28389	28103	1	KED
	Mo	98	0.310	ug/L	0.029	9	6	620	8	KED
	Cd	111	25.459	ug/L	0.079	0	1	11604	1	KED
	Cd	114	25.470	ug/L	0.278	1	1	30469	0	KED
>	In	115		ug/L			1825516	1688367	1	Standard
	Ag	107	24.971	ug/L	0.756	3	30	577564	2	Standard
	Ba	135	70.509	ug/L	2.224	3	78	629204	1	Standard
	Ba	137	70.280	ug/L	2.198	3	142	1102489	1	Standard
>	Tb	159		ug/L			3788380	3652656	0	Standard
	Pb	208	58.188	ug/L	0.704	1	478	8659878	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL4
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 16:48:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	21934	1	Standard
	Cl	**37**		ug/L			4174110	4075494	1	Standard
>	**Sc**	**45**		ug/L			942872	958379	0	Standard
	Cr	**52**	**-0.007**	ug/L	0.003	41	14556	14656	0	Standard
	Cr	**53**	**-0.004**	ug/L	0.003	76	151	144	5	Standard
	Fe	**54**	**0.496**	ug/L	0.733	147	114141	117680	2	Standard
	Fe	**57**	**2.905**	ug/L	0.386	13	19328	24244	2	Standard
	Mn	**55**	**0.010**	ug/L	0.006	62	382	700	28	Standard
>	**Ge**	**72**		ug/L			103798	102809	0	KED
	Ni	**60**	**0.012**	ug/L	0.002	16	27	54	7	KED
	Ni	**62**	**-0.005**	ug/L	0.011	208	9	7	50	KED
	Cu	**63**	**0.006**	ug/L	0.003	45	92	126	12	KED
	Cu	**65**	**0.004**	ug/L	0.004	94	52	64	19	KED
	Zn	**66**	**0.157**	ug/L	0.011	6	93	219	4	KED
	Zn	**67**	**0.119**	ug/L	0.072	60	14	30	32	KED
	As	**75**	**0.009**	ug/L	0.002	27	2	6	15	KED
	Y	**89**		ug/L			512459	518171	2	Standard
	Kr	**83**		ug/L			98	100	17	Standard
>	**In-1**	**115**		ug/L			28389	27815	1	KED
	Mo	**98**	**0.001**	ug/L	0.000	3	6	7	1	KED
	Cd	**111**	**0.002**	ug/L	0.003	146	1	2	57	KED
	Cd	**114**	**0.002**	ug/L	0.003	123	1	3	88	KED
>	**In**	**115**		ug/L			1825516	1811952	1	Standard
	Ag	**107**	**0.003**	ug/L	0.001	42	30	116	30	Standard
	Ba	**135**	**-0.000**	ug/L	0.003	7154	78	77	38	Standard
	Ba	**137**	**0.001**	ug/L	0.003	297	142	159	33	Standard
>	**Tb**	**159**		ug/L			3788380	3851056	0	Standard
	Pb	**208**	**0.006**	ug/L	0.002	25	478	1504	16	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 16:52:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	18167	2	Standard
	Cl	**37**		ug/L			4174110	4373829	1	Standard
⌈>	**Sc**	**45**		ug/L			942872	938580	1	Standard
|	**Cr**	**52**	**50.038**	ug/L	0.908	1	14556	1010597	0	Standard
|	**Cr**	**53**	**49.991**	ug/L	0.880	1	151	117821	1	Standard
|	**Fe**	**54**	**4889.327**	ug/L	51.993	1	114141	16130427	0	Standard
|	**Fe**	**57**	**4949.620**	ug/L	75.462	1	19328	7688920	2	Standard
⌊	**Mn**	**55**	**49.923**	ug/L	0.454	0	382	1471045	0	Standard
⌈>	**Ge**	**72**		ug/L			103798	103221	0	KED
|	**Ni**	**60**	**48.189**	ug/L	1.586	3	27	107873	3	KED
|	**Ni**	**62**	**48.941**	ug/L	1.223	2	9	17338	2	KED
|	**Cu**	**63**	**48.740**	ug/L	1.102	2	92	311649	1	KED
|	**Cu**	**65**	**50.053**	ug/L	0.345	0	52	160815	0	KED
|	**Zn**	**66**	**48.653**	ug/L	0.523	1	93	39495	0	KED
|	**Zn**	**67**	**49.279**	ug/L	0.874	1	14	6638	1	KED
⌊	**As**	**75**	**48.740**	ug/L	0.595	1	2	19355	0	KED
	Y	**89**		ug/L			512459	519261	2	Standard
	Kr	**83**		ug/L			98	100	34	Standard
⌈>	**In-1**	**115**		ug/L			28389	27702	1	KED
|	**Mo**	**98**	**50.342**	ug/L	0.968	1	6	98448	0	KED
|	**Cd**	**111**	**50.202**	ug/L	0.733	1	1	22550	0	KED
⌊	**Cd**	**114**	**50.081**	ug/L	0.659	1	1	59049	1	KED
⌈>	**In**	**115**		ug/L			1825516	1739913	0	Standard
|	**Ag**	**107**	**48.833**	ug/L	0.936	1	30	1164237	2	Standard
|	**Ba**	**135**	**49.918**	ug/L	0.362	0	78	459232	1	Standard
⌊	**Ba**	**137**	**50.086**	ug/L	0.229	0	142	809983	1	Standard
⌈>	**Tb**	**159**		ug/L			3788380	3749076	1	Standard
⌊	**Pb**	**208**	**49.696**	ug/L	0.505	1	478	7591247	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 16:59:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	16991	7	Standard
	Cl	**37**		ug/L			4174110	4076509	0	Standard
⌈>	**Sc**	**45**		ug/L			942872	930697	0	Standard
|	**Cr**	**52**	**0.002**	ug/L	0.009	364	14556	14417	1	Standard
|	**Cr**	**53**	**-0.006**	ug/L	0.002	38	151	135	4	Standard
|	**Fe**	**54**	**0.045**	ug/L	0.783	1731	114141	112806	1	Standard
|	**Fe**	**57**	**3.401**	ug/L	0.154	4	19328	24304	0	Standard
⌊	**Mn**	**55**	**0.003**	ug/L	0.001	18	382	457	3	Standard
⌈>	**Ge**	**72**		ug/L			103798	101121	1	KED
|	**Ni**	**60**	**-0.001**	ug/L	0.002	182	27	24	15	KED
|	**Ni**	**62**	**-0.016**	ug/L	0.005	34	9	3	50	KED
|	**Cu**	**63**	**0.003**	ug/L	0.001	20	92	107	3	KED
|	**Cu**	**65**	**0.001**	ug/L	0.004	290	52	54	20	KED
|	**Zn**	**66**	**0.093**	ug/L	0.021	22	93	165	11	KED
|	**Zn**	**67**	**0.123**	ug/L	0.086	69	14	30	37	KED
⌊	**As**	**75**	**0.008**	ug/L	0.004	52	2	5	30	KED
	Y	**89**		ug/L			512459	505966	1	Standard
	Kr	**83**		ug/L			98	96	10	Standard
⌈>	**In-1**	**115**		ug/L			28389	28220	1	KED
|	**Mo**	**98**	**0.014**	ug/L	0.004	31	6	33	25	KED
|	**Cd**	**111**	**0.003**	ug/L	0.004	148	1	2	66	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.002	56	1	6	47	KED
⌈>	**In**	**115**		ug/L			1825516	1748308	0	Standard
|	**Ag**	**107**	**0.004**	ug/L	0.001	17	30	132	14	Standard
|	**Ba**	**135**	**0.008**	ug/L	0.002	27	78	147	12	Standard
⌊	**Ba**	**137**	**0.010**	ug/L	0.000	5	142	291	2	Standard
⌈>	**Tb**	**159**		ug/L			3788380	3696740	0	Standard
⌊	**Pb**	**208**	**0.003**	ug/L	0.000	10	478	870	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0101-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 17:09:06
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	26198	1	Standard
	Cl	37		ug/L			4174110	4165643	0	Standard
>	Sc	45		ug/L			942872	968035	1	Standard
	Cr	52	0.044	ug/L	0.012	26	14556	15841	0	Standard
	Cr	53	0.035	ug/L	0.006	17	151	240	4	Standard
	Fe	54	0.435	ug/L	0.103	23	114141	118654	1	Standard
	Fe	57	3.481	ug/L	0.524	15	19328	25401	2	Standard
	Mn	55	0.288	ug/L	0.006	1	382	9137	0	Standard
>	Ge	72		ug/L			103798	103647	1	KED
	Ni	60	0.005	ug/L	0.001	12	27	39	2	KED
	Ni	62	0.002	ug/L	0.003	157	9	10	10	KED
	Cu	63	0.034	ug/L	0.002	5	92	310	4	KED
	Cu	65	0.032	ug/L	0.004	13	52	155	9	KED
	Zn	66	0.190	ug/L	0.016	8	93	248	6	KED
	Zn	67	0.202	ug/L	0.077	37	14	41	25	KED
	As	75	0.006	ug/L	0.001	22	2	4	11	KED
	Y	89		ug/L			512459	516031	0	Standard
	Kr	83		ug/L			98	102	17	Standard
>	In-1	115		ug/L			28389	28419	2	KED
	Mo	98	0.019	ug/L	0.004	18	6	44	14	KED
	Cd	111	0.006	ug/L	0.004	79	1	4	48	KED
	Cd	114	0.001	ug/L	0.002	118	1	2	73	KED
>	In	115		ug/L			1825516	1787707	0	Standard
	Ag	107	0.002	ug/L	0.000	10	30	68	5	Standard
	Ba	135	0.015	ug/L	0.001	4	78	223	2	Standard
	Ba	137	0.017	ug/L	0.001	8	142	420	4	Standard
>	Tb	159		ug/L			3788380	3800980	1	Standard
	Pb	208	0.004	ug/L	0.000	10	478	1113	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0101-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 17:13:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	29533	1	Standard
	Cl	37		ug/L			4174110	4441454	2	Standard
>	Sc	45		ug/L			942872	974545	1	Standard
	Cr	52	24.567	ug/L	0.348	1	14556	522868	1	Standard
	Cr	53	24.475	ug/L	0.255	1	151	59979	1	Standard
	Fe	54	4788.140	ug/L	124.850	2	114141	16400807	1	Standard
	Fe	57	4852.116	ug/L	44.797	0	19328	7825559	0	Standard
	Mn	55	24.497	ug/L	0.775	3	382	749477	1	Standard
>	Ge	72		ug/L			103798	104655	1	KED
	Ni	60	24.593	ug/L	0.467	1	27	55824	0	KED
	Ni	62	24.592	ug/L	0.141	0	9	8838	2	KED
	Cu	63	24.973	ug/L	0.181	0	92	161952	1	KED
	Cu	65	25.175	ug/L	0.176	0	52	82032	1	KED
	Zn	66	74.790	ug/L	1.089	1	93	61499	0	KED
	Zn	67	71.485	ug/L	1.870	2	14	9757	3	KED
	As	75	24.234	ug/L	0.569	2	2	9756	1	KED
	Y	89		ug/L			512459	530675	1	Standard
	Kr	83		ug/L			98	97	21	Standard
>	In-1	115		ug/L			28389	28099	1	KED
	Mo	98	24.973	ug/L	0.385	1	6	49544	0	KED
	Cd	111	25.322	ug/L	0.526	2	1	11541	2	KED
	Cd	114	24.762	ug/L	0.349	1	1	29617	1	KED
>	In	115		ug/L			1825516	1778168	0	Standard
	Ag	107	24.754	ug/L	0.700	2	30	603068	2	Standard
	Ba	135	24.964	ug/L	0.130	0	78	234746	0	Standard
	Ba	137	25.163	ug/L	0.221	0	142	415921	0	Standard
>	Tb	159		ug/L			3788380	3892076	0	Standard
	Pb	208	24.816	ug/L	0.254	1	478	3935692	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0747-BS2
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 17:20:39
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	20958	1	Standard
	Cl	37		ug/L			4174110	4358049	1	Standard
>	Sc	45		ug/L			942872	978149	2	Standard
	Cr	52	24.668	ug/L	0.381	1	14556	526942	2	Standard
	Cr	53	24.047	ug/L	0.389	1	151	59150	2	Standard
	Fe	54	471.617	ug/L	5.785	1	114141	1728377	1	Standard
	Fe	57	455.334	ug/L	11.810	2	19328	755061	0	Standard
	Mn	55	24.322	ug/L	0.064	0	382	747124	1	Standard
>	Ge	72		ug/L			103798	107006	0	KED
	Ni	60	23.276	ug/L	0.494	2	27	54027	1	KED
	Ni	62	23.621	ug/L	0.647	2	9	8679	1	KED
	Cu	63	23.832	ug/L	0.670	2	92	158019	2	KED
	Cu	65	24.175	ug/L	0.090	0	52	80547	0	KED
	Zn	66	70.725	ug/L	0.715	1	93	59474	0	KED
	Zn	67	65.905	ug/L	2.059	3	14	9198	2	KED
	As	75	22.496	ug/L	0.484	2	2	9261	1	KED
	Y	89		ug/L			512459	541160	1	Standard
	Kr	83		ug/L			98	120	13	Standard
>	In-1	115		ug/L			28389	29230	1	KED
	Mo	98	23.287	ug/L	0.258	1	6	48060	1	KED
	Cd	111	23.593	ug/L	0.358	1	1	11184	1	KED
	Cd	114	23.436	ug/L	0.175	0	1	29165	2	KED
>	In	115		ug/L			1825516	1844710	1	Standard
	Ag	107	24.753	ug/L	0.196	0	30	625636	1	Standard
	Ba	135	24.213	ug/L	0.651	2	78	236139	1	Standard
	Ba	137	24.393	ug/L	0.985	4	142	418116	2	Standard
>	Tb	159		ug/L			3788380	3939598	0	Standard
	Pb	208	24.237	ug/L	0.275	1	478	3890845	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0248-02
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 17:26:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	24282	1	Standard
	Cl	**37**		ug/L			4174110	16021065	2	Standard
>	**Sc**	**45**		ug/L			942872	972399	1	Standard
	Cr	**52**	**0.251**	ug/L	0.019	7	14556	20198	2	Standard
	Cr	**53**	**5.374**	ug/L	0.249	4	151	13267	5	Standard
	Fe	**54**	**2.103**	ug/L	0.397	18	114141	124870	2	Standard
	Fe	**57**	**24.112**	ug/L	0.370	1	19328	58645	2	Standard
	Mn	**55**	**68.981**	ug/L	0.803	1	382	2105752	1	Standard
>	**Ge**	**72**		ug/L			103798	94930	1	KED
	Ni	**60**	**0.235**	ug/L	0.014	5	27	507	3	KED
	Ni	**62**	**0.211**	ug/L	0.006	2	9	77	3	KED
	Cu	**63**	**0.098**	ug/L	0.006	5	92	659	3	KED
	Cu	**65**	**0.092**	ug/L	0.009	9	52	319	6	KED
	Zn	**66**	**0.398**	ug/L	0.013	3	93	382	4	KED
	Zn	**67**	**2.196**	ug/L	0.262	11	14	284	9	KED
	As	**75**	**0.030**	ug/L	0.005	15	2	13	14	KED
	Y	**89**		ug/L			512459	498317	0	Standard
	Kr	**83**		ug/L			98	121	5	Standard
>	**In-1**	**115**		ug/L			28389	26091	2	KED
	Mo	**98**	**0.287**	ug/L	0.008	2	6	534	1	KED
	Cd	**111**	**0.010**	ug/L	0.006	58	1	5	44	KED
	Cd	**114**	**0.012**	ug/L	0.002	15	1	14	15	KED
>	**In**	**115**		ug/L			1825516	1558184	1	Standard
	Ag	**107**	**0.005**	ug/L	0.000	6	30	131	3	Standard
	Ba	**135**	**27.912**	ug/L	0.821	2	78	229909	1	Standard
	Ba	**137**	**27.600**	ug/L	0.413	1	142	399713	1	Standard
>	**Tb**	**159**		ug/L			3788380	3624334	1	Standard
	Pb	**208**	**0.010**	ug/L	0.000	1	478	1981	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0248-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 17:34:58
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	23748	1	Standard
	Cl	**37**		ug/L			4174110	16884425	3	Standard
>	**Sc**	**45**		ug/L			942872	962400	0	Standard
	Cr	**52**	**0.451**	ug/L	0.021	4	14556	24054	0	Standard
	Cr	**53**	**4.698**	ug/L	0.086	1	151	11493	1	Standard
	Fe	**54**	**1626.515**	ug/L	9.680	0	114141	5580168	0	Standard
	Fe	**57**	**1626.803**	ug/L	31.933	1	19328	2604290	1	Standard
	Mn	**55**	**80.187**	ug/L	1.373	1	382	2422506	1	Standard
>	**Ge**	**72**		ug/L			103798	94220	1	KED
	Ni	**60**	**0.211**	ug/L	0.020	9	27	456	9	KED
	Ni	**62**	**0.263**	ug/L	0.098	37	9	93	32	KED
	Cu	**63**	**0.225**	ug/L	0.003	1	92	1394	2	KED
	Cu	**65**	**0.227**	ug/L	0.017	7	52	712	7	KED
	Zn	**66**	**0.994**	ug/L	0.032	3	93	819	1	KED
	Zn	**67**	**2.887**	ug/L	0.323	11	14	367	11	KED
	As	**75**	**0.070**	ug/L	0.010	14	2	27	13	KED
	Y	**89**		ug/L			512459	501130	1	Standard
	Kr	**83**		ug/L			98	155	16	Standard
>	**In-1**	**115**		ug/L			28389	25996	0	KED
	Mo	**98**	**0.242**	ug/L	0.017	6	6	450	6	KED
	Cd	**111**	**0.012**	ug/L	0.009	80	1	6	62	KED
	Cd	**114**	**0.007**	ug/L	0.007	100	1	8	89	KED
>	**In**	**115**		ug/L			1825516	1620025	1	Standard
	Ag	**107**	**0.003**	ug/L	0.001	15	30	102	11	Standard
	Ba	**135**	**33.092**	ug/L	0.148	0	78	283470	1	Standard
	Ba	**137**	**32.910**	ug/L	0.612	1	142	495514	1	Standard
>	**Tb**	**159**		ug/L			3788380	3677182	0	Standard
	Pb	**208**	**0.030**	ug/L	0.000	1	478	4927	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0170-07
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 17:43:35
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	53463	2	Standard
	Cl	**37**		ug/L			4174110	4439688	1	Standard
>	**Sc**	**45**		ug/L			942872	1057383	0	Standard
	Cr	**52**	**0.354**	ug/L	0.021	5	14556	24270	1	Standard
	Cr	**53**	**0.656**	ug/L	0.015	2	151	1909	1	Standard
	Fe	**54**	**17.439**	ug/L	0.725	4	114141	192356	1	Standard
	Fe	**57**	**29.124**	ug/L	0.634	2	19328	72511	1	Standard
	Mn	**55**	**1.501**	ug/L	0.009	0	382	50250	1	Standard
>	**Ge**	**72**		ug/L			103798	105140	0	KED
	Ni	**60**	**0.305**	ug/L	0.006	2	27	721	1	KED
	Ni	**62**	**0.265**	ug/L	0.054	20	9	105	18	KED
	Cu	**63**	**1.118**	ug/L	0.024	2	92	7376	2	KED
	Cu	**65**	**1.116**	ug/L	0.035	3	52	3702	3	KED
	Zn	**66**	**0.575**	ug/L	0.059	10	93	569	9	KED
	Zn	**67**	**1.242**	ug/L	0.257	20	14	184	18	KED
	As	**75**	**0.300**	ug/L	0.015	4	2	124	5	KED
	Y	**89**		ug/L			512459	547797	1	Standard
	Kr	**83**		ug/L			98	109	5	Standard
>	**In-1**	**115**		ug/L			28389	28559	2	KED
	Mo	**98**	**0.209**	ug/L	0.006	2	6	428	4	KED
	Cd	**111**	**0.005**	ug/L	0.006	114	1	3	66	KED
	Cd	**114**	**0.002**	ug/L	0.002	84	1	4	64	KED
>	**In**	**115**		ug/L			1825516	1850820	3	Standard
	Ag	**107**	**0.002**	ug/L	0.000	13	30	85	10	Standard
	Ba	**135**	**9.185**	ug/L	0.217	2	78	89899	0	Standard
	Ba	**137**	**9.343**	ug/L	0.243	2	142	160761	1	Standard
>	**Tb**	**159**		ug/L			3788380	4014435	0	Standard
	Pb	**208**	**0.011**	ug/L	0.000	2	478	2321	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0600-DUP2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 17:51:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	59197	2	Standard
	Cl	**37**		ug/L			4174110	4390485	1	Standard
⌈>	**Sc**	**45**		ug/L			942872	1035507	0	Standard
|	**Cr**	**52**	**0.331**	ug/L	0.007	2	14556	23257	1	Standard
|	**Cr**	**53**	**0.646**	ug/L	0.028	4	151	1844	3	Standard
|	**Fe**	**54**	**17.688**	ug/L	0.784	4	114141	189298	2	Standard
|	**Fe**	**57**	**28.170**	ug/L	0.274	0	19328	69386	1	Standard
⌊	**Mn**	**55**	**1.491**	ug/L	0.059	3	382	48893	4	Standard
⌈>	**Ge**	**72**		ug/L			103798	105216	1	KED
|	**Ni**	**60**	**0.299**	ug/L	0.007	2	27	709	1	KED
|	**Ni**	**62**	**0.290**	ug/L	0.001	0	9	114	1	KED
|	**Cu**	**63**	**1.127**	ug/L	0.024	2	92	7433	2	KED
|	**Cu**	**65**	**1.140**	ug/L	0.034	2	52	3784	1	KED
|	**Zn**	**66**	**0.863**	ug/L	0.031	3	93	807	1	KED
|	**Zn**	**67**	**1.457**	ug/L	0.155	10	14	214	11	KED
⌊	**As**	**75**	**0.295**	ug/L	0.017	5	2	122	6	KED
	Y	**89**		ug/L			512459	545417	0	Standard
	Kr	**83**		ug/L			98	102	3	Standard
⌈>	**In-1**	**115**		ug/L			28389	28381	1	KED
|	**Mo**	**98**	**0.175**	ug/L	0.008	4	6	355	4	KED
|	**Cd**	**111**	**0.001**	ug/L	0.003	229	1	2	65	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.002	78	1	4	60	KED
⌈>	**In**	**115**		ug/L			1825516	1816237	1	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	28	30	85	17	Standard
|	**Ba**	**135**	**9.176**	ug/L	0.087	0	78	88177	1	Standard
⌊	**Ba**	**137**	**9.101**	ug/L	0.070	0	142	153748	1	Standard
⌈>	**Tb**	**159**		ug/L			3788380	3891133	0	Standard
⌊	**Pb**	**208**	**0.013**	ug/L	0.001	4	478	2543	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0600-MS2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 17:55:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	55601	1	Standard
	Cl	**37**		ug/L			4174110	4190557	2	Standard
>	**Sc**	**45**		ug/L			942872	1010445	1	Standard
	Cr	**52**	**23.861**	ug/L	0.036	0	14556	527038	1	Standard
	Cr	**53**	**24.058**	ug/L	0.232	0	151	61130	1	Standard
	Fe	**54**	**4545.080**	ug/L	84.268	1	114141	16149085	0	Standard
	Fe	**57**	**4627.149**	ug/L	91.984	1	19328	7738627	2	Standard
	Mn	**55**	**24.874**	ug/L	0.436	1	382	789268	2	Standard
>	**Ge**	**72**		ug/L			103798	103507	1	KED
	Ni	**60**	**24.324**	ug/L	0.407	1	27	54607	0	KED
	Ni	**62**	**24.831**	ug/L	0.829	3	9	8824	2	KED
	Cu	**63**	**25.268**	ug/L	0.501	1	92	162033	0	KED
	Cu	**65**	**25.440**	ug/L	0.397	1	52	81978	1	KED
	Zn	**66**	**72.095**	ug/L	1.283	1	93	58633	0	KED
	Zn	**67**	**69.070**	ug/L	2.243	3	14	9322	2	KED
	As	**75**	**24.916**	ug/L	0.408	1	2	9921	1	KED
	Y	**89**		ug/L			512459	525365	1	Standard
	Kr	**83**		ug/L			98	109	7	Standard
>	**In-1**	**115**		ug/L			28389	27678	0	KED
	Mo	**98**	**0.192**	ug/L	0.011	5	6	380	4	KED
	Cd	**111**	**24.554**	ug/L	0.214	0	1	11023	1	KED
	Cd	**114**	**24.370**	ug/L	0.235	0	1	28712	0	KED
>	**In**	**115**		ug/L			1825516	1729078	2	Standard
	Ag	**107**	**24.665**	ug/L	0.304	1	30	584302	2	Standard
	Ba	**135**	**34.947**	ug/L	0.911	2	78	319363	0	Standard
	Ba	**137**	**34.547**	ug/L	1.063	3	142	554953	1	Standard
>	**Tb**	**159**		ug/L			3788380	3790551	0	Standard
	Pb	**208**	**24.189**	ug/L	0.281	1	478	3736416	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0380-01
Sample Dil Factor: 5
Comments:
Sample Date/Time: Wednesday, August 04, 2021 18:03:17
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	20673	1	Standard
	Cl	**37**		ug/L			4174110	4456831	0	Standard
⌈>	**Sc**	**45**		ug/L			942872	963563	0	Standard
|	**Cr**	**52**	**1.760**	ug/L	0.048	2	14556	50853	1	Standard
|	**Cr**	**53**	**2.089**	ug/L	0.054	2	151	5204	2	Standard
|	**Fe**	**54**	**239.186**	ug/L	1.173	0	114141	921094	0	Standard
|	**Fe**	**57**	**194.598**	ug/L	4.760	2	19328	329324	2	Standard
⌊	**Mn**	**55**	**7.108**	ug/L	0.061	0	382	215372	1	Standard
⌈>	**Ge**	**72**		ug/L			103798	102859	1	KED
|	**Ni**	**60**	**2.744**	ug/L	0.244	8	27	6139	6	KED
|	**Ni**	**62**	**2.675**	ug/L	0.058	2	9	953	0	KED
|	**Cu**	**63**	**27.555**	ug/L	0.581	2	92	175582	0	KED
|	**Cu**	**65**	**27.374**	ug/L	0.438	1	52	87650	0	KED
|	**Zn**	**66**	**21.958**	ug/L	0.221	1	93	17812	0	KED
|	**Zn**	**67**	**22.272**	ug/L	0.192	0	14	2997	1	KED
⌊	**As**	**75**	**0.180**	ug/L	0.010	5	2	73	6	KED
	Y	**89**		ug/L			512459	539404	1	Standard
	Kr	**83**		ug/L			98	101	15	Standard
⌈>	**In-1**	**115**		ug/L			28389	27868	1	KED
|	**Mo**	**98**	**3.878**	ug/L	0.074	1	6	7636	2	KED
|	**Cd**	**111**	**0.030**	ug/L	0.006	21	1	14	19	KED
⌊	**Cd**	**114**	**0.039**	ug/L	0.009	22	1	47	22	KED
⌈>	**In**	**115**		ug/L			1825516	1739908	1	Standard
|	**Ag**	**107**	**0.009**	ug/L	0.001	13	30	253	13	Standard
|	**Ba**	**135**	**24.841**	ug/L	0.253	1	78	228535	0	Standard
⌊	**Ba**	**137**	**24.840**	ug/L	0.244	0	142	401727	0	Standard
⌈>	**Tb**	**159**		ug/L			3788380	3829871	1	Standard
⌊	**Pb**	**208**	**1.937**	ug/L	0.017	0	478	302734	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL5
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 18:10:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	20598	4	Standard
	Cl	**37**		ug/L			4174110	4289784	4	Standard
>	**Sc**	**45**		ug/L			942872	947274	7	Standard
	Cr	**52**	**0.037**	ug/L	0.030	80	14556	15337	4	Standard
	Cr	**53**	**0.026**	ug/L	0.008	32	151	211	1	Standard
	Fe	**54**	**0.161**	ug/L	2.208	1368	114141	114833	2	Standard
	Fe	**57**	**-0.616**	ug/L	0.517	83	19328	18414	4	Standard
	Mn	**55**	**0.005**	ug/L	0.001	11	382	545	6	Standard
>	**Ge**	**72**		ug/L			103798	106101	0	KED
	Ni	**60**	**0.025**	ug/L	0.005	18	27	86	12	KED
	Ni	**62**	**0.034**	ug/L	0.006	18	9	22	9	KED
	Cu	**63**	**0.007**	ug/L	0.003	43	92	138	14	KED
	Cu	**65**	**0.006**	ug/L	0.002	36	52	73	10	KED
	Zn	**66**	**0.091**	ug/L	0.018	19	93	172	8	KED
	Zn	**67**	**0.057**	ug/L	0.028	48	14	22	16	KED
	As	**75**	**-0.002**	ug/L	0.002	109	2	1	50	KED
	Y	**89**		ug/L			512459	520346	6	Standard
	Kr	**83**		ug/L			98	100	5	Standard
>	**In-1**	**115**		ug/L			28389	28510	3	KED
	Mo	**98**	**-0.000**	ug/L	0.001	219	6	5	34	KED
	Cd	**111**	**0.001**	ug/L	0.002	176	1	2	49	KED
	Cd	**114**	**-0.000**	ug/L	0.002	17827	1	0	215	KED
>	**In**	**115**		ug/L			1825516	1797458	7	Standard
	Ag	**107**	**0.001**	ug/L	0.000	11	30	50	9	Standard
	Ba	**135**	**0.000**	ug/L	0.001	372	78	80	11	Standard
	Ba	**137**	**-0.001**	ug/L	0.001	65	142	119	17	Standard
>	**Tb**	**159**		ug/L			3788380	3790567	4	Standard
	Pb	**208**	**0.006**	ug/L	0.000	2	478	1346	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 18:14:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	18182	2	Standard
	Cl	**37**		ug/L			4174110	4484526	2	Standard
>	**Sc**	**45**		ug/L			942872	979358	0	Standard
	Cr	**52**	**49.401**	ug/L	0.367	0	14556	1041465	1	Standard
	Cr	**53**	**49.360**	ug/L	0.309	0	151	121396	0	Standard
	Fe	**54**	**4774.625**	ug/L	77.879	1	114141	16438536	0	Standard
	Fe	**57**	**4867.110**	ug/L	120.249	2	19328	7888600	2	Standard
	Mn	**55**	**49.651**	ug/L	1.147	2	382	1526548	1	Standard
>	**Ge**	**72**		ug/L			103798	105940	1	KED
	Ni	**60**	**48.760**	ug/L	0.468	0	27	112030	1	KED
	Ni	**62**	**49.105**	ug/L	1.413	2	9	17852	1	KED
	Cu	**63**	**48.847**	ug/L	0.800	1	92	320548	0	KED
	Cu	**65**	**49.679**	ug/L	0.331	0	52	163811	0	KED
	Zn	**66**	**49.790**	ug/L	0.954	1	93	41477	0	KED
	Zn	**67**	**49.016**	ug/L	1.264	2	14	6776	1	KED
	As	**75**	**48.859**	ug/L	0.370	0	2	19913	0	KED
	Y	**89**		ug/L			512459	530681	0	Standard
	Kr	**83**		ug/L			98	108	22	Standard
>	**In-1**	**115**		ug/L			28389	28152	1	KED
	Mo	**98**	**49.976**	ug/L	0.602	1	6	99338	2	KED
	Cd	**111**	**50.037**	ug/L	1.171	2	1	22839	0	KED
	Cd	**114**	**49.751**	ug/L	0.591	1	1	59615	1	KED
>	**In**	**115**		ug/L			1825516	1800421	0	Standard
	Ag	**107**	**48.857**	ug/L	0.614	1	30	1205261	1	Standard
	Ba	**135**	**50.086**	ug/L	0.849	1	78	476768	1	Standard
	Ba	**137**	**50.081**	ug/L	1.317	2	142	837997	2	Standard
>	**Tb**	**159**		ug/L			3788380	3860421	0	Standard
	Pb	**208**	**49.495**	ug/L	0.577	1	478	7785277	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 18:21:52
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	17167	2	Standard
	Cl	**37**		ug/L			4174110	4332495	1	Standard
>	**Sc**	**45**		ug/L			942872	969682	1	Standard
	Cr	**52**	**-0.000**	ug/L	0.006	5916	14556	14967	0	Standard
	Cr	**53**	**0.024**	ug/L	0.003	12	151	213	3	Standard
	Fe	**54**	**-0.875**	ug/L	0.457	52	114141	114434	2	Standard
	Fe	**57**	**0.755**	ug/L	0.351	46	19328	21090	3	Standard
	Mn	**55**	**0.002**	ug/L	0.001	40	382	451	6	Standard
>	**Ge**	**72**		ug/L			103798	104577	0	KED
	Ni	**60**	**-0.002**	ug/L	0.003	111	27	22	26	KED
	Ni	**62**	**-0.002**	ug/L	0.011	567	9	8	44	KED
	Cu	**63**	**0.002**	ug/L	0.001	49	92	104	5	KED
	Cu	**65**	**-0.001**	ug/L	0.001	100	52	48	8	KED
	Zn	**66**	**0.039**	ug/L	0.013	31	93	126	8	KED
	Zn	**67**	**0.036**	ug/L	0.042	116	14	19	29	KED
	As	**75**	**0.004**	ug/L	0.002	56	2	4	22	KED
	Y	**89**		ug/L			512459	538790	1	Standard
	Kr	**83**		ug/L			98	88	11	Standard
>	**In-1**	**115**		ug/L			28389	28953	0	KED
	Mo	**98**	**0.024**	ug/L	0.003	11	6	55	10	KED
	Cd	**111**	**0.005**	ug/L	0.003	58	1	4	35	KED
	Cd	**114**	**0.001**	ug/L	0.002	237	1	2	129	KED
>	**In**	**115**		ug/L			1825516	1850895	1	Standard
	Ag	**107**	**0.003**	ug/L	0.000	14	30	112	10	Standard
	Ba	**135**	**0.023**	ug/L	0.002	7	78	306	4	Standard
	Ba	**137**	**0.024**	ug/L	0.003	12	142	559	9	Standard
>	**Tb**	**159**		ug/L			3788380	3963262	0	Standard
	Pb	**208**	**0.003**	ug/L	0.000	11	478	972	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0103-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 18:26:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	25047	4	Standard
	Cl	37		ug/L			4174110	4290924	0	Standard
>	Sc	45		ug/L			942872	970484	1	Standard
	Cr	52	0.043	ug/L	0.003	6	14556	15870	1	Standard
	Cr	53	0.040	ug/L	0.007	18	151	253	6	Standard
	Fe	54	-0.068	ug/L	0.622	909	114141	117249	2	Standard
	Fe	57	0.424	ug/L	0.560	132	19328	20566	3	Standard
	Mn	55	0.208	ug/L	0.003	1	382	6739	1	Standard
>	Ge	72		ug/L			103798	107707	1	KED
	Ni	60	-0.000	ug/L	0.004	2086	27	27	37	KED
	Ni	62	-0.013	ug/L	0.008	60	9	5	57	KED
	Cu	63	0.009	ug/L	0.004	41	92	156	16	KED
	Cu	65	0.008	ug/L	0.003	30	52	82	11	KED
	Zn	66	0.123	ug/L	0.027	21	93	201	12	KED
	Zn	67	0.149	ug/L	0.141	94	14	36	55	KED
	As	75	0.003	ug/L	0.003	79	2	4	26	KED
	Y	89		ug/L			512459	532760	2	Standard
	Kr	83		ug/L			98	116	8	Standard
>	In-1	115		ug/L			28389	29067	1	KED
	Mo	98	0.007	ug/L	0.004	56	6	20	38	KED
	Cd	111	0.001	ug/L	0.000	12	1	1		KED
	Cd	114	0.002	ug/L	0.002	97	1	4	71	KED
>	In	115		ug/L			1825516	1898892	0	Standard
	Ag	107	0.001	ug/L	0.000	4	30	67	3	Standard
	Ba	135	0.029	ug/L	0.000	1	78	373	2	Standard
	Ba	137	0.032	ug/L	0.001	3	142	712	1	Standard
>	Tb	159		ug/L			3788380	3932998	2	Standard
	Pb	208	0.004	ug/L	0.000	6	478	1123	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0103-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 18:30:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	32249	1	Standard
	Cl	37		ug/L			4174110	4485471	0	Standard
>	Sc	45		ug/L			942872	988873	2	Standard
	Cr	52	24.854	ug/L	0.548	2	14556	536469	0	Standard
	Cr	53	24.871	ug/L	0.429	1	151	61835	1	Standard
	Fe	54	4757.730	ug/L	50.984	1	114141	16539349	1	Standard
	Fe	57	4695.611	ug/L	104.471	2	19328	7683607	0	Standard
	Mn	55	24.729	ug/L	0.338	1	382	767825	0	Standard
>	Ge	72		ug/L			103798	105636	0	KED
	Ni	60	24.759	ug/L	0.706	2	27	56733	2	KED
	Ni	62	24.109	ug/L	0.261	1	9	8746	0	KED
	Cu	63	24.392	ug/L	0.358	1	92	159672	1	KED
	Cu	65	24.370	ug/L	0.090	0	52	80160	0	KED
	Zn	66	75.790	ug/L	0.612	0	93	62912	0	KED
	Zn	67	73.233	ug/L	0.566	0	14	10089	1	KED
	As	75	24.183	ug/L	0.262	1	2	9829	0	KED
	Y	89		ug/L			512459	536387	1	Standard
	Kr	83		ug/L			98	116	6	Standard
>	In-1	115		ug/L			28389	28517	0	KED
	Mo	98	0.005	ug/L	0.002	32	6	15	20	KED
	Cd	111	24.837	ug/L	0.197	0	1	11487	1	KED
	Cd	114	24.750	ug/L	0.338	1	1	30043	0	KED
>	In	115		ug/L			1825516	1792404	0	Standard
	Ag	107	23.974	ug/L	0.493	2	30	588857	2	Standard
	Ba	135	24.889	ug/L	0.226	0	78	235904	1	Standard
	Ba	137	25.035	ug/L	0.454	1	142	417103	0	Standard
>	Tb	159		ug/L			3788380	3904212	0	Standard
	Pb	208	24.894	ug/L	0.247	0	478	3960437	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0258-01
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 18:34:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	36201	1	Standard
	Cl	37		ug/L			4174110	4555571	1	Standard
>	Sc	45		ug/L			942872	1005753	1	Standard
	Cr	52	0.427	ug/L	0.016	3	14556	24638	0	Standard
	Cr	53	0.417	ug/L	0.018	4	151	1213	3	Standard
	Fe	54	8.999	ug/L	0.342	3	114141	153353	1	Standard
	Fe	57	39.135	ug/L	1.220	3	19328	85589	2	Standard
	Mn	55	0.193	ug/L	0.005	2	382	6489	1	Standard
>	Ge	72		ug/L			103798	101007	1	KED
	Ni	60	1.705	ug/L	0.055	3	27	3760	2	KED
	Ni	62	1.762	ug/L	0.051	2	9	619	2	KED
	Cu	63	1.558	ug/L	0.052	3	92	9833	2	KED
	Cu	65	1.540	ug/L	0.043	2	52	4890	1	KED
	Zn	66	0.705	ug/L	0.006	0	93	650	0	KED
	Zn	67	2.546	ug/L	0.039	1	14	349	2	KED
	As	75	0.559	ug/L	0.030	5	2	219	6	KED
	Y	89		ug/L			512459	517061	1	Standard
	Kr	83		ug/L			98	85	10	Standard
>	In-1	115		ug/L			28389	27268	0	KED
	Mo	98	3.903	ug/L	0.097	2	6	7519	1	KED
	Cd	111	0.003	ug/L	0.004	143	1	2	66	KED
	Cd	114	0.003	ug/L	0.006	205	1	4	160	KED
>	In	115		ug/L			1825516	1777822	1	Standard
	Ag	107	0.004	ug/L	0.000	11	30	121	8	Standard
	Ba	135	23.396	ug/L	0.352	1	78	219958	1	Standard
	Ba	137	23.300	ug/L	0.166	0	142	385082	1	Standard
>	Tb	159		ug/L			3788380	3841268	0	Standard
	Pb	208	0.008	ug/L	0.001	7	478	1710	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0371-01
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 18:39:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	35213	1	Standard
	Cl	37		ug/L			4174110	4569015	1	Standard
>	Sc	45		ug/L			942872	1002803	1	Standard
	Cr	52	0.458	ug/L	0.007	1	14556	25234	1	Standard
	Cr	53	0.455	ug/L	0.018	3	151	1304	2	Standard
	Fe	54	9.670	ug/L	0.638	6	114141	155226	0	Standard
	Fe	57	40.407	ug/L	0.293	0	19328	87449	0	Standard
	Mn	55	0.240	ug/L	0.007	2	382	7953	1	Standard
>	Ge	72		ug/L			103798	102824	0	KED
	Ni	60	1.625	ug/L	0.031	1	27	3650	1	KED
	Ni	62	1.716	ug/L	0.110	6	9	614	6	KED
	Cu	63	1.554	ug/L	0.029	1	92	9985	1	KED
	Cu	65	1.597	ug/L	0.016	0	52	5160	0	KED
	Zn	66	0.836	ug/L	0.044	5	93	767	4	KED
	Zn	67	2.532	ug/L	0.176	6	14	353	7	KED
	As	75	0.559	ug/L	0.025	4	2	223	3	KED
	Y	89		ug/L			512459	531887	1	Standard
	Kr	83		ug/L			98	90	23	Standard
>	In-1	115		ug/L			28389	27840	2	KED
	Mo	98	3.883	ug/L	0.183	4	6	7635	3	KED
	Cd	111	0.006	ug/L	0.004	75	1	4	48	KED
	Cd	114	0.003	ug/L	0.007	242	1	4	186	KED
>	In	115		ug/L			1825516	1757276	3	Standard
	Ag	107	0.002	ug/L	0.001	34	30	83	20	Standard
	Ba	135	24.051	ug/L	0.780	3	78	223349	0	Standard
	Ba	137	24.464	ug/L	0.830	3	142	399371	1	Standard
>	Tb	159		ug/L			3788380	3844967	1	Standard
	Pb	208	0.005	ug/L	0.000	7	478	1210	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21H0022-01
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 18:45:03
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	137400	0	Standard
	Cl	37		ug/L			4174110	4135028	1	Standard
>	Sc	45		ug/L			942872	877439	0	Standard
	Cr	52	6.217	ug/L	0.172	2	14556	129264	2	Standard
	Cr	53	5.856	ug/L	0.067	1	151	13027	1	Standard
	Fe	54	587.766	ug/L	9.712	1	114141	1906260	1	Standard
	Fe	57	738.822	ug/L	9.164	1	19328	1088216	1	Standard
	Mn	55	9.729	ug/L	0.070	0	382	268303	0	Standard
>	Ge	72		ug/L			103798	92313	0	KED
	Ni	60	3.815	ug/L	0.114	2	27	7660	3	KED
	Ni	62	3.843	ug/L	0.167	4	9	1225	3	KED
	Cu	63	0.247	ug/L	0.011	4	92	1494	3	KED
	Cu	65	0.234	ug/L	0.002	0	52	718	1	KED
	Zn	66	4.420	ug/L	0.180	4	93	3284	3	KED
	Zn	67	5.026	ug/L	0.403	8	14	617	7	KED
	As	75	0.632	ug/L	0.047	7	2	226	7	KED
	Y	89		ug/L			512459	499811	0	Standard
	Kr	83		ug/L			98	97	5	Standard
>	In-1	115		ug/L			28389	24348	0	KED
	Mo	98	4.502	ug/L	0.101	2	6	7744	2	KED
	Cd	111	0.037	ug/L	0.005	14	1	15	13	KED
	Cd	114	0.008	ug/L	0.006	77	1	9	70	KED
>	In	115		ug/L			1825516	1528521	2	Standard
	Ag	107	0.004	ug/L	0.001	12	30	114	7	Standard
	Ba	135	16.302	ug/L	0.869	5	78	131687	2	Standard
	Ba	137	16.568	ug/L	0.584	3	142	235372	2	Standard
>	Tb	159		ug/L			3788380	3549758	2	Standard
	Pb	208	0.018	ug/L	0.001	3	478	3014	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21H0021-01
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 18:52:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	48475	4	Standard
	Cl	37		ug/L			4174110	10964979	3	Standard
>	Sc	45		ug/L			942872	955588	3	Standard
	Cr	52	0.704	ug/L	0.018	2	14556	29016	2	Standard
	Cr	53	5.466	ug/L	0.053	0	151	13252	2	Standard
	Fe	54	349.797	ug/L	10.569	3	114141	1281689	1	Standard
	Fe	57	327.225	ug/L	7.006	2	19328	535603	2	Standard
	Mn	55	122.425	ug/L	3.157	2	382	3670389	1	Standard
>	Ge	72		ug/L			103798	92766	2	KED
	Ni	60	3.958	ug/L	0.065	1	27	7985	1	KED
	Ni	62	3.848	ug/L	0.117	3	9	1232	1	KED
	Cu	63	2.339	ug/L	0.056	2	92	13518	1	KED
	Cu	65	2.312	ug/L	0.088	3	52	6716	2	KED
	Zn	66	33.114	ug/L	0.229	0	93	24184	1	KED
	Zn	67	33.979	ug/L	2.040	6	14	4117	5	KED
	As	75	2.189	ug/L	0.030	1	2	783	1	KED
	Y	89		ug/L			512459	493357	2	Standard
	Kr	83		ug/L			98	102	22	Standard
>	In-1	115		ug/L			28389	24572	2	KED
	Mo	98	121.586	ug/L	2.775	2	6	210895	1	KED
	Cd	111	0.104	ug/L	0.014	13	1	42	10	KED
	Cd	114	0.106	ug/L	0.009	8	1	111	9	KED
>	In	115		ug/L			1825516	1520811	0	Standard
	Ag	107	0.006	ug/L	0.000	5	30	149	4	Standard
	Ba	135	55.730	ug/L	0.207	0	78	448118	0	Standard
	Ba	137	55.796	ug/L	0.730	1	142	788657	1	Standard
>	Tb	159		ug/L			3788380	3606003	1	Standard
	Pb	208	0.633	ug/L	0.006	0	478	93489	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0262-01
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 19:00:17
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	27041	2	Standard
	Cl	37		ug/L			4174110	3984637	2	Standard
>	Sc	45		ug/L			942872	1066899	1	Standard
	Cr	52	3.947	ug/L	0.101	2	14556	105781	1	Standard
	Cr	53	4.029	ug/L	0.089	2	151	10949	0	Standard
	Fe	54	1.439	ug/L	0.803	55	114141	134483	0	Standard
	Fe	57	7.442	ug/L	0.349	4	19328	34976	1	Standard
	Mn	55	0.184	ug/L	0.001	0	382	6587	1	Standard
>	Ge	72		ug/L			103798	106450	0	KED
	Ni	60	0.405	ug/L	0.010	2	27	961	1	KED
	Ni	62	0.399	ug/L	0.073	18	9	155	17	KED
	Cu	63	0.184	ug/L	0.004	2	92	1304	2	KED
	Cu	65	0.180	ug/L	0.005	2	52	648	2	KED
	Zn	66	0.880	ug/L	0.047	5	93	831	4	KED
	Zn	67	1.068	ug/L	0.123	11	14	163	11	KED
	As	75	1.768	ug/L	0.049	2	2	726	2	KED
	Y	89		ug/L			512459	544731	0	Standard
	Kr	83		ug/L			98	92	16	Standard
>	In-1	115		ug/L			28389	28249	2	KED
	Mo	98	0.145	ug/L	0.004	2	6	294	1	KED
	Cd	111	0.007	ug/L	0.003	49	1	4	34	KED
	Cd	114	0.003	ug/L	0.003	96	1	4	74	KED
>	In	115		ug/L			1825516	1820228	2	Standard
	Ag	107	0.001	ug/L	0.000	36	30	55	14	Standard
	Ba	135	4.753	ug/L	0.077	1	78	45805	1	Standard
	Ba	137	4.768	ug/L	0.042	0	142	80775	1	Standard
>	Tb	159		ug/L			3788380	3916991	0	Standard
	Pb	208	0.019	ug/L	0.000	1	478	3489	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0103-DUP1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 19:07:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	29166	2	Standard
	Cl	37		ug/L			4174110	3879348	1	Standard
>	Sc	45		ug/L			942872	1080416	1	Standard
	Cr	52	4.157	ug/L	0.155	3	14556	111934	1	Standard
	Cr	53	4.193	ug/L	0.054	1	151	11534	1	Standard
	Fe	54	0.832	ug/L	0.109	13	114141	133928	1	Standard
	Fe	57	6.322	ug/L	0.523	8	19328	33417	1	Standard
	Mn	55	0.125	ug/L	0.005	3	382	4690	2	Standard
>	Ge	72		ug/L			103798	106827	1	KED
	Ni	60	0.398	ug/L	0.024	6	27	949	6	KED
	Ni	62	0.354	ug/L	0.092	26	9	139	24	KED
	Cu	63	0.128	ug/L	0.006	4	92	942	2	KED
	Cu	65	0.117	ug/L	0.014	11	52	443	11	KED
	Zn	66	0.870	ug/L	0.084	9	93	825	7	KED
	Zn	67	1.220	ug/L	0.039	3	14	184	4	KED
	As	75	1.799	ug/L	0.015	0	2	741	2	KED
	Y	89		ug/L			512459	550042	0	Standard
	Kr	83		ug/L			98	78	10	Standard
>	In-1	115		ug/L			28389	28967	1	KED
	Mo	98	0.121	ug/L	0.017	13	6	253	12	KED
	Cd	111	0.008	ug/L	0.003	38	1	5	26	KED
	Cd	114	-0.000	ug/L	0.001	235	1	0	196	KED
>	In	115		ug/L			1825516	1833426	2	Standard
	Ag	107	0.001	ug/L	0.000	32	30	57	13	Standard
	Ba	135	4.761	ug/L	0.096	2	78	46211	0	Standard
	Ba	137	4.841	ug/L	0.088	1	142	82596	0	Standard
>	Tb	159		ug/L			3788380	3994852	0	Standard
	Pb	208	0.015	ug/L	0.000	3	478	2901	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0103-MS1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 19:12:52
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	30279	1	Standard
	Cl	37		ug/L			4174110	3848289	0	Standard
>	Sc	45		ug/L			942872	1058505	2	Standard
	Cr	52	26.948	ug/L	0.871	3	14556	621060	0	Standard
	Cr	53	27.325	ug/L	0.546	1	151	72685	0	Standard
	Fe	54	4381.253	ug/L	103.461	2	114141	16308007	0	Standard
	Fe	57	4450.071	ug/L	130.552	2	19328	7793586	0	Standard
	Mn	55	23.123	ug/L	0.357	1	382	768461	1	Standard
>	Ge	72		ug/L			103798	106143	0	KED
	Ni	60	24.408	ug/L	0.377	1	27	56198	0	KED
	Ni	62	24.637	ug/L	0.347	1	9	8981	2	KED
	Cu	63	24.130	ug/L	0.302	1	92	158711	0	KED
	Cu	65	24.605	ug/L	0.226	0	52	81316	0	KED
	Zn	66	72.626	ug/L	0.962	1	93	60584	2	KED
	Zn	67	69.561	ug/L	1.348	1	14	9631	2	KED
	As	75	25.481	ug/L	0.134	0	2	10406	1	KED
	Y	89		ug/L			512459	540857	2	Standard
	Kr	83		ug/L			98	98	7	Standard
>	In-1	115		ug/L			28389	28077	0	KED
	Mo	98	0.121	ug/L	0.013	10	6	246	11	KED
	Cd	111	24.117	ug/L	0.338	1	1	10981	0	KED
	Cd	114	24.458	ug/L	0.063	0	1	29233	0	KED
>	In	115		ug/L			1825516	1728695	2	Standard
	Ag	107	23.954	ug/L	0.188	0	30	567423	2	Standard
	Ba	135	30.432	ug/L	0.378	1	78	278129	1	Standard
	Ba	137	30.842	ug/L	0.480	1	142	495474	0	Standard
>	Tb	159		ug/L			3788380	3901148	1	Standard
	Pb	208	24.510	ug/L	0.413	1	478	3895676	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL6
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 19:20:31
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	21314	1	Standard
	Cl	**37**		ug/L			4174110	3881309	2	Standard
>	**Sc**	**45**		ug/L			942872	1003959	2	Standard
	Cr	**52**	**0.056**	ug/L	0.005	9	14556	16688	2	Standard
	Cr	**53**	**0.017**	ug/L	0.005	27	151	203	5	Standard
	Fe	**54**	**-0.629**	ug/L	1.017	161	114141	119283	1	Standard
	Fe	**57**	**1.880**	ug/L	0.402	21	19328	23686	0	Standard
	Mn	**55**	**0.006**	ug/L	0.001	8	382	611	4	Standard
>	**Ge**	**72**		ug/L			103798	108979	1	KED
	Ni	**60**	**0.017**	ug/L	0.004	22	27	69	12	KED
	Ni	**62**	**0.006**	ug/L	0.017	297	9	12	50	KED
	Cu	**63**	**0.008**	ug/L	0.002	18	92	152	8	KED
	Cu	**65**	**0.009**	ug/L	0.001	11	52	86	4	KED
	Zn	**66**	**0.112**	ug/L	0.019	17	93	194	9	KED
	Zn	**67**	**0.089**	ug/L	0.046	52	14	27	23	KED
	As	**75**	**0.001**	ug/L	0.001	90	2	3	14	KED
	Y	**89**		ug/L			512459	532939	1	Standard
	Kr	**83**		ug/L			98	105	7	Standard
>	**In-1**	**115**		ug/L			28389	29427	2	KED
	Mo	**98**	**0.000**	ug/L	0.003	1222	6	6	85	KED
	Cd	**111**	**0.002**	ug/L	0.002	120	1	2	43	KED
	Cd	**114**	**0.001**	ug/L	0.002	292	1	1	111	KED
>	**In**	**115**		ug/L			1825516	1806534	1	Standard
	Ag	**107**	**0.002**	ug/L	0.000	8	30	73	5	Standard
	Ba	**135**	**0.001**	ug/L	0.000	42	78	87	6	Standard
	Ba	**137**	**0.000**	ug/L	0.001	598	142	142	9	Standard
>	**Tb**	**159**		ug/L			3788380	3934152	0	Standard
	Pb	**208**	**0.007**	ug/L	0.000	1	478	1551	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 19:24:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	18459	3	Standard
	Cl	**37**		ug/L			4174110	4297208	0	Standard
>	**Sc**	**45**		ug/L			942872	982249	1	Standard
	Cr	**52**	**50.108**	ug/L	0.455	0	14556	1059168	0	Standard
	Cr	**53**	**49.559**	ug/L	0.237	0	151	122250	1	Standard
	Fe	**54**	**4852.031**	ug/L	24.779	0	114141	16753633	0	Standard
	Fe	**57**	**4775.998**	ug/L	41.189	0	19328	7764326	0	Standard
	Mn	**55**	**49.874**	ug/L	1.177	2	382	1538212	3	Standard
>	**Ge**	**72**		ug/L			103798	106954	1	KED
	Ni	**60**	**48.408**	ug/L	0.117	0	27	112289	1	KED
	Ni	**62**	**48.670**	ug/L	0.399	0	9	17866	0	KED
	Cu	**63**	**48.404**	ug/L	1.055	2	92	320683	1	KED
	Cu	**65**	**47.965**	ug/L	0.753	1	52	159662	0	KED
	Zn	**66**	**48.174**	ug/L	0.416	0	93	40521	0	KED
	Zn	**67**	**49.367**	ug/L	1.251	2	14	6889	1	KED
	As	**75**	**48.032**	ug/L	0.416	0	2	19763	0	KED
	Y	**89**		ug/L			512459	524424	1	Standard
	Kr	**83**		ug/L			98	95	9	Standard
>	**In-1**	**115**		ug/L			28389	28413	1	KED
	Mo	**98**	**49.424**	ug/L	1.101	2	6	99135	1	KED
	Cd	**111**	**50.490**	ug/L	0.909	1	1	23261	0	KED
	Cd	**114**	**49.977**	ug/L	0.879	1	1	60437	1	KED
>	**In**	**115**		ug/L			1825516	1747815	1	Standard
	Ag	**107**	**47.897**	ug/L	0.951	1	30	1146825	0	Standard
	Ba	**135**	**50.222**	ug/L	0.388	0	78	464100	1	Standard
	Ba	**137**	**49.936**	ug/L	1.158	2	142	811052	1	Standard
>	**Tb**	**159**		ug/L			3788380	3856990	0	Standard
	Pb	**208**	**49.351**	ug/L	0.617	1	478	7755731	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 19:31:42
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	17950	1	Standard
	Cl	**37**		ug/L			4174110	4193324	1	Standard
>	**Sc**	**45**		ug/L			942872	984293	2	Standard
	Cr	**52**	**0.030**	ug/L	0.010	32	14556	15819	3	Standard
	Cr	**53**	**0.040**	ug/L	0.046	113	151	257	43	Standard
	Fe	**54**	**-0.480**	ug/L	0.668	139	114141	117531	3	Standard
	Fe	**57**	**3.002**	ug/L	0.175	5	19328	25054	1	Standard
	Mn	**55**	**0.002**	ug/L	0.000	27	382	453	5	Standard
>	**Ge**	**72**		ug/L			103798	106942	1	KED
	Ni	**60**	**0.001**	ug/L	0.001	58	27	30	6	KED
	Ni	**62**	**-0.016**	ug/L	0.005	31	9	3	50	KED
	Cu	**63**	**0.001**	ug/L	0.002	286	92	99	11	KED
	Cu	**65**	**0.001**	ug/L	0.003	362	52	56	19	KED
	Zn	**66**	**0.013**	ug/L	0.005	38	93	107	5	KED
	Zn	**67**	**0.033**	ug/L	0.041	123	14	19	29	KED
	As	**75**	**0.007**	ug/L	0.005	74	2	5	36	KED
	Y	**89**		ug/L			512459	530239	0	Standard
	Kr	**83**		ug/L			98	94	5	Standard
>	**In-1**	**115**		ug/L			28389	29113	0	KED
	Mo	**98**	**0.022**	ug/L	0.004	16	6	51	13	KED
	Cd	**111**	**0.004**	ug/L	0.002	60	1	3	31	KED
	Cd	**114**	**0.002**	ug/L	0.003	127	1	3	89	KED
>	**In**	**115**		ug/L			1825516	1830298	1	Standard
	Ag	**107**	**0.002**	ug/L	0.000	15	30	82	10	Standard
	Ba	**135**	**0.040**	ug/L	0.003	7	78	463	4	Standard
	Ba	**137**	**0.038**	ug/L	0.002	4	142	789	3	Standard
>	**Tb**	**159**		ug/L			3788380	3916634	1	Standard
	Pb	**208**	**0.002**	ug/L	0.000	9	478	888	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0385-01
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 19:37:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	690986	1	Standard
	Cl	37		ug/L			4174110	3716250	1	Standard
>	Sc	45		ug/L			942872	853054	1	Standard
	Cr	52	6.897	ug/L	0.018	0	14556	137966	0	Standard
	Cr	53	4.450	ug/L	0.044	0	151	9656	0	Standard
	Fe	54	611.198	ug/L	2.809	0	114141	1923142	1	Standard
	Fe	57	980.618	ug/L	15.844	1	19328	1398513	2	Standard
	Mn	55	277.012	ug/L	0.849	0	382	7417646	1	Standard
>	Ge	72		ug/L			103798	87984	0	KED
	Ni	60	15.999	ug/L	0.185	1	27	30545	1	KED
	Ni	62	16.345	ug/L	0.790	4	9	4941	5	KED
	Cu	63	5.795	ug/L	0.087	1	92	31658	2	KED
	Cu	65	5.858	ug/L	0.064	1	52	16081	1	KED
	Zn	66	5.186	ug/L	0.055	1	93	3659	1	KED
	Zn	67	9.569	ug/L	0.497	5	14	1108	4	KED
	As	75	0.203	ug/L	0.011	5	2	70	5	KED
	Y	89		ug/L			512459	472641	0	Standard
	Kr	83		ug/L			98	130	2	Standard
>	In-1	115		ug/L			28389	22727	0	KED
	Mo	98	1.565	ug/L	0.013	0	6	2516	1	KED
	Cd	111	0.093	ug/L	0.035	38	1	35	36	KED
	Cd	114	0.083	ug/L	0.007	8	1	80	9	KED
>	In	115		ug/L			1825516	1394003	1	Standard
	Ag	107	0.002	ug/L	0.001	49	30	66	32	Standard
	Ba	135	86.004	ug/L	0.738	0	78	633856	1	Standard
	Ba	137	85.094	ug/L	1.656	1	142	1102383	1	Standard
>	Tb	159		ug/L			3788380	3289097	1	Standard
	Pb	208	0.019	ug/L	0.001	3	478	3003	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL7
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 19:43:28
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	24198	2	Standard
	Cl	**37**		ug/L			4174110	4491464	1	Standard
>	**Sc**	**45**		ug/L			942872	912248	0	Standard
	Cr	**52**	**0.127**	ug/L	0.019	14	14556	16546	1	Standard
	Cr	**53**	**0.034**	ug/L	0.003	9	151	223	2	Standard
	Fe	**54**	**-0.475**	ug/L	0.778	163	114141	108909	1	Standard
	Fe	**57**	**2.362**	ug/L	0.552	23	19328	22257	3	Standard
	Mn	**55**	**0.008**	ug/L	0.001	15	382	607	5	Standard
>	**Ge**	**72**		ug/L			103798	102507	1	KED
	Ni	**60**	**0.008**	ug/L	0.001	14	27	45	4	KED
	Ni	**62**	**0.002**	ug/L	0.014	638	9	10	47	KED
	Cu	**63**	**0.001**	ug/L	0.003	232	92	99	18	KED
	Cu	**65**	**0.003**	ug/L	0.001	41	52	60	6	KED
	Zn	**66**	**0.013**	ug/L	0.018	139	93	102	12	KED
	Zn	**67**	**0.034**	ug/L	0.037	106	14	19	26	KED
	As	**75**	**0.001**	ug/L	0.008	642	2	3	99	KED
	Y	**89**		ug/L			512459	489104	1	Standard
	Kr	**83**		ug/L			98	89	7	Standard
>	**In-1**	**115**		ug/L			28389	26176	1	KED
	Mo	**98**	**-0.000**	ug/L	0.000	1041	6	5	3	KED
	Cd	**111**	**0.006**	ug/L	0.004	69	1	3	43	KED
	Cd	**114**	**0.004**	ug/L	0.003	72	1	5	58	KED
>	**In**	**115**		ug/L			1825516	1728636	1	Standard
	Ag	**107**	**0.001**	ug/L	0.000	8	30	50	4	Standard
	Ba	**135**	**-0.002**	ug/L	0.001	67	78	59	17	Standard
	Ba	**137**	**-0.002**	ug/L	0.001	73	142	105	19	Standard
>	**Tb**	**159**		ug/L			3788380	3662338	2	Standard
	Pb	**208**	**0.001**	ug/L	0.000	23	478	615	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0386-01
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 19:47:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	38825	1	Standard
	Cl	37		ug/L			4174110	3766788	3	Standard
>	Sc	45		ug/L			942872	919716	0	Standard
	Cr	52	7.819	ug/L	0.079	1	14556	166755	1	Standard
	Cr	53	7.803	ug/L	0.105	1	151	18146	1	Standard
	Fe	54	36.237	ug/L	2.121	5	114141	227695	3	Standard
	Fe	57	47.307	ug/L	1.549	3	19328	90691	3	Standard
	Mn	55	9.106	ug/L	0.185	2	382	263263	2	Standard
>	Ge	72		ug/L			103798	92240	1	KED
	Ni	60	7.809	ug/L	0.159	2	27	15640	1	KED
	Ni	62	8.203	ug/L	0.059	0	9	2604	1	KED
	Cu	63	4.379	ug/L	0.102	2	92	25091	1	KED
	Cu	65	4.472	ug/L	0.098	2	52	12880	1	KED
	Zn	66	11.088	ug/L	0.261	2	93	8107	1	KED
	Zn	67	10.409	ug/L	0.523	5	14	1262	3	KED
	As	75	0.156	ug/L	0.025	15	2	57	16	KED
	Y	89		ug/L			512459	498374	2	Standard
	Kr	83		ug/L			98	99	11	Standard
>	In-1	115		ug/L			28389	23585	2	KED
	Mo	98	11.142	ug/L	0.237	2	6	18553	0	KED
	Cd	111	0.011	ug/L	0.004	33	1	5	26	KED
	Cd	114	0.012	ug/L	0.005	37	1	13	36	KED
>	In	115		ug/L			1825516	1557102	1	Standard
	Ag	107	0.003	ug/L	0.000	4	30	96	4	Standard
	Ba	135	0.785	ug/L	0.004	0	78	6525	0	Standard
	Ba	137	0.798	ug/L	0.013	1	142	11666	0	Standard
>	Tb	159		ug/L			3788380	3559049	1	Standard
	Pb	208	0.012	ug/L	0.000	3	478	2132	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0386-02
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 19:54:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	46238	1	Standard
	Cl	37		ug/L			4174110	3817229	4	Standard
>	Sc	45		ug/L			942872	936176	1	Standard
	Cr	52	27.674	ug/L	0.674	2	14556	563995	2	Standard
	Cr	53	27.291	ug/L	0.154	0	151	64230	1	Standard
	Fe	54	61.943	ug/L	2.072	3	114141	315707	1	Standard
	Fe	57	66.841	ug/L	1.613	2	19328	122475	0	Standard
	Mn	55	5.824	ug/L	0.086	1	382	171490	0	Standard
>	Ge	72		ug/L			103798	93511	1	KED
	Ni	60	3.854	ug/L	0.073	1	27	7838	1	KED
	Ni	62	3.884	ug/L	0.083	2	9	1254	3	KED
	Cu	63	4.070	ug/L	0.032	0	92	23651	0	KED
	Cu	65	4.099	ug/L	0.062	1	52	11973	0	KED
	Zn	66	7.682	ug/L	0.018	0	93	5721	0	KED
	Zn	67	7.572	ug/L	0.056	0	14	935	0	KED
	As	75	0.171	ug/L	0.022	12	2	63	12	KED
	Y	89		ug/L			512459	505499	1	Standard
	Kr	83		ug/L			98	80	21	Standard
>	In-1	115		ug/L			28389	24137	1	KED
	Mo	98	7.581	ug/L	0.065	0	6	12923	0	KED
	Cd	111	0.005	ug/L	0.006	102	1	3	62	KED
	Cd	114	0.009	ug/L	0.005	48	1	10	44	KED
>	In	115		ug/L			1825516	1547273	2	Standard
	Ag	107	0.005	ug/L	0.001	26	30	132	18	Standard
	Ba	135	0.849	ug/L	0.022	2	78	7006	0	Standard
	Ba	137	0.842	ug/L	0.032	3	142	12223	1	Standard
>	Tb	159		ug/L			3788380	3624619	1	Standard
	Pb	208	0.054	ug/L	0.001	1	478	8427	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0386-03
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 20:00:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	43286	1	Standard
	Cl	37		ug/L			4174110	3717599	2	Standard
>	Sc	45		ug/L			942872	916293	3	Standard
	Cr	52	7.937	ug/L	0.192	2	14556	168355	1	Standard
	Cr	53	7.953	ug/L	0.121	1	151	18420	2	Standard
	Fe	54	28.042	ug/L	0.900	3	114141	200661	4	Standard
	Fe	57	40.654	ug/L	1.036	2	19328	80249	1	Standard
	Mn	55	4.586	ug/L	0.096	2	382	132205	1	Standard
>	Ge	72		ug/L			103798	92576	1	KED
	Ni	60	2.724	ug/L	0.049	1	27	5492	1	KED
	Ni	62	2.860	ug/L	0.027	0	9	916	1	KED
	Cu	63	2.789	ug/L	0.098	3	92	16066	2	KED
	Cu	65	2.715	ug/L	0.132	4	52	7866	4	KED
	Zn	66	4.858	ug/L	0.108	2	93	3611	1	KED
	Zn	67	4.690	ug/L	0.182	3	14	578	3	KED
	As	75	0.151	ug/L	0.009	5	2	56	6	KED
	Y	89		ug/L			512459	503389	2	Standard
	Kr	83		ug/L			98	97	8	Standard
>	In-1	115		ug/L			28389	23486	2	KED
	Mo	98	9.453	ug/L	0.300	3	6	15673	1	KED
	Cd	111	0.008	ug/L	0.001	16	1	4	12	KED
	Cd	114	0.010	ug/L	0.007	69	1	11	63	KED
>	In	115		ug/L			1825516	1524851	1	Standard
	Ag	107	0.002	ug/L	0.001	33	30	73	21	Standard
	Ba	135	0.826	ug/L	0.019	2	78	6722	1	Standard
	Ba	137	0.817	ug/L	0.019	2	142	11698	1	Standard
>	Tb	159		ug/L			3788380	3551327	1	Standard
	Pb	208	0.018	ug/L	0.001	3	478	3042	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL8
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 20:07:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	21431	0	Standard
	Cl	**37**		ug/L			4174110	4246378	1	Standard
>	**Sc**	**45**		ug/L			942872	971865	1	Standard
	Cr	**52**	**0.132**	ug/L	0.031	23	14556	17724	2	Standard
	Cr	**53**	**0.022**	ug/L	0.005	24	151	209	4	Standard
	Fe	**54**	**-1.600**	ug/L	0.800	49	114141	112199	1	Standard
	Fe	**57**	**6.006**	ug/L	0.715	11	19328	29551	2	Standard
	Mn	**55**	**0.003**	ug/L	0.001	24	382	497	4	Standard
>	**Ge**	**72**		ug/L			103798	102873	0	KED
	Ni	**60**	**0.006**	ug/L	0.006	88	27	41	29	KED
	Ni	**62**	**-0.009**	ug/L	0.003	37	9	6	17	KED
	Cu	**63**	**0.002**	ug/L	0.003	184	92	102	19	KED
	Cu	**65**	**0.001**	ug/L	0.002	210	52	54	11	KED
	Zn	**66**	**0.017**	ug/L	0.012	73	93	106	9	KED
	Zn	**67**	**0.001**	ug/L	0.055	4514	14	14	49	KED
	As	**75**	**0.001**	ug/L	0.007	813	2	3	92	KED
	Y	**89**		ug/L			512459	515574	1	Standard
	Kr	**83**		ug/L			98	87	15	Standard
>	**In-1**	**115**		ug/L			28389	27928	1	KED
	Mo	**98**	**0.000**	ug/L	0.001	135	6	6	15	KED
	Cd	**111**	**0.004**	ug/L	0.005	150	1	3	75	KED
	Cd	**114**	**0.002**	ug/L	0.005	281	1	3	183	KED
>	**In**	**115**		ug/L			1825516	1699451	0	Standard
	Ag	**107**	**0.000**	ug/L	0.000	43	30	40	12	Standard
	Ba	**135**	**-0.003**	ug/L	0.001	27	78	49	13	Standard
	Ba	**137**	**-0.004**	ug/L	0.000	12	142	68	11	Standard
>	**Tb**	**159**		ug/L			3788380	3732647	1	Standard
	Pb	**208**	**0.001**	ug/L	0.000	44	478	562	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21H0028-01
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 20:12:11
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	34694	1	Standard
	Cl	37		ug/L			4174110	3867795	0	Standard
>	Sc	45		ug/L			942872	925432	2	Standard
	Cr	52	8.963	ug/L	0.128	1	14556	190220	1	Standard
	Cr	53	9.204	ug/L	0.176	1	151	21507	0	Standard
	Fe	54	13.542	ug/L	1.438	10	114141	155719	1	Standard
	Fe	57	27.554	ug/L	0.487	1	19328	61058	1	Standard
	Mn	55	2.406	ug/L	0.034	1	382	70271	2	Standard
>	Ge	72		ug/L			103798	91835	1	KED
	Ni	60	1.645	ug/L	0.048	2	27	3298	1	KED
	Ni	62	1.793	ug/L	0.018	0	9	573	2	KED
	Cu	63	2.757	ug/L	0.064	2	92	15758	0	KED
	Cu	65	2.755	ug/L	0.067	2	52	7917	2	KED
	Zn	66	3.448	ug/L	0.181	5	93	2566	3	KED
	Zn	67	3.280	ug/L	0.167	5	14	405	3	KED
	As	75	0.094	ug/L	0.011	11	2	35	11	KED
	Y	89		ug/L			512459	493855	2	Standard
	Kr	83		ug/L			98	102	26	Standard
>	In-1	115		ug/L			28389	23742	1	KED
	Mo	98	7.995	ug/L	0.123	1	6	13407	1	KED
	Cd	111	0.011	ug/L	0.004	37	1	5	26	KED
	Cd	114	0.007	ug/L	0.008	117	1	7	104	KED
>	In	115		ug/L			1825516	1482345	2	Standard
	Ag	107	0.000	ug/L	0.000	86	30	33	20	Standard
	Ba	135	0.727	ug/L	0.037	5	78	5753	2	Standard
	Ba	137	0.732	ug/L	0.035	4	142	10191	2	Standard
>	Tb	159		ug/L			3788380	3611043	1	Standard
	Pb	208	0.010	ug/L	0.000	1	478	1998	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0101-DUP1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 20:19:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	35370	0	Standard
	Cl	37		ug/L			4174110	3841615	2	Standard
>	Sc	45		ug/L			942872	951398	1	Standard
	Cr	52	8.917	ug/L	0.184	2	14556	194654	2	Standard
	Cr	53	9.253	ug/L	0.171	1	151	22230	2	Standard
	Fe	54	13.179	ug/L	0.182	1	114141	158943	1	Standard
	Fe	57	27.314	ug/L	0.764	2	19328	62414	3	Standard
	Mn	55	2.406	ug/L	0.029	1	382	72248	1	Standard
>	Ge	72		ug/L			103798	93176	1	KED
	Ni	60	1.709	ug/L	0.076	4	27	3476	2	KED
	Ni	62	1.687	ug/L	0.025	1	9	547	2	KED
	Cu	63	2.785	ug/L	0.047	1	92	16153	1	KED
	Cu	65	2.794	ug/L	0.085	3	52	8144	2	KED
	Zn	66	3.217	ug/L	0.140	4	93	2436	4	KED
	Zn	67	3.046	ug/L	0.180	5	14	382	6	KED
	As	75	0.123	ug/L	0.016	12	2	46	11	KED
	Y	89		ug/L			512459	505483	1	Standard
	Kr	83		ug/L			98	81	17	Standard
>	In-1	115		ug/L			28389	24113	1	KED
	Mo	98	8.077	ug/L	0.191	2	6	13753	1	KED
	Cd	111	0.009	ug/L	0.008	96	1	4	69	KED
	Cd	114	0.006	ug/L	0.001	21	1	7	19	KED
>	In	115		ug/L			1825516	1541233	0	Standard
	Ag	107	0.001	ug/L	0.001	78	30	46	34	Standard
	Ba	135	0.715	ug/L	0.010	1	78	5889	1	Standard
	Ba	137	0.704	ug/L	0.013	1	142	10209	1	Standard
>	Tb	159		ug/L			3788380	3653355	0	Standard
	Pb	208	0.010	ug/L	0.001	11	478	2001	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0101-MS1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 20:24:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16458	29468	0	Standard
	Cl	37		ug/L			4174110	3769360	1	Standard
>	Sc	45		ug/L			942872	923469	1	Standard
	Cr	52	32.089	ug/L	0.808	2	14556	642731	1	Standard
	Cr	53	31.838	ug/L	0.137	0	151	73887	1	Standard
	Fe	54	4093.922	ug/L	78.015	1	114141	13305163	0	Standard
	Fe	57	4297.422	ug/L	110.453	2	19328	6569154	1	Standard
	Mn	55	24.968	ug/L	0.324	1	382	724090	1	Standard
>	Ge	72		ug/L			103798	91778	0	KED
	Ni	60	25.640	ug/L	0.325	1	27	51047	1	KED
	Ni	62	25.947	ug/L	0.885	3	9	8177	3	KED
	Cu	63	26.114	ug/L	0.377	1	92	148518	1	KED
	Cu	65	25.971	ug/L	0.133	0	52	74214	0	KED
	Zn	66	69.787	ug/L	0.681	0	93	50336	0	KED
	Zn	67	64.596	ug/L	1.542	2	14	7733	2	KED
	As	75	24.068	ug/L	0.475	1	2	8499	1	KED
	Y	89		ug/L			512459	509361	1	Standard
	Kr	83		ug/L			98	115	15	Standard
>	In-1	115		ug/L			28389	23321	1	KED
	Mo	98	35.556	ug/L	0.638	1	6	58539	0	KED
	Cd	111	23.430	ug/L	0.115	0	1	8862	1	KED
	Cd	114	23.483	ug/L	0.019	0	1	23312	1	KED
>	In	115		ug/L			1825516	1528040	2	Standard
	Ag	107	23.977	ug/L	0.453	1	30	501953	2	Standard
	Ba	135	26.192	ug/L	0.709	2	78	211548	0	Standard
	Ba	137	26.316	ug/L	0.831	3	142	373619	1	Standard
>	Tb	159		ug/L			3788380	3598679	1	Standard
	Pb	208	22.566	ug/L	0.419	1	478	3308822	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL9
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 20:32:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	21091	2	Standard
	Cl	**37**		ug/L			4174110	3962920	2	Standard
>	**Sc**	**45**		ug/L			942872	1003013	1	Standard
	Cr	**52**	**0.080**	ug/L	0.007	8	14556	17192	0	Standard
	Cr	**53**	**0.006**	ug/L	0.002	28	151	176	2	Standard
	Fe	**54**	**-2.374**	ug/L	0.280	11	114141	113102	0	Standard
	Fe	**57**	**2.243**	ug/L	0.172	7	19328	24275	1	Standard
	Mn	**55**	**0.003**	ug/L	0.001	35	382	490	5	Standard
>	**Ge**	**72**		ug/L			103798	106794	0	KED
	Ni	**60**	**0.008**	ug/L	0.002	18	27	47	8	KED
	Ni	**62**	**0.013**	ug/L	0.015	116	9	14	37	KED
	Cu	**63**	**0.002**	ug/L	0.002	113	92	108	13	KED
	Cu	**65**	**-0.001**	ug/L	0.004	326	52	49	27	KED
	Zn	**66**	**0.023**	ug/L	0.008	34	93	116	5	KED
	Zn	**67**	**0.061**	ug/L	0.034	56	14	23	20	KED
	As	**75**	**-0.001**	ug/L	0.001	99	2	2	24	KED
	Y	**89**		ug/L			512459	515195	1	Standard
	Kr	**83**		ug/L			98	111	8	Standard
>	**In-1**	**115**		ug/L			28389	28690	1	KED
	Mo	**98**	**0.007**	ug/L	0.001	12	6	19	7	KED
	Cd	**111**	**0.003**	ug/L	0.004	134	1	2	57	KED
	Cd	**114**	**0.004**	ug/L	0.001	22	1	6	16	KED
>	**In**	**115**		ug/L			1825516	1739660	1	Standard
	Ag	**107**	**0.001**	ug/L	0.000	22	30	64	12	Standard
	Ba	**135**	**-0.003**	ug/L	0.001	28	78	46	17	Standard
	Ba	**137**	**-0.003**	ug/L	0.001	20	142	81	13	Standard
>	**Tb**	**159**		ug/L			3788380	3795705	1	Standard
	Pb	**208**	**0.002**	ug/L	0.000	12	478	770	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 20:36:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	17693	5	Standard
	Cl	**37**		ug/L			4174110	4107625	0	Standard
>	**Sc**	**45**		ug/L			942872	972081	1	Standard
	Cr	**52**	**50.695**	ug/L	0.844	1	14556	1060195	0	Standard
	Cr	**53**	**49.970**	ug/L	1.142	2	151	121953	0	Standard
	Fe	**54**	**4691.239**	ug/L	114.584	2	114141	16031233	1	Standard
	Fe	**57**	**4690.372**	ug/L	58.300	1	19328	7546710	1	Standard
	Mn	**55**	**50.627**	ug/L	0.900	1	382	1544842	0	Standard
>	**Ge**	**72**		ug/L			103798	107234	1	KED
	Ni	**60**	**47.297**	ug/L	0.740	1	27	110001	1	KED
	Ni	**62**	**47.972**	ug/L	0.363	0	9	17657	1	KED
	Cu	**63**	**48.558**	ug/L	0.059	0	92	322578	0	KED
	Cu	**65**	**48.715**	ug/L	0.656	1	52	162589	0	KED
	Zn	**66**	**48.887**	ug/L	0.277	0	93	41229	0	KED
	Zn	**67**	**48.404**	ug/L	0.572	1	14	6774	0	KED
	As	**75**	**47.902**	ug/L	0.173	0	2	19763	1	KED
	Y	**89**		ug/L			512459	521558	2	Standard
	Kr	**83**		ug/L			98	97	18	Standard
>	**In-1**	**115**		ug/L			28389	27599	0	KED
	Mo	**98**	**49.769**	ug/L	0.425	0	6	96982	0	KED
	Cd	**111**	**50.953**	ug/L	0.210	0	1	22806	0	KED
	Cd	**114**	**50.436**	ug/L	1.187	2	1	59249	1	KED
>	**In**	**115**		ug/L			1825516	1681694	0	Standard
	Ag	**107**	**48.261**	ug/L	0.289	0	30	1112058	1	Standard
	Ba	**135**	**50.897**	ug/L	0.929	1	78	452580	2	Standard
	Ba	**137**	**52.084**	ug/L	0.599	1	142	814133	1	Standard
>	**Tb**	**159**		ug/L			3788380	3820848	2	Standard
	Pb	**208**	**49.262**	ug/L	1.154	2	478	7667088	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 20:43:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16458	17115	2	Standard
	Cl	**37**		ug/L			4174110	4111378	0	Standard
>	**Sc**	**45**		ug/L			942872	971270	0	Standard
	Cr	**52**	**0.020**	ug/L	0.010	50	14556	15410	1	Standard
	Cr	**53**	**0.000**	ug/L	0.006	1727	151	156	9	Standard
	Fe	**54**	**-1.703**	ug/L	0.694	40	114141	111799	1	Standard
	Fe	**57**	**1.370**	ug/L	0.141	10	19328	22106	0	Standard
	Mn	**55**	**0.003**	ug/L	0.000	12	382	474	1	Standard
>	**Ge**	**72**		ug/L			103798	103492	0	KED
	Ni	**60**	**0.007**	ug/L	0.004	55	27	42	20	KED
	Ni	**62**	**-0.009**	ug/L	0.003	34	9	6	17	KED
	Cu	**63**	**0.004**	ug/L	0.004	96	92	116	20	KED
	Cu	**65**	**0.002**	ug/L	0.004	158	52	59	20	KED
	Zn	**66**	**0.026**	ug/L	0.015	55	93	114	10	KED
	Zn	**67**	**0.043**	ug/L	0.057	134	14	20	37	KED
	As	**75**	**0.005**	ug/L	0.002	51	2	4	21	KED
	Y	**89**		ug/L			512459	517872	2	Standard
	Kr	**83**		ug/L			98	95	8	Standard
>	**In-1**	**115**		ug/L			28389	27510	1	KED
	Mo	**98**	**0.018**	ug/L	0.003	14	6	40	12	KED
	Cd	**111**	**0.005**	ug/L	0.006	124	1	3	75	KED
	Cd	**114**	**0.002**	ug/L	0.003	127	1	3	90	KED
>	**In**	**115**		ug/L			1825516	1729689	1	Standard
	Ag	**107**	**0.003**	ug/L	0.001	30	30	111	23	Standard
	Ba	**135**	**0.064**	ug/L	0.005	7	78	655	5	Standard
	Ba	**137**	**0.058**	ug/L	0.006	9	142	1073	6	Standard
>	**Tb**	**159**		ug/L			3788380	3793908	1	Standard
	Pb	**208**	**0.003**	ug/L	0.000	10	478	998	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 20:49:03
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				15714	3	Standard
	Cl	**37**		ug/L				4133067	2	Standard
>	**Sc**	**45**		ug/L				962260	2	Standard
	Cr	**52**		ug/L				15459	0	Standard
	Cr	**53**		ug/L				139	8	Standard
>	**Ge**	**72**		ug/L				106383	0	KED
	Ni	**60**		ug/L				24	15	KED
	Ni	**62**		ug/L				3	69	KED
	Cu	**63**		ug/L				92	8	KED
	Cu	**65**		ug/L				45	15	KED
	Zn	**66**		ug/L				75	10	KED
	Zn	**67**		ug/L				14	32	KED
	As	**75**		ug/L				4	24	KED
	Y	**89**		ug/L				513632	0	Standard
	Kr	**83**		ug/L				111	9	Standard
>	**In-1**	**115**		ug/L				27713	1	KED
	Cd	**111**		ug/L				1	86	KED
	Cd	**114**		ug/L				2	93	KED
>	**Tb**	**159**		ug/L				3819117	0	Standard
	Pb	**208**		ug/L				567	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 20:53:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	18101	1	Standard
	Cl	**37**		ug/L			4133067	4341407	1	Standard
⌈>	**Sc**	**45**		ug/L			962260	962449	1	Standard
|	**Cr**	**52**	**51.349**	ug/L	0.880	1	15459	1063754	1	Standard
⌊	**Cr**	**53**	**50.756**	ug/L	0.463	0	139	122652	0	Standard
⌈>	**Ge**	**72**		ug/L			106383	102277	0	KED
|	**Ni**	**60**	**48.499**	ug/L	0.671	1	24	107576	1	KED
|	**Ni**	**62**	**49.447**	ug/L	0.283	0	3	17352	0	KED
|	**Cu**	**63**	**48.642**	ug/L	0.245	0	92	308191	0	KED
|	**Cu**	**65**	**49.149**	ug/L	0.795	1	45	156454	1	KED
|	**Zn**	**66**	**49.103**	ug/L	0.864	1	75	39476	1	KED
|	**Zn**	**67**	**49.288**	ug/L	0.684	1	14	6578	0	KED
⌊	**As**	**75**	**49.218**	ug/L	0.499	1	4	19368	1	KED
	Y	**89**		ug/L			513632	523668	0	Standard
	Kr	**83**		ug/L			111	102	3	Standard
⌈>	**In-1**	**115**		ug/L			27713	27496	1	KED
|	**Cd**	**111**	**49.816**	ug/L	1.115	2	1	22212	1	KED
⌊	**Cd**	**114**	**50.446**	ug/L	0.106	0	2	59047	1	KED
⌈>	**Tb**	**159**		ug/L			3819117	3928502	0	Standard
⌊	**Pb**	**208**	**48.325**	ug/L	0.439	0	567	7735732	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 21:00:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	15803	1	Standard
	Cl	**37**		ug/L			4133067	4117343	1	Standard
>	**Sc**	**45**		ug/L			962260	970872	1	Standard
	Cr	**52**	**0.004**	ug/L	0.020	534	15459	15668	1	Standard
	Cr	**53**	**0.003**	ug/L	0.007	204	139	148	10	Standard
>	**Ge**	**72**		ug/L			106383	104803	1	KED
	Ni	**60**	**0.001**	ug/L	0.001	170	24	26	11	KED
	Ni	**62**	**0.014**	ug/L	0.006	44	3	8	26	KED
	Cu	**63**	**0.003**	ug/L	0.003	91	92	110	17	KED
	Cu	**65**	**0.002**	ug/L	0.001	34	45	50	2	KED
	Zn	**66**	**0.023**	ug/L	0.029	128	75	92	23	KED
	Zn	**67**	**-0.008**	ug/L	0.059	700	14	13	62	KED
	As	**75**	**-0.003**	ug/L	0.004	143	4	3	45	KED
	Y	**89**		ug/L			513632	530176	1	Standard
	Kr	**83**		ug/L			111	96	6	Standard
>	**In-1**	**115**		ug/L			27713	27880	1	KED
	Cd	**111**	**0.010**	ug/L	0.014	139	1	6	96	KED
	Cd	**114**	**0.005**	ug/L	0.007	135	2	8	94	KED
>	**Tb**	**159**		ug/L			3819117	3867696	2	Standard
	Pb	**208**	**0.001**	ug/L	0.000	44	567	672	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0023-BLK1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 21:04:00

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	21427	0	Standard
	Cl	**37**		ug/L			4133067	4163070	0	Standard
>	**Sc**	**45**		ug/L			962260	964001	0	Standard
	Cr	**52**	**0.026**	ug/L	0.005	20	15459	16014	0	Standard
	Cr	**53**	**0.014**	ug/L	0.005	33	139	173	6	Standard
>	**Ge**	**72**		ug/L			106383	105044	0	KED
	Ni	**60**	**0.010**	ug/L	0.002	17	24	48	8	KED
	Ni	**62**	**0.019**	ug/L	0.006	30	3	10	21	KED
	Cu	**63**	**0.008**	ug/L	0.003	38	92	141	13	KED
	Cu	**65**	**0.012**	ug/L	0.004	34	45	84	15	KED
	Zn	**66**	**0.191**	ug/L	0.023	11	75	232	8	KED
	Zn	**67**	**0.122**	ug/L	0.044	35	14	31	19	KED
	As	**75**	**-0.004**	ug/L	0.005	138	4	3	62	KED
	Y	**89**		ug/L			513632	519774	1	Standard
	Kr	**83**		ug/L			111	102	2	Standard
>	**In-1**	**115**		ug/L			27713	27688	0	KED
	Cd	**111**	**0.005**	ug/L	0.007	136	1	4	74	KED
	Cd	**114**	**-0.000**	ug/L	0.001	3807	2	2	47	KED
>	**Tb**	**159**		ug/L			3819117	3843358	0	Standard
	Pb	**208**	**0.044**	ug/L	0.000	0	567	7444	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0023-BS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 21:07:51

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	22284	3	Standard
	Cl	**37**		ug/L			4133067	4156133	1	Standard
>	**Sc**	**45**		ug/L			962260	977723	0	Standard
	Cr	**52**	**19.151**	ug/L	0.299	1	15459	412894	1	Standard
	Cr	**53**	**18.943**	ug/L	0.350	1	139	46590	1	Standard
>	**Ge**	**72**		ug/L			106383	105308	1	KED
	Ni	**60**	**18.577**	ug/L	0.388	2	24	42436	1	KED
	Ni	**62**	**18.955**	ug/L	0.353	1	3	6849	0	KED
	Cu	**63**	**19.295**	ug/L	0.398	2	92	125920	1	KED
	Cu	**65**	**18.971**	ug/L	0.241	1	45	62204	0	KED
	Zn	**66**	**56.567**	ug/L	1.549	2	75	46806	1	KED
	Zn	**67**	**54.525**	ug/L	0.440	0	14	7492	1	KED
	As	**75**	**18.386**	ug/L	0.079	0	4	7453	1	KED
	Y	**89**		ug/L			513632	515890	0	Standard
	Kr	**83**		ug/L			111	97	5	Standard
>	**In-1**	**115**		ug/L			27713	28569	0	KED
	Cd	**111**	**18.782**	ug/L	0.501	2	1	8703	2	KED
	Cd	**114**	**18.822**	ug/L	0.243	1	2	22892	1	KED
>	**Tb**	**159**		ug/L			3819117	3873395	1	Standard
	Pb	**208**	**19.093**	ug/L	0.311	1	567	3013387	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0199-04
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 21:11:42
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	30620	3	Standard
	Cl	**37**		ug/L			4133067	4159831	1	Standard
⌈>	**Sc**	**45**		ug/L			962260	1058792	1	Standard
|	**Cr**	**52**	**9.478**	ug/L	0.157	1	15459	229854	1	Standard
⌊	**Cr**	**53**	**9.447**	ug/L	0.166	1	139	25238	1	Standard
⌈>	**Ge**	**72**		ug/L			106383	106145	0	KED
|	**Ni**	**60**	**7.926**	ug/L	0.170	2	24	18266	1	KED
|	**Ni**	**62**	**8.154**	ug/L	0.004	0	3	2972	0	KED
|	**Cu**	**63**	**11.381**	ug/L	0.116	1	92	74908	1	KED
|	**Cu**	**65**	**11.328**	ug/L	0.103	0	45	37459	0	KED
|	**Zn**	**66**	**39.005**	ug/L	0.444	1	75	32558	0	KED
|	**Zn**	**67**	**38.093**	ug/L	1.561	4	14	5279	3	KED
⌊	**As**	**75**	**3.752**	ug/L	0.100	2	4	1537	3	KED
	Y	**89**		ug/L			513632	650770	1	Standard
	Kr	**83**		ug/L			111	107	6	Standard
⌈>	**In-1**	**115**		ug/L			27713	28423	1	KED
|	**Cd**	**111**	**0.067**	ug/L	0.013	19	1	32	17	KED
⌊	**Cd**	**114**	**0.056**	ug/L	0.007	13	2	69	11	KED
⌈>	**Tb**	**159**		ug/L			3819117	3937298	0	Standard
⌊	**Pb**	**208**	**7.039**	ug/L	0.153	2	567	1129625	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0199-09
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 21:15:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	33100	2	Standard
	Cl	**37**		ug/L			4133067	4141910	1	Standard
⌈>	**Sc**	**45**		ug/L			962260	1068165	1	Standard
|	**Cr**	**52**	**8.766**	ug/L	0.206	2	15459	215756	1	Standard
⌊	**Cr**	**53**	**8.674**	ug/L	0.288	3	139	23384	1	Standard
⌈>	**Ge**	**72**		ug/L			106383	107111	0	KED
|	**Ni**	**60**	**6.923**	ug/L	0.105	1	24	16103	1	KED
|	**Ni**	**62**	**7.099**	ug/L	0.150	2	3	2611	2	KED
|	**Cu**	**63**	**14.712**	ug/L	0.195	1	92	97682	1	KED
|	**Cu**	**65**	**14.779**	ug/L	0.152	1	45	49302	1	KED
|	**Zn**	**66**	**31.844**	ug/L	0.449	1	75	26839	1	KED
|	**Zn**	**67**	**31.952**	ug/L	0.411	1	14	4471	1	KED
⌊	**As**	**75**	**3.987**	ug/L	0.041	1	4	1647	1	KED
	Y	**89**		ug/L			513632	650561	1	Standard
	Kr	**83**		ug/L			111	122	6	Standard
⌈>	**In-1**	**115**		ug/L			27713	27370	1	KED
|	**Cd**	**111**	**0.066**	ug/L	0.005	6	1	31	4	KED
⌊	**Cd**	**114**	**0.054**	ug/L	0.002	3	2	64	3	KED
⌈>	**Tb**	**159**		ug/L			3819117	3948093	0	Standard
⌊	**Pb**	**208**	**7.064**	ug/L	0.077	1	567	1136875	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0212-06
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 21:19:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	34072	1	Standard
	Cl	**37**		ug/L			4133067	4123405	2	Standard
⌈>	**Sc**	**45**		ug/L			962260	1051136	0	Standard
|	**Cr**	**52**	**8.765**	ug/L	0.110	1	15459	212322	0	Standard
⌊	**Cr**	**53**	**8.729**	ug/L	0.147	1	139	23163	1	Standard
⌈>	**Ge**	**72**		ug/L			106383	108077	0	KED
|	**Ni**	**60**	**6.347**	ug/L	0.152	2	24	14897	1	KED
|	**Ni**	**62**	**6.459**	ug/L	0.200	3	3	2397	2	KED
|	**Cu**	**63**	**12.923**	ug/L	0.040	0	92	86592	1	KED
|	**Cu**	**65**	**12.944**	ug/L	0.223	1	45	43572	1	KED
|	**Zn**	**66**	**20.862**	ug/L	0.262	1	75	17766	0	KED
|	**Zn**	**67**	**20.391**	ug/L	0.140	0	14	2884	0	KED
⌊	**As**	**75**	**484.563**	ug/L	4.171	0	4	201453	0	KED
	Y	**89**		ug/L			513632	663432	1	Standard
	Kr	**83**		ug/L			111	109	14	Standard
⌈>	**In-1**	**115**		ug/L			27713	27955	1	KED
|	**Cd**	**111**	**0.039**	ug/L	0.013	33	1	19	29	KED
⌊	**Cd**	**114**	**0.040**	ug/L	0.015	36	2	50	35	KED
⌈>	**Tb**	**159**		ug/L			3819117	3962514	0	Standard
⌊	**Pb**	**208**	**4.147**	ug/L	0.041	0	567	670084	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0747-DUP3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 21:23:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	36239	2	Standard
	Cl	**37**		ug/L			4133067	4125754	0	Standard
⌈>	**Sc**	**45**		ug/L			962260	1061538	0	Standard
|	**Cr**	**52**	**9.216**	ug/L	0.150	1	15459	224604	2	Standard
⌊	**Cr**	**53**	**9.427**	ug/L	0.129	1	139	25249	0	Standard
⌈>	**Ge**	**72**		ug/L			106383	109037	0	KED
|	**Ni**	**60**	**6.758**	ug/L	0.158	2	24	16002	2	KED
|	**Ni**	**62**	**7.108**	ug/L	0.253	3	3	2661	3	KED
|	**Cu**	**63**	**12.979**	ug/L	0.443	3	92	87732	2	KED
|	**Cu**	**65**	**12.928**	ug/L	0.357	2	45	43908	2	KED
|	**Zn**	**66**	**21.477**	ug/L	0.216	1	75	18451	1	KED
|	**Zn**	**67**	**21.621**	ug/L	1.002	4	14	3085	4	KED
⌊	**As**	**75**	**510.557**	ug/L	7.627	1	4	214142	0	KED
	Y	**89**		ug/L			513632	663721	1	Standard
	Kr	**83**		ug/L			111	122	5	Standard
⌈>	**In-1**	**115**		ug/L			27713	28639	1	KED
|	**Cd**	**111**	**0.042**	ug/L	0.018	43	1	21	38	KED
⌊	**Cd**	**114**	**0.039**	ug/L	0.004	9	2	49	7	KED
⌈>	**Tb**	**159**		ug/L			3819117	3956182	1	Standard
⌊	**Pb**	**208**	**4.764**	ug/L	0.024	0	567	768544	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0747-MS3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 21:27:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	32527	3	Standard
	Cl	**37**		ug/L			4133067	4189612	0	Standard
⌈>	**Sc**	**45**		ug/L			962260	1047291	0	Standard
|	**Cr**	**52**	**30.762**	ug/L	0.485	1	15459	700235	1	Standard
⌊	**Cr**	**53**	**31.047**	ug/L	0.141	0	139	81704	0	Standard
⌈>	**Ge**	**72**		ug/L			106383	106979	3	KED
|	**Ni**	**60**	**28.442**	ug/L	1.267	4	24	65937	2	KED
|	**Ni**	**62**	**28.586**	ug/L	0.877	3	3	10488	2	KED
|	**Cu**	**63**	**35.007**	ug/L	1.941	5	92	231771	3	KED
|	**Cu**	**65**	**35.794**	ug/L	2.323	6	45	119053	4	KED
|	**Zn**	**66**	**86.626**	ug/L	5.069	5	75	72704	3	KED
|	**Zn**	**67**	**82.731**	ug/L	4.793	5	14	11528	3	KED
⌊	**As**	**75**	**545.553**	ug/L	29.847	5	4	224283	3	KED
	Y	**89**		ug/L			513632	667786	1	Standard
	Kr	**83**		ug/L			111	147	6	Standard
⌈>	**In-1**	**115**		ug/L			27713	28331	2	KED
|	**Cd**	**111**	**23.049**	ug/L	0.092	0	1	10591	2	KED
⌊	**Cd**	**114**	**22.665**	ug/L	0.504	2	2	27327	1	KED
⌈>	**Tb**	**159**		ug/L			3819117	3955206	1	Standard
⌊	**Pb**	**208**	**26.608**	ug/L	0.685	2	567	4287415	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0747-MSD3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 21:31:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	33631	3	Standard
	Cl	**37**		ug/L			4133067	4091858	1	Standard
⌈>	**Sc**	**45**		ug/L			962260	1039725	1	Standard
|	**Cr**	**52**	**30.505**	ug/L	0.354	1	15459	689456	0	Standard
⌊	**Cr**	**53**	**30.020**	ug/L	0.676	2	139	78428	1	Standard
⌈>	**Ge**	**72**		ug/L			106383	107569	0	KED
|	**Ni**	**60**	**27.749**	ug/L	0.258	0	24	64747	0	KED
|	**Ni**	**62**	**28.466**	ug/L	0.435	1	3	10507	1	KED
|	**Cu**	**63**	**33.548**	ug/L	0.177	0	92	223590	0	KED
|	**Cu**	**65**	**33.950**	ug/L	0.260	0	45	113683	0	KED
|	**Zn**	**66**	**85.589**	ug/L	0.837	0	75	72315	1	KED
|	**Zn**	**67**	**81.341**	ug/L	0.773	0	14	11409	0	KED
⌊	**As**	**75**	**667.336**	ug/L	4.293	0	4	276143	0	KED
	Y	**89**		ug/L			513632	670378	2	Standard
	Kr	**83**		ug/L			111	126	6	Standard
⌈>	**In-1**	**115**		ug/L			27713	27499	0	KED
|	**Cd**	**111**	**22.478**	ug/L	0.122	0	1	10026	0	KED
⌊	**Cd**	**114**	**22.342**	ug/L	0.398	1	2	26155	1	KED
⌈>	**Tb**	**159**		ug/L			3819117	3958783	0	Standard
⌊	**Pb**	**208**	**25.996**	ug/L	0.446	1	567	4193357	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJG0747-PS3
Sample Dil Factor: 20
Comments:

DEL

Sample Date/Time: Wednesday, August 04, 2021 21:35:58
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	34425	3	Standard
	Cl	**37**		ug/L			4133067	4113075	1	Standard
⌈>	**Sc**	**45**		ug/L			962260	1031358	1	Standard
|	**Cr**	**52**	**32.241**	ug/L	0.906	2	15459	721694	1	Standard
⌊	**Cr**	**53**	**32.073**	ug/L	1.066	3	139	83081	1	Standard
⌈>	**Ge**	**72**		ug/L			106383	107584	0	KED
|	**Ni**	**60**	**29.390**	ug/L	0.603	2	24	68580	1	KED
|	**Ni**	**62**	**29.323**	ug/L	0.237	0	3	10825	1	KED
|	**Cu**	**63**	**35.648**	ug/L	0.237	0	92	237621	1	KED
|	**Cu**	**65**	**36.184**	ug/L	1.189	3	45	121178	3	KED
|	**Zn**	**66**	**89.796**	ug/L	1.244	1	75	75876	1	KED
|	**Zn**	**67**	**87.658**	ug/L	0.756	0	14	12296	0	KED
⌊	**As**	**75**	**499.876**	ug/L	2.248	0	4	206884	1	KED
	Y	**89**		ug/L			513632	652398	2	Standard
	Kr	**83**		ug/L			111	133	11	Standard
⌈>	**In-1**	**115**		ug/L			27713	27874	1	KED
|	**Cd**	**111**	**23.914**	ug/L	0.497	2	1	10810	1	KED
⌊	**Cd**	**114**	**24.004**	ug/L	0.313	1	2	28481	0	KED
⌈>	**Tb**	**159**		ug/L			3819117	3938436	1	Standard
⌊	**Pb**	**208**	**27.975**	ug/L	0.312	1	567	4489274	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLA
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 21:41:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	22177	1	Standard
	Cl	**37**		ug/L			4133067	3909935	1	Standard
⌈>	**Sc**	**45**		ug/L			962260	900763	10	Standard
|	**Cr**	**52**	**0.017**	ug/L	0.074	428	15459	14708	0	Standard
⌊	**Cr**	**53**	**0.008**	ug/L	0.005	60	139	146	5	Standard
⌈>	**Ge**	**72**		ug/L			106383	103754	2	KED
|	**Ni**	**60**	**0.025**	ug/L	0.006	25	24	80	18	KED
|	**Ni**	**62**	**0.031**	ug/L	0.023	74	3	13	56	KED
|	**Cu**	**63**	**0.009**	ug/L	0.002	18	92	148	7	KED
|	**Cu**	**65**	**0.011**	ug/L	0.003	29	45	81	11	KED
|	**Zn**	**66**	**0.519**	ug/L	0.059	11	75	496	9	KED
|	**Zn**	**67**	**0.368**	ug/L	0.088	23	14	64	19	KED
⌊	**As**	**75**	**0.046**	ug/L	0.009	19	4	23	15	KED
	Y	**89**		ug/L			513632	472934	8	Standard
	Kr	**83**		ug/L			111	106	12	Standard
⌈>	**In-1**	**115**		ug/L			27713	27618	0	KED
|	**Cd**	**111**	**0.002**	ug/L	0.006	295	1	2	100	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.002	156	2	0	227	KED
⌈>	**Tb**	**159**		ug/L			3819117	3526443	9	Standard
⌊	**Pb**	**208**	**0.007**	ug/L	0.001	15	567	1548	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV8
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 21:45:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	18833	3	Standard
	Cl	**37**		ug/L			4133067	4242680	1	Standard
>	**Sc**	**45**		ug/L			962260	940055	1	Standard
	Cr	**52**	**51.074**	ug/L	1.500	2	15459	1033214	1	Standard
	Cr	**53**	**50.761**	ug/L	1.258	2	139	119780	0	Standard
>	**Ge**	**72**		ug/L			106383	101842	1	KED
	Ni	**60**	**47.989**	ug/L	0.675	1	24	105986	1	KED
	Ni	**62**	**48.533**	ug/L	0.635	1	3	16956	0	KED
	Cu	**63**	**48.216**	ug/L	0.825	1	92	304182	1	KED
	Cu	**65**	**49.190**	ug/L	0.599	1	45	155907	0	KED
	Zn	**66**	**49.368**	ug/L	0.452	0	75	39518	0	KED
	Zn	**67**	**50.232**	ug/L	0.798	1	14	6675	1	KED
	As	**75**	**48.937**	ug/L	1.052	2	4	19172	0	KED
	Y	**89**		ug/L			513632	505661	2	Standard
	Kr	**83**		ug/L			111	100	9	Standard
>	**In-1**	**115**		ug/L			27713	27044	1	KED
	Cd	**111**	**50.501**	ug/L	0.316	0	1	22149	0	KED
	Cd	**114**	**50.705**	ug/L	0.709	1	2	58368	0	KED
>	**Tb**	**159**		ug/L			3819117	3829286	1	Standard
	Pb	**208**	**48.581**	ug/L	0.910	1	567	7579049	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB8
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 21:52:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	16240	1	Standard
	Cl	**37**		ug/L			4133067	4063565	1	Standard
⌈>	**Sc**	**45**		ug/L			962260	964604	1	Standard
|	**Cr**	**52**	**-0.040**	ug/L	0.013	33	15459	14680	0	Standard
⌊	**Cr**	**53**	**0.002**	ug/L	0.006	355	139	143	8	Standard
⌈>	**Ge**	**72**		ug/L			106383	103076	1	KED
|	**Ni**	**60**	**0.000**	ug/L	0.003	3439	24	24	22	KED
|	**Ni**	**62**	**0.004**	ug/L	0.003	75	3	4	24	KED
|	**Cu**	**63**	**0.003**	ug/L	0.003	86	92	107	14	KED
|	**Cu**	**65**	**0.008**	ug/L	0.004	46	45	71	16	KED
|	**Zn**	**66**	**0.017**	ug/L	0.009	53	75	86	10	KED
|	**Zn**	**67**	**-0.006**	ug/L	0.043	707	14	13	42	KED
⌊	**As**	**75**	**0.008**	ug/L	0.004	51	4	7	19	KED
	Y	**89**		ug/L			513632	512979	1	Standard
	Kr	**83**		ug/L			111	104	18	Standard
⌈>	**In-1**	**115**		ug/L			27713	27907	0	KED
|	**Cd**	**111**	**0.003**	ug/L	0.004	157	1	3	62	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.002	61	2	5	34	KED
⌈>	**Tb**	**159**		ug/L			3819117	3826953	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	22	567	750	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0253-02
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 21:55:56

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	27454	2	Standard
	Cl	**37**		ug/L			4133067	4096822	1	Standard
⌈>	**Sc**	**45**		ug/L			962260	1048408	0	Standard
|	**Cr**	**52**	**26.015**	ug/L	0.336	1	15459	595365	0	Standard
⌊	**Cr**	**53**	**25.955**	ug/L	0.492	1	139	68394	1	Standard
⌈>	**Ge**	**72**		ug/L			106383	101857	0	KED
|	**Ni**	**60**	**42.151**	ug/L	0.636	1	24	93110	0	KED
|	**Ni**	**62**	**41.595**	ug/L	0.300	0	3	14537	1	KED
|	**Cu**	**63**	**18.166**	ug/L	0.038	0	92	114685	0	KED
|	**Cu**	**65**	**18.178**	ug/L	0.193	1	45	57658	1	KED
|	**Zn**	**66**	**36.646**	ug/L	0.493	1	75	29357	0	KED
|	**Zn**	**67**	**36.227**	ug/L	1.096	3	14	4819	2	KED
⌊	**As**	**75**	**3.876**	ug/L	0.057	1	4	1523	1	KED
	Y	**89**		ug/L			513632	650408	2	Standard
	Kr	**83**		ug/L			111	122	31	Standard
⌈>	**In-1**	**115**		ug/L			27713	26833	2	KED
|	**Cd**	**111**	**0.135**	ug/L	0.024	18	1	60	15	KED
⌊	**Cd**	**114**	**0.152**	ug/L	0.010	6	2	175	8	KED
⌈>	**Tb**	**159**		ug/L			3819117	3808898	1	Standard
⌊	**Pb**	**208**	**4.488**	ug/L	0.010	0	567	696987	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0253-03
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 21:59:47

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	27763	0	Standard
	Cl	**37**		ug/L			4133067	4212427	0	Standard
⌈>	**Sc**	**45**		ug/L			962260	1057522	0	Standard
|	**Cr**	**52**	**24.461**	ug/L	0.118	0	15459	565721	0	Standard
⌊	**Cr**	**53**	**24.544**	ug/L	0.205	0	139	65250	0	Standard
⌈>	**Ge**	**72**		ug/L			106383	104727	1	KED
|	**Ni**	**60**	**37.262**	ug/L	1.052	2	24	84628	2	KED
|	**Ni**	**62**	**37.516**	ug/L	0.662	1	3	13481	2	KED
|	**Cu**	**63**	**17.204**	ug/L	0.227	1	92	111662	0	KED
|	**Cu**	**65**	**17.037**	ug/L	0.360	2	45	55551	0	KED
|	**Zn**	**66**	**34.284**	ug/L	0.605	1	75	28243	1	KED
|	**Zn**	**67**	**33.326**	ug/L	0.210	0	14	4559	1	KED
⌊	**As**	**75**	**3.492**	ug/L	0.114	3	4	1411	2	KED
	Y	**89**		ug/L			513632	644014	0	Standard
	Kr	**83**		ug/L			111	120	4	Standard
⌈>	**In-1**	**115**		ug/L			27713	27289	1	KED
|	**Cd**	**111**	**0.179**	ug/L	0.014	7	1	80	6	KED
⌊	**Cd**	**114**	**0.187**	ug/L	0.007	3	2	219	3	KED
⌈>	**Tb**	**159**		ug/L			3819117	3905261	0	Standard
⌊	**Pb**	**208**	**4.395**	ug/L	0.065	1	567	699918	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0253-04
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 22:03:38

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	28728	4	Standard
	Cl	**37**		ug/L			4133067	4174568	1	Standard
>	**Sc**	**45**		ug/L			962260	1019266	0	Standard
	Cr	**52**	**24.834**	ug/L	0.288	1	15459	553288	0	Standard
	Cr	**53**	**24.782**	ug/L	0.536	2	139	63495	1	Standard
>	**Ge**	**72**		ug/L			106383	101525	1	KED
	Ni	**60**	**36.578**	ug/L	0.905	2	24	80531	2	KED
	Ni	**62**	**37.707**	ug/L	0.818	2	3	13132	0	KED
	Cu	**63**	**18.540**	ug/L	0.026	0	92	116659	1	KED
	Cu	**65**	**18.796**	ug/L	0.080	0	45	59419	1	KED
	Zn	**66**	**36.880**	ug/L	0.699	1	75	29443	0	KED
	Zn	**67**	**36.589**	ug/L	0.094	0	14	4851	1	KED
	As	**75**	**3.691**	ug/L	0.060	1	4	1445	0	KED
	Y	**89**		ug/L			513632	633916	3	Standard
	Kr	**83**		ug/L			111	120	2	Standard
>	**In-1**	**115**		ug/L			27713	26437	1	KED
	Cd	**111**	**0.302**	ug/L	0.003	1	1	131	1	KED
	Cd	**114**	**0.297**	ug/L	0.030	9	2	336	9	KED
>	**Tb**	**159**		ug/L			3819117	3787527	2	Standard
	Pb	**208**	**6.792**	ug/L	0.135	1	567	1048365	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0253-05
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 22:07:28

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	31390	1	Standard
	Cl	**37**		ug/L			4133067	4074104	3	Standard
⌈>	**Sc**	**45**		ug/L			962260	1011477	1	Standard
|	**Cr**	**52**	**17.458**	ug/L	0.219	1	15459	390787	0	Standard
⌊	**Cr**	**53**	**17.485**	ug/L	0.289	1	139	44499	1	Standard
⌈>	**Ge**	**72**		ug/L			106383	101918	1	KED
|	**Ni**	**60**	**20.710**	ug/L	0.249	1	24	45788	1	KED
|	**Ni**	**62**	**20.908**	ug/L	0.389	1	3	7313	2	KED
|	**Cu**	**63**	**14.387**	ug/L	0.038	0	92	90901	1	KED
|	**Cu**	**65**	**14.564**	ug/L	0.372	2	45	46224	1	KED
|	**Zn**	**66**	**32.194**	ug/L	0.585	1	75	25813	1	KED
|	**Zn**	**67**	**32.198**	ug/L	0.577	1	14	4288	3	KED
⌊	**As**	**75**	**4.151**	ug/L	0.134	3	4	1631	1	KED
	Y	**89**		ug/L			513632	620363	1	Standard
	Kr	**83**		ug/L			111	101	12	Standard
⌈>	**In-1**	**115**		ug/L			27713	26563	2	KED
|	**Cd**	**111**	**0.382**	ug/L	0.020	5	1	166	4	KED
⌊	**Cd**	**114**	**0.350**	ug/L	0.012	3	2	397	2	KED
⌈>	**Tb**	**159**		ug/L			3819117	3859762	0	Standard
⌊	**Pb**	**208**	**6.102**	ug/L	0.024	0	567	960276	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0253-06
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 22:11:19

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	35848	2	Standard
	Cl	**37**		ug/L			4133067	4132108	1	Standard
⌈>	**Sc**	**45**		ug/L			962260	1005646	1	Standard
|	**Cr**	**52**	**19.200**	ug/L	0.453	2	15459	425688	1	Standard
⌊	**Cr**	**53**	**18.942**	ug/L	0.218	1	139	47918	0	Standard
⌈>	**Ge**	**72**		ug/L			106383	102926	0	KED
|	**Ni**	**60**	**24.809**	ug/L	0.540	2	24	55393	2	KED
|	**Ni**	**62**	**24.836**	ug/L	0.444	1	3	8772	1	KED
|	**Cu**	**63**	**16.659**	ug/L	0.480	2	92	106268	2	KED
|	**Cu**	**65**	**16.955**	ug/L	0.231	1	45	54345	1	KED
|	**Zn**	**66**	**29.830**	ug/L	0.234	0	75	24163	1	KED
|	**Zn**	**67**	**29.229**	ug/L	0.990	3	14	3931	3	KED
⌊	**As**	**75**	**4.871**	ug/L	0.107	2	4	1933	2	KED
	Y	**89**		ug/L			513632	610785	2	Standard
	Kr	**83**		ug/L			111	107	24	Standard
⌈>	**In-1**	**115**		ug/L			27713	26513	1	KED
|	**Cd**	**111**	**0.381**	ug/L	0.019	5	1	165	4	KED
⌊	**Cd**	**114**	**0.341**	ug/L	0.005	1	2	387	1	KED
⌈>	**Tb**	**159**		ug/L			3819117	3816377	0	Standard
⌊	**Pb**	**208**	**4.560**	ug/L	0.071	1	567	709534	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0253-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 22:15:10

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	28736	2	Standard
	Cl	**37**		ug/L			4133067	4136752	2	Standard
⌈>	**Sc**	**45**		ug/L			962260	1007581	0	Standard
|	**Cr**	**52**	**21.788**	ug/L	0.135	0	15459	481862	0	Standard
⌊	**Cr**	**53**	**22.242**	ug/L	0.215	0	139	56350	0	Standard
⌈>	**Ge**	**72**		ug/L			106383	102197	1	KED
|	**Ni**	**60**	**36.883**	ug/L	0.182	0	24	81752	1	KED
|	**Ni**	**62**	**36.846**	ug/L	0.302	0	3	12920	0	KED
|	**Cu**	**63**	**15.229**	ug/L	0.256	1	92	96464	0	KED
|	**Cu**	**65**	**15.299**	ug/L	0.303	1	45	48688	0	KED
|	**Zn**	**66**	**30.860**	ug/L	0.575	1	75	24819	2	KED
|	**Zn**	**67**	**29.327**	ug/L	0.712	2	14	3916	1	KED
⌊	**As**	**75**	**3.127**	ug/L	0.075	2	4	1234	3	KED
	Y	**89**		ug/L			513632	623550	1	Standard
	Kr	**83**		ug/L			111	114	9	Standard
⌈>	**In-1**	**115**		ug/L			27713	26589	2	KED
|	**Cd**	**111**	**0.132**	ug/L	0.022	16	1	58	14	KED
⌊	**Cd**	**114**	**0.109**	ug/L	0.011	9	2	125	8	KED
⌈>	**Tb**	**159**		ug/L			3819117	3753945	0	Standard
⌊	**Pb**	**208**	**3.365**	ug/L	0.021	0	567	515277	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0023-DUP1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 22:19:00

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	30187	1	Standard
	Cl	**37**		ug/L			4133067	4133012	3	Standard
⌈>	**Sc**	**45**		ug/L			962260	1013647	0	Standard
|	**Cr**	**52**	**25.365**	ug/L	0.279	1	15459	561669	0	Standard
⌊	**Cr**	**53**	**25.460**	ug/L	0.353	1	139	64875	1	Standard
⌈>	**Ge**	**72**		ug/L			106383	100417	0	KED
|	**Ni**	**60**	**41.656**	ug/L	0.415	0	24	90720	0	KED
|	**Ni**	**62**	**42.129**	ug/L	0.627	1	3	14515	1	KED
|	**Cu**	**63**	**17.341**	ug/L	0.061	0	92	107935	0	KED
|	**Cu**	**65**	**17.784**	ug/L	0.238	1	45	55610	1	KED
|	**Zn**	**66**	**35.720**	ug/L	0.072	0	75	28214	0	KED
|	**Zn**	**67**	**35.148**	ug/L	0.131	0	14	4610	0	KED
⌊	**As**	**75**	**3.661**	ug/L	0.048	1	4	1418	1	KED
	Y	**89**		ug/L			513632	638928	2	Standard
	Kr	**83**		ug/L			111	133	14	Standard
⌈>	**In-1**	**115**		ug/L			27713	26909	0	KED
|	**Cd**	**111**	**0.134**	ug/L	0.025	18	1	60	18	KED
⌊	**Cd**	**114**	**0.137**	ug/L	0.008	5	2	159	5	KED
⌈>	**Tb**	**159**		ug/L			3819117	3798168	0	Standard
⌊	**Pb**	**208**	**3.813**	ug/L	0.034	0	567	590548	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0023-MS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 22:23:15

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	29074	2	Standard
	Cl	**37**		ug/L			4133067	4157426	0	Standard
>	**Sc**	**45**		ug/L			962260	1019532	1	Standard
	Cr	**52**	**48.314**	ug/L	1.223	2	15459	1060959	0	Standard
	Cr	**53**	**48.176**	ug/L	1.034	2	139	123305	0	Standard
>	**Ge**	**72**		ug/L			106383	102369	1	KED
	Ni	**60**	**66.034**	ug/L	1.005	1	24	146589	1	KED
	Ni	**62**	**66.319**	ug/L	1.324	1	3	23288	0	KED
	Cu	**63**	**39.299**	ug/L	0.500	1	92	249216	0	KED
	Cu	**65**	**39.553**	ug/L	0.616	1	45	126031	2	KED
	Zn	**66**	**100.343**	ug/L	1.358	1	75	80657	0	KED
	Zn	**67**	**94.902**	ug/L	1.655	1	14	12664	1	KED
	As	**75**	**23.500**	ug/L	0.312	1	4	9257	0	KED
	Y	**89**		ug/L			513632	645465	2	Standard
	Kr	**83**		ug/L			111	117	4	Standard
>	**In-1**	**115**		ug/L			27713	26272	2	KED
	Cd	**111**	**21.104**	ug/L	0.394	1	1	8990	0	KED
	Cd	**114**	**21.296**	ug/L	0.669	3	2	23809	1	KED
>	**Tb**	**159**		ug/L			3819117	3744369	0	Standard
	Pb	**208**	**25.717**	ug/L	0.194	0	567	3923957	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0023-MSD1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 22:27:30

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	27152	3	Standard
	Cl	**37**		ug/L			4133067	4057573	0	Standard
⌈>	**Sc**	**45**		ug/L			962260	1013980	1	Standard
|	**Cr**	**52**	**38.299**	ug/L	0.659	1	15459	839950	0	Standard
⌊	**Cr**	**53**	**38.595**	ug/L	0.738	1	139	98285	1	Standard
⌈>	**Ge**	**72**		ug/L			106383	99820	0	KED
|	**Ni**	**60**	**54.636**	ug/L	1.077	1	24	118262	1	KED
|	**Ni**	**62**	**55.508**	ug/L	0.850	1	3	19010	1	KED
|	**Cu**	**63**	**33.428**	ug/L	0.307	0	92	206734	0	KED
|	**Cu**	**65**	**33.667**	ug/L	0.411	1	45	104618	1	KED
|	**Zn**	**66**	**83.264**	ug/L	0.896	1	75	65280	0	KED
|	**Zn**	**67**	**78.619**	ug/L	1.072	1	14	10234	1	KED
⌊	**As**	**75**	**19.596**	ug/L	0.254	1	4	7528	0	KED
	Y	**89**		ug/L			513632	612905	1	Standard
	Kr	**83**		ug/L			111	116	31	Standard
⌈>	**In-1**	**115**		ug/L			27713	26568	2	KED
|	**Cd**	**111**	**17.126**	ug/L	0.476	2	1	7378	1	KED
⌊	**Cd**	**114**	**16.836**	ug/L	0.329	1	2	19040	1	KED
⌈>	**Tb**	**159**		ug/L			3819117	3761123	1	Standard
⌊	**Pb**	**208**	**19.956**	ug/L	0.307	1	567	3058539	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLB
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 22:32:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	22579	2	Standard
	Cl	**37**		ug/L			4133067	4025582	1	Standard
⌈>	**Sc**	**45**		ug/L			962260	953324	1	Standard
|	**Cr**	**52**	**-0.025**	ug/L	0.042	166	15459	14799	4	Standard
⌊	**Cr**	**53**	**-0.002**	ug/L	0.001	42	139	132	3	Standard
⌈>	**Ge**	**72**		ug/L			106383	102280	1	KED
|	**Ni**	**60**	**0.022**	ug/L	0.003	16	24	71	10	KED
|	**Ni**	**62**	**0.033**	ug/L	0.008	24	3	14	19	KED
|	**Cu**	**63**	**0.012**	ug/L	0.001	5	92	167	2	KED
|	**Cu**	**65**	**0.013**	ug/L	0.001	8	45	84	4	KED
|	**Zn**	**66**	**0.494**	ug/L	0.039	7	75	469	5	KED
|	**Zn**	**67**	**0.409**	ug/L	0.033	8	14	68	7	KED
⌊	**As**	**75**	**0.002**	ug/L	0.007	316	4	5	47	KED
	Y	**89**		ug/L			513632	508659	1	Standard
	Kr	**83**		ug/L			111	107	17	Standard
⌈>	**In-1**	**115**		ug/L			27713	26765	4	KED
|	**Cd**	**111**	**0.000**	ug/L	0.002	1904	1	1	50	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.001	49	2	4	25	KED
⌈>	**Tb**	**159**		ug/L			3819117	3736305	0	Standard
⌊	**Pb**	**208**	**0.006**	ug/L	0.000	2	567	1397	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV9
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 22:37:01
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	18310	1	Standard
	Cl	**37**		ug/L			4133067	4202333	0	Standard
⌈>	**Sc**	**45**		ug/L			962260	941038	1	Standard
|	**Cr**	**52**	**51.207**	ug/L	1.469	2	15459	1037003	1	Standard
⌊	**Cr**	**53**	**51.503**	ug/L	0.248	0	139	121693	1	Standard
⌈>	**Ge**	**72**		ug/L			106383	99849	1	KED
|	**Ni**	**60**	**48.730**	ug/L	0.876	1	24	105508	0	KED
|	**Ni**	**62**	**49.354**	ug/L	0.567	1	3	16906	0	KED
|	**Cu**	**63**	**49.429**	ug/L	0.148	0	92	305746	1	KED
|	**Cu**	**65**	**49.696**	ug/L	0.482	0	45	154434	0	KED
|	**Zn**	**66**	**49.877**	ug/L	1.178	2	75	39152	3	KED
|	**Zn**	**67**	**50.261**	ug/L	0.242	0	14	6549	1	KED
⌊	**As**	**75**	**49.735**	ug/L	0.354	0	4	19107	1	KED
	Y	**89**		ug/L			513632	491045	1	Standard
	Kr	**83**		ug/L			111	100	14	Standard
⌈>	**In-1**	**115**		ug/L			27713	26656	2	KED
|	**Cd**	**111**	**50.077**	ug/L	1.625	3	1	21639	1	KED
⌊	**Cd**	**114**	**50.309**	ug/L	0.884	1	2	57075	0	KED
⌈>	**Tb**	**159**		ug/L			3819117	3727087	1	Standard
⌊	**Pb**	**208**	**49.862**	ug/L	0.637	1	567	7571830	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB9
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 22:43:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	16897	2	Standard
	Cl	**37**		ug/L			4133067	4153686	2	Standard
⌈>	**Sc**	**45**		ug/L			962260	953751	1	Standard
|	**Cr**	**52**	**-0.025**	ug/L	0.017	67	15459	14816	1	Standard
⌊	**Cr**	**53**	**-0.008**	ug/L	0.004	49	139	119	6	Standard
⌈>	**Ge**	**72**		ug/L			106383	100971	0	KED
|	**Ni**	**60**	**0.001**	ug/L	0.003	349	24	25	26	KED
|	**Ni**	**62**	**0.011**	ug/L	0.008	73	3	6	41	KED
|	**Cu**	**63**	**0.005**	ug/L	0.001	11	92	118	3	KED
|	**Cu**	**65**	**0.002**	ug/L	0.002	131	45	48	13	KED
|	**Zn**	**66**	**0.023**	ug/L	0.032	141	75	89	27	KED
|	**Zn**	**67**	**0.025**	ug/L	0.015	59	14	17	11	KED
⌊	**As**	**75**	**-0.002**	ug/L	0.003	138	4	3	24	KED
	Y	**89**		ug/L			513632	514258	2	Standard
	Kr	**83**		ug/L			111	98	13	Standard
⌈>	**In-1**	**115**		ug/L			27713	27641	2	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.001	87	1	1	43	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.002	157	2	4	69	KED
⌈>	**Tb**	**159**		ug/L			3819117	3813662	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	52	567	673	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0253-07
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 22:47:28

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	30470	0	Standard
	Cl	**37**		ug/L			4133067	4118483	2	Standard
>	**Sc**	**45**		ug/L			962260	1035573	0	Standard
	Cr	**52**	**24.035**	ug/L	0.215	0	15459	544615	0	Standard
	Cr	**53**	**23.845**	ug/L	0.115	0	139	62081	0	Standard
>	**Ge**	**72**		ug/L			106383	101267	0	KED
	Ni	**60**	**37.116**	ug/L	0.176	0	24	81518	0	KED
	Ni	**62**	**37.270**	ug/L	0.566	1	3	12949	0	KED
	Cu	**63**	**17.701**	ug/L	0.131	0	92	111102	0	KED
	Cu	**65**	**17.949**	ug/L	0.103	0	45	56603	1	KED
	Zn	**66**	**35.812**	ug/L	0.955	2	75	28523	2	KED
	Zn	**67**	**34.598**	ug/L	0.353	1	14	4576	1	KED
	As	**75**	**3.698**	ug/L	0.075	2	4	1444	1	KED
	Y	**89**		ug/L			513632	626735	0	Standard
	Kr	**83**		ug/L			111	119	19	Standard
>	**In-1**	**115**		ug/L			27713	26618	1	KED
	Cd	**111**	**0.195**	ug/L	0.023	11	1	85	10	KED
	Cd	**114**	**0.202**	ug/L	0.014	7	2	231	7	KED
>	**Tb**	**159**		ug/L			3819117	3810044	0	Standard
	Pb	**208**	**4.938**	ug/L	0.036	0	567	767107	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0253-08

DEL

Sample Dil Factor: 20

Comments:

Sample Date/Time: Wednesday, August 04, 2021 22:51:18

Number of Replicates: 3

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth

Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	32299	1	Standard
	Cl	**37**		ug/L			4133067	4150975	1	Standard
⌈>	**Sc**	**45**		ug/L			962260	1042216	3	Standard
|	**Cr**	**52**	**30.374**	ug/L	1.849	6	15459	687202	1	Standard
⌊	**Cr**	**53**	**30.708**	ug/L	1.942	6	139	80289	2	Standard
⌈>	**Ge**	**72**		ug/L			106383	102343	1	KED
|	**Ni**	**60**	**49.615**	ug/L	0.766	1	24	110110	0	KED
|	**Ni**	**62**	**50.142**	ug/L	2.146	4	3	17602	3	KED
|	**Cu**	**63**	**20.547**	ug/L	0.124	0	92	130318	0	KED
|	**Cu**	**65**	**20.931**	ug/L	0.277	1	45	66695	1	KED
|	**Zn**	**66**	**41.463**	ug/L	0.494	1	75	33364	0	KED
|	**Zn**	**67**	**41.318**	ug/L	0.834	2	14	5521	2	KED
⌊	**As**	**75**	**4.230**	ug/L	0.111	2	4	1669	1	KED
	Y	**89**		ug/L			513632	666622	1	Standard
	Kr	**83**		ug/L			111	130	14	Standard
⌈>	**In-1**	**115**		ug/L			27713	26964	0	KED
|	**Cd**	**111**	**0.148**	ug/L	0.034	23	1	66	22	KED
⌊	**Cd**	**114**	**0.148**	ug/L	0.025	17	2	171	16	KED
⌈>	**Tb**	**159**		ug/L			3819117	3850324	0	Standard
⌊	**Pb**	**208**	**5.039**	ug/L	0.033	0	567	791052	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0253-09
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 22:55:03

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	31989	1	Standard
	Cl	**37**		ug/L			4133067	4121834	1	Standard
>	**Sc**	**45**		ug/L			962260	1054330	1	Standard
	Cr	**52**	**25.858**	ug/L	0.737	2	15459	595144	1	Standard
	Cr	**53**	**26.094**	ug/L	0.094	0	139	69153	1	Standard
>	**Ge**	**72**		ug/L			106383	102460	1	KED
	Ni	**60**	**39.717**	ug/L	0.349	0	24	88254	0	KED
	Ni	**62**	**40.796**	ug/L	0.324	0	3	14341	0	KED
	Cu	**63**	**18.714**	ug/L	0.249	1	92	118835	0	KED
	Cu	**65**	**18.650**	ug/L	0.349	1	45	59498	0	KED
	Zn	**66**	**36.725**	ug/L	0.711	1	75	29593	0	KED
	Zn	**67**	**36.607**	ug/L	0.410	1	14	4898	1	KED
	As	**75**	**3.796**	ug/L	0.098	2	4	1500	2	KED
	Y	**89**		ug/L			513632	656962	0	Standard
	Kr	**83**		ug/L			111	140	15	Standard
>	**In-1**	**115**		ug/L			27713	26662	1	KED
	Cd	**111**	**0.189**	ug/L	0.013	6	1	83	6	KED
	Cd	**114**	**0.205**	ug/L	0.010	4	2	235	6	KED
>	**Tb**	**159**		ug/L			3819117	3902985	0	Standard
	Pb	**208**	**4.613**	ug/L	0.036	0	567	734156	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21H0019-03
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 23:00:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	25090	2	Standard
	Cl	**37**		ug/L			4133067	3440230	0	Standard
⌈>	**Sc**	**45**		ug/L			962260	793337	1	Standard
|	**Cr**	**52**	**0.364**	ug/L	0.012	3	15459	18864	0	Standard
⌊	**Cr**	**53**	**0.341**	ug/L	0.006	1	139	794	1	Standard
⌈>	**Ge**	**72**		ug/L			106383	82376	0	KED
|	**Ni**	**60**	**2.484**	ug/L	0.012	0	24	4455	1	KED
|	**Ni**	**62**	**2.515**	ug/L	0.162	6	3	713	6	KED
|	**Cu**	**63**	**0.824**	ug/L	0.023	2	92	4274	3	KED
|	**Cu**	**65**	**0.832**	ug/L	0.022	2	45	2167	1	KED
|	**Zn**	**66**	**88.078**	ug/L	0.823	0	75	56983	0	KED
|	**Zn**	**67**	**81.105**	ug/L	1.833	2	14	8711	1	KED
⌊	**As**	**75**	**0.015**	ug/L	0.004	29	4	8	16	KED
	Y	**89**		ug/L			513632	459295	0	Standard
	Kr	**83**		ug/L			111	103	4	Standard
⌈>	**In-1**	**115**		ug/L			27713	20162	5	KED
|	**Cd**	**111**	**0.128**	ug/L	0.006	5	1	43	5	KED
⌊	**Cd**	**114**	**0.126**	ug/L	0.009	7	2	109	10	KED
⌈>	**Tb**	**159**		ug/L			3819117	3255361	1	Standard
⌊	**Pb**	**208**	**0.014**	ug/L	0.000	3	567	2386	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21H0019-02 RE1
Sample Dil Factor: 200
Comments:
Sample Date/Time: Wednesday, August 04, 2021 23:04:33

MB 8/4/21

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	18249	1	Standard
	Cl	**37**		ug/L			4133067	4279802	1	Standard
>	**Sc**	**45**		ug/L			962260	929387	0	Standard
	Cr	**52**	**0.012**	ug/L	0.023	198	15459	15157	2	Standard
	Cr	**53**	**0.005**	ug/L	0.001	10	139	146	0	Standard
>	**Ge**	**72**		ug/L			106383	102727	0	KED
	Ni	**60**	**0.085**	ug/L	0.006	7	24	212	6	KED
	Ni	**62**	**0.134**	ug/L	0.017	12	3	50	12	KED
	Cu	**63**	**23.850**	ug/L	0.224	0	92	151822	0	KED
	Cu	**65**	**24.249**	ug/L	0.642	2	45	77549	2	KED
	Zn	**66**	**189.618**	ug/L	2.325	1	75	152902	0	KED
	Zn	**67**	**174.785**	ug/L	4.412	2	14	23395	1	KED
	As	**75**	**-0.000**	ug/L	0.003	770	4	4	23	KED
	Y	**89**		ug/L			513632	505424	0	Standard
	Kr	**83**		ug/L			111	91	5	Standard
>	**In-1**	**115**		ug/L			27713	25636	2	KED
	Cd	**111**	**0.833**	ug/L	0.033	3	1	348	4	KED
	Cd	**114**	**0.863**	ug/L	0.015	1	2	943	1	KED
>	**Tb**	**159**		ug/L			3819117	3699033	0	Standard
	Pb	**208**	**0.438**	ug/L	0.005	1	567	66520	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21H0019-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 23:09:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	16744	0	Standard
	Cl	**37**		ug/L			4133067	3858911	0	Standard
⌈>	**Sc**	**45**		ug/L			962260	903874	2	Standard
|	**Cr**	**52**	**-0.067**	ug/L	0.029	43	15459	13235	3	Standard
⌊	**Cr**	**53**	**0.004**	ug/L	0.003	81	139	140	6	Standard
⌈>	**Ge**	**72**		ug/L			106383	100855	1	KED
|	**Ni**	**60**	**1.122**	ug/L	0.048	4	24	2475	2	KED
|	**Ni**	**62**	**1.145**	ug/L	0.029	2	3	399	3	KED
|	**Cu**	**63**	**3.022**	ug/L	0.100	3	92	18956	1	KED
|	**Cu**	**65**	**2.985**	ug/L	0.056	1	45	9408	0	KED
|	**Zn**	**66**	**100.555**	ug/L	1.846	1	75	79630	0	KED
|	**Zn**	**67**	**92.610**	ug/L	1.891	2	14	12175	0	KED
⌊	**As**	**75**	**0.025**	ug/L	0.002	6	4	14	5	KED
	Y	**89**		ug/L			513632	549683	1	Standard
	Kr	**83**		ug/L			111	95	1	Standard
⌈>	**In-1**	**115**		ug/L			27713	25726	1	KED
|	**Cd**	**111**	**0.283**	ug/L	0.014	4	1	120	3	KED
⌊	**Cd**	**114**	**0.281**	ug/L	0.030	10	2	309	11	KED
⌈>	**Tb**	**159**		ug/L			3819117	3670028	0	Standard
⌊	**Pb**	**208**	**0.074**	ug/L	0.004	5	567	11605	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21H0019-02
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, August 04, 2021 23:15:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			15714	18570	2	Standard
	Cl	37		ug/L			4133067	4061994	0	Standard
>	Sc	45		ug/L			962260	913298	1	Standard
	Cr	52	-0.019	ug/L	0.020	104	15459	14302	1	Standard
	Cr	53	0.014	ug/L	0.005	35	139	163	5	Standard
>	Ge	72		ug/L			106383	101170	0	KED
	Ni	60	0.717	ug/L	0.014	1	24	1596	2	KED
	Ni	62	1.135	ug/L	0.098	8	3	396	7	KED
	Cu	63	223.735	ug/L	1.888	0	92	1401914	0	KED
	Cu	65	225.203	ug/L	3.407	1	45	709035	2	KED
	Zn	66	1771.240	ug/L	12.243	0	75	1406057	0	KED
	Zn	67	1663.100	ug/L	5.063	0	14	219137	1	KED
	As	75	0.006	ug/L	0.006	96	4	7	33	KED
	Y	89		ug/L			513632	560088	0	Standard
	Kr	83		ug/L			111	118	8	Standard
>	In-1	115		ug/L			27713	26079	0	KED
	Cd	111	7.670	ug/L	0.166	2	1	3245	2	KED
	Cd	114	7.786	ug/L	0.266	3	2	8644	2	KED
>	Tb	159		ug/L			3819117	3710706	1	Standard
	Pb	208	3.846	ug/L	0.086	2	567	581973	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLC
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 23:23:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	19772	1	Standard
	Cl	**37**		ug/L			4133067	4333273	0	Standard
⌈>	**Sc**	**45**		ug/L			962260	942423	0	Standard
|	**Cr**	**52**	**-0.016**	ug/L	0.008	47	15459	14823	0	Standard
⌊	**Cr**	**53**	**-0.009**	ug/L	0.005	59	139	114	11	Standard
⌈>	**Ge**	**72**		ug/L			106383	102418	2	KED
|	**Ni**	**60**	**0.024**	ug/L	0.006	23	24	77	18	KED
|	**Ni**	**62**	**0.017**	ug/L	0.007	40	3	8	24	KED
|	**Cu**	**63**	**0.013**	ug/L	0.005	36	92	169	15	KED
|	**Cu**	**65**	**0.010**	ug/L	0.005	52	45	74	20	KED
|	**Zn**	**66**	**0.518**	ug/L	0.039	7	75	488	4	KED
|	**Zn**	**67**	**0.479**	ug/L	0.087	18	14	78	17	KED
⌊	**As**	**75**	**-0.005**	ug/L	0.003	64	4	2	44	KED
	Y	**89**		ug/L			513632	519444	0	Standard
	Kr	**83**		ug/L			111	112	14	Standard
⌈>	**In-1**	**115**		ug/L			27713	26098	5	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.001	123	1	1	43	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.001	154	2	3	34	KED
⌈>	**Tb**	**159**		ug/L			3819117	3759237	1	Standard
⌊	**Pb**	**208**	**0.005**	ug/L	0.000	3	567	1262	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21H0019-01
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 23:29:55

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	17625	1	Standard
	Cl	**37**		ug/L			4133067	2198273	0	Standard
>	**Sc**	**45**		ug/L			962260	683129	0	Standard
	Cr	**52**	**0.073**	ug/L	0.019	25	15459	12030	1	Standard
	Cr	**53**	**0.209**	ug/L	0.006	3	139	456	2	Standard
>	**Ge**	**72**		ug/L			106383	74870	2	KED
	Ni	**60**	**21.853**	ug/L	0.833	3	24	35482	2	KED
	Ni	**62**	**21.945**	ug/L	0.306	1	3	5639	3	KED
	Cu	**63**	**57.424**	ug/L	1.235	2	92	266266	0	KED
	Cu	**65**	**57.727**	ug/L	0.434	0	45	134504	1	KED
	Zn	**66**	**1753.572**	ug/L	21.915	1	75	1030014	0	KED
	Zn	**67**	**1612.434**	ug/L	40.979	2	14	157175	0	KED
	As	**75**	**0.718**	ug/L	0.026	3	4	210	2	KED
	Y	**89**		ug/L			513632	566694	2	Standard
	Kr	**83**		ug/L			111	113	11	Standard
>	**In-1**	**115**		ug/L			27713	17709	1	KED
	Cd	**111**	**5.126**	ug/L	0.246	4	1	1472	3	KED
	Cd	**114**	**5.207**	ug/L	0.065	1	2	3926	0	KED
>	**Tb**	**159**		ug/L			3819117	1859902	0	Standard
	Pb	**208**	**0.208**	ug/L	0.001	0	567	16076	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLD
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 23:38:11
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	18577	1	Standard
	Cl	**37**		ug/L			4133067	4204391	1	Standard
⌈>	**Sc**	**45**		ug/L			962260	908412	2	Standard
|	**Cr**	**52**	**-0.074**	ug/L	0.016	21	15459	13167	0	Standard
⌊	**Cr**	**53**	**-0.007**	ug/L	0.008	107	139	114	14	Standard
⌈>	**Ge**	**72**		ug/L			106383	99470	2	KED
|	**Ni**	**60**	**0.023**	ug/L	0.001	4	24	72	4	KED
|	**Ni**	**62**	**0.019**	ug/L	0.006	32	3	9	20	KED
|	**Cu**	**63**	**0.011**	ug/L	0.002	18	92	155	6	KED
|	**Cu**	**65**	**0.007**	ug/L	0.005	62	45	65	20	KED
|	**Zn**	**66**	**0.576**	ug/L	0.046	7	75	519	5	KED
|	**Zn**	**67**	**0.415**	ug/L	0.075	17	14	67	11	KED
⌊	**As**	**75**	**-0.002**	ug/L	0.001	59	4	3	15	KED
	Y	**89**		ug/L			513632	538696	2	Standard
	Kr	**83**		ug/L			111	118	6	Standard
⌈>	**In-1**	**115**		ug/L			27713	25386	0	KED
|	**Cd**	**111**	**-0.000**	ug/L	0.003	726	1	1	69	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.001	60	2	0	220	KED
⌈>	**Tb**	**159**		ug/L			3819117	3624367	0	Standard
⌊	**Pb**	**208**	**0.005**	ug/L	0.000	3	567	1210	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVA
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 23:43:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	16827	2	Standard
	Cl	**37**		ug/L			4133067	4242569	2	Standard
⌈>	**Sc**	**45**		ug/L			962260	902882	1	Standard
|	**Cr**	**52**	**49.966**	ug/L	1.207	2	15459	971334	1	Standard
⌊	**Cr**	**53**	**50.622**	ug/L	0.969	1	139	114746	0	Standard
⌈>	**Ge**	**72**		ug/L			106383	100183	1	KED
|	**Ni**	**60**	**49.393**	ug/L	0.470	0	24	107317	2	KED
|	**Ni**	**62**	**49.809**	ug/L	1.826	3	3	17113	1	KED
|	**Cu**	**63**	**49.677**	ug/L	0.560	1	92	308285	1	KED
|	**Cu**	**65**	**50.169**	ug/L	1.620	3	45	156374	1	KED
|	**Zn**	**66**	**49.899**	ug/L	1.780	3	75	39278	1	KED
|	**Zn**	**67**	**48.606**	ug/L	1.182	2	14	6354	2	KED
⌊	**As**	**75**	**48.340**	ug/L	0.990	2	4	18629	0	KED
	Y	**89**		ug/L			513632	519154	0	Standard
	Kr	**83**		ug/L			111	107	2	Standard
⌈>	**In-1**	**115**		ug/L			27713	25587	1	KED
|	**Cd**	**111**	**51.124**	ug/L	1.038	2	1	21212	0	KED
⌊	**Cd**	**114**	**50.795**	ug/L	0.679	1	2	55323	0	KED
⌈>	**Tb**	**159**		ug/L			3819117	3645356	0	Standard
⌊	**Pb**	**208**	**51.168**	ug/L	0.253	0	567	7600435	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBA
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 23:50:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	15217	1	Standard
	Cl	**37**		ug/L			4133067	4082641	3	Standard
⌈>	**Sc**	**45**		ug/L			962260	925082	0	Standard
|	**Cr**	**52**	**-0.044**	ug/L	0.013	29	15459	13992	1	Standard
⌊	**Cr**	**53**	**-0.005**	ug/L	0.008	186	139	123	16	Standard
⌈>	**Ge**	**72**		ug/L			106383	101797	1	KED
|	**Ni**	**60**	**0.002**	ug/L	0.003	162	24	27	22	KED
|	**Ni**	**62**	**0.002**	ug/L	0.005	247	3	3	50	KED
|	**Cu**	**63**	**0.004**	ug/L	0.001	24	92	110	6	KED
|	**Cu**	**65**	**0.004**	ug/L	0.002	43	45	57	11	KED
|	**Zn**	**66**	**0.106**	ug/L	0.038	35	75	157	20	KED
|	**Zn**	**67**	**0.095**	ug/L	0.063	66	14	26	32	KED
⌊	**As**	**75**	**0.001**	ug/L	0.003	229	4	5	24	KED
	Y	**89**		ug/L			513632	519840	0	Standard
	Kr	**83**		ug/L			111	100	17	Standard
⌈>	**In-1**	**115**		ug/L			27713	26262	0	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.003	265	1	1	114	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.002	156	2	3	56	KED
⌈>	**Tb**	**159**		ug/L			3819117	3684230	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	17	567	733	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0318-01
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 23:53:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	41955	1	Standard
	Cl	**37**		ug/L			4133067	4102717	1	Standard
>	**Sc**	**45**		ug/L			962260	996607	1	Standard
	Cr	**52**	**0.448**	ug/L	0.017	3	15459	25483	0	Standard
	Cr	**53**	**0.713**	ug/L	0.027	3	139	1926	3	Standard
>	**Ge**	**72**		ug/L			106383	96868	0	KED
	Ni	**60**	**1.838**	ug/L	0.052	2	24	3881	2	KED
	Ni	**62**	**2.044**	ug/L	0.206	10	3	682	10	KED
	Cu	**63**	**0.264**	ug/L	0.007	2	92	1665	1	KED
	Cu	**65**	**0.250**	ug/L	0.021	8	45	796	8	KED
	Zn	**66**	**1.050**	ug/L	0.015	1	75	866	1	KED
	Zn	**67**	**1.223**	ug/L	0.138	11	14	167	10	KED
	As	**75**	**7.071**	ug/L	0.094	1	4	2639	1	KED
	Y	**89**		ug/L			513632	529082	3	Standard
	Kr	**83**		ug/L			111	116	16	Standard
>	**In-1**	**115**		ug/L			27713	25063	2	KED
	Cd	**111**	**0.010**	ug/L	0.005	50	1	5	33	KED
	Cd	**114**	**0.001**	ug/L	0.004	635	2	2	149	KED
>	**Tb**	**159**		ug/L			3819117	3618433	0	Standard
	Pb	**208**	**0.034**	ug/L	0.001	2	567	5583	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0339-01
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, August 04, 2021 23:57:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			15714	35143	0	Standard
	Cl	37		ug/L			4133067	4258836	1	Standard
>	Sc	45		ug/L			962260	997817	2	Standard
	Cr	52	1.024	ug/L	0.027	2	15459	37706	1	Standard
	Cr	53	1.386	ug/L	0.140	10	139	3608	7	Standard
>	Ge	72		ug/L			106383	97591	0	KED
	Ni	60	3.112	ug/L	0.111	3	24	6607	3	KED
	Ni	62	3.123	ug/L	0.260	8	3	1048	7	KED
	Cu	63	1.249	ug/L	0.015	1	92	7635	0	KED
	Cu	65	1.238	ug/L	0.020	1	45	3802	2	KED
	Zn	66	60.623	ug/L	0.600	0	75	46488	0	KED
	Zn	67	56.868	ug/L	1.382	2	14	7241	2	KED
	As	75	1.043	ug/L	0.068	6	4	396	5	KED
	Y	89		ug/L			513632	529087	0	Standard
	Kr	83		ug/L			111	89	9	Standard
>	In-1	115		ug/L			27713	24805	1	KED
	Cd	111	0.031	ug/L	0.016	51	1	14	46	KED
	Cd	114	0.038	ug/L	0.012	32	2	41	30	KED
>	Tb	159		ug/L			3819117	3662208	1	Standard
	Pb	208	0.357	ug/L	0.009	2	567	53780	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0339-02
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 00:02:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			15714	35089	3	Standard
	Cl	37		ug/L			4133067	4312113	0	Standard
⌈>	Sc	45		ug/L			962260	980512	0	Standard
|	Cr	52	0.305	ug/L	0.018	5	15459	22106	1	Standard
⌊	Cr	53	0.577	ug/L	0.022	3	139	1561	2	Standard
⌈>	Ge	72		ug/L			106383	99752	0	KED
|	Ni	60	4.501	ug/L	0.067	1	24	9758	2	KED
|	Ni	62	4.819	ug/L	0.048	1	3	1652	1	KED
|	Cu	63	1.821	ug/L	0.012	0	92	11333	1	KED
|	Cu	65	1.805	ug/L	0.045	2	45	5645	2	KED
|	Zn	66	1.653	ug/L	0.094	5	75	1364	4	KED
|	Zn	67	1.713	ug/L	0.346	20	14	236	18	KED
⌊	As	75	0.394	ug/L	0.047	11	4	155	10	KED
	Y	89		ug/L			513632	531759	0	Standard
	Kr	83		ug/L			111	100	13	Standard
⌈>	In-1	115		ug/L			27713	25620	0	KED
|	Cd	111	0.060	ug/L	0.014	24	1	26	21	KED
⌊	Cd	114	0.050	ug/L	0.003	6	2	56	5	KED
⌈>	Tb	159		ug/L			3819117	3664468	1	Standard
⌊	Pb	208	0.020	ug/L	0.001	3	567	3586	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0339-04
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 00:06:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			15714	32782	2	Standard
	Cl	37		ug/L			4133067	4123669	2	Standard
>	Sc	45		ug/L			962260	1010597	1	Standard
	Cr	52	1.302	ug/L	0.024	1	15459	44143	2	Standard
	Cr	53	1.696	ug/L	0.258	15	139	4445	14	Standard
>	Ge	72		ug/L			106383	98298	0	KED
	Ni	60	20.091	ug/L	0.544	2	24	42838	1	KED
	Ni	62	20.082	ug/L	0.502	2	3	6774	2	KED
	Cu	63	1.082	ug/L	0.003	0	92	6672	1	KED
	Cu	65	1.068	ug/L	0.006	0	45	3308	1	KED
	Zn	66	1.936	ug/L	0.078	4	75	1562	3	KED
	Zn	67	2.256	ug/L	0.110	4	14	302	4	KED
	As	75	5.713	ug/L	0.064	1	4	2164	1	KED
	Y	89		ug/L			513632	525670	2	Standard
	Kr	83		ug/L			111	103	18	Standard
>	In-1	115		ug/L			27713	25428	0	KED
	Cd	111	0.007	ug/L	0.001	19	1	4	12	KED
	Cd	114	-0.001	ug/L	0.005	463	2	1	525	KED
>	Tb	159		ug/L			3819117	3644527	1	Standard
	Pb	208	0.069	ug/L	0.003	4	567	10808	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0339-05
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 00:11:30
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			15714	37460	2	Standard
	Cl	37		ug/L			4133067	4543448	2	Standard
>	Sc	45		ug/L			962260	1004582	0	Standard
	Cr	52	0.691	ug/L	0.026	3	15459	30874	2	Standard
	Cr	53	1.133	ug/L	0.017	1	139	2999	1	Standard
>	Ge	72		ug/L			106383	99087	1	KED
	Ni	60	9.704	ug/L	0.144	1	24	20868	0	KED
	Ni	62	9.829	ug/L	0.237	2	3	3344	3	KED
	Cu	63	5.412	ug/L	0.098	1	92	33293	1	KED
	Cu	65	5.459	ug/L	0.111	2	45	16872	1	KED
	Zn	66	4.867	ug/L	0.097	1	75	3854	2	KED
	Zn	67	6.077	ug/L	0.589	9	14	798	10	KED
	As	75	0.588	ug/L	0.030	5	4	228	3	KED
	Y	89		ug/L			513632	568235	3	Standard
	Kr	83		ug/L			111	106	18	Standard
>	In-1	115		ug/L			27713	25635	1	KED
	Cd	111	0.155	ug/L	0.011	7	1	66	8	KED
	Cd	114	0.171	ug/L	0.018	10	2	189	11	KED
>	Tb	159		ug/L			3819117	3728501	0	Standard
	Pb	208	0.040	ug/L	0.001	3	567	6570	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21H0028-02
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 00:18:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			15714	33233	0	Standard
	Cl	37		ug/L			4133067	4371952	1	Standard
>	Sc	45		ug/L			962260	887204	0	Standard
	Cr	52	3.945	ug/L	0.092	2	15459	88481	1	Standard
	Cr	53	4.553	ug/L	0.083	1	139	10257	0	Standard
>	Ge	72		ug/L			106383	87419	1	KED
	Ni	60	1.370	ug/L	0.044	3	24	2618	4	KED
	Ni	62	1.479	ug/L	0.103	6	3	445	5	KED
	Cu	63	4.144	ug/L	0.128	3	92	22505	1	KED
	Cu	65	4.221	ug/L	0.068	1	45	11518	0	KED
	Zn	66	18.211	ug/L	0.412	2	75	12549	0	KED
	Zn	67	17.416	ug/L	1.007	5	14	1993	4	KED
	As	75	0.126	ug/L	0.013	10	4	46	10	KED
	Y	89		ug/L			513632	500773	2	Standard
	Kr	83		ug/L			111	81	16	Standard
>	In-1	115		ug/L			27713	22047	1	KED
	Cd	111	0.002	ug/L	0.006	311	1	2	98	KED
	Cd	114	0.002	ug/L	0.001	54	2	4	30	KED
>	Tb	159		ug/L			3819117	3461971	0	Standard
	Pb	208	0.025	ug/L	0.001	3	567	3998	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21H0028-03
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 00:24:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			15714	33384	0	Standard
	Cl	37		ug/L			4133067	4071768	0	Standard
⌈>	Sc	45		ug/L			962260	867325	1	Standard
|	Cr	52	30.196	ug/L	0.765	2	15459	569402	1	Standard
⌊	Cr	53	30.273	ug/L	0.477	1	139	65976	1	Standard
⌈>	Ge	72		ug/L			106383	87584	0	KED
|	Ni	60	1.775	ug/L	0.045	2	24	3390	1	KED
|	Ni	62	1.814	ug/L	0.132	7	3	547	6	KED
|	Cu	63	5.630	ug/L	0.036	0	92	30614	0	KED
|	Cu	65	5.617	ug/L	0.148	2	45	15342	1	KED
|	Zn	66	6.158	ug/L	0.258	4	75	4293	3	KED
|	Zn	67	5.913	ug/L	0.397	6	14	686	6	KED
⌊	As	75	0.139	ug/L	0.011	7	4	50	7	KED
	Y	89		ug/L			513632	500119	2	Standard
	Kr	83		ug/L			111	95	13	Standard
⌈>	In-1	115		ug/L			27713	22161	0	KED
|	Cd	111	0.006	ug/L	0.007	110	1	3	66	KED
⌊	Cd	114	0.000	ug/L	0.002	1218	2	2	102	KED
⌈>	Tb	159		ug/L			3819117	3407628	0	Standard
⌊	Pb	208	0.026	ug/L	0.000	0	567	4121	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21H0028-04
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 00:29:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			15714	31907	1	Standard
	Cl	37		ug/L			4133067	3789200	1	Standard
>	Sc	45		ug/L			962260	874622	1	Standard
	Cr	52	35.469	ug/L	0.236	0	15459	672152	2	Standard
	Cr	53	35.482	ug/L	0.045	0	139	77961	1	Standard
>	Ge	72		ug/L			106383	89290	1	KED
	Ni	60	1.291	ug/L	0.025	1	24	2520	2	KED
	Ni	62	1.375	ug/L	0.097	7	3	423	5	KED
	Cu	63	4.807	ug/L	0.176	3	92	26648	2	KED
	Cu	65	4.787	ug/L	0.031	0	45	13337	0	KED
	Zn	66	4.057	ug/L	0.246	6	75	2903	4	KED
	Zn	67	3.846	ug/L	0.240	6	14	459	7	KED
	As	75	0.136	ug/L	0.011	8	4	50	6	KED
	Y	89		ug/L			513632	486098	1	Standard
	Kr	83		ug/L			111	113	9	Standard
>	In-1	115		ug/L			27713	22715	1	KED
	Cd	111	0.011	ug/L	0.004	38	1	5	28	KED
	Cd	114	0.008	ug/L	0.002	27	2	10	23	KED
>	Tb	159		ug/L			3819117	3454834	0	Standard
	Pb	208	0.021	ug/L	0.000	1	567	3539	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-03
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 00:36:30
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			15714	28436	1	Standard
	Cl	37		ug/L			4133067	3609154	1	Standard
⌈>	Sc	45		ug/L			962260	913767	0	Standard
|	Cr	52	0.356	ug/L	0.032	9	15459	21580	3	Standard
⌊	Cr	53	0.402	ug/L	0.014	3	139	1053	3	Standard
⌈>	Ge	72		ug/L			106383	96050	2	KED
|	Ni	60	0.623	ug/L	0.029	4	24	1318	2	KED
|	Ni	62	0.640	ug/L	0.100	15	3	213	13	KED
|	Cu	63	0.120	ug/L	0.009	7	92	798	5	KED
|	Cu	65	0.120	ug/L	0.015	12	45	400	10	KED
|	Zn	66	1.990	ug/L	0.126	6	75	1566	4	KED
|	Zn	67	2.703	ug/L	0.117	4	14	351	2	KED
⌊	As	75	0.007	ug/L	0.002	26	4	6	7	KED
	Y	89		ug/L			513632	517684	1	Standard
	Kr	83		ug/L			111	101	17	Standard
⌈>	In-1	115		ug/L			27713	24795	0	KED
|	Cd	111	0.830	ug/L	0.032	3	1	335	3	KED
⌊	Cd	114	0.843	ug/L	0.067	7	2	891	6	KED
⌈>	Tb	159		ug/L			3819117	3545067	1	Standard
⌊	Pb	208	0.007	ug/L	0.001	10	567	1604	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLE
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 00:41:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	19756	0	Standard
	Cl	**37**		ug/L			4133067	4276785	0	Standard
⌈>	**Sc**	**45**		ug/L			962260	921804	0	Standard
|	**Cr**	**52**	**0.011**	ug/L	0.006	54	15459	15025	0	Standard
⌊	**Cr**	**53**	**0.004**	ug/L	0.005	112	139	142	7	Standard
⌈>	**Ge**	**72**		ug/L			106383	99459	1	KED
|	**Ni**	**60**	**0.022**	ug/L	0.006	26	24	69	16	KED
|	**Ni**	**62**	**0.023**	ug/L	0.011	49	3	10	36	KED
|	**Cu**	**63**	**0.008**	ug/L	0.004	51	92	133	18	KED
|	**Cu**	**65**	**0.006**	ug/L	0.002	29	45	60	9	KED
|	**Zn**	**66**	**0.545**	ug/L	0.048	8	75	495	6	KED
|	**Zn**	**67**	**0.502**	ug/L	0.080	15	14	78	13	KED
⌊	**As**	**75**	**-0.005**	ug/L	0.001	26	4	2	16	KED
	Y	**89**		ug/L			513632	496900	2	Standard
	Kr	**83**		ug/L			111	107	12	Standard
⌈>	**In-1**	**115**		ug/L			27713	24771	1	KED
|	**Cd**	**111**	**0.001**	ug/L	0.003	211	1	2	49	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.002	101	2	4	50	KED
⌈>	**Tb**	**159**		ug/L			3819117	3578860	0	Standard
⌊	**Pb**	**208**	**0.005**	ug/L	0.000	5	567	1241	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 00:47:01
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	16604	1	Standard
	Cl	**37**		ug/L			4133067	4222354	2	Standard
⌈>	**Sc**	**45**		ug/L			962260	918490	1	Standard
|	**Cr**	**52**	**50.261**	ug/L	0.128	0	15459	994050	1	Standard
⌊	**Cr**	**53**	**49.650**	ug/L	1.221	2	139	114503	2	Standard
⌈>	**Ge**	**72**		ug/L			106383	99846	0	KED
|	**Ni**	**60**	**49.263**	ug/L	0.056	0	24	106673	0	KED
|	**Ni**	**62**	**49.919**	ug/L	0.511	1	3	17101	1	KED
|	**Cu**	**63**	**50.242**	ug/L	0.735	1	92	310773	1	KED
|	**Cu**	**65**	**50.118**	ug/L	0.138	0	45	155753	0	KED
|	**Zn**	**66**	**49.772**	ug/L	0.362	0	75	39062	0	KED
|	**Zn**	**67**	**49.707**	ug/L	0.704	1	14	6477	1	KED
⌊	**As**	**75**	**48.747**	ug/L	0.372	0	4	18727	0	KED
	Y	**89**		ug/L			513632	504739	0	Standard
	Kr	**83**		ug/L			111	108	8	Standard
⌈>	**In-1**	**115**		ug/L			27713	25239	0	KED
|	**Cd**	**111**	**51.493**	ug/L	0.132	0	1	21078	0	KED
⌊	**Cd**	**114**	**51.433**	ug/L	0.262	0	2	55261	1	KED
⌈>	**Tb**	**159**		ug/L			3819117	3639747	0	Standard
⌊	**Pb**	**208**	**51.044**	ug/L	0.571	1	567	7570157	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 00:53:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15714	15541	0	Standard
	Cl	**37**		ug/L			4133067	4241373	2	Standard
⌈>	**Sc**	**45**		ug/L			962260	905799	2	Standard
|	**Cr**	**52**	**-0.048**	ug/L	0.027	55	15459	13613	1	Standard
⌊	**Cr**	**53**	**-0.001**	ug/L	0.007	899	139	129	8	Standard
⌈>	**Ge**	**72**		ug/L			106383	100546	1	KED
|	**Ni**	**60**	**-0.001**	ug/L	0.001	124	24	20	15	KED
|	**Ni**	**62**	**0.010**	ug/L	0.014	142	3	6	75	KED
|	**Cu**	**63**	**0.004**	ug/L	0.002	53	92	109	11	KED
|	**Cu**	**65**	**0.006**	ug/L	0.004	73	45	60	21	KED
|	**Zn**	**66**	**0.081**	ug/L	0.016	19	75	135	9	KED
|	**Zn**	**67**	**0.104**	ug/L	0.113	109	14	27	53	KED
⌊	**As**	**75**	**-0.001**	ug/L	0.003	546	4	4	26	KED
	Y	**89**		ug/L			513632	506436	0	Standard
	Kr	**83**		ug/L			111	90	8	Standard
⌈>	**In-1**	**115**		ug/L			27713	26018	1	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.001	105	1	1	43	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.000	5	2	3	0	KED
⌈>	**Tb**	**159**		ug/L			3819117	3624668	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	25	567	697	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 00:57:28
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				15621	1	Standard
	Cl	**37**		ug/L				4261922	2	Standard
⌈>	**Sc**	**45**		ug/L				909878	1	Standard
|	**Cr**	**52**		ug/L				13848	1	Standard
⌊	**Cr**	**53**		ug/L				127	10	Standard
⌈>	**Ge**	**72**		ug/L				101344	1	KED
|	**Ni**	**60**		ug/L				27	40	KED
|	**Ni**	**62**		ug/L				4	137	KED
|	**Cu**	**63**		ug/L				107	9	KED
|	**Cu**	**65**		ug/L				45	24	KED
|	**Zn**	**66**		ug/L				98	10	KED
|	**Zn**	**67**		ug/L				14	19	KED
⌊	**As**	**75**		ug/L				3	21	KED
	Y	**89**		ug/L				500295	2	Standard
	Kr	**83**		ug/L				96	4	Standard
⌈>	**In-1**	**115**		ug/L				25788	1	KED
|	**Cd**	**111**		ug/L				1	69	KED
⌊	**Cd**	**114**		ug/L				2	45	KED
⌈>	**Tb**	**159**		ug/L				3667915	1	Standard
⌊	**Pb**	**208**		ug/L				708	13	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVC
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 01:01:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	16768	2	Standard
	Cl	**37**		ug/L			4261922	4231238	2	Standard
⌈>	**Sc**	**45**		ug/L			909878	924349	1	Standard
|	**Cr**	**52**	**50.040**	ug/L	1.029	2	13848	995112	0	Standard
⌊	**Cr**	**53**	**50.015**	ug/L	0.545	1	127	116075	0	Standard
⌈>	**Ge**	**72**		ug/L			101344	99851	0	KED
|	**Ni**	**60**	**48.713**	ug/L	0.706	1	27	105490	1	KED
|	**Ni**	**62**	**48.858**	ug/L	0.811	1	4	16740	1	KED
|	**Cu**	**63**	**49.481**	ug/L	0.539	1	107	306118	1	KED
|	**Cu**	**65**	**50.280**	ug/L	0.647	1	45	156258	0	KED
|	**Zn**	**66**	**49.777**	ug/L	1.167	2	98	39098	2	KED
|	**Zn**	**67**	**50.440**	ug/L	0.329	0	14	6573	1	KED
⌊	**As**	**75**	**48.587**	ug/L	0.255	0	3	18666	1	KED
	Y	**89**		ug/L			500295	504188	0	Standard
	Kr	**83**		ug/L			96	106	17	Standard
⌈>	**In-1**	**115**		ug/L			25788	25793	1	KED
|	**Cd**	**111**	**50.379**	ug/L	0.791	1	1	21071	0	KED
⌊	**Cd**	**114**	**49.769**	ug/L	0.759	1	2	54645	2	KED
⌈>	**Tb**	**159**		ug/L			3667915	3715568	1	Standard
⌊	**Pb**	**208**	**50.398**	ug/L	1.196	2	708	7628528	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBC
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 01:07:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	15595	0	Standard
	Cl	**37**		ug/L			4261922	4210675	1	Standard
⌈>	**Sc**	**45**		ug/L			909878	918118	1	Standard
|	**Cr**	**52**	**0.001**	ug/L	0.025	4654	13848	13980	2	Standard
⌊	**Cr**	**53**	**-0.006**	ug/L	0.004	64	127	115	8	Standard
⌈>	**Ge**	**72**		ug/L			101344	100199	0	KED
|	**Ni**	**60**	**-0.001**	ug/L	0.006	636	27	24	55	KED
|	**Ni**	**62**	**0.009**	ug/L	0.006	58	4	7	25	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.003	232	107	99	18	KED
|	**Cu**	**65**	**-0.000**	ug/L	0.003	1092	45	43	19	KED
|	**Zn**	**66**	**0.016**	ug/L	0.027	170	98	109	19	KED
|	**Zn**	**67**	**-0.033**	ug/L	0.047	141	14	10	60	KED
⌊	**As**	**75**	**0.002**	ug/L	0.004	203	3	4	30	KED
	Y	**89**		ug/L			500295	504739	1	Standard
	Kr	**83**		ug/L			96	102	8	Standard
⌈>	**In-1**	**115**		ug/L			25788	25558	1	KED
|	**Cd**	**111**	**0.002**	ug/L	0.005	225	1	2	86	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.001	87	2	1	98	KED
⌈>	**Tb**	**159**		ug/L			3667915	3653355	0	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	814	708	708	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-05
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 01:11:47
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	32007	2	Standard
	Cl	**37**		ug/L			4261922	3563635	2	Standard
⌈>	**Sc**	**45**		ug/L			909878	915483	0	Standard
|	**Cr**	**52**	**0.175**	ug/L	0.013	7	13848	17322	1	Standard
⌊	**Cr**	**53**	**0.170**	ug/L	0.022	12	127	519	9	Standard
⌈>	**Ge**	**72**		ug/L			101344	95656	0	KED
|	**Ni**	**60**	**17.427**	ug/L	0.200	1	27	36170	0	KED
|	**Ni**	**62**	**17.803**	ug/L	0.428	2	4	5845	1	KED
|	**Cu**	**63**	**25.719**	ug/L	0.318	1	107	152465	1	KED
|	**Cu**	**65**	**25.892**	ug/L	0.413	1	45	77104	0	KED
|	**Zn**	**66**	**203.682**	ug/L	2.299	1	98	152955	0	KED
|	**Zn**	**67**	**189.480**	ug/L	2.192	1	14	23617	1	KED
⌊	**As**	**75**	**0.050**	ug/L	0.005	9	3	21	7	KED
	Y	**89**		ug/L			500295	607665	1	Standard
	Kr	**83**		ug/L			96	97	13	Standard
⌈>	**In-1**	**115**		ug/L			25788	24321	1	KED
|	**Cd**	**111**	**2.136**	ug/L	0.103	4	1	843	3	KED
⌊	**Cd**	**114**	**2.087**	ug/L	0.056	2	2	2162	2	KED
⌈>	**Tb**	**159**		ug/L			3667915	3584640	0	Standard
⌊	**Pb**	**208**	**0.089**	ug/L	0.001	0	708	13654	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-07
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 01:15:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	32683	4	Standard
	Cl	**37**		ug/L			4261922	3676320	0	Standard
>	**Sc**	**45**		ug/L			909878	921415	2	Standard
	Cr	**52**	**0.212**	ug/L	0.002	0	13848	18168	2	Standard
	Cr	**53**	**0.203**	ug/L	0.009	4	127	598	4	Standard
>	**Ge**	**72**		ug/L			101344	88887	1	KED
	Ni	**60**	**11.097**	ug/L	0.189	1	27	21410	2	KED
	Ni	**62**	**11.539**	ug/L	0.254	2	4	3522	3	KED
	Cu	**63**	**13.624**	ug/L	0.208	1	107	75081	0	KED
	Cu	**65**	**13.718**	ug/L	0.295	2	45	37973	1	KED
	Zn	**66**	**190.583**	ug/L	2.025	1	98	132988	0	KED
	Zn	**67**	**177.362**	ug/L	0.227	0	14	20544	1	KED
	As	**75**	**0.040**	ug/L	0.007	16	3	16	11	KED
	Y	**89**		ug/L			500295	591215	2	Standard
	Kr	**83**		ug/L			96	107	16	Standard
>	**In-1**	**115**		ug/L			25788	23422	1	KED
	Cd	**111**	**1.925**	ug/L	0.105	5	1	732	4	KED
	Cd	**114**	**1.899**	ug/L	0.086	4	2	1895	3	KED
>	**Tb**	**159**		ug/L			3667915	3542084	1	Standard
	Pb	**208**	**0.018**	ug/L	0.001	6	708	3243	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-09
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 01:18:44
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	34882	1	Standard
	Cl	**37**		ug/L			4261922	3887829	2	Standard
>	**Sc**	**45**		ug/L			909878	940491	0	Standard
	Cr	**52**	**0.195**	ug/L	0.001	0	13848	18208	0	Standard
	Cr	**53**	**0.181**	ug/L	0.006	3	127	558	2	Standard
>	**Ge**	**72**		ug/L			101344	93291	0	KED
	Ni	**60**	**0.112**	ug/L	0.010	8	27	252	6	KED
	Ni	**62**	**0.088**	ug/L	0.012	13	4	32	11	KED
	Cu	**63**	**0.573**	ug/L	0.017	3	107	3411	2	KED
	Cu	**65**	**0.571**	ug/L	0.028	4	45	1698	4	KED
	Zn	**66**	**66.597**	ug/L	0.429	0	98	48836	0	KED
	Zn	**67**	**61.203**	ug/L	0.892	1	14	7449	2	KED
	As	**75**	**0.023**	ug/L	0.003	13	3	11	8	KED
	Y	**89**		ug/L			500295	528762	4	Standard
	Kr	**83**		ug/L			96	108	10	Standard
>	**In-1**	**115**		ug/L			25788	25123	0	KED
	Cd	**111**	**0.085**	ug/L	0.004	4	1	36	5	KED
	Cd	**114**	**0.085**	ug/L	0.025	28	2	92	28	KED
>	**Tb**	**159**		ug/L			3667915	3664858	2	Standard
	Pb	**208**	**0.098**	ug/L	0.003	2	708	15345	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-11
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 01:21:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	33319	2	Standard
	Cl	**37**		ug/L			4261922	3366988	1	Standard
>	**Sc**	**45**		ug/L			909878	879568	1	Standard
	Cr	**52**	**0.145**	ug/L	0.009	5	13848	16091	1	Standard
	Cr	**53**	**0.150**	ug/L	0.011	7	127	454	4	Standard
>	**Ge**	**72**		ug/L			101344	84035	1	KED
	Ni	**60**	**10.193**	ug/L	0.219	2	27	18593	1	KED
	Ni	**62**	**10.552**	ug/L	0.211	1	4	3046	2	KED
	Cu	**63**	**29.082**	ug/L	0.481	1	107	151449	2	KED
	Cu	**65**	**29.325**	ug/L	0.531	1	45	76708	0	KED
	Zn	**66**	**390.645**	ug/L	7.397	1	98	257623	1	KED
	Zn	**67**	**365.702**	ug/L	6.520	1	14	40031	1	KED
	As	**75**	**0.076**	ug/L	0.012	15	3	27	12	KED
	Y	**89**		ug/L			500295	615299	1	Standard
	Kr	**83**		ug/L			96	104	7	Standard
>	**In-1**	**115**		ug/L			25788	21937	1	KED
	Cd	**111**	**3.074**	ug/L	0.021	0	1	1094	1	KED
	Cd	**114**	**3.083**	ug/L	0.055	1	2	2881	2	KED
>	**Tb**	**159**		ug/L			3667915	3378842	0	Standard
	Pb	**208**	**0.125**	ug/L	0.001	0	708	17801	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-13
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 01:24:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	32680	2	Standard
	Cl	**37**		ug/L			4261922	3560409	1	Standard
>	**Sc**	**45**		ug/L			909878	859219	0	Standard
	Cr	**52**	**0.892**	ug/L	0.025	2	13848	29332	1	Standard
	Cr	**53**	**0.863**	ug/L	0.014	1	127	1980	2	Standard
>	**Ge**	**72**		ug/L			101344	82400	1	KED
	Ni	**60**	**0.504**	ug/L	0.009	1	27	921	2	KED
	Ni	**62**	**0.513**	ug/L	0.023	4	4	148	5	KED
	Cu	**63**	**2.816**	ug/L	0.077	2	107	14456	1	KED
	Cu	**65**	**2.824**	ug/L	0.038	1	45	7277	0	KED
	Zn	**66**	**2.975**	ug/L	0.032	1	98	2003	0	KED
	Zn	**67**	**4.760**	ug/L	0.120	2	14	522	1	KED
	As	**75**	**0.412**	ug/L	0.025	6	3	133	6	KED
	Y	**89**		ug/L			500295	492288	1	Standard
	Kr	**83**		ug/L			96	92	9	Standard
>	**In-1**	**115**		ug/L			25788	21648	2	KED
	Cd	**111**	**0.101**	ug/L	0.020	20	1	36	16	KED
	Cd	**114**	**0.088**	ug/L	0.018	20	2	83	20	KED
>	**Tb**	**159**		ug/L			3667915	3289194	1	Standard
	Pb	**208**	**0.225**	ug/L	0.004	1	708	30746	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-15
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 01:28:03
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	33138	1	Standard
	Cl	**37**		ug/L			4261922	3707157	1	Standard
>	**Sc**	**45**		ug/L			909878	867138	3	Standard
	Cr	**52**	**0.264**	ug/L	0.039	14	13848	18045	1	Standard
	Cr	**53**	**0.216**	ug/L	0.014	6	127	592	3	Standard
>	**Ge**	**72**		ug/L			101344	88517	2	KED
	Ni	**60**	**0.489**	ug/L	0.015	3	27	961	4	KED
	Ni	**62**	**0.444**	ug/L	0.069	15	4	139	17	KED
	Cu	**63**	**1.691**	ug/L	0.026	1	107	9360	0	KED
	Cu	**65**	**1.677**	ug/L	0.009	0	45	4659	2	KED
	Zn	**66**	**7.150**	ug/L	0.108	1	98	5052	3	KED
	Zn	**67**	**7.846**	ug/L	0.247	3	14	916	1	KED
	As	**75**	**0.012**	ug/L	0.008	64	3	7	35	KED
	Y	**89**		ug/L			500295	498680	4	Standard
	Kr	**83**		ug/L			96	100	9	Standard
>	**In-1**	**115**		ug/L			25788	23038	2	KED
	Cd	**111**	**0.149**	ug/L	0.040	26	1	56	24	KED
	Cd	**114**	**0.168**	ug/L	0.020	12	2	167	13	KED
>	**Tb**	**159**		ug/L			3667915	3402775	0	Standard
	Pb	**208**	**0.009**	ug/L	0.000	2	708	1955	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-17
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 01:31:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			15621	31553	2	Standard
	Cl	37		ug/L			4261922	3361566	1	Standard
>	Sc	45		ug/L			909878	850722	0	Standard
	Cr	52	0.157	ug/L	0.009	5	13848	15782	0	Standard
	Cr	53	0.155	ug/L	0.011	6	127	451	4	Standard
>	Ge	72		ug/L			101344	82950	2	KED
	Ni	60	10.461	ug/L	0.175	1	27	18832	1	KED
	Ni	62	10.282	ug/L	0.176	1	4	2929	3	KED
	Cu	63	69.228	ug/L	2.039	2	107	355529	0	KED
	Cu	65	69.668	ug/L	2.038	2	45	179758	0	KED
	Zn	66	302.524	ug/L	5.447	1	98	196909	1	KED
	Zn	67	278.831	ug/L	3.140	1	14	30128	2	KED
	As	75	0.109	ug/L	0.007	6	3	37	3	KED
	Y	89		ug/L			500295	692422	1	Standard
	Kr	83		ug/L			96	118	8	Standard
>	In-1	115		ug/L			25788	21272	1	KED
	Cd	111	2.283	ug/L	0.025	1	1	788	2	KED
	Cd	114	2.360	ug/L	0.035	1	2	2139	2	KED
>	Tb	159		ug/L			3667915	3325613	0	Standard
	Pb	208	0.108	ug/L	0.001	1	708	15224	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-19
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 01:35:03

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	19162	2	Standard
	Cl	**37**		ug/L			4261922	2011386	2	Standard
>	**Sc**	**45**		ug/L			909878	600249	1	Standard
	Cr	**52**	**0.147**	ug/L	0.018	12	13848	11006	2	Standard
	Cr	**53**	**0.143**	ug/L	0.004	2	127	300	1	Standard
>	**Ge**	**72**		ug/L			101344	57398	3	KED
	Ni	**60**	**0.141**	ug/L	0.013	8	27	191	11	KED
	Ni	**62**	**0.176**	ug/L	0.062	35	4	37	35	KED
	Cu	**63**	**0.534**	ug/L	0.024	4	107	1958	1	KED
	Cu	**65**	**0.558**	ug/L	0.035	6	45	1021	4	KED
	Zn	**66**	**24.173**	ug/L	0.710	2	98	10938	2	KED
	Zn	**67**	**22.776**	ug/L	0.715	3	14	1711	6	KED
	As	**75**	**0.029**	ug/L	0.010	35	3	8	23	KED
	Y	**89**		ug/L			500295	357357	1	Standard
	Kr	**83**		ug/L			96	81	9	Standard
>	**In-1**	**115**		ug/L			25788	14830	4	KED
	Cd	**111**	**0.158**	ug/L	0.028	17	1	38	12	KED
	Cd	**114**	**0.167**	ug/L	0.012	7	2	106	11	KED
>	**Tb**	**159**		ug/L			3667915	2140799	0	Standard
	Pb	**208**	**0.060**	ug/L	0.003	4	708	5651	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-21
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 01:39:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	33057	0	Standard
	Cl	**37**		ug/L			4261922	3324556	1	Standard
>	**Sc**	**45**		ug/L			909878	875193	1	Standard
	Cr	**52**	**0.257**	ug/L	0.012	4	13848	18084	1	Standard
	Cr	**53**	**0.223**	ug/L	0.009	3	127	612	2	Standard
>	**Ge**	**72**		ug/L			101344	85454	1	KED
	Ni	**60**	**16.906**	ug/L	0.181	1	27	31348	1	KED
	Ni	**62**	**17.237**	ug/L	1.019	5	4	5054	5	KED
	Cu	**63**	**89.103**	ug/L	1.662	1	107	471587	0	KED
	Cu	**65**	**88.825**	ug/L	0.997	1	45	236207	0	KED
	Zn	**66**	**440.201**	ug/L	1.950	0	98	295243	1	KED
	Zn	**67**	**406.228**	ug/L	6.377	1	14	45215	0	KED
	As	**75**	**0.009**	ug/L	0.007	72	3	6	36	KED
	Y	**89**		ug/L			500295	541831	0	Standard
	Kr	**83**		ug/L			96	96	11	Standard
>	**In-1**	**115**		ug/L			25788	21736	0	KED
	Cd	**111**	**2.965**	ug/L	0.121	4	1	1046	3	KED
	Cd	**114**	**2.940**	ug/L	0.029	0	2	2722	0	KED
>	**Tb**	**159**		ug/L			3667915	3404807	1	Standard
	Pb	**208**	**0.014**	ug/L	0.000	3	708	2534	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLF
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 01:46:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	19651	1	Standard
	Cl	**37**		ug/L			4261922	4173400	0	Standard
⌈>	**Sc**	**45**		ug/L			909878	920558	0	Standard
|	**Cr**	**52**	**0.022**	ug/L	0.008	33	13848	14448	1	Standard
⌊	**Cr**	**53**	**-0.003**	ug/L	0.002	76	127	122	4	Standard
⌈>	**Ge**	**72**		ug/L			101344	89095	0	KED
|	**Ni**	**60**	**0.026**	ug/L	0.013	48	27	74	32	KED
|	**Ni**	**62**	**0.025**	ug/L	0.012	50	4	11	33	KED
|	**Cu**	**63**	**0.011**	ug/L	0.002	14	107	158	6	KED
|	**Cu**	**65**	**0.016**	ug/L	0.004	23	45	83	12	KED
|	**Zn**	**66**	**0.486**	ug/L	0.067	13	98	426	11	KED
|	**Zn**	**67**	**0.502**	ug/L	0.018	3	14	71	3	KED
⌊	**As**	**75**	**-0.004**	ug/L	0.007	179	3	2	113	KED
	Y	**89**		ug/L			500295	501349	0	Standard
	Kr	**83**		ug/L			96	95	19	Standard
⌈>	**In-1**	**115**		ug/L			25788	23155	2	KED
|	**Cd**	**111**	**0.004**	ug/L	0.005	135	1	2	66	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.001	93	2	1	105	KED
⌈>	**Tb**	**159**		ug/L			3667915	3568739	0	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.000	11	708	1266	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVD
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 01:50:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	17138	3	Standard
	Cl	**37**		ug/L			4261922	4193073	1	Standard
⌈>	**Sc**	**45**		ug/L			909878	896677	1	Standard
|	**Cr**	**52**	**51.396**	ug/L	0.207	0	13848	991228	0	Standard
⌊	**Cr**	**53**	**50.397**	ug/L	0.339	0	127	113465	0	Standard
⌈>	**Ge**	**72**		ug/L			101344	88782	0	KED
|	**Ni**	**60**	**50.389**	ug/L	0.190	0	27	97025	0	KED
|	**Ni**	**62**	**52.110**	ug/L	0.601	1	4	15874	1	KED
|	**Cu**	**63**	**52.027**	ug/L	0.865	1	107	286166	1	KED
|	**Cu**	**65**	**51.985**	ug/L	1.056	2	45	143654	2	KED
|	**Zn**	**66**	**50.328**	ug/L	0.606	1	98	35145	1	KED
|	**Zn**	**67**	**51.113**	ug/L	1.248	2	14	5922	2	KED
⌊	**As**	**75**	**49.745**	ug/L	0.540	1	3	16992	1	KED
	Y	**89**		ug/L			500295	490743	0	Standard
	Kr	**83**		ug/L			96	97	23	Standard
⌈>	**In-1**	**115**		ug/L			25788	23953	1	KED
|	**Cd**	**111**	**50.933**	ug/L	1.030	2	1	19783	1	KED
⌊	**Cd**	**114**	**50.786**	ug/L	0.120	0	2	51785	1	KED
⌈>	**Tb**	**159**		ug/L			3667915	3620587	1	Standard
⌊	**Pb**	**208**	**50.632**	ug/L	0.476	0	708	7469417	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBD
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 01:56:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	16701	2	Standard
	Cl	**37**		ug/L			4261922	4287907	2	Standard
>	**Sc**	**45**		ug/L			909878	892940	0	Standard
	Cr	**52**	**0.025**	ug/L	0.013	53	13848	14058	2	Standard
	Cr	**53**	**-0.013**	ug/L	0.003	27	127	97	7	Standard
>	**Ge**	**72**		ug/L			101344	89325	1	KED
	Ni	**60**	**-0.001**	ug/L	0.003	407	27	22	22	KED
	Ni	**62**	**0.002**	ug/L	0.004	207	4	4	24	KED
	Cu	**63**	**-0.001**	ug/L	0.002	175	107	89	9	KED
	Cu	**65**	**0.002**	ug/L	0.003	149	45	45	19	KED
	Zn	**66**	**-0.019**	ug/L	0.015	78	98	73	14	KED
	Zn	**67**	**0.004**	ug/L	0.029	711	14	13	24	KED
	As	**75**	**0.001**	ug/L	0.005	378	3	3	45	KED
	Y	**89**		ug/L			500295	495841	0	Standard
	Kr	**83**		ug/L			96	107	13	Standard
>	**In-1**	**115**		ug/L			25788	23993	3	KED
	Cd	**111**	**0.003**	ug/L	0.004	134	1	2	57	KED
	Cd	**114**	**0.003**	ug/L	0.002	72	2	5	43	KED
>	**Tb**	**159**		ug/L			3667915	3572397	1	Standard
	Pb	**208**	**-0.001**	ug/L	0.000	26	708	516	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-23
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 01:59:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	36411	1	Standard
	Cl	**37**		ug/L			4261922	3649153	1	Standard
>	**Sc**	**45**		ug/L			909878	877684	1	Standard
	Cr	**52**	**0.221**	ug/L	0.022	9	13848	17470	0	Standard
	Cr	**53**	**0.198**	ug/L	0.030	15	127	558	11	Standard
>	**Ge**	**72**		ug/L			101344	85884	1	KED
	Ni	**60**	**29.159**	ug/L	0.171	0	27	54324	1	KED
	Ni	**62**	**29.769**	ug/L	0.676	2	4	8774	2	KED
	Cu	**63**	**43.104**	ug/L	0.712	1	107	229321	0	KED
	Cu	**65**	**43.686**	ug/L	0.559	1	45	116769	0	KED
	Zn	**66**	**457.490**	ug/L	6.396	1	98	308321	0	KED
	Zn	**67**	**421.968**	ug/L	0.266	0	14	47208	1	KED
	As	**75**	**0.063**	ug/L	0.005	7	3	23	6	KED
	Y	**89**		ug/L			500295	591148	0	Standard
	Kr	**83**		ug/L			96	103	9	Standard
>	**In-1**	**115**		ug/L			25788	22840	3	KED
	Cd	**111**	**6.010**	ug/L	0.149	2	1	2227	3	KED
	Cd	**114**	**5.864**	ug/L	0.221	3	2	5698	0	KED
>	**Tb**	**159**		ug/L			3667915	3336230	1	Standard
	Pb	**208**	**0.027**	ug/L	0.001	2	708	4261	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-25
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 02:02:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	29931	2	Standard
	Cl	**37**		ug/L			4261922	3560437	1	Standard
>	**Sc**	**45**		ug/L			909878	882246	0	Standard
	Cr	**52**	**0.291**	ug/L	0.004	1	13848	18867	0	Standard
	Cr	**53**	**0.309**	ug/L	0.050	16	127	808	13	Standard
>	**Ge**	**72**		ug/L			101344	80734	0	KED
	Ni	**60**	**14.690**	ug/L	0.461	3	27	25734	2	KED
	Ni	**62**	**14.982**	ug/L	0.552	3	4	4152	3	KED
	Cu	**63**	**0.329**	ug/L	0.007	2	107	1731	2	KED
	Cu	**65**	**0.358**	ug/L	0.024	6	45	935	5	KED
	Zn	**66**	**19.941**	ug/L	0.262	1	98	12710	1	KED
	Zn	**67**	**20.747**	ug/L	1.387	6	14	2192	6	KED
	As	**75**	**0.081**	ug/L	0.009	10	3	28	10	KED
	Y	**89**		ug/L			500295	582828	1	Standard
	Kr	**83**		ug/L			96	93	16	Standard
>	**In-1**	**115**		ug/L			25788	21198	2	KED
	Cd	**111**	**6.721**	ug/L	0.306	4	1	2310	2	KED
	Cd	**114**	**6.716**	ug/L	0.037	0	2	6061	2	KED
>	**Tb**	**159**		ug/L			3667915	3310769	0	Standard
	Pb	**208**	**0.013**	ug/L	0.001	7	708	2451	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-27
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 02:05:44
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			15621	28959	2	Standard
	Cl	37		ug/L			4261922	3164155	1	Standard
>	Sc	45		ug/L			909878	813011	3	Standard
	Cr	52	0.426	ug/L	0.016	3	13848	19721	2	Standard
	Cr	53	0.460	ug/L	0.006	1	127	1052	4	Standard
>	Ge	72		ug/L			101344	80014	3	KED
	Ni	60	17.044	ug/L	0.494	2	27	29577	2	KED
	Ni	62	17.258	ug/L	0.326	1	4	4739	2	KED
	Cu	63	55.137	ug/L	0.822	1	107	273281	2	KED
	Cu	65	54.695	ug/L	0.462	0	45	136190	2	KED
	Zn	66	385.357	ug/L	6.025	1	98	241942	1	KED
	Zn	67	355.423	ug/L	7.380	2	14	37032	1	KED
	As	75	0.177	ug/L	0.010	5	3	57	2	KED
	Y	89		ug/L			500295	686673	1	Standard
	Kr	83		ug/L			96	138	8	Standard
>	In-1	115		ug/L			25788	20660	1	KED
	Cd	111	1.811	ug/L	0.059	3	1	608	4	KED
	Cd	114	1.833	ug/L	0.108	5	2	1613	6	KED
>	Tb	159		ug/L			3667915	3069773	2	Standard
	Pb	208	0.109	ug/L	0.000	0	708	14173	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-29
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 02:08:50
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			15621	29245	2	Standard
	Cl	37		ug/L			4261922	3097850	1	Standard
>	Sc	45		ug/L			909878	820181	0	Standard
	Cr	52	0.254	ug/L	0.009	3	13848	16902	0	Standard
	Cr	53	0.279	ug/L	0.006	2	127	688	1	Standard
>	Ge	72		ug/L			101344	78826	1	KED
	Ni	60	20.345	ug/L	0.212	1	27	34794	1	KED
	Ni	62	21.082	ug/L	0.127	0	4	5703	1	KED
	Cu	63	52.441	ug/L	0.844	1	107	256067	1	KED
	Cu	65	52.383	ug/L	0.742	1	45	128506	1	KED
	Zn	66	319.120	ug/L	2.899	0	98	197441	1	KED
	Zn	67	296.509	ug/L	4.200	1	14	30448	1	KED
	As	75	0.123	ug/L	0.027	21	3	40	21	KED
	Y	89		ug/L			500295	603798	3	Standard
	Kr	83		ug/L			96	99	8	Standard
>	In-1	115		ug/L			25788	20592	0	KED
	Cd	111	2.285	ug/L	0.135	5	1	764	6	KED
	Cd	114	2.285	ug/L	0.019	0	2	2004	1	KED
>	Tb	159		ug/L			3667915	3118426	0	Standard
	Pb	208	0.121	ug/L	0.001	1	708	16027	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-26
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 02:11:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	25664	4	Standard
	Cl	**37**		ug/L			4261922	3278703	0	Standard
>	**Sc**	**45**		ug/L			909878	859265	1	Standard
	Cr	**52**	**0.202**	ug/L	0.011	5	13848	16761	3	Standard
	Cr	**53**	**0.214**	ug/L	0.011	5	127	582	3	Standard
>	**Ge**	**72**		ug/L			101344	72720	14	KED
	Ni	**60**	**16.757**	ug/L	2.325	13	27	26080	2	KED
	Ni	**62**	**17.253**	ug/L	2.795	16	4	4241	4	KED
	Cu	**63**	**0.473**	ug/L	0.067	14	107	2183	7	KED
	Cu	**65**	**0.488**	ug/L	0.084	17	45	1118	0	KED
	Zn	**66**	**22.507**	ug/L	2.762	12	98	12757	3	KED
	Zn	**67**	**22.091**	ug/L	2.809	12	14	2076	3	KED
	As	**75**	**0.096**	ug/L	0.012	11	3	29	13	KED
	Y	**89**		ug/L			500295	616141	2	Standard
	Kr	**83**		ug/L			96	111	18	Standard
>	**In-1**	**115**		ug/L			25788	20459	1	KED
	Cd	**111**	**6.948**	ug/L	0.083	1	1	2306	0	KED
	Cd	**114**	**6.945**	ug/L	0.105	1	2	6051	2	KED
>	**Tb**	**159**		ug/L			3667915	3214813	1	Standard
	Pb	**208**	**0.013**	ug/L	0.001	6	708	2360	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-01
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 02:15:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			15621	28340	1	Standard
	Cl	37		ug/L			4261922	3402386	2	Standard
>	Sc	45		ug/L			909878	861856	4	Standard
	Cr	52	0.168	ug/L	0.037	21	13848	16181	1	Standard
	Cr	53	0.161	ug/L	0.015	9	127	468	3	Standard
>	Ge	72		ug/L			101344	82418	2	KED
	Ni	60	27.447	ug/L	0.748	2	27	49051	0	KED
	Ni	62	27.778	ug/L	1.494	5	4	7851	3	KED
	Cu	63	27.405	ug/L	0.571	2	107	139928	0	KED
	Cu	65	27.516	ug/L	0.278	1	45	70593	1	KED
	Zn	66	375.724	ug/L	5.826	1	98	243002	1	KED
	Zn	67	348.308	ug/L	4.284	1	14	37391	1	KED
	As	75	0.049	ug/L	0.005	9	3	18	6	KED
	Y	89		ug/L			500295	627846	1	Standard
	Kr	83		ug/L			96	112	13	Standard
>	In-1	115		ug/L			25788	21425	2	KED
	Cd	111	5.200	ug/L	0.107	2	1	1808	3	KED
	Cd	114	5.223	ug/L	0.078	1	2	4766	3	KED
>	Tb	159		ug/L			3667915	3264555	1	Standard
	Pb	208	0.055	ug/L	0.002	3	708	7878	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0024-DUP1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 02:18:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			15621	33369	1	Standard
	Cl	37		ug/L			4261922	3494091	0	Standard
>	Sc	45		ug/L			909878	880459	1	Standard
	Cr	52	0.162	ug/L	0.026	15	13848	16421	1	Standard
	Cr	53	0.151	ug/L	0.017	11	127	457	7	Standard
>	Ge	72		ug/L			101344	82580	2	KED
	Ni	60	27.445	ug/L	0.646	2	27	49144	0	KED
	Ni	62	28.444	ug/L	0.939	3	4	8064	5	KED
	Cu	63	27.383	ug/L	0.328	1	107	140106	1	KED
	Cu	65	27.391	ug/L	0.917	3	45	70376	0	KED
	Zn	66	380.312	ug/L	11.432	3	98	246372	1	KED
	Zn	67	354.674	ug/L	9.574	2	14	38141	1	KED
	As	75	0.041	ug/L	0.000	1	3	16	2	KED
	Y	89		ug/L			500295	634440	1	Standard
	Kr	83		ug/L			96	116	9	Standard
>	In-1	115		ug/L			25788	21635	1	KED
	Cd	111	5.480	ug/L	0.205	3	1	1923	2	KED
	Cd	114	5.298	ug/L	0.160	3	2	4880	2	KED
>	Tb	159		ug/L			3667915	3315525	0	Standard
	Pb	208	0.055	ug/L	0.000	0	708	8131	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0024-MS1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 02:22:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			15621	33259	2	Standard
	Cl	37		ug/L			4261922	3495078	0	Standard
>	Sc	45		ug/L			909878	882196	1	Standard
	Cr	52	23.314	ug/L	0.172	0	13848	449680	0	Standard
	Cr	53	23.328	ug/L	0.143	0	127	51737	1	Standard
>	Ge	72		ug/L			101344	82712	0	KED
	Ni	60	54.267	ug/L	0.129	0	27	97345	0	KED
	Ni	62	55.237	ug/L	0.270	0	4	15676	0	KED
	Cu	63	54.063	ug/L	0.549	1	107	277024	0	KED
	Cu	65	53.962	ug/L	0.183	0	45	138918	0	KED
	Zn	66	447.869	ug/L	5.330	1	98	290751	1	KED
	Zn	67	417.009	ug/L	3.666	0	14	44929	0	KED
	As	75	24.779	ug/L	0.110	0	3	7887	0	KED
	Y	89		ug/L			500295	650248	4	Standard
	Kr	83		ug/L			96	99	18	Standard
>	In-1	115		ug/L			25788	21685	0	KED
	Cd	111	30.253	ug/L	0.475	1	1	10639	0	KED
	Cd	114	30.785	ug/L	0.355	1	2	28420	1	KED
>	Tb	159		ug/L			3667915	3369632	1	Standard
	Pb	208	25.847	ug/L	0.241	0	708	3548988	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BJH0024-MSD1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 02:26:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			15621	31775	3	Standard
	Cl	37		ug/L			4261922	3511401	1	Standard
>	Sc	45		ug/L			909878	893694	2	Standard
	Cr	52	23.368	ug/L	0.351	1	13848	456489	1	Standard
	Cr	53	23.382	ug/L	0.406	1	127	52524	1	Standard
>	Ge	72		ug/L			101344	83325	2	KED
	Ni	60	54.222	ug/L	0.605	1	27	97971	1	KED
	Ni	62	54.020	ug/L	0.957	1	4	15441	1	KED
	Cu	63	54.107	ug/L	1.186	2	107	279224	0	KED
	Cu	65	53.740	ug/L	0.925	1	45	139341	0	KED
	Zn	66	453.483	ug/L	9.340	2	98	296499	1	KED
	Zn	67	420.750	ug/L	6.923	1	14	45660	1	KED
	As	75	24.950	ug/L	0.325	1	3	7999	1	KED
	Y	89		ug/L			500295	645283	2	Standard
	Kr	83		ug/L			96	114	20	Standard
>	In-1	115		ug/L			25788	21789	3	KED
	Cd	111	30.982	ug/L	0.739	2	1	10945	2	KED
	Cd	114	30.947	ug/L	1.021	3	2	28688	1	KED
>	Tb	159		ug/L			3667915	3391386	0	Standard
	Pb	208	25.965	ug/L	0.348	1	708	3588292	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLG
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 02:33:03
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	18737	3	Standard
	Cl	**37**		ug/L			4261922	4119192	1	Standard
⌈>	**Sc**	**45**		ug/L			909878	858572	2	Standard
|	**Cr**	**52**	**0.042**	ug/L	0.018	43	13848	13821	1	Standard
⌊	**Cr**	**53**	**-0.009**	ug/L	0.008	83	127	100	15	Standard
⌈>	**Ge**	**72**		ug/L			101344	85601	1	KED
|	**Ni**	**60**	**0.023**	ug/L	0.009	37	27	65	23	KED
|	**Ni**	**62**	**0.030**	ug/L	0.024	79	4	12	56	KED
|	**Cu**	**63**	**0.011**	ug/L	0.006	51	107	150	19	KED
|	**Cu**	**65**	**0.013**	ug/L	0.005	38	45	73	17	KED
|	**Zn**	**66**	**0.508**	ug/L	0.044	8	98	424	6	KED
|	**Zn**	**67**	**0.481**	ug/L	0.076	15	14	66	13	KED
⌊	**As**	**75**	**-0.001**	ug/L	0.007	1213	3	3	71	KED
	Y	**89**		ug/L			500295	457717	0	Standard
	Kr	**83**		ug/L			96	97	5	Standard
⌈>	**In-1**	**115**		ug/L			25788	21827	2	KED
|	**Cd**	**111**	**0.003**	ug/L	0.002	45	1	2	21	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.002	254	2	2	76	KED
⌈>	**Tb**	**159**		ug/L			3667915	3358707	0	Standard
⌊	**Pb**	**208**	**0.006**	ug/L	0.002	25	708	1520	14	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVE
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 02:37:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	17286	1	Standard
	Cl	**37**		ug/L			4261922	4103829	2	Standard
>	**Sc**	**45**		ug/L			909878	886493	1	Standard
	Cr	**52**	**50.630**	ug/L	0.629	1	13848	965506	0	Standard
	Cr	**53**	**49.738**	ug/L	0.360	0	127	110708	0	Standard
>	**Ge**	**72**		ug/L			101344	87568	0	KED
	Ni	**60**	**50.404**	ug/L	0.405	0	27	95726	1	KED
	Ni	**62**	**51.498**	ug/L	1.323	2	4	15471	1	KED
	Cu	**63**	**51.543**	ug/L	0.363	0	107	279637	1	KED
	Cu	**65**	**51.197**	ug/L	0.962	1	45	139557	2	KED
	Zn	**66**	**49.478**	ug/L	0.483	0	98	34082	1	KED
	Zn	**67**	**50.512**	ug/L	1.263	2	14	5773	3	KED
	As	**75**	**49.219**	ug/L	0.374	0	3	16583	1	KED
	Y	**89**		ug/L			500295	474795	0	Standard
	Kr	**83**		ug/L			96	95	6	Standard
>	**In-1**	**115**		ug/L			25788	22716	1	KED
	Cd	**111**	**51.685**	ug/L	1.468	2	1	19042	3	KED
	Cd	**114**	**51.472**	ug/L	0.241	0	2	49772	0	KED
>	**Tb**	**159**		ug/L			3667915	3529484	1	Standard
	Pb	**208**	**50.212**	ug/L	0.115	0	708	7221426	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBE
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 02:43:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	16010	3	Standard
	Cl	**37**		ug/L			4261922	4198023	2	Standard
>	**Sc**	**45**		ug/L			909878	849061	0	Standard
	Cr	**52**	**0.012**	ug/L	0.019	152	13848	13146	2	Standard
	Cr	**53**	**-0.013**	ug/L	0.004	33	127	92	9	Standard
>	**Ge**	**72**		ug/L			101344	86594	4	KED
	Ni	**60**	**-0.002**	ug/L	0.004	175	27	19	34	KED
	Ni	**62**	**0.019**	ug/L	0.015	81	4	9	52	KED
	Cu	**63**	**-0.000**	ug/L	0.004	6504	107	92	23	KED
	Cu	**65**	**0.006**	ug/L	0.002	35	45	53	7	KED
	Zn	**66**	**-0.017**	ug/L	0.003	15	98	72	4	KED
	Zn	**67**	**0.030**	ug/L	0.022	72	14	15	18	KED
	As	**75**	**-0.001**	ug/L	0.004	393	3	2	50	KED
	Y	**89**		ug/L			500295	453723	2	Standard
	Kr	**83**		ug/L			96	102	10	Standard
>	**In-1**	**115**		ug/L			25788	22245	2	KED
	Cd	**111**	**0.007**	ug/L	0.005	67	1	3	43	KED
	Cd	**114**	**0.001**	ug/L	0.001	109	2	3	35	KED
>	**Tb**	**159**		ug/L			3667915	3340156	0	Standard
	Pb	**208**	**-0.001**	ug/L	0.000	62	708	556	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-24
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 02:46:31
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	32454	3	Standard
	Cl	**37**		ug/L			4261922	3714651	0	Standard
>	**Sc**	**45**		ug/L			909878	890439	2	Standard
	Cr	**52**	**0.197**	ug/L	0.008	4	13848	17274	1	Standard
	Cr	**53**	**0.158**	ug/L	0.007	4	127	477	3	Standard
>	**Ge**	**72**		ug/L			101344	84139	1	KED
	Ni	**60**	**29.251**	ug/L	0.050	0	27	53387	1	KED
	Ni	**62**	**29.999**	ug/L	0.151	0	4	8662	1	KED
	Cu	**63**	**43.267**	ug/L	0.554	1	107	225514	0	KED
	Cu	**65**	**43.553**	ug/L	0.823	1	45	114039	1	KED
	Zn	**66**	**462.832**	ug/L	7.800	1	98	305583	1	KED
	Zn	**67**	**424.677**	ug/L	14.611	3	14	46525	1	KED
	As	**75**	**0.046**	ug/L	0.007	15	3	18	14	KED
	Y	**89**		ug/L			500295	605533	2	Standard
	Kr	**83**		ug/L			96	114	17	Standard
>	**In-1**	**115**		ug/L			25788	22164	1	KED
	Cd	**111**	**6.013**	ug/L	0.216	3	1	2162	2	KED
	Cd	**114**	**5.853**	ug/L	0.136	2	2	5525	3	KED
>	**Tb**	**159**		ug/L			3667915	3363104	1	Standard
	Pb	**208**	**0.029**	ug/L	0.001	3	708	4618	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-28
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 02:49:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	26911	3	Standard
	Cl	**37**		ug/L			4261922	3314810	1	Standard
>	**Sc**	**45**		ug/L			909878	841211	1	Standard
	Cr	**52**	**0.375**	ug/L	0.019	5	13848	19501	1	Standard
	Cr	**53**	**0.373**	ug/L	0.011	2	127	906	1	Standard
>	**Ge**	**72**		ug/L			101344	78809	3	KED
	Ni	**60**	**17.552**	ug/L	0.592	3	27	29991	0	KED
	Ni	**62**	**17.949**	ug/L	0.364	2	4	4854	1	KED
	Cu	**63**	**56.432**	ug/L	1.493	2	107	275380	1	KED
	Cu	**65**	**57.318**	ug/L	1.462	2	45	140515	0	KED
	Zn	**66**	**394.971**	ug/L	6.187	1	98	244241	2	KED
	Zn	**67**	**365.359**	ug/L	11.644	3	14	37483	0	KED
	As	**75**	**0.150**	ug/L	0.012	7	3	48	4	KED
	Y	**89**		ug/L			500295	704561	1	Standard
	Kr	**83**		ug/L			96	127	9	Standard
>	**In-1**	**115**		ug/L			25788	20932	0	KED
	Cd	**111**	**1.918**	ug/L	0.001	0	1	652	0	KED
	Cd	**114**	**1.920**	ug/L	0.117	6	2	1712	5	KED
>	**Tb**	**159**		ug/L			3667915	3123067	1	Standard
	Pb	**208**	**0.112**	ug/L	0.001	0	708	14832	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0205-30
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 02:53:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			15621	28253	2	Standard
	Cl	37		ug/L			4261922	3188680	1	Standard
>	Sc	45		ug/L			909878	841268	1	Standard
	Cr	52	0.270	ug/L	0.023	8	13848	17614	0	Standard
	Cr	53	0.288	ug/L	0.011	3	127	726	2	Standard
>	Ge	72		ug/L			101344	79754	2	KED
	Ni	60	20.917	ug/L	0.317	1	27	36186	0	KED
	Ni	62	21.594	ug/L	0.487	2	4	5909	0	KED
	Cu	63	53.625	ug/L	0.340	0	107	264943	1	KED
	Cu	65	53.712	ug/L	0.214	0	45	133329	1	KED
	Zn	66	319.884	ug/L	3.032	0	98	200238	1	KED
	Zn	67	298.155	ug/L	2.571	0	14	30982	2	KED
	As	75	0.088	ug/L	0.015	17	3	30	16	KED
	Y	89		ug/L			500295	600641	2	Standard
	Kr	83		ug/L			96	114	12	Standard
>	In-1	115		ug/L			25788	20291	1	KED
	Cd	111	2.277	ug/L	0.205	8	1	751	10	KED
	Cd	114	2.488	ug/L	0.128	5	2	2149	4	KED
>	Tb	159		ug/L			3667915	3160047	2	Standard
	Pb	208	0.109	ug/L	0.002	2	708	14590	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLH
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 02:57:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	18311	3	Standard
	Cl	**37**		ug/L			4261922	4012179	2	Standard
⌈>	**Sc**	**45**		ug/L			909878	861639	2	Standard
|	**Cr**	**52**	**-0.009**	ug/L	0.009	98	13848	12942	1	Standard
⌊	**Cr**	**53**	**-0.013**	ug/L	0.002	13	127	92	1	Standard
⌈>	**Ge**	**72**		ug/L			101344	85726	1	KED
|	**Ni**	**60**	**0.019**	ug/L	0.004	20	27	59	12	KED
|	**Ni**	**62**	**0.024**	ug/L	0.004	17	4	10	10	KED
|	**Cu**	**63**	**0.010**	ug/L	0.004	36	107	143	11	KED
|	**Cu**	**65**	**0.014**	ug/L	0.006	42	45	74	20	KED
|	**Zn**	**66**	**0.512**	ug/L	0.111	21	98	428	18	KED
|	**Zn**	**67**	**0.515**	ug/L	0.070	13	14	69	11	KED
⌊	**As**	**75**	**0.002**	ug/L	0.001	72	3	3	12	KED
	Y	**89**		ug/L			500295	479614	3	Standard
	Kr	**83**		ug/L			96	93	14	Standard
⌈>	**In-1**	**115**		ug/L			25788	21849	3	KED
|	**Cd**	**111**	**0.003**	ug/L	0.001	39	1	2	21	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.003	1433	2	2	133	KED
⌈>	**Tb**	**159**		ug/L			3667915	3421976	1	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.000	9	708	1167	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0262-02
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 03:01:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	31224	3	Standard
	Cl	**37**		ug/L			4261922	3763187	3	Standard
⌈>	**Sc**	**45**		ug/L			909878	1014425	1	Standard
|	**Cr**	**52**	**1.055**	ug/L	0.012	1	13848	38136	1	Standard
⌊	**Cr**	**53**	**1.115**	ug/L	0.035	3	127	2979	1	Standard
⌈>	**Ge**	**72**		ug/L			101344	87380	1	KED
|	**Ni**	**60**	**2.538**	ug/L	0.072	2	27	4832	3	KED
|	**Ni**	**62**	**2.461**	ug/L	0.038	1	4	741	2	KED
|	**Cu**	**63**	**0.716**	ug/L	0.012	1	107	3966	2	KED
|	**Cu**	**65**	**0.682**	ug/L	0.030	4	45	1893	2	KED
|	**Zn**	**66**	**0.198**	ug/L	0.015	7	98	220	3	KED
|	**Zn**	**67**	**0.632**	ug/L	0.086	13	14	84	10	KED
⌊	**As**	**75**	**1.102**	ug/L	0.024	2	3	373	2	KED
	Y	**89**		ug/L			500295	504915	0	Standard
	Kr	**83**		ug/L			96	102	21	Standard
⌈>	**In-1**	**115**		ug/L			25788	22945	0	KED
|	**Cd**	**111**	**0.001**	ug/L	0.004	335	1	1	86	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.001	22	2	6	14	KED
⌈>	**Tb**	**159**		ug/L			3667915	3515843	1	Standard
⌊	**Pb**	**208**	**0.009**	ug/L	0.001	5	708	1997	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0262-03
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 03:04:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	31576	1	Standard
	Cl	**37**		ug/L			4261922	3717724	0	Standard
⌈>	**Sc**	**45**		ug/L			909878	996424	2	Standard
|	**Cr**	**52**	**0.057**	ug/L	0.021	36	13848	16361	0	Standard
⌊	**Cr**	**53**	**0.146**	ug/L	0.007	4	127	505	1	Standard
⌈>	**Ge**	**72**		ug/L			101344	89795	1	KED
|	**Ni**	**60**	**2.113**	ug/L	0.055	2	27	4137	1	KED
|	**Ni**	**62**	**2.248**	ug/L	0.088	3	4	696	3	KED
|	**Cu**	**63**	**1.095**	ug/L	0.070	6	107	6184	5	KED
|	**Cu**	**65**	**1.089**	ug/L	0.010	0	45	3084	1	KED
|	**Zn**	**66**	**0.390**	ug/L	0.077	19	98	361	14	KED
|	**Zn**	**67**	**0.611**	ug/L	0.130	21	14	84	18	KED
⌊	**As**	**75**	**2.442**	ug/L	0.059	2	3	847	2	KED
	Y	**89**		ug/L			500295	502775	1	Standard
	Kr	**83**		ug/L			96	89	17	Standard
⌈>	**In-1**	**115**		ug/L			25788	23818	1	KED
|	**Cd**	**111**	**0.013**	ug/L	0.007	57	1	6	45	KED
⌊	**Cd**	**114**	**0.009**	ug/L	0.002	25	2	10	18	KED
⌈>	**Tb**	**159**		ug/L			3667915	3567837	1	Standard
⌊	**Pb**	**208**	**0.011**	ug/L	0.000	0	708	2338	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0262-04
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 03:07:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	30987	1	Standard
	Cl	**37**		ug/L			4261922	3774073	3	Standard
⌈>	**Sc**	**45**		ug/L			909878	983102	1	Standard
|	**Cr**	**52**	**0.058**	ug/L	0.012	20	13848	16173	0	Standard
⌊	**Cr**	**53**	**0.157**	ug/L	0.002	1	127	525	0	Standard
⌈>	**Ge**	**72**		ug/L			101344	90738	2	KED
|	**Ni**	**60**	**0.415**	ug/L	0.028	6	27	840	4	KED
|	**Ni**	**62**	**0.473**	ug/L	0.043	9	4	151	6	KED
|	**Cu**	**63**	**0.160**	ug/L	0.013	8	107	993	5	KED
|	**Cu**	**65**	**0.155**	ug/L	0.014	9	45	476	6	KED
|	**Zn**	**66**	**0.680**	ug/L	0.044	6	98	572	7	KED
|	**Zn**	**67**	**0.905**	ug/L	0.085	9	14	120	8	KED
⌊	**As**	**75**	**5.618**	ug/L	0.072	1	3	1964	2	KED
	Y	**89**		ug/L			500295	501774	1	Standard
	Kr	**83**		ug/L			96	88	20	Standard
⌈>	**In-1**	**115**		ug/L			25788	23579	1	KED
|	**Cd**	**111**	**0.002**	ug/L	0.006	310	1	2	107	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.002	70	2	5	42	KED
⌈>	**Tb**	**159**		ug/L			3667915	3549140	0	Standard
⌊	**Pb**	**208**	**0.006**	ug/L	0.000	4	708	1532	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0262-05
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 03:10:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	34061	4	Standard
	Cl	**37**		ug/L			4261922	3885480	0	Standard
⌈>	**Sc**	**45**		ug/L			909878	975332	2	Standard
|	**Cr**	**52**	**0.169**	ug/L	0.015	8	13848	18327	0	Standard
⌊	**Cr**	**53**	**0.311**	ug/L	0.015	4	127	898	3	Standard
⌈>	**Ge**	**72**		ug/L			101344	89660	0	KED
|	**Ni**	**60**	**0.780**	ug/L	0.035	4	27	1541	3	KED
|	**Ni**	**62**	**0.794**	ug/L	0.094	11	4	248	11	KED
|	**Cu**	**63**	**0.433**	ug/L	0.014	3	107	2499	2	KED
|	**Cu**	**65**	**0.432**	ug/L	0.011	2	45	1246	3	KED
|	**Zn**	**66**	**0.501**	ug/L	0.026	5	98	439	4	KED
|	**Zn**	**67**	**0.515**	ug/L	0.086	16	14	73	12	KED
⌊	**As**	**75**	**13.977**	ug/L	0.203	1	3	4823	0	KED
	Y	**89**		ug/L			500295	489219	1	Standard
	Kr	**83**		ug/L			96	101	13	Standard
⌈>	**In-1**	**115**		ug/L			25788	23659	3	KED
|	**Cd**	**111**	**0.004**	ug/L	0.005	132	1	2	66	KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.005	69	2	9	57	KED
⌈>	**Tb**	**159**		ug/L			3667915	3536158	1	Standard
⌊	**Pb**	**208**	**0.012**	ug/L	0.001	4	708	2359	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0262-06
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 03:15:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	33313	3	Standard
	Cl	**37**		ug/L			4261922	3884034	1	Standard
⌈>	**Sc**	**45**		ug/L			909878	1030772	1	Standard
|	**Cr**	**52**	**3.599**	ug/L	0.030	0	13848	94379	1	Standard
⌊	**Cr**	**53**	**3.664**	ug/L	0.126	3	127	9612	1	Standard
⌈>	**Ge**	**72**		ug/L			101344	90902	1	KED
|	**Ni**	**60**	**0.682**	ug/L	0.015	2	27	1367	0	KED
|	**Ni**	**62**	**0.678**	ug/L	0.066	9	4	215	8	KED
|	**Cu**	**63**	**0.135**	ug/L	0.010	7	107	855	7	KED
|	**Cu**	**65**	**0.134**	ug/L	0.015	11	45	420	8	KED
|	**Zn**	**66**	**0.289**	ug/L	0.028	9	98	293	5	KED
|	**Zn**	**67**	**0.732**	ug/L	0.167	22	14	99	19	KED
⌊	**As**	**75**	**1.724**	ug/L	0.006	0	3	606	1	KED
	Y	**89**		ug/L			500295	504900	1	Standard
	Kr	**83**		ug/L			96	93	20	Standard
⌈>	**In-1**	**115**		ug/L			25788	24298	2	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.004	695	1	1	114	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.004	73	2	8	52	KED
⌈>	**Tb**	**159**		ug/L			3667915	3642015	0	Standard
⌊	**Pb**	**208**	**0.006**	ug/L	0.001	8	708	1664	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLI
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 03:21:52
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	21005	2	Standard
	Cl	**37**		ug/L			4261922	3996955	2	Standard
⌈>	**Sc**	**45**		ug/L			909878	931062	2	Standard
|	**Cr**	**52**	**0.076**	ug/L	0.018	23	13848	15662	1	Standard
⌊	**Cr**	**53**	**0.009**	ug/L	0.004	49	127	150	5	Standard
⌈>	**Ge**	**72**		ug/L			101344	89882	2	KED
|	**Ni**	**60**	**0.026**	ug/L	0.003	11	27	74	5	KED
|	**Ni**	**62**	**0.035**	ug/L	0.011	30	4	14	19	KED
|	**Cu**	**63**	**0.009**	ug/L	0.001	7	107	144	4	KED
|	**Cu**	**65**	**0.010**	ug/L	0.005	50	45	67	18	KED
|	**Zn**	**66**	**0.529**	ug/L	0.043	8	98	460	8	KED
|	**Zn**	**67**	**0.472**	ug/L	0.163	34	14	67	26	KED
⌊	**As**	**75**	**-0.002**	ug/L	0.003	130	3	2	43	KED
	Y	**89**		ug/L			500295	472246	1	Standard
	Kr	**83**		ug/L			96	86	10	Standard
⌈>	**In-1**	**115**		ug/L			25788	23691	1	KED
|	**Cd**	**111**	**0.002**	ug/L	0.006	289	1	2	98	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.000	2	2	0	20	KED
⌈>	**Tb**	**159**		ug/L			3667915	3512656	1	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.000	11	708	1227	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVF
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 03:25:22
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	18640	1	Standard
	Cl	**37**		ug/L			4261922	4130217	1	Standard
⌈>	**Sc**	**45**		ug/L			909878	936137	0	Standard
|	**Cr**	**52**	**50.704**	ug/L	0.434	0	13848	1021111	0	Standard
⌊	**Cr**	**53**	**50.762**	ug/L	0.795	1	127	119311	1	Standard
⌈>	**Ge**	**72**		ug/L			101344	89122	0	KED
|	**Ni**	**60**	**51.414**	ug/L	0.634	1	27	99374	0	KED
|	**Ni**	**62**	**51.679**	ug/L	0.456	0	4	15803	0	KED
|	**Cu**	**63**	**51.381**	ug/L	0.727	1	107	283687	1	KED
|	**Cu**	**65**	**52.056**	ug/L	1.246	2	45	144395	2	KED
|	**Zn**	**66**	**49.935**	ug/L	0.630	1	98	35004	0	KED
|	**Zn**	**67**	**50.237**	ug/L	0.511	1	14	5843	1	KED
⌊	**As**	**75**	**50.152**	ug/L	0.279	0	3	17197	0	KED
	Y	**89**		ug/L			500295	479561	2	Standard
	Kr	**83**		ug/L			96	107	25	Standard
⌈>	**In-1**	**115**		ug/L			25788	23978	1	KED
|	**Cd**	**111**	**52.528**	ug/L	1.612	3	1	20419	1	KED
⌊	**Cd**	**114**	**51.526**	ug/L	0.656	1	2	52587	0	KED
⌈>	**Tb**	**159**		ug/L			3667915	3558212	1	Standard
⌊	**Pb**	**208**	**51.660**	ug/L	0.716	1	708	7489333	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBF
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 03:31:13
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	17674	2	Standard
	Cl	**37**		ug/L			4261922	4017824	3	Standard
>	**Sc**	**45**		ug/L			909878	927551	1	Standard
	Cr	**52**	**0.011**	ug/L	0.023	200	13848	14342	3	Standard
	Cr	**53**	**-0.001**	ug/L	0.005	1015	127	129	10	Standard
>	**Ge**	**72**		ug/L			101344	89888	0	KED
	Ni	**60**	**-0.001**	ug/L	0.002	144	27	21	18	KED
	Ni	**62**	**0.006**	ug/L	0.016	285	4	5	88	KED
	Cu	**63**	**-0.004**	ug/L	0.001	23	107	73	7	KED
	Cu	**65**	**-0.001**	ug/L	0.002	169	45	37	10	KED
	Zn	**66**	**-0.023**	ug/L	0.014	60	98	71	13	KED
	Zn	**67**	**0.025**	ug/L	0.046	187	14	15	34	KED
	As	**75**	**0.002**	ug/L	0.002	100	3	4	17	KED
	Y	**89**		ug/L			500295	481048	1	Standard
	Kr	**83**		ug/L			96	95	16	Standard
>	**In-1**	**115**		ug/L			25788	23099	3	KED
	Cd	**111**	**0.003**	ug/L	0.004	127	1	2	57	KED
	Cd	**114**	**0.001**	ug/L	0.002	225	2	3	68	KED
>	**Tb**	**159**		ug/L			3667915	3510632	2	Standard
	Pb	**208**	**-0.001**	ug/L	0.000	18	708	482	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0262-07
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 03:34:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	38182	2	Standard
	Cl	**37**		ug/L			4261922	4225732	2	Standard
⌈>	**Sc**	**45**		ug/L			909878	1006577	2	Standard
|	**Cr**	**52**	**1.474**	ug/L	0.068	4	13848	46783	1	Standard
⌊	**Cr**	**53**	**1.922**	ug/L	0.041	2	127	4992	0	Standard
⌈>	**Ge**	**72**		ug/L			101344	86819	0	KED
|	**Ni**	**60**	**1.063**	ug/L	0.015	1	27	2024	1	KED
|	**Ni**	**62**	**0.966**	ug/L	0.011	1	4	291	1	KED
|	**Cu**	**63**	**0.149**	ug/L	0.003	2	107	895	2	KED
|	**Cu**	**65**	**0.150**	ug/L	0.006	4	45	444	4	KED
|	**Zn**	**66**	**0.407**	ug/L	0.051	12	98	361	9	KED
|	**Zn**	**67**	**1.063**	ug/L	0.188	17	14	132	15	KED
⌊	**As**	**75**	**1.822**	ug/L	0.041	2	3	611	1	KED
	Y	**89**		ug/L			500295	483704	1	Standard
	Kr	**83**		ug/L			96	81	9	Standard
⌈>	**In-1**	**115**		ug/L			25788	23368	1	KED
|	**Cd**	**111**	**0.003**	ug/L	0.006	200	1	2	86	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.001	52	2	3	23	KED
⌈>	**Tb**	**159**		ug/L			3667915	3530061	1	Standard
⌊	**Pb**	**208**	**0.009**	ug/L	0.000	0	708	1940	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0262-08
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 03:37:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	47977	3	Standard
	Cl	**37**		ug/L			4261922	3819356	3	Standard
⌈>	**Sc**	**45**		ug/L			909878	1016524	0	Standard
|	**Cr**	**52**	**0.940**	ug/L	0.045	4	13848	35745	2	Standard
⌊	**Cr**	**53**	**1.029**	ug/L	0.005	0	127	2766	0	Standard
⌈>	**Ge**	**72**		ug/L			101344	93198	0	KED
|	**Ni**	**60**	**0.878**	ug/L	0.019	2	27	1798	2	KED
|	**Ni**	**62**	**0.873**	ug/L	0.059	6	4	283	6	KED
|	**Cu**	**63**	**0.257**	ug/L	0.012	4	107	1584	3	KED
|	**Cu**	**65**	**0.266**	ug/L	0.008	3	45	813	2	KED
|	**Zn**	**66**	**0.683**	ug/L	0.063	9	98	589	7	KED
|	**Zn**	**67**	**1.077**	ug/L	0.089	8	14	144	6	KED
⌊	**As**	**75**	**4.736**	ug/L	0.052	1	3	1701	1	KED
	Y	**89**		ug/L			500295	499454	1	Standard
	Kr	**83**		ug/L			96	111	4	Standard
⌈>	**In-1**	**115**		ug/L			25788	24931	1	KED
|	**Cd**	**111**	**0.007**	ug/L	0.001	16	1	4	12	KED
⌊	**Cd**	**114**	**0.008**	ug/L	0.005	59	2	10	46	KED
⌈>	**Tb**	**159**		ug/L			3667915	3647356	0	Standard
⌊	**Pb**	**208**	**0.086**	ug/L	0.002	1	708	13414	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0262-09
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 03:40:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	44905	3	Standard
	Cl	**37**		ug/L			4261922	3760198	1	Standard
⌈>	**Sc**	**45**		ug/L			909878	1018306	1	Standard
|	**Cr**	**52**	**1.103**	ug/L	0.041	3	13848	39334	3	Standard
⌊	**Cr**	**53**	**1.195**	ug/L	0.012	1	127	3194	1	Standard
⌈>	**Ge**	**72**		ug/L			101344	90253	0	KED
|	**Ni**	**60**	**1.016**	ug/L	0.012	1	27	2013	1	KED
|	**Ni**	**62**	**1.025**	ug/L	0.169	16	4	321	15	KED
|	**Cu**	**63**	**0.311**	ug/L	0.019	6	107	1834	5	KED
|	**Cu**	**65**	**0.319**	ug/L	0.011	3	45	935	3	KED
|	**Zn**	**66**	**0.566**	ug/L	0.049	8	98	488	6	KED
|	**Zn**	**67**	**1.008**	ug/L	0.133	13	14	131	11	KED
⌊	**As**	**75**	**1.763**	ug/L	0.059	3	3	615	2	KED
	Y	**89**		ug/L			500295	492492	1	Standard
	Kr	**83**		ug/L			96	105	9	Standard
⌈>	**In-1**	**115**		ug/L			25788	24188	0	KED
|	**Cd**	**111**	**0.003**	ug/L	0.003	106	1	2	43	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.001	76	2	3	31	KED
⌈>	**Tb**	**159**		ug/L			3667915	3574942	1	Standard
⌊	**Pb**	**208**	**0.024**	ug/L	0.001	3	708	4135	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0262-10
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 03:44:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	35870	1	Standard
	Cl	**37**		ug/L			4261922	3999347	2	Standard
⌈>	**Sc**	**45**		ug/L			909878	1026429	1	Standard
|	**Cr**	**52**	**0.166**	ug/L	0.028	16	13848	19230	1	Standard
⌊	**Cr**	**53**	**0.334**	ug/L	0.005	1	127	1005	2	Standard
⌈>	**Ge**	**72**		ug/L			101344	91495	3	KED
|	**Ni**	**60**	**0.788**	ug/L	0.040	5	27	1588	5	KED
|	**Ni**	**62**	**0.774**	ug/L	0.125	16	4	246	16	KED
|	**Cu**	**63**	**0.375**	ug/L	0.006	1	107	2220	4	KED
|	**Cu**	**65**	**0.403**	ug/L	0.011	2	45	1188	3	KED
|	**Zn**	**66**	**0.381**	ug/L	0.017	4	98	362	6	KED
|	**Zn**	**67**	**0.422**	ug/L	0.058	13	14	63	11	KED
⌊	**As**	**75**	**13.734**	ug/L	0.191	1	3	4835	2	KED
	Y	**89**		ug/L			500295	505360	0	Standard
	Kr	**83**		ug/L			96	99	15	Standard
⌈>	**In-1**	**115**		ug/L			25788	24297	2	KED
|	**Cd**	**111**	**0.005**	ug/L	0.004	72	1	3	41	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.005	184	2	4	99	KED
⌈>	**Tb**	**159**		ug/L			3667915	3627732	1	Standard
⌊	**Pb**	**208**	**0.009**	ug/L	0.000	1	708	2005	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 21G0262-11
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 03:48:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	32051	1	Standard
	Cl	**37**		ug/L			4261922	4001418	1	Standard
⌈>	**Sc**	**45**		ug/L			909878	1020270	0	Standard
|	**Cr**	**52**	**0.136**	ug/L	0.021	15	13848	18480	2	Standard
⌊	**Cr**	**53**	**0.311**	ug/L	0.016	5	127	940	4	Standard
⌈>	**Ge**	**72**		ug/L			101344	90706	1	KED
|	**Ni**	**60**	**4.593**	ug/L	0.057	1	27	9058	2	KED
|	**Ni**	**62**	**4.639**	ug/L	0.148	3	4	1447	3	KED
|	**Cu**	**63**	**0.229**	ug/L	0.008	3	107	1386	4	KED
|	**Cu**	**65**	**0.232**	ug/L	0.014	6	45	694	4	KED
|	**Zn**	**66**	**0.737**	ug/L	0.028	3	98	612	4	KED
|	**Zn**	**67**	**1.679**	ug/L	0.058	3	14	211	4	KED
⌊	**As**	**75**	**1.589**	ug/L	0.043	2	3	557	2	KED
	Y	**89**		ug/L			500295	497878	3	Standard
	Kr	**83**		ug/L			96	90	13	Standard
⌈>	**In-1**	**115**		ug/L			25788	24152	2	KED
|	**Cd**	**111**	**0.025**	ug/L	0.004	14	1	11	14	KED
⌊	**Cd**	**114**	**0.030**	ug/L	0.009	28	2	33	28	KED
⌈>	**Tb**	**159**		ug/L			3667915	3698163	1	Standard
⌊	**Pb**	**208**	**0.033**	ug/L	0.000	1	708	5678	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLJ
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 03:55:03
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	20894	3	Standard
	Cl	**37**		ug/L			4261922	4116815	1	Standard
⌈>	**Sc**	**45**		ug/L			909878	958491	1	Standard
|	**Cr**	**52**	**0.055**	ug/L	0.017	31	13848	15715	2	Standard
⌊	**Cr**	**53**	**0.006**	ug/L	0.007	117	127	147	9	Standard
⌈>	**Ge**	**72**		ug/L			101344	90240	0	KED
|	**Ni**	**60**	**0.028**	ug/L	0.004	13	27	78	9	KED
|	**Ni**	**62**	**0.034**	ug/L	0.022	62	4	14	45	KED
|	**Cu**	**63**	**0.006**	ug/L	0.005	84	107	128	21	KED
|	**Cu**	**65**	**0.009**	ug/L	0.005	55	45	64	21	KED
|	**Zn**	**66**	**0.548**	ug/L	0.041	7	98	475	6	KED
|	**Zn**	**67**	**0.440**	ug/L	0.049	11	14	64	8	KED
⌊	**As**	**75**	**-0.000**	ug/L	0.001	770	3	3	14	KED
	Y	**89**		ug/L			500295	489290	0	Standard
	Kr	**83**		ug/L			96	95	24	Standard
⌈>	**In-1**	**115**		ug/L			25788	23821	3	KED
|	**Cd**	**111**	**0.000**	ug/L	0.005	1689	1	1	124	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.002	132	2	3	52	KED
⌈>	**Tb**	**159**		ug/L			3667915	3588217	1	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.000	13	708	1210	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVG
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 03:58:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	19373	2	Standard
	Cl	**37**		ug/L			4261922	4288700	1	Standard
⌈>	**Sc**	**45**		ug/L			909878	976875	0	Standard
|	**Cr**	**52**	**50.903**	ug/L	0.997	1	13848	1069658	1	Standard
⌊	**Cr**	**53**	**50.494**	ug/L	0.464	0	127	123853	0	Standard
⌈>	**Ge**	**72**		ug/L			101344	92854	0	KED
|	**Ni**	**60**	**49.243**	ug/L	0.341	0	27	99170	1	KED
|	**Ni**	**62**	**50.866**	ug/L	0.299	0	4	16206	0	KED
|	**Cu**	**63**	**50.499**	ug/L	0.922	1	107	290488	1	KED
|	**Cu**	**65**	**50.632**	ug/L	0.357	0	45	146331	0	KED
|	**Zn**	**66**	**49.675**	ug/L	0.200	0	98	36280	0	KED
|	**Zn**	**67**	**49.634**	ug/L	0.751	1	14	6015	1	KED
⌊	**As**	**75**	**49.059**	ug/L	0.306	0	3	17526	0	KED
	Y	**89**		ug/L			500295	514072	1	Standard
	Kr	**83**		ug/L			96	93	9	Standard
⌈>	**In-1**	**115**		ug/L			25788	25546	0	KED
|	**Cd**	**111**	**50.666**	ug/L	0.535	1	1	20991	1	KED
⌊	**Cd**	**114**	**50.302**	ug/L	0.781	1	2	54706	2	KED
⌈>	**Tb**	**159**		ug/L			3667915	3730972	0	Standard
⌊	**Pb**	**208**	**50.230**	ug/L	0.725	1	708	7636165	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBG
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 04:04:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	18332	1	Standard
	Cl	**37**		ug/L			4261922	4190946	1	Standard
⌈>	**Sc**	**45**		ug/L			909878	968967	1	Standard
|	**Cr**	**52**	**0.023**	ug/L	0.027	117	13848	15213	1	Standard
⌊	**Cr**	**53**	**-0.004**	ug/L	0.002	57	127	126	3	Standard
⌈>	**Ge**	**72**		ug/L			101344	90856	0	KED
|	**Ni**	**60**	**-0.000**	ug/L	0.002	1077	27	24	16	KED
|	**Ni**	**62**	**-0.009**	ug/L	0.007	81	4	1	173	KED
|	**Cu**	**63**	**-0.003**	ug/L	0.002	47	107	78	11	KED
|	**Cu**	**65**	**0.003**	ug/L	0.002	93	45	47	14	KED
|	**Zn**	**66**	**0.001**	ug/L	0.022	2295	98	88	17	KED
|	**Zn**	**67**	**-0.036**	ug/L	0.061	169	14	8	81	KED
⌊	**As**	**75**	**0.004**	ug/L	0.004	102	3	4	31	KED
	Y	**89**		ug/L			500295	505159	2	Standard
	Kr	**83**		ug/L			96	118	18	Standard
⌈>	**In-1**	**115**		ug/L			25788	24607	0	KED
|	**Cd**	**111**	**0.003**	ug/L	0.005	193	1	2	78	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.003	149	2	4	69	KED
⌈>	**Tb**	**159**		ug/L			3667915	3637073	0	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	9	708	589	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 04:07:30
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	28859	1	Standard
	Cl	**37**		ug/L			4261922	4383172	2	Standard
>	**Sc**	**45**		ug/L			909878	1114139	0	Standard
	Cr	**52**	**0.045**	ug/L	0.014	31	13848	18017	1	Standard
	Cr	**53**	**0.007**	ug/L	0.004	59	127	176	7	Standard
>	**Ge**	**72**		ug/L			101344	97051	0	KED
	Ni	**60**	**0.010**	ug/L	0.004	39	27	46	16	KED
	Ni	**62**	**0.004**	ug/L	0.006	132	4	5	33	KED
	Cu	**63**	**0.004**	ug/L	0.004	102	107	126	18	KED
	Cu	**65**	**0.012**	ug/L	0.000	1	45	80	1	KED
	Zn	**66**	**0.071**	ug/L	0.020	28	98	148	10	KED
	Zn	**67**	**0.125**	ug/L	0.099	79	14	29	42	KED
	As	**75**	**0.000**	ug/L	0.002	35278	3	3	19	KED
	Y	**89**		ug/L			500295	573354	1	Standard
	Kr	**83**		ug/L			96	90	11	Standard
>	**In-1**	**115**		ug/L			25788	27232	2	KED
	Cd	**111**	**0.002**	ug/L	0.002	121	1	2	43	KED
	Cd	**114**	**-0.001**	ug/L	0.002	278	2	1	110	KED
>	**Tb**	**159**		ug/L			3667915	4023101	2	Standard
	Pb	**208**	**0.001**	ug/L	0.000	40	708	880	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 04:10:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	29452	3	Standard
	Cl	**37**		ug/L			4261922	4469928	1	Standard
⌈>	**Sc**	**45**		ug/L			909878	1101180	0	Standard
|	**Cr**	**52**	**0.060**	ug/L	0.004	7	13848	18173	1	Standard
⌊	**Cr**	**53**	**0.005**	ug/L	0.005	94	127	169	7	Standard
⌈>	**Ge**	**72**		ug/L			101344	97423	1	KED
|	**Ni**	**60**	**0.010**	ug/L	0.007	65	27	47	28	KED
|	**Ni**	**62**	**0.014**	ug/L	0.008	60	4	8	32	KED
|	**Cu**	**63**	**0.003**	ug/L	0.004	125	107	121	18	KED
|	**Cu**	**65**	**0.005**	ug/L	0.001	16	45	57	5	KED
|	**Zn**	**66**	**0.041**	ug/L	0.032	78	98	125	18	KED
|	**Zn**	**67**	**0.090**	ug/L	0.060	66	14	25	28	KED
⌊	**As**	**75**	**-0.000**	ug/L	0.003	4837	3	3	37	KED
	Y	**89**		ug/L			500295	575346	0	Standard
	Kr	**83**		ug/L			96	109	15	Standard
⌈>	**In-1**	**115**		ug/L			25788	27690	3	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.002	133	1	0	100	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.001	73	2	0	119	KED
⌈>	**Tb**	**159**		ug/L			3667915	4040936	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	49	708	869	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 04:13:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	28875	2	Standard
	Cl	**37**		ug/L			4261922	4353711	2	Standard
>	**Sc**	**45**		ug/L			909878	1085787	1	Standard
	Cr	**52**	**0.060**	ug/L	0.001	2	13848	17919	2	Standard
	Cr	**53**	**0.005**	ug/L	0.003	59	127	166	5	Standard
>	**Ge**	**72**		ug/L			101344	96664	2	KED
	Ni	**60**	**0.012**	ug/L	0.005	44	27	52	24	KED
	Ni	**62**	**0.016**	ug/L	0.010	60	4	9	34	KED
	Cu	**63**	**0.002**	ug/L	0.002	95	107	117	10	KED
	Cu	**65**	**0.009**	ug/L	0.005	48	45	71	21	KED
	Zn	**66**	**0.022**	ug/L	0.007	31	98	110	5	KED
	Zn	**67**	**0.087**	ug/L	0.069	79	14	24	33	KED
	As	**75**	**-0.000**	ug/L	0.004	943	3	3	39	KED
	Y	**89**		ug/L			500295	556401	1	Standard
	Kr	**83**		ug/L			96	102	25	Standard
>	**In-1**	**115**		ug/L			25788	27054	2	KED
	Cd	**111**	**0.003**	ug/L	0.003	98	1	3	45	KED
	Cd	**114**	**-0.001**	ug/L	0.002	275	2	1	104	KED
>	**Tb**	**159**		ug/L			3667915	3998616	1	Standard
	Pb	**208**	**0.001**	ug/L	0.000	15	708	882	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 04:16:50
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	19438	1	Standard
	Cl	**37**		ug/L			4261922	4000806	1	Standard
⌈>	**Sc**	**45**		ug/L			909878	894866	1	Standard
|	**Cr**	**52**	**0.046**	ug/L	0.019	42	13848	14480	0	Standard
⌊	**Cr**	**53**	**-0.006**	ug/L	0.004	60	127	111	5	Standard
⌈>	**Ge**	**72**		ug/L			101344	90117	1	KED
|	**Ni**	**60**	**-0.003**	ug/L	0.002	88	27	19	26	KED
|	**Ni**	**62**	**0.004**	ug/L	0.004	102	4	5	21	KED
|	**Cu**	**63**	**-0.003**	ug/L	0.002	62	107	78	12	KED
|	**Cu**	**65**	**0.003**	ug/L	0.003	86	45	48	13	KED
|	**Zn**	**66**	**0.129**	ug/L	0.019	14	98	179	9	KED
|	**Zn**	**67**	**0.128**	ug/L	0.050	39	14	27	19	KED
⌊	**As**	**75**	**-0.002**	ug/L	0.004	161	3	2	54	KED
	Y	**89**		ug/L			500295	463605	3	Standard
	Kr	**83**		ug/L			96	92	10	Standard
⌈>	**In-1**	**115**		ug/L			25788	24262	1	KED
|	**Cd**	**111**	**0.005**	ug/L	0.004	71	1	3	41	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.001	55	2	4	26	KED
⌈>	**Tb**	**159**		ug/L			3667915	3384947	2	Standard
⌊	**Pb**	**208**	**-0.002**	ug/L	0.000	10	708	386	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 04:19:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	18535	2	Standard
	Cl	**37**		ug/L			4261922	4016364	1	Standard
⌈>	**Sc**	**45**		ug/L			909878	900217	2	Standard
|	**Cr**	**52**	**0.027**	ug/L	0.030	110	13848	14216	1	Standard
⌊	**Cr**	**53**	**-0.007**	ug/L	0.002	21	127	110	4	Standard
⌈>	**Ge**	**72**		ug/L			101344	90276	1	KED
|	**Ni**	**60**	**-0.001**	ug/L	0.004	377	27	22	38	KED
|	**Ni**	**62**	**0.004**	ug/L	0.007	195	4	5	43	KED
|	**Cu**	**63**	**-0.002**	ug/L	0.003	120	107	83	15	KED
|	**Cu**	**65**	**0.001**	ug/L	0.004	419	45	43	29	KED
|	**Zn**	**66**	**0.138**	ug/L	0.034	24	98	185	11	KED
|	**Zn**	**67**	**0.084**	ug/L	0.015	17	14	22	8	KED
⌊	**As**	**75**	**-0.002**	ug/L	0.002	100	3	2	26	KED
	Y	**89**		ug/L			500295	461591	0	Standard
	Kr	**83**		ug/L			96	76	18	Standard
⌈>	**In-1**	**115**		ug/L			25788	24119	4	KED
|	**Cd**	**111**	**0.004**	ug/L	0.002	69	1	2	33	KED
⌊	**Cd**	**114**	**-0.000**	ug/L	0.002	439	2	1	107	KED
⌈>	**Tb**	**159**		ug/L			3667915	3447648	1	Standard
⌊	**Pb**	**208**	**-0.002**	ug/L	0.000	12	708	351	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, August 05, 2021 04:23:03
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\080421_mod.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			15621	18553	4	Standard
	Cl	**37**		ug/L			4261922	4002878	1	Standard
⌈>	**Sc**	**45**		ug/L			909878	890702	1	Standard
|	**Cr**	**52**	**0.045**	ug/L	0.011	24	13848	14399	1	Standard
⌊	**Cr**	**53**	**-0.006**	ug/L	0.004	64	127	112	8	Standard
⌈>	**Ge**	**72**		ug/L			101344	90035	2	KED
|	**Ni**	**60**	**-0.001**	ug/L	0.003	226	27	21	30	KED
|	**Ni**	**62**	**0.002**	ug/L	0.020	1193	4	4	137	KED
|	**Cu**	**63**	**0.001**	ug/L	0.001	219	107	99	8	KED
|	**Cu**	**65**	**0.002**	ug/L	0.002	112	45	44	10	KED
|	**Zn**	**66**	**0.108**	ug/L	0.012	10	98	163	6	KED
|	**Zn**	**67**	**0.079**	ug/L	0.035	45	14	22	19	KED
⌊	**As**	**75**	**0.001**	ug/L	0.003	228	3	3	25	KED
	Y	**89**		ug/L			500295	457920	2	Standard
	Kr	**83**		ug/L			96	85	17	Standard
⌈>	**In-1**	**115**		ug/L			25788	24045	0	KED
|	**Cd**	**111**	**0.002**	ug/L	0.003	147	1	2	49	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.003	71	2	6	45	KED
⌈>	**Tb**	**159**		ug/L			3667915	3392004	2	Standard
⌊	**Pb**	**208**	**-0.002**	ug/L	0.000	13	708	326	12	Standard

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Instrument ID: ICPMS1
Calibration: EH00007
Control Limt: +/- 10.00%
Sequence: SJH0041

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SJH0041-ICV1	Arsenic-75a	50.000	49.0	98.0	ug/L	PA 6020B UCT-KE
SJH0041-CCV1	Arsenic-75a	50.000	48.8	97.6	ug/L	PA 6020B UCT-KE
SJH0041-CCV2	Arsenic-75a	50.000	49.0	98.1	ug/L	PA 6020B UCT-KE
SJH0041-CCV3	Arsenic-75a	50.000	48.9	97.7	ug/L	PA 6020B UCT-KE
SJH0041-CCV4	Arsenic-75a	50.000	47.8	95.7	ug/L	PA 6020B UCT-KE
SJH0041-CCV5	Arsenic-75a	50.000	48.7	97.3	ug/L	PA 6020B UCT-KE
SJH0041-CCV6	Arsenic-75a	50.000	49.7	99.3	ug/L	PA 6020B UCT-KE
SJH0041-CCV7	Arsenic-75a	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
SJH0041-CCV8	Arsenic-75a	50.000	48.4	96.9	ug/L	PA 6020B UCT-KE
SJH0041-CCV9	Arsenic-75a	50.000	48.7	97.4	ug/L	PA 6020B UCT-KE
SJH0041-CCVA	Arsenic-75a	50.000	48.6	97.1	ug/L	PA 6020B UCT-KE
SJH0041-CCVB	Arsenic-75a	50.000	49.0	98.0	ug/L	PA 6020B UCT-KE
SJH0041-CCVC	Arsenic-75a	50.000	48.5	96.9	ug/L	PA 6020B UCT-KE
SJH0041-CCVD	Arsenic-75a	50.000	47.3	94.6	ug/L	PA 6020B UCT-KE
SJH0041-CCVE	Arsenic-75a	50.000	49.0	98.0	ug/L	PA 6020B UCT-KE
SJH0041-CCVF	Arsenic-75a	50.000	49.0	98.0	ug/L	PA 6020B UCT-KE

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Instrument ID: ICPMS1
Calibration: EH00009
Control Limt: +/- 10.00%
Sequence: SJH0067

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SJH0067-ICV1	Arsenic-75a	50.000	47.1	94.3	ug/L	PA 6020B UCT-KE
SJH0067-CCV1	Arsenic-75a	50.000	48.3	96.7	ug/L	PA 6020B UCT-KE
SJH0067-CCV2	Arsenic-75a	50.000	48.4	96.7	ug/L	PA 6020B UCT-KE
SJH0067-CCV3	Arsenic-75a	50.000	48.7	97.5	ug/L	PA 6020B UCT-KE
SJH0067-CCV4	Arsenic-75a	50.000	48.9	97.7	ug/L	PA 6020B UCT-KE
SJH0067-CCV5	Arsenic-75a	50.000	48.0	96.1	ug/L	PA 6020B UCT-KE
SJH0067-CCV6	Arsenic-75a	50.000	47.9	95.8	ug/L	PA 6020B UCT-KE
SJH0067-CCV7	Arsenic-75a	50.000	49.2	98.4	ug/L	PA 6020B UCT-KE
SJH0067-CCV8	Arsenic-75a	50.000	48.9	97.9	ug/L	PA 6020B UCT-KE
SJH0067-CCV9	Arsenic-75a	50.000	49.7	99.5	ug/L	PA 6020B UCT-KE
SJH0067-CCVA	Arsenic-75a	50.000	48.3	96.7	ug/L	PA 6020B UCT-KE
SJH0067-CCVB	Arsenic-75a	50.000	48.7	97.5	ug/L	PA 6020B UCT-KE
SJH0067-CCVC	Arsenic-75a	50.000	48.6	97.2	ug/L	PA 6020B UCT-KE
SJH0067-CCVD	Arsenic-75a	50.000	49.7	99.5	ug/L	PA 6020B UCT-KE
SJH0067-CCVE	Arsenic-75a	50.000	49.2	98.4	ug/L	PA 6020B UCT-KE
SJH0067-CCVF	Arsenic-75a	50.000	50.2	100	ug/L	PA 6020B UCT-KE
SJH0067-CCVG	Arsenic-75a	50.000	49.1	98.1	ug/L	PA 6020B UCT-KE

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, Inc.
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SJH0041

SDG: 21G0212
Project: Lower Duwamish AOC4
Calibration: EH00007
Date Analyzed: 08/03/21 16:36

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SJH0041-IBL1	Arsenic-75a	0.00500	0.0373	0.200	ug/L	
SJH0041-ICB1	Arsenic-75a	0.00300	0.0373	0.200	ug/L	
SJH0041-CCB1	Arsenic-75a	-0.00200	0.0373	0.200	ug/L	
SJH0041-IBL2	Arsenic-75a	0.0110	0.0373	0.200	ug/L	
SJH0041-IBL3	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	
SJH0041-CCB2	Arsenic-75a	-0.00200	0.0373	0.200	ug/L	
SJH0041-CCB3	Arsenic-75a	0.00600	0.0373	0.200	ug/L	
SJH0041-IBL4	Arsenic-75a	-0.00200	0.0373	0.200	ug/L	
SJH0041-IBL5	Arsenic-75a	0.00400	0.0373	0.200	ug/L	
SJH0041-IBL6	Arsenic-75a	-0.00200	0.0373	0.200	ug/L	
SJH0041-IBL7	Arsenic-75a	0.00200	0.0373	0.200	ug/L	
SJH0041-IBL8	Arsenic-75a	0.00300	0.0373	0.200	ug/L	
SJH0041-CCB4	Arsenic-75a	0.00300	0.0373	0.200	ug/L	
SJH0041-IBL9	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SJH0041-CCB5	Arsenic-75a	0.0140	0.0373	0.200	ug/L	
SJH0041-IBLA	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SJH0041-IBLB	Arsenic-75a	0.0490	0.0373	0.200	ug/L	
SJH0041-CCB6	Arsenic-75a	0.0120	0.0373	0.200	ug/L	
SJH0041-CCB7	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	
SJH0041-IBLC	Arsenic-75a	0.0340	0.0373	0.200	ug/L	
SJH0041-CCB8	Arsenic-75a	-0.00300	0.0373	0.200	ug/L	
SJH0041-CCB9	Arsenic-75a	-0.00300	0.0373	0.200	ug/L	
SJH0041-IBLD	Arsenic-75a	0.00700	0.0373	0.200	ug/L	
SJH0041-CCBA	Arsenic-75a	0.00200	0.0373	0.200	ug/L	
SJH0041-IBLE	Arsenic-75a	-0.00600	0.0373	0.200	ug/L	
SJH0041-CCBB	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SJH0041-IBLF	Arsenic-75a	-0.0120	0.0373	0.200	ug/L	
SJH0041-CCBC	Arsenic-75a	-0.00800	0.0373	0.200	ug/L	
SJH0041-IBLG	Arsenic-75a	-0.0120	0.0373	0.200	ug/L	
SJH0041-CCBD	Arsenic-75a	-0.00800	0.0373	0.200	ug/L	
SJH0041-CCBE	Arsenic-75a	0.00500	0.0373	0.200	ug/L	
SJH0041-IBLH	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SJH0041-CCBF	Arsenic-75a	0.00100	0.0373	0.200	ug/L	

Analytical Resources, Incorporated
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INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, Inc.
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SJH0067

SDG: 21G0212
Project: Lower Duwamish AOC4
Calibration: EH00009
Date Analyzed: 08/04/21 14:37

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SJH0067-IBL1	Arsenic-75a	0.00700	0.0373	0.200	ug/L	
SJH0067-ICB1	Arsenic-75a	0.00300	0.0373	0.200	ug/L	
SJH0067-CCB1	Arsenic-75a	0.00700	0.0373	0.200	ug/L	
SJH0067-IBL2	Arsenic-75a	0.0160	0.0373	0.200	ug/L	
SJH0067-IBL3	Arsenic-75a	0.0130	0.0373	0.200	ug/L	
SJH0067-CCB2	Arsenic-75a	0.0100	0.0373	0.200	ug/L	
SJH0067-IBL4	Arsenic-75a	0.00900	0.0373	0.200	ug/L	
SJH0067-CCB3	Arsenic-75a	0.00800	0.0373	0.200	ug/L	
SJH0067-IBL5	Arsenic-75a	-0.00200	0.0373	0.200	ug/L	
SJH0067-CCB4	Arsenic-75a	0.00400	0.0373	0.200	ug/L	
SJH0067-IBL6	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SJH0067-CCB5	Arsenic-75a	0.00700	0.0373	0.200	ug/L	
SJH0067-IBL7	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SJH0067-IBL8	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SJH0067-IBL9	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	
SJH0067-CCB6	Arsenic-75a	0.00500	0.0373	0.200	ug/L	
SJH0067-CCB7	Arsenic-75a	-0.00300	0.0373	0.200	ug/L	
SJH0067-IBLA	Arsenic-75a	0.0460	0.0373	0.200	ug/L	
SJH0067-CCB8	Arsenic-75a	0.00800	0.0373	0.200	ug/L	
SJH0067-IBLB	Arsenic-75a	0.00200	0.0373	0.200	ug/L	
SJH0067-CCB9	Arsenic-75a	-0.00200	0.0373	0.200	ug/L	
SJH0067-IBLC	Arsenic-75a	-0.00500	0.0373	0.200	ug/L	
SJH0067-IBLD	Arsenic-75a	-0.00200	0.0373	0.200	ug/L	
SJH0067-CCBA	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SJH0067-IBLE	Arsenic-75a	-0.00500	0.0373	0.200	ug/L	
SJH0067-CCBB	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	
SJH0067-CCBC	Arsenic-75a	0.00200	0.0373	0.200	ug/L	
SJH0067-IBLF	Arsenic-75a	-0.00400	0.0373	0.200	ug/L	
SJH0067-CCBD	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SJH0067-IBLG	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	
SJH0067-CCBE	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	
SJH0067-IBLH	Arsenic-75a	0.00200	0.0373	0.200	ug/L	
SJH0067-IBLI	Arsenic-75a	-0.00200	0.0373	0.200	ug/L	
SJH0067-CCBF	Arsenic-75a	0.00200	0.0373	0.200	ug/L	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, Inc.
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SJH0067

SDG: 21G0212
Project: Lower Duwamish AOC4
Calibration: EH00009
Date Analyzed: 08/05/21 03:55

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SJH0067-IBLJ	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SJH0067-CCBG	Arsenic-75a	0.00400	0.0373	0.200	ug/L	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0041	Instrument:	ICPMS1
		Calibration:	EH00007

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SJH0041-CAL1	XDT_m1210803-006	NA	08/03/21 16:05
CAL 1 - LOW CHECK	SJH0041-CAL2	XDT_m1210803-007	NA	08/03/21 16:09
CAL 2	SJH0041-CAL3	XDT_m1210803-008	NA	08/03/21 16:14
CAL 3	SJH0041-CAL4	XDT_m1210803-009	NA	08/03/21 16:18
CAL 4	SJH0041-CAL5	XDT_m1210803-010	NA	08/03/21 16:23
CAL 5	SJH0041-CAL6	XDT_m1210803-011	NA	08/03/21 16:29
RINSE	SJH0041-IBL1	XDT_m1210803-012	NA	08/03/21 16:36
Initial Cal Check	SJH0041-ICV1	XDT_m1210803-014	NA	08/03/21 16:42
Initial Cal Blank	SJH0041-ICB1	XDT_m1210803-015	NA	08/03/21 16:49
Calibration Check	SJH0041-CCV1	XDT_m1210803-016	NA	08/03/21 16:53
Calibration Blank	SJH0041-CCB1	XDT_m1210803-017	NA	08/03/21 17:02
Instrument RL Check	SJH0041-CRL1	XDT_m1210803-018	NA	08/03/21 17:10
Interference Check A	SJH0041-IFA1	XDT_m1210803-019	NA	08/03/21 17:14
Interference Check B	SJH0041-IFB1	XDT_m1210803-020	NA	08/03/21 17:19
LR200	SJH0041-HCV1	XDT_m1210803-021	NA	08/03/21 17:23
LR300	SJH0041-HCV2	XDT_m1210803-022	NA	08/03/21 17:27
Instrument Blank	SJH0041-IBL2	XDT_m1210803-023	NA	08/03/21 17:34
Instrument Blank	SJH0041-IBL3	XDT_m1210803-024	NA	08/03/21 17:41
Calibration Check	SJH0041-CCV2	XDT_m1210803-025	NA	08/03/21 17:47
Calibration Blank	SJH0041-CCB2	XDT_m1210803-026	NA	08/03/21 17:54
Calibration Check	SJH0041-CCV3	XDT_m1210803-028	NA	08/03/21 18:04
Calibration Blank	SJH0041-CCB3	XDT_m1210803-029	NA	08/03/21 18:11
Instrument Blank	SJH0041-IBL4	XDT_m1210803-035	NA	08/03/21 18:39
Instrument Blank	SJH0041-IBL5	XDT_m1210803-036	NA	08/03/21 18:44
Instrument Blank	SJH0041-IBL6	XDT_m1210803-037	NA	08/03/21 18:57
Instrument Blank	SJH0041-IBL7	XDT_m1210803-038	NA	08/03/21 19:13
Instrument Blank	SJH0041-IBL8	XDT_m1210803-039	NA	08/03/21 19:18
Calibration Check	SJH0041-CCV4	XDT_m1210803-040	NA	08/03/21 19:24
Calibration Blank	SJH0041-CCB4	XDT_m1210803-041	NA	08/03/21 19:31
LDW21-IT579B	21G0212-09	XDT_m1210803-048	Solid	08/03/21 20:14

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0041	Instrument:	ICPMS1
		Calibration:	EH00007

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW21-IT597B	21G0212-10	XDT_m1210803-049	Solid	08/03/21 20:19
LDW21-IT597C	21G0212-11	XDT_m1210803-050	Solid	08/03/21 20:23
Instrument Blank	SJH0041-IBL9	XDT_m1210803-051	NA	08/03/21 20:29
Calibration Check	SJH0041-CCV5	XDT_m1210803-052	NA	08/03/21 20:34
Calibration Blank	SJH0041-CCB5	XDT_m1210803-053	NA	08/03/21 20:42
Blank	BJG0747-BLK1	XDT_m1210803-054	Solid	08/03/21 20:48
LCS	BJG0747-BS1	XDT_m1210803-055	Solid	08/03/21 20:53
Instrument Blank	SJH0041-IBLA	XDT_m1210803-057	NA	08/03/21 21:04
Instrument Blank	SJH0041-IBLB	XDT_m1210803-063	NA	08/03/21 21:37
Calibration Check	SJH0041-CCV6	XDT_m1210803-064	NA	08/03/21 21:43
Calibration Blank	SJH0041-CCB6	XDT_m1210803-065	NA	08/03/21 21:50
Calibration Check	SJH0041-CCV7	XDT_m1210803-068	NA	08/03/21 22:12
Calibration Blank	SJH0041-CCB7	XDT_m1210803-069	NA	08/03/21 22:19
ZZZZZ	21G0156-06	XDT_m1210803-071	Solid	08/03/21 22:30
Instrument Blank	SJH0041-IBLC	XDT_m1210803-079	NA	08/03/21 23:04
Calibration Check	SJH0041-CCV8	XDT_m1210803-080	NA	08/03/21 23:08
Calibration Blank	SJH0041-CCB8	XDT_m1210803-081	NA	08/03/21 23:15
Calibration Check	SJH0041-CCV9	XDT_m1210803-083	NA	08/03/21 23:25
Calibration Blank	SJH0041-CCB9	XDT_m1210803-084	NA	08/03/21 23:32
LDW21-IT597E	21G0212-12	XDT_m1210803-087	Solid	08/03/21 23:44
LDW21-IT582C	21G0212-07	XDT_m1210803-088	Solid	08/03/21 23:49
LDW21-IT582E	21G0212-08	XDT_m1210803-089	Solid	08/03/21 23:53
LDW21-IT582B	21G0212-06RE1	XDT_m1210803-090	Solid	08/03/21 23:57
LDW21-IT582B	BJG0747-DUP2	XDT_m1210803-091	Solid	08/04/21 00:01
LDW21-IT582B	BJG0747-MS2	XDT_m1210803-092	Solid	08/04/21 00:05
LDW21-IT582B	BJG0747-MSD2	XDT_m1210803-093	Solid	08/04/21 00:09
Instrument Blank	SJH0041-IBLD	XDT_m1210803-094	NA	08/04/21 00:13
Calibration Check	SJH0041-CCVA	XDT_m1210803-095	NA	08/04/21 00:17
Calibration Blank	SJH0041-CCBA	XDT_m1210803-096	NA	08/04/21 00:24
ZZZZZ	21G0156-07	XDT_m1210803-097	Solid	08/04/21 00:28

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0041	Instrument:	ICPMS1
		Calibration:	EH00007

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	21G0156-10	XDT_m1210803-098	Solid	08/04/21 00:31
ZZZZZ	21G0199-04	XDT_m1210803-099	Solid	08/04/21 00:35
ZZZZZ	21G0199-04	XDT_m1210803-099	Solid	08/04/21 00:35
ZZZZZ	21G0199-04	XDT_m1210803-099	Solid	08/04/21 00:35
ZZZZZ	21G0199-04	XDT_m1210803-099	Solid	08/04/21 00:35
ZZZZZ	21G0199-09	XDT_m1210803-100	Solid	08/04/21 00:39
ZZZZZ	21G0199-09	XDT_m1210803-100	Solid	08/04/21 00:39
ZZZZZ	21G0199-09	XDT_m1210803-100	Solid	08/04/21 00:39
ZZZZZ	21G0199-09	XDT_m1210803-100	Solid	08/04/21 00:39
Instrument Blank	SJH0041-IBLE	XDT_m1210803-106	NA	08/04/21 01:06
Calibration Check	SJH0041-CCVB	XDT_m1210803-107	NA	08/04/21 01:10
Calibration Blank	SJH0041-CCBB	XDT_m1210803-108	NA	08/04/21 01:16
Instrument Blank	SJH0041-IBLF	XDT_m1210803-118	NA	08/04/21 01:59
Calibration Check	SJH0041-CCVC	XDT_m1210803-119	NA	08/04/21 02:03
Calibration Blank	SJH0041-CCBC	XDT_m1210803-120	NA	08/04/21 02:10
ZZZZZ	21G0324-01	XDT_m1210803-123	Water	08/04/21 02:21
ZZZZZ	21G0324-01	XDT_m1210803-123	Water	08/04/21 02:21
ZZZZZ	21G0324-03	XDT_m1210803-124	Water	08/04/21 02:25
ZZZZZ	21G0324-03	XDT_m1210803-124	Water	08/04/21 02:25
ZZZZZ	21G0205-04	XDT_m1210803-125	Water	08/04/21 02:30
ZZZZZ	21G0205-04	XDT_m1210803-125	Water	08/04/21 02:30
ZZZZZ	21G0205-02	XDT_m1210803-126	Water	08/04/21 02:33
Instrument Blank	SJH0041-IBLG	XDT_m1210803-130	NA	08/04/21 02:54
Calibration Check	SJH0041-CCVD	XDT_m1210803-131	NA	08/04/21 02:58
Calibration Blank	SJH0041-CCBD	XDT_m1210803-132	NA	08/04/21 03:05
Calibration Check	SJH0041-CCVE	XDT_m1210803-134	NA	08/04/21 03:12
Calibration Blank	SJH0041-CCBE	XDT_m1210803-135	NA	08/04/21 03:19
ZZZZZ	21G0205-06	XDT_m1210803-136	Water	08/04/21 03:23
ZZZZZ	21G0205-06	XDT_m1210803-136	Water	08/04/21 03:23
ZZZZZ	21G0205-06	XDT_m1210803-136	Water	08/04/21 03:23

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0041	Instrument:	ICPMS1
		Calibration:	EH00007

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	21G0205-08	XDT_m1210803-137	Water	08/04/21 03:27
ZZZZZ	21G0205-08	XDT_m1210803-137	Water	08/04/21 03:27
ZZZZZ	21G0205-08	XDT_m1210803-137	Water	08/04/21 03:27
ZZZZZ	21G0205-10	XDT_m1210803-138	Water	08/04/21 03:30
ZZZZZ	21G0205-10	XDT_m1210803-138	Water	08/04/21 03:30
ZZZZZ	21G0205-10	XDT_m1210803-138	Water	08/04/21 03:30
ZZZZZ	21G0205-12	XDT_m1210803-139	Water	08/04/21 03:34
ZZZZZ	21G0205-12	XDT_m1210803-139	Water	08/04/21 03:34
ZZZZZ	21G0205-14	XDT_m1210803-140	Water	08/04/21 03:38
ZZZZZ	21G0205-14	XDT_m1210803-140	Water	08/04/21 03:38
ZZZZZ	21G0205-14	XDT_m1210803-140	Water	08/04/21 03:38
ZZZZZ	21G0205-16	XDT_m1210803-141	Water	08/04/21 03:42
ZZZZZ	21G0205-16	XDT_m1210803-141	Water	08/04/21 03:42
ZZZZZ	21G0205-16	XDT_m1210803-141	Water	08/04/21 03:42
ZZZZZ	21G0205-18	XDT_m1210803-142	Water	08/04/21 03:46
ZZZZZ	21G0205-18	XDT_m1210803-142	Water	08/04/21 03:46
ZZZZZ	21G0205-22	XDT_m1210803-144	Water	08/04/21 03:55
ZZZZZ	21G0205-22	XDT_m1210803-144	Water	08/04/21 03:55
Instrument Blank	SJH0041-IBLH	XDT_m1210803-145	NA	08/04/21 04:02
Calibration Check	SJH0041-CCVF	XDT_m1210803-146	NA	08/04/21 04:07
Calibration Blank	SJH0041-CCBF	XDT_m1210803-147	NA	08/04/21 04:13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0067	Instrument:	ICPMS1
		Calibration:	EH00009

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SJH0067-CAL1	XDT_m1210804-006	NA	08/04/21 14:06
CAL 1 - LOW CHECK	SJH0067-CAL2	XDT_m1210804-007	NA	08/04/21 14:10
CAL 2	SJH0067-CAL3	XDT_m1210804-008	NA	08/04/21 14:14
CAL 3	SJH0067-CAL4	XDT_m1210804-009	NA	08/04/21 14:19
CAL 4	SJH0067-CAL5	XDT_m1210804-010	NA	08/04/21 14:24
CAL 5	SJH0067-CAL6	XDT_m1210804-011	NA	08/04/21 14:30
RINSE	SJH0067-IBL1	XDT_m1210804-012	NA	08/04/21 14:37
Initial Cal Check	SJH0067-ICV1	XDT_m1210804-014	NA	08/04/21 14:42
Initial Cal Blank	SJH0067-ICB1	XDT_m1210804-015	NA	08/04/21 14:49
Calibration Check	SJH0067-CCV1	XDT_m1210804-016	NA	08/04/21 14:55
Calibration Blank	SJH0067-CCB1	XDT_m1210804-017	NA	08/04/21 15:02
Instrument RL Check	SJH0067-CRL1	XDT_m1210804-018	NA	08/04/21 15:07
Interference Check A	SJH0067-IFA1	XDT_m1210804-019	NA	08/04/21 15:14
Interference Check B	SJH0067-IFB1	XDT_m1210804-020	NA	08/04/21 15:19
LR200	SJH0067-HCV1	XDT_m1210804-021	NA	08/04/21 15:23
LR300	SJH0067-HCV2	XDT_m1210804-023	NA	08/04/21 15:34
Instrument Blank	SJH0067-IBL2	XDT_m1210804-024	NA	08/04/21 15:41
Instrument Blank	SJH0067-IBL3	XDT_m1210804-025	NA	08/04/21 15:47
Calibration Check	SJH0067-CCV2	XDT_m1210804-026	NA	08/04/21 15:54
Calibration Blank	SJH0067-CCB2	XDT_m1210804-027	NA	08/04/21 16:01
Instrument Blank	SJH0067-IBL4	XDT_m1210804-037	NA	08/04/21 16:48
Calibration Check	SJH0067-CCV3	XDT_m1210804-038	NA	08/04/21 16:52
Calibration Blank	SJH0067-CCB3	XDT_m1210804-039	NA	08/04/21 16:59
ZZZZZ	BJH0101-BLK1	XDT_m1210804-040	Water	08/04/21 17:09
ZZZZZ	BJH0101-BS1	XDT_m1210804-041	Water	08/04/21 17:13
Instrument Blank	SJH0067-IBL5	XDT_m1210804-049	NA	08/04/21 18:10
Calibration Check	SJH0067-CCV4	XDT_m1210804-050	NA	08/04/21 18:14
Calibration Blank	SJH0067-CCB4	XDT_m1210804-051	NA	08/04/21 18:21
Instrument Blank	SJH0067-IBL6	XDT_m1210804-061	NA	08/04/21 19:20
Calibration Check	SJH0067-CCV5	XDT_m1210804-062	NA	08/04/21 19:24

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0067	Instrument:	ICPMS1
		Calibration:	EH00009

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SJH0067-CCB5	XDT_m1210804-063	NA	08/04/21 19:31
Instrument Blank	SJH0067-IBL7	XDT_m1210804-065	NA	08/04/21 19:43
Instrument Blank	SJH0067-IBL8	XDT_m1210804-069	NA	08/04/21 20:07
ZZZZZ	21H0028-01	XDT_m1210804-070	Water	08/04/21 20:12
ZZZZZ	21H0028-01	XDT_m1210804-070	Water	08/04/21 20:12
ZZZZZ	21H0028-01	XDT_m1210804-070	Water	08/04/21 20:12
ZZZZZ	21H0028-01	XDT_m1210804-070	Water	08/04/21 20:12
ZZZZZ	21H0028-01	XDT_m1210804-070	Water	08/04/21 20:12
Instrument Blank	SJH0067-IBL9	XDT_m1210804-073	NA	08/04/21 20:32
Calibration Check	SJH0067-CCV6	XDT_m1210804-074	NA	08/04/21 20:36
Calibration Blank	SJH0067-CCB6	XDT_m1210804-075	NA	08/04/21 20:43
Calibration Check	SJH0067-CCV7	XDT_m1210804-077	NA	08/04/21 20:53
Calibration Blank	SJH0067-CCB7	XDT_m1210804-078	NA	08/04/21 21:00
Instrument Blank	SJH0067-IBLA	XDT_m1210804-088	NA	08/04/21 21:41
Calibration Check	SJH0067-CCV8	XDT_m1210804-089	NA	08/04/21 21:45
Calibration Blank	SJH0067-CCB8	XDT_m1210804-090	NA	08/04/21 21:52
Instrument Blank	SJH0067-IBLB	XDT_m1210804-100	NA	08/04/21 22:32
Calibration Check	SJH0067-CCV9	XDT_m1210804-101	NA	08/04/21 22:37
Calibration Blank	SJH0067-CCB9	XDT_m1210804-102	NA	08/04/21 22:43
Instrument Blank	SJH0067-IBLC	XDT_m1210804-110	NA	08/04/21 23:23
Instrument Blank	SJH0067-IBLD	XDT_m1210804-112	NA	08/04/21 23:38
Calibration Check	SJH0067-CCVA	XDT_m1210804-113	NA	08/04/21 23:43
Calibration Blank	SJH0067-CCBA	XDT_m1210804-114	NA	08/04/21 23:50
ZZZZZ	21G0339-01	XDT_m1210804-116	Water	08/04/21 23:57
ZZZZZ	21G0339-01	XDT_m1210804-116	Water	08/04/21 23:57
ZZZZZ	21G0339-01	XDT_m1210804-116	Water	08/04/21 23:57
ZZZZZ	21G0339-01	XDT_m1210804-116	Water	08/04/21 23:57
ZZZZZ	21G0339-01	XDT_m1210804-116	Water	08/04/21 23:57
ZZZZZ	21G0339-02	XDT_m1210804-117	Water	08/05/21 00:02
ZZZZZ	21G0339-02	XDT_m1210804-117	Water	08/05/21 00:02

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0067	Instrument:	ICPMS1
		Calibration:	EH00009

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	21G0339-02	XDT_m1210804-117	Water	08/05/21 00:02
ZZZZZ	21G0339-02	XDT_m1210804-117	Water	08/05/21 00:02
ZZZZZ	21G0339-02	XDT_m1210804-117	Water	08/05/21 00:02
ZZZZZ	21G0339-04	XDT_m1210804-118	Water	08/05/21 00:06
ZZZZZ	21G0339-04	XDT_m1210804-118	Water	08/05/21 00:06
ZZZZZ	21G0339-04	XDT_m1210804-118	Water	08/05/21 00:06
ZZZZZ	21G0339-04	XDT_m1210804-118	Water	08/05/21 00:06
ZZZZZ	21G0339-04	XDT_m1210804-118	Water	08/05/21 00:06
ZZZZZ	21G0339-05	XDT_m1210804-119	Water	08/05/21 00:11
ZZZZZ	21G0339-05	XDT_m1210804-119	Water	08/05/21 00:11
ZZZZZ	21G0339-05	XDT_m1210804-119	Water	08/05/21 00:11
ZZZZZ	21G0339-05	XDT_m1210804-119	Water	08/05/21 00:11
ZZZZZ	21G0339-05	XDT_m1210804-119	Water	08/05/21 00:11
ZZZZZ	21G0205-03	XDT_m1210804-123	Water	08/05/21 00:36
ZZZZZ	21G0205-03	XDT_m1210804-123	Water	08/05/21 00:36
ZZZZZ	21G0205-03	XDT_m1210804-123	Water	08/05/21 00:36
Instrument Blank	SJH0067-IBLE	XDT_m1210804-124	NA	08/05/21 00:41
Calibration Check	SJH0067-CCVB	XDT_m1210804-125	NA	08/05/21 00:47
Calibration Blank	SJH0067-CCBB	XDT_m1210804-126	NA	08/05/21 00:53
Calibration Check	SJH0067-CCVC	XDT_m1210804-128	NA	08/05/21 01:01
Calibration Blank	SJH0067-CCBC	XDT_m1210804-129	NA	08/05/21 01:07
ZZZZZ	21G0205-05	XDT_m1210804-130	Water	08/05/21 01:11
ZZZZZ	21G0205-05	XDT_m1210804-130	Water	08/05/21 01:11
ZZZZZ	21G0205-05	XDT_m1210804-130	Water	08/05/21 01:11
ZZZZZ	21G0205-07	XDT_m1210804-131	Water	08/05/21 01:15
ZZZZZ	21G0205-07	XDT_m1210804-131	Water	08/05/21 01:15
ZZZZZ	21G0205-07	XDT_m1210804-131	Water	08/05/21 01:15
ZZZZZ	21G0205-09	XDT_m1210804-132	Water	08/05/21 01:18
ZZZZZ	21G0205-09	XDT_m1210804-132	Water	08/05/21 01:18
ZZZZZ	21G0205-09	XDT_m1210804-132	Water	08/05/21 01:18

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0067	Instrument:	ICPMS1
		Calibration:	EH00009

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	21G0205-11	XDT_m1210804-133	Water	08/05/21 01:21
ZZZZZ	21G0205-11	XDT_m1210804-133	Water	08/05/21 01:21
ZZZZZ	21G0205-13	XDT_m1210804-134	Water	08/05/21 01:24
ZZZZZ	21G0205-13	XDT_m1210804-134	Water	08/05/21 01:24
ZZZZZ	21G0205-13	XDT_m1210804-134	Water	08/05/21 01:24
ZZZZZ	21G0205-15	XDT_m1210804-135	Water	08/05/21 01:28
ZZZZZ	21G0205-15	XDT_m1210804-135	Water	08/05/21 01:28
ZZZZZ	21G0205-15	XDT_m1210804-135	Water	08/05/21 01:28
ZZZZZ	21G0205-17	XDT_m1210804-136	Water	08/05/21 01:31
ZZZZZ	21G0205-17	XDT_m1210804-136	Water	08/05/21 01:31
ZZZZZ	21G0205-21	XDT_m1210804-138	Water	08/05/21 01:39
ZZZZZ	21G0205-21	XDT_m1210804-138	Water	08/05/21 01:39
Instrument Blank	SJH0067-IBLF	XDT_m1210804-139	NA	08/05/21 01:46
Calibration Check	SJH0067-CCVD	XDT_m1210804-140	NA	08/05/21 01:50
Calibration Blank	SJH0067-CCBD	XDT_m1210804-141	NA	08/05/21 01:56
ZZZZZ	21G0205-23	XDT_m1210804-142	Water	08/05/21 01:59
ZZZZZ	21G0205-23	XDT_m1210804-142	Water	08/05/21 01:59
ZZZZZ	21G0205-25	XDT_m1210804-143	Water	08/05/21 02:02
ZZZZZ	21G0205-25	XDT_m1210804-143	Water	08/05/21 02:02
ZZZZZ	21G0205-25	XDT_m1210804-143	Water	08/05/21 02:02
ZZZZZ	21G0205-27	XDT_m1210804-144	Water	08/05/21 02:05
ZZZZZ	21G0205-27	XDT_m1210804-144	Water	08/05/21 02:05
ZZZZZ	21G0205-29	XDT_m1210804-145	Water	08/05/21 02:08
ZZZZZ	21G0205-29	XDT_m1210804-145	Water	08/05/21 02:08
ZZZZZ	21G0205-26	XDT_m1210804-146	Water	08/05/21 02:11
ZZZZZ	21G0205-01	XDT_m1210804-147	Water	08/05/21 02:15
ZZZZZ	21G0205-01	XDT_m1210804-147	Water	08/05/21 02:15
Instrument Blank	SJH0067-IBLG	XDT_m1210804-151	NA	08/05/21 02:33
Calibration Check	SJH0067-CCVE	XDT_m1210804-152	NA	08/05/21 02:37
Calibration Blank	SJH0067-CCBE	XDT_m1210804-153	NA	08/05/21 02:43

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0067	Instrument:	ICPMS1
		Calibration:	EH00009

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	21G0205-24	XDT_m1210804-154	Water	08/05/21 02:46
ZZZZZ	21G0205-24	XDT_m1210804-154	Water	08/05/21 02:46
ZZZZZ	21G0205-28	XDT_m1210804-155	Water	08/05/21 02:49
ZZZZZ	21G0205-28	XDT_m1210804-155	Water	08/05/21 02:49
ZZZZZ	21G0205-30	XDT_m1210804-156	Water	08/05/21 02:53
Instrument Blank	SJH0067-IBLH	XDT_m1210804-157	NA	08/05/21 02:57
Instrument Blank	SJH0067-IBLI	XDT_m1210804-163	NA	08/05/21 03:21
Calibration Check	SJH0067-CCVF	XDT_m1210804-164	NA	08/05/21 03:25
Calibration Blank	SJH0067-CCBF	XDT_m1210804-165	NA	08/05/21 03:31
Instrument Blank	SJH0067-IBLJ	XDT_m1210804-171	NA	08/05/21 03:55
Calibration Check	SJH0067-CCVG	XDT_m1210804-172	NA	08/05/21 03:58
Calibration Blank	SJH0067-CCBG	XDT_m1210804-173	NA	08/05/21 04:04

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Instrument ID: ICPMS1
Calibration: EH00007
Sequence: SJH0041
Standard ID: J007152

Lab Sample ID	Analyte	True	Found	%R	Units
SJH0041-IFA1	Arsenic-75a	0	0.0190		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Instrument ID: ICPMS1
Calibration: EH00007
Sequence: SJH0041
Standard ID: J007152

Lab Sample ID	Analyte	True	Found	%R	Units
SJH0041-IFB1	Arsenic-75a	20.000	21.130	106	ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Instrument ID: ICPMS1
Calibration: EH00009
Sequence: SJH0067
Standard ID: J008098

Lab Sample ID	Analyte	True	Found	%R	Units
SJH0067-IFA1	Arsenic-75a	0	0.0270		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Instrument ID: ICPMS1
Calibration: EH00009
Sequence: SJH0067
Standard ID: J008098

Lab Sample ID	Analyte	True	Found	%R	Units
SJH0067-IFB1	Arsenic-75a	20.000	19.489	97.4	ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DETECTION LEVEL STANDARD
EPA 6020B UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Instrument ID: ICPMS1
Calibration: EH00007
Sequence: SJH0041
Lab Sample ID: SJH0041-CRL1

Analyte	True	Found	%R	Units	QC Limts
Arsenic-75a	0.20000	0.167	83.5	ug/L	50 - 150

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

DETECTION LEVEL STANDARD
EPA 6020B UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Instrument ID: ICPMS1
Calibration: EH00009
Sequence: SJH0067
Lab Sample ID: SJH0067-CRL1

Analyte	True	Found	%R	Units	QC Limts
Arsenic-75a	0.20000	0.193	96.5	ug/L	50 - 150

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Calibration: EH00007
Laboratory ID: SJH0041-HCV1
Sequence: SJH0041
Standard ID: J007549

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	200.00	197	-1.6	10.00

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Calibration: EH00007
Laboratory ID: SJH0041-HCV2
Sequence: SJH0041
Standard ID: J007893

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	300.00	296	-1.4	10.00

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Calibration: EH00009
Laboratory ID: SJH0067-HCV1
Sequence: SJH0067
Standard ID: J007549

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	200.00	192	-4.1	10.00

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Calibration: EH00009
Laboratory ID: SJH0067-HCV2
Sequence: SJH0067
Standard ID: J007893

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	300.00	292	-2.7	10.00

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HOLDING TIME SUMMARY

Analysis: EPA 6020B UCT-KED

Laboratory: Analytical Resources, Inc. SDG: 21G0212

Client: Anchor QEA, LLC Project: Lower Duwamish AOC4

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
LDW21-IT582B 21G0212-06RE1	07/16/21 08:16	07/16/21 17:39	08/02/21 11:35	17	180	08/03/21 23:57	19	180	
LDW21-IT582C 21G0212-07	07/16/21 08:16	07/16/21 17:39	08/02/21 11:35	17	180	08/03/21 23:49	19	180	
LDW21-IT582E 21G0212-08	07/16/21 08:16	07/16/21 17:39	08/02/21 11:35	17	180	08/03/21 23:53	19	180	
LDW21-IT579B 21G0212-09	07/16/21 11:23	07/16/21 17:39	08/02/21 11:35	17	180	08/03/21 20:14	18	180	
LDW21-IT597B 21G0212-10	07/16/21 14:07	07/16/21 17:39	08/02/21 11:35	16	180	08/03/21 20:19	18	180	
LDW21-IT597C 21G0212-11	07/16/21 14:07	07/16/21 17:39	08/02/21 11:35	16	180	08/03/21 20:23	18	180	
LDW21-IT597E 21G0212-12	07/16/21 14:07	07/16/21 17:39	08/02/21 11:35	16	180	08/03/21 23:44	18	180	
Duplicate BJG0747-DUP2	07/16/21 08:16	07/16/21 17:39	08/02/21 11:35	17	180	08/04/21 00:01	19	180	
Matrix Spike BJG0747-MS2	07/16/21 08:16	07/16/21 17:39	08/02/21 11:35	17	180	08/04/21 00:05	19	180	
Matrix Spike Dup BJG0747-MSD2	07/16/21 08:16	07/16/21 17:39	08/02/21 11:35	17	180	08/04/21 00:09	19	180	

* Indicates hold time exceedance.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

METHOD DETECTION AND REPORTING LIMITS

EPA 6020B UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Matrix: Solid
Instrument: ICPMS1

Analyte	MDL	RL	Units
Arsenic-75a	0.04	0.20	mg/kg

Analytical Resources, Incorporated
Analytical Chemists and Consultants

METHOD DETECTION AND REPORTING LIMITS

EPA 6020B UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Matrix: Water
Instrument: ICPMS1

Analyte	MDL	RL	Units
Arsenic-75a	0.0373	0.200	ug/L

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAG10
Lot Number:	P2-AG679501
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Silver
Starting Material:	Ag Shot
Starting Material Lot#:	2217
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9996 ± 30 µg/mL

Density: 1.053 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10015 ± 56 µg/mL**
ICP Assay NIST SRM 3151 Lot Number: 160729

Assay Method #2 **9992 ± 25 µg/mL**
Volhard NIST SRM 999c Lot Number: 999c

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

s	Ag	<		M	Eu	<	0.000253	O	Na		0.005562	M	Se	<	0.018179	M	Zn		0.005799
O	Al		0.006295	O	Fe		0.002932	M	Nb	<	0.000253	M	Si		0.022484	M	Zr	<	0.005559
M	As	<	0.002403	M	Ga	<	0.000253	M	Nd	<	0.000253	M	Sm	<	0.000253				
M	Au		0.001634	M	Gd	<	0.000253	O	Ni	<	0.005472	M	Sn		0.001927				
O	B	<	0.009978	M	Ge	<	0.000754	M	Os	<	0.000254	O	Sr		0.000086				
M	Ba	<	0.000785	M	Hf	<	0.000253	M	P	<	0.053784	M	Ta	<	0.000253				
M	Be	<	0.002407	M	Hg	<	0.001332	M	Pb		0.003281	M	Tb	<	0.000253				
M	Bi		0.001671	M	Ho	<	0.000253	M	Pd	<	0.001382	M	Te	<	0.003715				
O	Ca		0.007115	M	In	<	0.003483	M	Pr	<	0.000253	M	Th	<	0.000253				
M	Cd	<	0.000253	M	Ir	<	0.000254	M	Pt	<	0.000253	M	Ti	<	0.002706				
M	Ce	<	0.000573	O	K		0.004010	M	Rb	<	0.000253	M	Tl	<	0.000253				
M	Co	<	0.000253	M	La	<	0.000253	M	Re	<	0.000253	M	Tm	<	0.000253				
O	Cr	<	0.005043	O	Li	<	0.000214	M	Rh	<	0.000253	M	U	<	0.000253				
M	Cs	<	0.002769	M	Lu	<	0.000253	M	Ru	<	0.000254	M	V	<	0.000822				
O	Cu		0.004614	O	Mg		0.001034	M	S	<	0.560935	M	W	<	0.002146				
M	Dy	<	0.000253	M	Mn	<	0.000253	M	Sb	<	0.006899	M	Y	<	0.000253				
M	Er	<	0.000253	M	Mo	<	0.000479	M	Sc	<	0.000733	M	Yb	<	0.000253				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 107.87 +1 6 $Ag(H_2O)_6^+$
Chemical Compatibility -Stable in HNO_3, and HF. Avoid basic media. Ag forms more insoluble salts than any other metal. It also is subject to photochemical reduction to the metal in HCl media although 10 µg/mL solutions in 10% HCl [$AgCl_{x1-x}$] are commonly used in the analytical laboratory. The most common solubility problems exist with arsenate, arsenite , bromide, chloride, iodide, carbonate , chromate, cyanide, iodate, oxalate, oxide, sulfate, sulfide, tartrate, and thiocyanate in aqueous media. The addition of nitric acid renders many of these salts soluble.
Stability - 2-100 ppb levels stable for 75+ days when mixed with equivalent levels of all other elements including the precious metals (where chloride is present) when in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.
Ag Containing Samples (Preparation and Solution) -Metal (Soluble in HNO_3); Oxides (Soluble in HNO_3); Ores (Digestion with conc. HNO_3).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 107 amu	1 ppt	N/A	91Zr16O
ICP-OES 243.779 nm	0.12/0.01 µg/mL	1	Mn, Th, Ni, Rh
ICP-OES 328.068 nm	0.007/0.0007 µg/mL	1	Ce, Rh, V
ICP-OES 338.289 nm	0.013/0.001 µg/mL	1	Ce, Cr, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 07, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 07, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAS10
Lot Number:	R2-AS691113
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Arsenic
Starting Material:	As Pieces
Starting Material Lot#:	2208
Starting Material Purity:	99.9980%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9981 ± 55 µg/mL

Density: 1.028 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9981 ± 55 µg/mL**
ICP Assay NIST SRM 3103a Lot Number: 100818

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001578	M	Eu	<	0.000526	O	Na		0.036136	M	Se	<	0.014204	O	Zn	<	0.003390
O	Al		0.006694	M	Fe		0.002633	O	Nb	<	0.011526	O	Si		0.139479	M	Zr	<	0.003156
s	As	<		M	Ga	<	0.000526	M	Nd	<	0.000526	M	Sm	<	0.000526				
M	Au	<	0.000526	M	Gd	<	0.000526	O	Ni	<	0.005537	M	Sn	<	0.001052				
M	B		0.017011	M	Ge	<	0.000526	M	Os	<	0.000526	M	Sr	<	0.000526				
M	Ba	<	0.000526	M	Hf	<	0.000526	O	P	<	0.056500	M	Ta	<	0.000526				
O	Be	<	0.001130	M	Hg	<	0.002104	M	Pb	<	0.000526	M	Tb	<	0.000526				
M	Bi	<	0.002104	M	Ho	<	0.000526	M	Pd	<	0.000526	M	Te	<	0.003682				
O	Ca		0.005657	M	In	<	0.000526	M	Pr	<	0.002630	M	Th	<	0.000526				
M	Cd	<	0.000526	M	Ir	<	0.000526	M	Pt	<	0.000526	O	Ti	<	0.001017				
M	Ce	<	0.000526	O	K		0.003865	M	Rb	<	0.002104	M	Tl	<	0.000526				
M	Co	<	0.003156	M	La	<	0.000526	M	Re	<	0.000526	M	Tm	<	0.000526				
M	Cr		0.000877	M	Li	<	0.000526	M	Rh	<	0.000526	M	U	<	0.000526				
M	Cs	<	0.002104	M	Lu	<	0.000526	M	Ru	<	0.000526	M	V	<	0.001578				
M	Cu	<	0.003156	O	Mg		0.000235	O	S	<	0.056500	M	W	<	0.000526				
M	Dy	<	0.000526	M	Mn	<	0.001052	M	Sb	<	0.000526	M	Y	<	0.000526				
M	Er	<	0.000526	M	Mo	<	0.000526	M	Sc	<	0.002104	M	Yb	<	0.000526				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 74.92 ; mix of +3 and +5 ; 6 ; H_3AsO_4 and $HAsO_2$

Chemical Compatibility - Arsenic has no cationic chemistry. It is soluble in HCl, HNO_3,H_3PO_4, H_2SO_4 and HF aqueous matrices water and NH_4OH . It is stable with most inorganic anions (forms arsenate when boiled with chromate) but many cationic metals form the insoluble arsenates under pH neutral conditions. When fluorinated and / or under acidic conditions arsenate formation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO_3 / LDPE container.

As Containing Samples (Preparation and Solution) - Metal (soluble in 1:1 H_2O / HNO_3); Oxides (the oxide exists in crystalline and amorphous forms where the amorphic form is more water soluble. The oxides typically dissolve in dilute acidic solutions when boiled); Minerals (one gram of powered sample is fused in a Ni crucible with 10 grams of a 1:1 mix of K_2CO_3 and KNO_3 and the melt extracted with hot water); Organic Matrices (0.2 to 0.5 grams of sample are fused with 15 grams of a 1:1 Na_2CO_3 / Na_2O_2 mix in a Ni crucible. The fuseate is extracted with water and acidified with HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 75 amu	20 ppt	N/A	40Ar35Cl, 59Co16O, 36Ar38Ar1H,8Ar37Cl,Ar39K, 150Nd2+,150Sm2+
ICP-OES 189.042 nm	0.05/0.005 µg/mL	1	Cr
ICP-OES 193.696 nm	0.1/0.01 µg/mL	1	V, Ge
ICP-OES 228.812 nm	0.1/0.01 µg/mL	1	Cd, Pt, Ir, Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 25, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 25, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 - 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCD10
Lot Number:	P2-CD675954
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cadmium
Starting Material:	Cd Shot
Starting Material Lot#:	1954
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10014 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10021 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **10038 ± 43 µg/mL**
ICP Assay NIST SRM 3108 Lot Number: 130116

Assay Method #3 **9996 ± 30 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag		0.000834	O	Eu	<	0.002146	O	Na		0.003359	M	Se	<	0.003997	O	Zn		0.000251
O	Al		0.002435	O	Fe	<	0.001180	M	Nb	<	0.000399	O	Si		0.009519	M	Zr	<	0.000399
M	As	<	0.003997	M	Ga	<	0.000399	M	Nd	<	0.000399	M	Sm	<	0.000799				
M	Au	<	0.002809	M	Gd	<	0.000399	M	Ni	<	0.002398	M	Sn	<	0.000799				
M	B	<	0.005197	M	Ge	<	0.004397	M	Os	<	0.000401	O	Sr	<	0.000107				
M	Ba	<	0.000399	M	Hf	<	0.000399	O	P	<	0.023606	M	Ta	<	0.000399				
O	Be	<	0.000107	O	Hg	<	0.010730	M	Pb	<	0.001599	M	Tb	<	0.000399				
M	Bi	<	0.000399	M	Ho	<	0.000399	M	Pd	<	0.000799	M	Te	<	0.005596				
O	Ca		0.001399	O	In	<	0.015558	M	Pr	<	0.000399	M	Th	<	0.000399				
s	Cd	<		M	Ir	<	0.000401	M	Pt	<	0.000399	O	Ti	<	0.000536				
M	Ce	<	0.000399	O	K		0.004479	M	Rb	<	0.000399	M	Tl		0.000625				
M	Co	<	0.000399	M	La	<	0.000399	M	Re	<	0.000399	M	Tm	<	0.000399				
M	Cr	<	0.001199	O	Li	<	0.000214	M	Rh	<	0.000399	M	U	<	0.000399				
M	Cs	<	0.000399	M	Lu	<	0.000399	M	Ru	<	0.000401	M	V	<	0.001599				
O	Cu	<	0.003219	O	Mg		0.000083	O	S	<	0.021460	M	W	<	0.000799				
M	Dy	<	0.000399	O	Mn	<	0.000429	M	Sb	<	0.001599	M	Y	<	0.000399				
M	Er	<	0.000399	M	Mo	<	0.000399	O	Sc	<	0.000429	M	Yb	<	0.000399				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 112.41 +2 4 Cd2(OH) (aq)3+ and Cd(OH)(aq)
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 , and HF. Avoid basic media forming insoluble carbonate and hydroxide.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO3 / LDPE container.
Cd Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (soluble in HCl or HNO3); Ores (dissolve in HCl /HNO3 then take to fumes with H2SO4. The silica and lead sulfate are filtered off after the addition of water); Organic based (dry ash at 450°C and dissolve ash in HCl), (sulfuric / peroxide acid digestion).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 111 amu	11 ppt	n/a	95Mo16O
ICP-OES 214.438 nm	0.003 / 0.0003 µg/mL	1	Pt, Ir
ICP-OES 226.502 nm	0.003 / 0.0003 µg/mL	1	Ir
ICP-OES 228.802 nm	0.003 / 0.0003 µg/mL	1	Co, Ir, As, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 07, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 07, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCO10
Lot Number:	N2-CO671028
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cobalt
Starting Material:	COBALT
Starting Material Lot#:	1749
Starting Material Purity:	99.9978%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9988 ± 34 µg/mL

Density: 1.057 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9973 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **10024 ± 50 µg/mL**
ICP Assay NIST SRM traceable to 3113 Lot Number: M2-CO661665

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.022956	M	Eu	<	0.000422	O	Na		0.008125	M	Se	<	0.009290	M	Zn		0.007197
O	Al		0.013621	O	Fe		0.048700	M	Nb	<	0.000422	O	Si		0.017539	M	Zr	<	0.014357
i	As	<		M	Ga	<	0.000844	M	Nd	<	0.017735	M	Sm	<	0.001689				
M	Au	<	0.000583	M	Gd		0.003247	O	Ni	<	0.043642	M	Sn	<	0.005067				
M	B	<	0.013512	M	Ge	<	0.004645	M	Os	<	0.000583	O	Sr		0.000841				
O	Ba		0.071210	M	Hf	<	0.000422	n	P	<		M	Ta	<	0.000422				
O	Be	<	0.001771	M	Hg	<	0.002334	M	Pb		0.010094	M	Tb	<	0.001689				
M	Bi		0.000614	M	Ho	<	0.000422	M	Pd	<	0.000422	M	Te	<	0.008445				
O	Ca		0.025034	M	In	<	0.003378	M	Pr	<	0.006756	M	Th	<	0.000422				
M	Cd	<	0.000844	M	Ir	<	0.000583	M	Pt	<	0.000422	M	Ti	<	0.002533				
M	Ce		0.002721	O	K		0.005785	M	Rb	<	0.001689	M	Tl	<	0.000422				
s	Co	<		M	La		0.000877	M	Re		0.016853	M	Tm	<	0.000422				
M	Cr	<	0.020269	O	Li		0.000262	M	Rh	<	0.000422	M	U	<	0.000422				
M	Cs		0.000877	M	Lu	<	0.000422	M	Ru	<	0.000583	M	V	<	0.001689				
M	Cu		0.007197	O	Mg		0.003444	n	S	<		M	W	<	0.000844				
M	Dy	<	0.000422	O	Mn	<	0.006072	M	Sb	<	0.005911	M	Y		0.001228				
M	Er	<	0.000422	M	Mo	<	0.005911	M	Sc	<	0.001689	M	Yb	<	0.003378				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.93 +2 6 Co(H2O)62+
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
Co Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxides (Soluble in HCl); Ores (dissolve in HCl / HNO3).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 59 amu	2 ppt	n/a	42Ca16O1H , 40Ar18O1H , 36Ar23Na, 43Ca16O, 24Mg35Cl
ICP-OES 228.616 nm	0.01/0.001 µg/mL	1	
ICP-OES 237.862 nm	0.01/0.002 µg/mL	1	W, Re, Al, Ta
ICP-OES 238.892 nm	0.01/0.002 µg/mL	1	Fe, W, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 15, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 15, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCR(3)10
Lot Number:	P2-CR684202
Matrix:	10% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Chromium
Starting Material:	Cr METAL
Starting Material Lot#:	2077
Starting Material Purity:	99.9942%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10056 ± 49 µg/mL

Density: 1.084 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10061 ± 71 µg/mL**
ICP Assay NIST SRM 3112a Lot Number: 170630

Assay Method #2 **10052 ± 64 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000540	M	Eu	<	0.003200	O	Na		0.130027	M	Se	<	0.012000	O	Zn	<	0.002700
O	Al		0.016626	O	Fe		0.202502	M	Nb	<	0.022000	n	Si	<		M	Zr	<	0.020000
M	As		0.003836	O	Ga	<	0.031000	M	Nd	<	0.000540	M	Sm	<	0.035000				
M	Au	<	0.000540	M	Gd	<	0.000540	O	Ni		0.009165	M	Sn		0.004049				
M	B	<	0.049000	M	Ge	<	0.005400	M	Os	<	0.088000	O	Sr	<	0.000250				
O	Ba	<	0.002000	M	Hf	<	0.000540	i	P	<		M	Ta	<	0.000540				
O	Be	<	0.000250	M	Hg	<	0.001600	M	Pb		0.002557	M	Tb	<	0.000540				
M	Bi		0.008952	M	Ho	<	0.000540	M	Pd	<	0.001100	M	Te	<	0.004800				
O	Ca		0.074605	M	In	<	0.001100	M	Pr	<	0.000540	M	Th	<	0.000540				
M	Cd	<	0.000540	M	Ir	<	0.000540	M	Pt	<	0.000540	O	Ti		0.013428				
M	Ce	<	0.000540	O	K		0.034105	i	Rb	<		M	Tl	<	0.001100				
O	Co	<	0.002900	M	La	<	0.001100	M	Re	<	0.002700	O	Tm	<	0.001800				
s	Cr	<		O	Li	<	0.000130	M	Rh	<	0.032000	M	U	<	0.001100				
M	Cs	<	0.019000	M	Lu	<	0.000540	M	Ru	<	0.094000	O	V		0.159869				
O	Cu		0.010018	O	Mg		0.001449	i	S	<		M	W	<	0.028000				
M	Dy	<	0.000540	O	Mn	<	0.014000	M	Sb	<	0.008600	M	Y	<	0.001100				
M	Er	<	0.016000	O	Mo	<	0.013000	O	Sc	<	0.001400	M	Yb	<	0.000540				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 52.00 +3 6 Cr(H2O)63+

Chemical Compatibility -Stable in HCl, HNO3, H2SO4, HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Cr3 Containing Samples (Preparation and Solution) -Metal (soluble in HCl); Oxides/Ores (Chrome ore/oxides are very difficult to dissolve. The following procedures [A-D] are commonly used: A. Fusion with KHSO4 and extraction with hot KCl. The residue fused with Na2CO3 and KClO3, 3:1. B. Fusion with NaKSO4 and NaF 2:1, C. Fusion with magnesia or lime and sodium or potassium carbonates, 4:1. D. Fusion with Na2O2 or NaOH and KNO3 or NaOH and Na2O2. Nickel, iron, copper, or silver crucibles should be used for D. Platinum may be used for A, B, C); Organic Matrices (ash at 4500C followed by one of the fusion methods above or sulfuric/hydrogen peroxide acid digestions may be applicable to non oxide containing samples).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 52 amu	40 ppt	N/A	36S16O, 36Ar16O - The 50Cr, 53Cr, 54Cr lines suffer from many more potential interferences from sulfur, chlorine and argon compounds of oxygen, nitrogen and carbon.
ICP-OES 205.552 nm	0.006/0.0008 µg/mL	1	Os
ICP-OES 276.654 nm	0.01/0.001 µg/mL	1	Cu, Ta, V
ICP-OES 284.325 nm	0.008/0.0007 µg/mL	1	

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

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fax: 540.585.3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCU10
Lot Number:	P2-CU682108
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Copper
Starting Material:	Cu Metal
Starting Material Lot#:	2095
Starting Material Purity:	99.9996%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10013 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9977 ± 50 µg/mL**
ICP Assay NIST SRM 3114 Lot Number: 121207

Assay Method #2 **10024 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10007 ± 46 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.007542	M	Eu	<	0.000942	O	Na		0.001434	M	Se	<	0.016971	M	Zn	<	0.005657
O	Al	<	0.000609	O	Fe		0.008700	M	Nb	<	0.000942	O	Si		0.003052	M	Zr	<	0.000942
M	As	<	0.010371	M	Ga	<	0.000942	M	Nd	<	0.000942	M	Sm	<	0.000942				
M	Au	<	0.001885	M	Gd	<	0.000942	M	Ni		0.003781	M	Sn	<	0.005657				
O	B		0.003663	M	Ge	<	0.005657	M	Os	<	0.000942	M	Sr	<	0.000942				
M	Ba		0.004253	M	Hf	<	0.000942	O	P	<	0.031668	M	Ta	<	0.000942				
M	Be	<	0.000942	O	Hg	<	0.007064	M	Pb		0.005789	M	Tb	<	0.000942				
M	Bi	<	0.000942	M	Ho	<	0.000942	M	Pd	<	0.000942	M	Te	<	0.004714				
O	Ca		0.002304	M	In	<	0.000942	M	Pr	<	0.000942	M	Th	<	0.000942				
M	Cd	<	0.000942	M	Ir	<	0.000942	M	Pt	<	0.000942	O	Ti	<	0.002801				
M	Ce	<	0.000942	O	K		0.000763	M	Rb	<	0.000942	M	Tl	<	0.000942				
M	Co		0.001890	M	La	<	0.000942	M	Re	<	0.000942	M	Tm	<	0.000942				
M	Cr	<	0.005657	O	Li	<	0.000243	i	Rh	<		M	U	<	0.000942				
M	Cs	<	0.000942	M	Lu	<	0.000942	M	Ru	<	0.039588	M	V	<	0.003771				
s	Cu	<		O	Mg		0.000320	O	S		0.007174	M	W	<	0.005657				
M	Dy	<	0.000942	O	Mn		0.000793	M	Sb	<	0.001885	M	Y	<	0.000942				
M	Er	<	0.000942	M	Mo	<	0.005657	M	Sc	<	0.000942	M	Yb	<	0.000942				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 63.55 +2 6 Cu(H2O)62+

Chemical Compatibility -Stable in HCl, HNO3, H2SO4, HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Cu Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 63 amu	10 ppt	n/a	40Ar23Na 47Ti16O, 14N12C37Cl, 16O12C35Cl, 23Na40Ca
ICP-OES 219.958 nm	0.01/.002 µg/mL	1	Th, Ta, Nb, U, Hf
ICP-OES 224.700 nm	0.01/.001 µg/mL	1	Pb, Ir, Ni, W
ICP-OES 324.754 nm	0.06/.001 µg/mL		Nb, U, Th, Mo, Hf

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 24, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 24, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMN10
Lot Number:	P2-MN687536
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Manganese
Starting Material:	Mn Metal
Starting Material Lot#:	2275
Starting Material Purity:	99.9909%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10046 ± 30 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10045 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **10083 ± 68 µg/mL**
ICP Assay NIST SRM 3132 Lot Number: 050429

Assay Method #3 **10031 ± 47 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001500	M	Eu	<	0.000730	O	Na		0.176713	M	Se	<	0.006600	M	Zn		0.009960
O	Al		0.004337	M	Fe	<	0.650000	M	Nb	<	0.000730	O	Si		0.097995	M	Zr	<	0.000730
M	As	<	0.008000	M	Ga		0.004337	M	Nd	<	0.001500	M	Sm	<	0.000730				
M	Au	<	0.000730	M	Gd	<	0.000730	M	Ni		0.024097	M	Sn	<	0.002200				
M	B		0.069078	M	Ge	<	0.004400	M	Os	<	0.000730	O	Sr		0.000931				
M	Ba	<	0.001500	M	Hf	<	0.000730	i	P	<		M	Ta	<	0.000730				
M	Be	<	0.000730	M	Hg	<	0.002200	M	Pb		0.007389	M	Tb	<	0.000730				
M	Bi	<	0.003000	M	Ho	<	0.000730	M	Pd	<	0.000730	M	Te	<	0.019000				
O	Ca		0.062652	M	In	<	0.003000	M	Pr	<	0.000730	M	Th	<	0.000730				
M	Cd	<	0.001500	M	Ir	<	0.000730	M	Pt	<	0.000730	O	Ti	<	0.006500				
M	Ce	<	0.007300	O	K		0.006425	M	Rb	<	0.006600	M	Tl	<	0.000730				
O	Co		0.014779	M	La	<	0.003000	M	Re	<	0.000730	M	Tm	<	0.000730				
O	Cr		0.273102	O	Li		0.000417	M	Rh	<	0.003000	M	U	<	0.001500				
M	Cs	<	0.000730	M	Lu	<	0.000730	M	Ru	<	0.004400	M	V	<	0.000730				
O	Cu		0.007711	O	Mg		0.321297	i	S	<		M	W	<	0.004400				
M	Dy	<	0.001500	s	Mn	<		M	Sb	<	0.021000	O	Y		0.001365				
M	Er	<	0.001500	M	Mo		0.010281	O	Sc	<	0.004100	M	Yb	<	0.000730				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 54.94 +2 6 Mn(H2O)62+

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO3/LDPE container.

Mn Containing Samples (Preparation and Solution) -Metal (Soluble in dilute acids); Oxides (Soluble in dilute acids); Ores (Dissolve with HCl. If silica is present add HF and then fume off silica by adding H2SO4 and heat to SO3 fumes - dense white fumes).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 55 amu	10 ppt	n/a	40Ar14N1H,39K16 O,37Cl18O,40Ar15 N,38Ar17O,36Ar18O 1H ,38Ar16O1H,37Cl17 O1H,23Na32S
ICP-OES 257.610 nm	0.0014 / 0.00002 µg/mL	1	Ce, W, Re
ICP-OES 259.373 nm	0.0016 / 0.00002 µg/mL	1	U, Ta, Mo, Fe, Nb
ICP-OES 260.569 nm	0.0021 / 0.00002 µg/mL	1	Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 05, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 05, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNI10
Lot Number:	P2-NI686384
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Nickel
Starting Material:	Ni Metal
Starting Material Lot#:	2277 and 2282
Starting Material Purity:	99.9992%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9979 ± 30 µg/mL

Density: 1.038 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9971 ± 54 µg/mL**
ICP Assay NIST SRM 3136 Lot Number: 120619

Assay Method #2 **9970 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **9993 ± 33 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag		0.002606	M	Eu	<	0.001100	O	Na		0.004965	O	Se	<	0.067000	M	Zn		0.006578
M	Al	<	0.013000	O	Fe		0.018618	M	Nb	<	0.001100	O	Si		0.010923	M	Zr	<	0.001100
O	As	<	0.067000	M	Ga	<	0.001100	M	Nd	<	0.001100	M	Sm	<	0.001100				
M	Au	<	0.002100	M	Gd	<	0.001100	s	Ni	<		M	Sn	<	0.016000				
M	B	<	0.017000	M	Ge	<	0.004200	M	Os		0.002110	O	Sr	<	0.000940				
M	Ba	<	0.001100	M	Hf	<	0.001100	i	P	<		M	Ta	<	0.001100				
O	Be	<	0.000410	M	Hg		0.014895	M	Pb		0.006578	M	Tb	<	0.001100				
M	Bi	<	0.004200	M	Ho	<	0.001100	M	Pd	<	0.001100	M	Te	<	0.015000				
O	Ca		0.003351	M	In	<	0.001100	M	Pr	<	0.001100	M	Th	<	0.001100				
M	Cd		0.001365	M	Ir		0.004716	M	Pt	<	0.001100	M	Ti	<	0.004200				
M	Ce	<	0.001100	O	K		0.004716	M	Rb	<	0.001100	M	Tl	<	0.001100				
O	Co		0.017377	M	La	<	0.001100	M	Re		0.001737	M	Tm	<	0.001100				
O	Cr	<	0.006700	O	Li	<	0.000140	M	Rh	<	0.006300	M	U	<	0.001100				
M	Cs	<	0.007300	M	Lu	<	0.001100	M	Ru	<	0.019000	M	V	<	0.002100				
M	Cu		0.004096	O	Mg		0.000372	i	S	<		M	W	<	0.006300				
M	Dy	<	0.001100	O	Mn	<	0.001900	M	Sb		0.005833	O	Y	<	0.000540				
M	Er	<	0.001100	M	Mo	<	0.008400	M	Sc	<	0.002100	M	Yb	<	0.001100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.69 +2 6 Ni(H2O)62+

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Ni Containing Samples (Preparation and Solution) -Metal (Soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 60 amu	100 ppt	n/a	43Ca16O1H , 44Ca16O, 23Na37Cl
ICP-OES 221.647 nm	0.01 / 0.0009 µg/mL	1	Si
ICP-OES 231.604 nm	0.02 / 0.002 µg/mL	1	Sb, Ta, Co
ICP-OES 232.003 nm	0.02 / 0.006 µg/mL	1	Cr, Re, Os, Nb, Ag, Pt, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

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300 Technology Drive
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGZN10
Lot Number:	P2-ZN686137
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Zinc
Starting Material:	Zn Shot
Starting Material Lot#:	2201
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10040 ± 30 µg/mL

Density: 1.033 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10009 ± 54 µg/mL**
ICP Assay NIST SRM 3168a Lot Number: 120629

Assay Method #2 **10049 ± 33 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10041 ± 28 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.003057	M	Eu	<	0.000509	O	Na		0.001874	M	Se	<	0.023441	s	Zn	<	
O	Al	<	0.005720	O	Fe		0.006348	M	Nb	<	0.000509	O	Si	<	0.057200	M	Zr	<	0.000509
M	As	<	0.003057	M	Ga	<	0.007134	M	Nd	<	0.000509	M	Sm	<	0.000509				
M	Au	<	0.000510	M	Gd	<	0.000509	M	Ni	<	0.000509	M	Sn	<	0.000509				
O	B	<	0.017160	M	Ge	<	0.003057	M	Os	<	0.000510	M	Sr	<	0.000509				
M	Ba	<	0.000509	M	Hf	<	0.000509	O	P	<	0.057200	M	Ta	<	0.000509				
M	Be	<	0.000509	M	Hg	<	0.001021	O	Pb		0.023870	M	Tb	<	0.000509				
M	Bi	<	0.005095	M	Ho	<	0.000509	M	Pd	<	0.002038	M	Te	<	0.023441				
O	Ca		0.033793	M	In	<	0.000509	M	Pr	<	0.000509	M	Th	<	0.000509				
O	Cd		0.003924	M	Ir	<	0.000510	M	Pt	<	0.000509	M	Ti	<	0.000509				
M	Ce	<	0.000509	O	K		0.001499	M	Rb	<	0.002038	M	Tl	<	0.009172				
M	Co	<	0.000509	M	La	<	0.000509	M	Re	<	0.000509	M	Tm	<	0.000509				
O	Cr		0.001549	O	Li	<	0.000457	M	Rh	<	0.000509	M	U	<	0.000509				
M	Cs	<	0.000509	M	Lu	<	0.000509	M	Ru	<	0.006129	M	V	<	0.000509				
O	Cu	<	0.010296	O	Mg		0.000349	O	S	<	0.034320	M	W	<	0.001019				
M	Dy	<	0.000509	M	Mn	<	0.000509	M	Sb	<	0.001019	M	Y	<	0.000509				
M	Er	<	0.000509	M	Mo	<	0.000509	M	Sc	<	0.000509	M	Yb	<	0.000509				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 65.39 +2 4 Zn(OH)(aq)1+

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media forming insoluble carbonate and hydroxide. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Zn Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3); Organic based (dry ash at 4500C and dissolve ash in HCl) (sulfuric/peroxide acid digestion)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 66 amu	7 ppt	N/A	50Ti16O,50Cr16O, 50V16O, 34S16O2, 32S16O18O, 32S17O2, 33S16O17O, 32S34S, 33S2
ICP-OES 202.548 nm	0.004/0.0002 µg/mL	1	Nb, Cu, Co, Hf
ICP-OES 206.200 nm	0.006/0.0006 µg/mL	1	Sb, Ta, Bi, Os
ICP-OES 213.856 nm	0.002/0.0004 µg/mL	1	Ni, Cu, V

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 05, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 05, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGU1
Lot Number:	P2-U683975
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Uranium
Starting Material:	Uranyl Nitrate
Starting Material Lot#:	1948
Starting Material Purity:	99.9985%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 5 µg/mL

Density: 1.010 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **1001 ± 5 µg/mL**
ICP Assay NIST SRM 3164 Lot Number: 080521

Assay Method #2 **1002 ± 6 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.24 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000103	M	Eu	<	0.000103	M	Na		0.020618	M	Se	<	0.001246	M	Zn	<	0.003533
M	Al	<	0.003740	M	Fe		0.001029	M	Nb	<	0.000207	M	Si	<	0.035027	M	Zr	<	0.000103
M	As	<	0.001143	M	Ga	<	0.001350	M	Nd	<	0.000623	M	Sm	<	0.000311				
M	Au	<	0.000207	M	Gd	<	0.000311	M	Ni	<	0.008313	M	Sn	<	0.007273				
M	B	<	0.005819	M	Ge	<	0.001974	M	Os	<	0.000103	M	Sr	<	0.001039				
M	Ba	<	0.002286	M	Hf	<	0.000103	i	P	<		M	Ta	<	0.000103				
M	Be	<	0.001350	M	Hg	<	0.000415	M	Pb	<	0.000103	M	Tb	<	0.000103				
M	Bi	<	0.000103	M	Ho	<	0.000103	M	Pd	<	0.000207	M	Te	<	0.006234				
M	Ca	<	0.010391	M	In	<	0.000103	M	Pr	<	0.000103	M	Th		0.010535				
M	Cd	<	0.000103	M	Ir	<	0.000103	M	Pt	<	0.000103	M	Ti	<	0.000207				
M	Ce	<	0.000103	M	K	<	0.041565	M	Rb	<	0.000519	M	Tl	<	0.000103				
M	Co	<	0.000415	M	La	<	0.001662	M	Re	<	0.000103	M	Tm	<	0.000103				
M	Cr	<	0.001870	M	Li	<	0.001662	M	Rh	<	0.000103	s	U	<					
M	Cs		0.000175	M	Lu	<	0.000103	M	Ru	<	0.000519	M	V	<	0.000207				
M	Cu		0.000792	M	Mg	<	0.002493	i	S	<		M	W	<	0.000103				
M	Dy	<	0.000103	M	Mn	<	0.001454	M	Sb	<	0.000103	M	Y	<	0.000103				
M	Er	<	0.000103	M	Mo	<	0.000415	M	Sc	<	0.006234	M	Yb	<	0.000103				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 238.03 +6 8 UO22+(uranyl)
Chemical Compatibility - Soluble in HCl and HNO3. Avoid H3PO4. H2SO4 and HF matrices should not be a problem depending upon [U]. Although the UO22+ ion is distinctly basic, any U+4 will precipitate in basic media. UO22+salts are generally soluble in water and UO22+ is stable with most metals and inorganic anions. The uranyl phosphate is insoluble in water. UF4 and UF6 are water soluble.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
U Containing Samples (Preparation and Solution) -Metal (Dissolves rapidly in HCl and HNO3); Oxide (Soluble in HNO3); Ores (Digest for 1-2 hours with 1 gram of ore to 30 mL 1:1 HNO3. Silica insolubles are removed by filtration after bringing the sample to fumes with conc. H2SO4.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 238 amu	2 ppt	N/A	206Pb16O2
ICP-OES 263.553 nm	0.3 / 0.01 µg/mL	1	Ce, Ir, Th, Rh, W, Zr, Ta, Ti, V, Hf, Fe, Re, Ru
ICP-OES 367.007 nm	0.3 / 0.02 µg/mL	1	Th, Ce
ICP-OES 385.958 nm	0.3 / 0.01 µg/mL	1	Th, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 28, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **September 28, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution

Catalog Number: AR-6020ICS-0A10

Lot Number: R2-MEB692465

Matrix: 1.4% (v/v) HNO3

Value / Analyte(s):

1 000 µg/mL ea:
Chloride,

200 µg/mL ea:
Carbon,

100 µg/mL ea:
Calcium, Aluminum,
Iron, Potassium,
Magnesium, Sodium,
Phosphorus, Sulfur,

2 µg/mL ea:
Titanium, Molybdenum

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**100.0 ± 0.3 µg/mL**	**Calcium, Ca**	**100.0 ± 0.5 µg/mL**
Carbon, C	**200.1 ± 0.5 µg/mL**	**Chloride, Cl**	**1 000 ± 5 µg/mL**
Iron, Fe	**100.0 ± 0.5 µg/mL**	**Magnesium, Mg**	**100.0 ± 0.5 µg/mL**
Molybdenum, Mo	**2.001 ± 0.012 µg/mL**	**Phosphorus, P**	**100.1 ± 0.6 µg/mL**
Potassium, K	**100.0 ± 0.5 µg/mL**	**Sodium, Na**	**100.0 ± 0.5 µg/mL**
Sulfur, S	**100.0 ± 0.5 µg/mL**	**Titanium, Ti**	**2.001 ± 0.017 µg/mL**

Density: 1.007 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	M2-S657208
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 22, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 22, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAG10
Lot Number:	P2-AG688237
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Silver
Starting Material:	Ag Shot
Starting Material Lot#:	2217
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10004 ± 30 µg/mL

Density: 1.054 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9984 ± 32 µg/mL**
ICP Assay NIST SRM 3151 Lot Number: 160729

Assay Method #2 **10016 ± 26 µg/mL**
Volhard NIST SRM 999c Lot Number: 999c

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

s	Ag	<		M	Eu	<	0.000253	O	Na		0.005563	M	Se	<	0.018179	M	Zn		0.005800
O	Al		0.006296	O	Fe		0.002932	M	Nb	<	0.000253	M	Si		0.022487	M	Zr	<	0.005559
M	As	<	0.002403	M	Ga	<	0.000253	M	Nd	<	0.000253	M	Sm	<	0.000253				
M	Au		0.001635	M	Gd	<	0.000253	O	Ni	<	0.005472	M	Sn		0.001928				
O	B	<	0.009978	M	Ge	<	0.000754	M	Os	<	0.000254	O	Sr		0.000086				
M	Ba	<	0.000785	M	Hf	<	0.000253	M	P	<	0.053784	M	Ta	<	0.000253				
M	Be	<	0.002407	M	Hg	<	0.001332	M	Pb		0.003281	M	Tb	<	0.000253				
M	Bi		0.001671	M	Ho	<	0.000253	M	Pd	<	0.001382	M	Te	<	0.003715				
O	Ca		0.007116	M	In	<	0.003483	M	Pr	<	0.000253	M	Th	<	0.000253				
M	Cd	<	0.000253	M	Ir	<	0.000254	M	Pt	<	0.000253	M	Ti	<	0.002706				
M	Ce	<	0.000573	O	K		0.004010	M	Rb	<	0.000253	M	Tl	<	0.000253				
M	Co	<	0.000253	M	La	<	0.000253	M	Re	<	0.000253	M	Tm	<	0.000253				
O	Cr	<	0.005043	O	Li	<	0.000214	M	Rh	<	0.000253	M	U	<	0.000253				
M	Cs	<	0.002769	M	Lu	<	0.000253	M	Ru	<	0.000254	M	V	<	0.000822				
O	Cu		0.004614	O	Mg		0.001035	M	S	<	0.560935	M	W	<	0.002146				
M	Dy	<	0.000253	M	Mn	<	0.000253	M	Sb	<	0.006899	M	Y	<	0.000253				
M	Er	<	0.000253	M	Mo	<	0.000479	M	Sc	<	0.000733	M	Yb	<	0.000253				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 107.87 +1 6 $Ag(H_2O)_6^+$

Chemical Compatibility -Stable in HNO_3, and HF. Avoid basic media. Ag forms more insoluble salts than any other metal. It also is subject to photochemical reduction to the metal in HCl media although 10 µg/mL solutions in 10% HCl [$AgCl_{x1-x}$] are commonly used in the analytical laboratory. The most common solubility problems exist with arsenate, arsenite , bromide, chloride, iodide, carbonate , chromate, cyanide, iodate, oxalate, oxide, sulfate, sulfide, tartrate, and thiocyanate in aqueous media. The addition of nitric acid renders many of these salts soluble.

Stability - 2-100 ppb levels stable for 75+ days when mixed with equivalent levels of all other elements including the precious metals (where chloride is present) when in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Ag Containing Samples (Preparation and Solution) -Metal (Soluble in HNO_3); Oxides (Soluble in HNO_3); Ores (Digestion with conc. HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 107 amu	1 ppt	N/A	91Zr16O
ICP-OES 243.779 nm	0.12/0.01 µg/mL	1	Mn, Th, Ni, Rh
ICP-OES 328.068 nm	0.007/0.0007 µg/mL	1	Ce, Rh, V
ICP-OES 338.289 nm	0.013/0.001 µg/mL	1	Ce, Cr, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 29, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 29, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 - 540.585.3030
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAL10
Lot Number:	S2-AL700843
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Aluminum
Starting Material:	Al(NO3)3 * 9H2O
Starting Material Lot#:	P2-2302
Starting Material Purity:	99.9913%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10011 ± 31 µg/mL

Density: 1.087 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10015 ± 44 µg/mL**
ICP Assay NIST SRM 3101a Lot Number: 140903

Assay Method #2 **10008 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10014 ± 36 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001500	M	Eu	<	0.000680	O	Na		0.510200	M	Se	<	0.014000	M	Zn		0.009183
s	Al	<		O	Fe		0.114284	M	Nb	<	0.000680	O	Si		0.053060	O	Zr		0.003673
M	As	<	0.006800	O	Ga		0.191835	M	Nd	<	0.000680	M	Sm	<	0.000680				
M	Au	<	0.000680	M	Gd	<	0.004100	O	Ni		0.001102	M	Sn	<	0.006800				
O	B	<	0.021000	M	Ge	<	0.001400	M	Os	<	0.008700	O	Sr		0.006530				
O	Ba		0.012652	M	Hf	<	0.002700	n	P	<		M	Ta	<	0.000680				
O	Be	<	0.001300	M	Hg	<	0.006100	M	Pb		0.006530	M	Tb	<	0.000680				
M	Bi	<	0.008100	M	Ho	<	0.000680	M	Pd	<	0.000680	M	Te	<	0.030000				
O	Ca		0.071428	M	In	<	0.000900	M	Pr	<	0.000680	M	Th	<	0.000680				
M	Cd	<	0.001400	M	Ir	<	0.000680	M	Pt	<	0.000680	O	Ti		0.001142				
M	Ce	<	0.002700	O	K		0.053060	M	Rb	<	0.014000	M	Tl	<	0.000680				
O	Co		0.001979	M	La	<	0.002900	M	Re	<	0.000680	M	Tm	<	0.000680				
O	Cr		0.014285	O	Li		0.000142	M	Rh	<	0.000680	M	U	<	0.001400				
M	Cs		0.005306	M	Lu	<	0.000680	M	Ru	<	0.000680	M	V	<	0.005400				
O	Cu		0.003469	O	Mg		0.069387	i	S	<		M	W	<	0.012000				
M	Dy	<	0.005400	O	Mn		0.001653	M	Sb	<	0.004200	M	Y	<	0.000680				
M	Er	<	0.000680	M	Mo	<	0.012000	M	Sc	<	0.002100	M	Yb	<	0.000680				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 26.98 +3 6 Al(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, HF and H2SO4. Avoid neutral media. Soluble in strongly basic NaOH forming the Al(OH)4(H2O)21- species. Stable with most metals and inorganic anions. The phosphate is insoluble in water and only slightly soluble in acid.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Al Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); a- Al2O3 (Na2CO3 fusion in Pt0);

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 27 amu	30 ppt	N/A	12C15N, 13C14N, 1H12C14N, 11B16O, 54Cr2+, 54Fe2+
ICP-OES 167.078 nm	0.1/0.009 µg/mL	1	Fe
ICP-OES 394.401 nm	0.05/0.006 µg/mL	1	U, Ce
ICP-OES 396.152 nm	0.03/0.006 µg/mL	1	Mo, Zr, Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 27, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 27, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAS10
Lot Number:	R2-AS691113
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Arsenic
Starting Material:	As Pieces
Starting Material Lot#:	2208
Starting Material Purity:	99.9980%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9981 ± 55 µg/mL

Density: 1.028 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9981 ± 55 µg/mL**
ICP Assay NIST SRM 3103a Lot Number: 100818

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001578	M	Eu	<	0.000526	O	Na		0.036136	M	Se	<	0.014204	O	Zn	<	0.003390
O	Al		0.006694	M	Fe		0.002633	O	Nb	<	0.011526	O	Si		0.139479	M	Zr	<	0.003156
s	As	<		M	Ga	<	0.000526	M	Nd	<	0.000526	M	Sm	<	0.000526				
M	Au	<	0.000526	M	Gd	<	0.000526	O	Ni	<	0.005537	M	Sn	<	0.001052				
M	B		0.017011	M	Ge	<	0.000526	M	Os	<	0.000526	M	Sr	<	0.000526				
M	Ba	<	0.000526	M	Hf	<	0.000526	O	P	<	0.056500	M	Ta	<	0.000526				
O	Be	<	0.001130	M	Hg	<	0.002104	M	Pb	<	0.000526	M	Tb	<	0.000526				
M	Bi	<	0.002104	M	Ho	<	0.000526	M	Pd	<	0.000526	M	Te	<	0.003682				
O	Ca		0.005657	M	In	<	0.000526	M	Pr	<	0.002630	M	Th	<	0.000526				
M	Cd	<	0.000526	M	Ir	<	0.000526	M	Pt	<	0.000526	O	Ti	<	0.001017				
M	Ce	<	0.000526	O	K		0.003865	M	Rb	<	0.002104	M	Tl	<	0.000526				
M	Co	<	0.003156	M	La	<	0.000526	M	Re	<	0.000526	M	Tm	<	0.000526				
M	Cr		0.000877	M	Li	<	0.000526	M	Rh	<	0.000526	M	U	<	0.000526				
M	Cs	<	0.002104	M	Lu	<	0.000526	M	Ru	<	0.000526	M	V	<	0.001578				
M	Cu	<	0.003156	O	Mg		0.000235	O	S	<	0.056500	M	W	<	0.000526				
M	Dy	<	0.000526	M	Mn	<	0.001052	M	Sb	<	0.000526	M	Y	<	0.000526				
M	Er	<	0.000526	M	Mo	<	0.000526	M	Sc	<	0.002104	M	Yb	<	0.000526				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 74.92 ; mix of +3 and +5 ; 6 ; H_3AsO_4 and $HAsO_2$

Chemical Compatibility - Arsenic has no cationic chemistry. It is soluble in HCl, HNO_3,H_3PO_4, H_2SO_4 and HF aqueous matrices water and NH_4OH . It is stable with most inorganic anions (forms arsenate when boiled with chromate) but many cationic metals form the insoluble arsenates under pH neutral conditions. When fluorinated and / or under acidic conditions arsenate formation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO_3 / LDPE container.

As Containing Samples (Preparation and Solution) - Metal (soluble in 1:1 H_2O / HNO_3); Oxides (the oxide exists in crystalline and amorphous forms where the amorphic form is more water soluble. The oxides typically dissolve in dilute acidic solutions when boiled); Minerals (one gram of powered sample is fused in a Ni crucible with 10 grams of a 1:1 mix of K_2CO_3 and KNO_3 and the melt extracted with hot water); Organic Matrices (0.2 to 0.5 grams of sample are fused with 15 grams of a 1:1 Na_2CO_3 / Na_2O_2 mix in a Ni crucible. The fuseate is extracted with water and acidified with HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 75 amu	20 ppt	N/A	40Ar35Cl, 59Co16O, 36Ar38Ar1H,8Ar37Cl,Ar39K, 150Nd2+,150Sm2+
ICP-OES 189.042 nm	0.05/0.005 µg/mL	1	Cr
ICP-OES 193.696 nm	0.1/0.01 µg/mL	1	V, Ge
ICP-OES 228.812 nm	0.1/0.01 µg/mL	1	Cd, Pt, Ir, Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 25, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 25, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBA10
Lot Number:	P2-BA682107
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Barium
Starting Material:	Ba(NO3)2
Starting Material Lot#:	Mixed Lots
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10072 ± 32 µg/mL

Density: 1.024 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10054 ± 80 µg/mL**
ICP Assay NIST SRM 3104a Lot Number: 140909

Assay Method #2 **10075 ± 30 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001538	O	Eu	<	0.028728	O	Na		0.006767	M	Se	<	0.007964	O	Zn		0.004335
M	Al		0.005194	M	Fe		0.016554	M	Nb	<	0.000200	O	Si	<	0.020780	M	Zr	<	0.000271
M	As	<	0.000519	M	Ga	<	0.000200	M	Nd	<	0.000200	M	Sm	<	0.082480				
M	Au	<	0.003452	M	Gd	<	0.000200	M	Ni	<	0.001290	M	Sn	<	0.000200				
M	B	<	0.002519	M	Ge	<	0.000430	M	Os	<	0.000752	O	Sr		0.027070				
s	Ba	<		M	Hf	<	0.002746	O	P	<	0.044677	M	Ta	<	0.001008				
M	Be	<	0.000430	M	Hg	<	0.001063	M	Pb	<	0.002257	M	Tb	<	0.000200				
M	Bi	<	0.002971	M	Ho	<	0.000200	M	Pd	<	0.000286	M	Te	<	0.001470				
O	Ca		0.026224	M	In	<	0.000200	M	Pr	<	0.000200	M	Th	<	0.000200				
M	Cd	<	0.000200	M	Ir	<	0.000446	M	Pt	<	0.000200	M	Ti	<	0.000324				
M	Ce	<	0.004362	O	K		0.011526	M	Rb		0.001487	M	Tl	<	0.000200				
M	Co	<	0.000200	O	La	<	0.091587	M	Re	<	0.000200	M	Tm	<	0.000954				
M	Cr	<	0.002191	O	Li	<	0.002181	M	Rh	<	0.000200	M	U	<	0.000200				
M	Cs	<	0.001640	M	Lu	<	0.002934	M	Ru	<	0.000200	M	V	<	0.000229				
M	Cu	<	0.003646	O	Mg		0.002379	O	S	<	0.073041	M	W	<	0.001627				
M	Dy	<	0.000200	M	Mn	<	0.000902	M	Sb	<	0.000514	O	Y	<	0.019637				
M	Er	<	0.000556	M	Mo	<	0.000455	M	Sc	<	0.000478	M	Yb	<	0.001991				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 137.33 +2 6 $Ba(H_2O)_6^{+2}$

Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, iodate, molybdate, sulfite and tungstate in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1 -10,000 ppm solutions chemically stable for years in 1-3.5% HNO_3 / LDPE container.

Ba Containing Samples (Preparation and Solution) -Metal(is best dissolved in diluted HNO_3); Ores(Carbonate fusion in Pt0 followed by HCl dissolution. If sulfate is present dissolve the fuseate using HCl / tartaric acid to prevent $BaSO_4$ precipitate); Organic Matrices (dry ash and dissolve in dilute HCl.)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 138 amu	1 ppt	N/A	122Sn16O, 122Te16O
ICP-OES 230.424 nm	0.004/0.0005 µg/mL	1	Mo, Ir, Co
ICP-OES 233.527 nm	0.004/0.0003 µg/mL	1	
ICP-OES 455.403 nm	0.002/0.0001 µg/mL	1	Zr, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 13, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **September 13, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBE10
Lot Number:	P2-BE678865
Matrix:	6% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Beryllium
Starting Material:	Beryllium diacetate
Starting Material Lot#:	2221
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10036 ± 35 µg/mL

Density: 1.140 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10051 ± 42 µg/mL**
ICP Assay NIST SRM 3105a Lot Number: 090514

Assay Method #2 **10008 ± 59 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag		0.045414	M	Eu	<	0.000254	O	Na		0.015009	M	Se	<	0.015257	O	Zn		0.004059
O	Al		0.008058	O	Fe		0.011749	M	Nb	<	0.000254	O	Si		0.063793	O	Zr	<	0.007064
M	As	<	0.006473	M	Ga	<	0.000254	M	Nd	<	0.000254	M	Sm	<	0.000254				
M	Au	<	0.000248	M	Gd	<	0.000254	M	Ni	<	0.002034	M	Sn	<	0.002542				
O	B	<	0.021661	M	Ge	<	0.000508	M	Os	<	0.000248	M	Sr	<	0.000254				
M	Ba		0.001760	M	Hf	<	0.000254	O	P	<	0.666500	M	Ta	<	0.000254				
s	Be	<		M	Hg	<	0.001244	M	Pb	<	0.001271	M	Tb	<	0.000254				
M	Bi	<	0.000254	M	Ho	<	0.000254	M	Pd	<	0.000254	M	Te	<	0.001780				
O	Ca		0.015256	M	In	<	0.000254	M	Pr	<	0.000254	M	Th	<	0.000254				
M	Cd	<	0.000254	M	Ir	<	0.000248	M	Pt	<	0.000254	O	Ti	<	0.002266				
M	Ce	<	0.000254	O	K		0.031127	M	Rb	<	0.000508	M	Tl	<	0.000254				
M	Co	<	0.004068	M	La	<	0.000254	M	Re	<	0.000254	M	Tm	<	0.000254				
M	Cr	<	0.001525	O	Li	<	0.000666	M	Rh	<	0.000254	M	U	<	0.000254				
M	Cs		0.001642	M	Lu	<	0.000254	M	Ru	<	0.000248	M	V	<	0.000508				
M	Cu	<	0.005085	O	Mg		0.001907	i	S	<		M	W	<	0.004068				
M	Dy	<	0.000254	O	Mn	<	0.001333	M	Sb	<	0.000254	M	Y	<	0.000254				
M	Er	<	0.000254	M	Mo	<	0.000762	O	Sc	<	0.001333	M	Yb	<	0.000254				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 9.01 +2 4 $Be(H_2O)_4^{+2}$

Chemical Compatibility -Soluble in HCl, HNO_3, H_2SO_4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1 % HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 5-10 % HNO_3 / LDPE container.

Be Containing Samples (Preparation and Solution) - Meta l(is best dissolved in diluted H_2SO_4); BeO (boiling nitric, hydrochloric, or sulfuric acids or $KHSO_4$ fusion); Ores (H_2SO_4/HF digestion or carbonate fusion in Pt0); Organic Matrices (sulfuric/peroxide digestion or nitric/sulfuric/perchloric acid decomposition, or dry ash and dissolution according to the BeO procedure above).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 9 amu	4 ppt	N/A	
ICP-OES 234.861 nm	0.0003/0.00016 µg/mL	1	Fe, Ta, Mo
ICP-OES 313.042 nm	0.0003/0.00009 µg/mL	1	V, Ce, U
ICP-OES 313.107 nm	0.0007/0.0005 µg/mL	1	Ce, Th, Tm

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION, PERIOD OF VALIDITY AND REVISION HISTORY

11.1 Certification Issue Date

April 22, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 22, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

11.4 Revision Status

- Revision 1 - Revised on Thursday, Jan 14, 2021 by utruong. Revision was made for the following reason: Modified Section 7 Chemical Form in Solution.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCA10
Lot Number:	R2-CA697921
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Calcium
Starting Material:	Calcium Oxide
Starting Material Lot#:	P2-CA677788
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9985 ± 30 µg/mL

Density: 1.039 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**9976 ± 43 µg/mL** ICP Assay NIST SRM 3109a Lot Number: 130213
Assay Method #2	**9965 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10008 ± 26 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002500	M	Eu	<	0.001300	M	Na		0.008214	O	Se	<	0.022000	O	Zn		0.001158
O	Al	<	0.030000	O	Fe		0.002316	M	Nb	<	0.001300	O	Si	<	0.022000	M	Zr	<	0.006200
O	As	<	0.025000	M	Ga	<	0.002500	M	Nd	<	0.001300	M	Sm	<	0.001300				
M	Au	<	0.013000	M	Gd	<	0.001300	O	Ni	<	0.005300	O	Sn	<	0.013000				
O	B	<	0.006900	O	Ge	<	0.018000	M	Os	<	0.002500	M	Sr		0.115847				
M	Ba		0.000905	M	Hf	<	0.002500	O	P	<	0.027000	M	Ta	<	0.008600				
O	Be	<	0.000270	M	Hg	<	0.001300	M	Pb		0.001685	M	Tb	<	0.001300				
M	Bi	<	0.002500	M	Ho	<	0.001300	M	Pd	<	0.006200	O	Te	<	0.045000				
s	Ca	<		M	In	<	0.001300	M	Pr	<	0.001300	M	Th	<	0.001300				
O	Cd	<	0.000540	M	Ir	<	0.001300	M	Pt	<	0.001300	O	Ti	<	0.004200				
M	Ce	<	0.001300	O	K		0.015797	M	Rb	<	0.014000	M	Tl	<	0.001300				
O	Co		0.000558	M	La	<	0.001300	M	Re	<	0.001300	M	Tm	<	0.001300				
O	Cr	<	0.006000	O	Li	<	0.006900	M	Rh	<	0.002500	M	U	<	0.001300				
M	Cs	<	0.001300	M	Lu	<	0.001300	M	Ru	<	0.003800	O	V	<	0.002200				
M	Cu	<	0.002500	O	Mg		0.002843	n	S	<		M	W	<	0.012000				
M	Dy	<	0.001300	O	Mn		0.000115	M	Sb	<	0.007400	M	Y	<	0.001300				
M	Er	<	0.001300	M	Mo		0.002527	O	Sc	<	0.006100	M	Yb	<	0.001300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 40.08 +2 6 Ca(H2O)6+2

Chemical Compatibility - Soluble in HCl and HNO3. Avoid H2SO4, HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, and tungstate in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO3 / LDPE container.

Ca Containing Samples (Preparation and Solution) -Metal (best dissolved in diluted HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (dry ash and dissolution in dilute HCl. Do not heat when dissolving to avoid precipitation of SiO2). The oxide, hydroxide, carbonate, phosphate, and fluoride of calcium are soluble in % levels of HCl or HNO3. The sulfates (gypsum, anhydrite, etc.), certain silicates, and complex compounds require fusion with Na2CO3 followed by HCl / water dissolution. Note that contamination is a very real problem when analyzing for trace levels.

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 44 amu	1200 ppt	n/a	16O212C, 28Si16O, 88Sr
ICP-OES 393.366 nm	0.0002 / 0.00004 µg/mL	1	U, Ce
ICP-OES 396.847 nm	0.0005 / 0.00006 µg/mL	1	Th
ICP-OES 422.673 nm	0.01 / 0.001 µg/mL	1	Ge

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 09, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 09, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCD10
Lot Number:	P2-CD685077
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cadmium
Starting Material:	Cd Shot
Starting Material Lot#:	1954
Starting Material Purity:	99.9996%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9954 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9956 ± 54 µg/mL**
ICP Assay NIST SRM 3108 Lot Number: 130116

Assay Method #2 **9953 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	<	0.006348	M	Eu	<	0.010622	O	Na		0.004020	M	Se	<	0.008116	O	Zn	<	0.002152
O	Al		0.011566	M	Fe		0.003011	M	Nb	<	0.000405	O	Si		0.005480	M	Zr	<	0.000405
M	As	<	0.001623	M	Ga	<	0.000405	M	Nd	<	0.000405	M	Sm	<	0.000405				
M	Au	<	0.000405	M	Gd	<	0.000405	M	Ni	<	0.002840	M	Sn	<	0.001217				
M	B	<	0.004463	M	Ge	<	0.000405	M	Os	<	0.000405	M	Sr	<	0.000405				
O	Ba	<	0.000968	M	Hf	<	0.000405	O	P	<	0.045730	M	Ta	<	0.000405				
M	Be	<	0.000405	O	Hg	<	0.002152	M	Pb	<	0.002434	M	Tb	<	0.000405				
M	Bi	<	0.000405	M	Ho	<	0.000405	M	Pd	<	0.000405	M	Te	<	0.016636				
O	Ca		0.002946	O	In	<	0.021520	M	Pr	<	0.000405	M	Th	<	0.000405				
s	Cd	<		M	Ir	<	0.000405	M	Pt	<	0.000405	M	Ti	<	0.001217				
M	Ce	<	0.000405	O	K		0.008179	M	Rb	<	0.000405	M	Tl	<	0.004495				
M	Co	<	0.000405	M	La	<	0.000405	M	Re	<	0.000405	M	Tm	<	0.000405				
M	Cr		0.002907	M	Li	<	0.000405	M	Rh	<	0.000405	M	U	<	0.000405				
M	Cs	<	0.002374	M	Lu	<	0.000405	M	Ru	<	0.000405	M	V	<	0.003179				
M	Cu	<	0.002434	O	Mg		0.000137	O	S	<	0.037660	M	W	<	0.000405				
M	Dy	<	0.000405	M	Mn	<	0.001623	M	Sb	<	0.004057	M	Y	<	0.000405				
M	Er	<	0.000405	M	Mo	<	0.000811	M	Sc	<	0.001623	M	Yb	<	0.000811				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 112.41 +2 4 Cd2(OH) (aq)3+ and Cd(OH)(aq)

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 , and HF. Avoid basic media forming insoluble carbonate and hydroxide.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO3 / LDPE container.

Cd Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (soluble in HCl or HNO3); Ores (dissolve in HCl /HNO3 then take to fumes with H2SO4. The silica and lead sulfate are filtered off after the addition of water); Organic based (dry ash at 450°C and dissolve ash in HCl), (sulfuric / peroxide acid digestion).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 111 amu	11 ppt	n/a	95Mo16O
ICP-OES 214.438 nm	0.003 / 0.0003 µg/mL	1	Pt, Ir
ICP-OES 226.502 nm	0.003 / 0.0003 µg/mL	1	Ir
ICP-OES 228.802 nm	0.003 / 0.0003 µg/mL	1	Co, Ir, As, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 08, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 08, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

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fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCO10
Lot Number:	N2-CO671028
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cobalt
Starting Material:	COBALT
Starting Material Lot#:	1749
Starting Material Purity:	99.9978%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9988 ± 34 µg/mL

Density: 1.057 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9973 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **10024 ± 50 µg/mL**
ICP Assay NIST SRM traceable to 3113 Lot Number: M2-CO661665

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.022956	M	Eu	<	0.000422	O	Na		0.008125	M	Se	<	0.009290	M	Zn		0.007197
O	Al		0.013621	O	Fe		0.048700	M	Nb	<	0.000422	O	Si		0.017539	M	Zr	<	0.014357
i	As	<		M	Ga	<	0.000844	M	Nd	<	0.017735	M	Sm	<	0.001689				
M	Au	<	0.000583	M	Gd		0.003247	O	Ni	<	0.043642	M	Sn	<	0.005067				
M	B	<	0.013512	M	Ge	<	0.004645	M	Os	<	0.000583	O	Sr		0.000841				
O	Ba		0.071210	M	Hf	<	0.000422	n	P	<		M	Ta	<	0.000422				
O	Be	<	0.001771	M	Hg	<	0.002334	M	Pb		0.010094	M	Tb	<	0.001689				
M	Bi		0.000614	M	Ho	<	0.000422	M	Pd	<	0.000422	M	Te	<	0.008445				
O	Ca		0.025034	M	In	<	0.003378	M	Pr	<	0.006756	M	Th	<	0.000422				
M	Cd	<	0.000844	M	Ir	<	0.000583	M	Pt	<	0.000422	M	Ti	<	0.002533				
M	Ce		0.002721	O	K		0.005785	M	Rb	<	0.001689	M	Tl	<	0.000422				
s	Co	<		M	La		0.000877	M	Re		0.016853	M	Tm	<	0.000422				
M	Cr	<	0.020269	O	Li		0.000262	M	Rh	<	0.000422	M	U	<	0.000422				
M	Cs		0.000877	M	Lu	<	0.000422	M	Ru	<	0.000583	M	V	<	0.001689				
M	Cu		0.007197	O	Mg		0.003444	n	S	<		M	W	<	0.000844				
M	Dy	<	0.000422	O	Mn	<	0.006072	M	Sb	<	0.005911	M	Y		0.001228				
M	Er	<	0.000422	M	Mo	<	0.005911	M	Sc	<	0.001689	M	Yb	<	0.003378				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.93 +2 6 Co(H2O)62+
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
Co Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxides (Soluble in HCl); Ores (dissolve in HCl / HNO3).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 59 amu	2 ppt	n/a	42Ca16O1H , 40Ar18O1H , 36Ar23Na, 43Ca16O, 24Mg35Cl
ICP-OES 228.616 nm	0.01/0.001 µg/mL	1	
ICP-OES 237.862 nm	0.01/0.002 µg/mL	1	W, Re, Al, Ta
ICP-OES 238.892 nm	0.01/0.002 µg/mL	1	Fe, W, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 15, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 15, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCR(3)10
Lot Number:	R2-CR691013
Matrix:	10% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Chromium
Starting Material:	Cr METAL
Starting Material Lot#:	2077
Starting Material Purity:	99.9942%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10044 ± 40 µg/mL

Density: 1.082 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10057 ± 58 µg/mL**
ICP Assay NIST SRM 3112a Lot Number: 170630

Assay Method #2 **10035 ± 50 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000540	M	Eu	<	0.003200	O	Na		0.130091	M	Se	<	0.012000	O	Zn	<	0.002700
O	Al		0.016634	O	Fe		0.202602	M	Nb	<	0.022000	n	Si	<		M	Zr	<	0.020000
M	As		0.003838	O	Ga	<	0.031000	M	Nd	<	0.000540	M	Sm	<	0.035000				
M	Au	<	0.000540	M	Gd	<	0.000540	O	Ni		0.009170	M	Sn		0.004051				
M	B	<	0.049000	M	Ge	<	0.005400	M	Os	<	0.088000	O	Sr	<	0.000250				
O	Ba	<	0.002000	M	Hf	<	0.000540	i	P	<		M	Ta	<	0.000540				
O	Be	<	0.000250	M	Hg	<	0.001600	M	Pb		0.002559	M	Tb	<	0.000540				
M	Bi		0.008956	M	Ho	<	0.000540	M	Pd	<	0.001100	M	Te	<	0.004800				
O	Ca		0.074642	M	In	<	0.001100	M	Pr	<	0.000540	M	Th	<	0.000540				
M	Cd	<	0.000540	M	Ir	<	0.000540	M	Pt	<	0.000540	O	Ti		0.013435				
M	Ce	<	0.000540	O	K		0.034122	i	Rb	<		M	Tl	<	0.001100				
O	Co	<	0.002900	M	La	<	0.001100	M	Re	<	0.002700	O	Tm	<	0.001800				
s	Cr	<		O	Li	<	0.000130	M	Rh	<	0.032000	M	U	<	0.001100				
M	Cs	<	0.019000	M	Lu	<	0.000540	M	Ru	<	0.094000	O	V		0.159949				
O	Cu		0.010023	O	Mg		0.001450	i	S	<		M	W	<	0.028000				
M	Dy	<	0.000540	O	Mn	<	0.014000	M	Sb	<	0.008600	M	Y	<	0.001100				
M	Er	<	0.016000	O	Mo	<	0.013000	O	Sc	<	0.001400	M	Yb	<	0.000540				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 52.00 +3 6 Cr(H2O)63+

Chemical Compatibility -Stable in HCl, HNO3, H2SO4, HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Cr3 Containing Samples (Preparation and Solution) -Metal (soluble in HCl); Oxides/Ores (Chrome ore/oxides are very difficult to dissolve. The following procedures [A-D] are commonly used: A. Fusion with KHSO4 and extraction with hot KCl. The residue fused with Na2CO3 and KClO3, 3:1. B. Fusion with NaKSO4 and NaF 2:1, C. Fusion with magnesia or lime and sodium or potassium carbonates, 4:1. D. Fusion with Na2O2 or NaOH and KNO3 or NaOH and Na2O2. Nickel, iron, copper, or silver crucibles should be used for D. Platinum may be used for A, B, C); Organic Matrices (ash at 4500C followed by one of the fusion methods above or sulfuric/hydrogen peroxide acid digestions may be applicable to non oxide containing samples).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	**Interferences** (underlined indicates severe)
ICP-MS 52 amu	40 ppt	N/A	36S16O, 36Ar16O - The 50Cr, 53Cr, 54Cr lines suffer from many more potential interferences from sulfur, chlorine and argon compounds of oxygen, nitrogen and carbon.
ICP-OES 205.552 nm	0.006/0.0008 µg/mL	1	Os
ICP-OES 276.654 nm	0.01/0.001 µg/mL	1	Cu, Ta, V
ICP-OES 284.325 nm	0.008/0.0007 µg/mL	1	

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 25, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 25, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 - 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCU10
Lot Number:	R2-CU693370
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Copper
Starting Material:	Cu Metal
Starting Material Lot#:	2095
Starting Material Purity:	99.9996%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10016 ± 30 µg/mL

Density: 1.033 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10010 ± 55 µg/mL**
ICP Assay NIST SRM 3114 Lot Number: 121207

Assay Method #2 **10017 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10015 ± 25 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.007542	M	Eu	<	0.000942	O	Na		0.001434	M	Se	<	0.016971	M	Zn	<	0.005657
O	Al	<	0.000609	O	Fe		0.008698	M	Nb	<	0.000942	O	Si		0.003052	M	Zr	<	0.000942
M	As	<	0.010371	M	Ga	<	0.000942	M	Nd	<	0.000942	M	Sm	<	0.000942				
M	Au	<	0.001885	M	Gd	<	0.000942	M	Ni		0.003780	M	Sn	<	0.005657				
O	B		0.003662	M	Ge	<	0.005657	M	Os	<	0.000942	M	Sr	<	0.000942				
M	Ba		0.004252	M	Hf	<	0.000942	O	P	<	0.031668	M	Ta	<	0.000942				
M	Be	<	0.000942	O	Hg	<	0.007064	M	Pb		0.005788	M	Tb	<	0.000942				
M	Bi	<	0.000942	M	Ho	<	0.000942	M	Pd	<	0.000942	M	Te	<	0.004714				
O	Ca		0.002304	M	In	<	0.000942	M	Pr	<	0.000942	M	Th	<	0.000942				
M	Cd	<	0.000942	M	Ir	<	0.000942	M	Pt	<	0.000942	O	Ti	<	0.002801				
M	Ce	<	0.000942	O	K		0.000762	M	Rb	<	0.000942	M	Tl	<	0.000942				
M	Co		0.001890	M	La	<	0.000942	M	Re	<	0.000942	M	Tm	<	0.000942				
M	Cr	<	0.005657	O	Li	<	0.000243	i	Rh	<		M	U	<	0.000942				
M	Cs	<	0.000942	M	Lu	<	0.000942	M	Ru	<	0.039588	M	V	<	0.003771				
s	Cu	<		O	Mg		0.000320	O	S		0.007172	M	W	<	0.005657				
M	Dy	<	0.000942	O	Mn		0.000793	M	Sb	<	0.001885	M	Y	<	0.000942				
M	Er	<	0.000942	M	Mo	<	0.005657	M	Sc	<	0.000942	M	Yb	<	0.000942				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 63.55 +2 6 Cu(H2O)62+

Chemical Compatibility -Stable in HCl, HNO3, H2SO4, HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Cu Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 63 amu	10 ppt	n/a	40Ar23Na 47Ti16O, 14N12C37Cl, 16O12C35Cl, 23Na40Ca
ICP-OES 219.958 nm	0.01/.002 µg/mL	1	Th, Ta, Nb, U, Hf
ICP-OES 224.700 nm	0.01/.001 µg/mL	1	Pb, Ir, Ni, W
ICP-OES 324.754 nm	0.06/.001 µg/mL		Nb, U, Th, Mo, Hf

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 05, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 05, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Certificate of Analysis

Refine your results. Redefine your industry.

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ARI-1
Lot Number:	S2-MEB704284
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Iron

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Iron, Fe	**10 000.0 ± 40.0 µg/mL**		

Density: 1.033 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

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10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 20, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 20, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 - 540.585.3030
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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGK10
Lot Number:	S2-K700978
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Potassium
Starting Material:	KNO3
Starting Material Lot#:	2313
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10016 ± 30 µg/mL

Density: 1.025 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10018 ± 54 µg/mL**
ICP Assay NIST SRM 3141a Lot Number: 140813

Assay Method #2 **10016 ± 24 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #3 **10014 ± 45 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

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Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001400	M	Eu	<	0.000660	O	Na		0.240000	M	Se	<	0.007900	O	Zn		0.017000
O	Al		0.001600	O	Fe		0.005800	M	Nb	<	0.000660	O	Si		0.012000	O	Zr	<	0.001600
M	As	<	0.005300	M	Ga	<	0.000660	M	Nd	<	0.000660	M	Sm	<	0.000660				
M	Au	<	0.002000	M	Gd	<	0.000660	O	Ni	<	0.004900	M	Sn	<	0.000660				
O	B	<	0.005600	M	Ge	<	0.002000	M	Os	<	0.003300	O	Sr		0.000055				
O	Ba	<	0.000860	M	Hf	<	0.000660	O	P	<	0.032000	M	Ta	<	0.000660				
O	Be	<	0.000082	M	Hg	<	0.002000	M	Pb	<	0.002300	M	Tb	<	0.000660				
M	Bi	<	0.006600	M	Ho	<	0.000660	M	Pd	<	0.000660	M	Te	<	0.017000				
O	Ca		0.031000	M	In	<	0.000660	M	Pr	<	0.000660	M	Th	<	0.000660				
O	Cd	<	0.000450	M	Ir	<	0.000660	M	Pt	<	0.002700	M	Ti	<	0.000660				
M	Ce	<	0.000660	s	K	<		M	Rb		0.480000	M	Tl	<	0.000660				
O	Co	<	0.000780	M	La	<	0.000660	M	Re	<	0.000660	M	Tm	<	0.000660				
O	Cr		0.000530	O	Li	<	0.000084	M	Rh	<	0.000660	M	U	<	0.000660				
M	Cs	<	0.000660	M	Lu	<	0.000660	M	Ru	<	0.000660	O	V	<	0.001100				
M	Cu	<	0.002700	O	Mg		0.006300	O	S		0.028000	M	W	<	0.000660				
M	Dy	<	0.000660	O	Mn		0.000480	M	Sb	<	0.000660	M	Y	<	0.000660				
M	Er	<	0.000660	M	Mo	<	0.000660	O	Sc	<	0.000340	O	Yb	<	0.000270				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 39.10 +1 (6) K+(aq)

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Avoid use of HClO4 due to insolubility of the perchlorate. Stable with all metals and inorganic anions except ClO4-.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

K Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Sodium carbonate fusion in Pt0 followed by HCl dissolution-blank levels of K in sodium carbonate critical); Organic Matrices (Sulfuric/peroxide digestion)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 39 amu	10 ppt	n/a	38ArH, 23Na16O, 78Se
ICP-OES 404.721 nm	1.1 / 0.05 µg/mL	1	U, Ce
ICP-OES 766.490 nm	0.4 / 0.001 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 771.531 nm	1.0 / 0.03 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 06, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **February 06, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 - 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMG10
Lot Number:	R2-MG695748
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Magnesium
Starting Material:	Magnesium Metal
Starting Material Lot#:	2168
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10044 ± 30 µg/mL

Density: 1.053 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**10055 ± 26 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**10042 ± 57 µg/mL** ICP Assay NIST SRM 3131a Lot Number: 140110
Assay Method #3	**10033 ± 26 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.002104	M	Eu	<	0.000910	O	Na		0.071011	O	Se	<	0.048000	O	Zn		0.003296
M	Al		0.003550	M	Fe		0.002536	M	Nb	<	0.000460	O	Si	<	0.032000	O	Zr	<	0.002700
M	As	<	0.001400	M	Ga	<	0.000460	M	Nd	<	0.000910	M	Sm	<	0.000460				
M	Au	<	0.001400	M	Gd	<	0.000460	O	Ni	<	0.001600	M	Sn	<	0.002300				
O	B		0.006847	M	Ge	<	0.001400	M	Os	<	0.000460	O	Sr		0.000278				
O	Ba		0.000963	M	Hf	<	0.000460	O	P		0.015216	M	Ta	<	0.000460				
O	Be	<	0.000120	M	Hg	<	0.000460	M	Pb	<	0.000460	M	Tb	<	0.000460				
M	Bi	<	0.000460	M	Ho	<	0.000460	M	Pd	<	0.003200	M	Te	<	0.007300				
O	Ca		0.053258	M	In	<	0.000460	M	Pr	<	0.000460	M	Th	<	0.000460				
O	Cd	<	0.000360	M	Ir	<	0.000460	M	Pt	<	0.001900	O	Ti	<	0.001700				
M	Ce	<	0.002300	M	K		0.048186	M	Rb		0.002409	M	Tl		0.003043				
M	Co	<	0.000910	M	La	<	0.002800	M	Re	<	0.000460	M	Tm	<	0.000460				
M	Cr	<	0.002300	O	Li		0.027897	M	Rh	<	0.000460	M	U	<	0.000460				
M	Cs		0.001039	M	Lu	<	0.000460	M	Ru	<	0.000460	M	V	<	0.000460				
O	Cu	<	0.003000	s	Mg	<		O	S	<	0.190000	M	W	<	0.000460				
M	Dy	<	0.000460	O	Mn		0.015216	M	Sb		0.020796	O	Y	<	0.000720				
M	Er	<	0.000460	M	Mo	<	0.000910	O	Sc	<	0.000480	M	Yb	<	0.000460				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 24.31 +2 6 Mg(H2O)6+2

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4 avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicates, carbonates, hydroxides, oxides, and tungstates in neutral and slightly acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO3 / LDPE container.

Mg Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO3); Oxide (Readily soluble in above compatible aqueous acidic solutions); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric / peroxide digestion or nitric / sulfuric / perchloric acid decomposition, or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 24 amu	42 ppt	n/a	7Li17O, 48Ti+2 , 48Ca+2
ICP-OES 279.553 nm	0.0002 / 0.00003 µg/mL	1	Th
ICP-OES 280.270 nm	0.0003 / 0.00005 µg/mL	1	U, V
ICP-OES 285.213 nm	0.002 / 0.00003 µg/mL	1	U, Hf, Cr, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 01, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **September 01, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMN10
Lot Number:	P2-MN687536
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Manganese
Starting Material:	Mn Metal
Starting Material Lot#:	2275
Starting Material Purity:	99.9909%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10046 ± 30 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10045 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **10083 ± 68 µg/mL**
ICP Assay NIST SRM 3132 Lot Number: 050429

Assay Method #3 **10031 ± 47 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001500	M	Eu	<	0.000730	O	Na		0.176713	M	Se	<	0.006600	M	Zn		0.009960
O	Al		0.004337	M	Fe	<	0.650000	M	Nb	<	0.000730	O	Si		0.097995	M	Zr	<	0.000730
M	As	<	0.008000	M	Ga		0.004337	M	Nd	<	0.001500	M	Sm	<	0.000730				
M	Au	<	0.000730	M	Gd	<	0.000730	M	Ni		0.024097	M	Sn	<	0.002200				
M	B		0.069078	M	Ge	<	0.004400	M	Os	<	0.000730	O	Sr		0.000931				
M	Ba	<	0.001500	M	Hf	<	0.000730	i	P	<		M	Ta	<	0.000730				
M	Be	<	0.000730	M	Hg	<	0.002200	M	Pb		0.007389	M	Tb	<	0.000730				
M	Bi	<	0.003000	M	Ho	<	0.000730	M	Pd	<	0.000730	M	Te	<	0.019000				
O	Ca		0.062652	M	In	<	0.003000	M	Pr	<	0.000730	M	Th	<	0.000730				
M	Cd	<	0.001500	M	Ir	<	0.000730	M	Pt	<	0.000730	O	Ti	<	0.006500				
M	Ce	<	0.007300	O	K		0.006425	M	Rb	<	0.006600	M	Tl	<	0.000730				
O	Co		0.014779	M	La	<	0.003000	M	Re	<	0.000730	M	Tm	<	0.000730				
O	Cr		0.273102	O	Li		0.000417	M	Rh	<	0.003000	M	U	<	0.001500				
M	Cs	<	0.000730	M	Lu	<	0.000730	M	Ru	<	0.004400	M	V	<	0.000730				
O	Cu		0.007711	O	Mg		0.321297	i	S	<		M	W	<	0.004400				
M	Dy	<	0.001500	s	Mn	<		M	Sb	<	0.021000	O	Y		0.001365				
M	Er	<	0.001500	M	Mo		0.010281	O	Sc	<	0.004100	M	Yb	<	0.000730				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 54.94 +2 6 Mn(H2O)62+

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO3/LDPE container.

Mn Containing Samples (Preparation and Solution) -Metal (Soluble in dilute acids); Oxides (Soluble in dilute acids); Ores (Dissolve with HCl. If silica is present add HF and then fume off silica by adding H2SO4 and heat to SO3 fumes - dense white fumes).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 55 amu	10 ppt	n/a	40Ar14N1H,39K16O,37Cl18O,40Ar15N,38Ar17O,36Ar18O1H ,38Ar16O1H,37Cl17O1H,23Na32S
ICP-OES 257.610 nm	0.0014 / 0.00002 µg/mL	1	Ce, W, Re
ICP-OES 259.373 nm	0.0016 / 0.00002 µg/mL	1	U, Ta, Mo, Fe, Nb
ICP-OES 260.569 nm	0.0021 / 0.00002 µg/mL	1	Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 05, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 05, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 - 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMO10
Lot Number:	R2-MO693167
Matrix:	tr. NH4OH H2O
Value / Analyte(s):	10 000 µg/mL ea: Molybdenum
Starting Material:	Ammonium Molybdate
Starting Material Lot#:	2257
Starting Material Purity:	99.9914%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10013 ± 35 µg/mL

Density: 1.011 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10035 ± 67 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

Assay Method #2 **10005 ± 40 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001826	M	Eu	<	0.000300	M	Na		0.008750	M	Se	<	0.007480	M	Zn		0.002553
M	Al		0.004455	M	Fe		0.002093	M	Nb	<	0.015030	i	Si	<		M	Zr	<	0.005393
M	As	<	0.003006	M	Ga	<	0.000300	i	Nd	<		M	Sm	<	0.000300				
M	Au	<	0.006012	M	Gd	<	0.000300	M	Ni	<	0.004828	M	Sn		0.001004				
M	B	<	0.035184	M	Ge	<	0.000903	M	Os	<	0.003006	M	Sr		0.001903				
O	Ba		0.015613	M	Hf	<	0.000896	i	P	<		M	Ta	<	0.000300				
M	Be	<	0.003006	M	Hg	<	0.003006	M	Pb	<	0.000409	M	Tb	<	0.000300				
M	Bi	<	0.000401	M	Ho	<	0.000300	M	Pd	<	0.001114	M	Te	<	0.060122				
O	Ca		0.032589	M	In	<	0.015030	M	Pr	<	0.090184	M	Th	<	0.000786				
O	Cd	<	0.051800	M	Ir	<	0.007483	M	Pt	<	0.000388	O	Ti	<	0.093240				
M	Ce	<	0.015030	M	K		1.114508	M	Rb		0.040641	M	Tl		0.013140				
M	Co		0.004032	M	La	<	0.000300	M	Re	<	0.000300	M	Tm	<	0.000300				
M	Cr		0.005931	O	Li		0.000215	M	Rh	<	0.000300	M	U		0.000937				
M	Cs		0.002812	M	Lu	<	0.000300	M	Ru	<	0.003006	M	V	<	0.000759				
M	Cu		0.005172	M	Mg		0.005212	i	S	<		M	W		0.592427				
M	Dy	<	0.000300	M	Mn		0.000952	M	Sb		0.003147	M	Y	<	0.000300				
M	Er	<	0.000300	s	Mo	<		M	Sc	<	0.009019	M	Yb	<	0.000300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 95.94 +6 6,7,8,9 [MoO4] -2(chemical form as received)

Chemical Compatibility -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5] -2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4] -2 chemically stable for years in 1% NH4OH in a LDPE container.

Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 95 amu	3 ppt	n/a	40Ar39K16O,79Br16O,190Os2+,190Pt2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 28, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 28, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNA10
Lot Number:	S2-NA700842
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Sodium
Starting Material:	Na2CO3
Starting Material Lot#:	2274
Starting Material Purity:	99.9958%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10053 ± 30 µg/mL

Density: 1.036 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10070 ± 26 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #2 **10012 ± 31 µg/mL**
ICP Assay NIST SRM 3152a Lot Number: 120715

Assay Method #3 **10059 ± 20 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	<	0.000250	M	Eu	<	0.000840	s	Na	<		O	Se	<	0.004700	O	Zn	0.000226
O	Al		0.003688	O	Fe		0.001560	O	Nb	<	0.001300	O	Si		0.049648	O	Zr	0.000680
O	As	<	0.006900	M	Ga	<	0.000840	M	Nd	<	0.000840	M	Sm	<	0.000840			
M	Au	<	0.000840	M	Gd	<	0.000840	O	Ni	<	0.000250	M	Sn	<	0.001700			
O	B		0.000936	M	Ge	<	0.003400	M	Os	<	0.000840	O	Sr		0.000255			
O	Ba		0.002269	M	Hf	<	0.000840	O	P		0.006525	M	Ta	<	0.004200			
O	Be	<	0.000130	M	Hg	<	0.001700	M	Pb	<	0.000840	M	Tb	<	0.000840			
O	Bi	<	0.008100	M	Ho	<	0.000840	M	Pd	<	0.000840	O	Te	<	0.004800			
O	Ca		0.085112	M	In	<	0.000840	M	Pr	<	0.000840	M	Th	<	0.002500			
O	Cd	<	0.000250	M	Ir	<	0.000840	M	Pt	<	0.000840	O	Ti		0.000553			
M	Ce	<	0.001700	O	K		1.049718	M	Rb	<	0.003400	M	Tl	<	0.000840			
O	Co	<	0.000370	M	La	<	0.000840	M	Re	<	0.000840	M	Tm	<	0.000840			
O	Cr	<	0.001400	O	Li		0.000069	M	Rh	<	0.000840	M	U	<	0.000840			
M	Cs	<	0.003400	M	Lu	<	0.000840	M	Ru	<	0.001700	O	V	<	0.001600			
O	Cu	<	0.001400	O	Mg		0.028370	O	S		0.048230	O	W	<	0.005000			
M	Dy	<	0.000840	O	Mn		0.000139	M	Sb	<	0.001700	O	Y	<	0.000730			
M	Er	<	0.000840	O	Mo	<	0.004800	O	Sc	<	0.000370	O	Yb	<	0.000130			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 22.99 +1 (6) Na+(aq) largely ionic in nature

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Na Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Lithium carbonate fusion in graphite crucible followed by HCl dissolution - blank levels of Na in lithium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric/sulfuric/perchloric acid decomposition).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 23 amu	310 ppt	n/a	46Ti+2 , 46Ca+2
ICP-OES 330.237 nm	2.0 / 0.09 µg/mL	1	Pd, Zn
ICP-OES 588.995 nm	0.03 / 0.006 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 589.595 nm	0.07 / 0.00009 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 25, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 25, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNI10
Lot Number:	P2-NI686384
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Nickel
Starting Material:	Ni Metal
Starting Material Lot#:	2277 and 2282
Starting Material Purity:	99.9992%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9979 ± 30 µg/mL

Density: 1.038 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9971 ± 54 µg/mL**
ICP Assay NIST SRM 3136 Lot Number: 120619

Assay Method #2 **9970 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **9993 ± 33 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag		0.002606	M	Eu	<	0.001100	O	Na		0.004965	O	Se	<	0.067000	M	Zn		0.006578
M	Al	<	0.013000	O	Fe		0.018618	M	Nb	<	0.001100	O	Si		0.010923	M	Zr	<	0.001100
O	As	<	0.067000	M	Ga	<	0.001100	M	Nd	<	0.001100	M	Sm	<	0.001100				
M	Au	<	0.002100	M	Gd	<	0.001100	s	Ni	<		M	Sn	<	0.016000				
M	B	<	0.017000	M	Ge	<	0.004200	M	Os		0.002110	O	Sr	<	0.000940				
M	Ba	<	0.001100	M	Hf	<	0.001100	i	P	<		M	Ta	<	0.001100				
O	Be	<	0.000410	M	Hg		0.014895	M	Pb		0.006578	M	Tb	<	0.001100				
M	Bi	<	0.004200	M	Ho	<	0.001100	M	Pd	<	0.001100	M	Te	<	0.015000				
O	Ca		0.003351	M	In	<	0.001100	M	Pr	<	0.001100	M	Th	<	0.001100				
M	Cd		0.001365	M	Ir		0.004716	M	Pt	<	0.001100	M	Ti	<	0.004200				
M	Ce	<	0.001100	O	K		0.004716	M	Rb	<	0.001100	M	Tl	<	0.001100				
O	Co		0.017377	M	La	<	0.001100	M	Re		0.001737	M	Tm	<	0.001100				
O	Cr	<	0.006700	O	Li	<	0.000140	M	Rh	<	0.006300	M	U	<	0.001100				
M	Cs	<	0.007300	M	Lu	<	0.001100	M	Ru	<	0.019000	M	V	<	0.002100				
M	Cu		0.004096	O	Mg		0.000372	i	S	<		M	W	<	0.006300				
M	Dy	<	0.001100	O	Mn	<	0.001900	M	Sb		0.005833	O	Y	<	0.000540				
M	Er	<	0.001100	M	Mo	<	0.008400	M	Sc	<	0.002100	M	Yb	<	0.001100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.69 +2 6 Ni(H2O)62+

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Ni Containing Samples (Preparation and Solution) -Metal (Soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 60 amu	100 ppt	n/a	43Ca16O1H , 44Ca16O, 23Na37Cl
ICP-OES 221.647 nm	0.01 / 0.0009 µg/mL	1	Si
ICP-OES 231.604 nm	0.02 / 0.002 µg/mL	1	Sb, Ta, Co
ICP-OES 232.003 nm	0.02 / 0.006 µg/mL	1	Cr, Re, Os, Nb, Ag, Pt, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

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fax: 540.585.3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGPB10
Lot Number:	P2-PB686383
Matrix:	0.5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Lead
Starting Material:	Lead Nitrate
Starting Material Lot#:	2299
Starting Material Purity:	99.9974%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10031 ± 30 µg/mL

Density: 1.015 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10060 ± 63 µg/mL**
ICP Assay NIST SRM 3128 Lot Number: 101026

Assay Method #2 **10048 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10007 ± 32 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag		0.000850	M	Eu	<	0.000310	O	Na		0.005780	M	Se	<	0.004600	M	Zn		0.005440
O	Al		0.234602	O	Fe		0.023460	M	Nb	<	0.000310	O	Si		0.047600	M	Zr	<	0.000610
M	As	<	0.001900	M	Ga	<	0.000310	M	Nd	<	0.000310	M	Sm	<	0.000310				
M	Au	<	0.002200	M	Gd	<	0.004300	M	Ni	<	0.001600	M	Sn	<	0.000610				
O	B	<	0.005200	M	Ge	<	0.000610	M	Os	<	0.000310	O	Sr		0.000442				
O	Ba		0.001530	M	Hf	<	0.000310	O	P	<	0.052000	M	Ta	<	0.000310				
O	Be	<	0.000630	M	Hg	<	0.001600	s	Pb	<		M	Tb	<	0.000310				
O	Bi		0.021080	M	Ho	<	0.000610	M	Pd	<	0.000310	M	Te	<	0.004300				
O	Ca		0.037400	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.000310				
M	Cd	<	0.000610	M	Ir	<	0.000310	M	Pt	<	0.000310	M	Ti		0.002992				
M	Ce	<	0.000910	O	K		0.008840	M	Rb	<	0.000610	M	Tl		0.037400				
M	Co	<	0.000610	M	La	<	0.000610	M	Re	<	0.000310	M	Tm	<	0.000610				
M	Cr	<	0.003400	O	Li		0.000108	O	Rh	<	0.006300	M	U	<	0.000310				
M	Cs		0.002686	M	Lu	<	0.000310	M	Ru	<	0.000310	M	V	<	0.000310				
M	Cu	<	0.002500	O	Mg		0.004760	O	S	<	0.052000	M	W	<	0.002200				
M	Dy	<	0.000310	M	Mn	<	0.000310	M	Sb	<	0.001300	M	Y	<	0.000310				
M	Er	<	0.000310	O	Mo	<	0.005400	M	Sc	<	0.000310	M	Yb	<	0.000310				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 207.20 +2 6 $Pb(H_2O)_6^{+2}$

Chemical Compatibility - Soluble in HCl, HF and HNO_3. Avoid H_2SO_4. Stable with most metals and inorganic anions forming insoluble carbonate, borate, sulfate, sulfite, sulfide, phosphate, oxalate, chromate, tannate, iodate, and cyanide in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO_3 / LDPE container.

Pb Containing Samples (Preparation and Solution) -Metal (Best dissolved in 1:1 H_2O / HNO_3); Oxides (The many different Pb oxides are soluble in HNO_3 with the exception of PbO_2 which is soluble in HCl or HF); Ores and Alloys (Best attacked using 1:1 H_2O / HNO_3); Organic Matrices (Dry ash and dissolve in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 208 amu	5 ppt	n/a	192Pt16O, 192Os16O
ICP-OES 168.215 nm	0.03 / 0.003 µg/mL	1	Co
ICP-OES 217.000 nm	0.09 / 0.03 µg/mL	1	W, Ir, Hf, Sb, Th
ICP-OES 220.353 nm	0.04 / 0.006 µg/mL	1	Bi, Nb

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 - 540.585.3030
fax: 540.585.3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSB10
Lot Number:	R2-SB688559
Matrix:	3% (v/v) HNO3 3% (w/v) tartaric acid
Value / Analyte(s):	10 000 µg/mL ea: Antimony
Starting Material:	Antimony Metal
Starting Material Lot#:	1857
Starting Material Purity:	99.9894%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10003 ± 47 µg/mL

Density: 1.061 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10003 ± 41 µg/mL**
ICP Assay NIST SRM 3102a Lot Number: 140911

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$
w_i = the weighting factors for each method calculated using the inverse square of the variance:
$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2
$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method
u_{bb} = bottle to bottle homogeneity standard uncertainty
u_{lts} = long term stability standard uncertainty (storage)
u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with
$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2
$u_{char\ a}$ = the errors from characterization
u_{bb} = bottle to bottle homogeneity standard uncertainty
u_{lts} = long term stability standard uncertainty (storage)
u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000300	O	Na		0.140000	M	Se	<	0.007300	O	Zn		0.005000
M	Al		0.003200	O	Fe		0.060000	M	Nb	<	0.000100	O	Si		0.150000	O	Zr	<	0.006300
M	As	<	0.004400	M	Ga	<	0.000400	M	Nd	<	0.000100	M	Sm	<	0.000100				
M	Au	<	0.000210	M	Gd	<	0.000100	O	Ni		0.004800	M	Sn	<	0.001800				
M	B	<	0.011000	M	Ge	<	0.000600	M	Os	<	0.000110	O	Sr		0.000750				
O	Ba	<	0.004900	M	Hf	<	0.000100	O	P		0.540000	M	Ta		0.003300				
M	Be	<	0.000400	M	Hg	<	0.000110	M	Pb	<	0.000400	M	Tb	<	0.000100				
M	Bi	<	0.000200	M	Ho	<	0.000100	M	Pd	<	0.000210	M	Te	<	0.000600				
O	Ca		0.110000	M	In	<	0.000100	M	Pr	<	0.001600	M	Th	<	0.000100				
M	Cd	<	0.000200	M	Ir	<	0.000110	M	Pt	<	0.000600	M	Ti	<	0.002800				
M	Ce		0.006500	O	K		0.020000	M	Rb	<	0.001000	M	Tl	<	0.000100				
M	Co	<	0.000200	O	La	<	0.016000	M	Re	<	0.000100	M	Tm	<	0.000100				
M	Cr		0.006900	O	Li	<	0.000430	M	Rh	<	0.000300	M	U	<	0.000100				
M	Cs	<	0.000200	M	Lu	<	0.000100	M	Ru	<	0.000310	M	V	<	0.000800				
M	Cu	<	0.000600	O	Mg		0.021000	n	S	<		M	W	<	0.000200				
M	Dy	<	0.000100	O	Mn		0.001900	s	Sb	<		M	Y	<	0.000100				
M	Er	<	0.000100	M	Mo	<	0.000500	O	Sc	<	0.002300	M	Yb	<	0.000100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 121.75 +3 6 Sb(O)C4H4O6-1

Chemical Compatibility -Stable in conc. HCl, dilute or conc. HF. Stable in dilute HNO3 as the fluoride or tartrate complex. Avoid basic media. Stable with most metals and inorganic anions in acidic media as the tartrate provided the acidity is not too high or the acid is oxidizing causing loss of the stabilizing tartrate ion. The fluoride complex of antimony is stable in strong acid but you should only mix with other metals that are fluorinated.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-2% HNO3 / LDPE container.

Sb Containing Samples (Preparation and Solution) -Metal and alloys (Soluble in H2O / HF / HNO3 mixture); Oxides (Soluble in HCl and tartaric acid or H2O / HF / HNO3 mixtures); Ores (fusion with Na2CO3 in Pt0 followed by dissolving the fuseate in a H2O / HF / HNO3 mixture); Organic based (sulfuric acid / hydrogen peroxide digestion)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 121 amu	5 ppt	N/A	105Pd16O, 89Y16O2
ICP-OES 206.833 nm	0.03/0.003 µg/mL	1	Ta, Cr, Ge, Hf
ICP-OES 217.581 nm	0.05/0.005 µg/mL	1	Nb, W, Re, Fe
ICP-OES 231.147 nm	0.06/0.006 µg/mL	1	Ni, Co, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 30, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 30, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSE10
Lot Number:	P2-SE684206
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Selenium
Starting Material:	Se Metal
Starting Material Lot#:	1962
Starting Material Purity:	99.9991%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9992 ± 61 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9993 ± 67 µg/mL**
ICP Assay NIST SRM 3149 Lot Number: 100901

Assay Method #2 **9992 ± 73 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002242	M	Eu	<	0.000373	O	Na		0.013700	s	Se	<		O	Zn		0.002382
M	Al		0.004465	M	Fe		0.008506	O	Nb	<	0.002975	O	Si		0.006270	M	Zr	<	0.001868
O	As	<	0.022040	M	Ga	<	0.000373	M	Nd	<	0.000373	M	Sm	<	0.000373				
M	Au	<	0.000373	M	Gd	<	0.000373	O	Ni		0.001849	M	Sn		0.000850				
O	B	<	0.007714	M	Ge	<	0.002616	M	Os	<	0.000373	M	Sr	<	0.001121				
M	Ba	<	0.001495	M	Hf	<	0.000373	O	P	<	0.022040	M	Ta	<	0.000373				
M	Be	<	0.001495	M	Hg	<	0.002240	M	Pb		0.006379	M	Tb	<	0.006353				
M	Bi	<	0.000373	M	Ho	<	0.000373	M	Pd	<	0.000373	M	Te	<	0.012707				
O	Ca		0.006552	M	In	<	0.000373	M	Pr	<	0.001495	M	Th	<	0.002990				
M	Cd		0.001169	M	Ir	<	0.000373	M	Pt	<	0.000373	M	Ti	<	0.003363				
M	Ce	<	0.000373	O	K		0.002006	M	Rb	<	0.001868	M	Tl		0.008613				
M	Co	<	0.000373	M	La	<	0.001121	M	Re	<	0.000373	M	Tm	<	0.000373				
M	Cr		0.002870	O	Li		0.000062	M	Rh	<	0.000373	M	U	<	0.000373				
M	Cs	<	0.001121	M	Lu	<	0.000373	M	Ru	<	0.001493	M	V	<	0.000747				
M	Cu	<	0.000747	O	Mg		0.001159	O	S		0.024674	M	W	<	0.002242				
M	Dy	<	0.000373	M	Mn	<	0.000373	M	Sb	<	0.002242	M	Y	<	0.000373				
M	Er	<	0.000373	O	Mo	<	0.003195	M	Sc	<	0.001121	M	Yb	<	0.000373				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 78.96 +4 6 H_2SeO_3

Chemical Compatibility -Soluble in HCl, HNO_3,H_3PO_4, H_2SO_4 and HF aqueous matrices and water. It is stable with most inorganic anions but many cationic metals form the insoluble selenites under pH neutral conditions. When fluorinated and/or under acidic conditions precipitation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Se Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (readily soluble in water); Minerals and alloys (acid digestion with HNO_3or HNO_3 / HF); Organic Matrices (acid digestion with hot concentrated H_2SO_4 accompanied by the careful dropwise addition of H_2O_2 until clear).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 82 amu	200 ppt	N/A	12C35Cl2
ICP-OES 196.026 nm	0.08/0.006 µg/mL	1	Fe
ICP-OES 203.985 nm	0.2/0.05 µg/mL	1	Sb, Ir, Cr, Ta
ICP-OES 206.279 nm	0.3/0.16 µg/mL	1	Cr, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 13, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **September 13, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTL10
Lot Number:	R2-TL691937
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Thallium
Starting Material:	TlNO3
Starting Material Lot#:	2118
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9987 ± 49 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9968 ± 68 µg/mL**
ICP Assay NIST SRM 3158 Lot Number: 151215

Assay Method #2 **10001 ± 58 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000200	O	Na		0.002479	M	Se	<	0.011019	O	Zn		0.002288
O	Al	<	0.004184	O	Fe	<	0.002824	M	Nb	<	0.000200	O	Si		0.003744	M	Zr	<	0.000200
M	As	<	0.002003	M	Ga	<	0.000200	M	Nd	<	0.000200	M	Sm	<	0.000200				
O	Au	<	0.002824	M	Gd	<	0.000200	M	Ni		0.001717	M	Sn	<	0.000601				
O	B	<	0.004184	M	Ge	<	0.000801	M	Os	<	0.000198	O	Sr	<	0.000313				
M	Ba	<	0.000400	M	Hf	<	0.000200	O	P	<	0.010460	M	Ta	<	0.000200				
O	Be	<	0.000104	M	Hg	<	0.000794	M	Pb		0.000807	M	Tb	<	0.000200				
M	Bi	<	0.005209	M	Ho	<	0.000200	M	Pd	<	0.000400	M	Te	<	0.005008				
O	Ca		0.002426	M	In	<	0.000200	M	Pr	<	0.000200	M	Th	<	0.000200				
M	Cd		0.001312	M	Ir	<	0.000198	M	Pt	<	0.000801	O	Ti	<	0.001255				
M	Ce	<	0.000200	O	K		0.006150	M	Rb	<	0.000200	s	Tl	<					
M	Co	<	0.000601	M	La	<	0.000200	M	Re	<	0.000200	M	Tm	<	0.000200				
M	Cr	<	0.000801	O	Li	<	0.000177	M	Rh	<	0.000200	M	U	<	0.000200				
M	Cs	<	0.003606	M	Lu	<	0.000200	M	Ru	<	0.000397	M	V	<	0.002203				
M	Cu	<	0.001001	O	Mg		0.000527	O	S	<	0.015690	M	W	<	0.000601				
M	Dy	<	0.000200	M	Mn	<	0.000801	M	Sb	<	0.000400	M	Y	<	0.000200				
M	Er	<	0.000200	M	Mo	<	0.001202	O	Sc	<	0.000711	M	Yb	<	0.000200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 204.38 +1 6 Tl(H2O)61+

Chemical Compatibility - Soluble in HCl, HNO3, and H2SO4. Stable with most metals and inorganic anions. The sulfite, thiocyanate and oxalate are moderately soluble; the phosphate and arsenite are slightly soluble and the sulfide is insoluble.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Tl Containing Samples (Preparation and Solution) -Metal (Best dissolved in HNO3 which forms chiefly the Tl1+ ion.); Oxide (The thallous oxide is readily soluble in water. The thallic oxide requires high levels of acid); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 205 amu	2 ppt	N/A	189Os16O
ICP-OES 190.864 nm	0.04 / 0.004 µg/mL	1	V, Ti
ICP-OES 276.787 nm	0.1 / 0.01 µg/mL	1	Ta, V, Fe, Cr
ICP-OES 351.924 nm	0.2 / 0.02 µg/mL	1	Th, Ce, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 08, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 08, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGV10
Lot Number:	R2-V688296
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Vanadium
Starting Material:	Vanadium pentoxide
Starting Material Lot#:	1782
Starting Material Purity:	99.9907%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10026 ± 30 µg/mL

Density: 1.105 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10025 ± 56 µg/mL**
ICP Assay NIST SRM 3165 Lot Number: 160906

Assay Method #2 **10027 ± 30 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000510	M	Eu	<	0.000110	M	Na		0.095000	M	Se	<	0.002300	M	Zn		0.008900
O	Al		0.051000	O	Fe		0.350000	M	Nb	<	0.000710	O	Si		0.260000	M	Zr	<	0.002500
M	As	<	0.000410	M	Ga	<	0.007100	M	Nd	<	0.000210	M	Sm	<	0.000110				
M	Au	<	0.000410	M	Gd	<	0.000110	M	Ni		0.011000	M	Sn	<	0.003300				
M	B	<	0.006000	M	Ge	<	0.000110	M	Os	<	0.000410	M	Sr		0.001400				
M	Ba		0.001800	M	Hf	<	0.000110	O	P	<	0.120000	M	Ta	<	0.000110				
M	Be	<	0.000110	M	Hg	<	0.000310	M	Pb	<	0.002300	M	Tb	<	0.000110				
M	Bi	<	0.000610	M	Ho	<	0.000110	M	Pd	<	0.000610	M	Te	<	0.000610				
M	Ca		0.180000	M	In	<	0.000110	M	Pr	<	0.000110	M	Th	<	0.000210				
M	Cd	<	0.000410	M	Ir	<	0.000110	M	Pt	<	0.000410	M	Ti	<	0.021000				
M	Ce	<	0.000310	M	K		0.400000	M	Rb	<	0.000410	M	Tl	<	0.000110				
M	Co	<	0.001100	M	La	<	0.000110	M	Re	<	0.000110	M	Tm	<	0.000110				
O	Cr		0.190000	M	Li	<	0.001400	M	Rh	<	0.000110	M	U	<	0.000310				
M	Cs		0.005700	M	Lu	<	0.000110	M	Ru	<	0.000410	s	V	<					
M	Cu	<	0.001800	M	Mg		0.009200	n	S	<		M	W	<	0.003100				
M	Dy	<	0.000110	M	Mn		0.008700	M	Sb		0.076000	M	Y	<	0.000110				
M	Er	<	0.000110	M	Mo		0.086000	M	Sc	<	0.000310	M	Yb	<	0.000110				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 50.94 +5 6 $H_2V_{10}O_{28}^{4-}$

Chemical Compatibility -Soluble in HCl, HNO_3, H_2SO_4, HF, H_3PO_4 and strong basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

V Containing Samples (Preparation and Solution) -Metal (Fusion with NaOH or KOH in Ni0 or Na_2CO_3 / KNO_3); Oxides (V_2O_3 - use HCl, V_2O_4 - use HCl or HNO_3, V_2O_5 - use concentrated acids); Ores (Na_2CO_3 / KNO_3 in Pt0 caution - nitrates attack Pto followed by water extraction of fuseate); Organic Matrices (Ash at 450 EC followed by dissolving according to V_2O_5 above) .

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 51 amu	4 ppt	N/A	34S16O1H, 35Cl16O, 38Ar13C, 36Ar15N, 36Ar14N1H, 37Cl14N,36S15N, 33S18O, 34S17O, 102Ru+2,02Pd+2
ICP-OES 290.882 nm	0.008 / 0.0008 µg/mL	1	Hf, Nb
ICP-OES 292.402 nm	0.006 / 0.001 µg/mL	1	Th
ICP-OES 309.311 nm	0.005 / 0.001 µg/mL	1	Mg, U, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 01, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 01, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGZN10
Lot Number:	P2-ZN686137
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Zinc
Starting Material:	Zn Shot
Starting Material Lot#:	2201
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10040 ± 30 µg/mL

Density: 1.033 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10009 ± 54 µg/mL**
ICP Assay NIST SRM 3168a Lot Number: 120629

Assay Method #2 **10049 ± 33 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10041 ± 28 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.003057	M	Eu	<	0.000509	O	Na		0.001874	M	Se	<	0.023441	s	Zn	<	
O	Al	<	0.005720	O	Fe		0.006348	M	Nb	<	0.000509	O	Si	<	0.057200	M	Zr	<	0.000509
M	As	<	0.003057	M	Ga	<	0.007134	M	Nd	<	0.000509	M	Sm	<	0.000509				
M	Au	<	0.000510	M	Gd	<	0.000509	M	Ni	<	0.000509	M	Sn	<	0.000509				
O	B	<	0.017160	M	Ge	<	0.003057	M	Os	<	0.000510	M	Sr	<	0.000509				
M	Ba	<	0.000509	M	Hf	<	0.000509	O	P	<	0.057200	M	Ta	<	0.000509				
M	Be	<	0.000509	M	Hg	<	0.001021	O	Pb		0.023870	M	Tb	<	0.000509				
M	Bi	<	0.005095	M	Ho	<	0.000509	M	Pd	<	0.002038	M	Te	<	0.023441				
O	Ca		0.033793	M	In	<	0.000509	M	Pr	<	0.000509	M	Th	<	0.000509				
O	Cd		0.003924	M	Ir	<	0.000510	M	Pt	<	0.000509	M	Ti	<	0.000509				
M	Ce	<	0.000509	O	K		0.001499	M	Rb	<	0.002038	M	Tl	<	0.009172				
M	Co	<	0.000509	M	La	<	0.000509	M	Re	<	0.000509	M	Tm	<	0.000509				
O	Cr		0.001549	O	Li	<	0.000457	M	Rh	<	0.000509	M	U	<	0.000509				
M	Cs	<	0.000509	M	Lu	<	0.000509	M	Ru	<	0.006129	M	V	<	0.000509				
O	Cu	<	0.010296	O	Mg		0.000349	O	S	<	0.034320	M	W	<	0.001019				
M	Dy	<	0.000509	M	Mn	<	0.000509	M	Sb	<	0.001019	M	Y	<	0.000509				
M	Er	<	0.000509	M	Mo	<	0.000509	M	Sc	<	0.000509	M	Yb	<	0.000509				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 65.39 +2 4 Zn(OH)(aq)1+

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media forming insoluble carbonate and hydroxide. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Zn Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3); Organic based (dry ash at 4500C and dissolve ash in HCl) (sulfuric/peroxide acid digestion)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 66 amu	7 ppt	N/A	50Ti16O,50Cr16O, 50V16O, 34S16O2, 32S16O18O, 32S17O2, 33S16O17O, 32S34S, 33S2
ICP-OES 202.548 nm	0.004/0.0002 µg/mL	1	Nb, Cu, Co, Hf
ICP-OES 206.200 nm	0.006/0.0006 µg/mL	1	Sb, Ta, Bi, Os
ICP-OES 213.856 nm	0.002/0.0004 µg/mL	1	Ni, Cu, V

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 05, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 05, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW21-SC524

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-01 C	SDG:	21G0212
Sampled:	07/15/21 14:55	Prepared:	07/29/21 17:15	File ID:	CubeData_08092021@1047-087
% Solids:	56.38	Preparation:	PSEP 1986 (modified)	Analyzed:	08/03/21 11:05
Batch:	BJG0719	Sequence:	SJH0006	Initial/Final:	0.6023 g Wet / 0.6023 mL
Instrument:	TOC Cube			Calibration:	EG00035

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.79	1	0.02	0.02	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW21-SC528

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-02 C	SDG:	21G0212
Sampled:	07/15/21 15:20	Prepared:	07/29/21 17:15	File ID:	CubeData_08092021@1047-123
% Solids:	58.39	Preparation:	PSEP 1986 (modified)	Analyzed:	08/03/21 14:15
Batch:	BJG0719	Sequence:	SJH0006	Initial/Final:	0.5633 g Wet / 0.5633 mL
Instrument:	TOC Cube			Calibration:	EG00035

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.53	1	0.02	0.02	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW21-SC538B

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-03 C	SDG:	21G0212
Sampled:	07/15/21 16:21	Prepared:	07/29/21 17:15	File ID:	CubeData_08092021@1047-131
% Solids:	75.56	Preparation:	PSEP 1986 (modified)	Analyzed:	08/03/21 14:47
Batch:	BJG0719	Sequence:	SJH0006	Initial/Final:	0.5235 g Wet / 0.5235 mL
Instrument:	TOC Cube			Calibration:	EG00035

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.90	1	0.02	0.02	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW21-SC538C

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-04 C	SDG:	21G0212
Sampled:	07/15/21 16:21	Prepared:	07/29/21 17:15	File ID:	CubeData_08092021@1047-136
% Solids:	73.33	Preparation:	PSEP 1986 (modified)	Analyzed:	08/03/21 15:19
Batch:	BJG0719	Sequence:	SJH0006	Initial/Final:	0.5467 g Wet / 0.5467 mL
Instrument:	TOC Cube			Calibration:	EG00035

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.35	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW21-SC538E

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-05 C	SDG:	21G0212
Sampled:	07/15/21 16:21	Prepared:	07/29/21 17:15	File ID:	CubeData_08092021@1047-143
% Solids:	74.24	Preparation:	PSEP 1986 (modified)	Analyzed:	08/03/21 15:51
Batch:	BJG0719	Sequence:	SJH0006	Initial/Final:	0.6411 g Wet / 0.6411 mL
Instrument:	TOC Cube			Calibration:	EG00035

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.20	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW21-IT582B

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-06 C	SDG:	21G0212
Sampled:	07/16/21 08:16	Prepared:	07/29/21 17:15	File ID:	CubeData_08092021@1047-149
% Solids:	69.55	Preparation:	PSEP 1986 (modified)	Analyzed:	08/03/21 16:23
Batch:	BJG0719	Sequence:	SJH0006	Initial/Final:	0.6244 g Wet / 0.6244 mL
Instrument:	TOC Cube			Calibration:	EG00035

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.25	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW21-IT582C

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-07 C	SDG:	21G0212
Sampled:	07/16/21 08:16	Prepared:	07/29/21 17:15	File ID:	CubeData_08092021@1047-155
% Solids:	69.77	Preparation:	PSEP 1986 (modified)	Analyzed:	08/03/21 16:54
Batch:	BJG0719	Sequence:	SJH0006	Initial/Final:	0.7001 g Wet / 0.7001 mL
Instrument:	TOC Cube			Calibration:	EG00035

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.07	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW21-IT582E

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-08 C	SDG:	21G0212
Sampled:	07/16/21 08:16	Prepared:	07/29/21 17:15	File ID:	CubeData_08092021@1047-161
% Solids:	72.02	Preparation:	PSEP 1986 (modified)	Analyzed:	08/03/21 17:26
Batch:	BJG0719	Sequence:	SJH0006	Initial/Final:	0.6005 g Wet / 0.6005 mL
Instrument:	TOC Cube			Calibration:	EG00035

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.65	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW21-IT579B

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-09 C	SDG:	21G0212
Sampled:	07/16/21 11:23	Prepared:	07/29/21 17:15	File ID:	CubeData_08092021@1047-167
% Solids:	69.95	Preparation:	PSEP 1986 (modified)	Analyzed:	08/03/21 17:58
Batch:	BJG0719	Sequence:	SJH0006	Initial/Final:	0.5674 g Wet / 0.5674 mL
Instrument:	TOC Cube			Calibration:	EG00035

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.88	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW21-IT597B

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-10 C	SDG:	21G0212
Sampled:	07/16/21 14:07	Prepared:	07/29/21 17:15	File ID:	CubeData_08092021@1047-172
% Solids:	59.76	Preparation:	PSEP 1986 (modified)	Analyzed:	08/03/21 18:29
Batch:	BJG0719	Sequence:	SJH0006	Initial/Final:	0.5552 g Wet / 0.5552 mL
Instrument:	TOC Cube			Calibration:	EG00035

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.17	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW21-IT597C

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-11 C	SDG:	21G0212
Sampled:	07/16/21 14:07	Prepared:	07/29/21 17:15	File ID:	CubeData_08092021@1047-180
% Solids:	75.15	Preparation:	PSEP 1986 (modified)	Analyzed:	08/03/21 19:00
Batch:	BJG0719	Sequence:	SJH0006	Initial/Final:	0.5067 g Wet / 0.5067 mL
Instrument:	TOC Cube			Calibration:	EG00035

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.39	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW21-IT597E

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-12 C	SDG:	21G0212
Sampled:	07/16/21 14:07	Prepared:	07/29/21 17:15	File ID:	CubeData_08092021@1047-199
% Solids:	81.85	Preparation:	PSEP 1986 (modified)	Analyzed:	08/03/21 20:35
Batch:	BJG0719	Sequence:	SJH0006	Initial/Final:	0.5495 g Wet / 0.5495 mL
Instrument:	TOC Cube			Calibration:	EG00035

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.11	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW21-SC539A

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-13RE1 C	SDG:	21G0212
Sampled:	07/16/21 15:45	Prepared:	07/29/21 17:15	File ID:	CubeData_09062021@0807-514
% Solids:	54.64	Preparation:	PSEP 1986 (modified)	Analyzed:	09/04/21 16:54
Batch:	BJG0719	Sequence:	SJH0417	Initial/Final:	0.2224 g Wet / 0.2224 mL
Instrument:	TOC Cube			Calibration:	EH00065

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.99	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW21-SC539B

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-14 C	SDG:	21G0212
Sampled:	07/16/21 15:45	Prepared:	07/29/21 17:15	File ID:	CubeData_08092021@1047-206
% Solids:	74.12	Preparation:	PSEP 1986 (modified)	Analyzed:	08/03/21 21:39
Batch:	BJG0719	Sequence:	SJH0006	Initial/Final:	0.5493 g Wet / 0.5493 mL
Instrument:	TOC Cube			Calibration:	EG00035

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.42	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW21-SC539C

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-15 C	SDG:	21G0212
Sampled:	07/16/21 15:45	Prepared:	07/29/21 17:15	File ID:	CubeData_08092021@1047-211
% Solids:	62.92	Preparation:	PSEP 1986 (modified)	Analyzed:	08/03/21 22:11
Batch:	BJG0719	Sequence:	SJH0006	Initial/Final:	0.6598 g Wet / 0.6598 mL
Instrument:	TOC Cube			Calibration:	EG00035

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.65	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW21-SC539E

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Lower Duwamish AOC4				
Matrix:	Sediment	Laboratory ID:	21G0212-16 C	SDG:	21G0212
Sampled:	07/16/21 15:45	Prepared:	07/29/21 17:15	File ID:	CubeData_08092021@1047-217
% Solids:	78.49	Preparation:	PSEP 1986 (modified)	Analyzed:	08/03/21 22:42
Batch:	BJG0719	Sequence:	SJH0006	Initial/Final:	0.5819 g Wet / 0.5819 mL
Instrument:	TOC Cube			Calibration:	EG00035

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.08	1	0.02	0.02	

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PREPARATION BATCH SUMMARY

EPA 9060A m

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC			Project:	Lower Duwamish AOC4
Batch:	BJG0719	Batch Matrix:	Solid	Preparation:	PSEP 1986 (modified)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW21-SC524	21G0212-01	eData_08092021@1047-	07/29/21 17:15	
LDW21-SC528	21G0212-02	eData_08092021@1047-	07/29/21 17:15	
LDW21-SC538B	21G0212-03	eData_08092021@1047-	07/29/21 17:15	
LDW21-SC538C	21G0212-04	eData_08092021@1047-	07/29/21 17:15	
LDW21-SC538E	21G0212-05	eData_08092021@1047-	07/29/21 17:15	
LDW21-IT582B	21G0212-06	eData_08092021@1047-	07/29/21 17:15	
LDW21-IT582C	21G0212-07	eData_08092021@1047-	07/29/21 17:15	
LDW21-IT582E	21G0212-08	eData_08092021@1047-	07/29/21 17:15	
LDW21-IT579B	21G0212-09	eData_08092021@1047-	07/29/21 17:15	
LDW21-IT597B	21G0212-10	eData_08092021@1047-	07/29/21 17:15	
LDW21-IT597C	21G0212-11	eData_08092021@1047-	07/29/21 17:15	
LDW21-IT597E	21G0212-12	eData_08092021@1047-	07/29/21 17:15	
LDW21-SC539A	21G0212-13RE1	eData_09062021@0807-	07/29/21 17:15	Added 8/9/2021 By BF
LDW21-SC539B	21G0212-14	eData_08092021@1047-	07/29/21 17:15	
LDW21-SC539C	21G0212-15	eData_08092021@1047-	07/29/21 17:15	
LDW21-SC539E	21G0212-16	eData_08092021@1047-	07/29/21 17:15	
Blank	BJG0719-BLK1	eData_08092021@1047-	07/29/21 17:15	
LCS	BJG0719-BS1	eData_08092021@1047-	07/29/21 17:15	
MRL Check	BJG0719-MRL1	eData_08092021@1047-	07/29/21 17:15	
Reference	BJG0719-SRM1	eData_08092021@1047-	07/29/21 17:15	

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Form I

METHOD BLANK DATA SHEET

EPA 9060A m

TotalAnalytes

Blank

Laboratory:	Analytical Resources, Inc.			SDG:	21G0212
Client:	Anchor QEA, LLC			Project:	Lower Duwamish AOC4
Batch:	BJG0719	Laboratory ID:	BJG0719-BLK1	Prepared:	07/29/21 17:15
Matrix:	Solid	Preparation:	PSEP 1986 (modified)	Analyzed:	08/03/21 05:19
Sequence:	SJH0006	Calibration:	EG00035	Instrument:	TOC Cube

CAS NO.	Analyte	Concentration (% wet)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	ND	1	0.02	0.02	U

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LCS / LCS DUPLICATE RECOVERY

EPA 9060A m

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Matrix:	Solid	Analyzed:	08/03/21 05:51
Batch:	BJG0719	Laboratory ID:	BJG0719-BS1
Preparation:	PSEP 1986 (modified)	Sequence Name:	LCS
Initial/Final:	0.0203 g / 0.0203 mL		

COMPOUND	SPIKE ADDED (% wet)	LCS CONCENTRATION (% wet)	Q	LCS % REC. #	QC LIMITS REC.
Total Organic Carbon	44.4	44.4		99.8	80 - 120

* Indicates values outside of QC limits

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ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

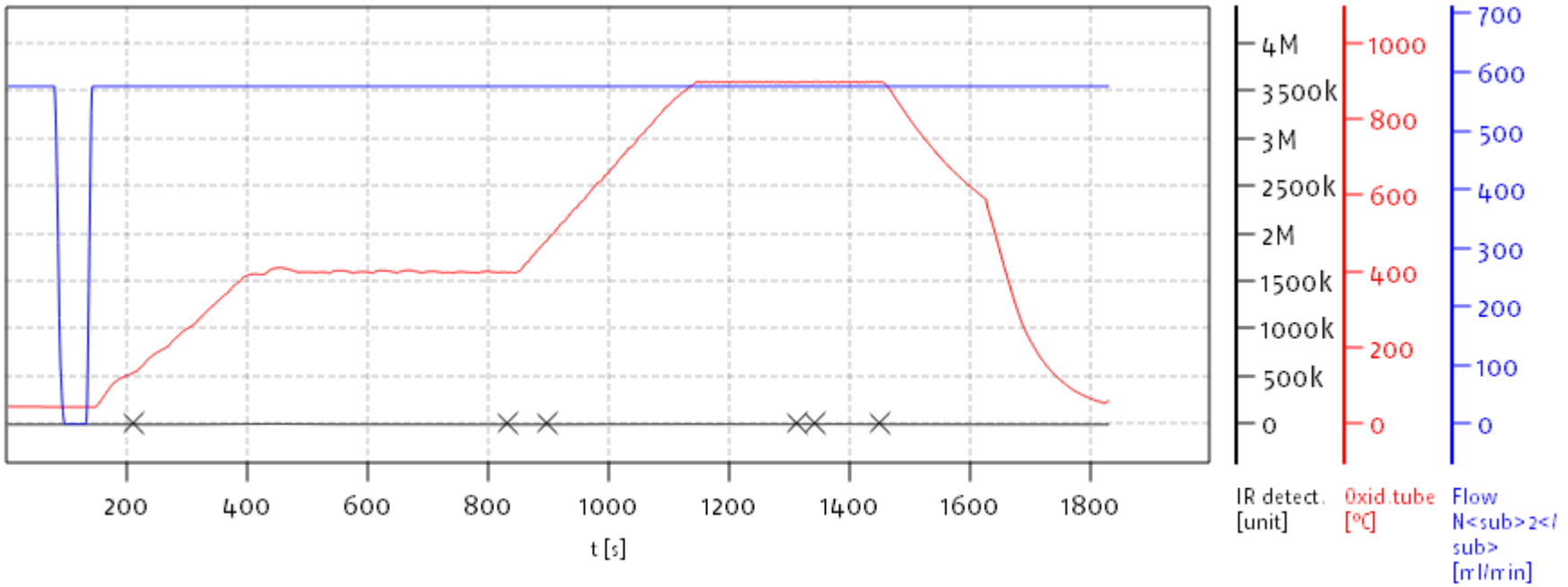
Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJG0169	Instrument:	TOC Cube
		Calibration:	EG00035

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Cal Standard	SJG0169-CAL1	peData_07142021@1025-(	NA	07/13/21 15:07
Cal Standard	SJG0169-CAL2	peData_07142021@1025-(	NA	07/13/21 15:38
Cal Standard	SJG0169-CAL3	peData_07142021@1025-(	NA	07/13/21 16:09
Cal Standard	SJG0169-CAL4	peData_07142021@1025-(	NA	07/13/21 16:40
Cal Standard	SJG0169-CAL5	peData_07142021@1025-(	NA	07/13/21 17:11
Cal Standard	SJG0169-CAL6	peData_07142021@1025-(	NA	07/13/21 17:41
Cal Standard	SJG0169-CAL7	peData_07142021@1025-(	NA	07/13/21 18:12
Cal Standard	SJG0169-CAL8	peData_07142021@1025-(	NA	07/13/21 18:43
Cal Standard	SJG0169-CAL9	peData_07142021@1025-(	NA	07/13/21 19:14
Cal Standard	SJG0169-CALA	peData_07142021@1025-(	NA	07/13/21 19:45
Cal Standard	SJG0169-CALB	peData_07142021@1025-(	NA	07/13/21 20:16
Cal Standard	SJG0169-CALC	peData_07142021@1025-(	NA	07/13/21 20:47
Cal Standard	SJG0169-CALD	peData_07142021@1025-(	NA	07/13/21 21:18
Cal Standard	SJG0169-CALE	peData_07142021@1025-(	NA	07/13/21 21:49
Cal Standard	SJG0169-CALF	peData_07142021@1025-(	NA	07/13/21 22:20
Cal Standard	SJG0169-CALG	peData_07142021@1025-(	NA	07/13/21 22:50
Cal Standard	SJG0169-CALH	peData_07142021@1025-(	NA	07/13/21 23:21
Cal Standard	SJG0169-CALI	peData_07142021@1025-(	NA	07/13/21 23:52
Cal Standard	SJG0169-CALJ	peData_07142021@1025-(	NA	07/14/21 00:23
Cal Standard	SJG0169-CALK	peData_07142021@1025-(	NA	07/14/21 00:55
Cal Standard	SJG0169-CALL	peData_07142021@1025-(	NA	07/14/21 01:26
Cal Standard	SJG0169-CALM	peData_07142021@1025-(	NA	07/14/21 01:56
Cal Standard	SJG0169-CALN	peData_07142021@1025-(	NA	07/14/21 02:27
Initial Cal Check	SJG0169-ICV1	peData_07142021@1025-(	NA	07/14/21 05:02
Initial Cal Blank	SJG0169-ICB1	peData_07142021@1025-(	NA	07/14/21 05:33
Cal Standard	SJG0169-CALO	peData_07142021@1025-(	NA	07/14/21 10:22

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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	7/13/2021 2:06 PM	0.000	0.000	0.000	bl	41 637	34 438	10 598	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Wed Jul 14 09:43:57 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

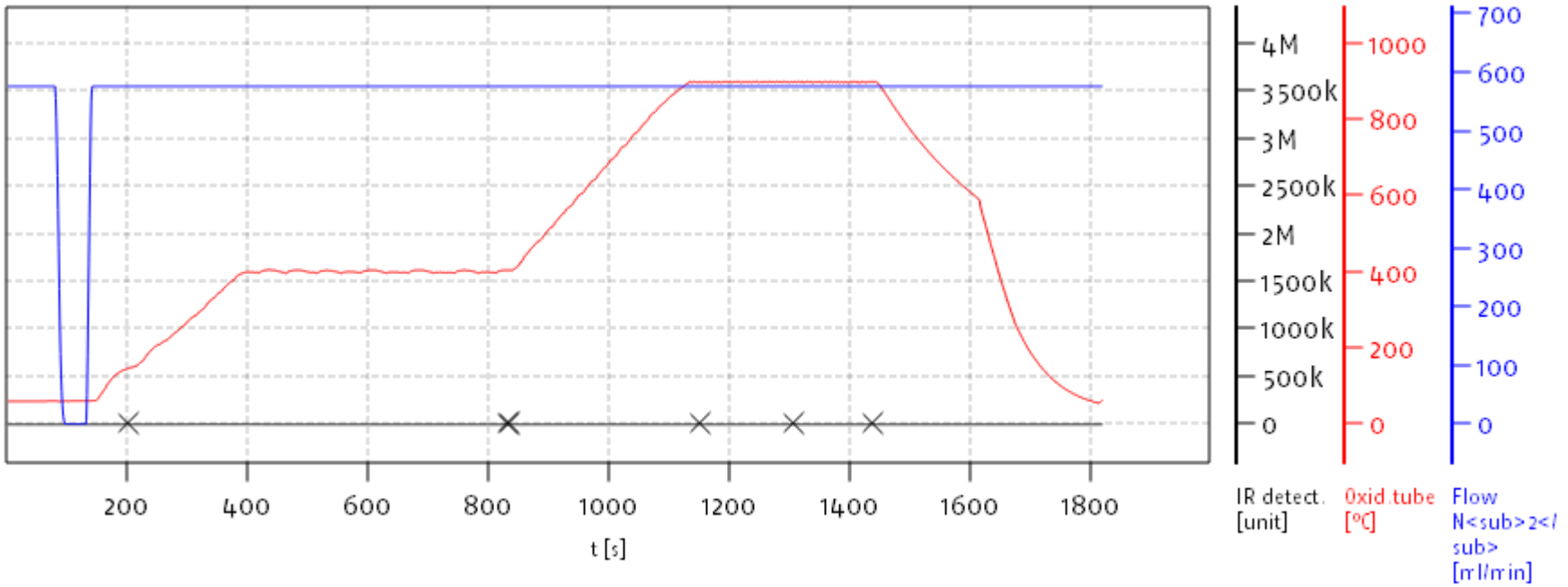
elementar
EXCELLENCE IN ELEMENTS

Document: TOC Calibration EG00035 071321BF from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
2	2	BLANK	1.00		1.00	CARBON	7/13/2021 2:37 PM	0.000	0.000	0.000	bl	4 874	0	164	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Wed Jul 14 09:43:57 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

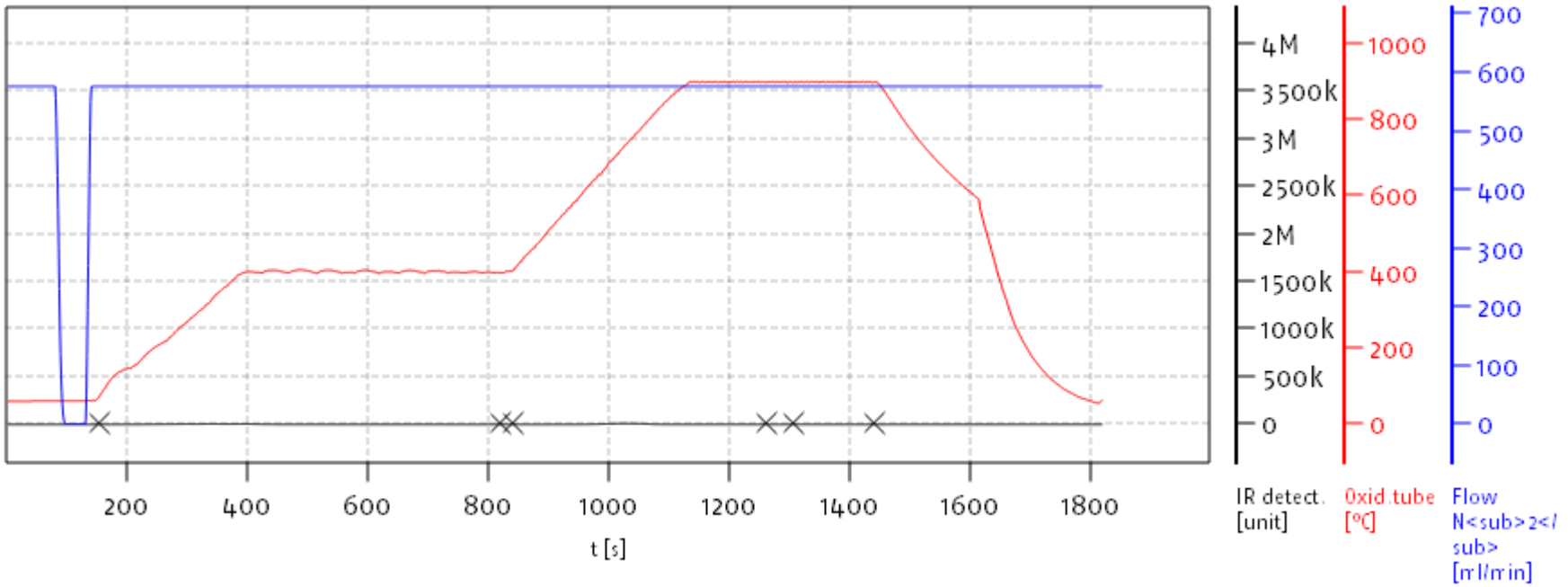
elementar
EXCELLENCE IN ELEMENTS

Document: TOC Calibration EG00035 071321BF from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
3	3	SEQ-CAL1	200.00	0.0027	1.00	CARBON	7/13/2021 3:07 PM	0.029	0.008	0.037	bl,C2u	31 040	28 300	256	1.0000	0.3447



Name:

Access: soliTOC superuser

Date: Wed Jul 14 09:43:57 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

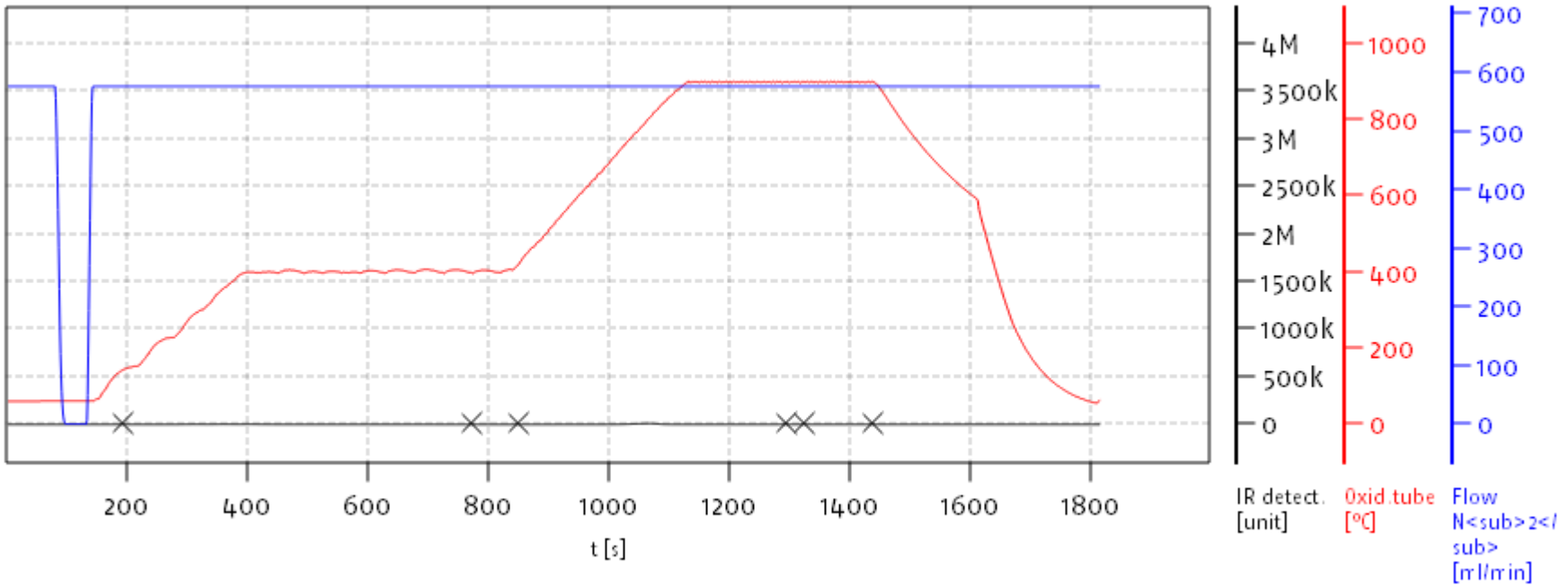
elementar
EXCELLENCE IN ELEMENTS

Document: TOC Calibration EG00035 071321BF from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
4	4	SEQ-CAL2	200.00	0.0050	1.00	CARBON	7/13/2021 3:38 PM	0.013	0.015	0.028	bl,C2u	10 883	17 832	143	1.0000	0.9493



Name:

Access: soliTOC superuser

Date: Wed Jul 14 09:43:57 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

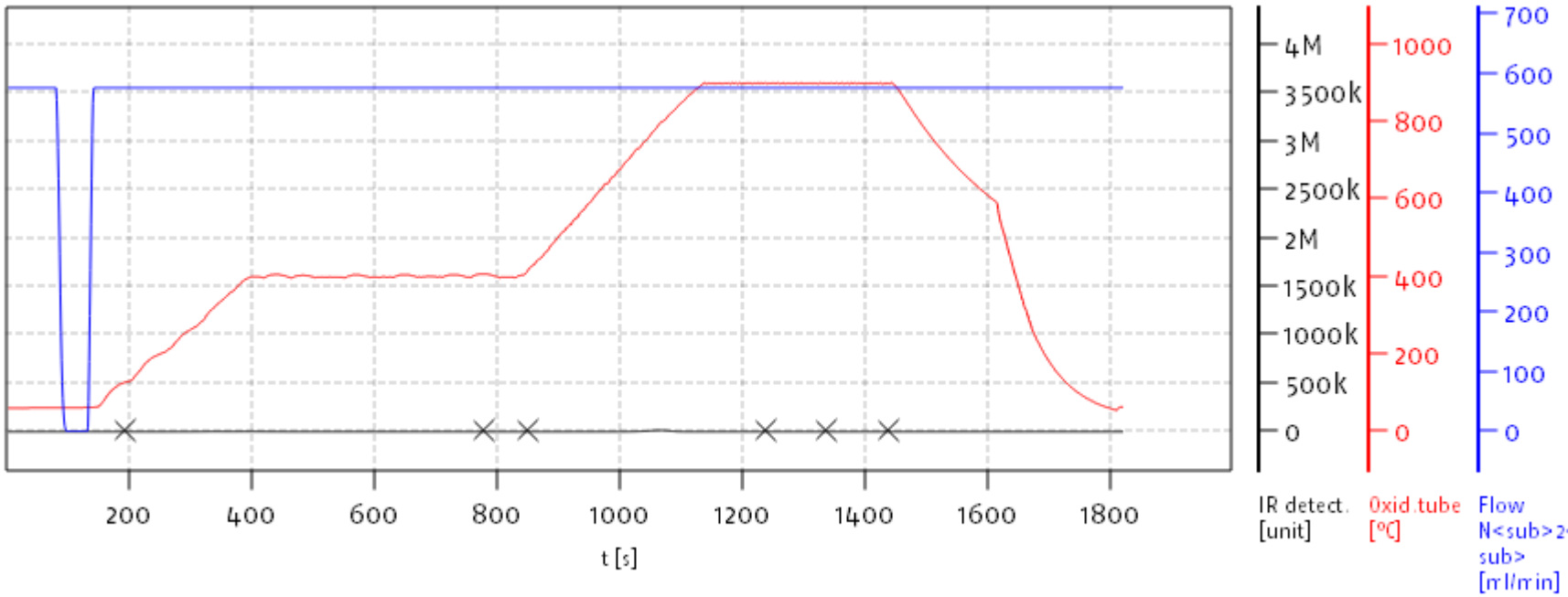
elementar
EXCELLENCE IN ELEMENTS

Document: TOC Calibration EG00035 071321BF from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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	0.0068	1.00	CARBON	7/13/2021 4:09 PM	0.012	0.022	0.034	bl,C2u	9 870	22 430	107	1.0000	1.1246



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Date: Wed Jul 14 09:43:57 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: TOC Calibration EG00035 071321BF from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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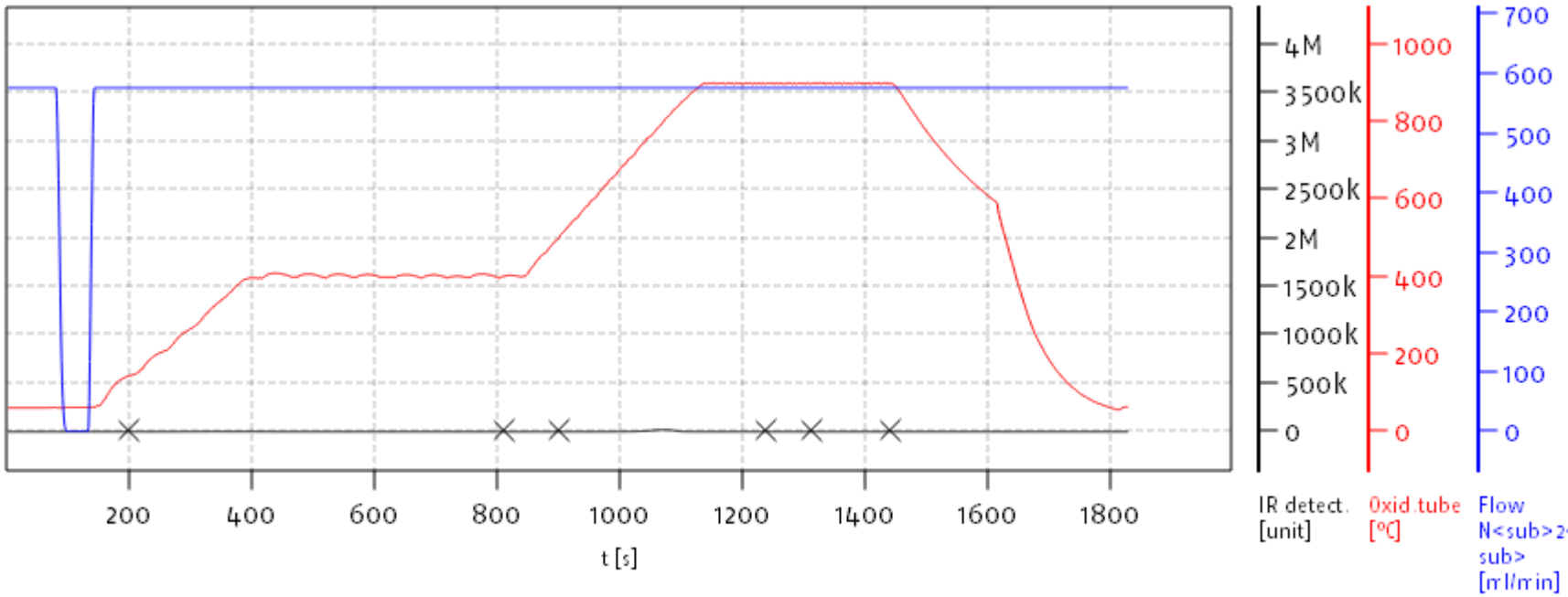
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
6	6	SEQ-CAL4	200.00	0.0099	1.00	CARBON	7/13/2021 4:40 PM	0.012	0.030	0.042	bl,C2u	9 549	35 259	82	1.0000	1.0150



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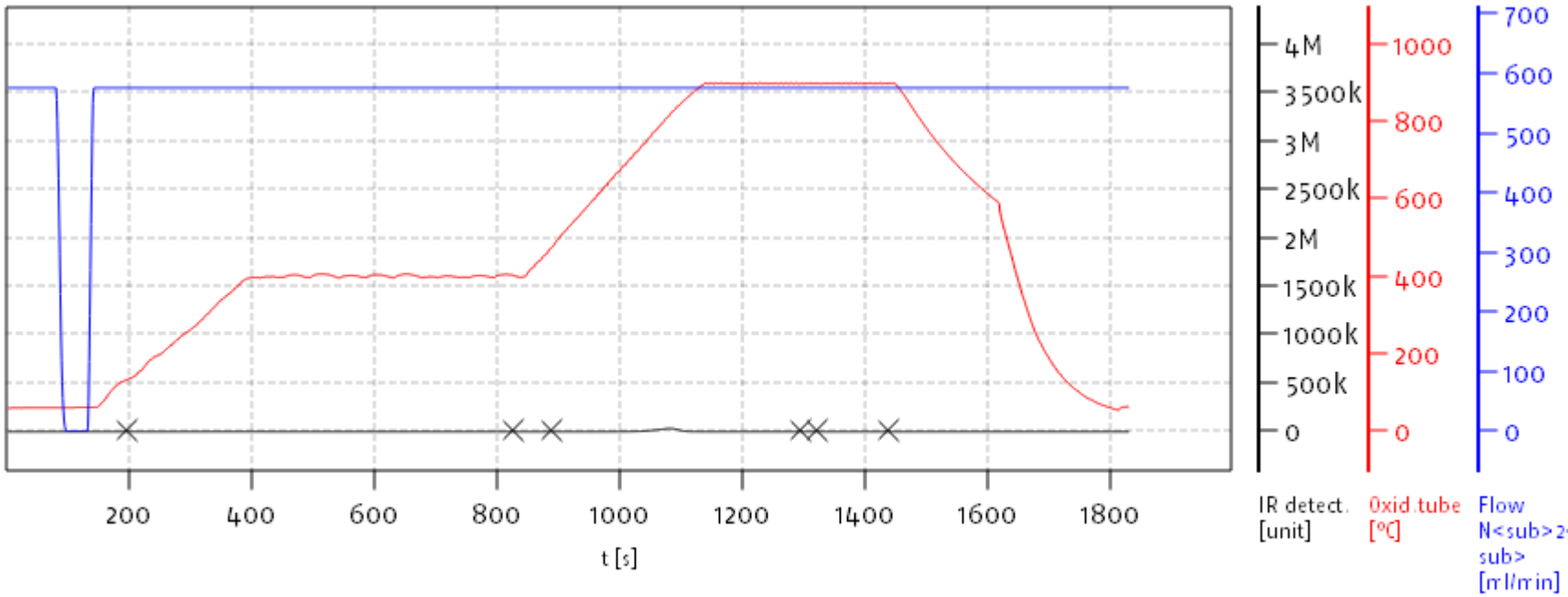
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
7	7	SEQ-CAL5	200.00	0.0155	1.00	CARBON	7/13/2021 5:11 PM	0.008	0.045	0.053	bl,C1u,C2u	4 269	54 591	65	1.0000	0.9980



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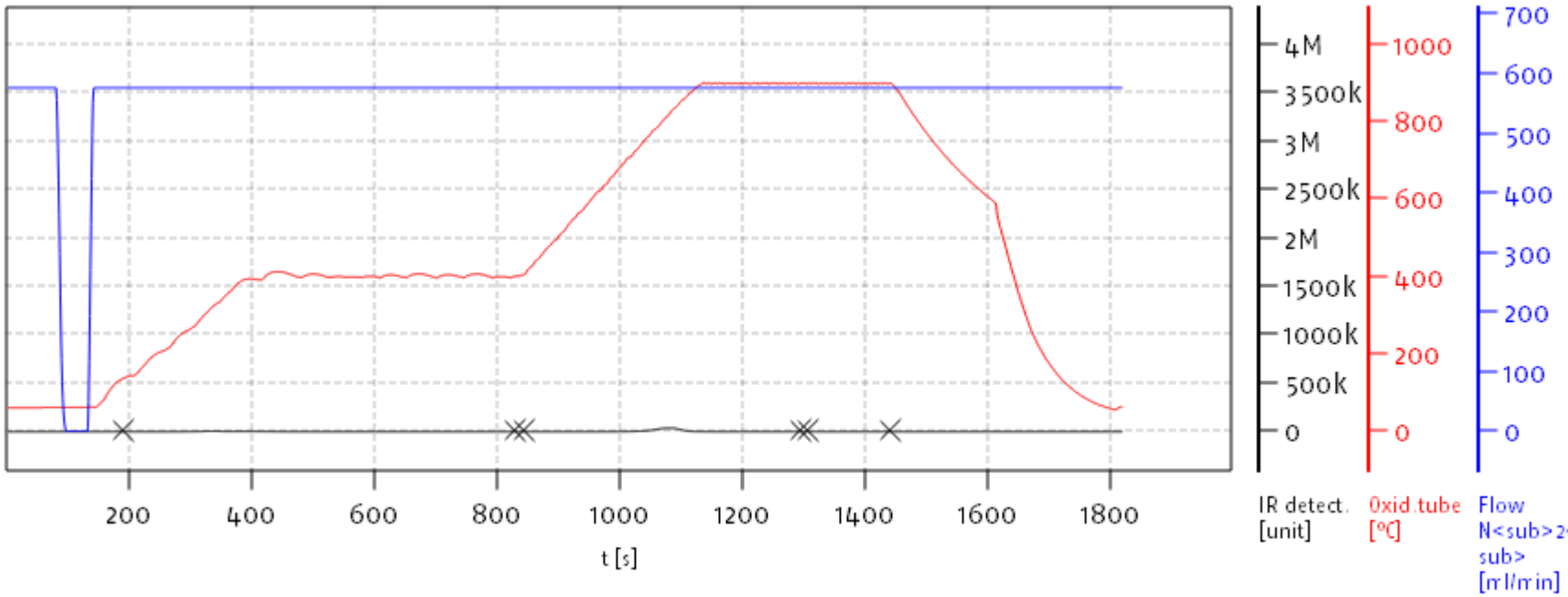
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
8	8	SEQ-CAL6	200.00	0.0198	1.00	CARBON	7/13/2021 5:41 PM	0.019	0.061	0.080	bl,C2u	18 512	73 034	79	1.0000	1.0264



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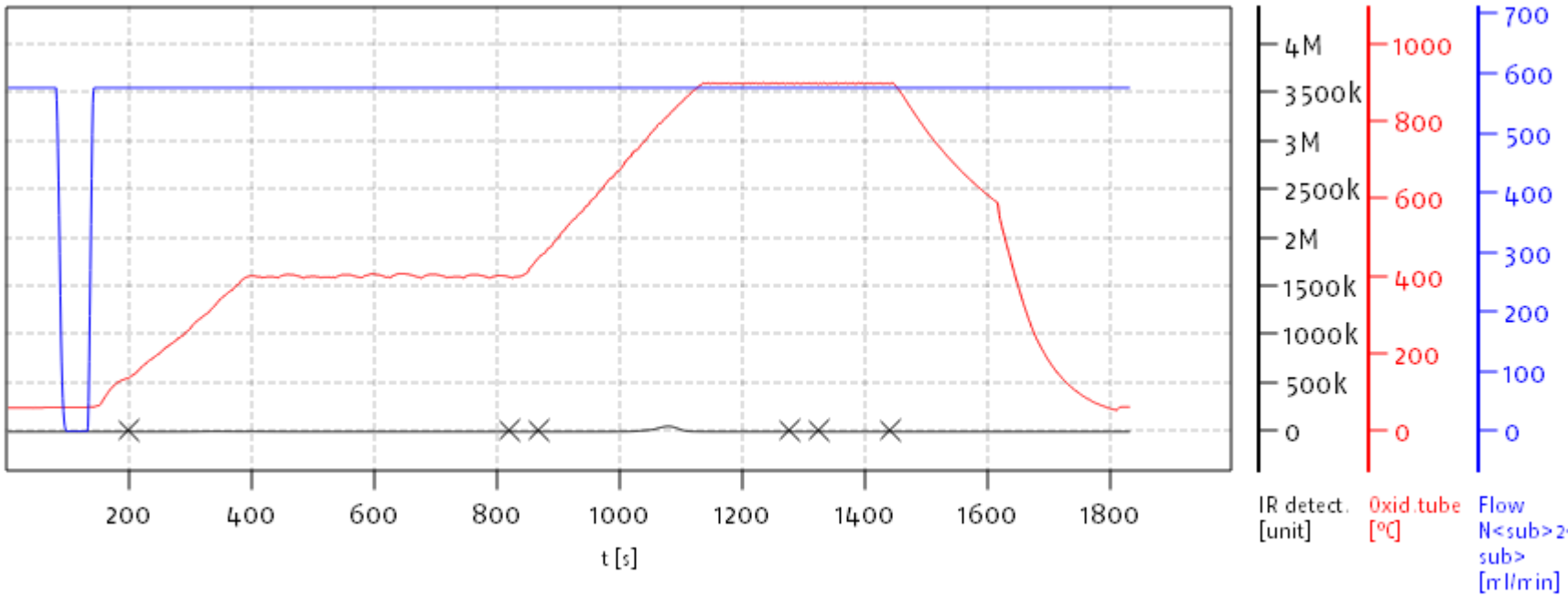
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
9	9	SEQ-CAL7	200.00	0.0257	1.00	CARBON	7/13/2021 6:12 PM	0.014	0.075	0.089	bl,C2u	12 682	95 421	29	1.0000	0.9745



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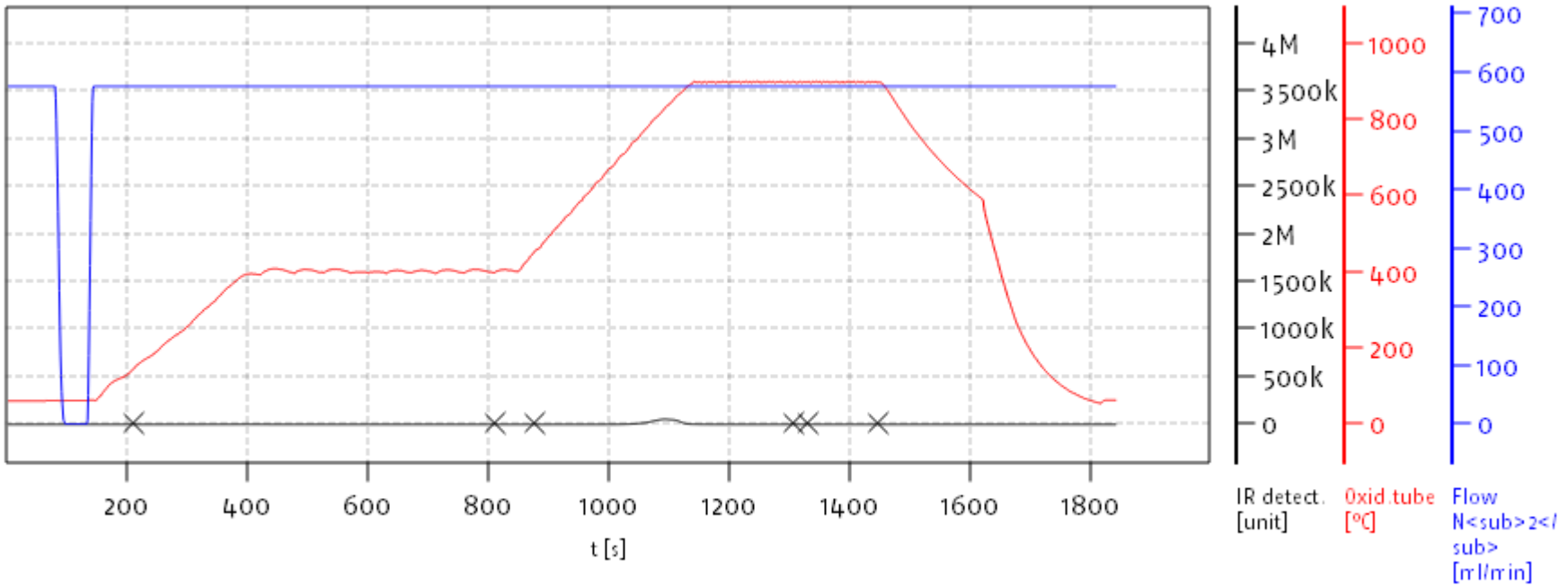
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
10	10	SEQ-CAL8	200.00	0.0300	1.00	CARBON	7/13/2021 6:43 PM	0.008	0.091	0.098	bl,C1u,C2u	4 663	112 452	86	1.0000	0.9989



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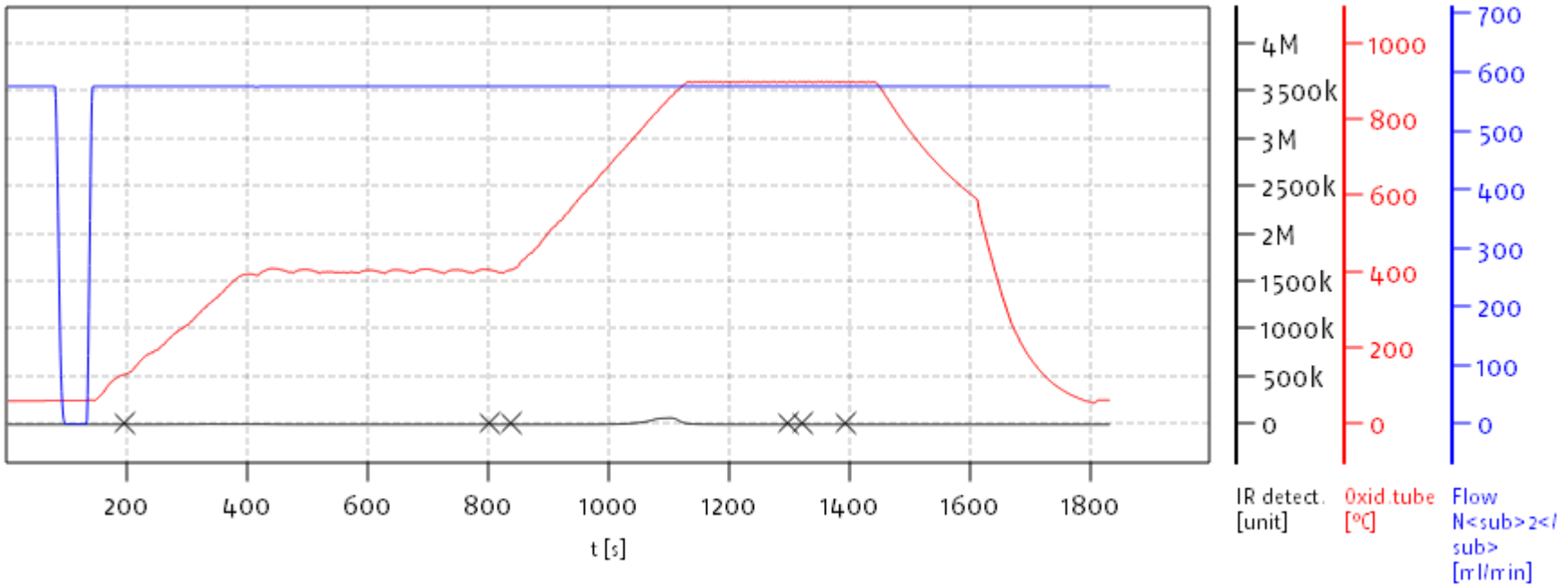
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
11	11	SEQ-CAL9	200.00	0.0407	1.00	CARBON	7/13/2021 7:14 PM	0.021	0.120	0.141	bl,C2u	21 063	157 168	339	1.0000	0.9528



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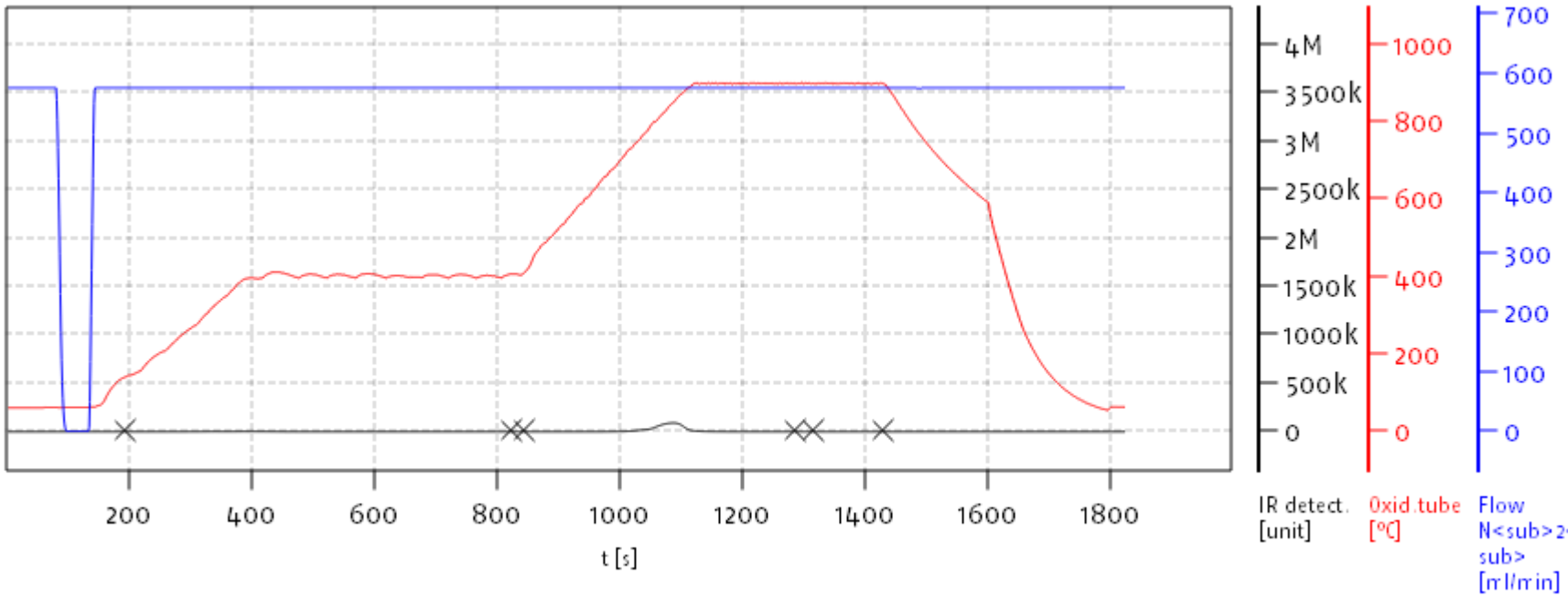
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
12	12	SEQ-CALA	200.00	0.0501	1.00	CARBON	7/13/2021 7:45 PM	0.013	0.151	0.164	bl,C2u	11 050	187 538	95	1.0000	1.0068



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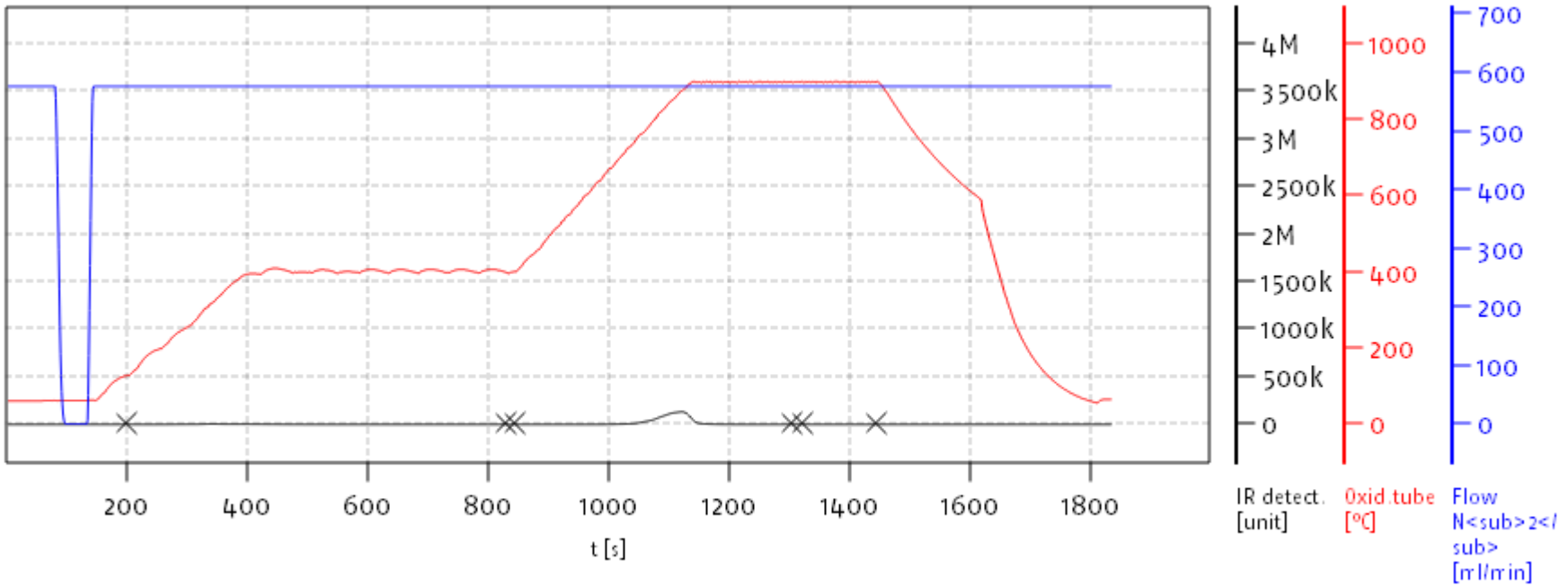
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
13	13	SEQ-CALB	200.00	0.0041	1.00	CARBON	7/13/2021 8:16 PM	0.021	0.258	0.279	bl,C2u	21 325	304 031	81	1.0000	1.0675



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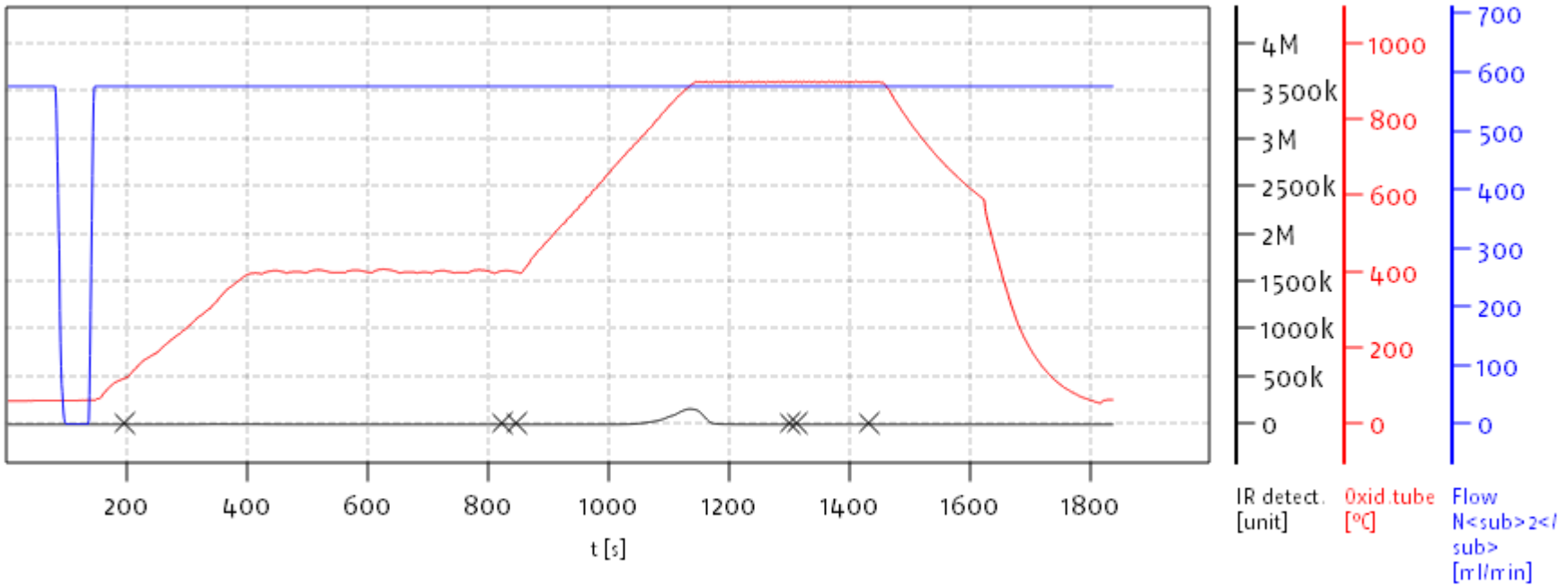
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
14	14	SEQ-CALC	200.00	0.0051	1.00	CARBON	7/13/2021 8:47 PM	0.013	0.324	0.337	bl,C2u	11 360	386 243	161	1.0000	1.0571



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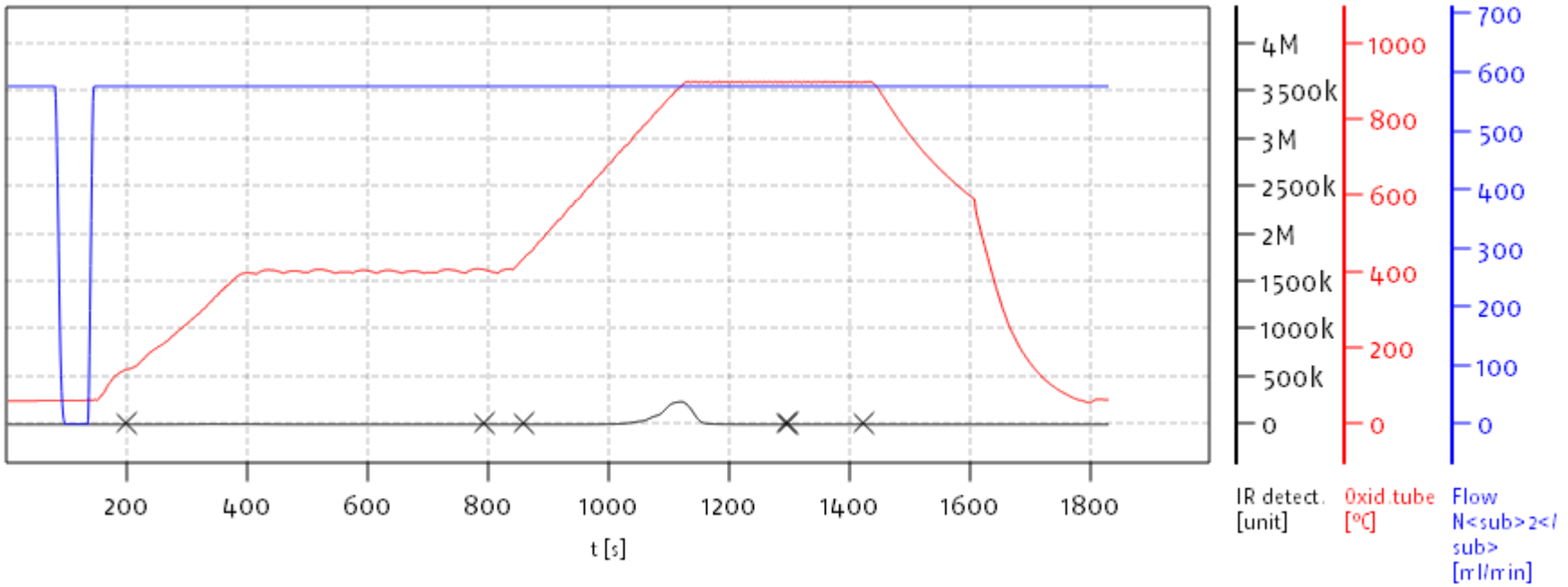
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
15	15	SEQ-CALD	200.00	0.0073	1.00	CARBON	7/13/2021 9:18 PM	0.017	0.444	0.461	bl,C2u	15 984	558 687	174	1.0000	1.0036



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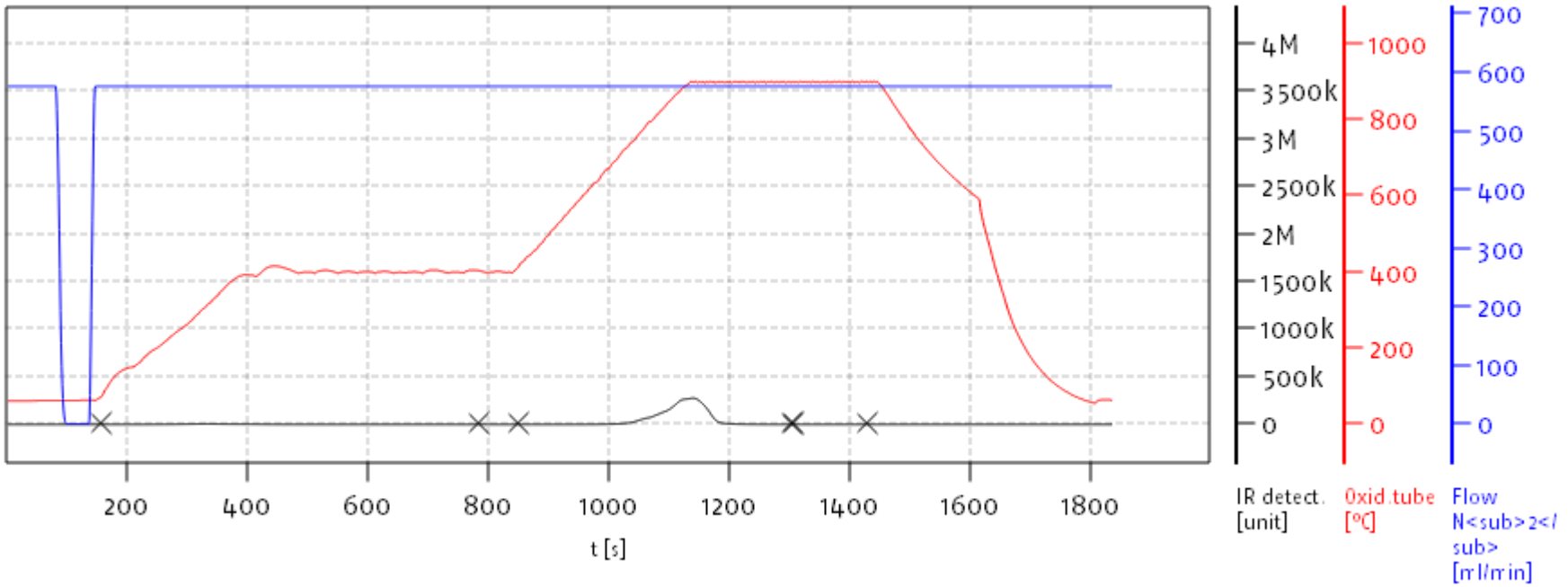
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
16	16	SEQ-CALE	200.00	0.0109	1.00	CARBON	7/13/2021 9:49 PM	0.024	0.600	0.624	bl,C2u	25 032	838 073	291	1.0000	0.9055



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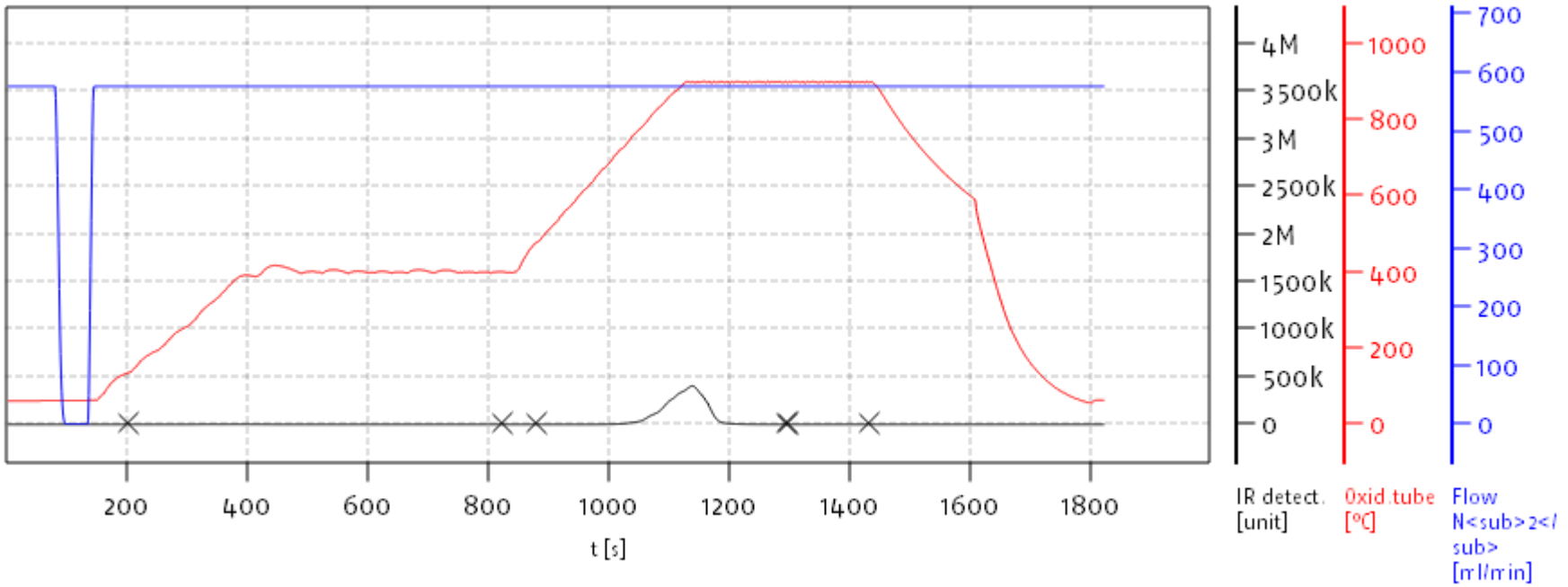
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
17	17	SEQ-CALF	200.00	0.0145	1.00	CARBON	7/13/2021 10:20 PM	0.011	0.906	0.917	bl,C1u,C2u	7 705	1 129 877	389	1.0000	1.0150



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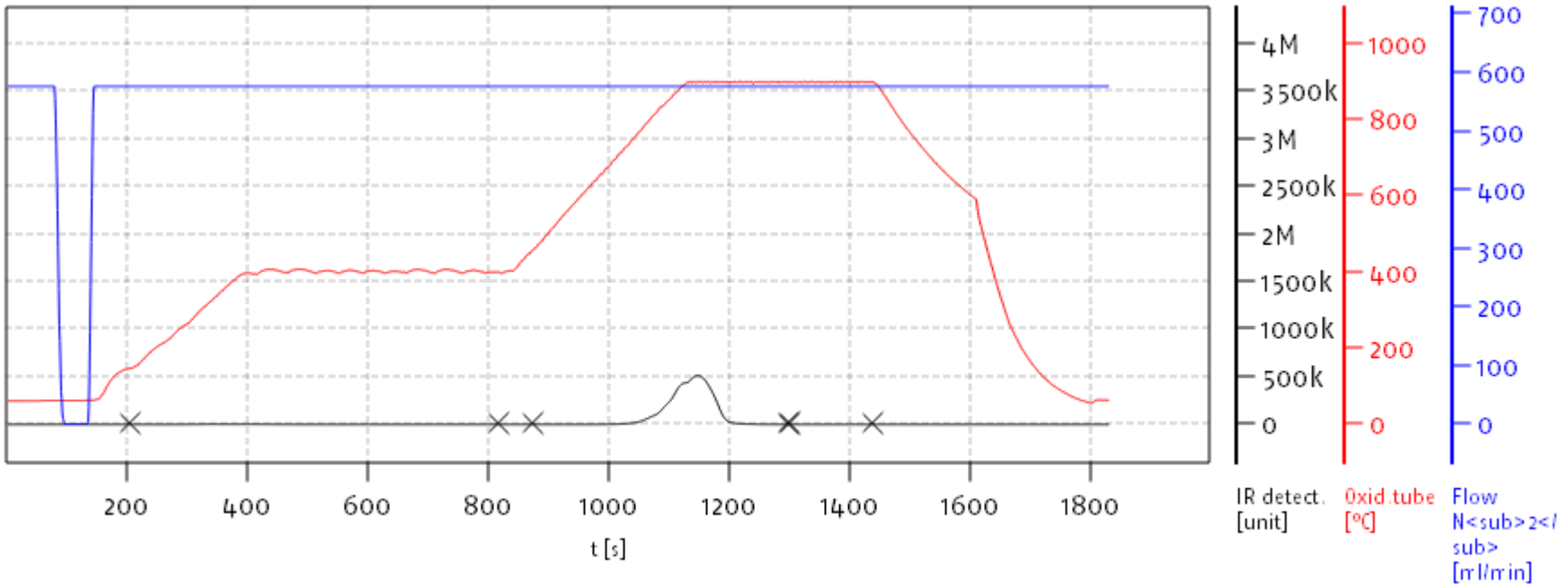
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
18	18	SEQ-CALG	200.00	0.0199	1.00	CARBON	7/13/2021 10:50 PM	0.015	1.206	1.221	bl,C2u	12 993	1 534 582	594	1.0000	0.9954



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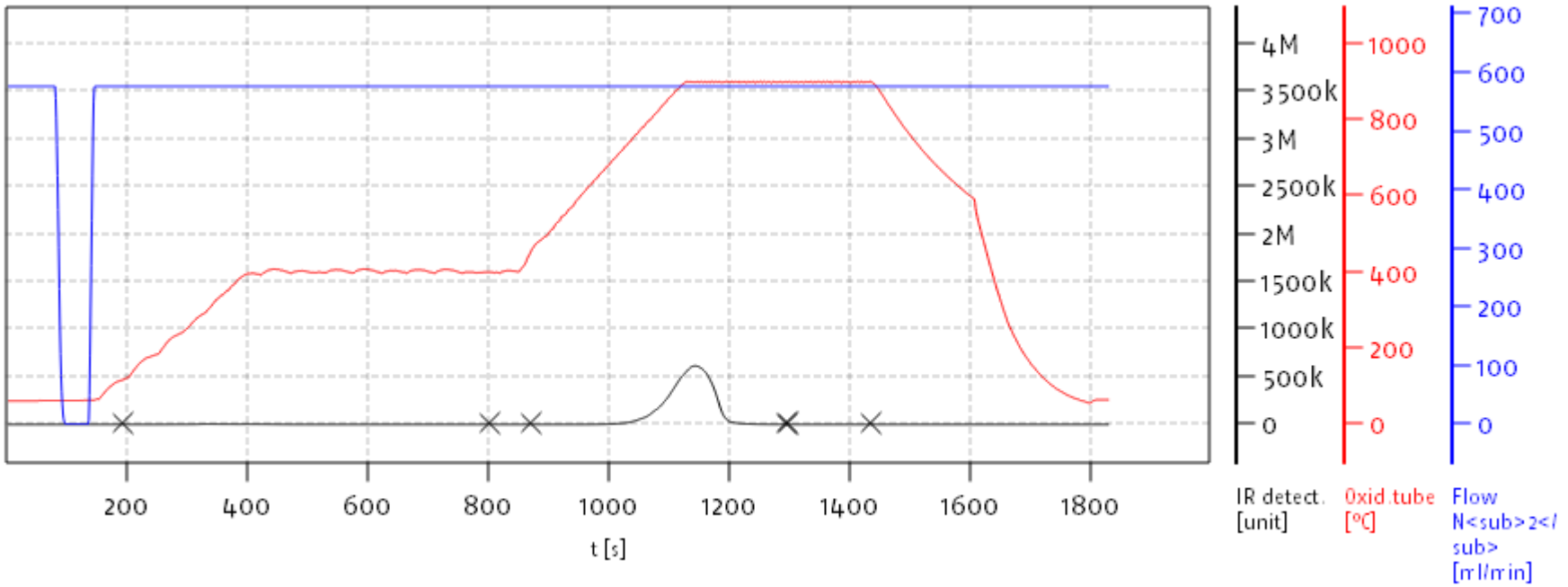
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
19	19	SEQ-CALH	200.00	0.0249	1.00	CARBON	7/13/2021 11:21 PM	0.021	1.524	1.545	bl,C2u	20 201	1 923 277	918	1.0000	1.0040



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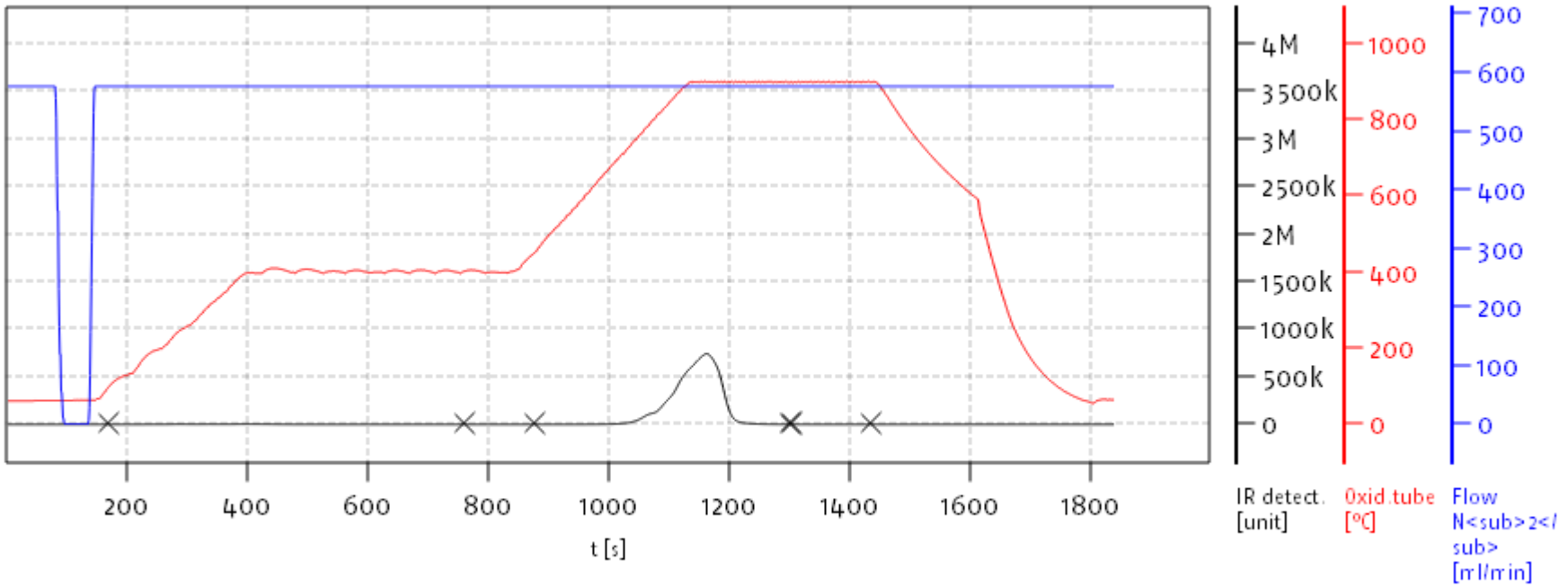
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
20	20	SEQ-CALI	200.00	0.0306	1.00	CARBON	7/13/2021 11:52 PM	0.021	1.800	1.821	bl,C2u	20 790	2 358 162	940	1.0000	0.9674



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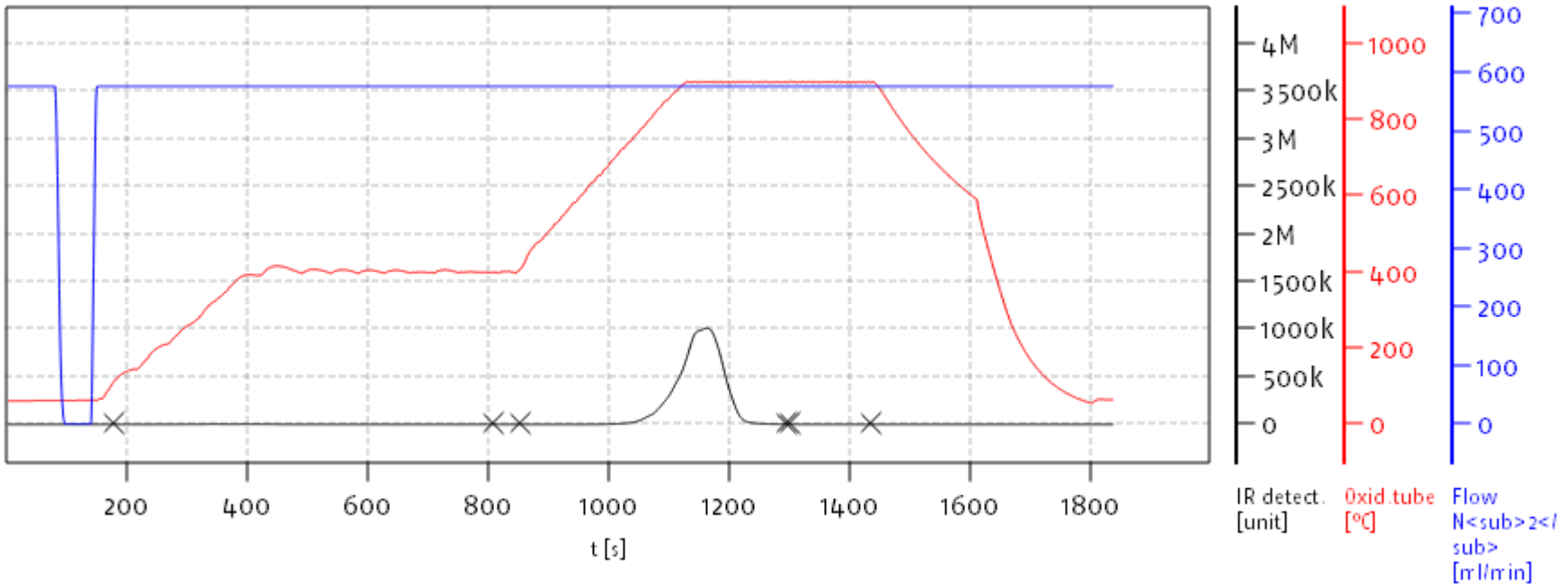
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
21	21	SEQ-CALJ	200.00	0.0419	1.00	CARBON	7/14/2021 12:23 AM	0.020	2.400	2.420	bl,C2u	17 643	3 227 695	2 142	1.0000	0.9426



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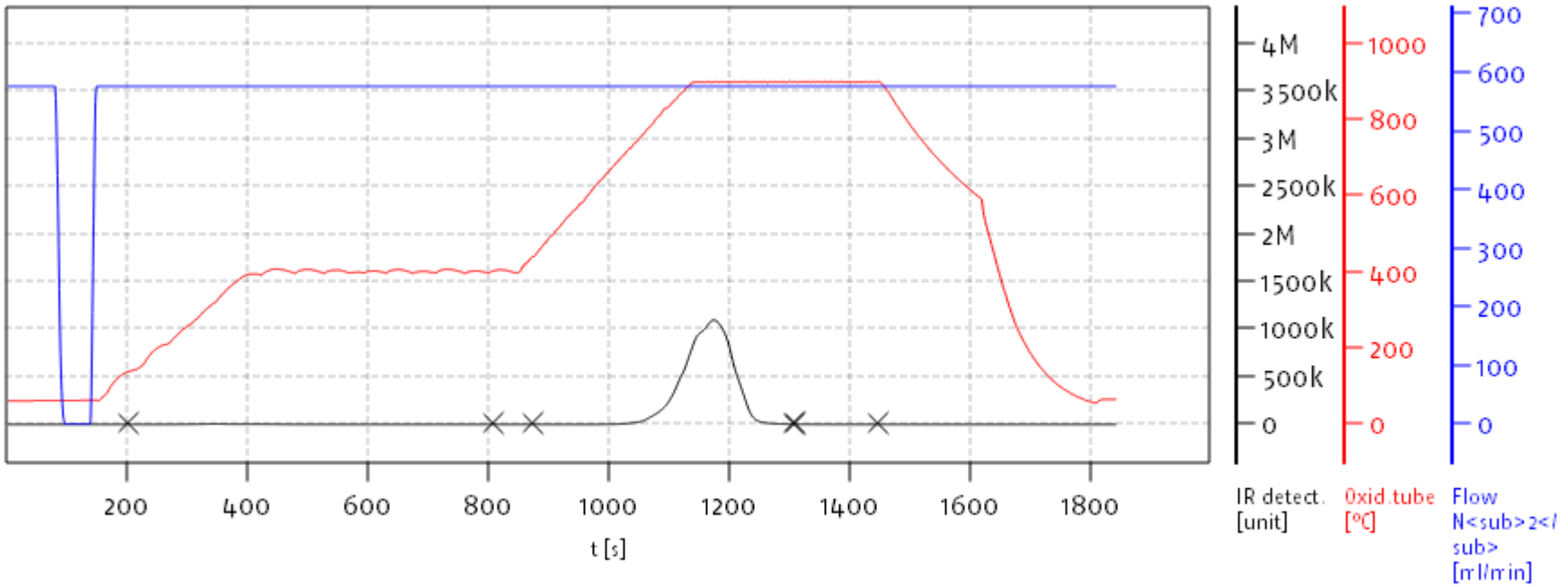
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
22	22	SEQ-CALK	200.00	0.0501	1.00	CARBON	7/14/2021 12:55 AM	0.023	3.012	3.035	bl,C2u	21 378	3 860 392	2 936	1.0000	0.9892



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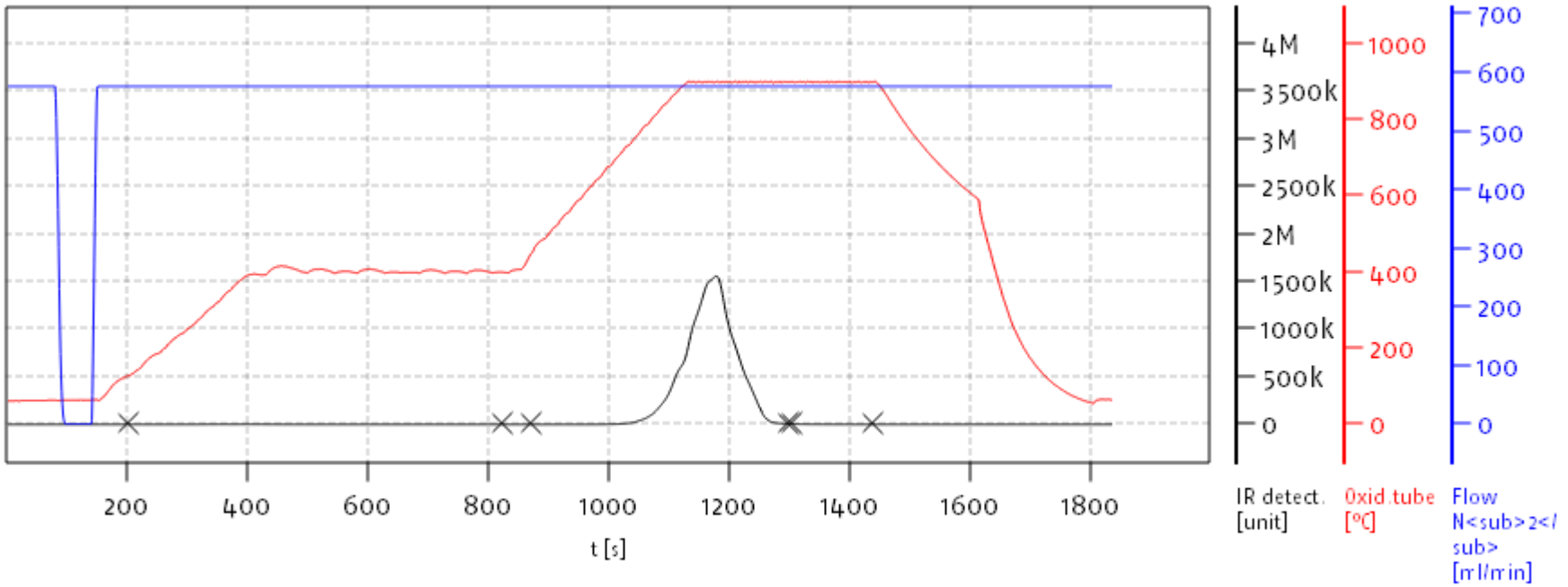
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
23	23	SEQ-CALL	200.00	0.0700	1.00	CARBON	7/14/2021 1:26 AM	0.016	4.206	4.222	bl,C1u,C2u	8 341	5 418 041	6 511	1.0000	0.9844



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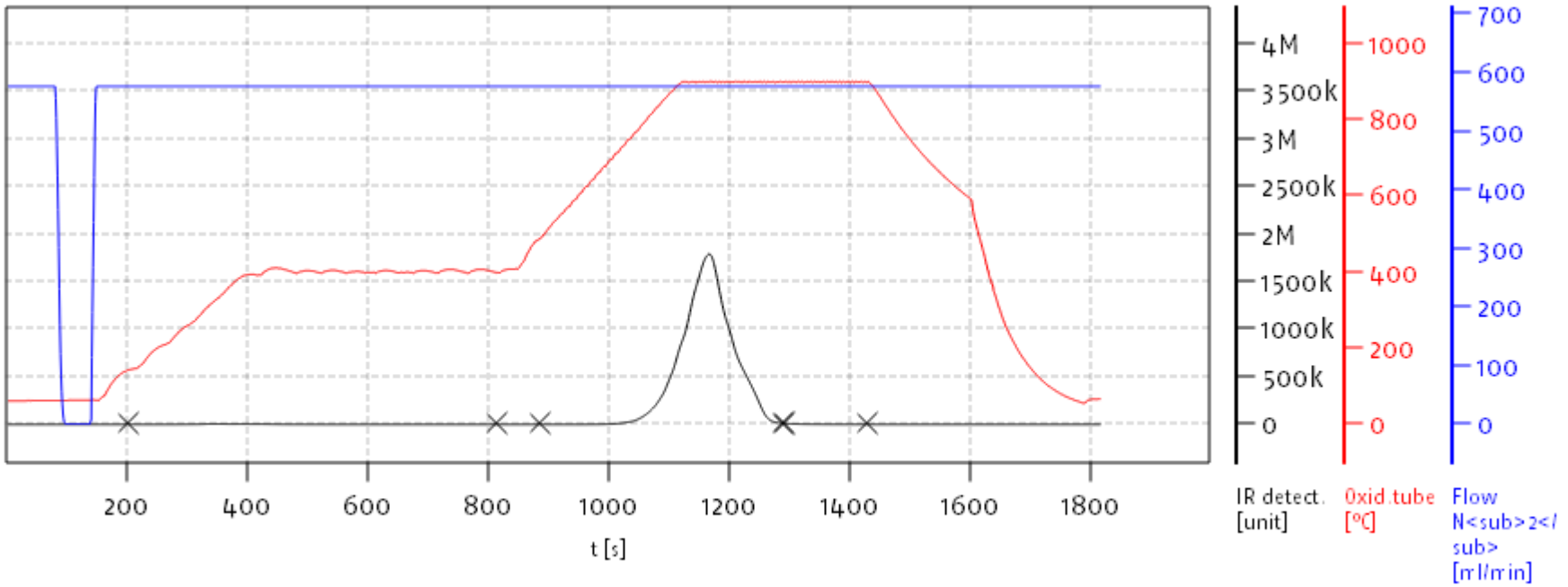
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
24	24	SEQ-CALM	200.00	0.0808	1.00	CARBON	7/14/2021 1:56 AM	0.032	4.812	4.844	bl	24 602	6 251 692	10 888	1.0000	0.9761



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Access: soliTOC superuser

Date: Wed Jul 14 09:43:57 2021

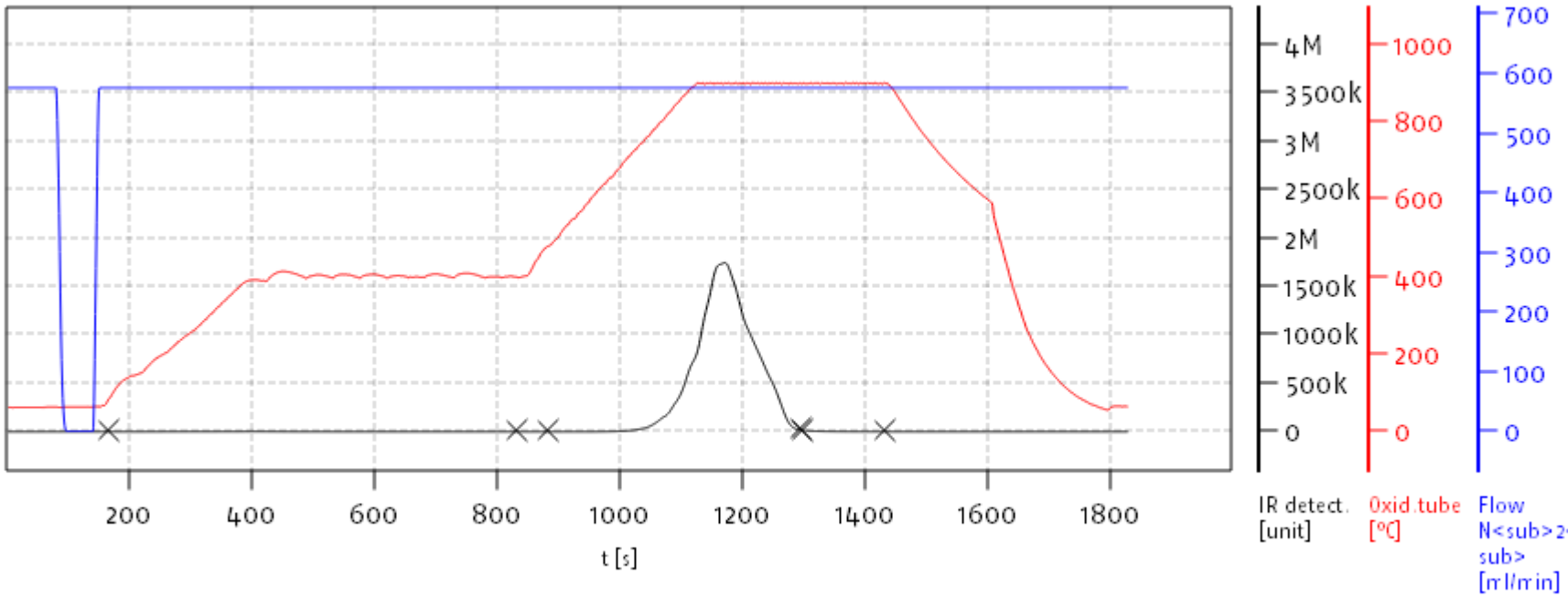
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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	0.0897	1.00	CARBON	7/14/2021 2:27 AM	0.025	5.406	5.431	bl	11 970	6 909 943	14 720	1.0000	0.9922



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Mode CCC

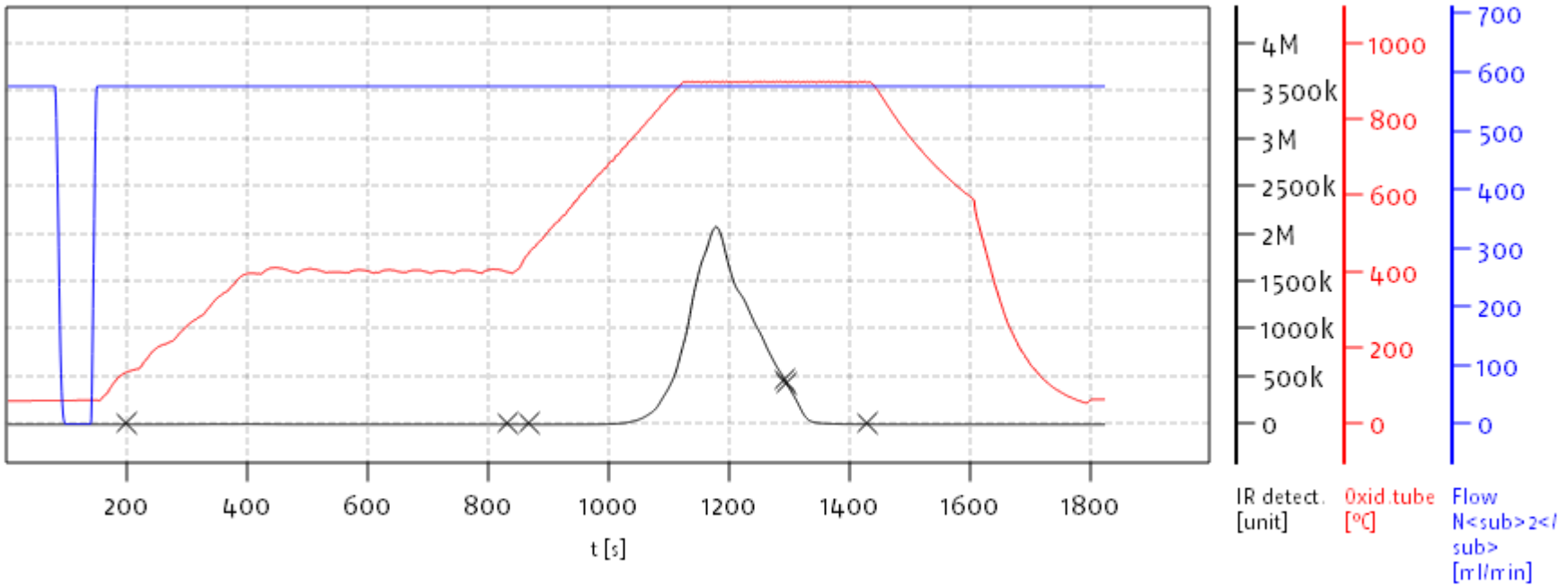
elementar
EXCELLENCE IN ELEMENTS

Document: TOC Calibration EG00035 071321BF from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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	0.1237	1.00	CARBON	7/14/2021 2:58 AM	0.271	7.218	7.489	bl,C3o	14 303	9 169 261	324 811	1.0000	0.9985



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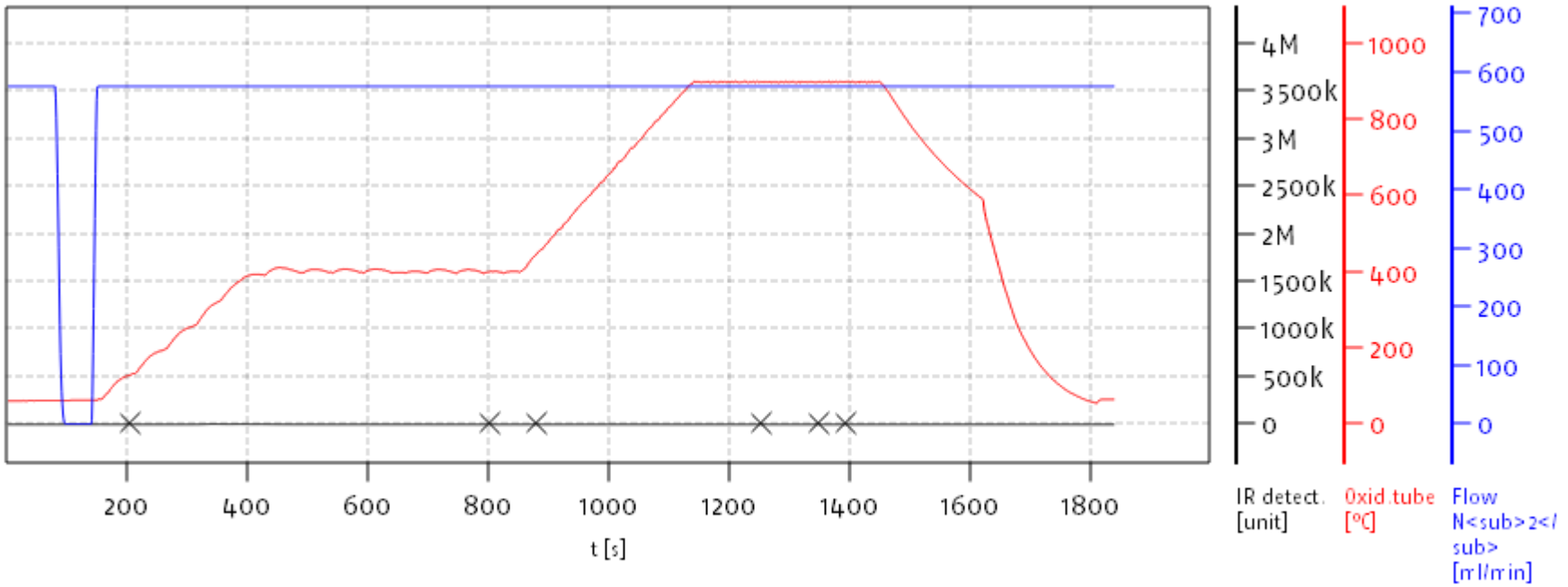
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
27	27	BLANK	1.00		1.00	CARBON	7/14/2021 3:29 AM	0.000	0.000	0.000	bl	15 377	4	0	1.0000	0.9704



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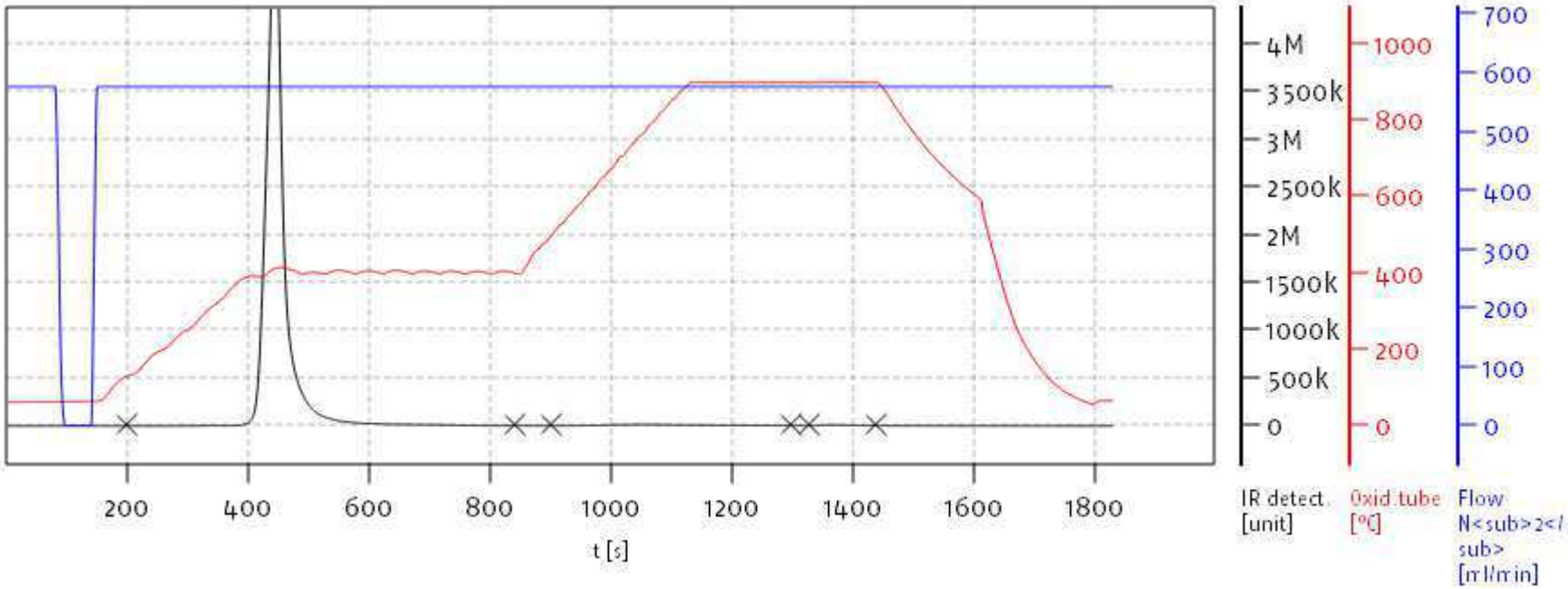
Analytical Chemists and Consultants

	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	24.90		1.00	CARBON	7/14/2021 4:00 AM	44.620	0.675	45.295	bl	6 675 069	104 070	24 945	1.0513	1.0000



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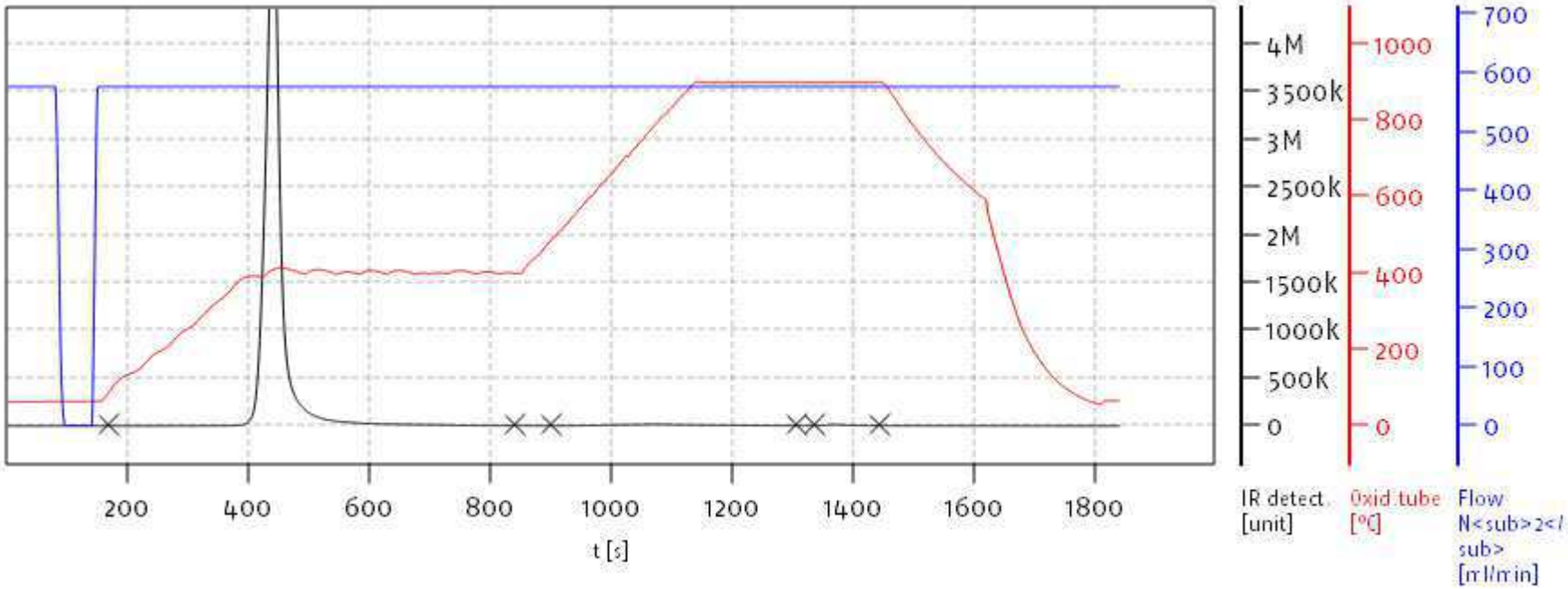
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
29	29	Dfactor	22.60		1.00	CARBON	7/14/2021 4:31 AM	44.643	0.810	45.453	bl	6 011 996	113 561	25 659	1.0594	1.0000



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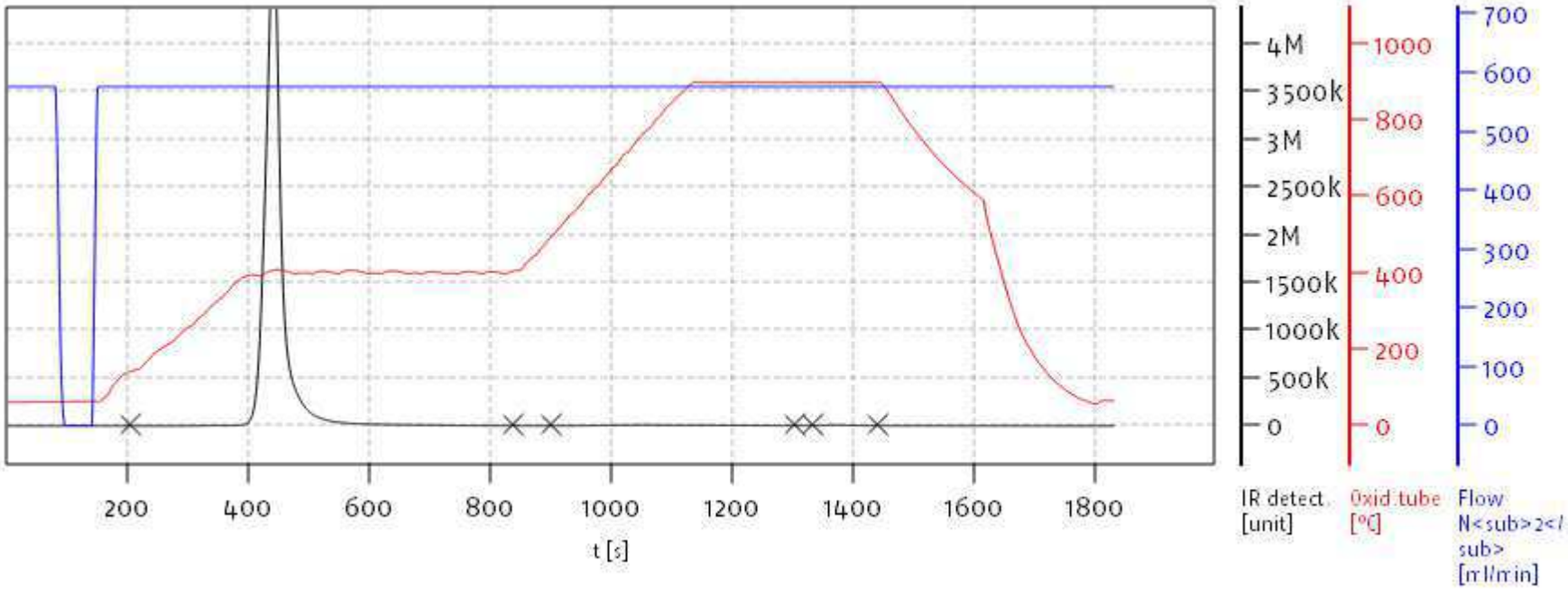
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
30	30	SEQ-ICV1	22.00		1.00	CARBON	7/14/2021 5:02 AM	44.870	0.594	45.465	bl	5 908 965	82 878	20 547	1.0554	0.9704



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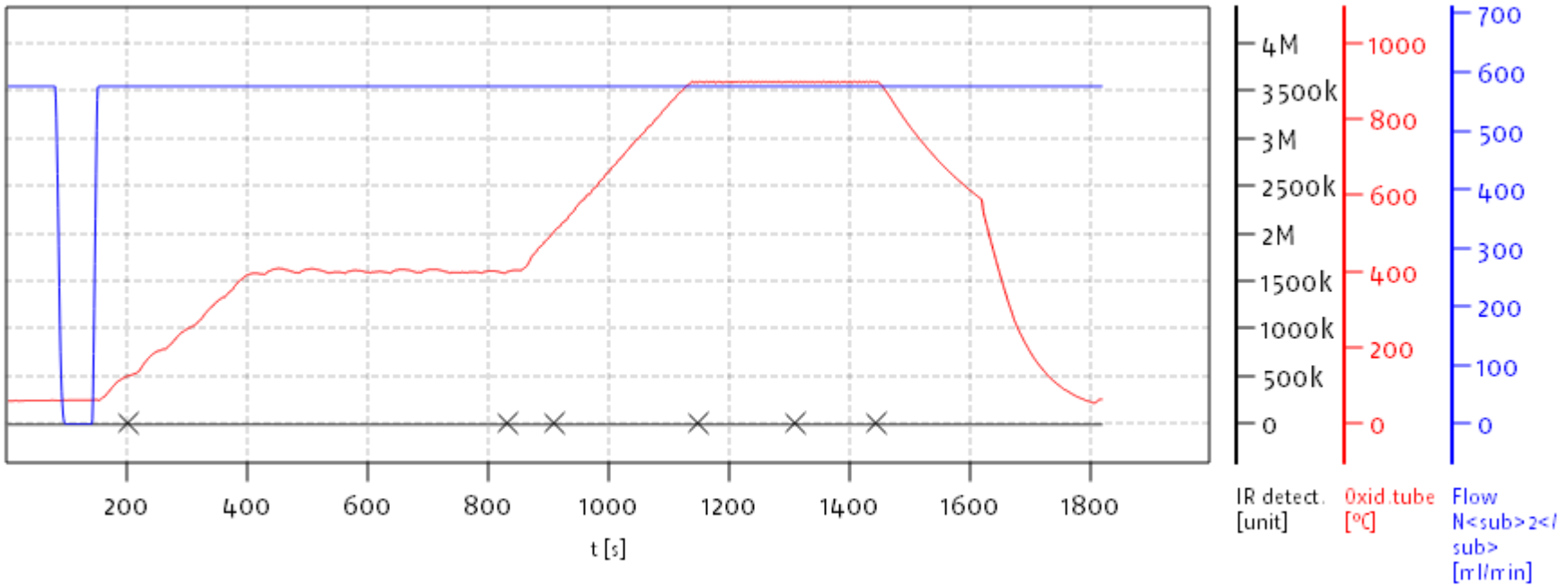
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
31	31	SEQ-ICB1	618.10		1.00	CARBON	7/14/2021 5:33 AM	0.002	0.001	0.003	bl,C1u,C3u,C2u	2 837	1 593	526	1.0554	0.9704



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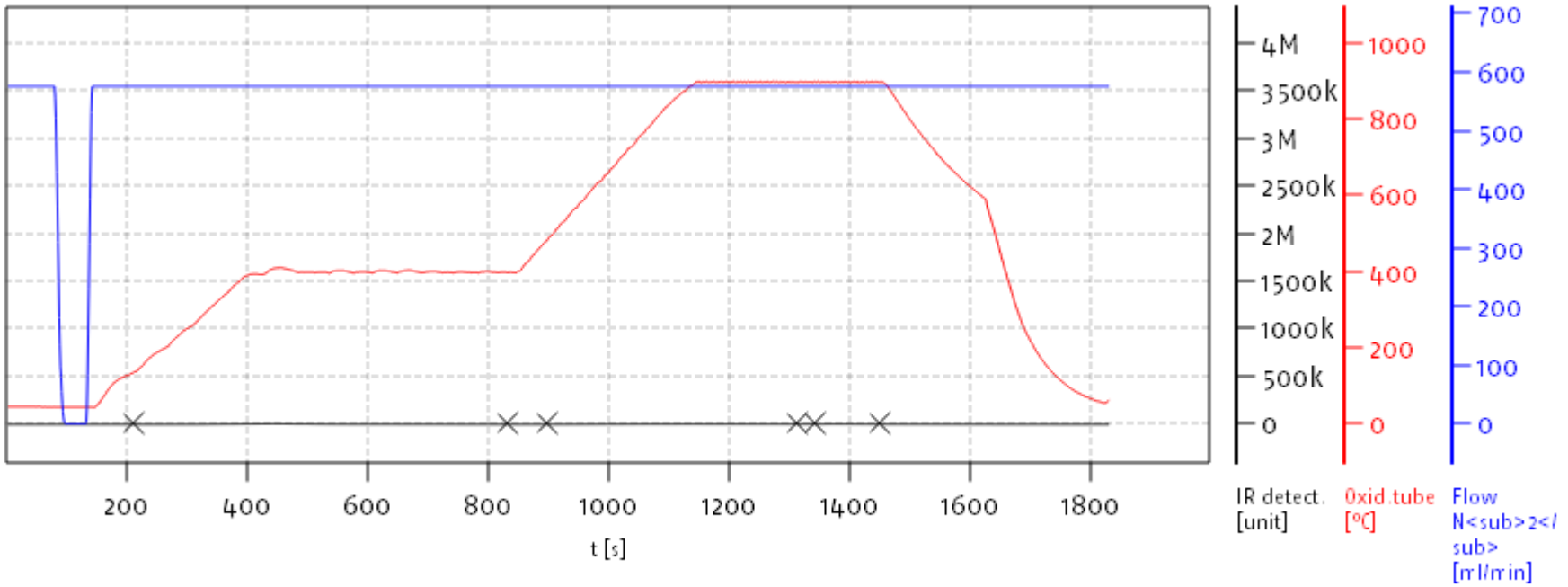
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
1	1	BLANK	1.00		1.00	CARBON	7/13/2021 2:06 PM	0.000	0.000	0.000	bl	41 637	34 438	10 598	1.0000	1.0000



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Document: TOC Calibration EG00035 071321BF from: 7/14/2021 10:24 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

Analytical Resources, Incorporated
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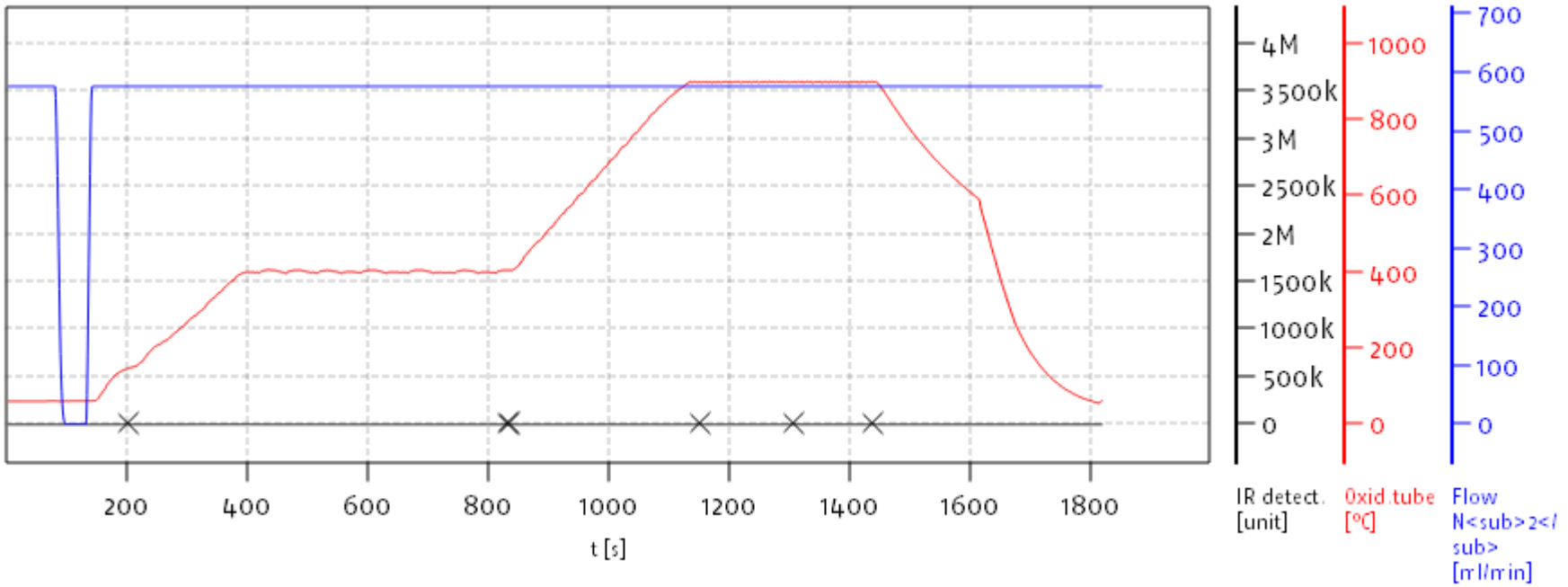
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
2	2	BLANK	1.00		1.00	CARBON	7/13/2021 2:37 PM	0.000	0.000	0.000	bl	4 874	0	164	1.0000	1.0000



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Balance: BAL3
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Analytical Resources, Incorporated
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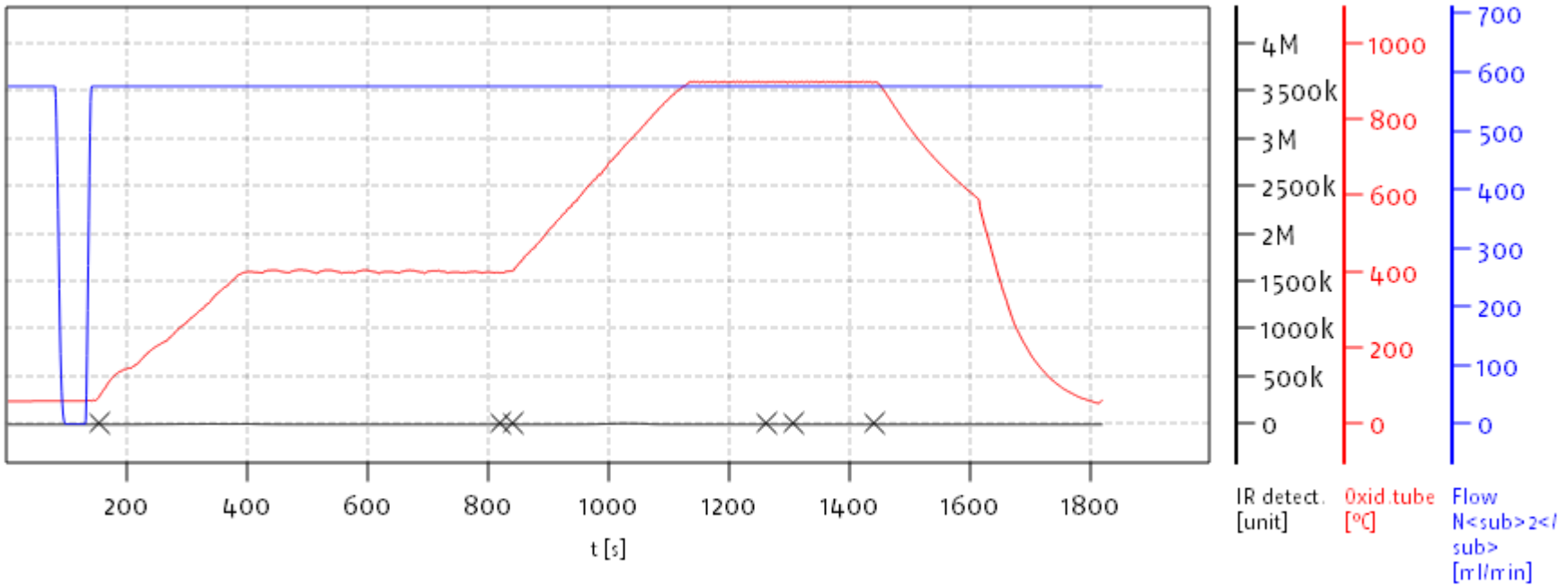
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
3	3	SEQ-CAL1	200.00	0.0027	1.00	CARBON	7/13/2021 3:07 PM	0.029	0.008	0.037	bl,C2u	31 040	28 300	256	1.0000	0.3447



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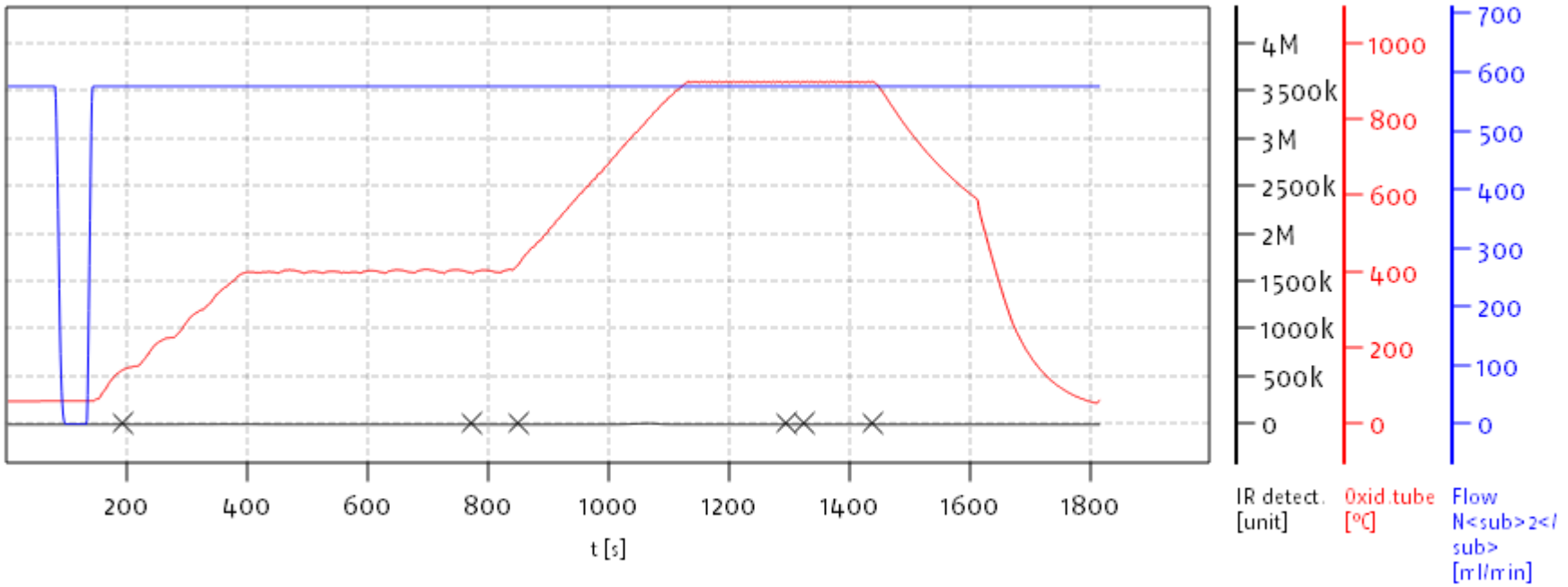
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
4	4	SEQ-CAL2	200.00	0.0050	1.00	CARBON	7/13/2021 3:38 PM	0.013	0.015	0.028	bl,C2u	10 883	17 832	143	1.0000	0.9493



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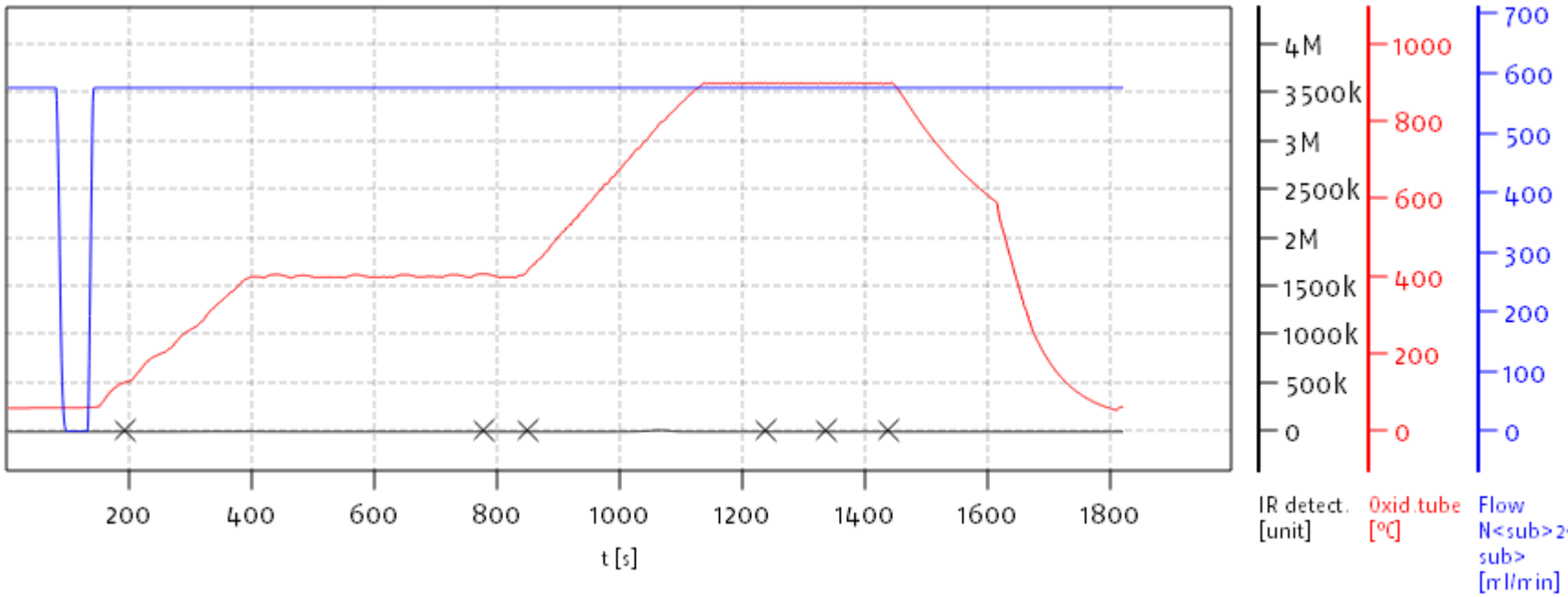
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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	0.0068	1.00	CARBON	7/13/2021 4:09 PM	0.012	0.022	0.034	bl,C2u	9 870	22 430	107	1.0000	1.1246



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Balance: BAL3
Analyst: BF

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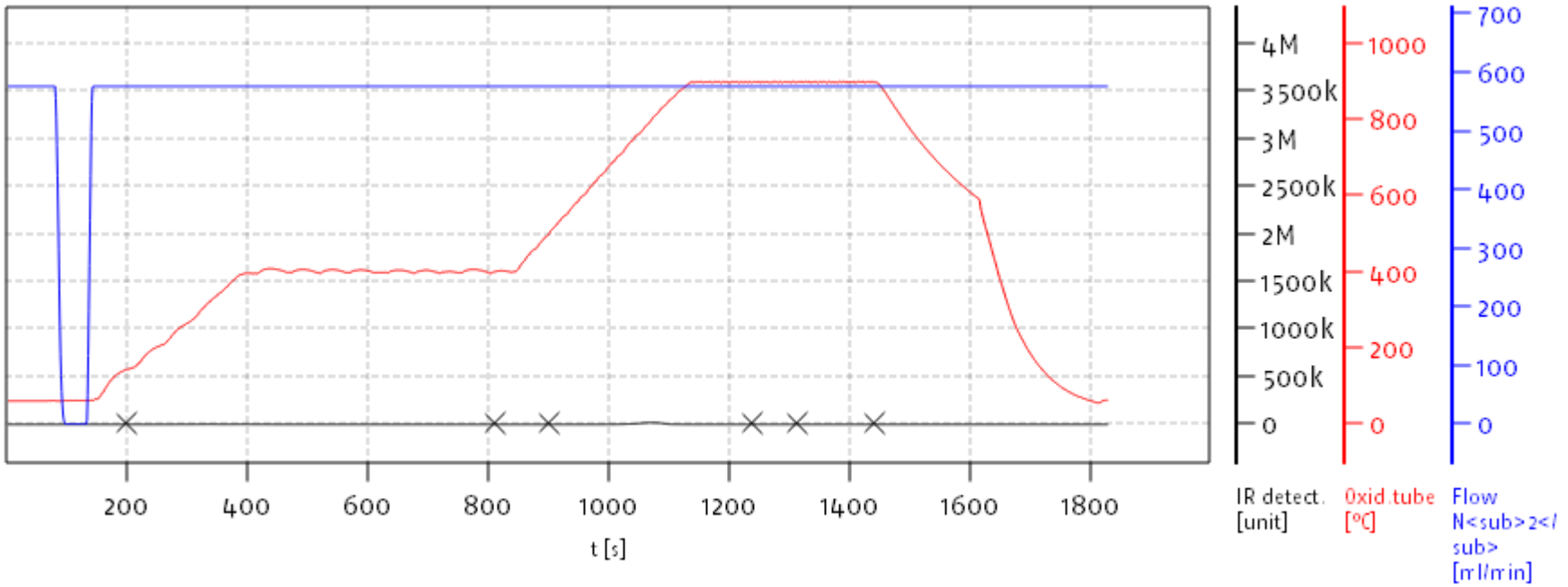
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
6	6	SEQ-CAL4	200.00	0.0099	1.00	CARBON	7/13/2021 4:40 PM	0.012	0.030	0.042	bl,C2u	9 549	35 259	82	1.0000	1.0150



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Analytical Resources, Incorporated
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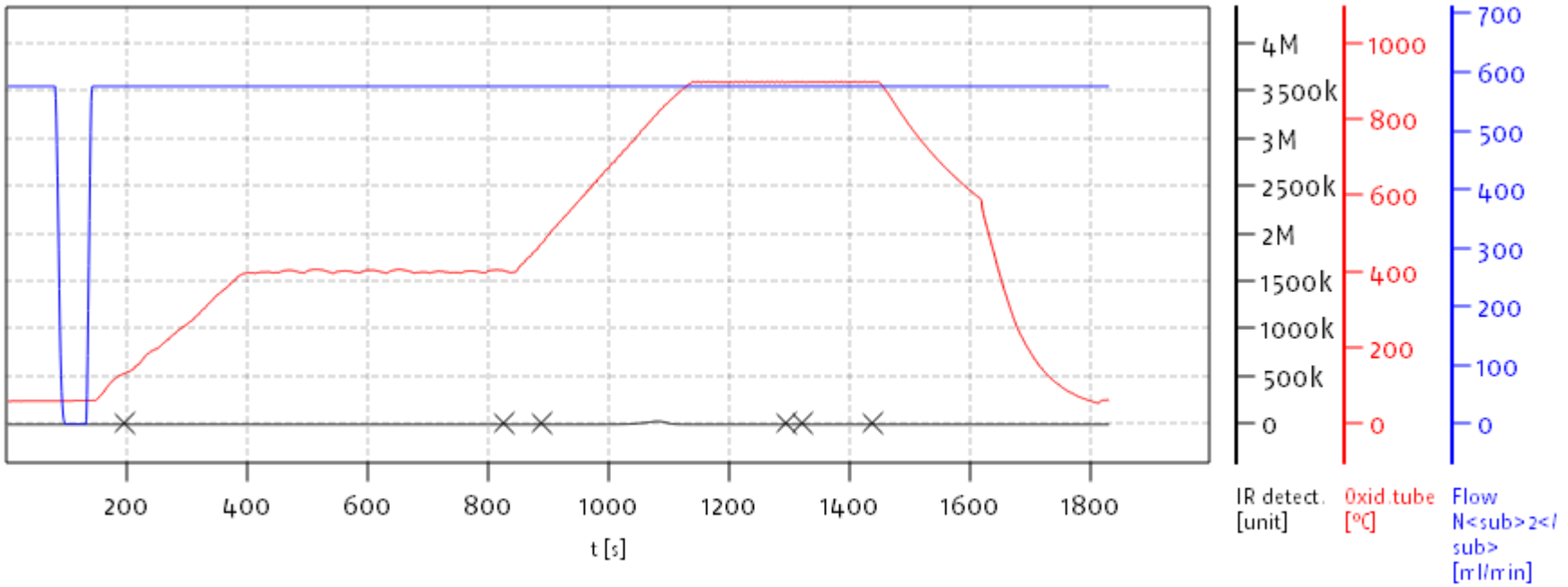
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
7	7	SEQ-CAL5	200.00	0.0155	1.00	CARBON	7/13/2021 5:11 PM	0.008	0.045	0.053	bl,C1u,C2u	4 269	54 591	65	1.0000	0.9980



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Balance: BAL3
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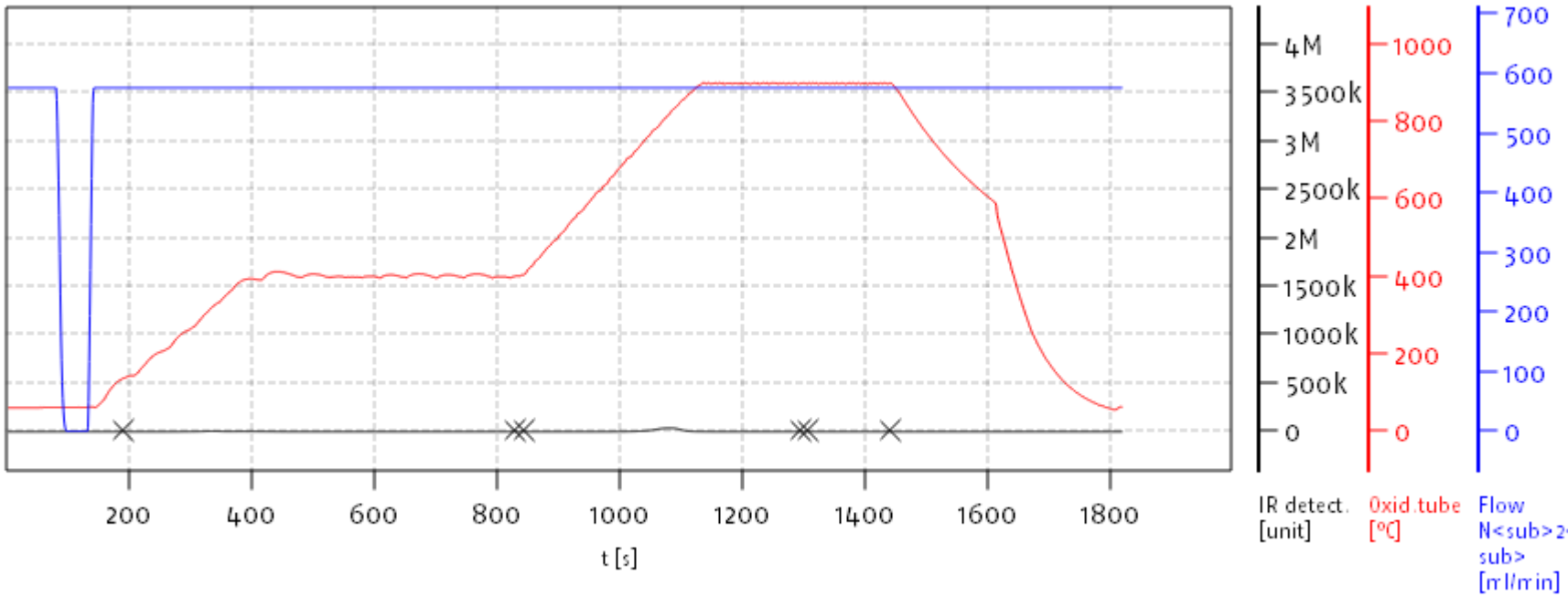
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
8	8	SEQ-CAL6	200.00	0.0198	1.00	CARBON	7/13/2021 5:41 PM	0.019	0.061	0.080	bl,C2u	18 512	73 034	79	1.0000	1.0264



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Soli TOC Cube, Carbon
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Analyst: BF

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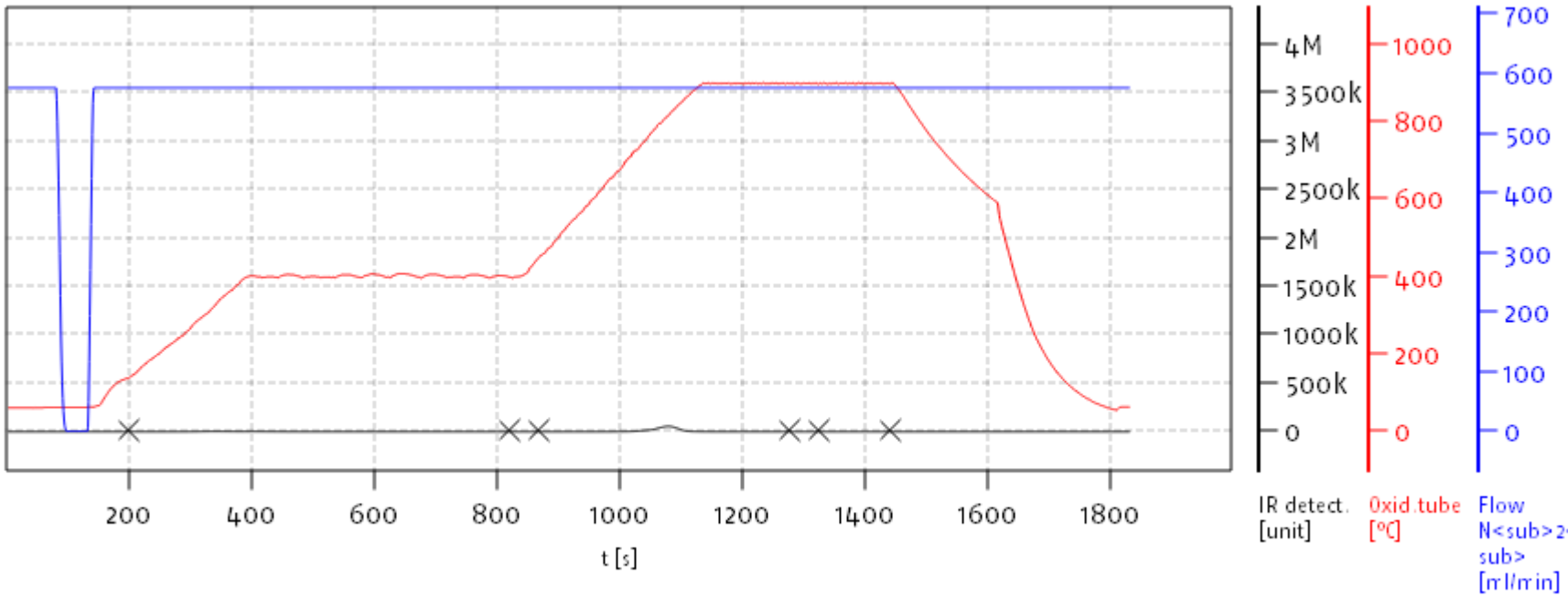
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
9	9	SEQ-CAL7	200.00	0.0257	1.00	CARBON	7/13/2021 6:12 PM	0.014	0.075	0.089	bl,C2u	12 682	95 421	29	1.0000	0.9745



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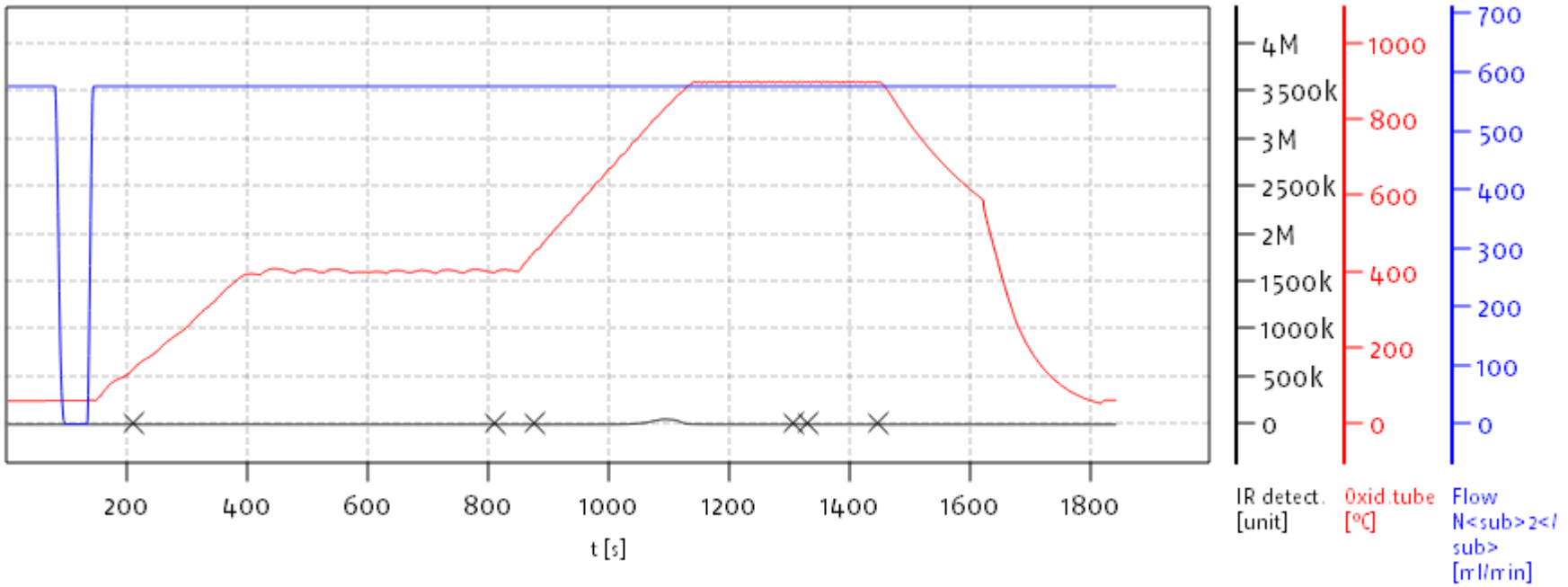
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
10	10	SEQ-CAL8	200.00	0.0300	1.00	CARBON	7/13/2021 6:43 PM	0.008	0.091	0.098	bl,C1u,C2u	4 663	112 452	86	1.0000	0.9989



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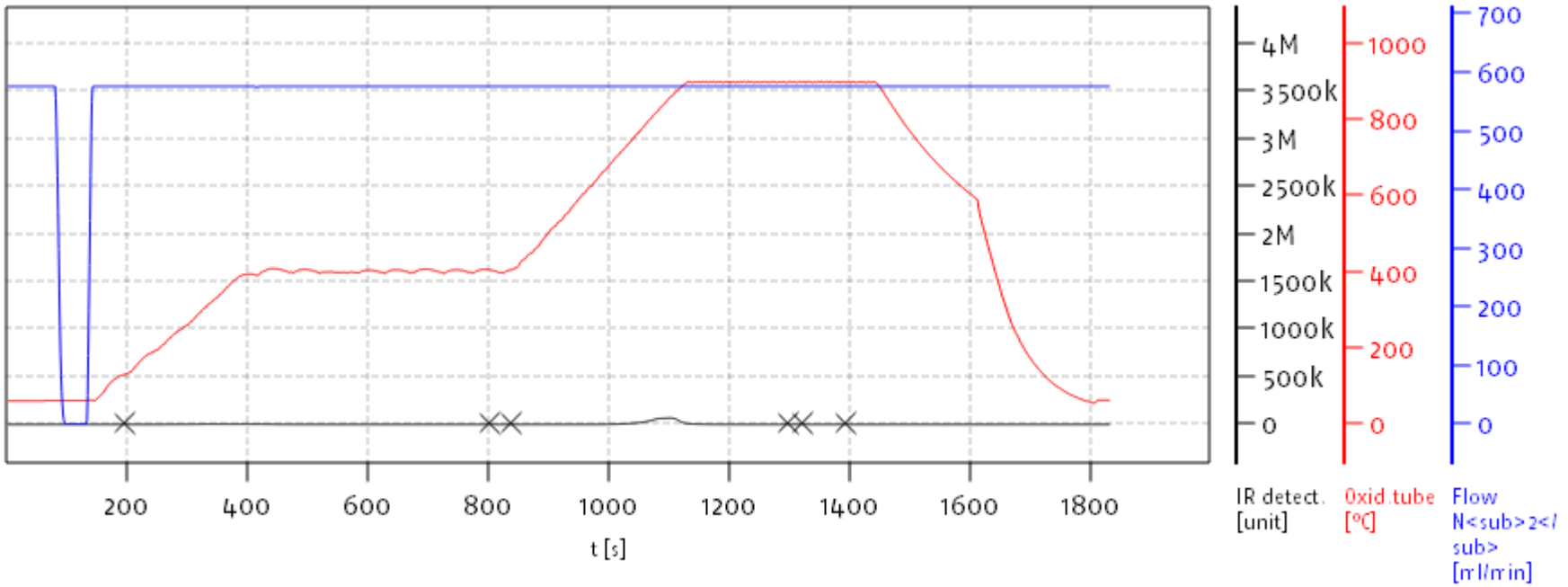
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
11	11	SEQ-CAL9	200.00	0.0407	1.00	CARBON	7/13/2021 7:14 PM	0.021	0.120	0.141	bl,C2u	21 063	157 168	339	1.0000	0.9528



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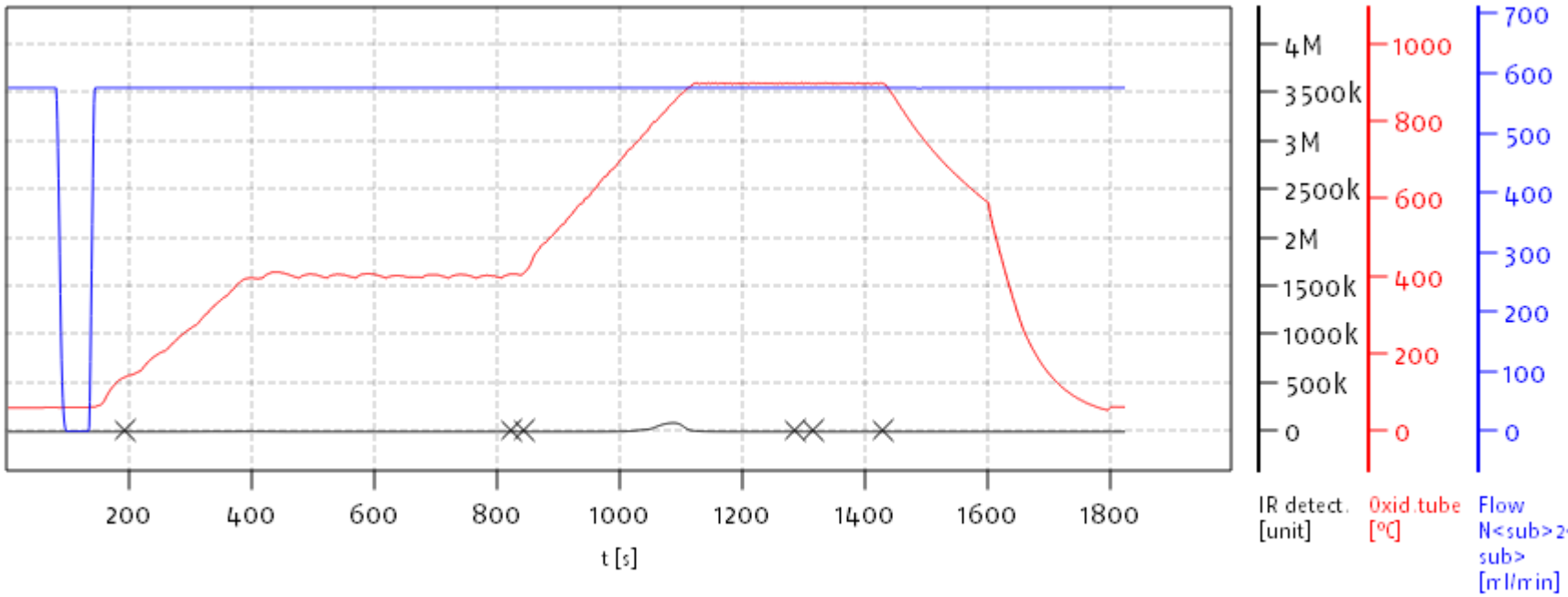
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
12	12	SEQ-CALA	200.00	0.0501	1.00	CARBON	7/13/2021 7:45 PM	0.013	0.151	0.164	bl,C2u	11 050	187 538	95	1.0000	1.0068



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Date: Wed Jul 14 10:35:53 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

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Document: TOC Calibration EG00035 071321BF from: 7/14/2021 10:24 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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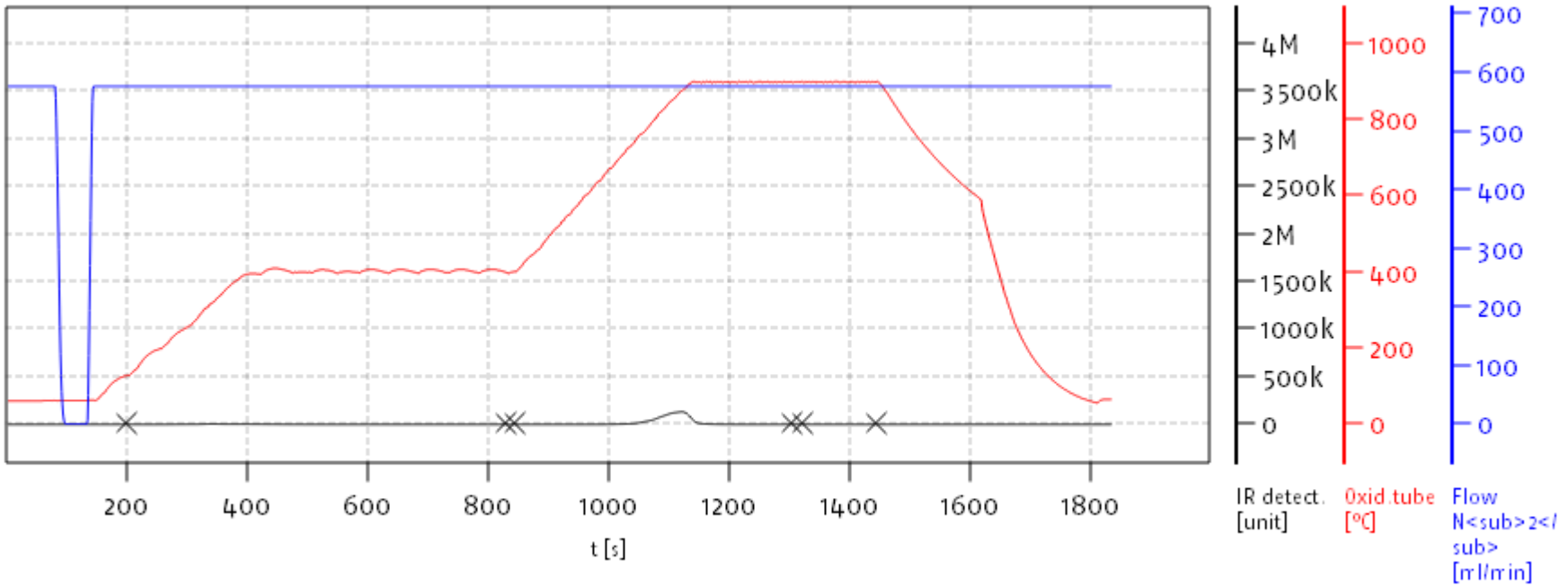
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
13	13	SEQ-CALB	200.00	0.0041	1.00	CARBON	7/13/2021 8:16 PM	0.021	0.258	0.279	bl,C2u	21 325	304 031	81	1.0000	1.0675



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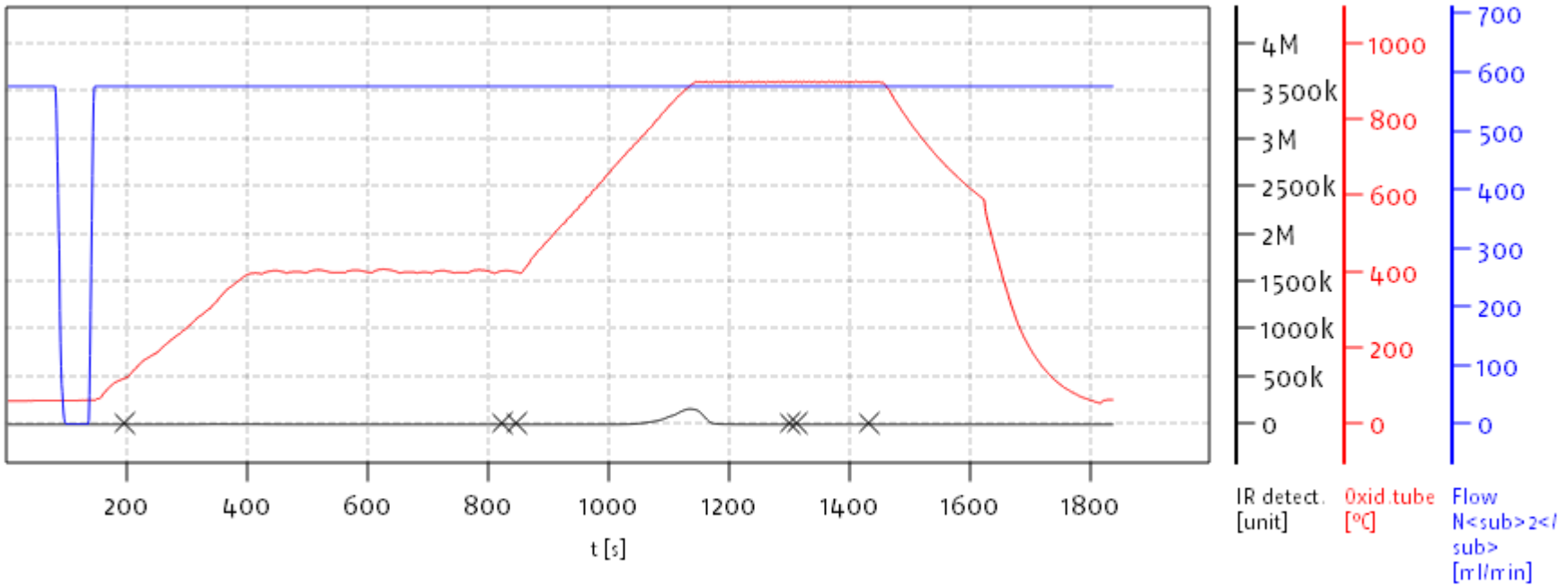
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
14	14	SEQ-CALC	200.00	0.0051	1.00	CARBON	7/13/2021 8:47 PM	0.013	0.324	0.337	bl,C2u	11 360	386 243	161	1.0000	1.0571



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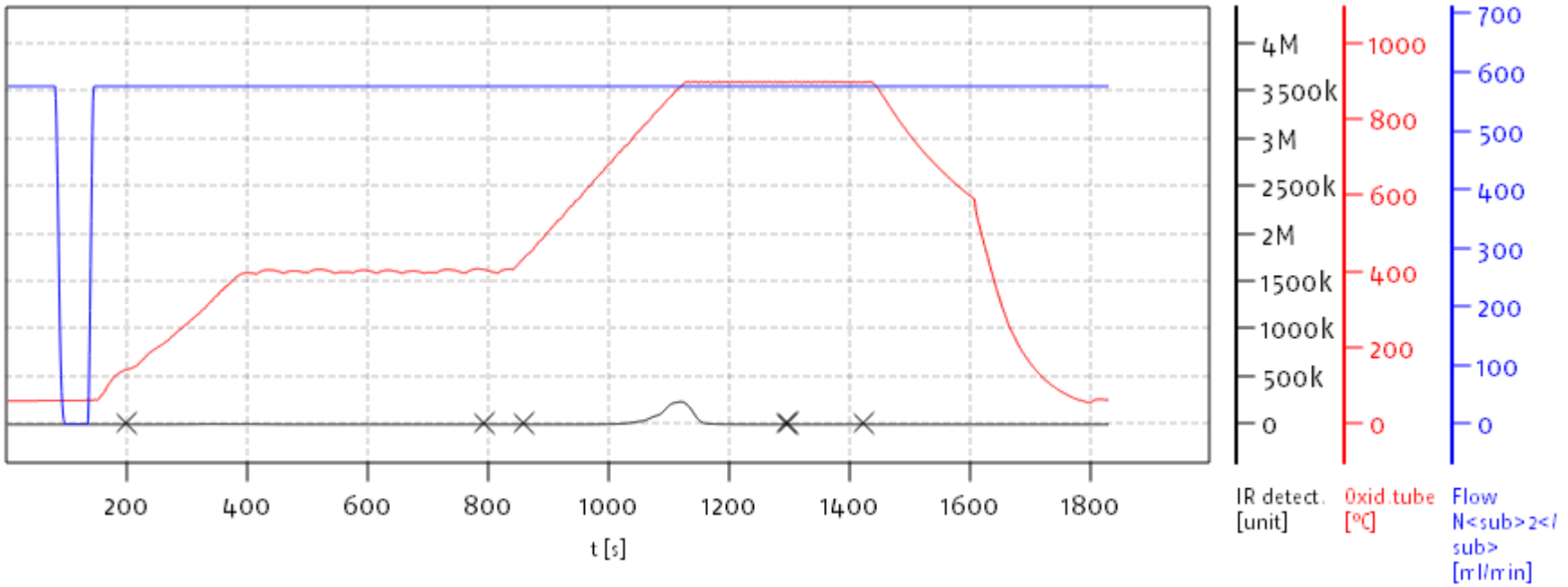
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
15	15	SEQ-CALD	200.00	0.0073	1.00	CARBON	7/13/2021 9:18 PM	0.017	0.444	0.461	bl,C2u	15 984	558 687	174	1.0000	1.0036



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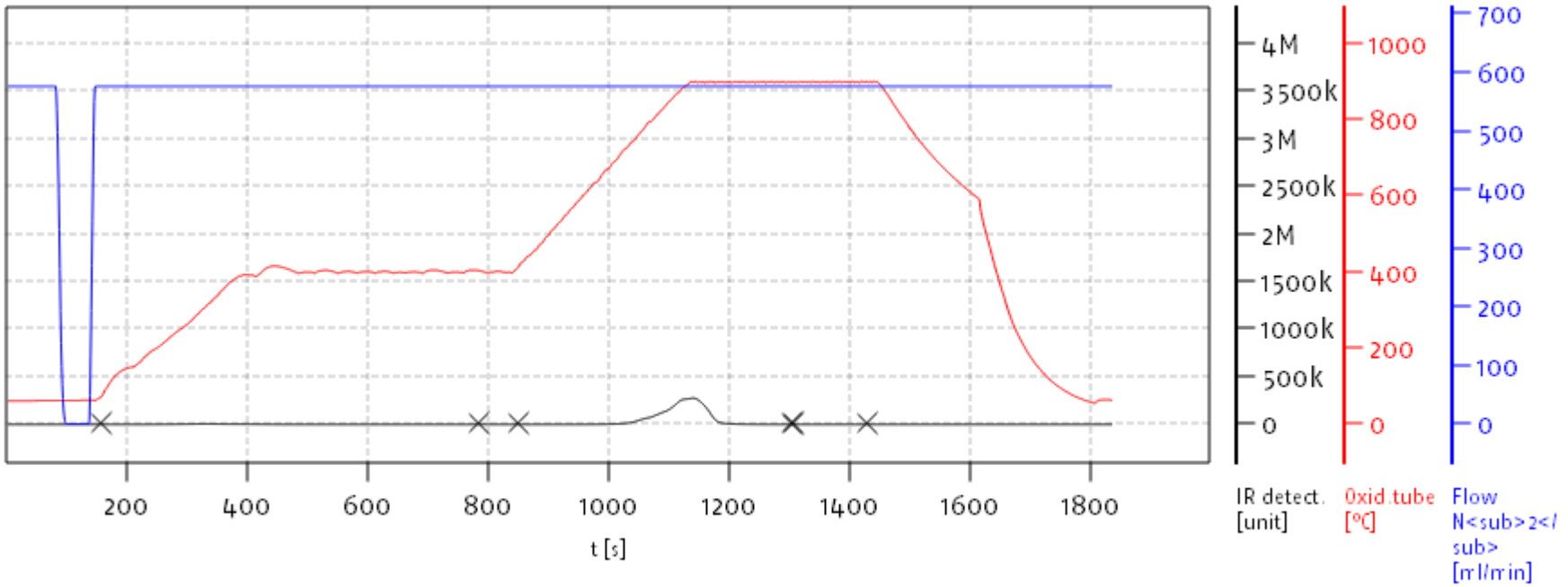
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
16	16	SEQ-CALE	200.00	0.0109	1.00	CARBON	7/13/2021 9:49 PM	0.024	0.600	0.624	bl,C2u	25 032	838 073	291	1.0000	0.9055



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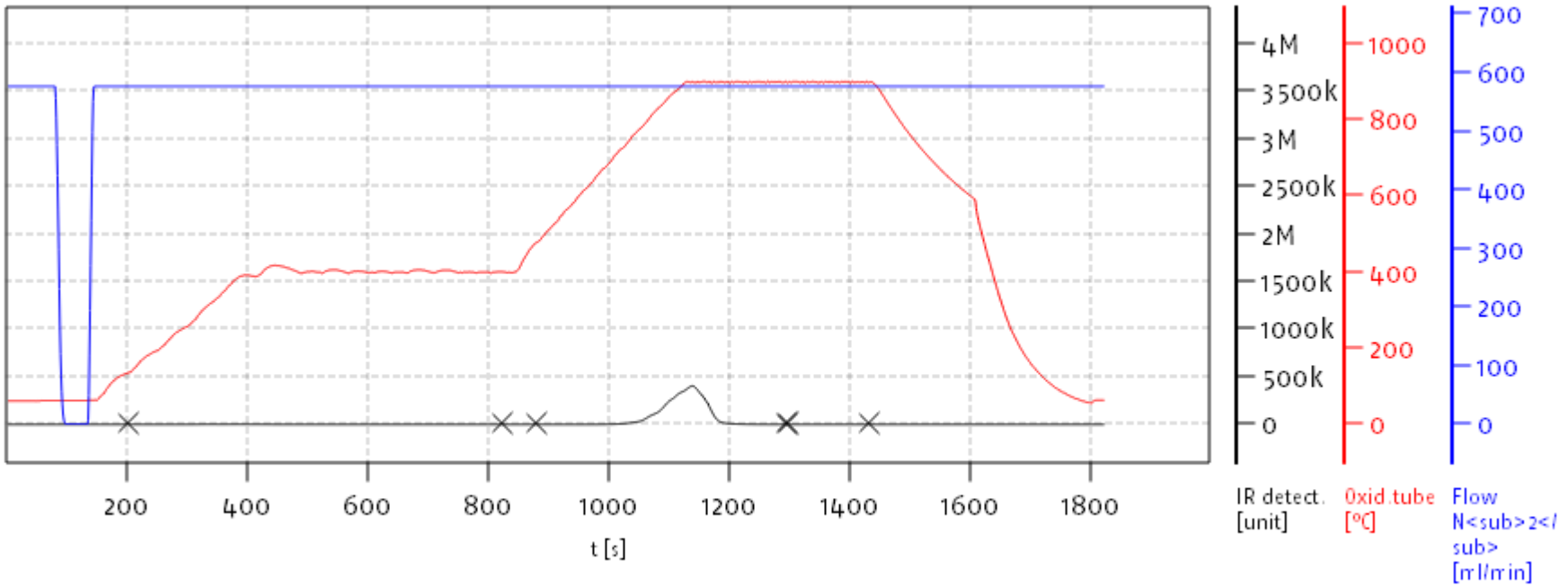
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
17	17	SEQ-CALF	200.00	0.0145	1.00	CARBON	7/13/2021 10:20 PM	0.011	0.906	0.917	bl,C1u,C2u	7 705	1 129 877	389	1.0000	1.0150



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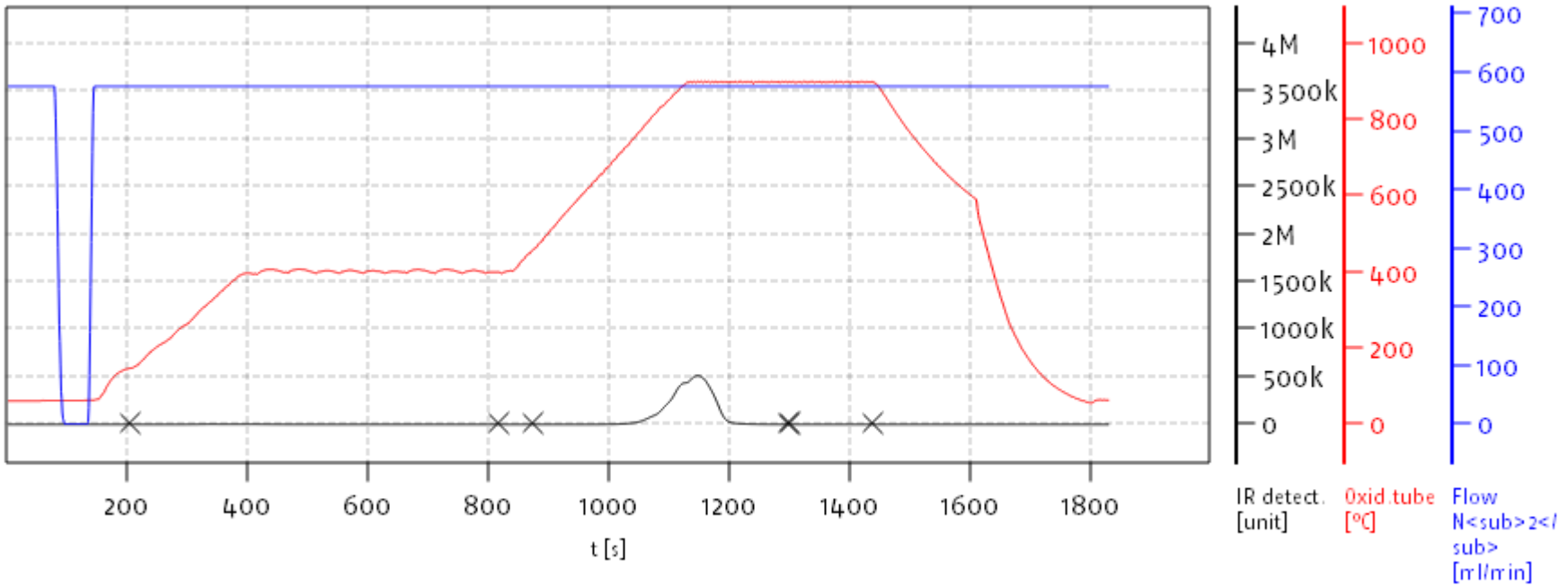
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
18	18	SEQ-CALG	200.00	0.0199	1.00	CARBON	7/13/2021 10:50 PM	0.015	1.206	1.221	bl,C2u	12 993	1 534 582	594	1.0000	0.9954



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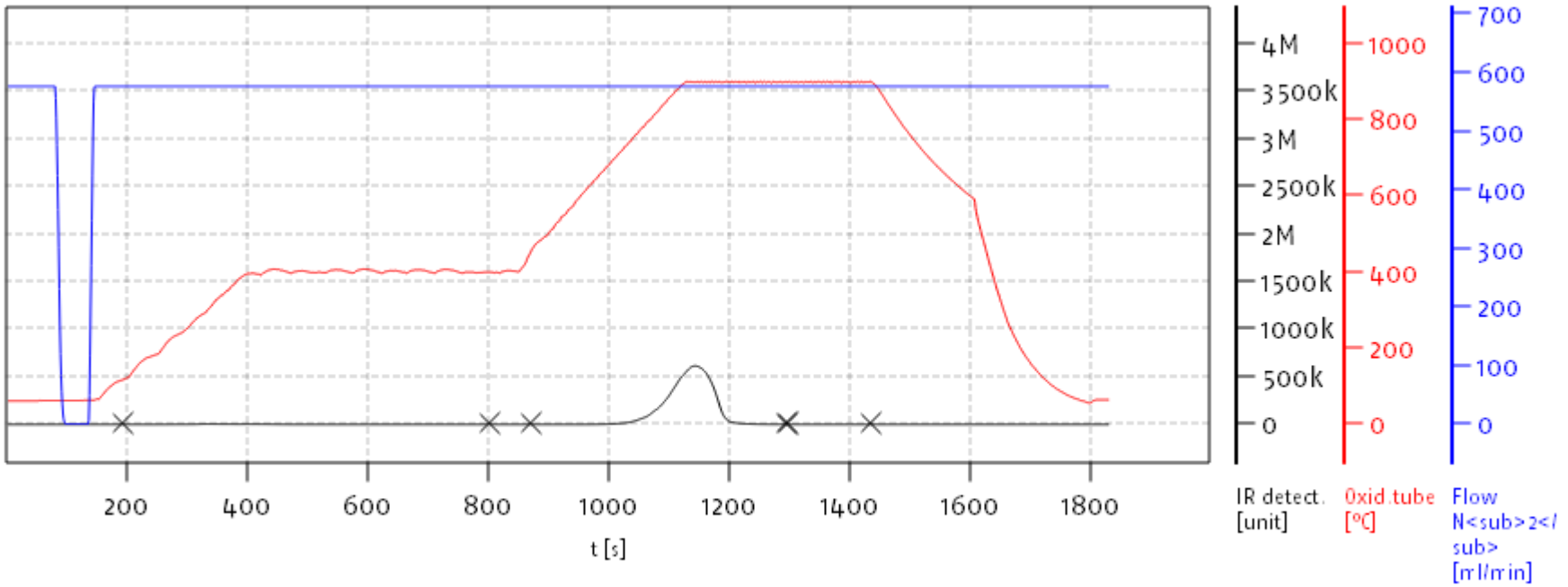
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
19	19	SEQ-CALH	200.00	0.0249	1.00	CARBON	7/13/2021 11:21 PM	0.021	1.524	1.545	bl,C2u	20 201	1 923 277	918	1.0000	1.0040



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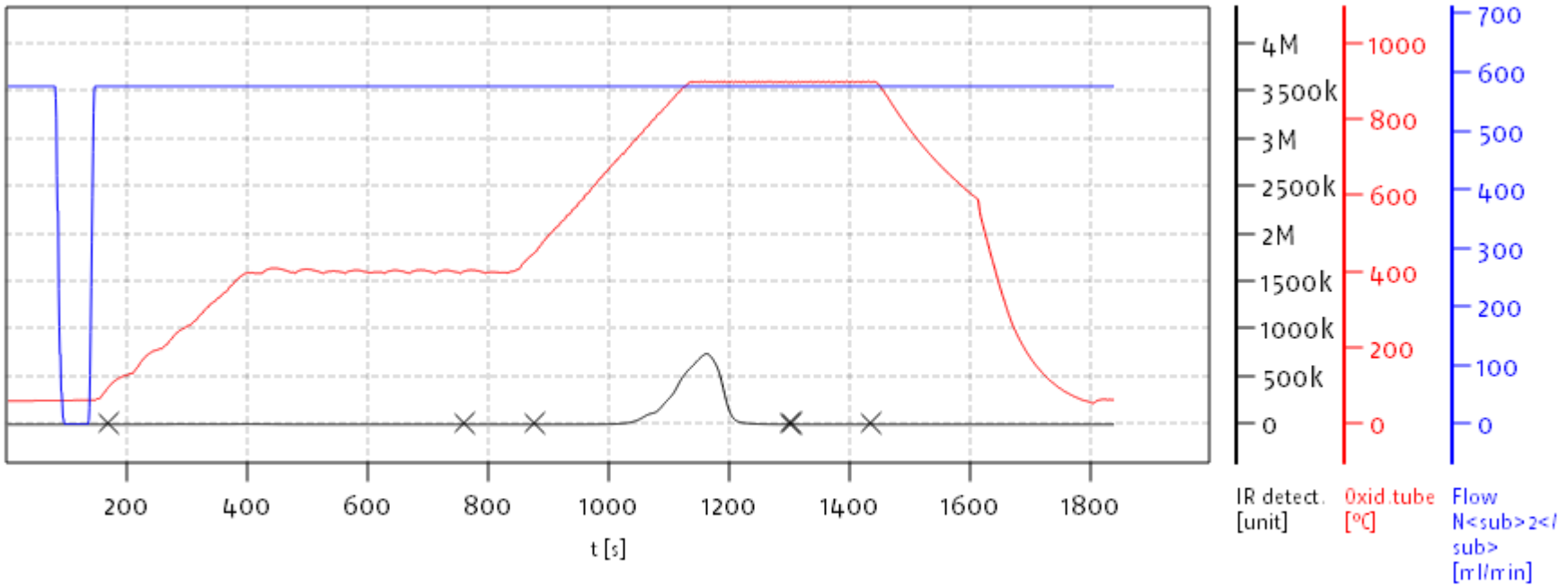
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
20	20	SEQ-CALI	200.00	0.0306	1.00	CARBON	7/13/2021 11:52 PM	0.021	1.800	1.821	bl,C2u	20 790	2 358 162	940	1.0000	0.9674



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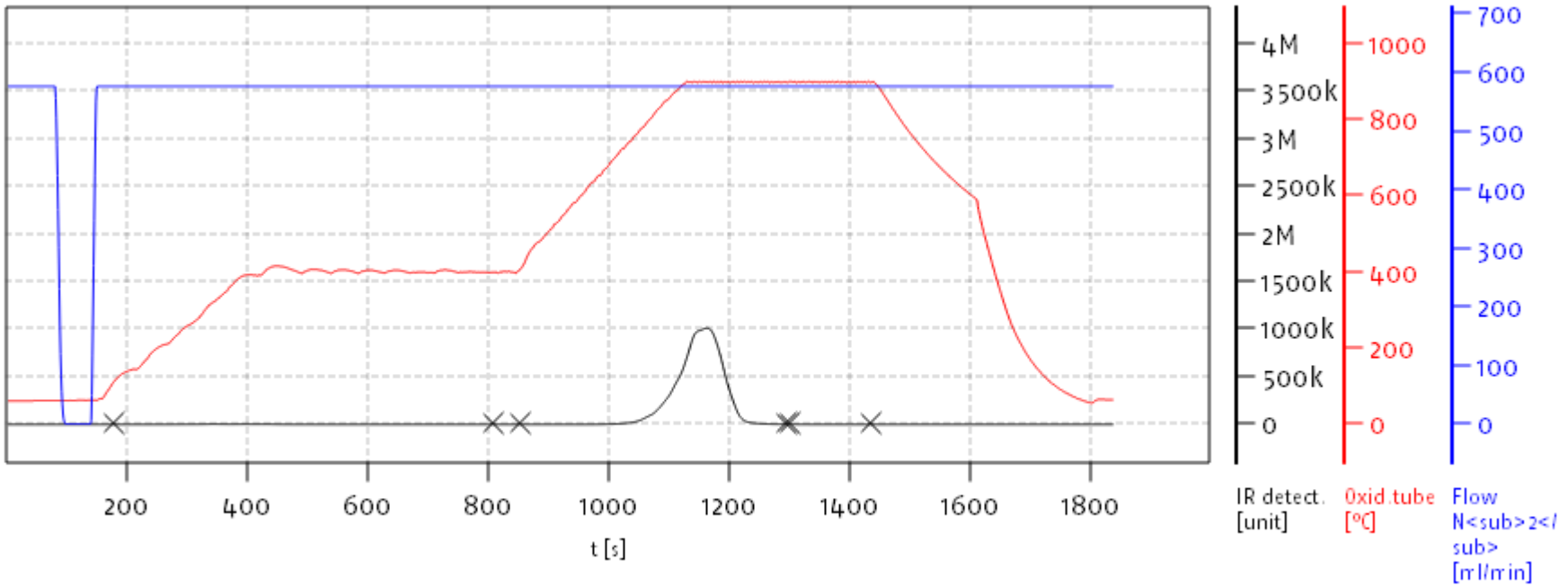
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
21	21	SEQ-CALJ	200.00	0.0419	1.00	CARBON	7/14/2021 12:23 AM	0.020	2.400	2.420	bl,C2u	17 643	3 227 695	2 142	1.0000	0.9426



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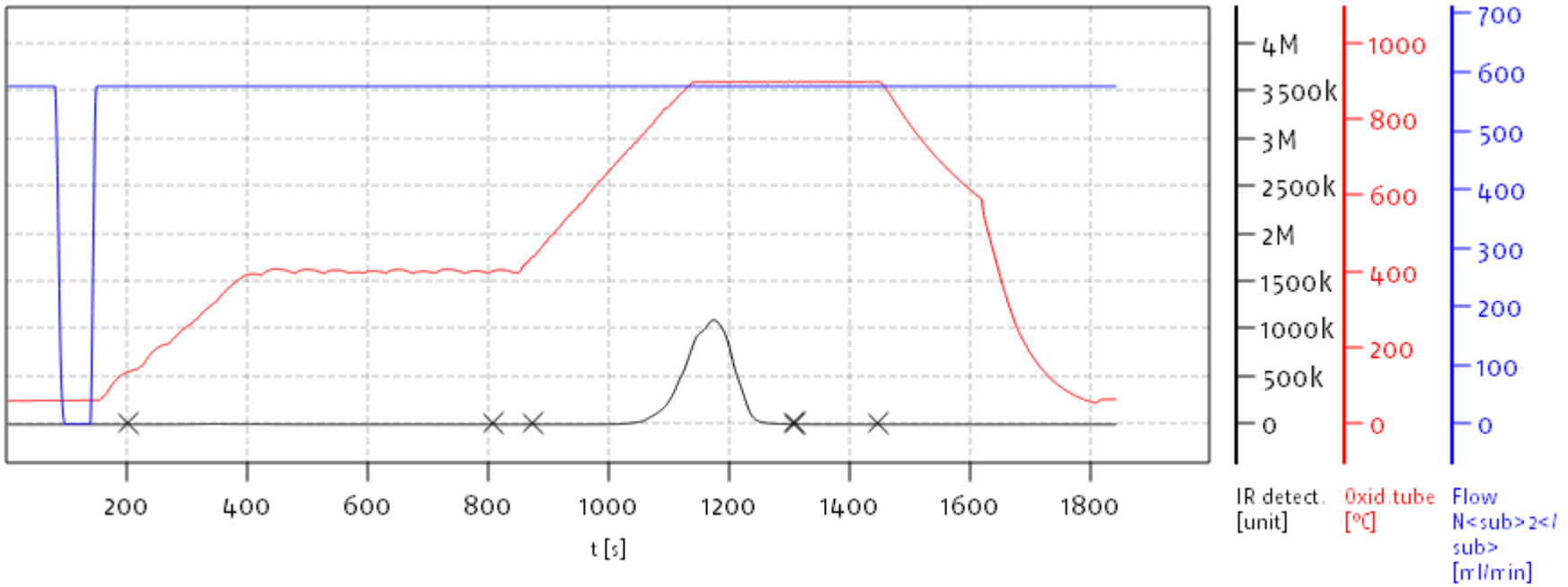
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
22	22	SEQ-CALK	200.00	0.0501	1.00	CARBON	7/14/2021 12:55 AM	0.023	3.012	3.035	bl,C2u	21 378	3 860 392	2 936	1.0000	0.9892



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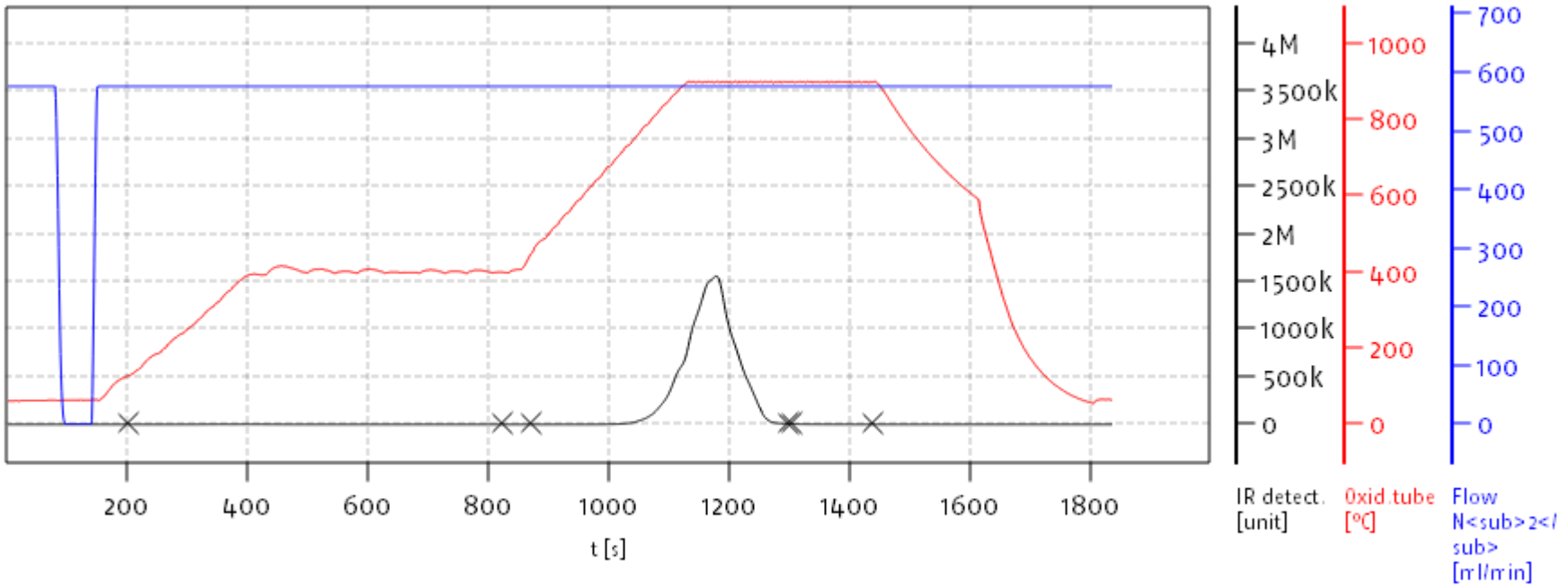
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
23	23	SEQ-CALL	200.00	0.0700	1.00	CARBON	7/14/2021 1:26 AM	0.016	4.206	4.222	bl,C1u,C2u	8 341	5 418 041	6 511	1.0000	0.9844



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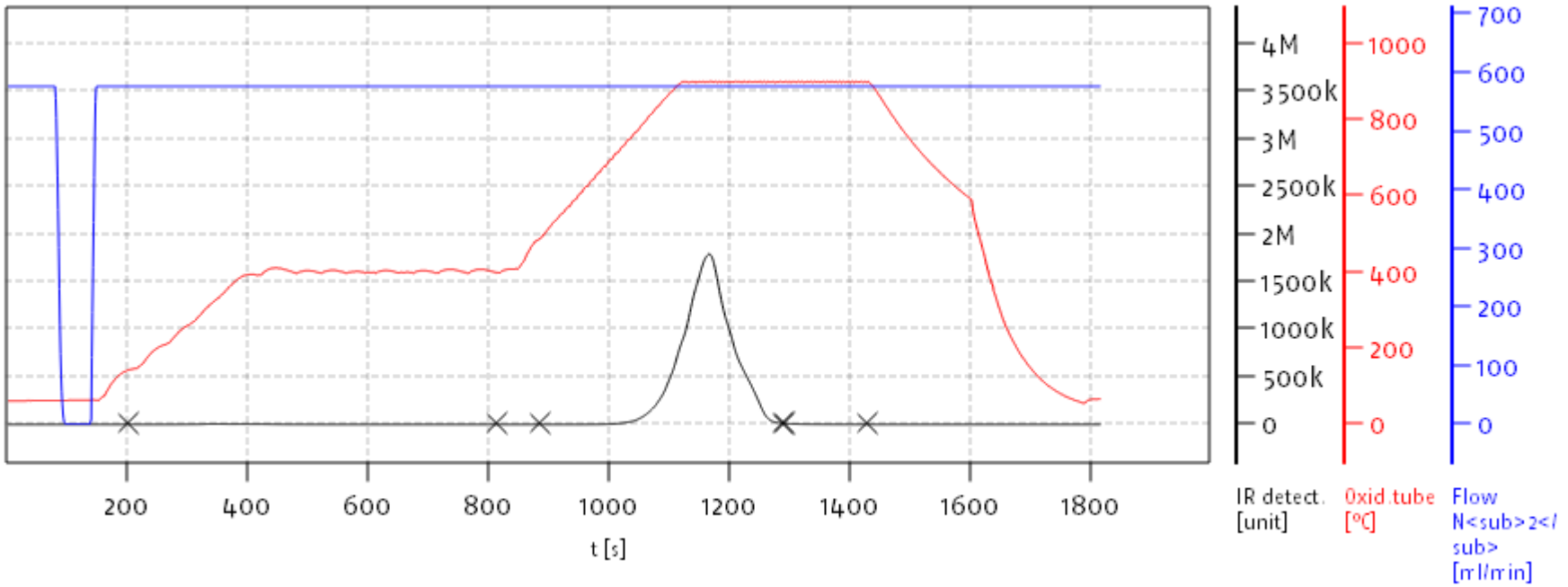
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
24	24	SEQ-CALM	200.00	0.0808	1.00	CARBON	7/14/2021 1:56 AM	0.032	4.812	4.844	bl	24 602	6 251 692	10 888	1.0000	0.9761



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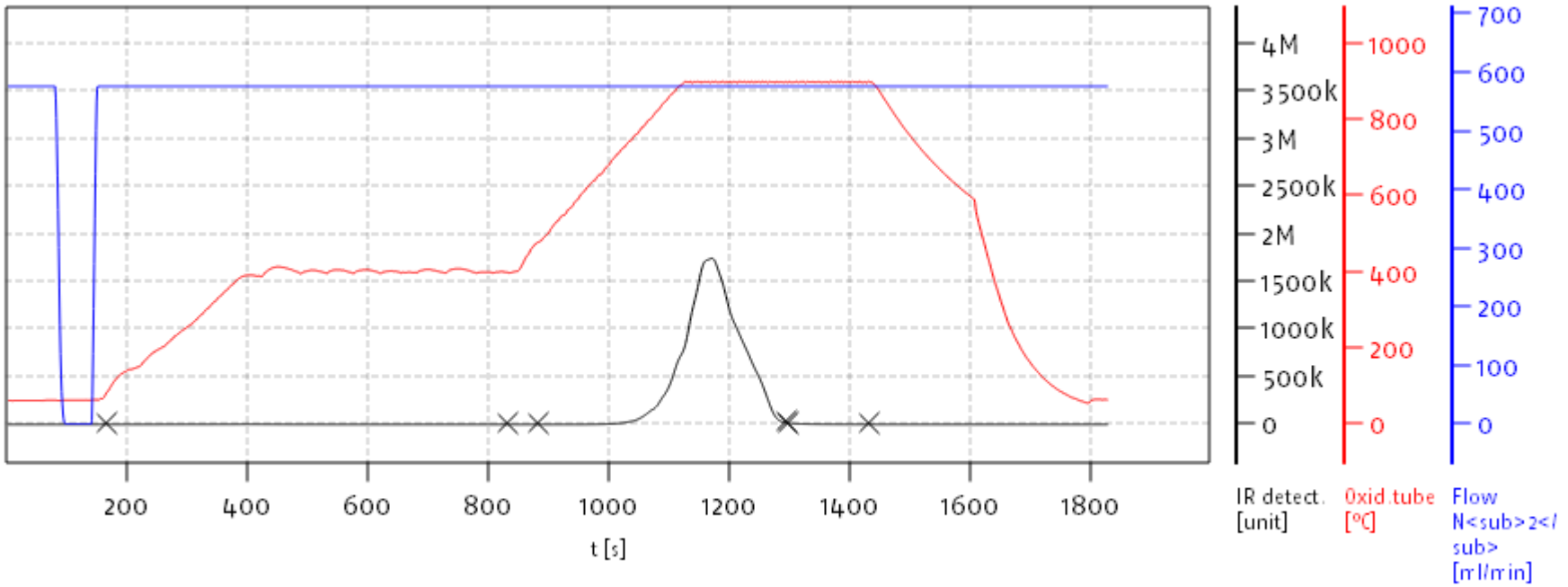
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
25	25	SEQ-CALN	200.00	0.0897	1.00	CARBON	7/14/2021 2:27 AM	0.025	5.406	5.431	bl	11 970	**6 909 943**	**14 720**	1.0000	0.9922



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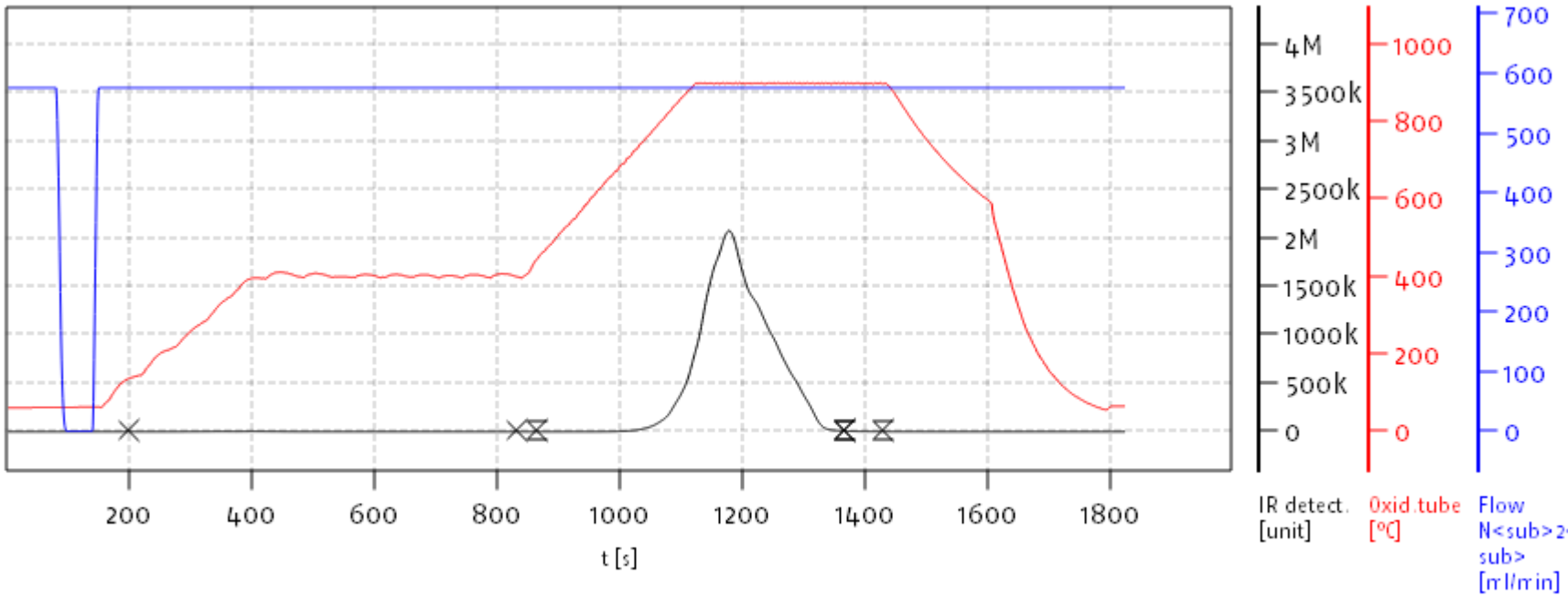
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
26	26	SEQ-CALO	200.00	0.1237	1.00	CARBON	7/14/2021 10:22 AM	0.013	7.434	7.447	bl,C3o	14 303	9 443 796	0	1.0000	0.9985



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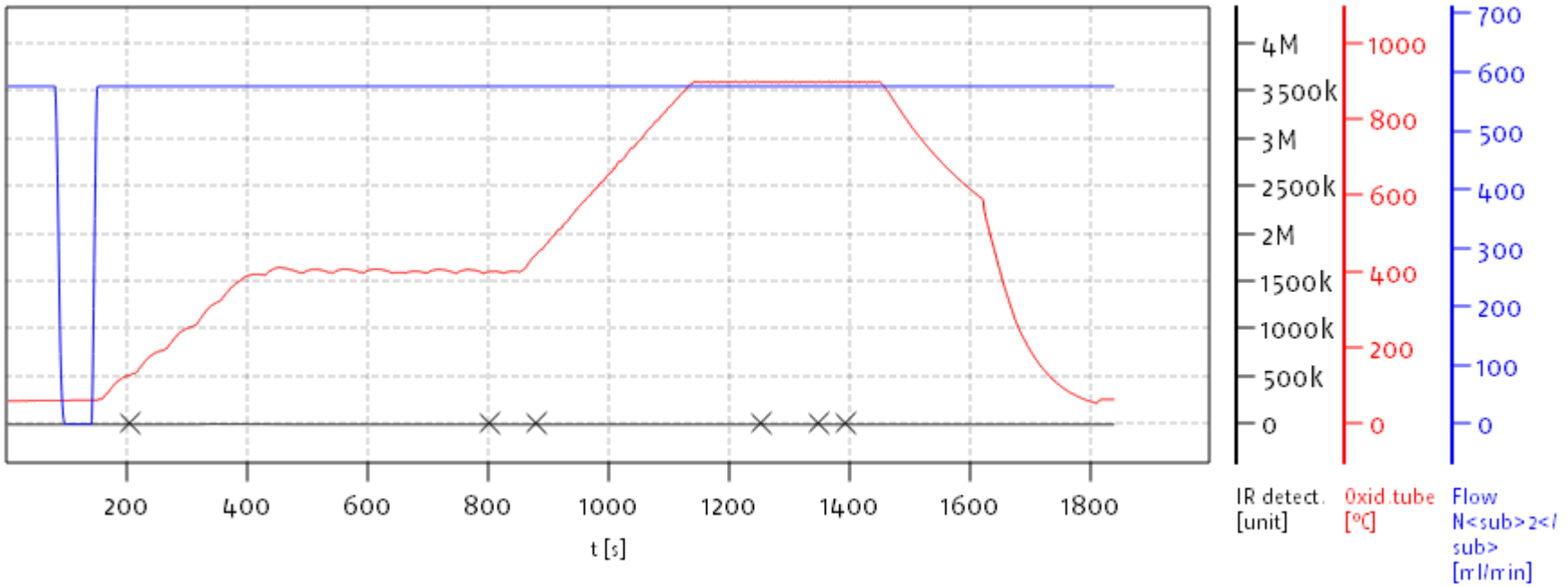
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
27	27	BLANK	1.00		1.00	CARBON	7/14/2021 3:29 AM	0.000	0.000	0.000	bl	15 377	4	0	1.0000	0.9704



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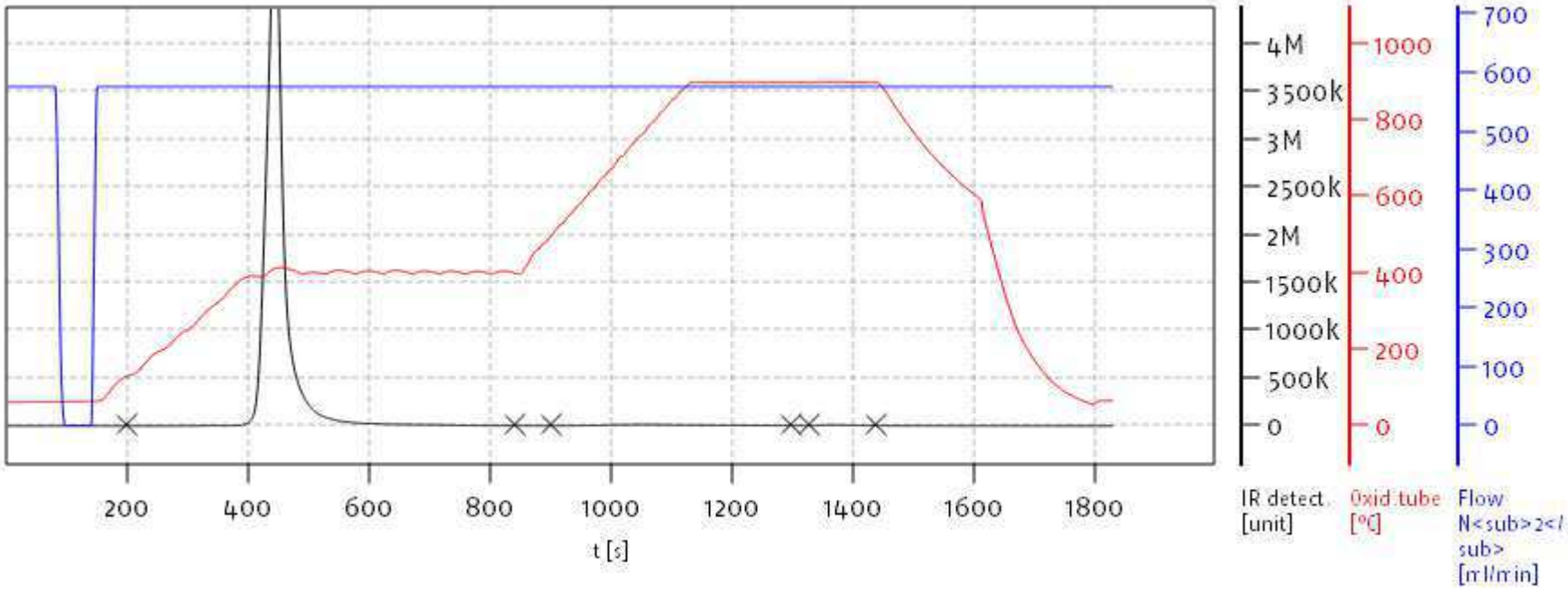
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
28	28	Dfactor	24.90		1.00	CARBON	7/14/2021 4:00 AM	44.620	0.675	45.295	bl	6 675 069	104 070	24 945	1.0513	1.0000



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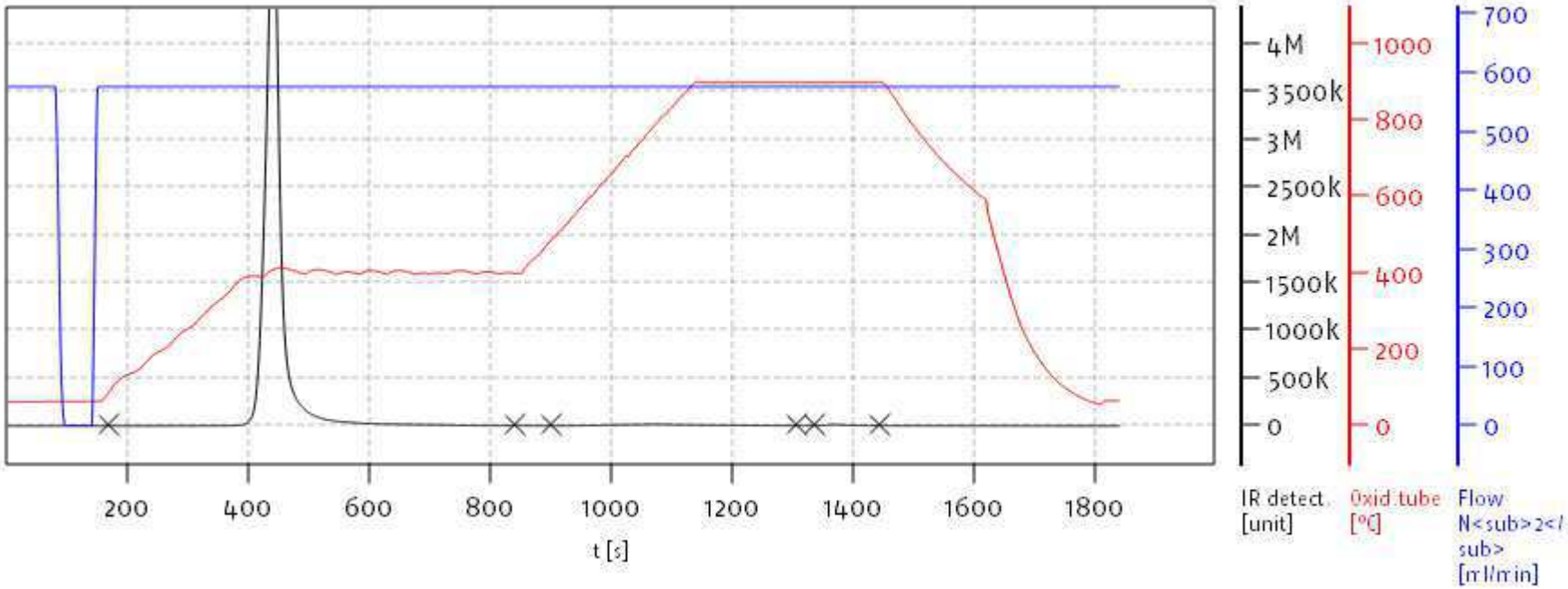
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
29	29	Dfactor	22.60		1.00	CARBON	7/14/2021 4:31 AM	44.643	0.810	45.453	bl	6 011 996	113 561	25 659	1.0594	1.0000



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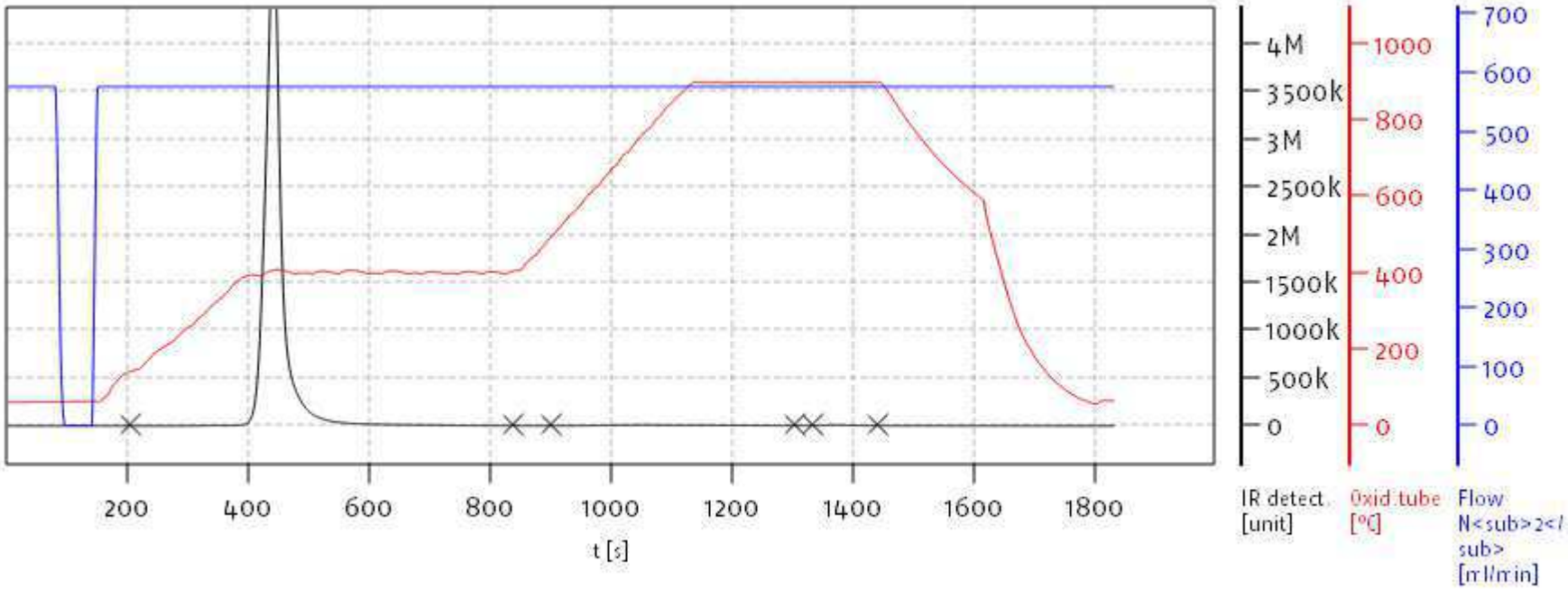
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
30	30	SEQ-ICV1	22.00		1.00	CARBON	7/14/2021 5:02 AM	44.870	0.594	45.465	bl	5 908 965	82 878	20 547	1.0554	0.9704



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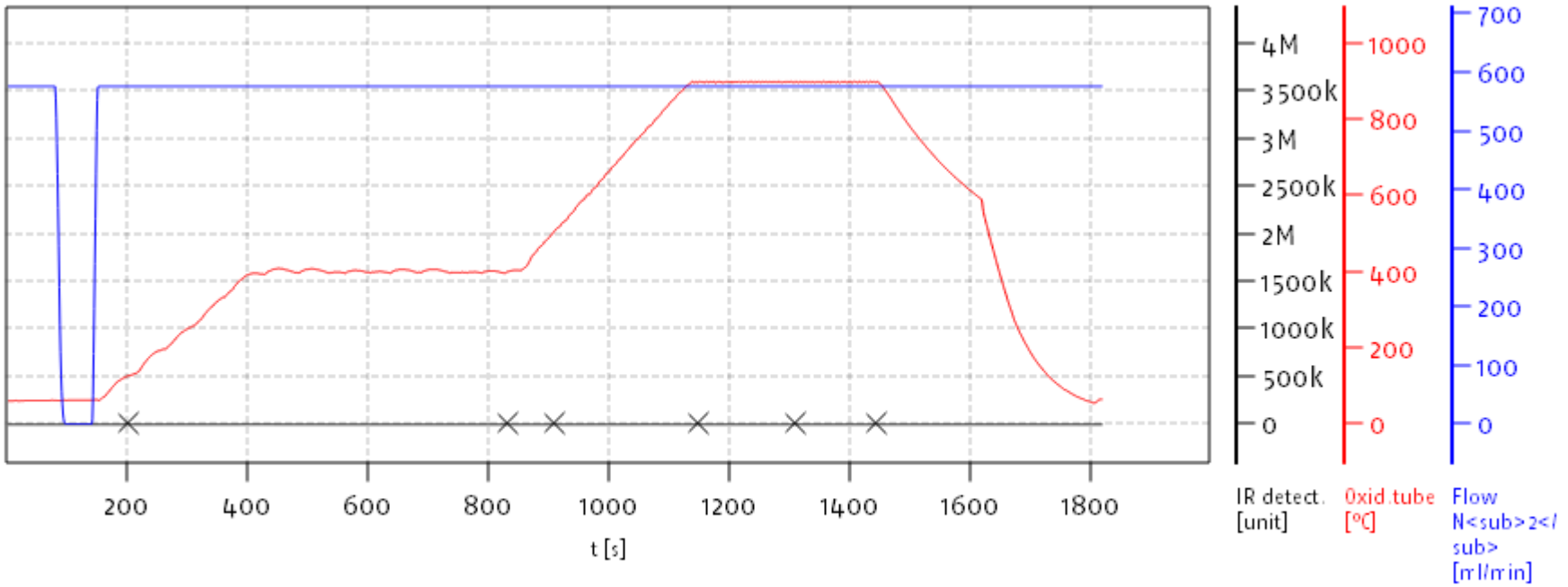
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
31	31	SEQ-ICB1	618.10		1.00	CARBON	7/14/2021 5:33 AM	0.002	0.001	0.003	bl,C1u,C3u,C2u	2 837	1 593	526	1.0554	0.9704



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Access: soliTOC superuser

Date: Wed Jul 14 10:35:53 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

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Document: TOC Calibration EG00035 071321BF from: 7/14/2021 10:24 AM

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0006	Instrument:	TOC Cube
		Calibration:	EG00035

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Initial Cal Check	SJH0006-ICV1	peData_08092021@1047-2	NA	08/02/21 18:16
Initial Cal Blank	SJH0006-ICB1	peData_08092021@1047-2	NA	08/02/21 18:47
Calibration Check	SJH0006-CCV1	peData_08092021@1047-3	NA	08/03/21 00:36
Calibration Blank	SJH0006-CCB1	peData_08092021@1047-3	NA	08/03/21 01:08
MRL Check	BJG0719-MRL1	peData_08092021@1047-(	Solid	08/03/21 04:48
Blank	BJG0719-BLK1	peData_08092021@1047-(	Solid	08/03/21 05:19
LCS	BJG0719-BS1	peData_08092021@1047-(	Solid	08/03/21 05:51
Reference	BJG0719-SRM1	peData_08092021@1047-(	Solid	08/03/21 06:22
Calibration Check	SJH0006-CCV2	peData_08092021@1047-(	NA	08/03/21 06:54
Calibration Blank	SJH0006-CCB2	peData_08092021@1047-(	NA	08/03/21 07:25
LDW21-SC524	21G0212-01	peData_08092021@1047-(	Solid	08/03/21 11:05
Calibration Check	SJH0006-CCV3	peData_08092021@1047-1	NA	08/03/21 13:12
Calibration Blank	SJH0006-CCB3	peData_08092021@1047-1	NA	08/03/21 13:44
LDW21-SC528	21G0212-02	peData_08092021@1047-1	Solid	08/03/21 14:15
LDW21-SC538B	21G0212-03	peData_08092021@1047-1	Solid	08/03/21 14:47
LDW21-SC538C	21G0212-04	peData_08092021@1047-1	Solid	08/03/21 15:19
LDW21-SC538E	21G0212-05	peData_08092021@1047-1	Solid	08/03/21 15:51
LDW21-IT582B	21G0212-06	peData_08092021@1047-1	Solid	08/03/21 16:23
LDW21-IT582C	21G0212-07	peData_08092021@1047-1	Solid	08/03/21 16:54
LDW21-IT582E	21G0212-08	peData_08092021@1047-1	Solid	08/03/21 17:26
LDW21-IT579B	21G0212-09	peData_08092021@1047-1	Solid	08/03/21 17:58
LDW21-IT597B	21G0212-10	peData_08092021@1047-1	Solid	08/03/21 18:29
LDW21-IT597C	21G0212-11	peData_08092021@1047-1	Solid	08/03/21 19:00
Calibration Check	SJH0006-CCV4	peData_08092021@1047-1	NA	08/03/21 19:32
Calibration Blank	SJH0006-CCB4	peData_08092021@1047-1	NA	08/03/21 20:03
LDW21-IT597E	21G0212-12	peData_08092021@1047-1	Solid	08/03/21 20:35
LDW21-SC539B	21G0212-14	peData_08092021@1047-2	Solid	08/03/21 21:39
LDW21-SC539C	21G0212-15	peData_08092021@1047-2	Solid	08/03/21 22:11
LDW21-SC539E	21G0212-16	peData_08092021@1047-2	Solid	08/03/21 22:42
Calibration Check	SJH0006-CCV5	peData_08092021@1047-2	NA	08/04/21 01:53

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

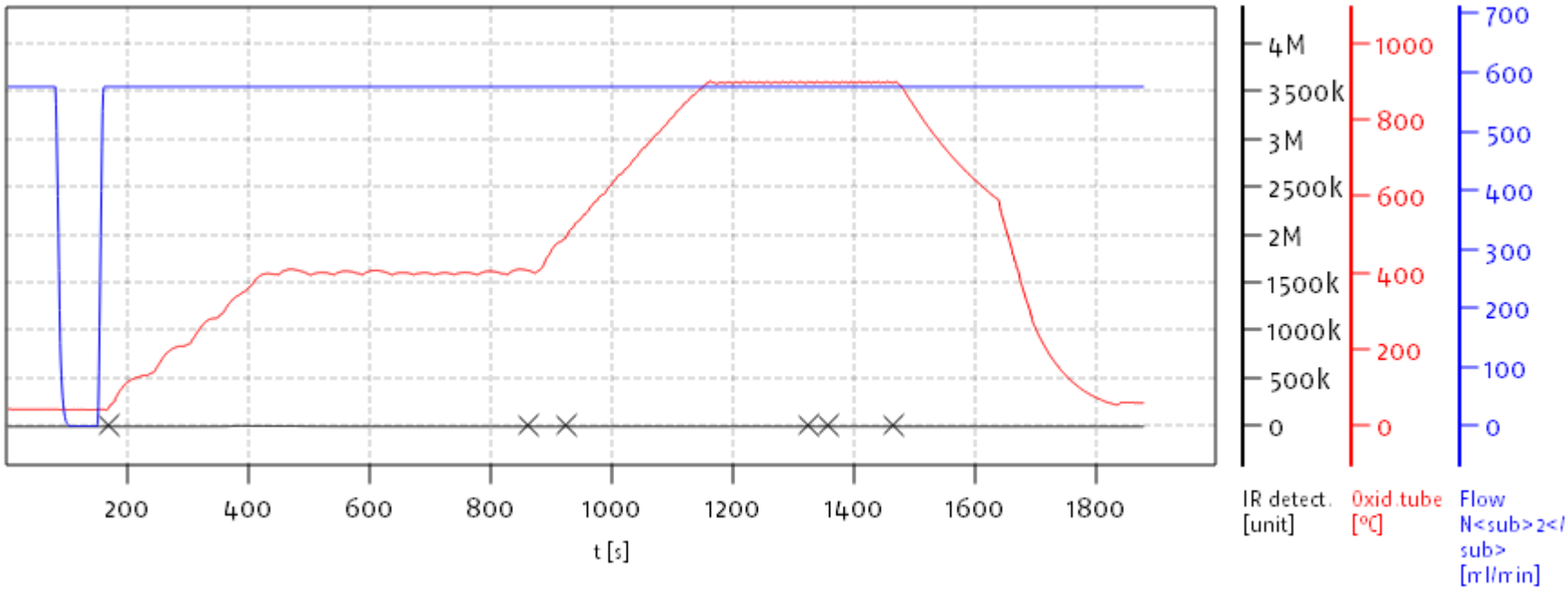
Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0006	Instrument:	TOC Cube
		Calibration:	EG00035

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SJH0006-CCB5	peData_08092021@1047-2	NA	08/04/21 02:24
Calibration Check	SJH0006-CCV6	peData_08092021@1047-2	NA	08/04/21 08:11
Calibration Blank	SJH0006-CCB6	peData_08092021@1047-2	NA	08/04/21 08:42
Calibration Check	SJH0006-CCV7	peData_08092021@1047-2	NA	08/04/21 14:30
Calibration Blank	SJH0006-CCB7	peData_08092021@1047-2	NA	08/04/21 15:02
Calibration Check	SJH0006-CCV8	peData_08092021@1047-3	NA	08/04/21 20:50
Calibration Blank	SJH0006-CCB8	peData_08092021@1047-3	NA	08/04/21 21:21
Calibration Check	SJH0006-CCV9	peData_08092021@1047-0	NA	08/05/21 03:08
Calibration Blank	SJH0006-CCB9	peData_08092021@1047-0	NA	08/05/21 03:40
Calibration Check	SJH0006-CCVA	peData_08092021@1047-0	NA	08/05/21 09:25
Calibration Blank	SJH0006-CCBA	peData_08092021@1047-0	NA	08/05/21 09:57
Calibration Check	SJH0006-CCVB	peData_08092021@1047-1	NA	08/05/21 15:45
Calibration Blank	SJH0006-CCBB	peData_08092021@1047-1	NA	08/05/21 16:16
Calibration Check	SJH0006-CCVC	peData_08092021@1047-2	NA	08/05/21 22:06
Calibration Blank	SJH0006-CCBC	peData_08092021@1047-2	NA	08/05/21 22:38

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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	68	BLANK	1.00		1.00	CARBON	8/2/2021 4:41 PM	0.000	0.000	0.000	bl	39 453	11 313	2 544	1.0000	1.0000



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Access: soliTOC superuser

Date: Sat Aug 7 21:02:20 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

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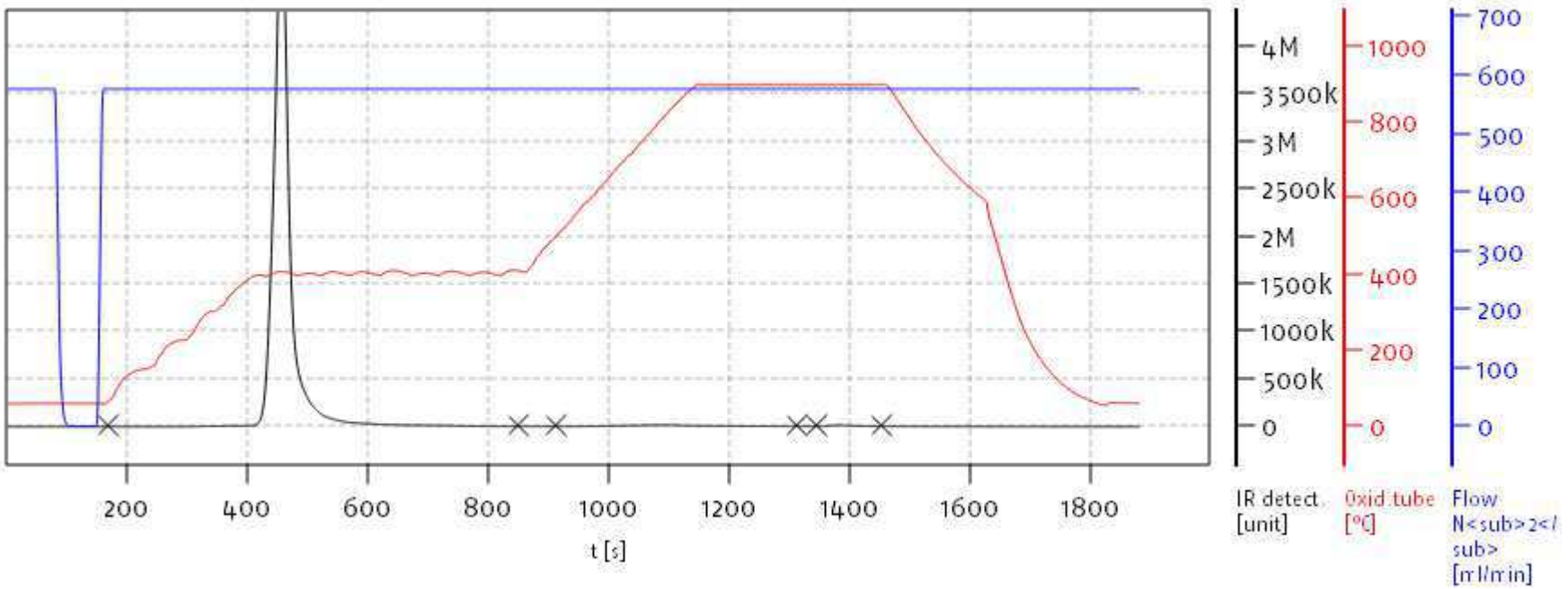
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
2	69	Dfactor	22.20		1.00	CARBON	8/2/2021 5:13 PM	44.801	0.921	45.722	bl	6 158 330	113 455	31 952	1.0373	1.0000



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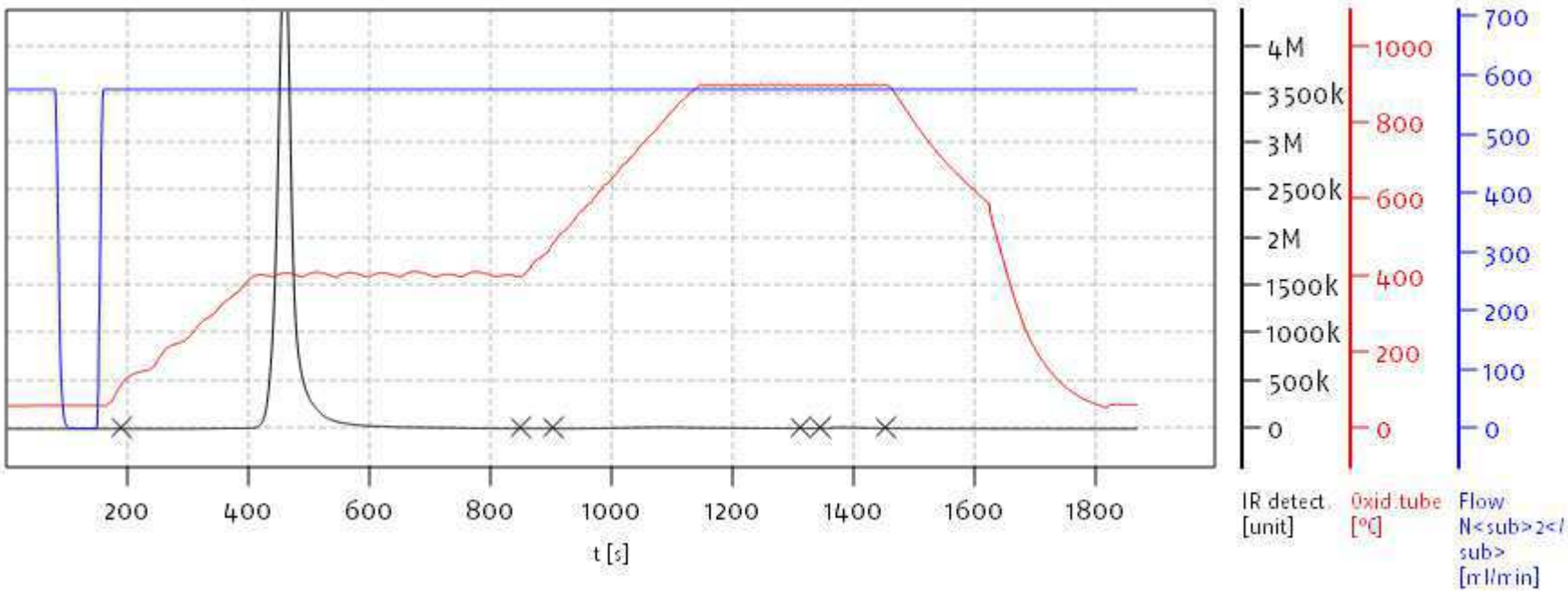
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
3	70	Dfactor	20.90		1.00	CARBON	8/2/2021 5:44 PM	44.837	1.034	45.870	bl	5 722 840	120 999	33 761	1.0506	1.0000



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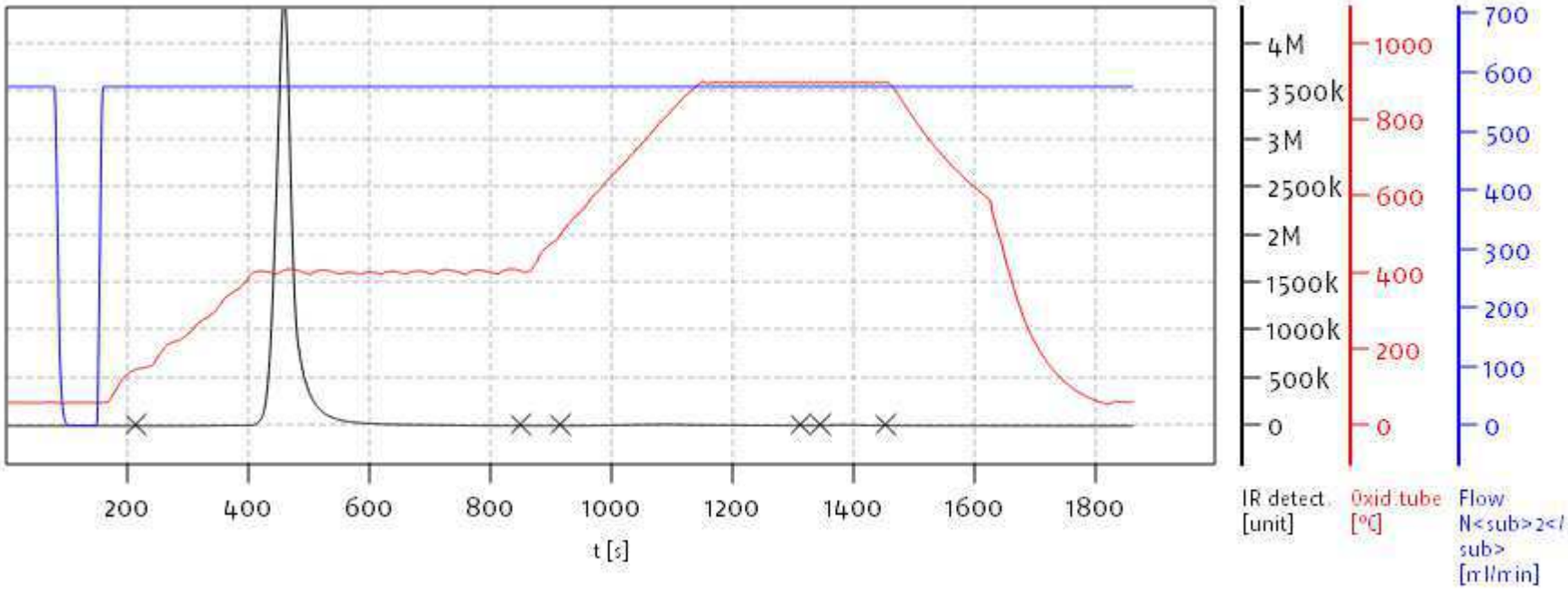
Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
4	71	SJH0006-ICV1	20.20		1.00	CARBON	8/2/2021 6:16 PM	45.181	0.956	46.137	bl	5 614 280	106 090	26 638	1.0439	1.0000



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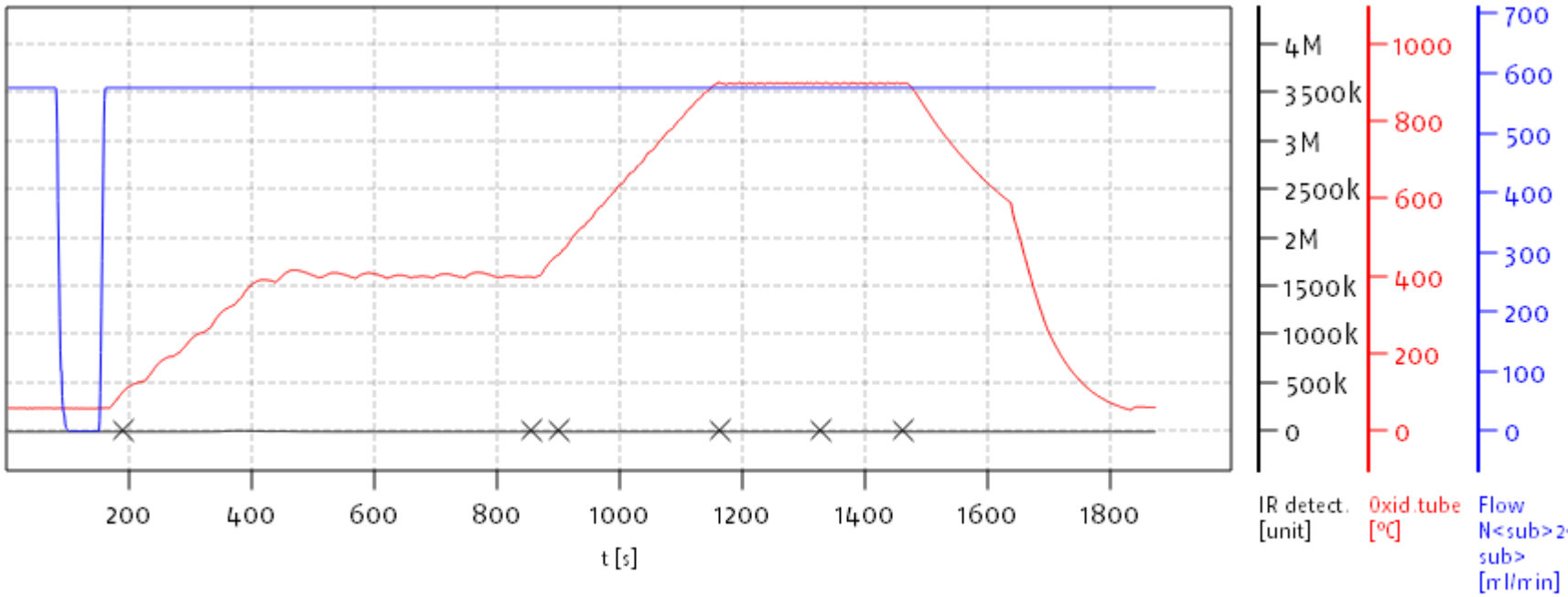
Analytical Resources, Incorporated
Analytical Chemists and Consultants

	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	72	SJH0006-ICB1	540.10		1.00	CARBON	8/2/2021 6:47 PM	0.021	0.006	0.026	bl,C3u,C2u	30 390	664	935	1.0439	1.0000



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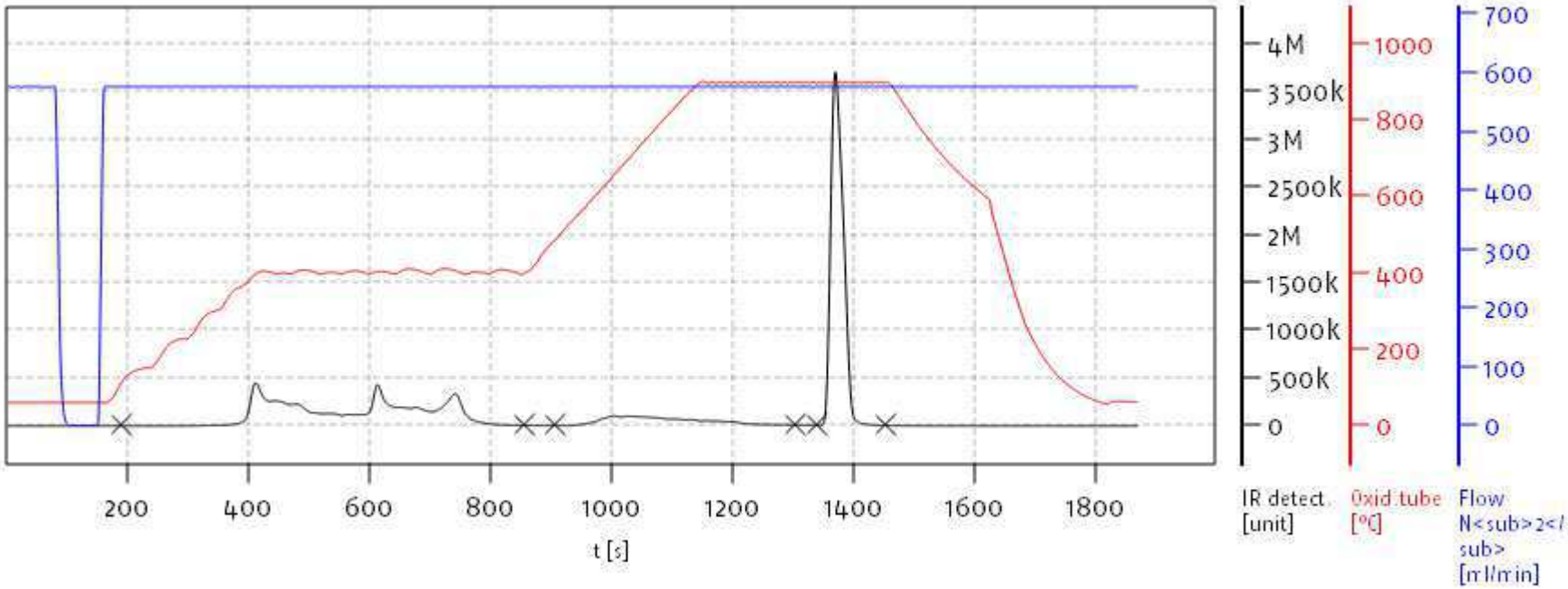
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
6	73	21G0178-13	526.30		1.00	CARBON	8/2/2021 7:19 PM	1.892	0.219	2.112	bl	2 935 470	730 281	3 364 550	1.0439	1.0000



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Soli TOC Cube, Carbon
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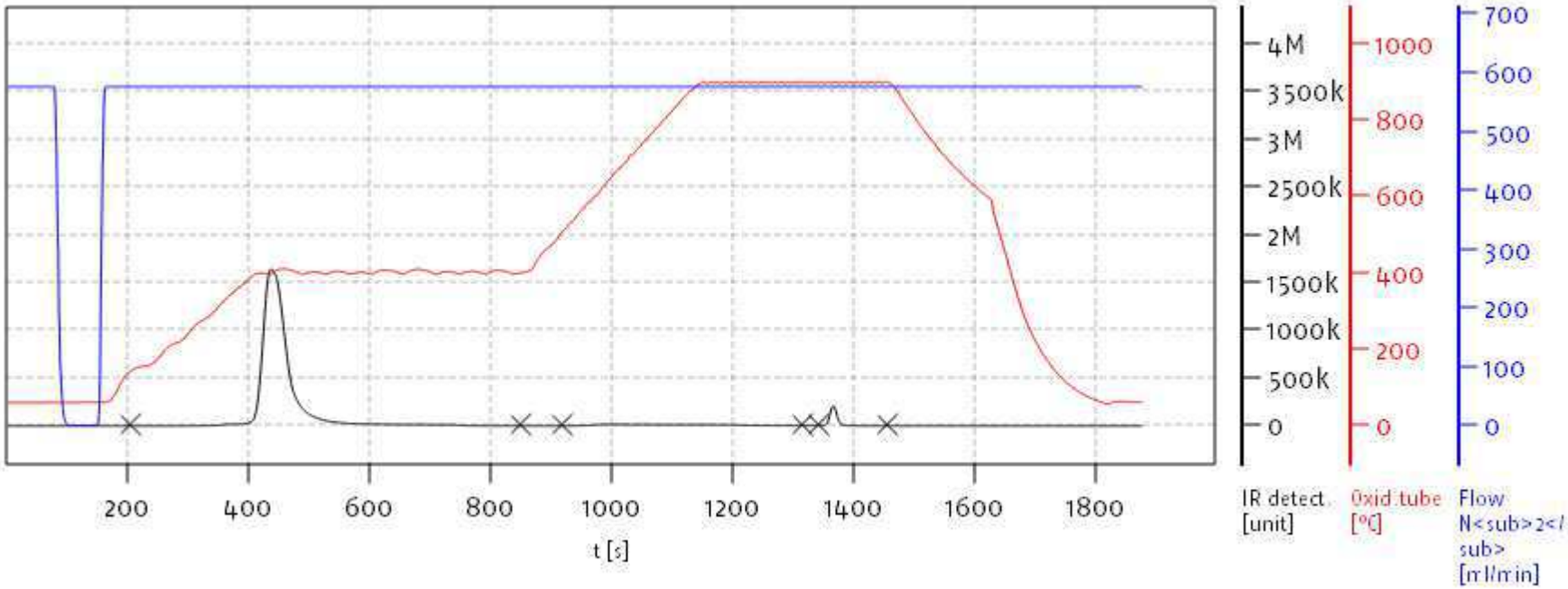
Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
7	74	21G0178-14	609.60		1.00	CARBON	8/2/2021 7:51 PM	0.810	0.039	0.848	bl	2 927 740	133 156	109 219	1.0439	1.0000



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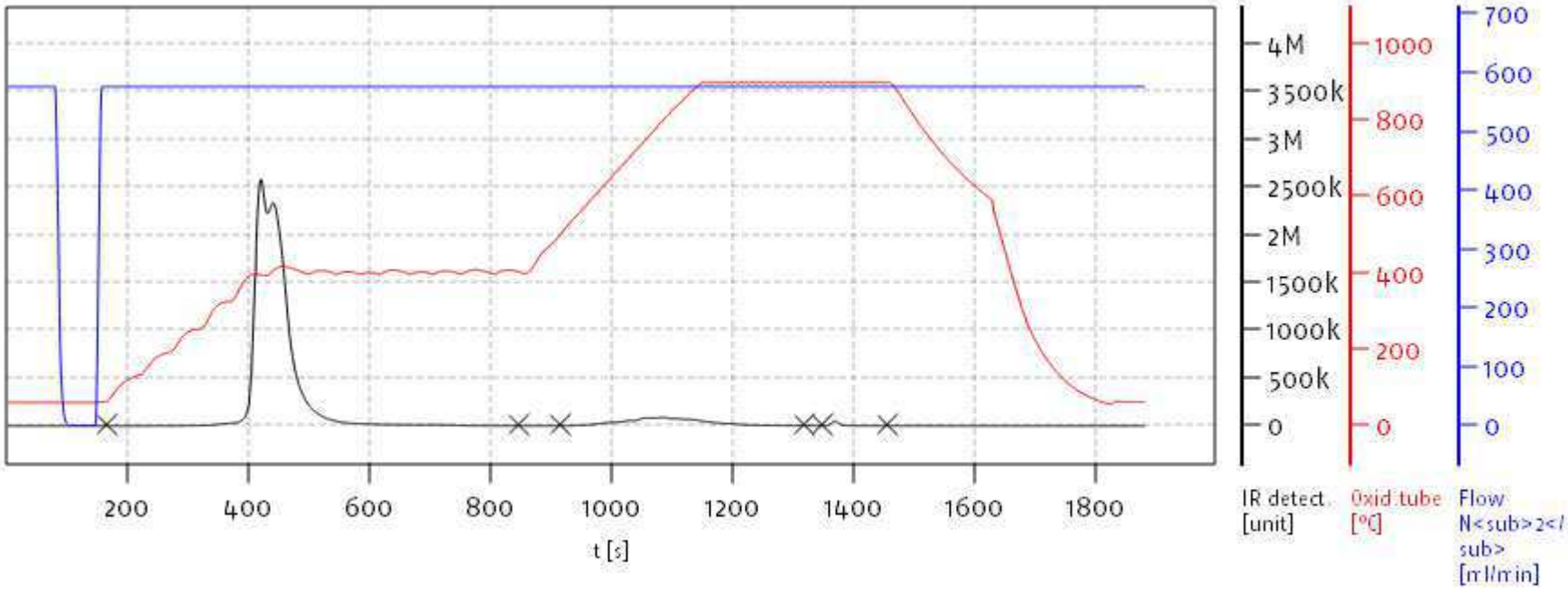
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
8	75	21G0178-15	589.90		1.00	CARBON	8/2/2021 8:22 PM	1.566	0.138	1.703	bl	5 677 030	508 251	32 335	1.0439	1.0000



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Balance: BAL3
Analyst: BF

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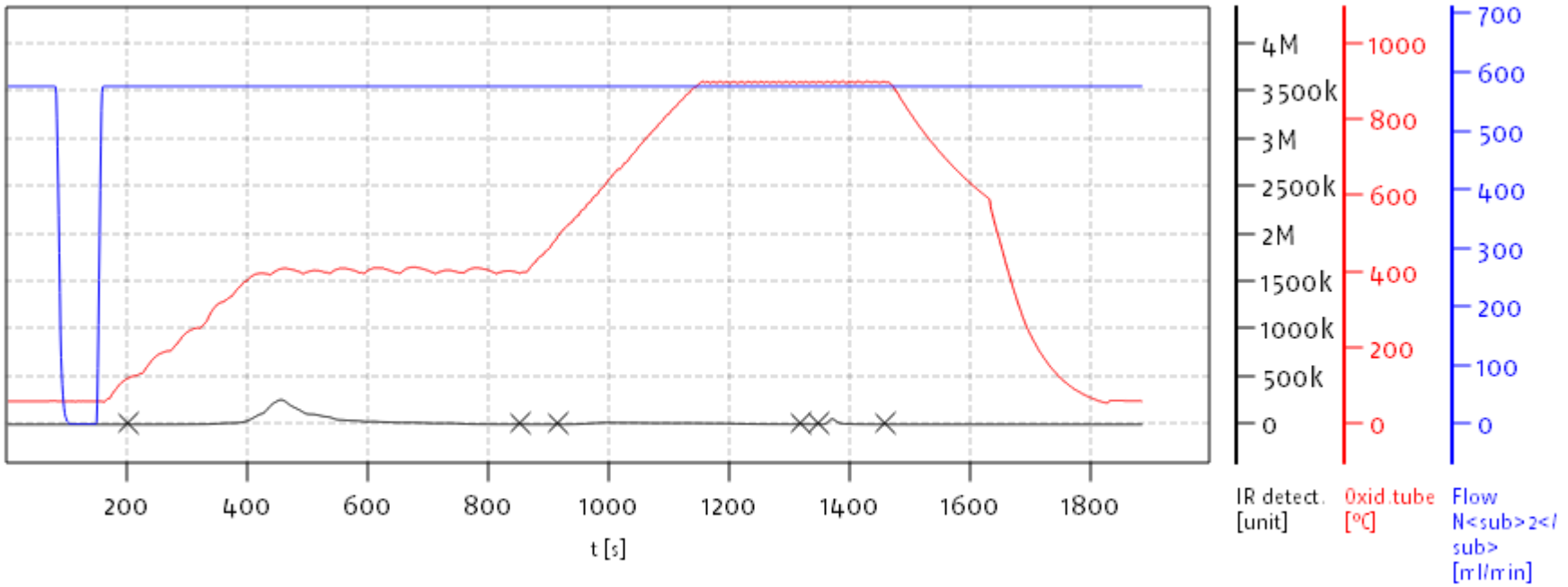
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
9	76	21G0199-01	572.10		1.00	CARBON	8/2/2021 8:54 PM	0.301	0.046	0.346	bl	993 156	150 028	40 246	1.0439	1.0000



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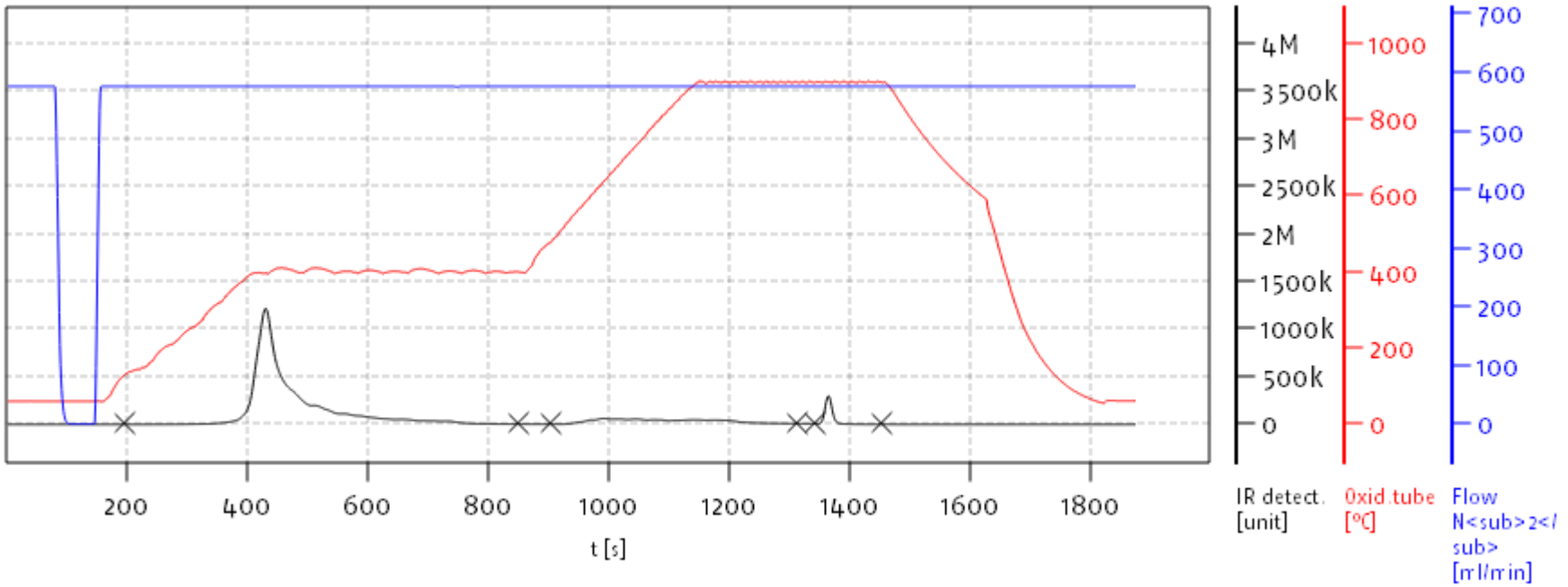
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
10	77	21G0199-02	621.80		1.00	CARBON	8/2/2021 9:26 PM	0.830	0.136	0.966	bl	3 017 390	529 160	161 763	1.0439	1.0000



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Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

Analytical Resources, Incorporated
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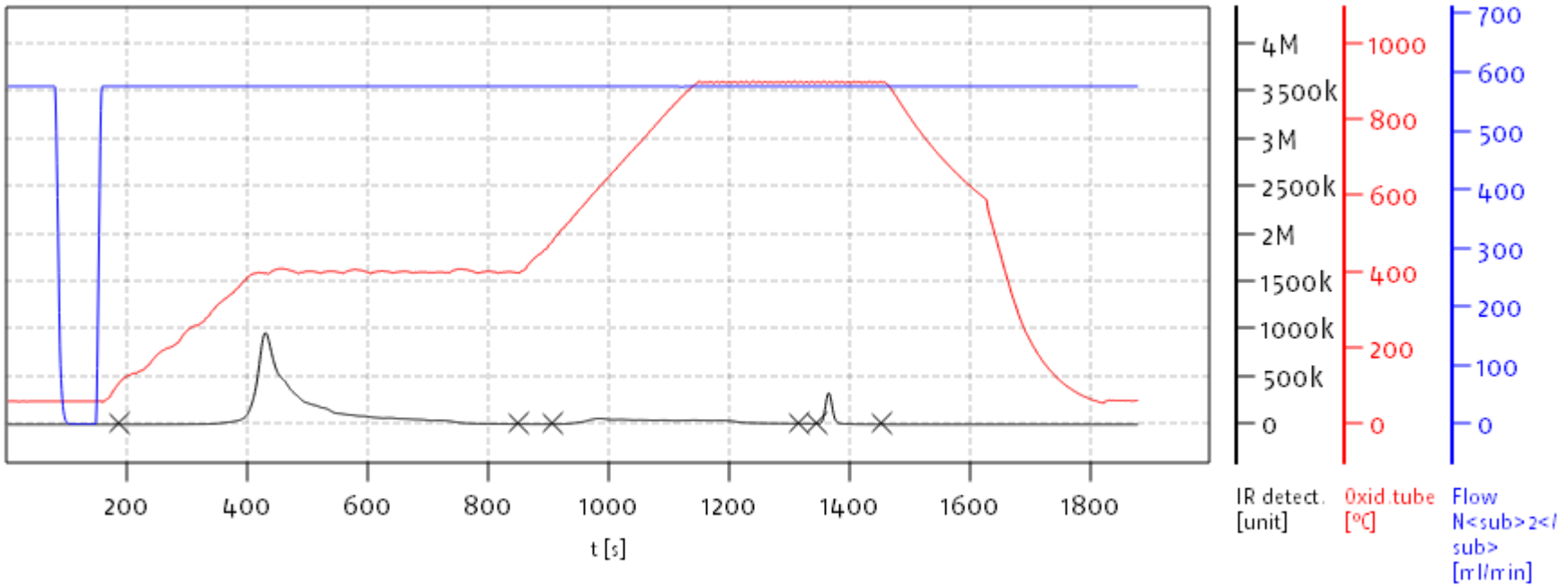
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
11	78	21G0199-03	552.70		1.00	CARBON	8/2/2021 9:58 PM	0.847	0.144	0.992	bl	2 707 480	498 992	174 949	1.0439	1.0000



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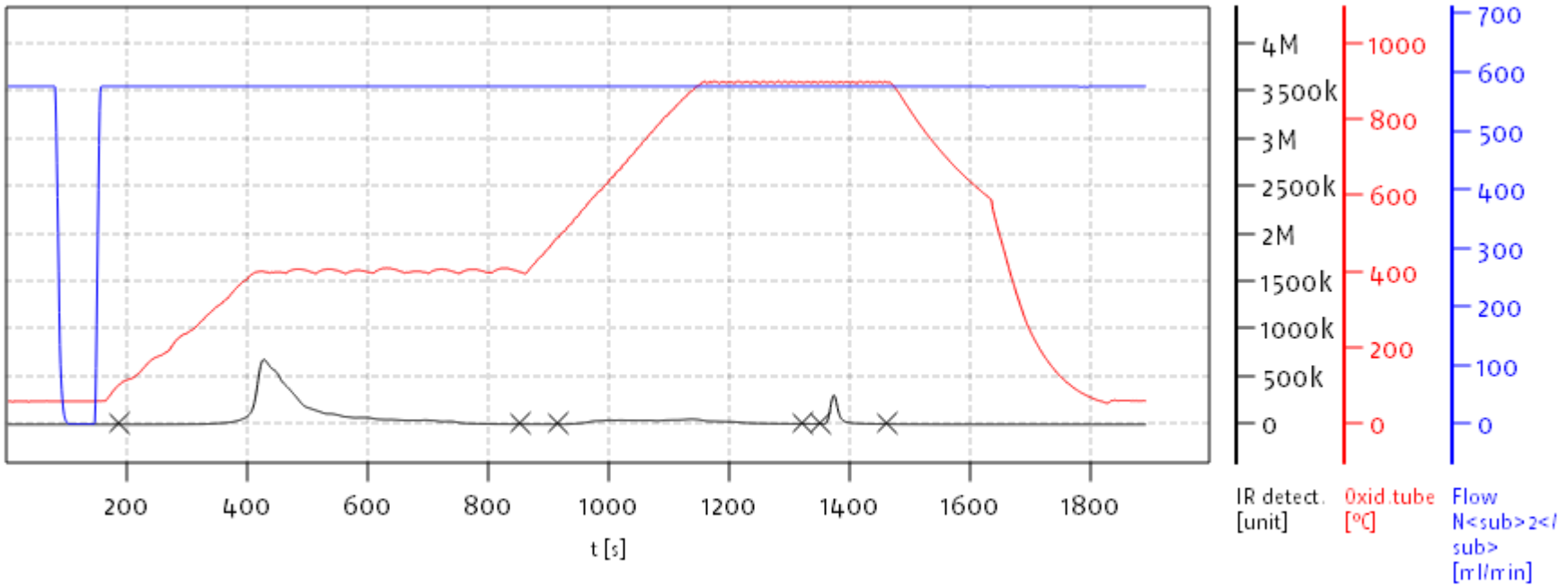
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
12	79	21G0199-04	554.20		1.00	CARBON	8/2/2021 10:30 PM	0.712	0.126	0.839	bl	2 230 720	435 963	195 890	1.0439	1.0000



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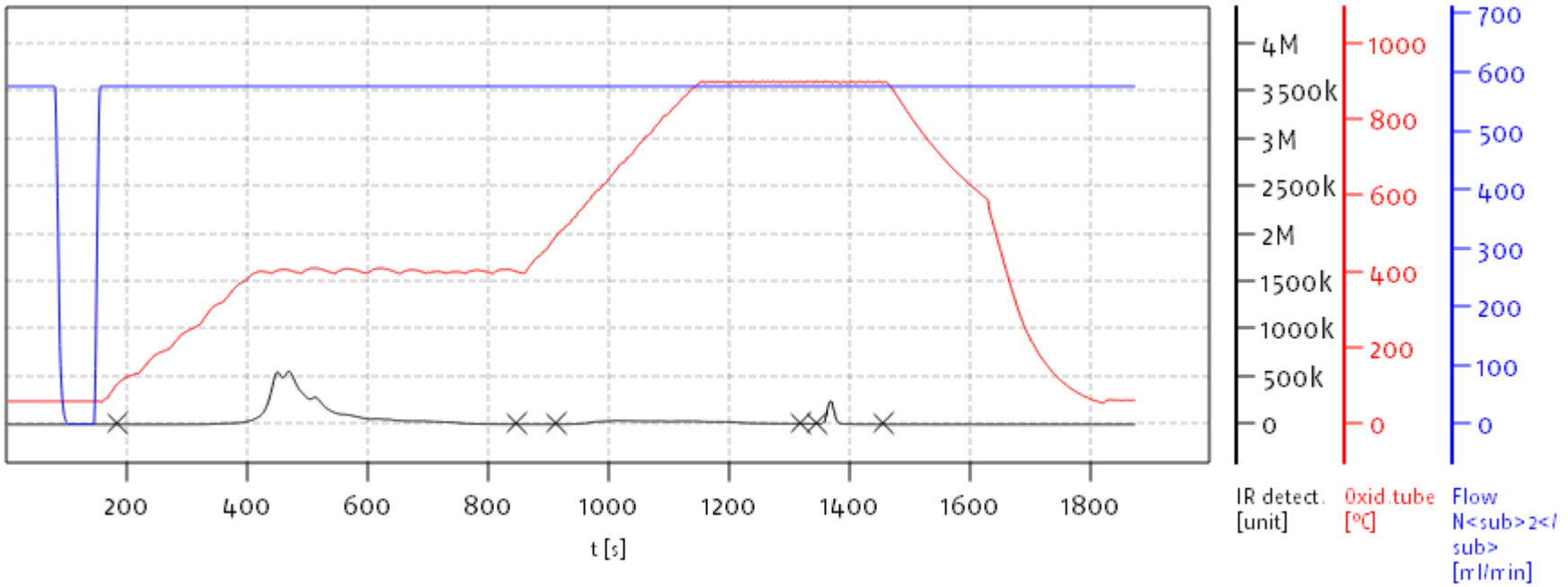
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
13	80	21G0199-05	694.10		1.00	CARBON	8/2/2021 11:01 PM	0.504	0.081	0.585	bl	2 015 030	345 192	130 736	1.0439	1.0000



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Balance: BAL3
Analyst: BF

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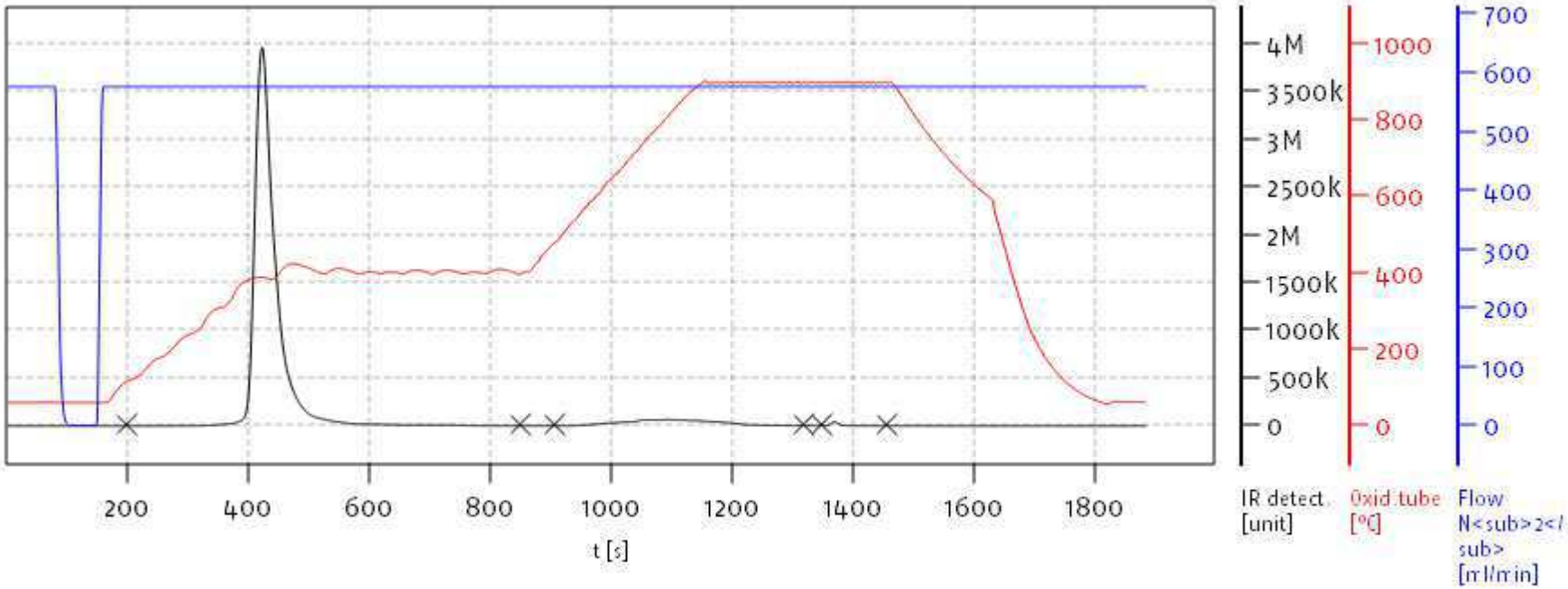
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
14	81	21G0199-06	654.00		1.00	CARBON	8/2/2021 11:33 PM	1.453	0.111	1.564	bl	5 848 350	453 831	26 692	1.0439	1.0000



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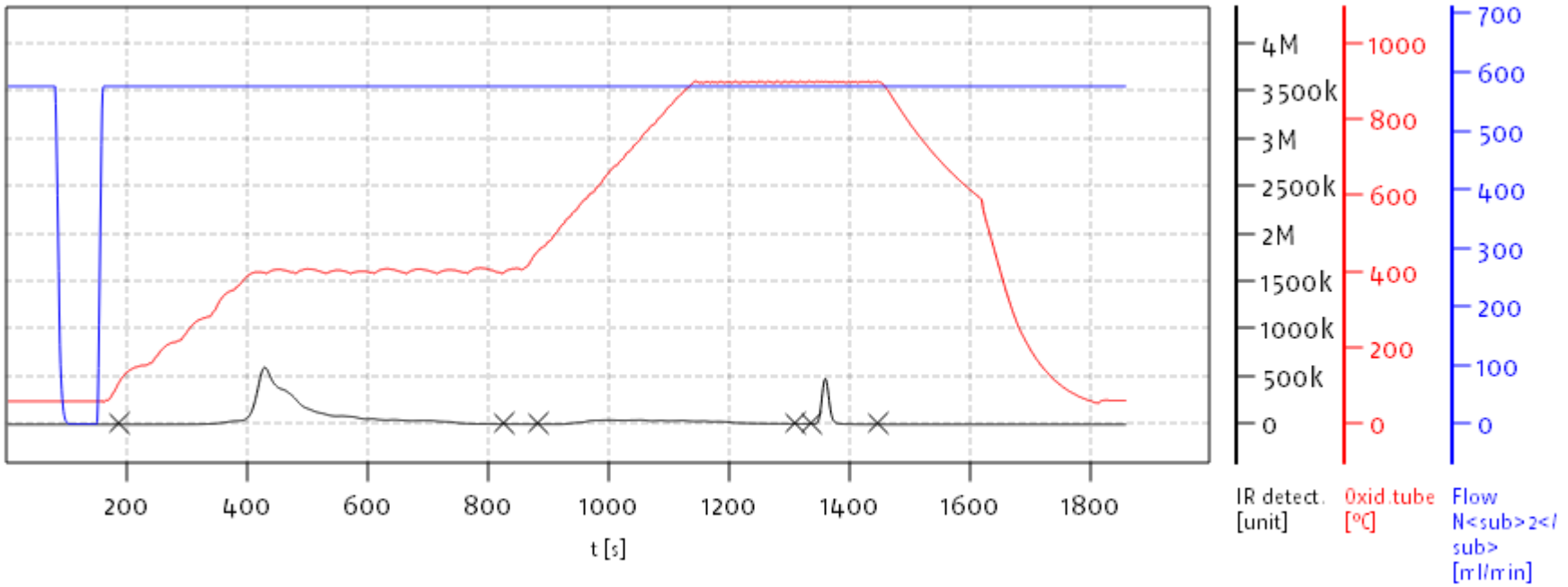
Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
15	82	21G0199-07	596.20		1.00	CARBON	8/3/2021 12:04 AM	0.601	0.111	0.712	bl	1 943 200	409 767	258 650	1.0439	1.0000



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Access: soliTOC superuser

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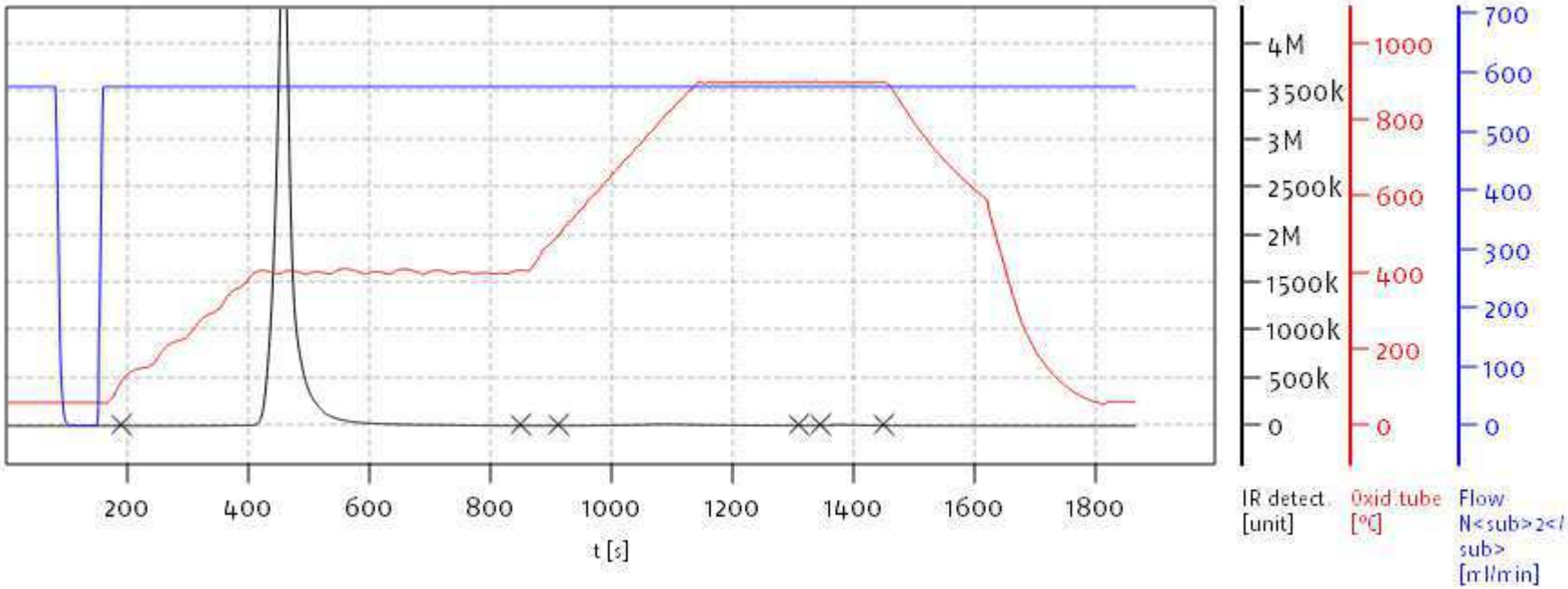
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
16	83	SJH0006-CCV1	22.00		1.00	CARBON	8/3/2021 12:36 AM	44.720	0.925	45.645	bl	6 057 520	112 902	26 227	1.0439	1.0000



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Analyst: BF

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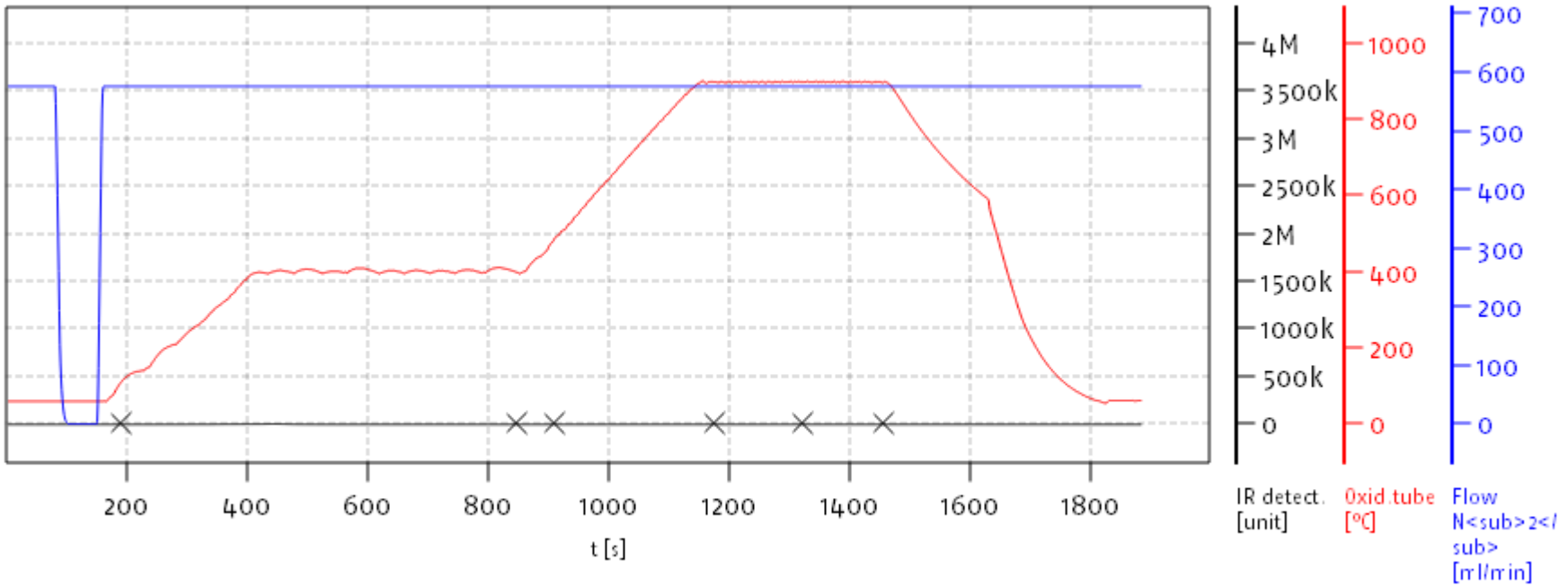
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
17	84	SJH0006-CCB1	510.60		1.00	CARBON	8/3/2021 1:08 AM	0.019	0.006	0.025	bl,C3u,C2u	20 722	1 373	769	1.0439	1.0000



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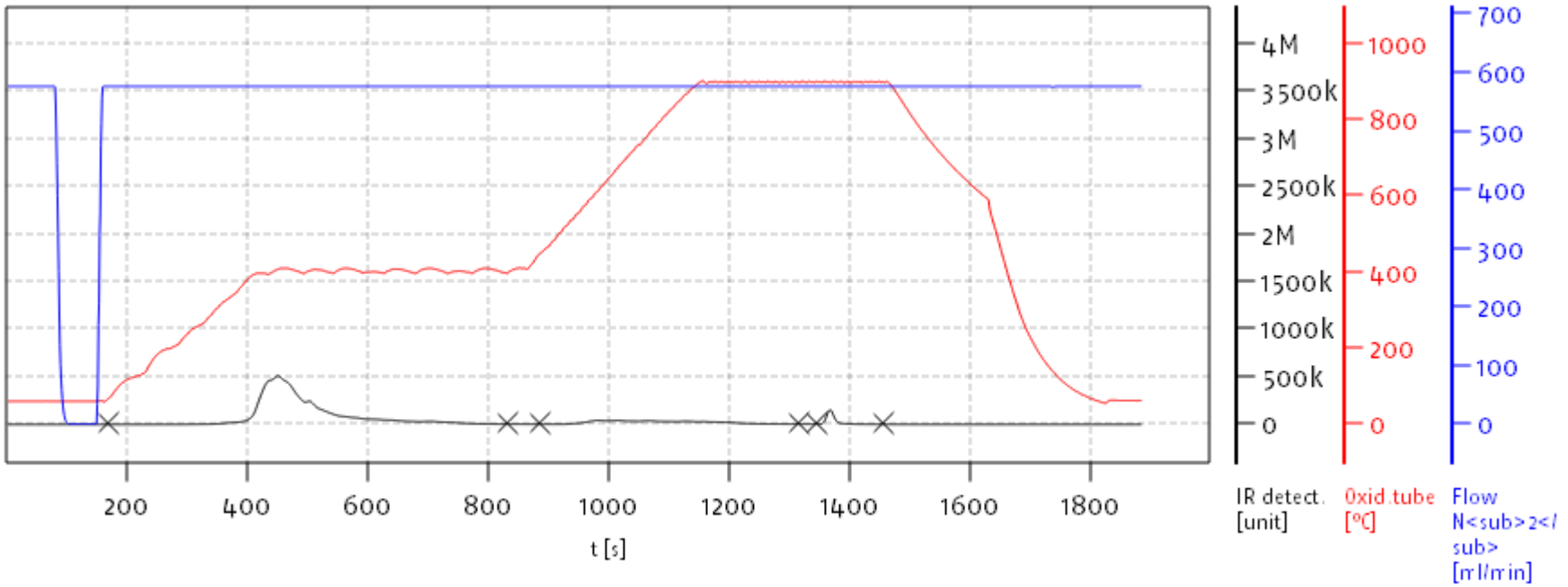
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
18	85	21G0199-08	543.30		1.00	CARBON	8/3/2021 1:39 AM	0.621	0.103	0.724	bl	1 970 360	345 151	94 089	1.0439	1.0000



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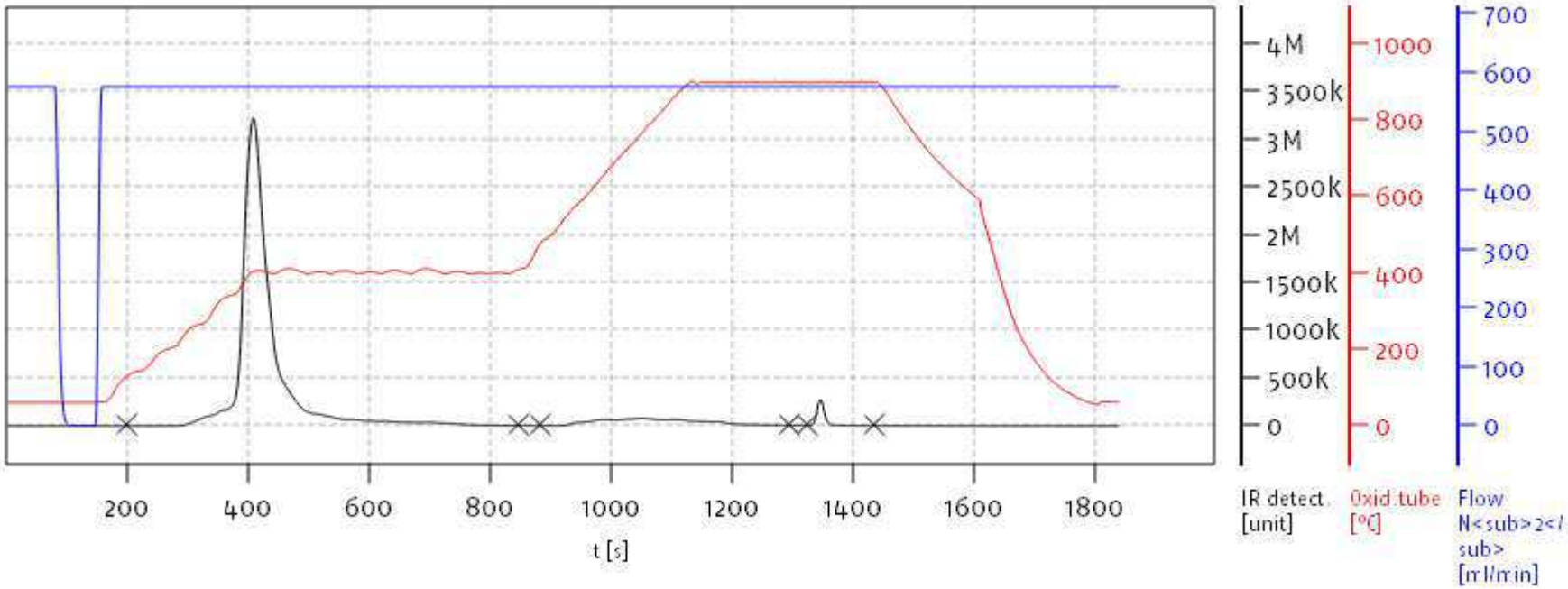
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
19	86	21G0199-09	537.00		1.00	CARBON	8/3/2021 2:10 AM	1.944	0.182	2.127	bl	6 306 470	616 172	158 181	1.0439	1.0000



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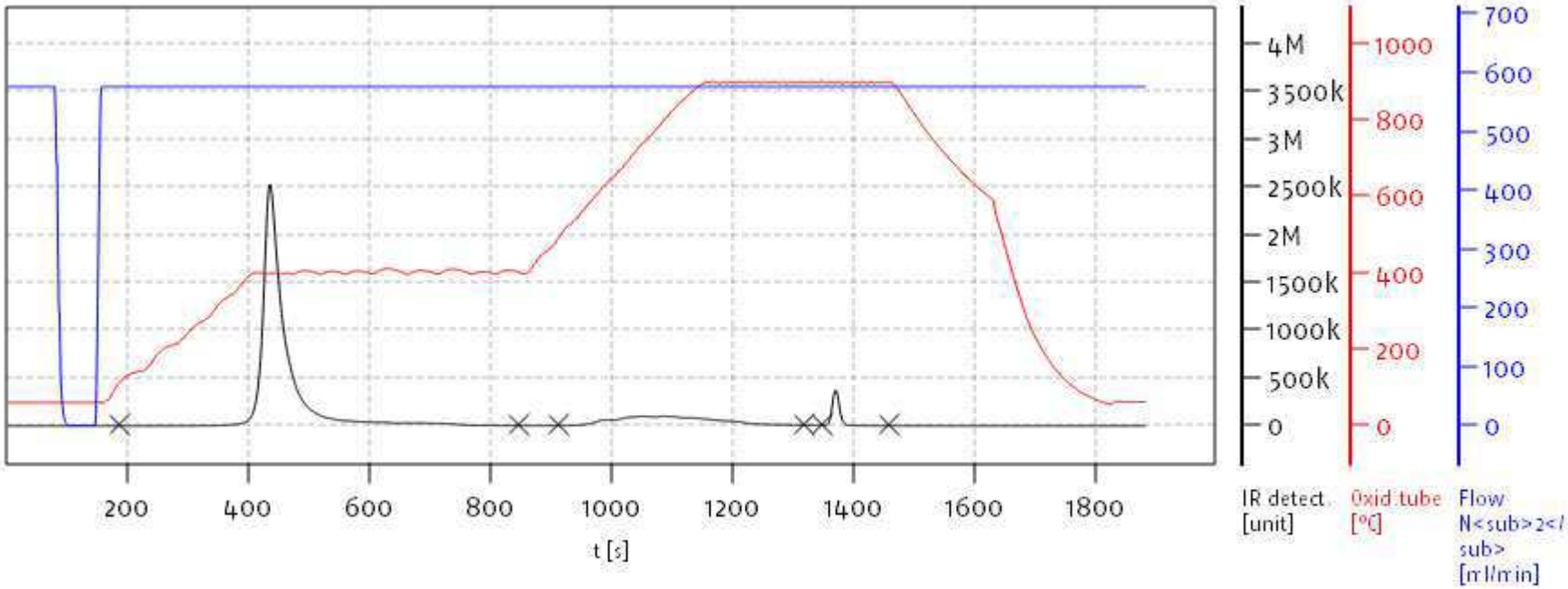
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
20	87	21G0199-10	594.50		1.00	CARBON	8/3/2021 2:42 AM	1.124	0.207	1.331	bl	3 926 630	778 093	201 773	1.0439	1.0000



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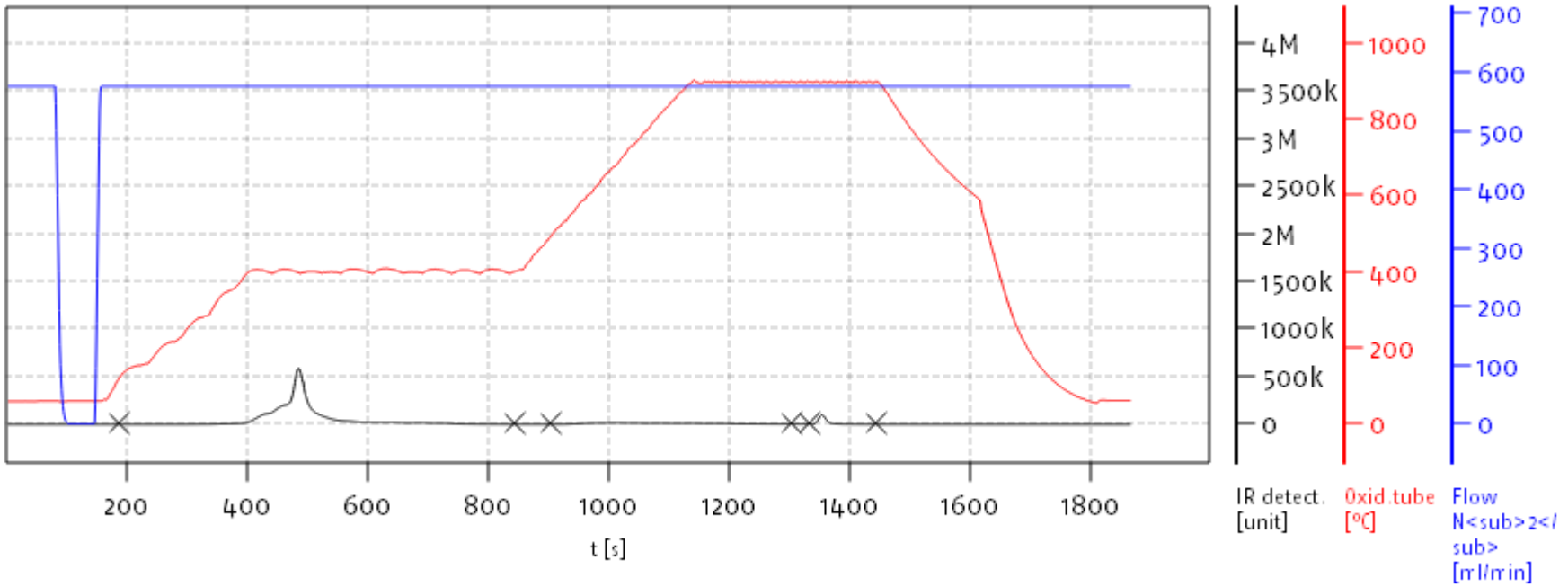
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
21	88	21G0199-11	519.90		1.00	CARBON	8/3/2021 3:14 AM	0.388	0.051	0.439	bl	1 156 260	152 747	62 401	1.0439	1.0000



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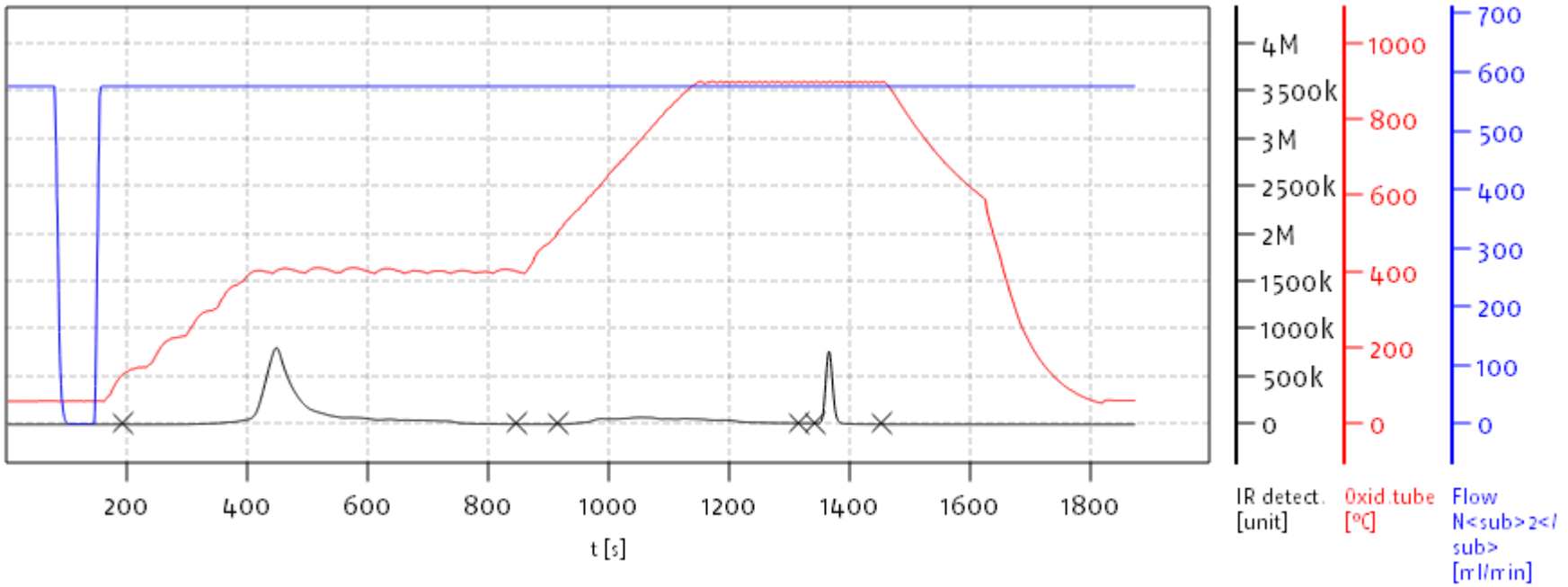
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
22	89	21G0199-12	538.40		1.00	CARBON	8/3/2021 3:45 AM	0.776	0.180	0.956	bl	2 174 010	609 766	404 586	1.0439	1.0000



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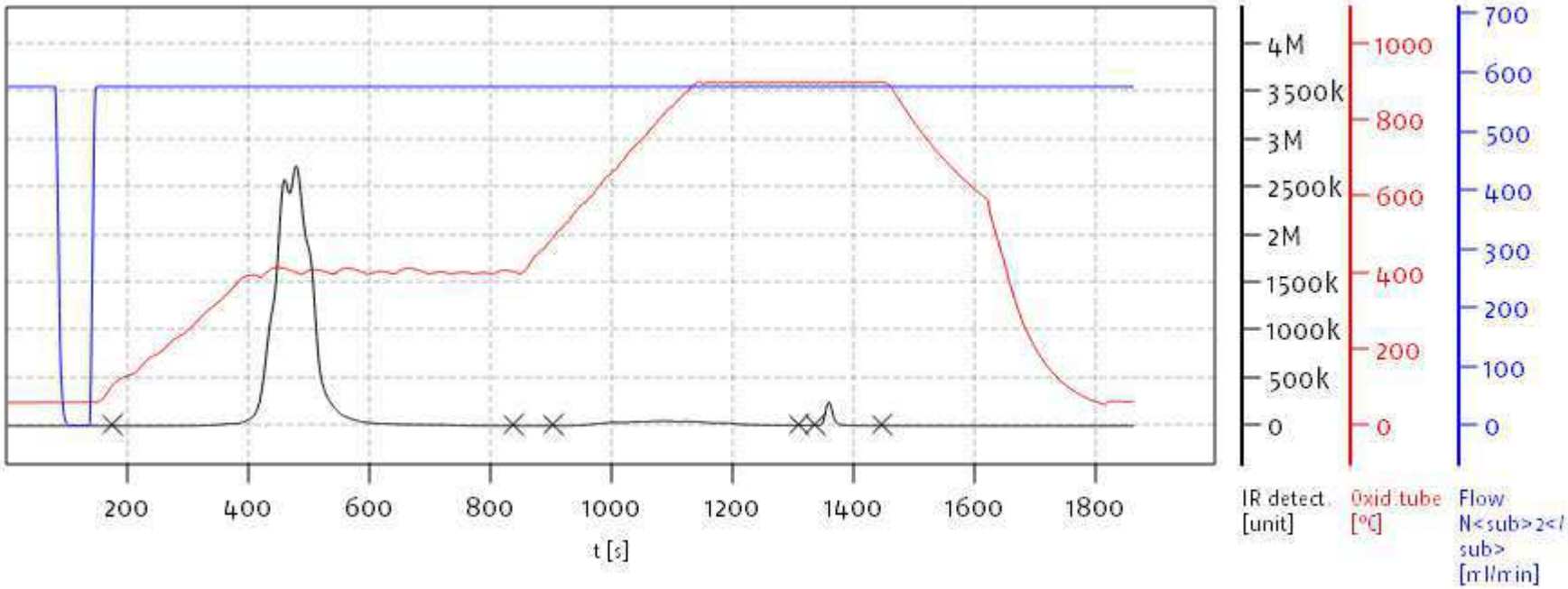
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
23	1	21G0199-13	624.20		1.00	CARBON	8/3/2021 4:17 AM	1.900	0.099	1.999	bl	7 205 860	383 477	139 798	1.0439	1.0000



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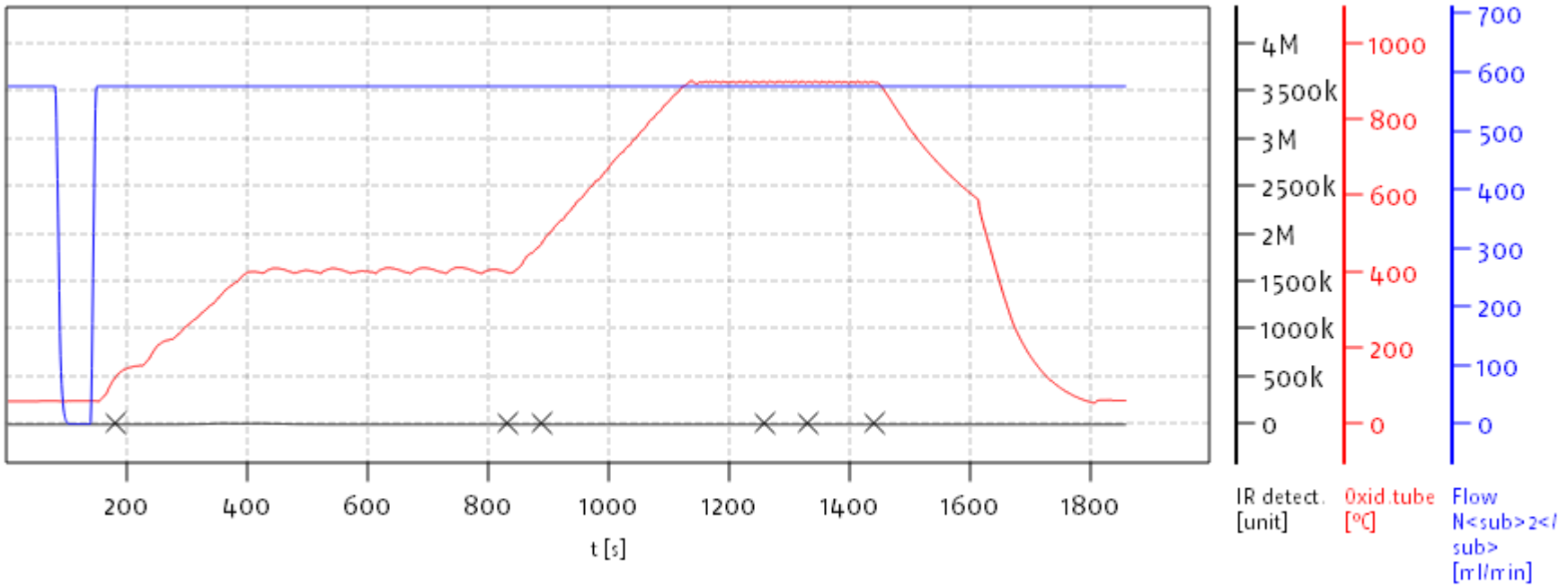
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
24	2	BJG0719-MRL1	508.40		1.00	CARBON	8/3/2021 4:48 AM	0.029	0.007	0.035	bl,C3u,C2u	52 332	2 278	312	1.0439	1.0000



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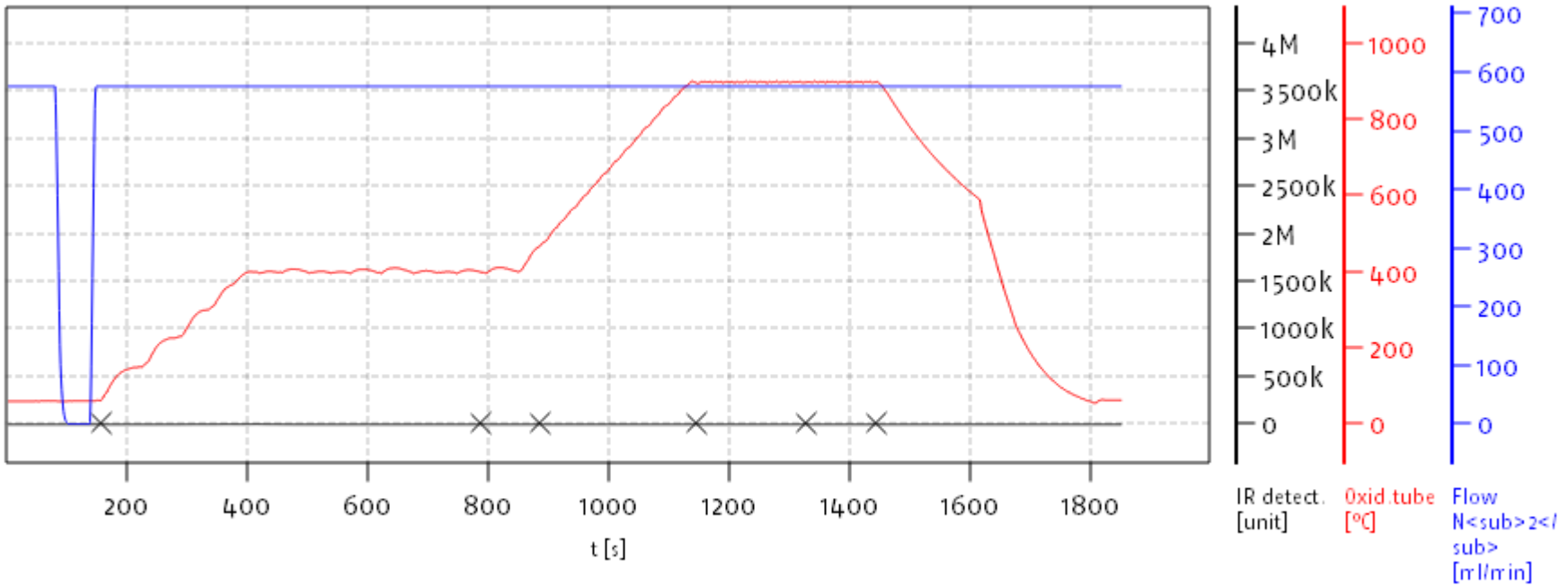
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
25	3	BJG0719-BLK1	595.60		1.00	CARBON	8/3/2021 5:19 AM	0.014	0.005	0.019	bl,C3u,C2u	13 179	1 637	323	1.0439	1.0000



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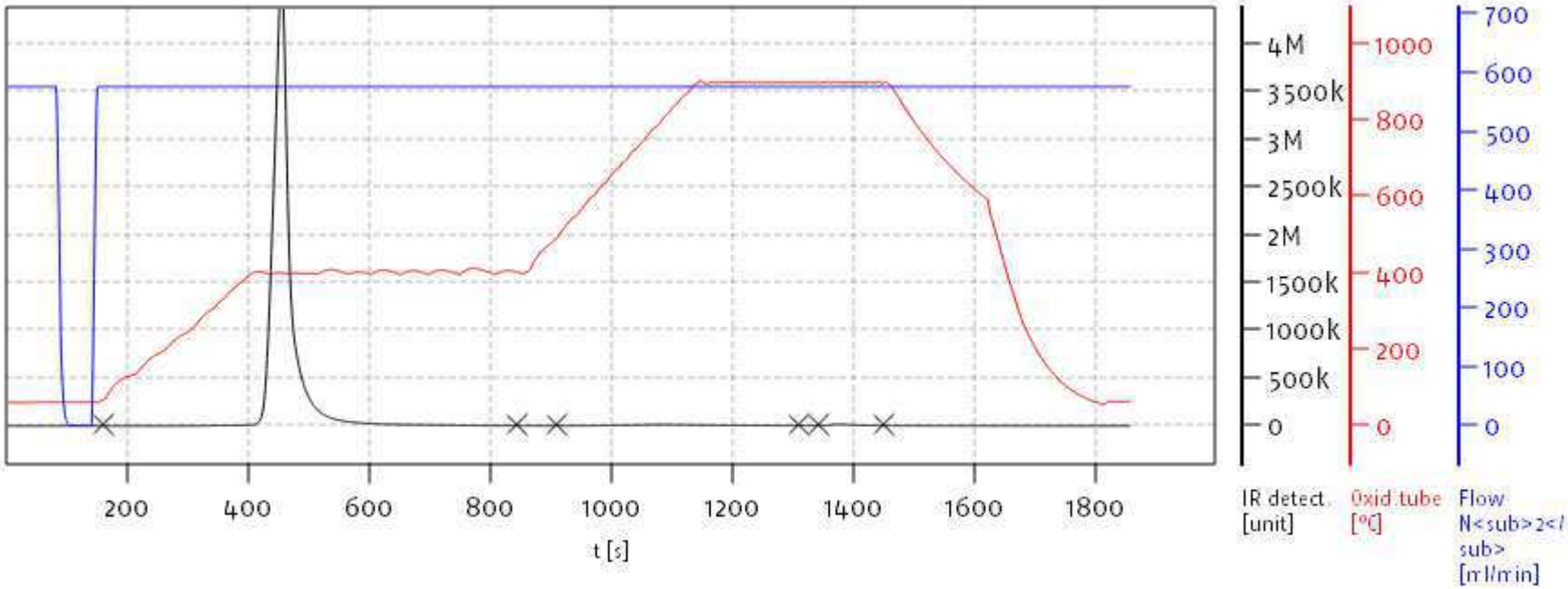
Analytical Chemists and Consultants

	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	4	BJG0719-BS1	20.30		1.00	CARBON	8/3/2021 5:51 AM	44.376	0.893	45.269	bl	5 536 400	98 462	31 165	1.0439	1.0000



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Analytical Resources, Incorporated
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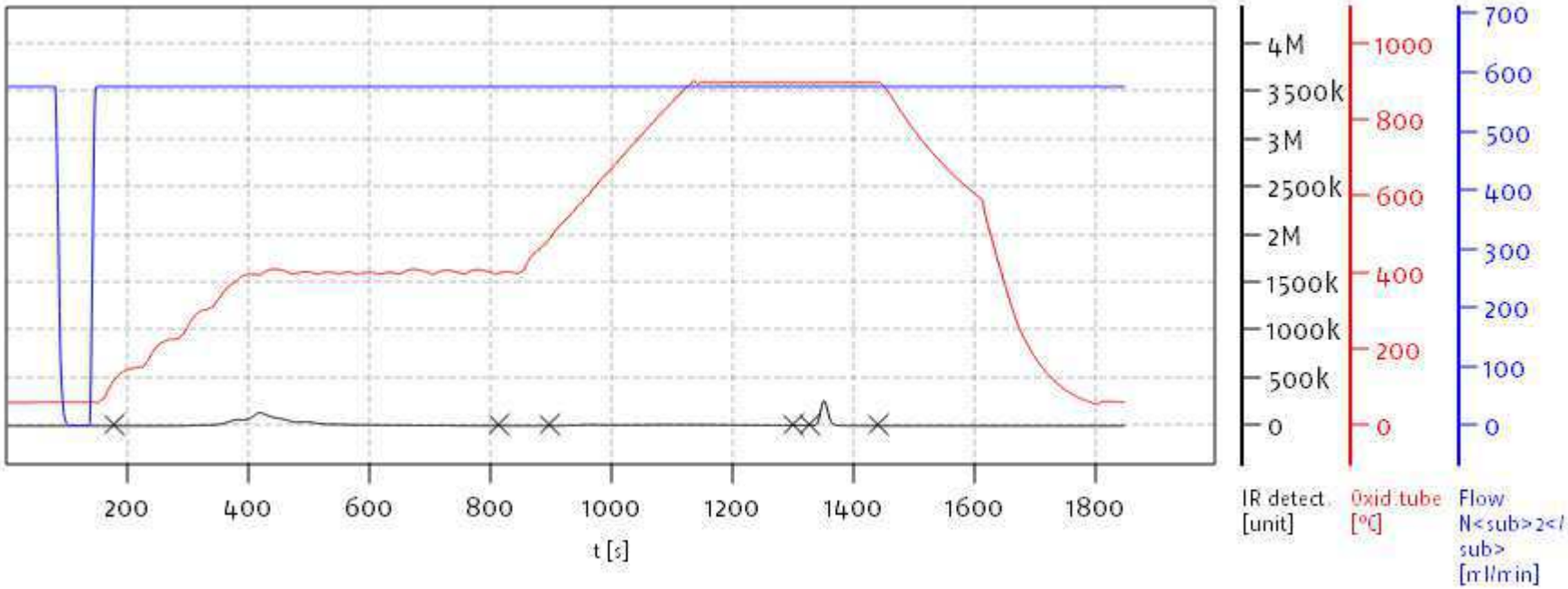
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
27	5	BJG0719-SRM1	38.60		1.00	CARBON	8/3/2021 6:22 AM	2.820	0.582	3.402	bl	499 291	126 524	146 163	1.0439	1.0000



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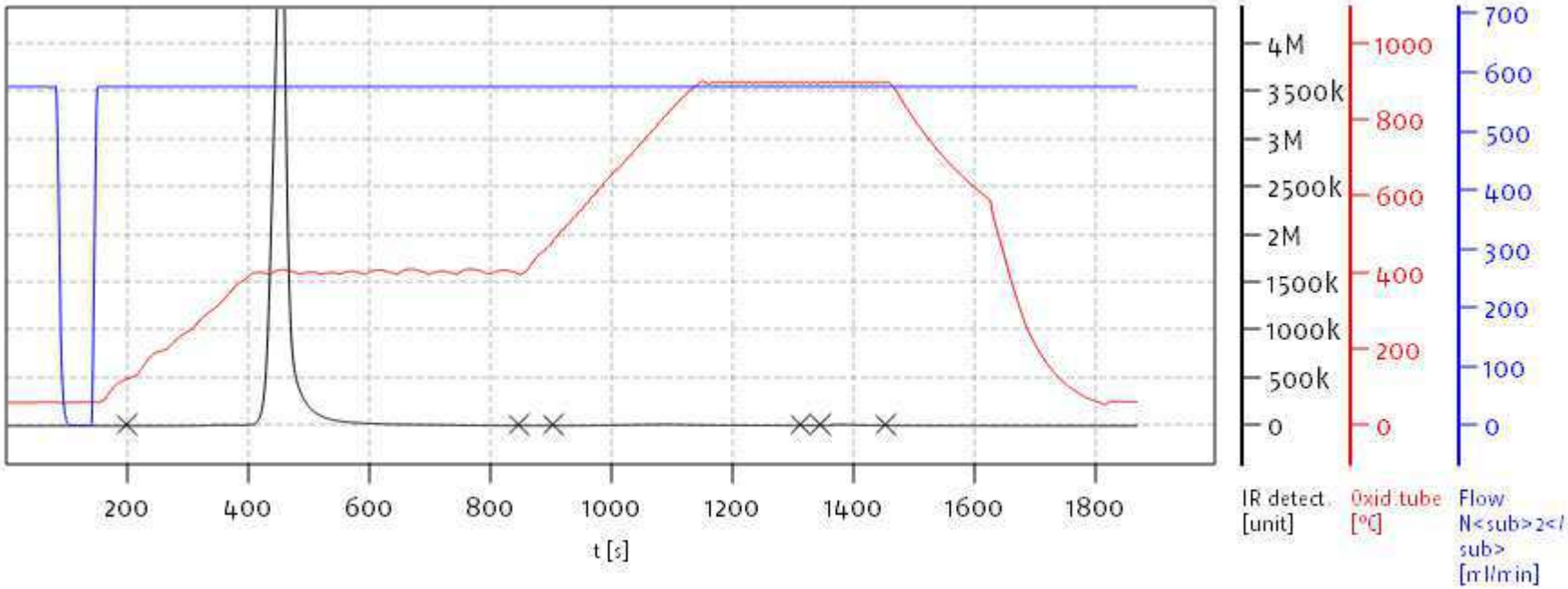
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
28	6	SJH0006-CCV2	21.40		1.00	CARBON	8/3/2021 6:54 AM	44.794	0.908	45.702	bl	5 897 330	106 856	29 554	1.0439	1.0000



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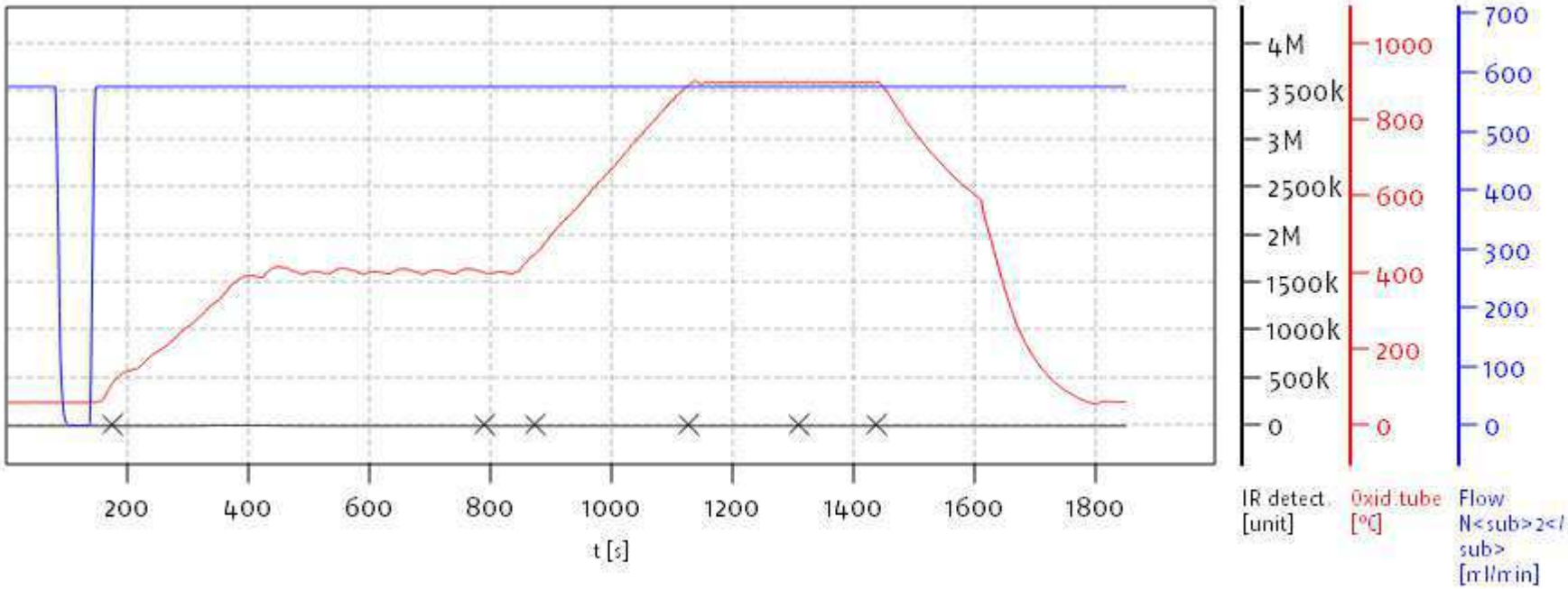
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
29	7	SJH0006-CCB2	507.90		1.00	CARBON	8/3/2021 7:25 AM	0.021	0.006	0.027	bl,C3u,C2u	27 374	1 137	742	1.0439	1.0000



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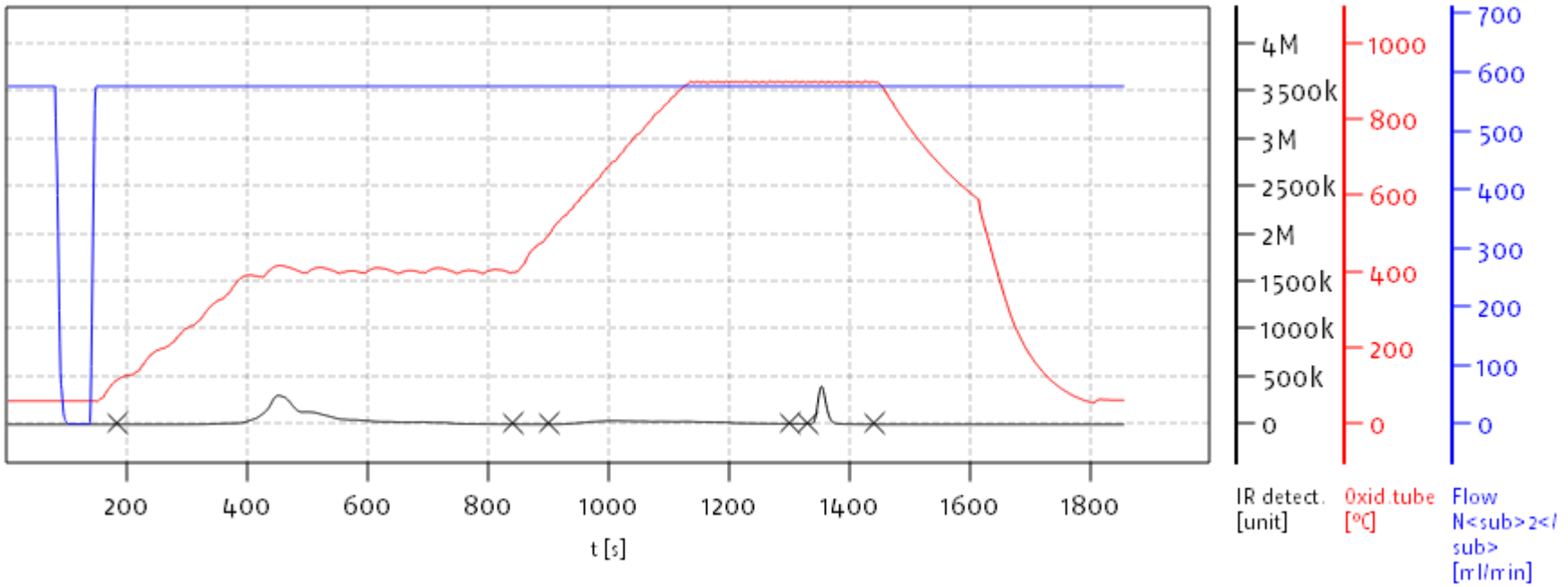
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
30	8	21G0199-14	538.40		1.00	CARBON	8/3/2021 7:56 AM	0.409	0.097	0.506	bl	1 094 620	320 889	247 343	1.0439	1.0000



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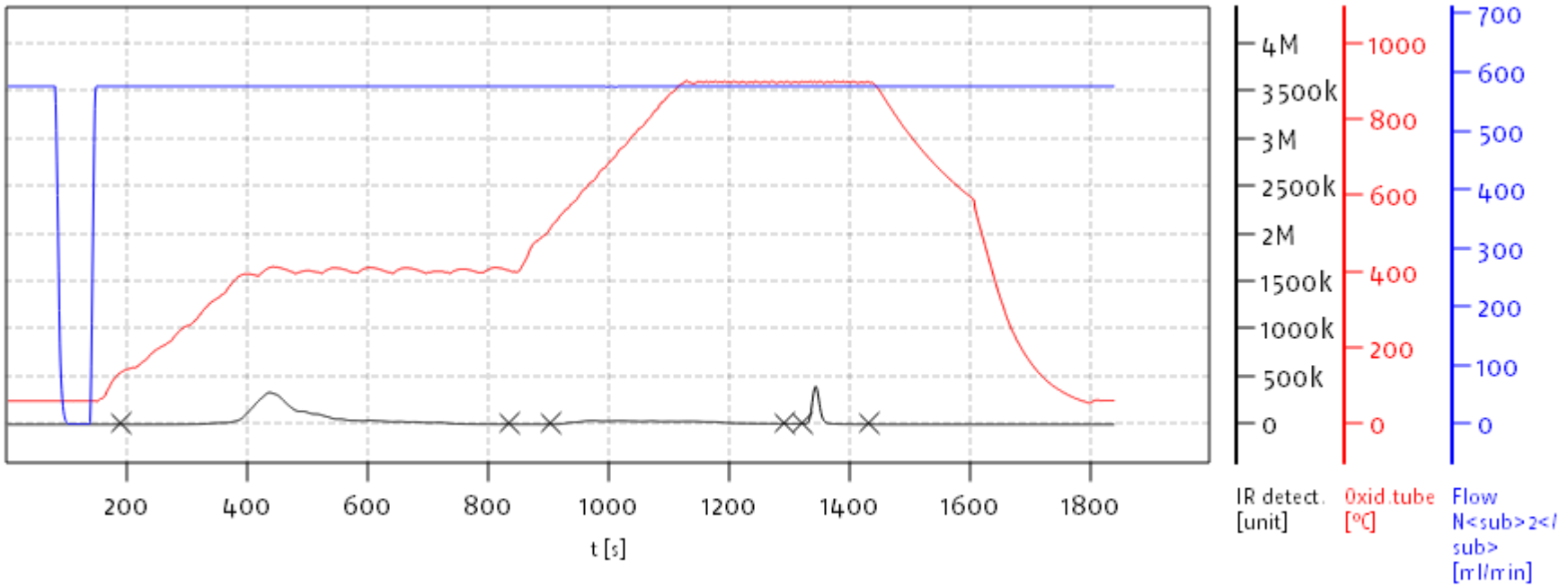
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
31	9	BJG0719-DUP1	552.60		1.00	CARBON	8/3/2021 8:27 AM	0.461	0.103	0.563	bl	1 333 190	348 774	222 862	1.0439	1.0000



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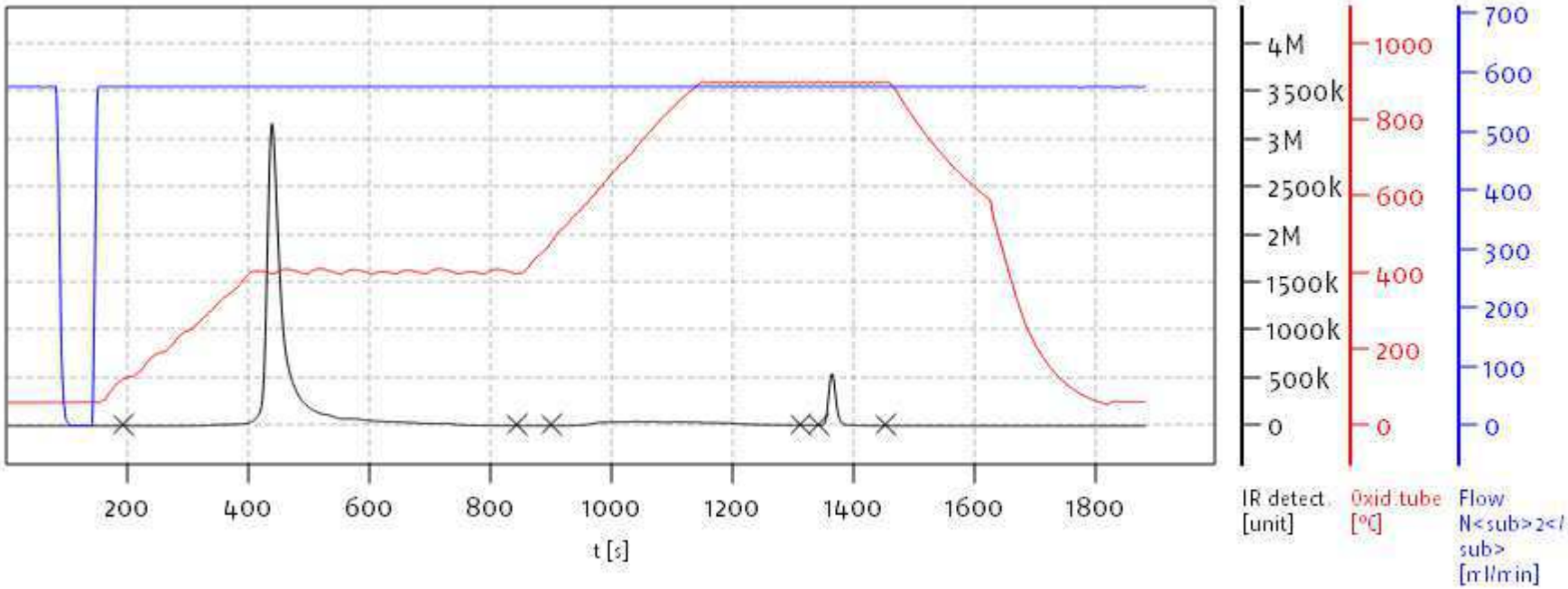
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
32	10	BJG0719-MS1	568.80	0.0096	1.00	CARBON	8/3/2021 8:59 AM	1.187	0.112	1.299	bl	3 878 310	395 333	297 414	1.0439	1.0000



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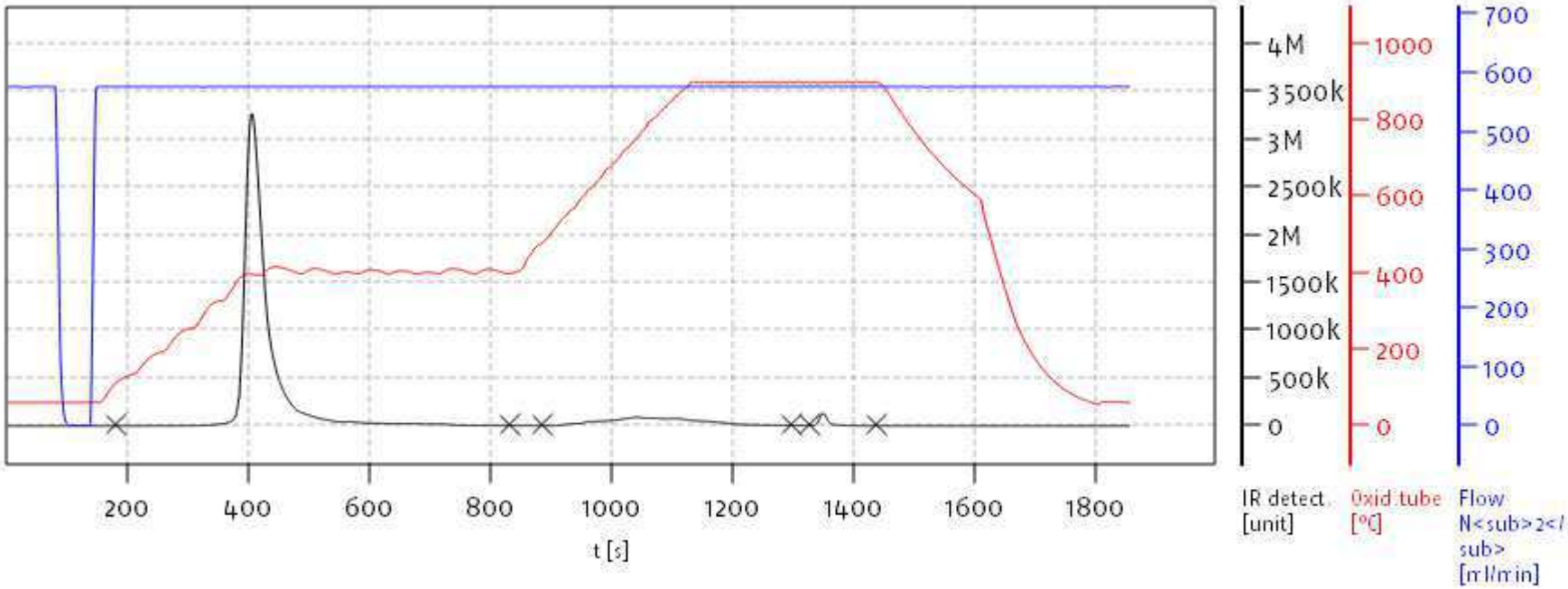
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
33	11	21G0211-01	510.70		1.00	CARBON	8/3/2021 9:30 AM	1.647	0.194	1.841	bl	5 112 800	625 763	85 591	1.0439	1.0000



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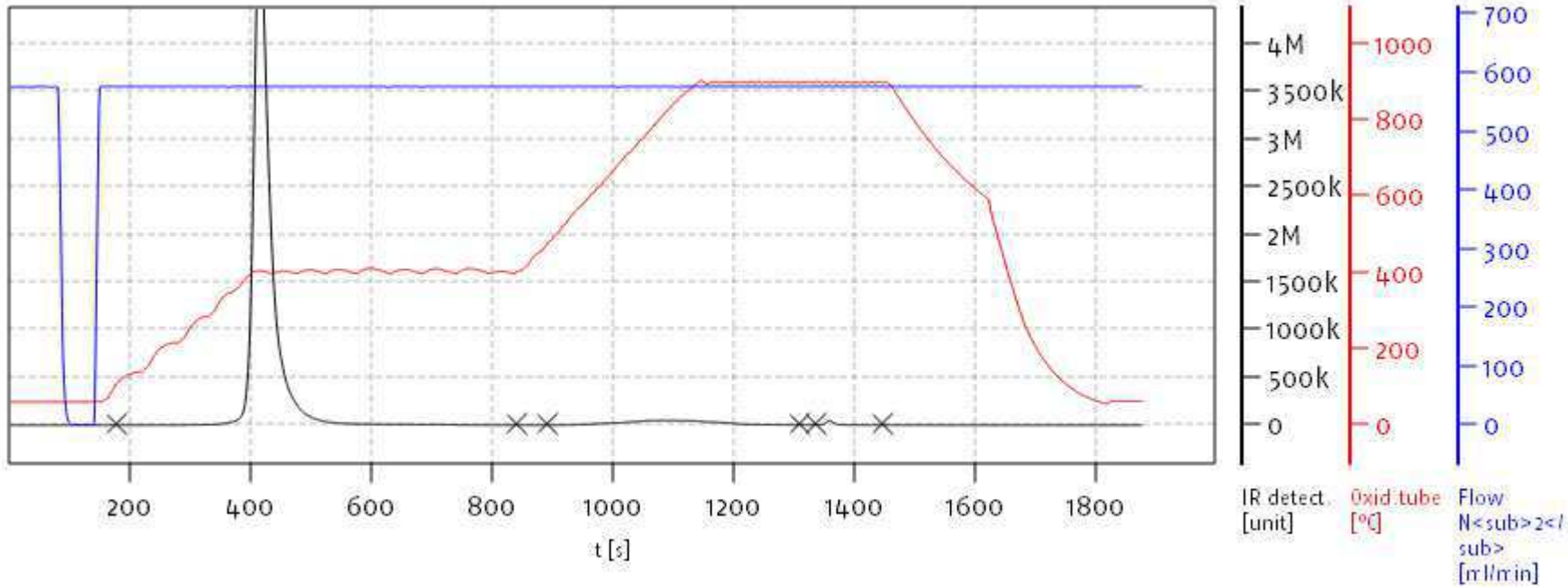
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
34	12	21G0211-02	573.90		1.00	CARBON	8/3/2021 10:02 AM	1.806	0.097	1.903	bl	6 379 900	341 744	31 754	1.0439	1.0000



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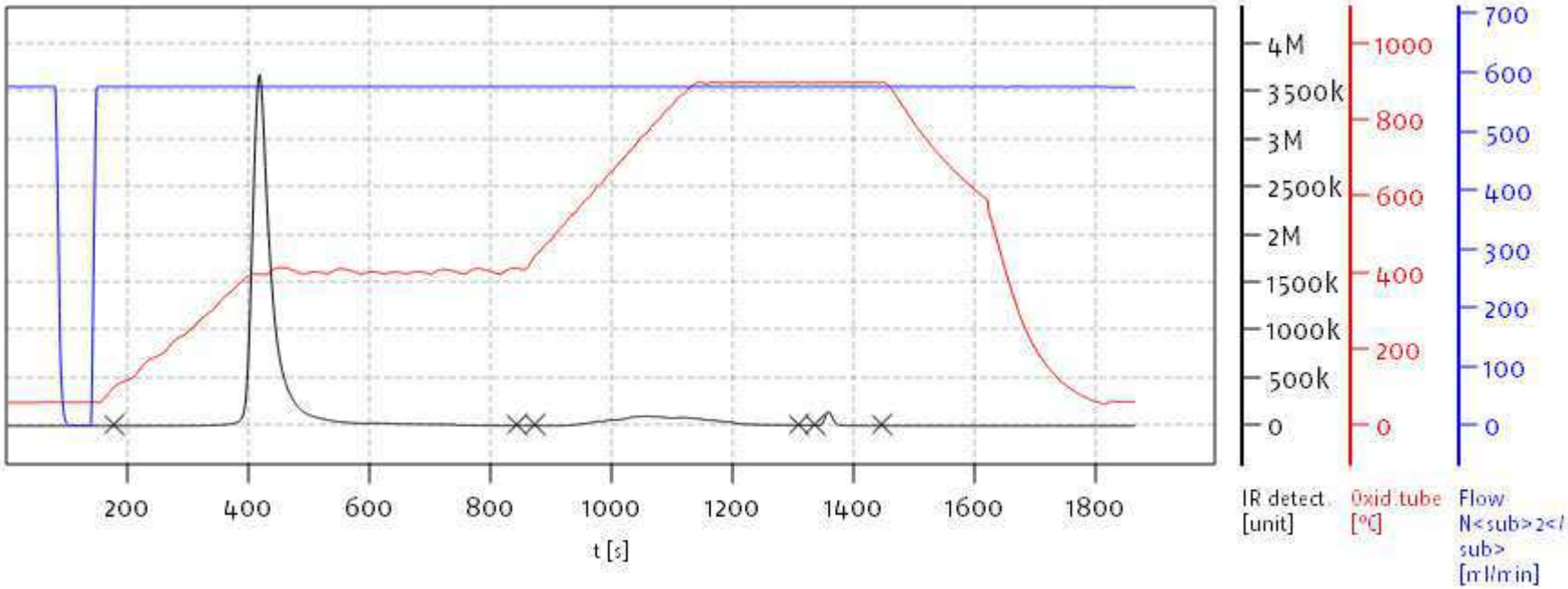
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
35	13	21G0211-03	568.50		1.00	CARBON	8/3/2021 10:34 AM	1.511	0.200	1.711	bl	5 221 280	719 247	87 457	1.0439	1.0000



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Access: soliTOC superuser

Date: Sat Aug 7 21:02:20 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

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Analyst: BF

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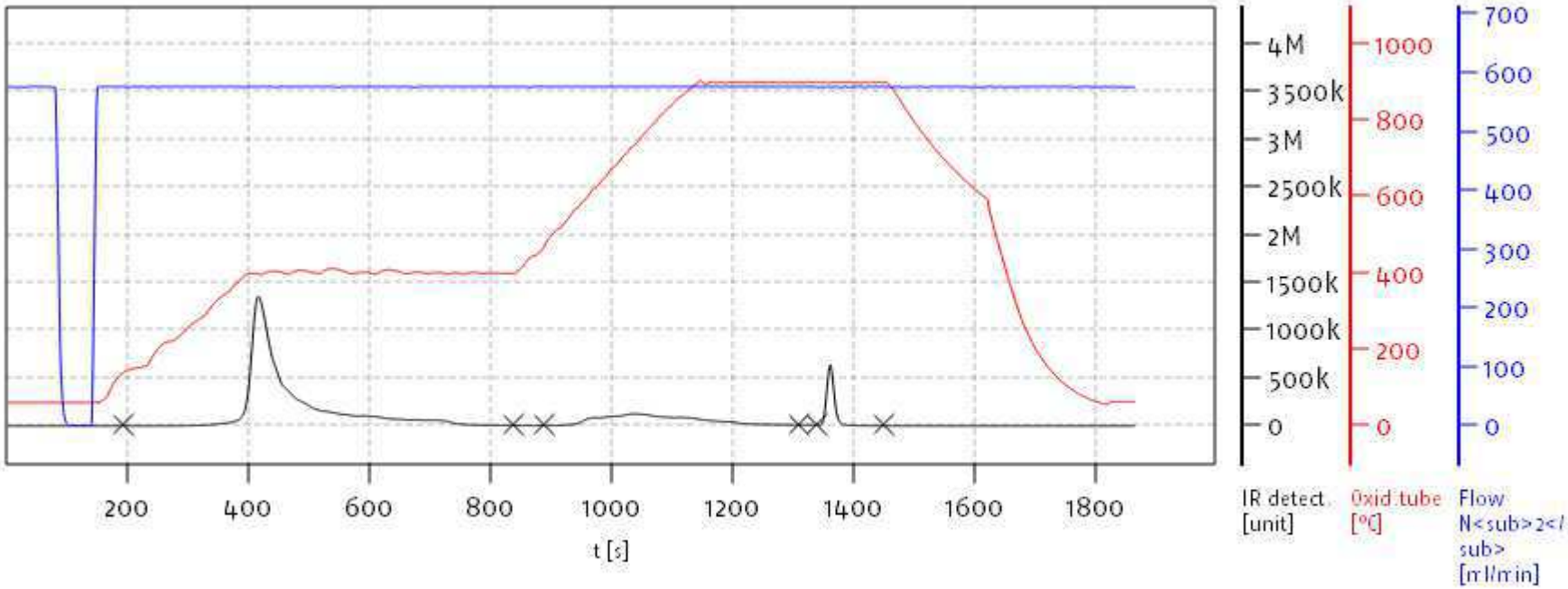
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
36	14	21G0212-01	602.30		1.00	CARBON	8/3/2021 11:05 AM	1.010	0.235	1.245	bl	3 406 510	900 220	353 841	1.0439	1.0000



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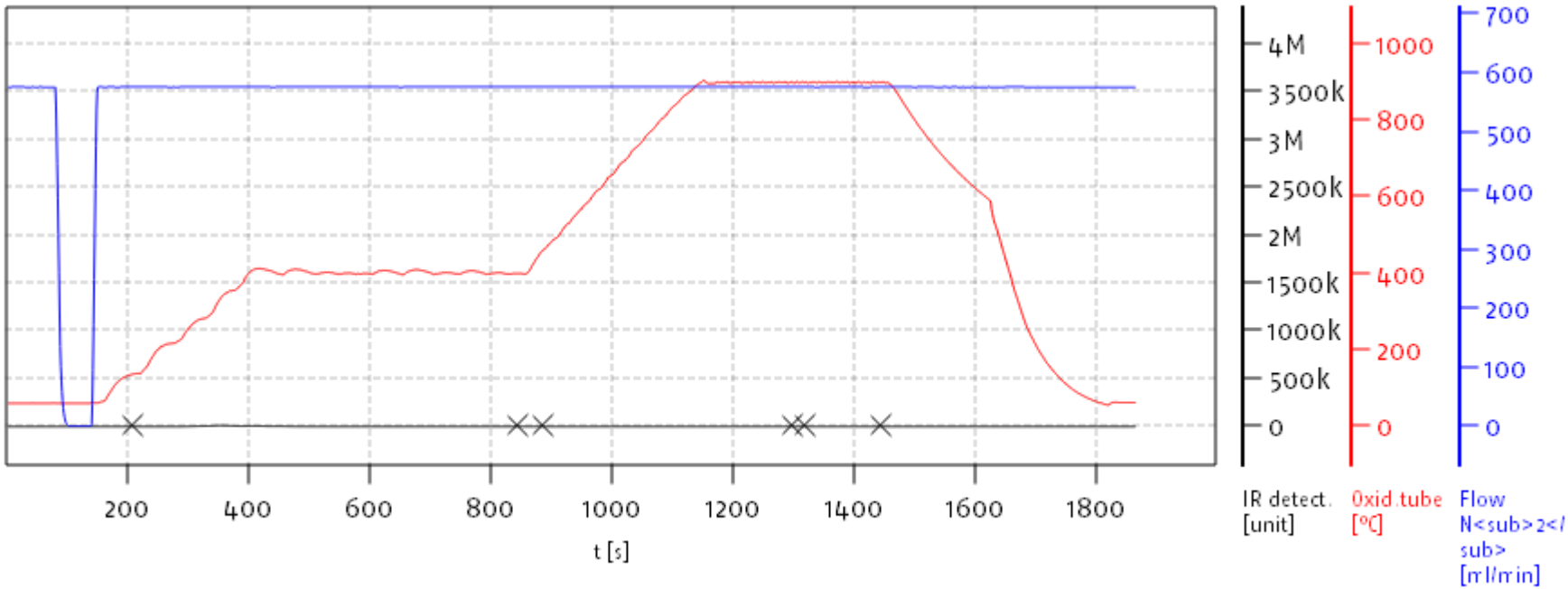
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
37	15	BLANK	1.00		1.00	CARBON	8/3/2021 11:36 AM	0.000	0.000	0.000	bl	36 994	1 797	248	1.0439	1.0000



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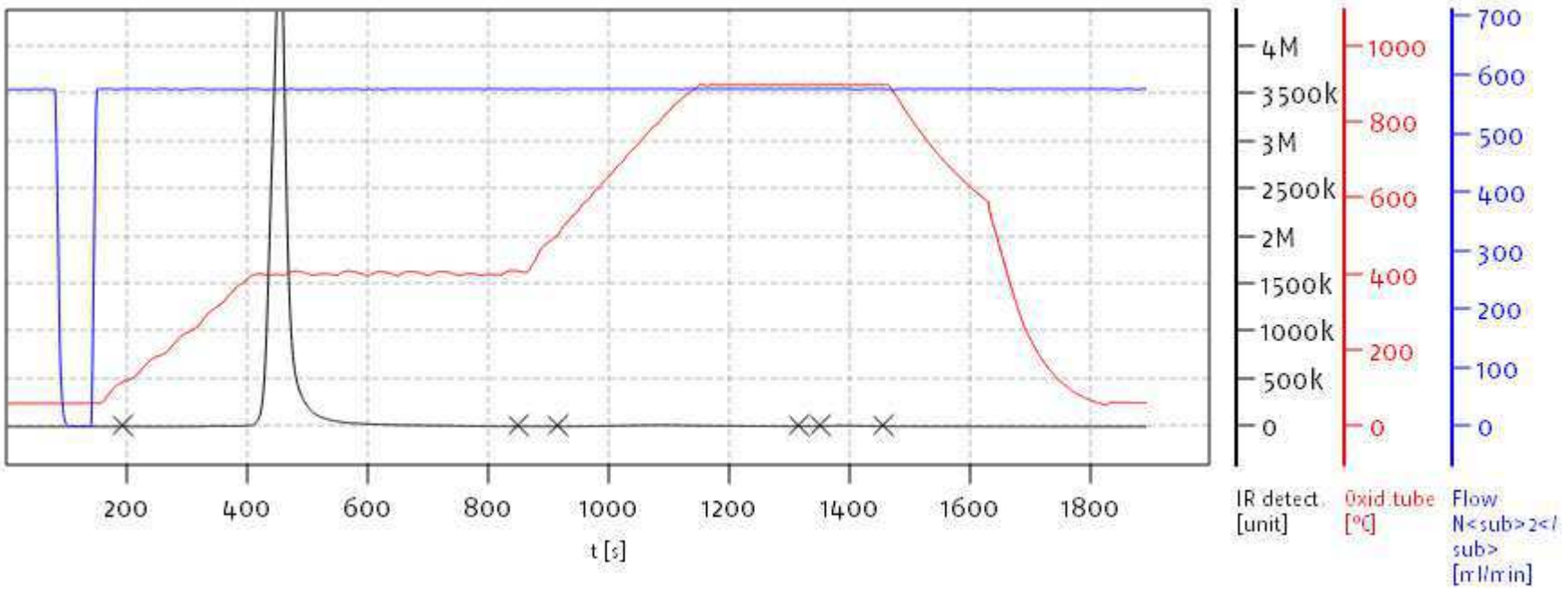
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
38	16	Dfactor	21.30		1.00	CARBON	8/3/2021 12:08 PM	44.764	0.989	45.754	bl	5 906 840	117 521	24 761	1.0375	1.0000



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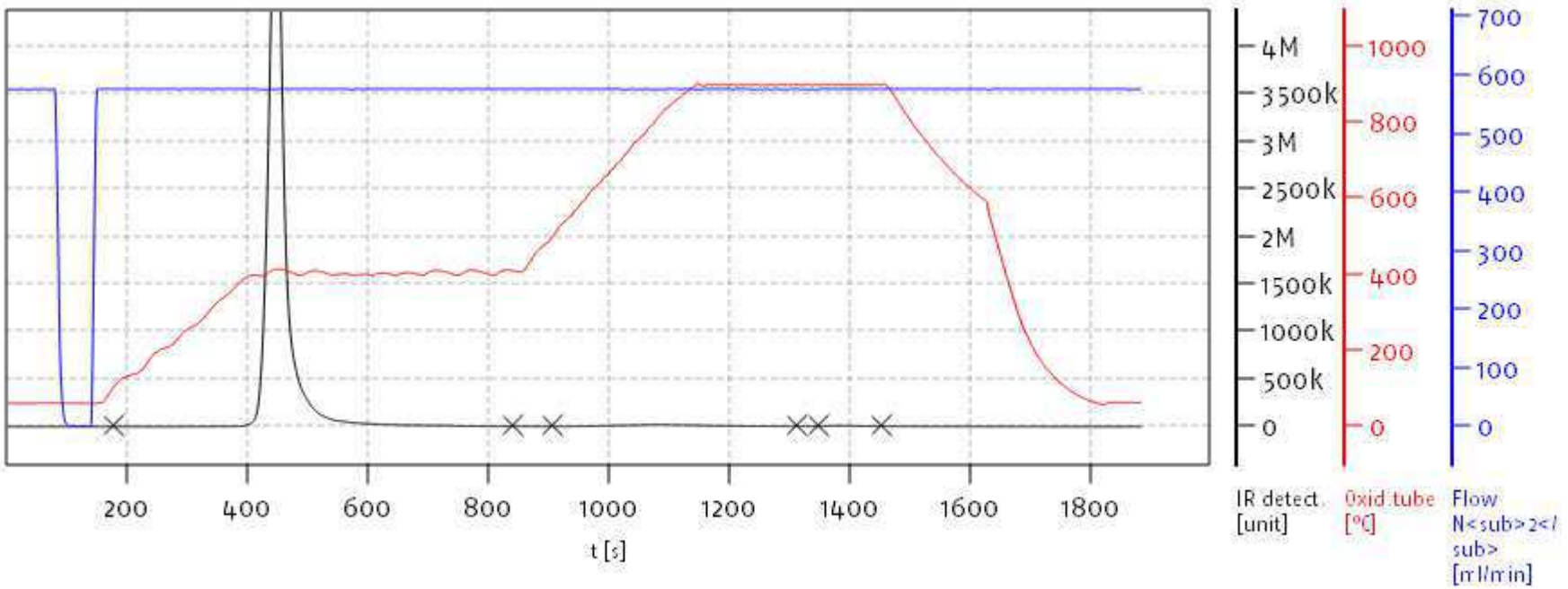
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
39	17	Dfactor	25.30		1.00	CARBON	8/3/2021 12:40 PM	44.713	0.981	45.694	bl	7 042 320	141 867	24 560	1.0341	1.0000



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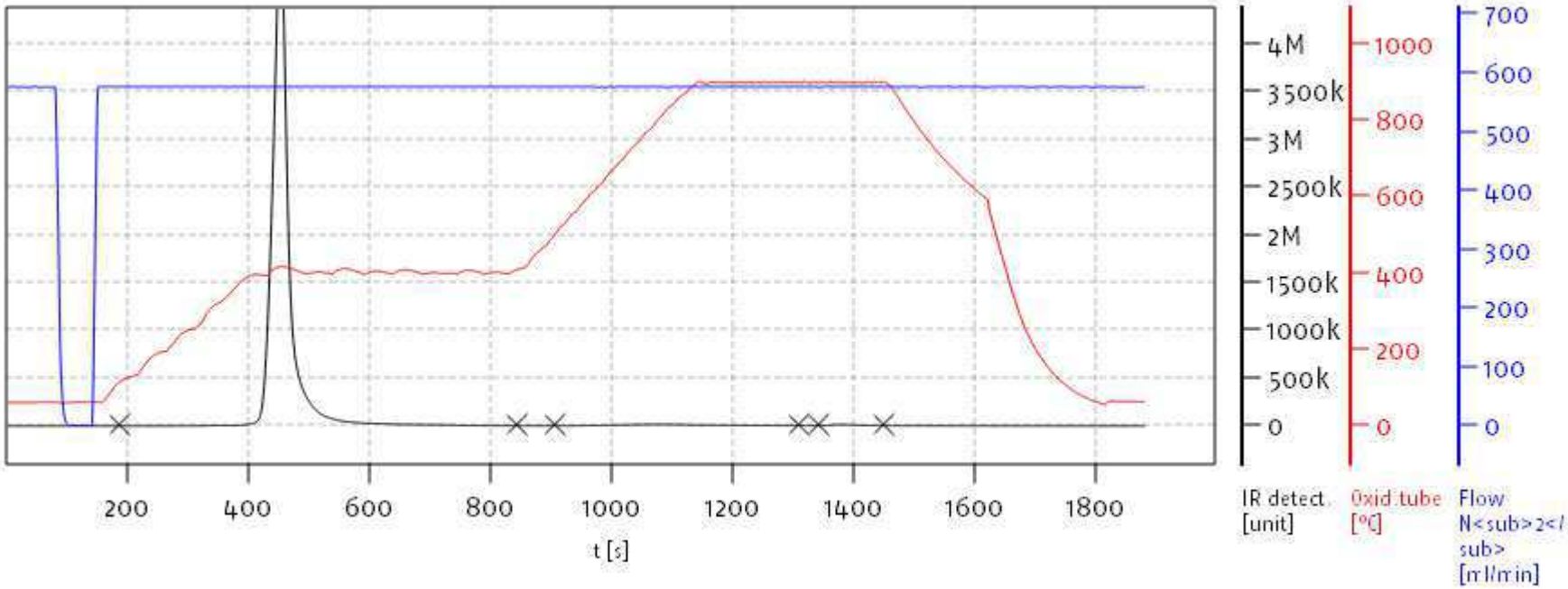
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
40	18	SJH0006-CCV3	21.40		1.00	CARBON	8/3/2021 1:12 PM	44.832	0.971	45.803	bl	5 948 720	115 618	29 714	1.0358	1.0000



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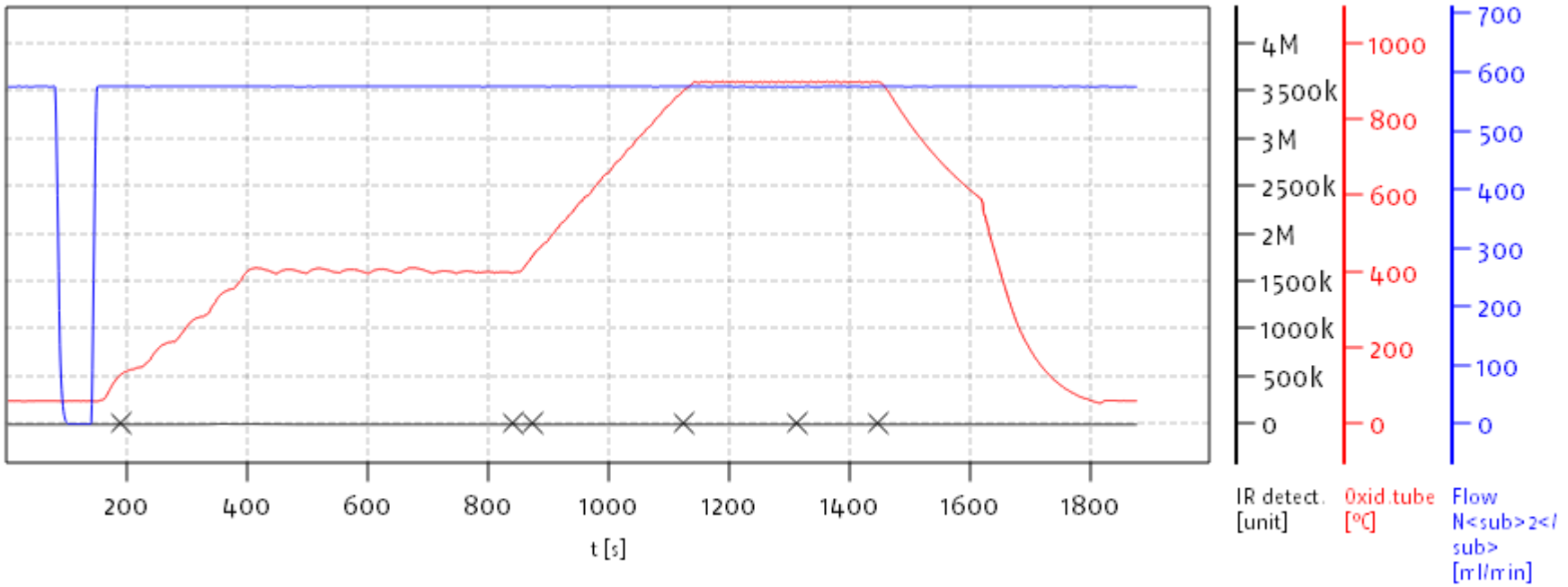
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
41	19	SJH0006-CCB3	587.40		1.00	CARBON	8/3/2021 1:44 PM	0.015	0.005	0.021	bl,C3u,C2u	18 199	966	939	1.0358	1.0000



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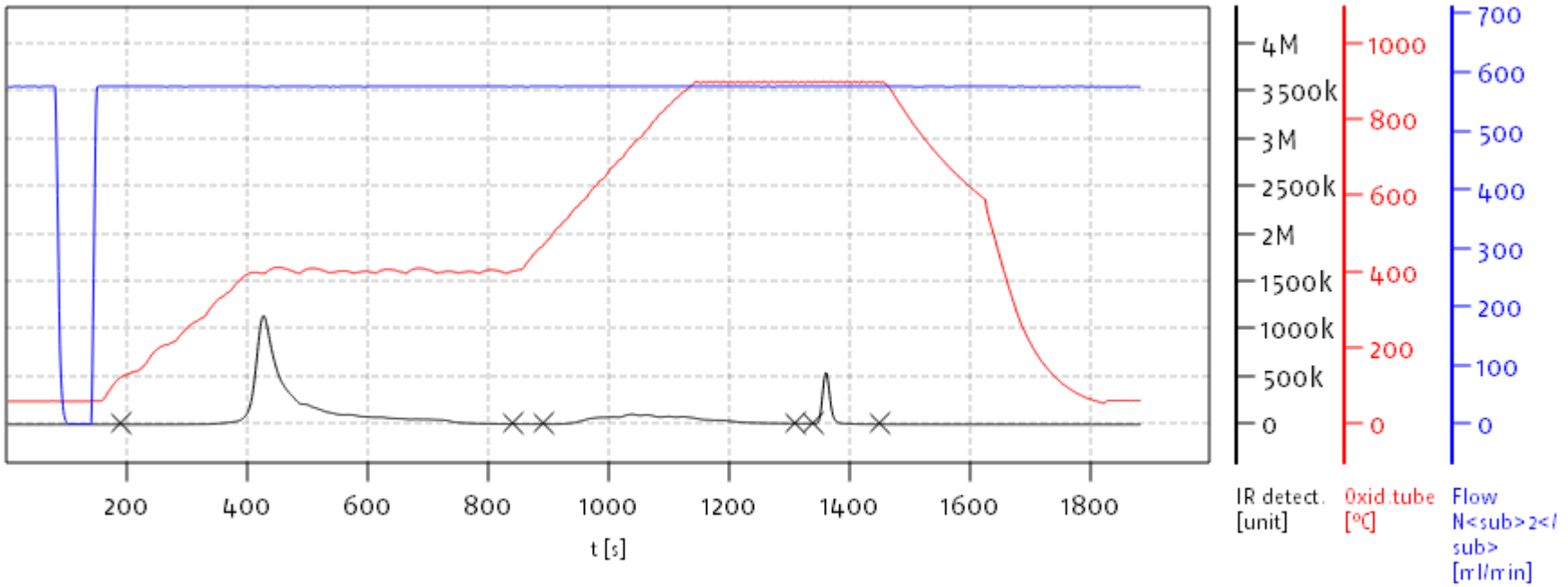
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
42	20	21G0212-02	563.30		1.00	CARBON	8/3/2021 2:15 PM	0.891	0.214	1.104	bl	2 810 390	762 850	307 884	1.0358	1.0000



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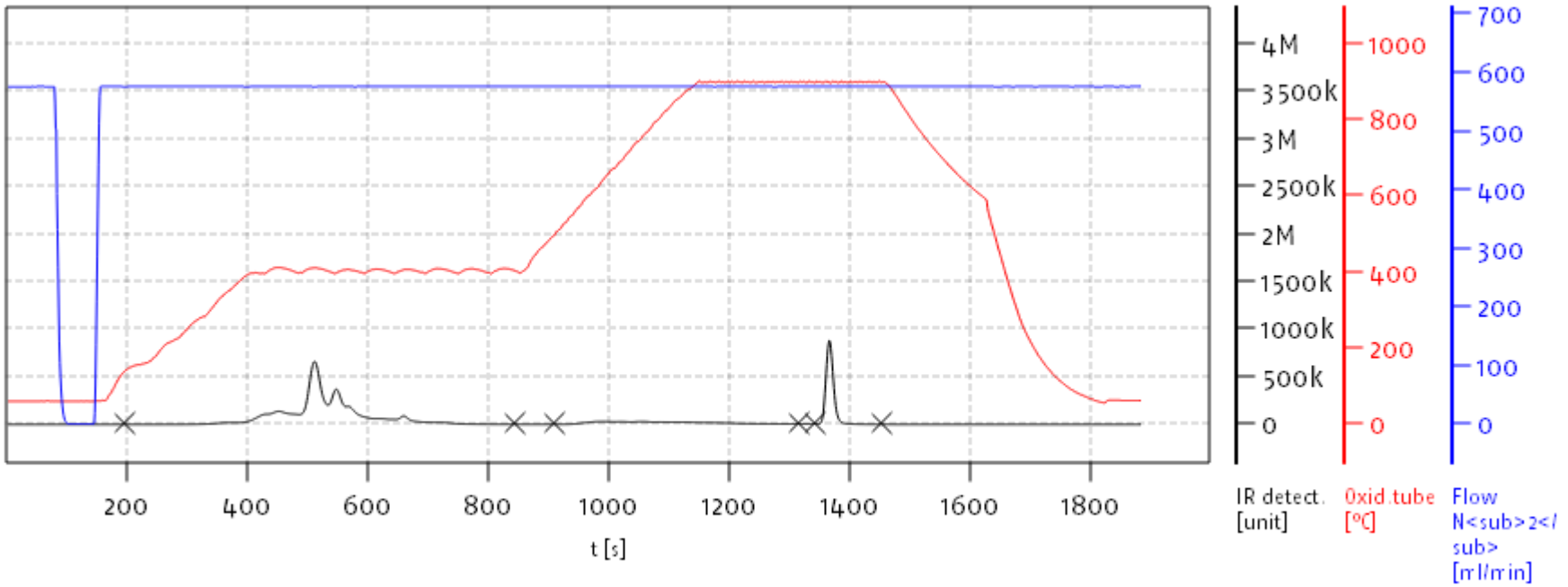
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
43	21	21G0212-03	523.50		1.00	CARBON	8/3/2021 2:47 PM	0.678	0.082	0.760	bl	1 724 180	258 208	479 845	1.0358	1.0000



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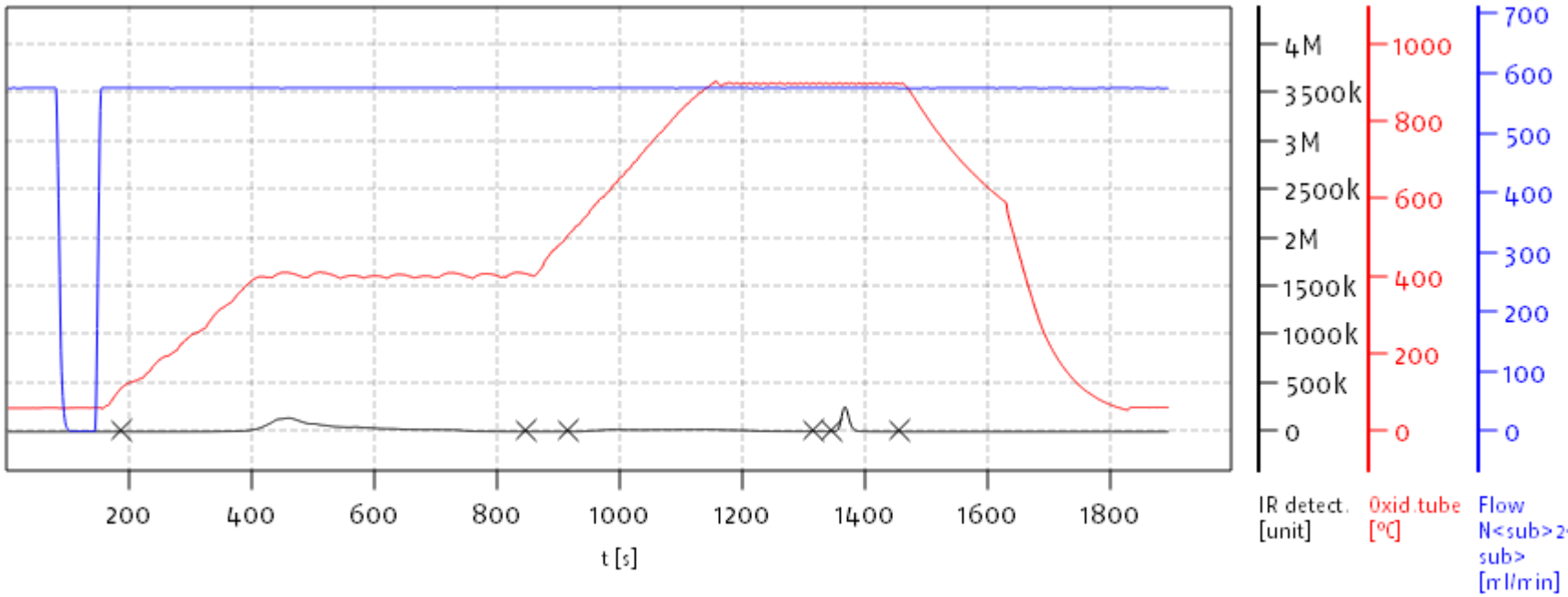
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
44	22	21G0212-04	546.70		1.00	CARBON	8/3/2021 3:19 PM	0.256	0.062	0.318	bl	701 446	200 429	142 266	1.0358	1.0000



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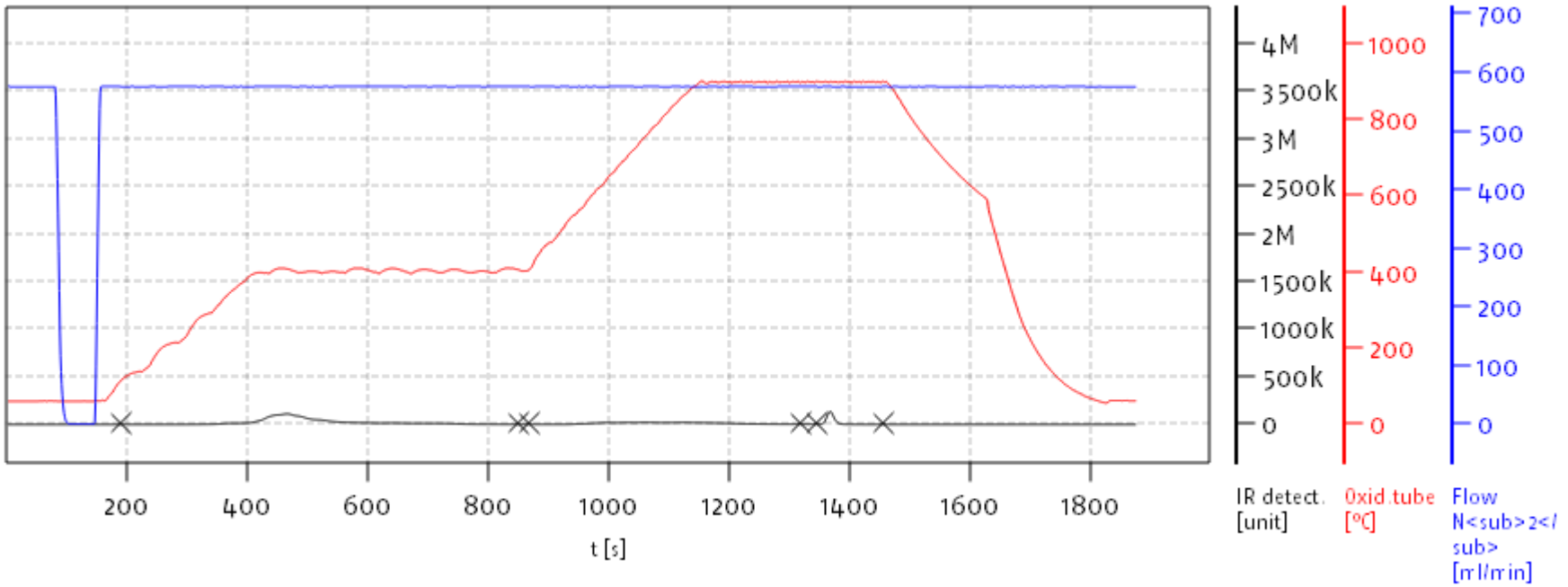
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
45	23	21G0212-05	641.10		1.00	CARBON	8/3/2021 3:51 PM	0.152	0.050	0.201	bl	499 762	187 523	74 351	1.0358	1.0000



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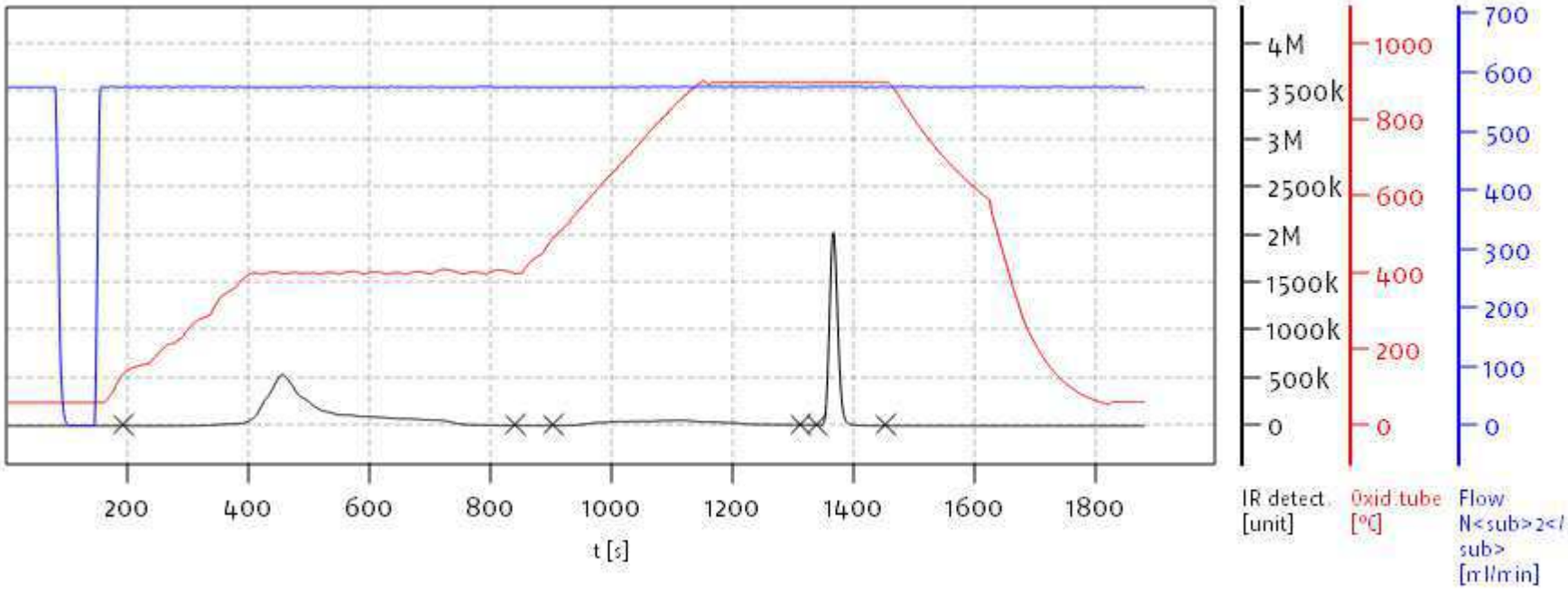
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
46	24	21G0212-06	624.40		1.00	CARBON	8/3/2021 4:23 PM	0.866	0.124	0.990	bl	2 177 920	481 819	1 216 180	1.0358	1.0000



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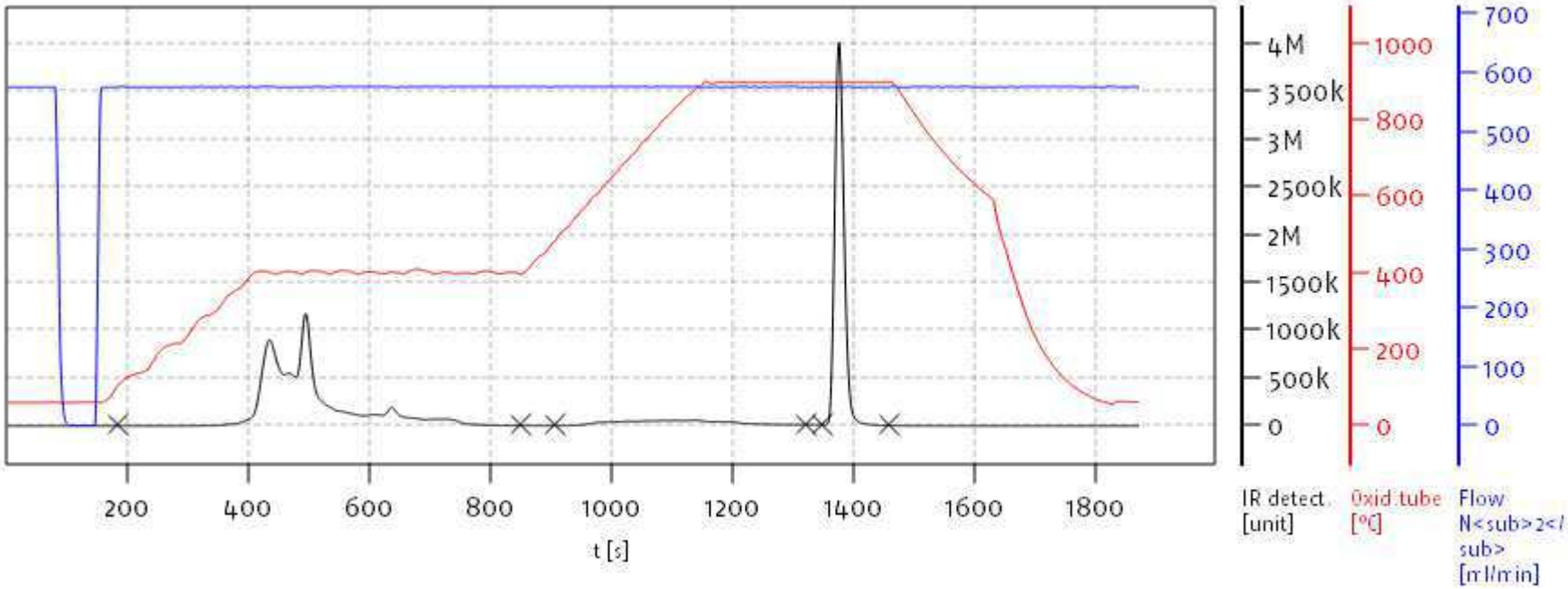
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
47	25	21G0212-07	700.10		1.00	CARBON	8/3/2021 4:54 PM	1.445	0.119	1.564	bl	3 694 480	520 226	2 703 690	1.0358	1.0000



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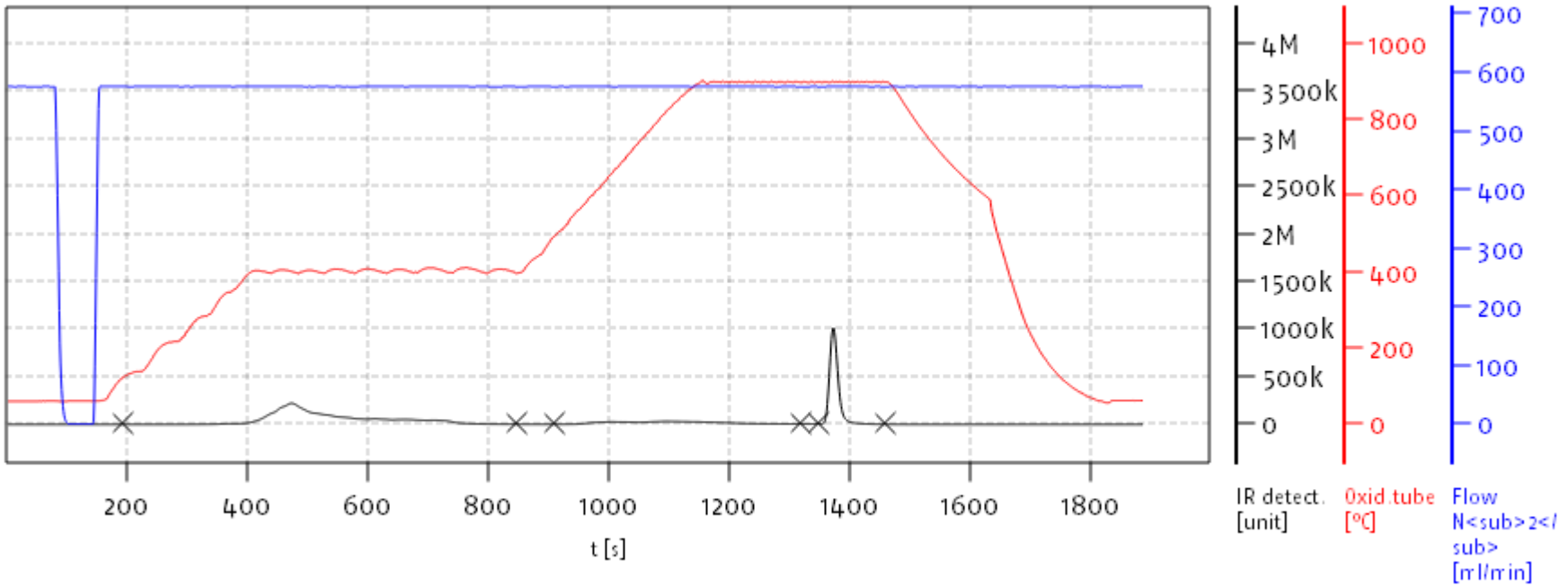
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
48	26	21G0212-08	600.50		1.00	CARBON	8/3/2021 5:26 PM	0.465	0.073	0.537	bl	1 103 580	263 940	629 982	1.0358	1.0000



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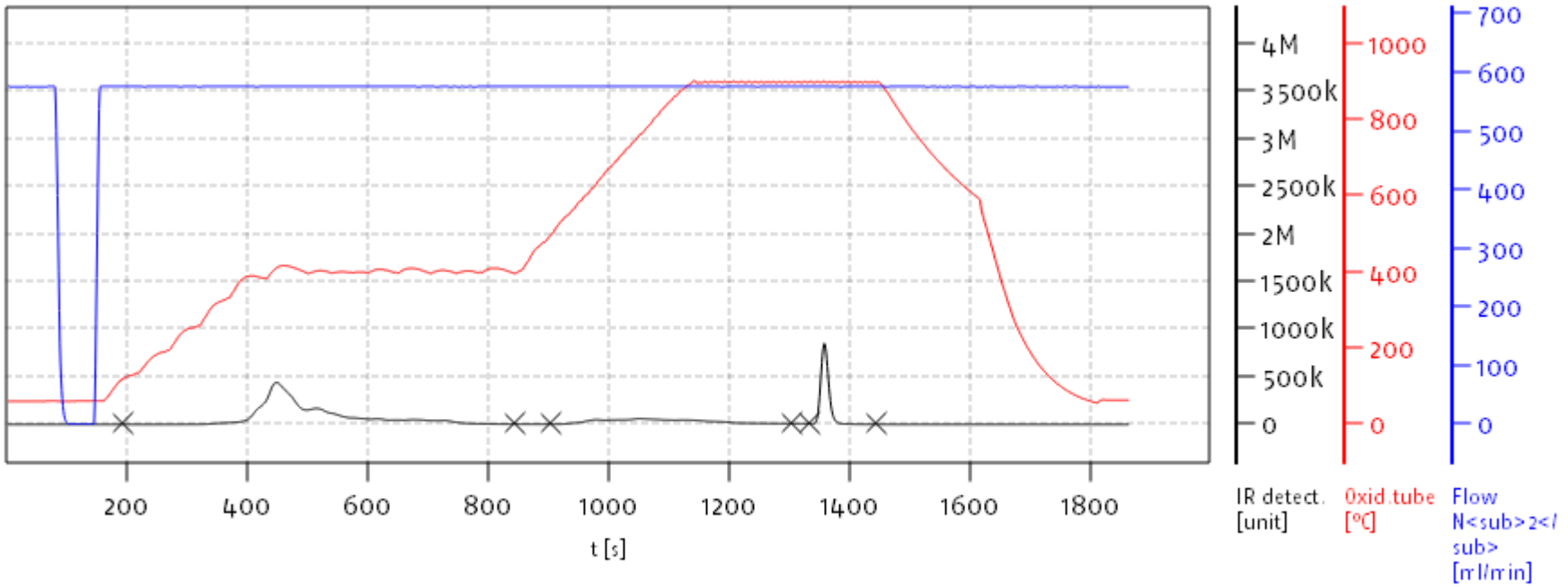
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
49	27	21G0212-09	567.40		1.00	CARBON	8/3/2021 5:58 PM	0.615	0.133	0.749	bl	1 680 020	472 478	487 102	1.0358	1.0000



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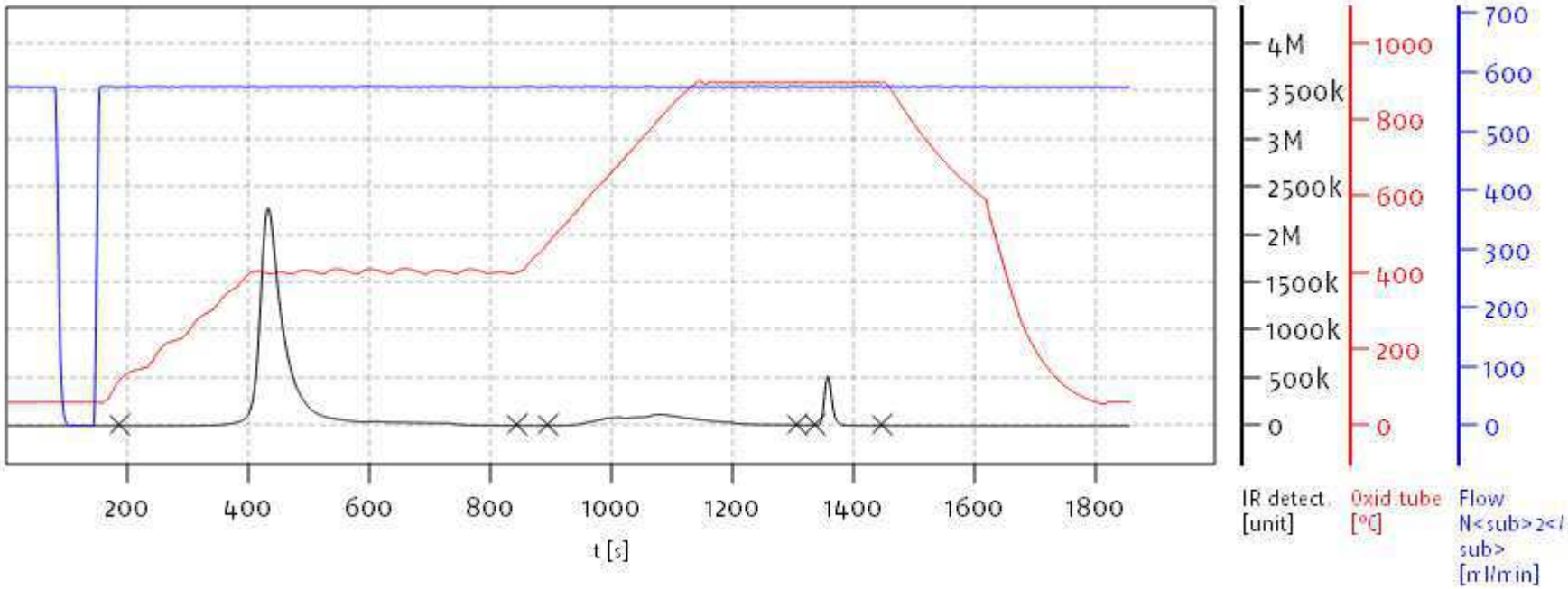
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
50	28	21G0212-10	555.20		1.00	CARBON	8/3/2021 6:29 PM	1.294	0.223	1.517	bl	4 182 940	785 430	294 540	1.0358	1.0000



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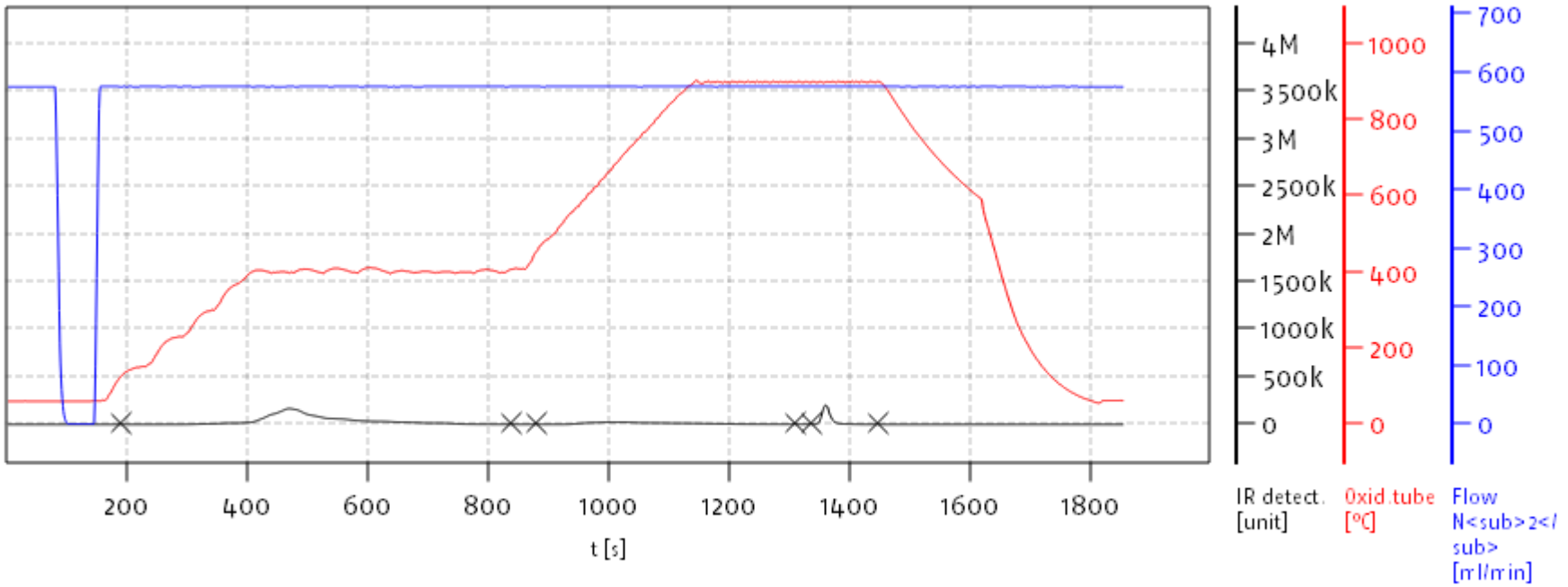
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
51	29	21G0212-11	506.70		1.00	CARBON	8/3/2021 7:00 PM	0.296	0.054	0.350	bl	781 776	158 532	123 980	1.0358	1.0000



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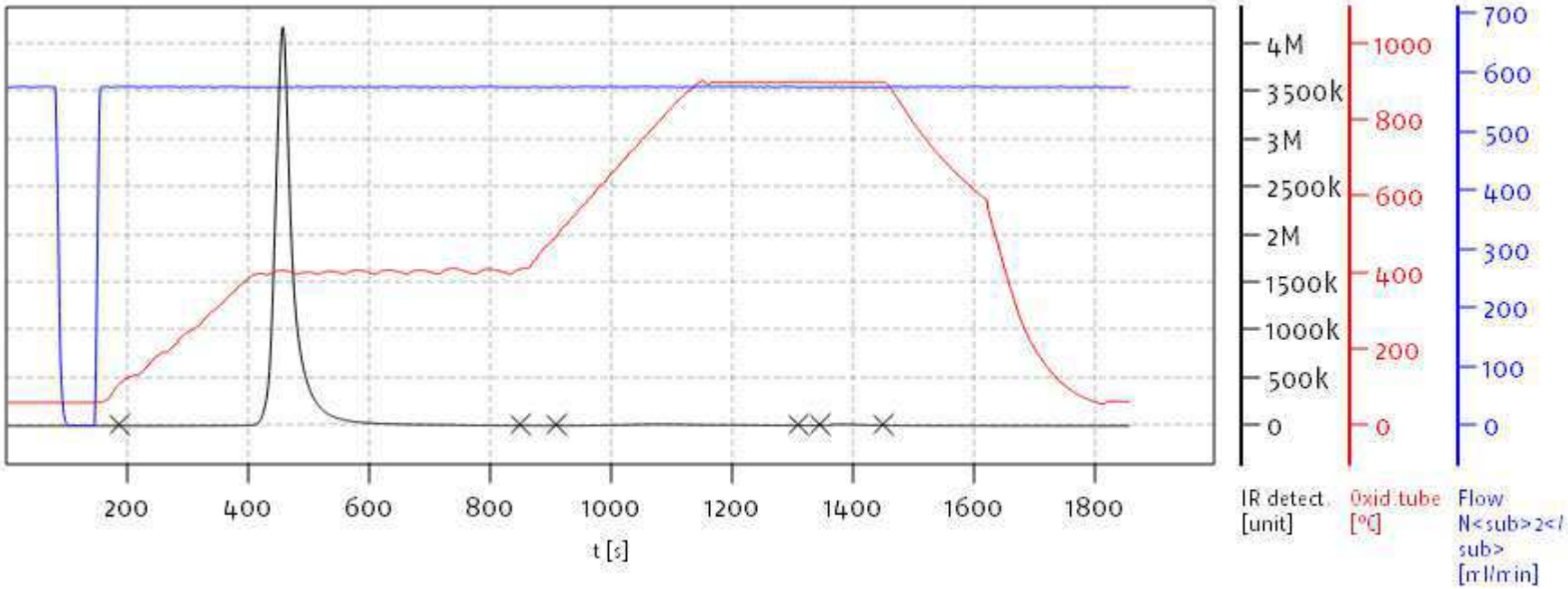
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
52	30	SJH0006-CCV4	20.30		1.00	CARBON	8/3/2021 7:32 PM	43.330	1.141	44.471	bl	5 440 180	131 057	38 207	1.0358	1.0000



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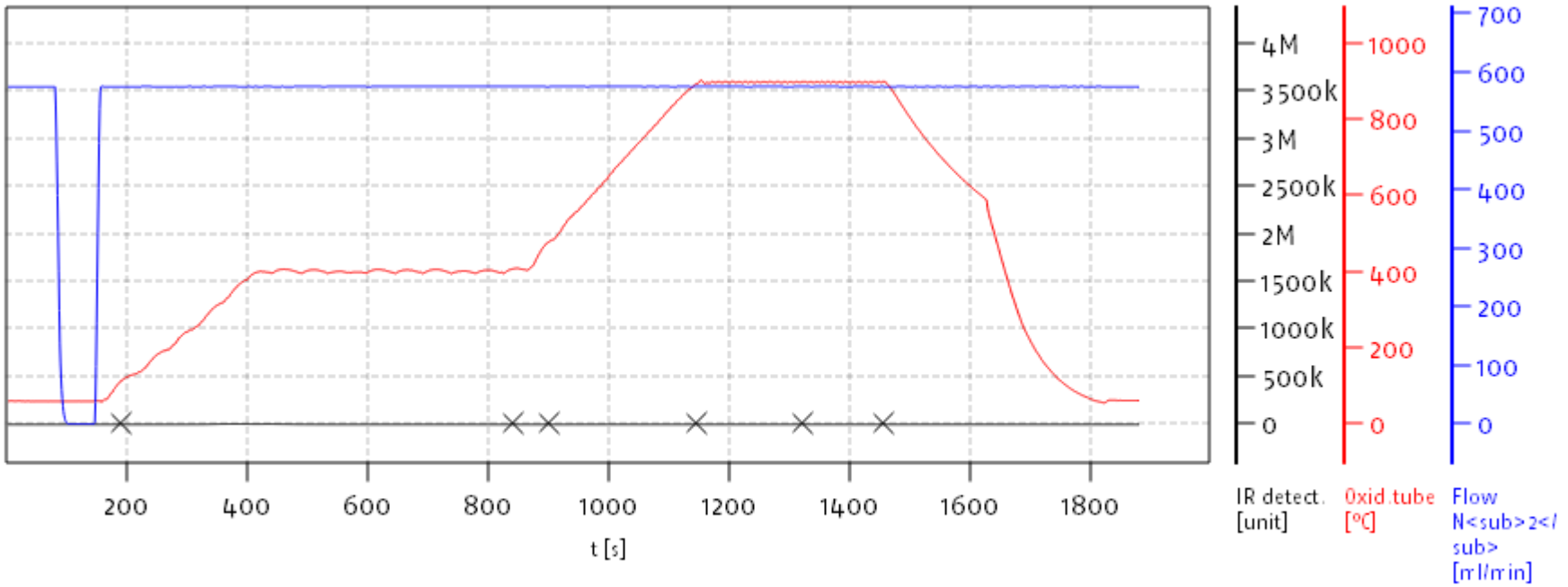
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
53	31	SJH0006-CCB4	583.30		1.00	CARBON	8/3/2021 8:03 PM	0.017	0.005	0.023	bl,C3u,C2u	24 340	1 394	755	1.0358	1.0000



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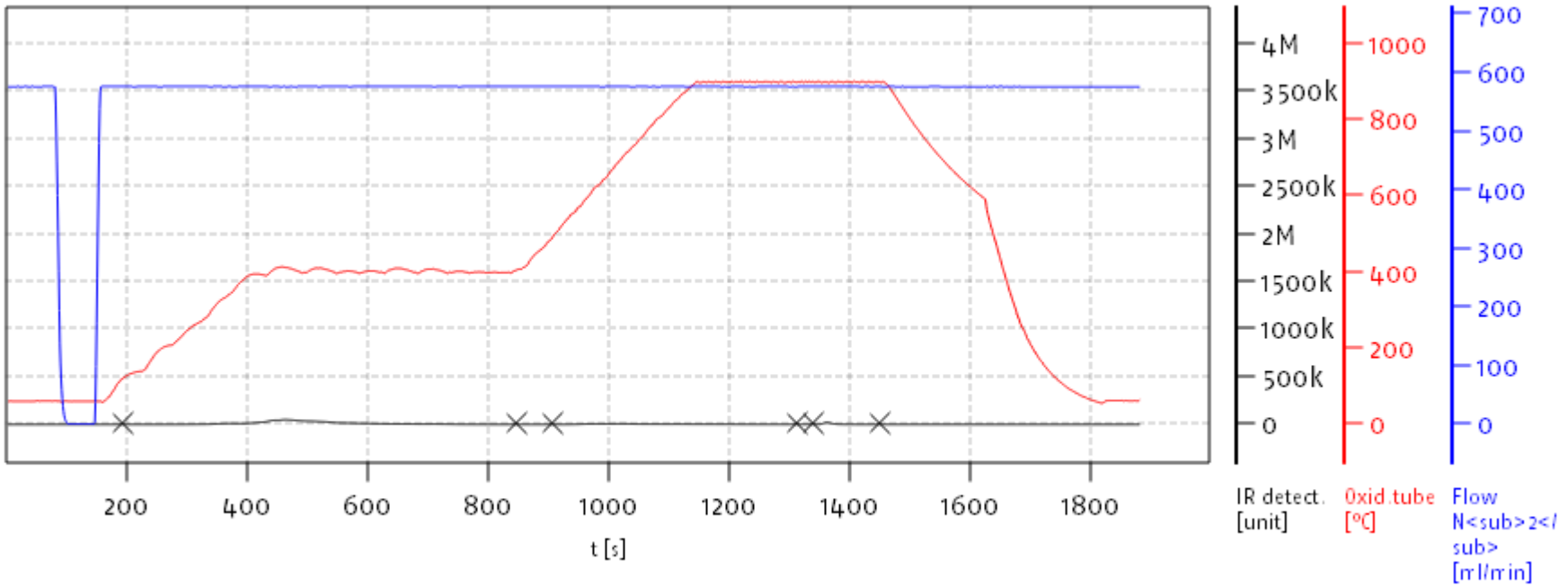
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
54	32	21G0212-12	549.50		1.00	CARBON	8/3/2021 8:35 PM	0.091	0.018	0.109	bl	261 592	46 158	14 425	1.0358	1.0000



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Mode CCC

elementar
EXCELLENCE IN ELEMENTS

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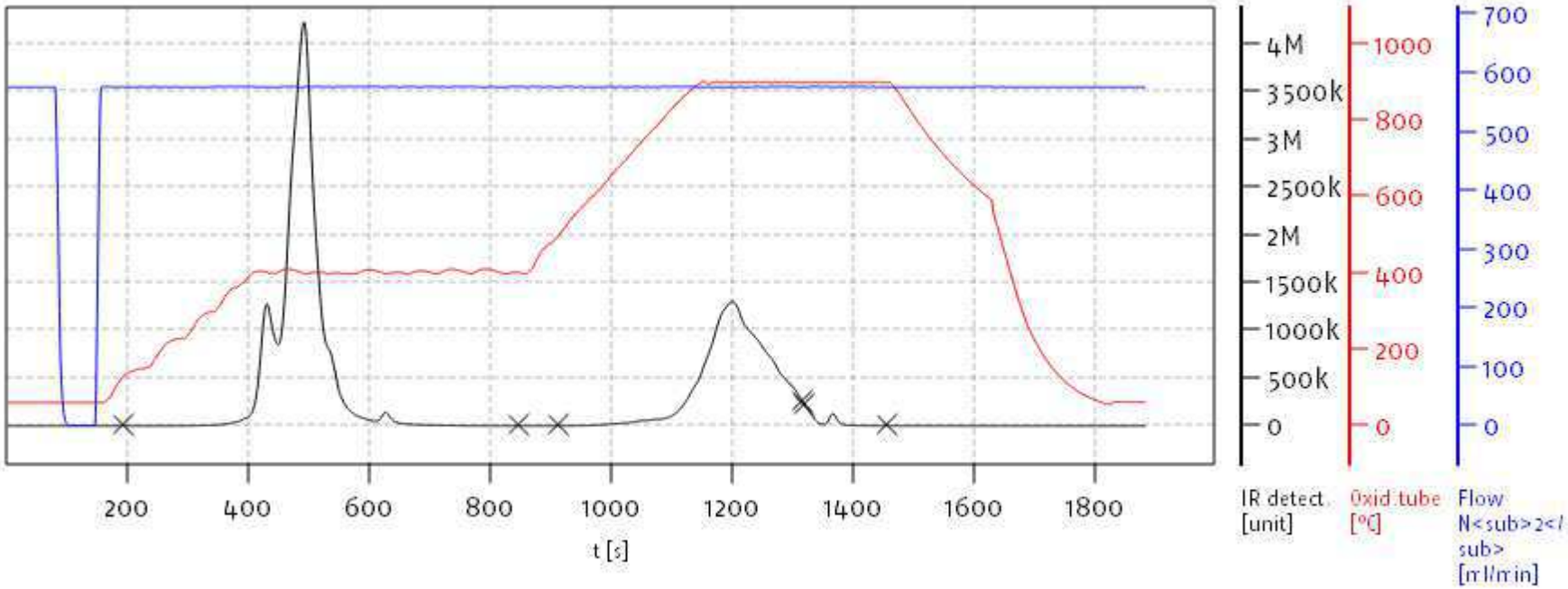
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
55	33	21G0212-13	514.70		1.00	CARBON	8/3/2021 9:07 PM	3.052	1.788	4.841	bl,Cl o	9 634 900	5 958 510	183 503	1.0358	1.0000



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Access: soliTOC superuser

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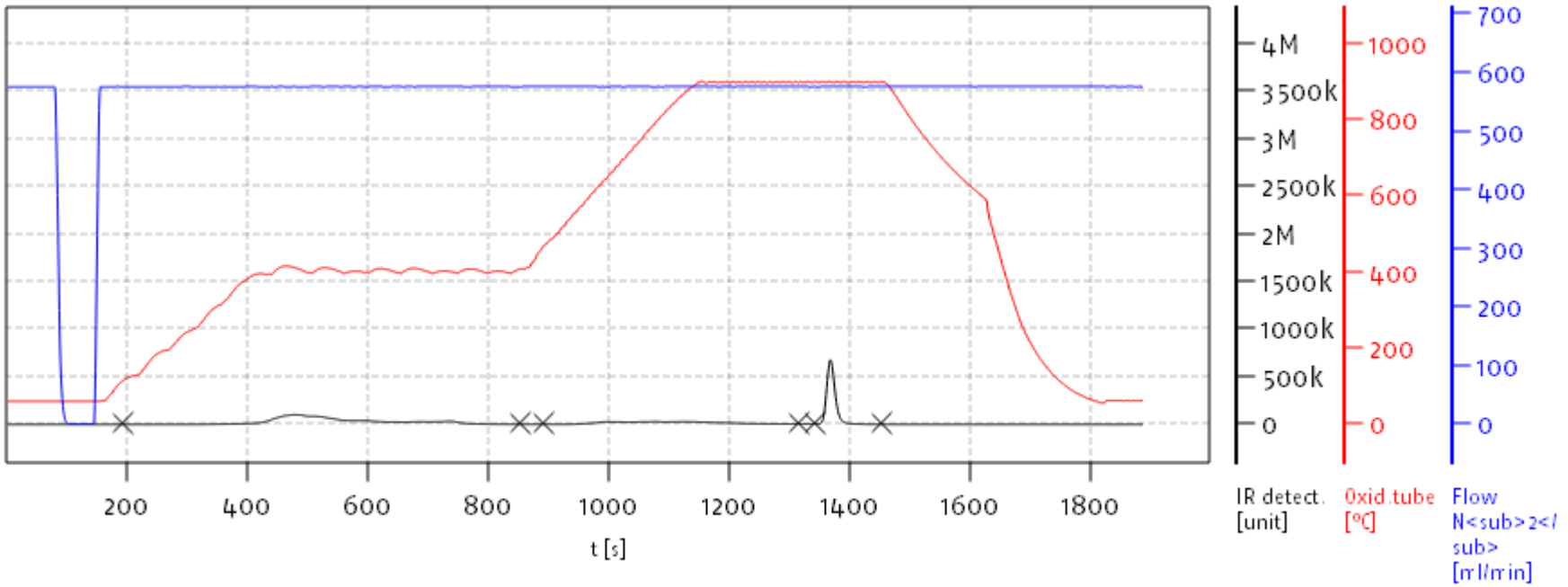
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
56	34	21G0212-14	549.30		1.00	CARBON	8/3/2021 9:39 PM	0.312	0.077	0.388	bl	635 905	254 369	413 994	1.0358	1.0000



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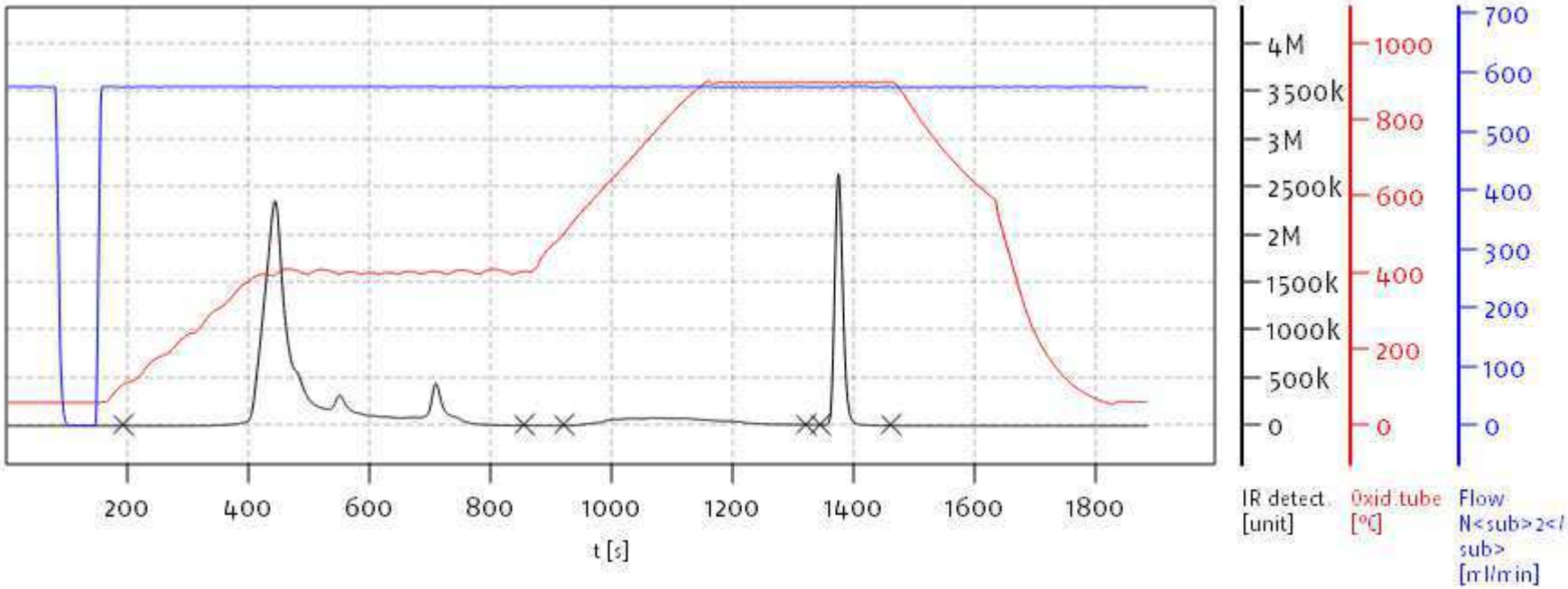
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
57	35	21G0212-15	659.80		1.00	CARBON	8/3/2021 10:11 PM	1.670	0.167	1.837	bl	5 352 840	698 269	1 571 450	1.0358	1.0000



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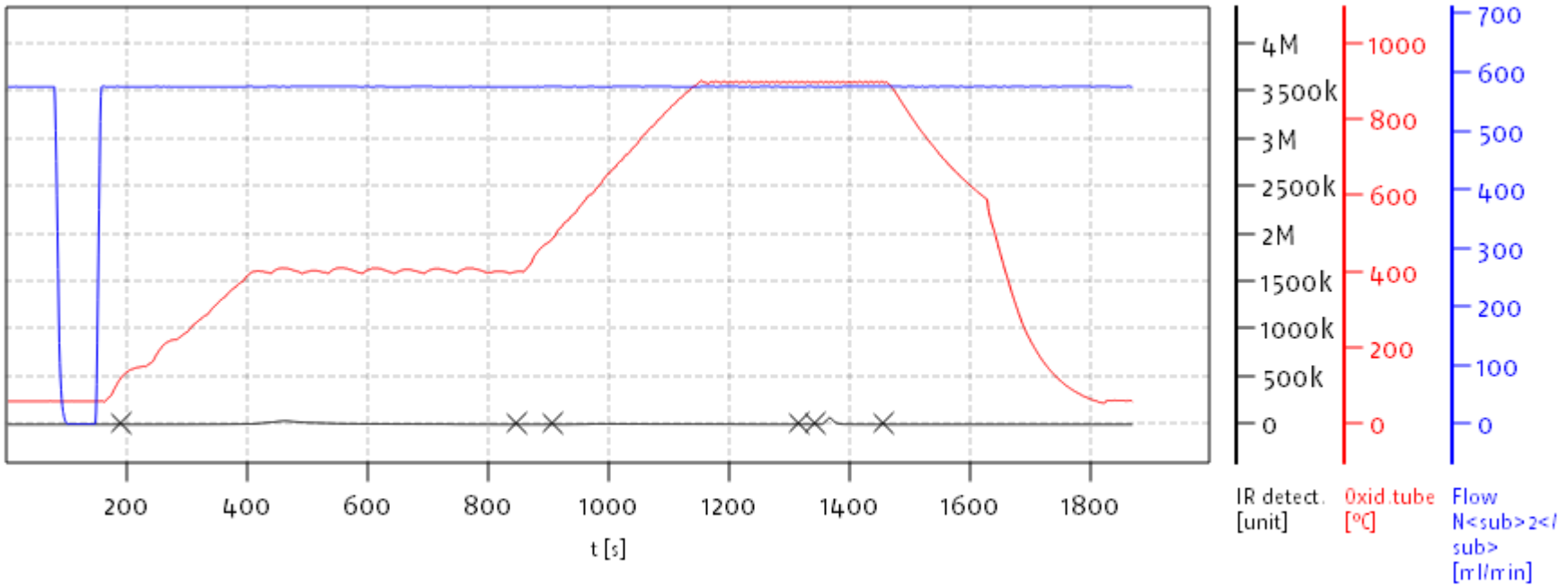
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
58	36	21G0212-16	581.90		1.00	CARBON	8/3/2021 10:42 PM	0.064	0.018	0.082	bl	157 649	46 972	40 130	1.0358	1.0000



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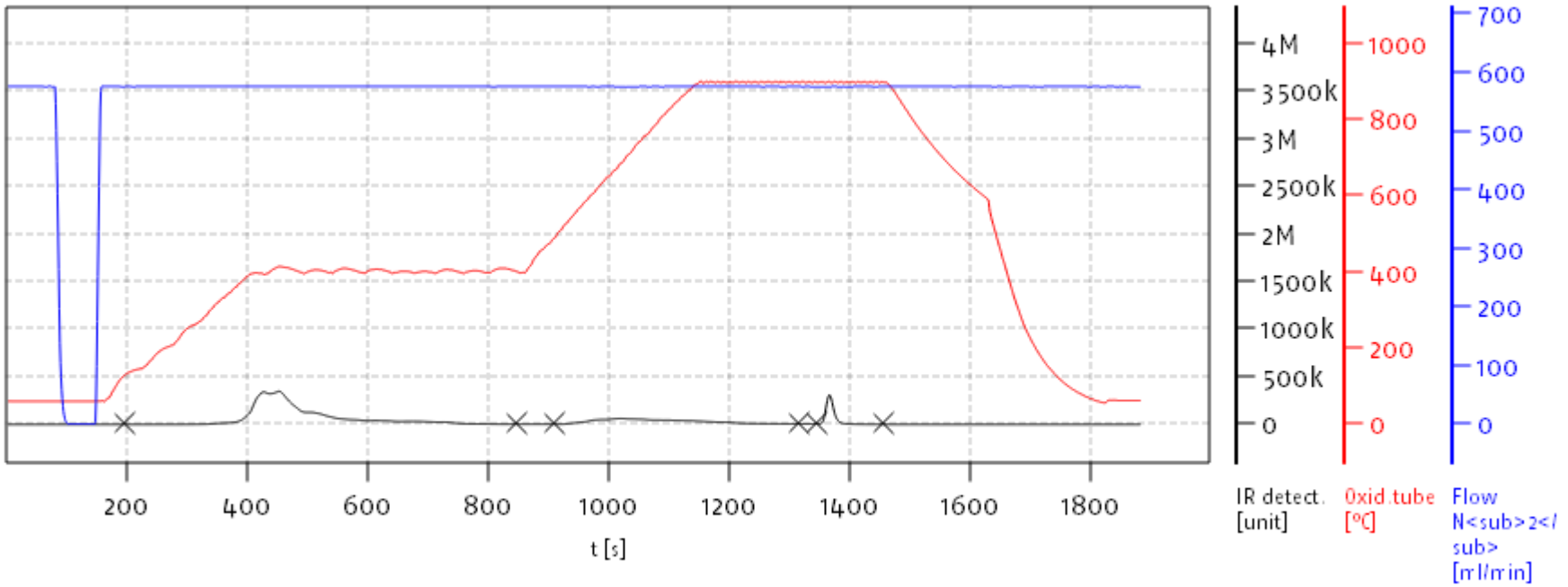
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
59	37	BJF0733-DUP3	508.60		1.00	CARBON	8/3/2021 11:14 PM	0.529	0.143	0.672	bl	1 474 760	453 330	179 976	1.0358	1.0000



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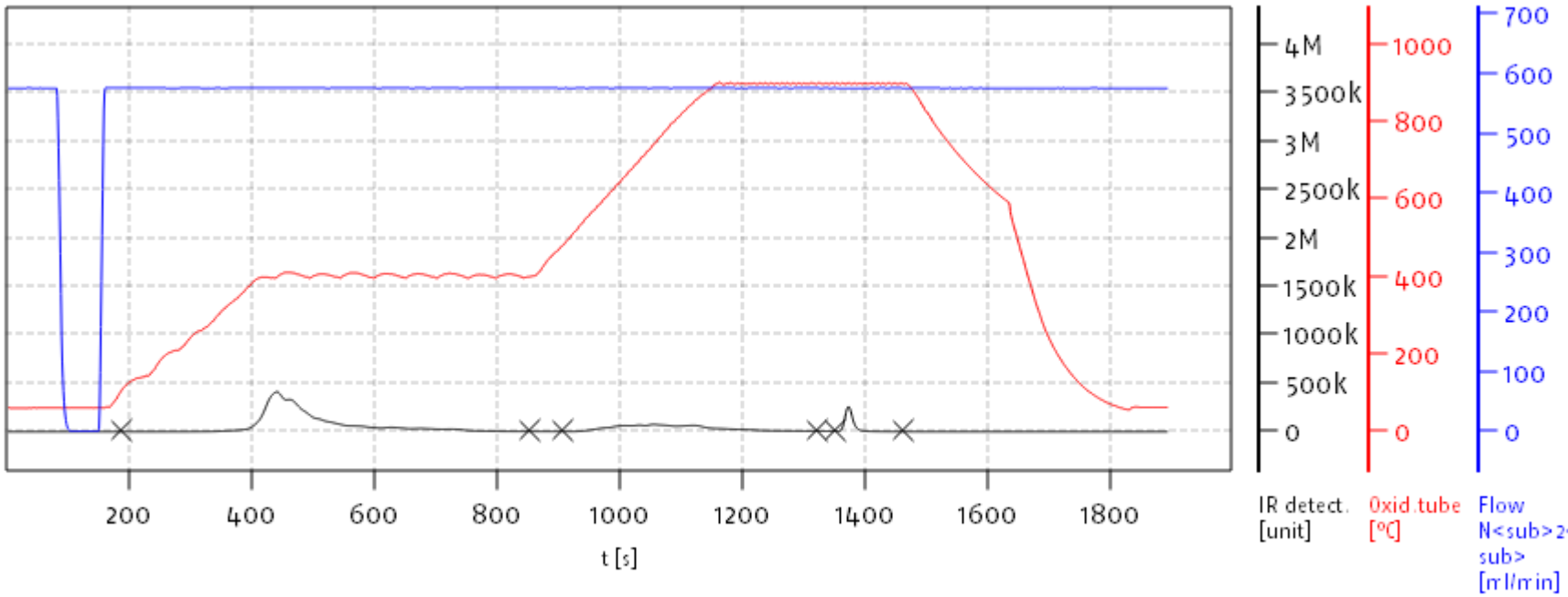
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
60	38	BJF0733-DUP4	504.70		1.00	CARBON	8/3/2021 11:46 PM	0.535	0.166	0.701	bl	1 508 080	524 392	151 149	1.0358	1.0000



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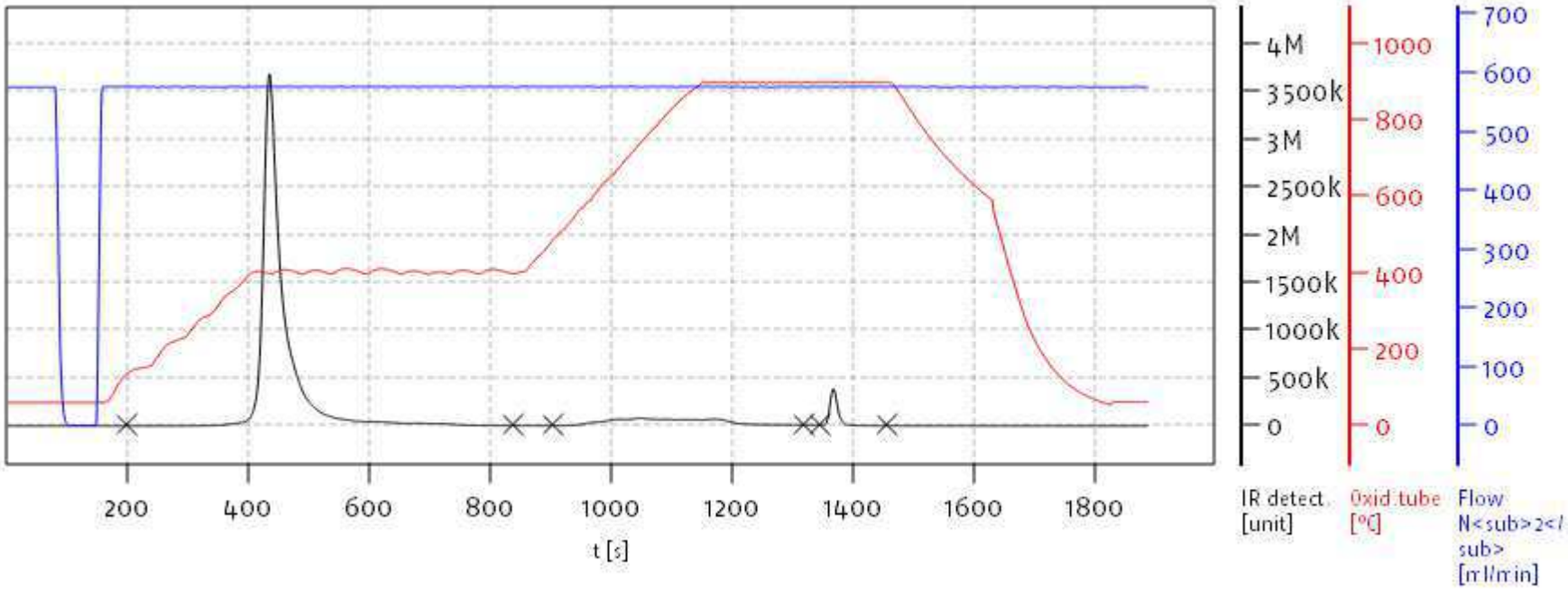
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
61	39	BJF0733-MS2	529.70	0.0125	1.00	CARBON	8/4/2021 12:18 AM	1.649	0.193	1.842	bl	5 222 060	645 298	223 923	1.0358	1.0000



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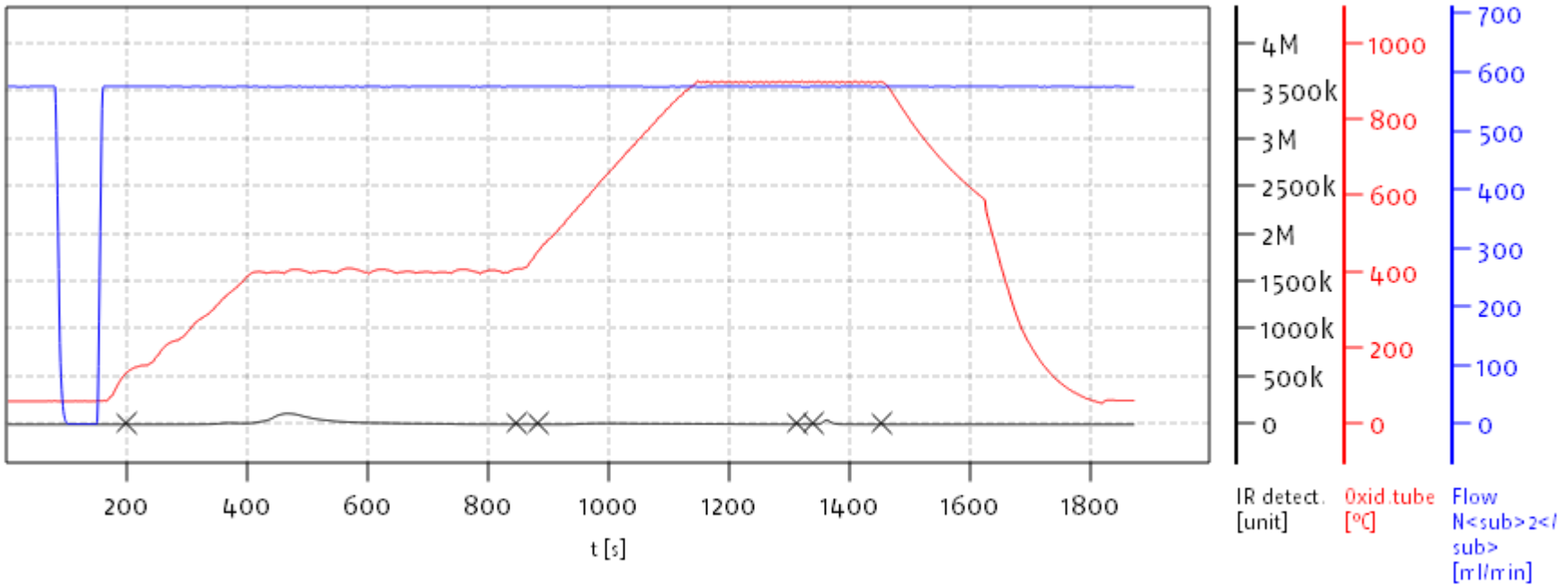
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
62	40	21G0127-17RE1	594.50		1.00	CARBON	8/4/2021 12:49 AM	0.148	0.026	0.174	bl	486 486	81 515	28 076	1.0358	1.0000



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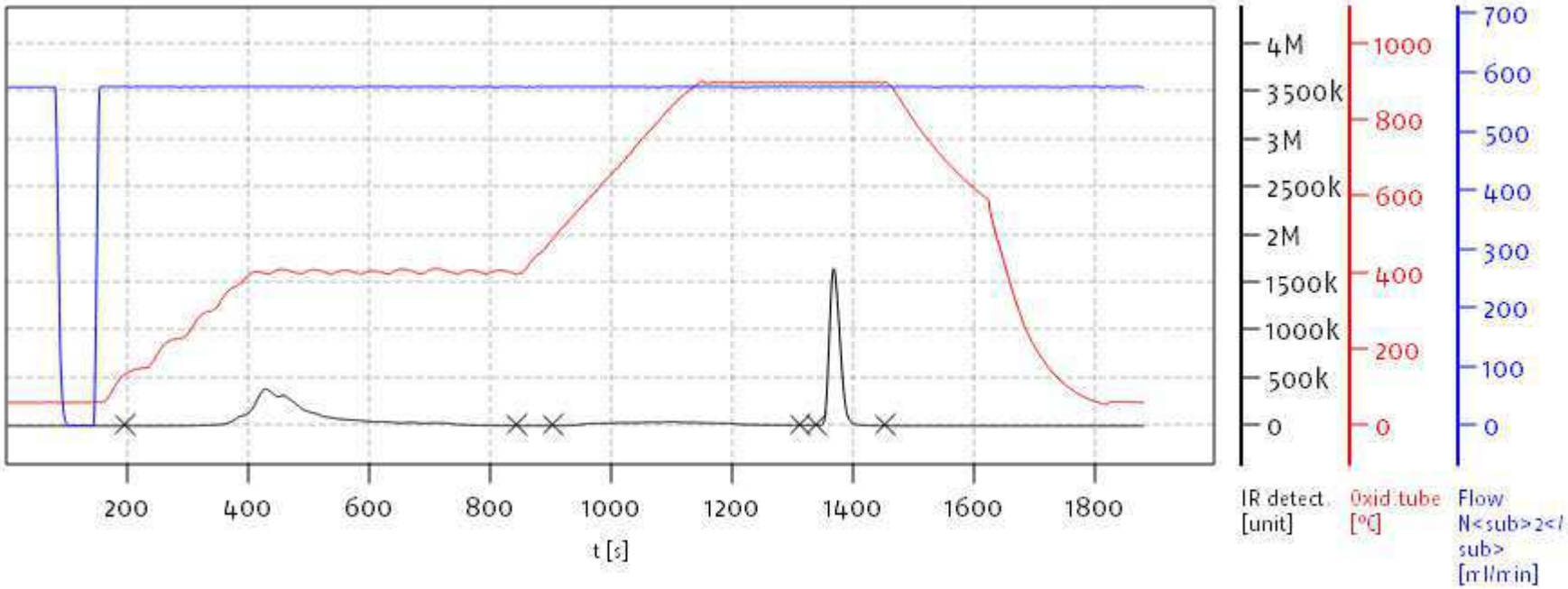
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
63	41	21G0156-10RE1	257.90		1.00	CARBON	8/4/2021 1:21 AM	1.801	0.223	2.024	bl	1 653 790	353 653	1 264 310	1.0358	1.0000



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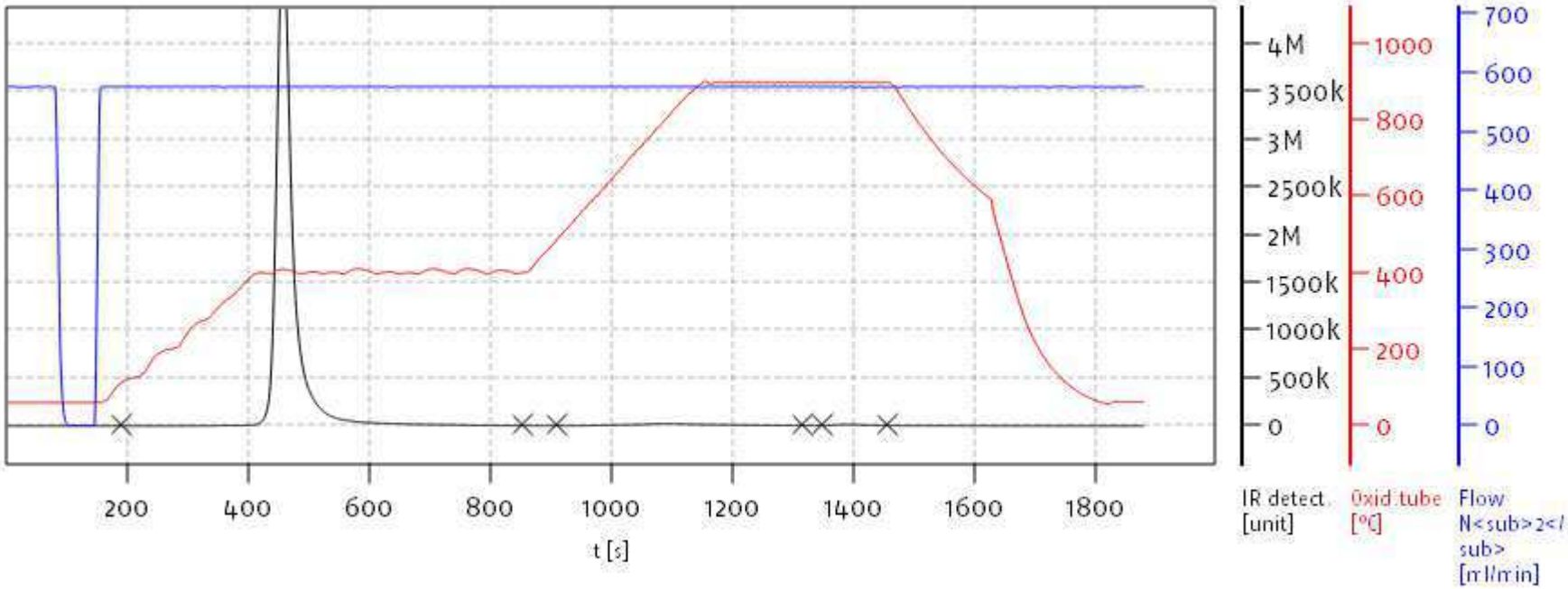
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
64	42	SJH0006-CCV5	22.20		1.00	CARBON	8/4/2021 1:53 AM	43.384	1.195	44.579	bl	5 968 050	152 970	33 778	1.0358	1.0000



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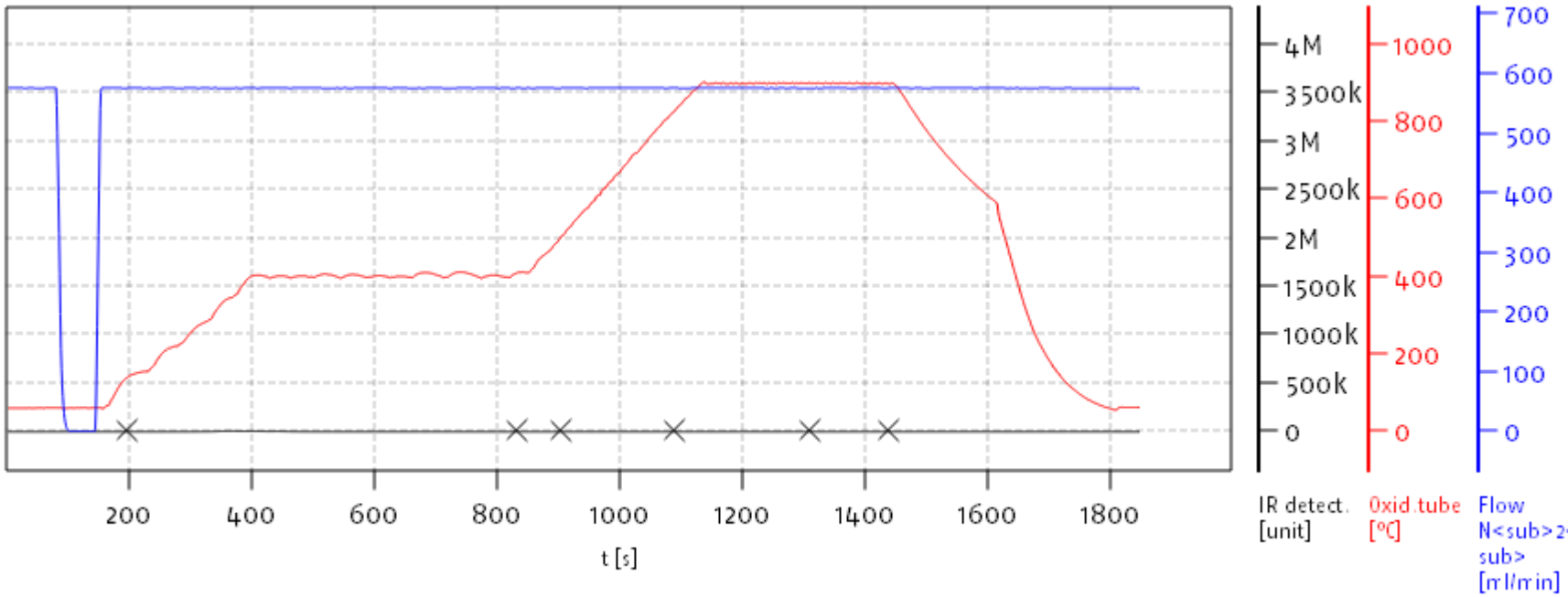
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
65	43	SJH0006-CCB5	584.20		1.00	CARBON	8/4/2021 2:24 AM	0.018	0.005	0.023	bl,C3u,C2u	26 322	532	596	1.0358	1.0000



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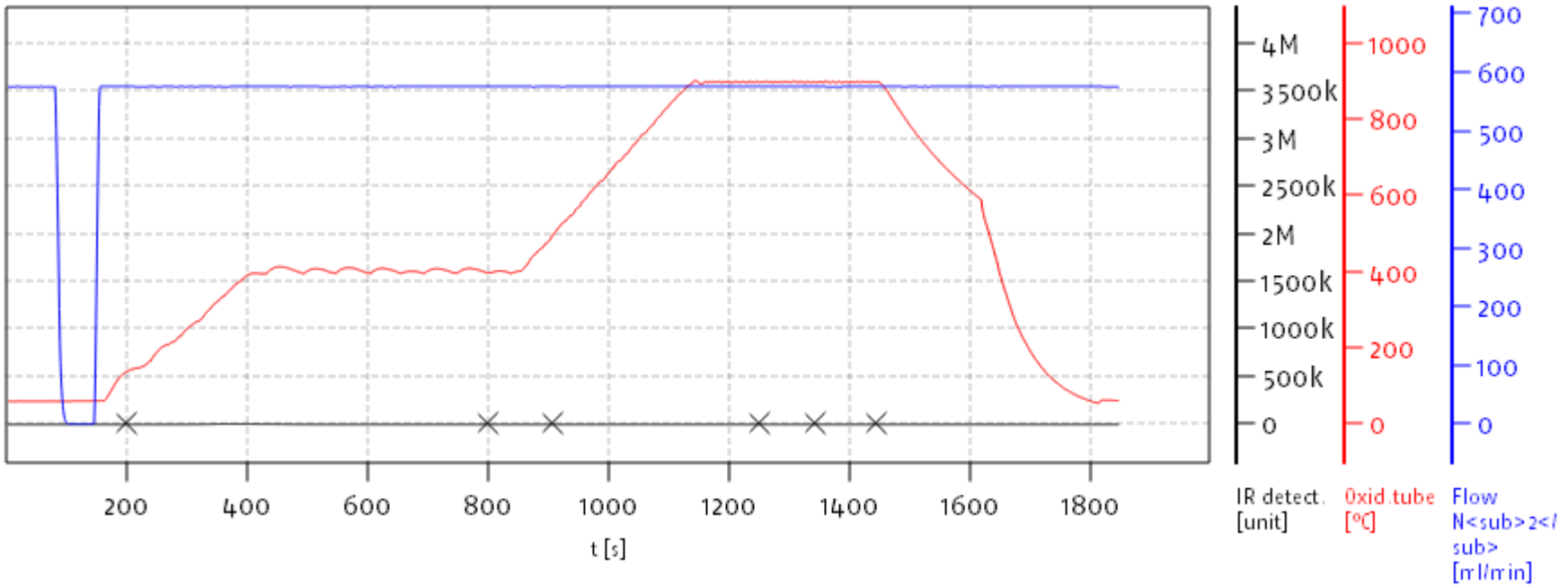
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
66	44	BJG0675-BLK2	532.00		1.00	CARBON	8/4/2021 2:55 AM	0.018	0.006	0.025	bl,C3u,C2u	23 147	1 856	451	1.0358	1.0000



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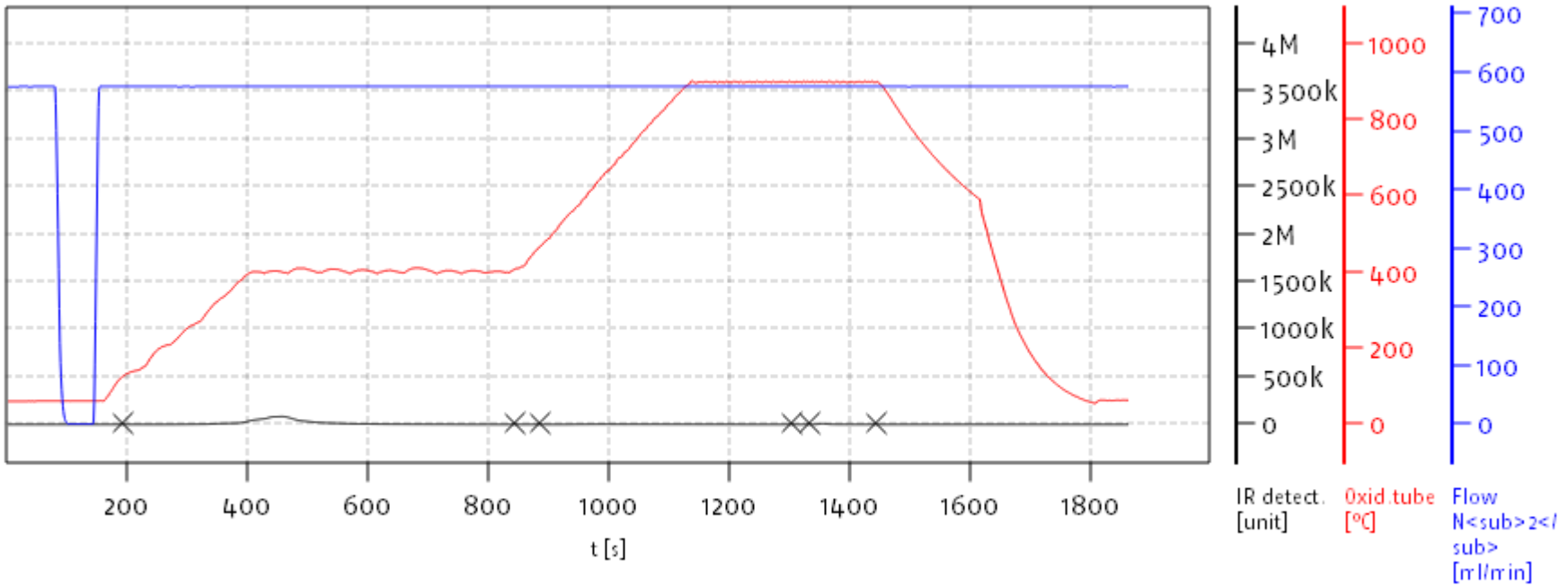
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
67	45	BJG0675-DUP2	506.30		1.00	CARBON	8/4/2021 3:27 AM	0.116	0.012	0.127	bl	322 436	19 369	6 581	1.0358	1.0000



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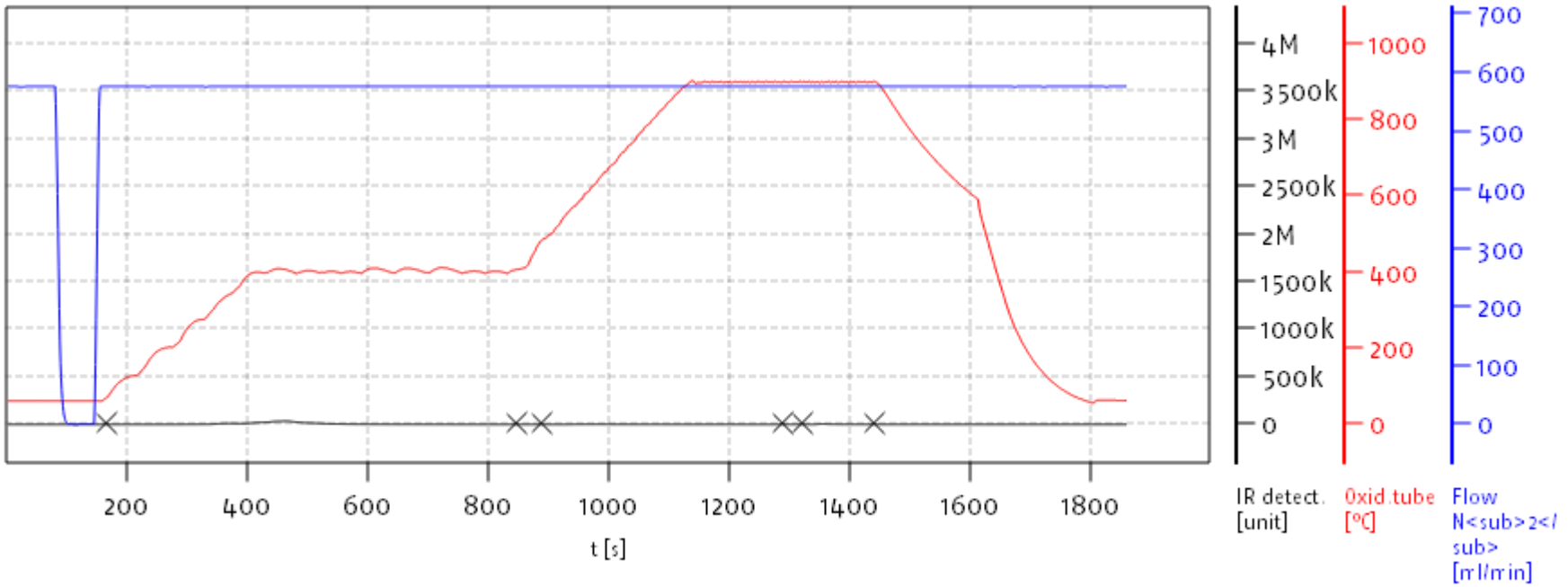
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
68	46	21G0178-10RE1	583.40		1.00	CARBON	8/4/2021 3:58 AM	0.052	0.008	0.060	bl,C2u	145 727	10 068	6 078	1.0358	1.0000



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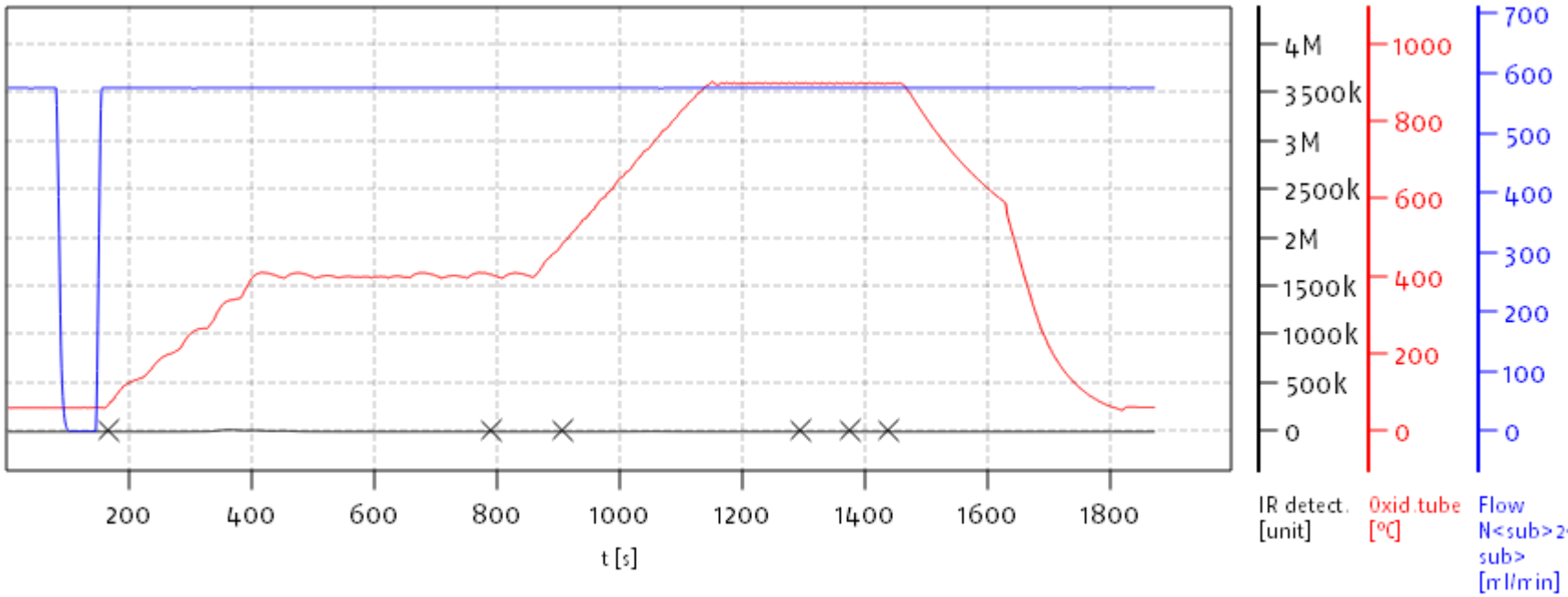
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
69	47	BJH0016-MRL1	5285.00		1.00	CARBON	8/4/2021 4:30 AM	0.003	0.001	0.004	bl,C2u	65 193	9 979	195	1.0358	1.0000



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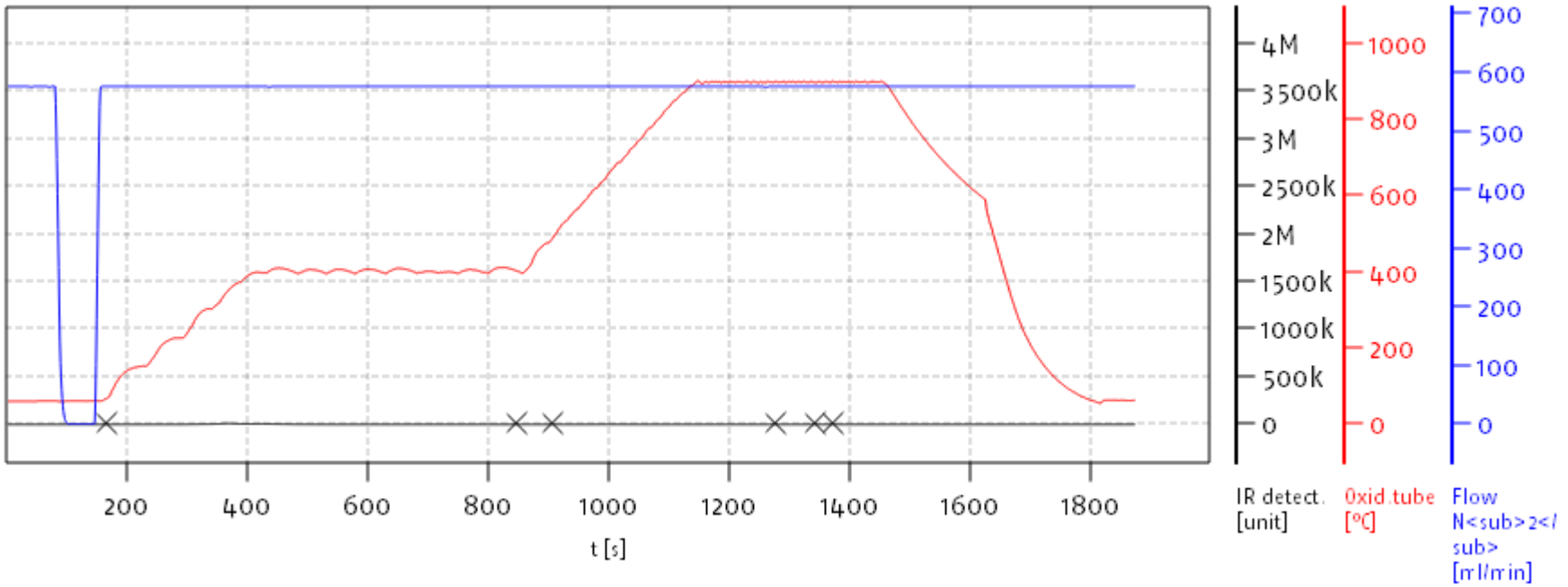
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
70	48	BJH0016-BLK1	503.90		1.00	CARBON	8/4/2021 5:01 AM	0.024	0.007	0.030	bl,C3u,C2u	36 263	2 964	72	1.0358	1.0000



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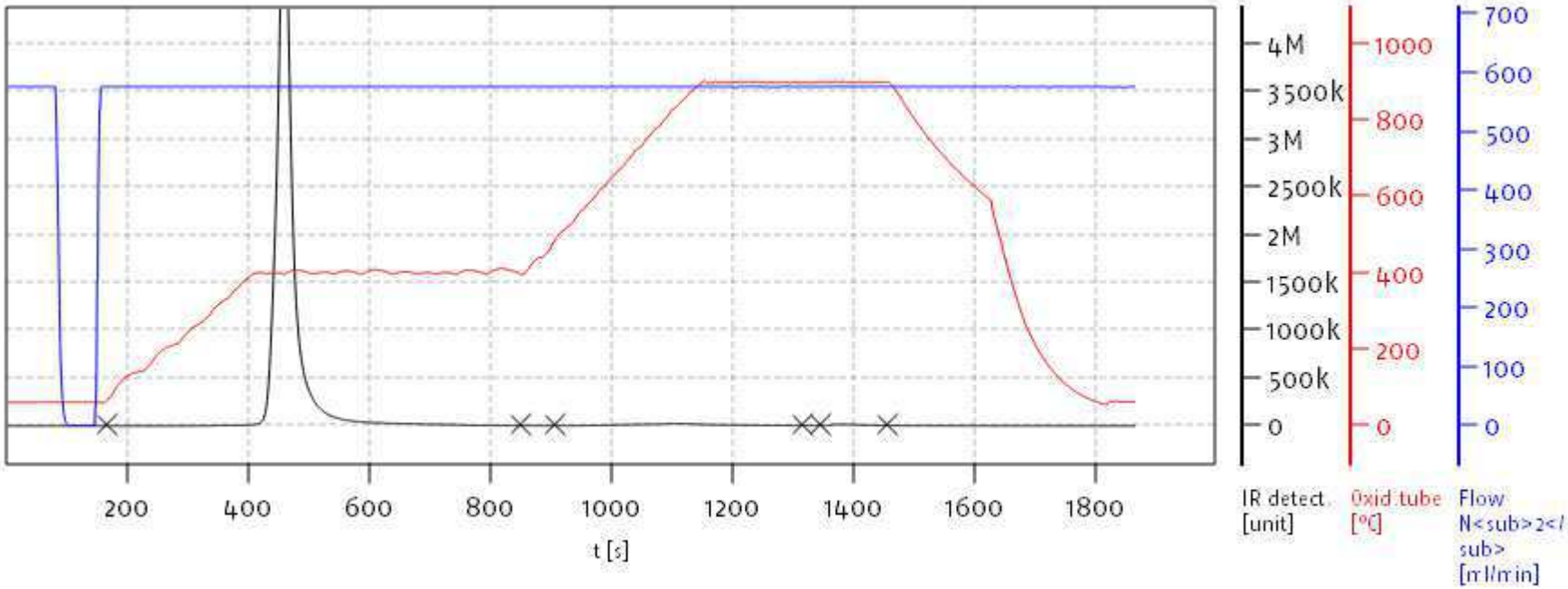
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
71	49	BJH0016-BS1	23.90		1.00	CARBON	8/4/2021 5:33 AM	43.645	1.121	44.766	bl	6 466 300	154 693	37 220	1.0358	1.0000



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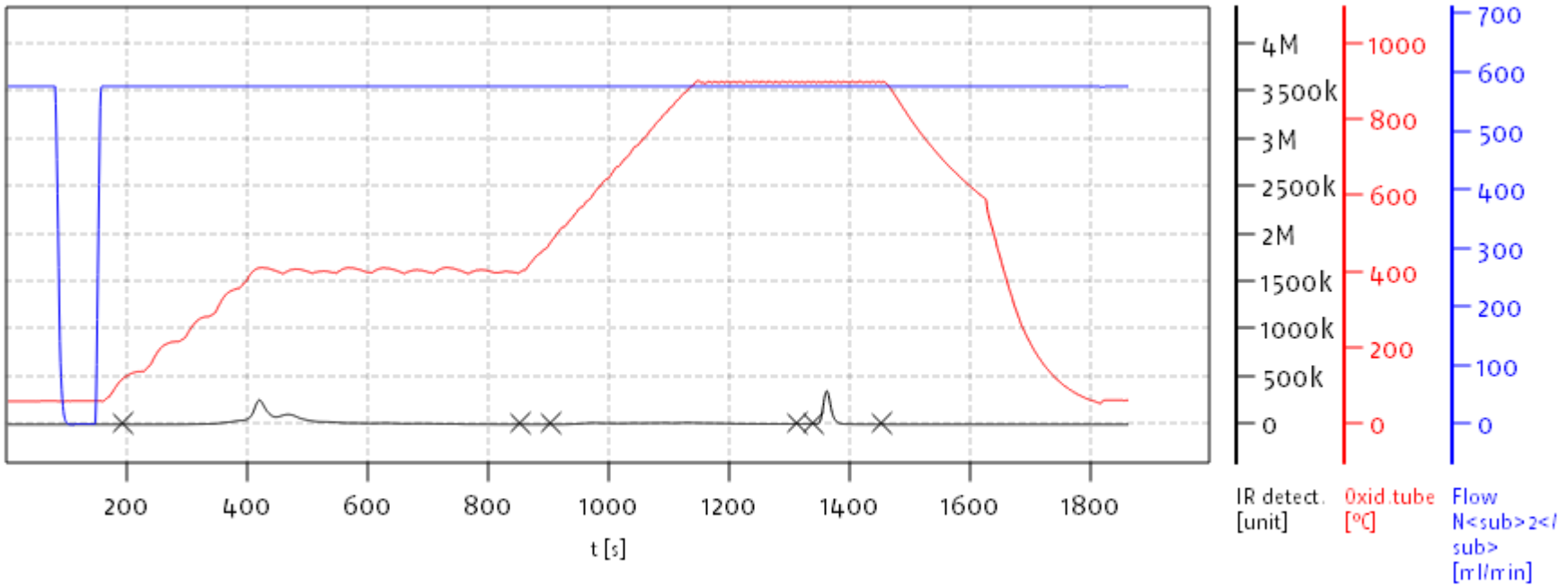
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
72	50	BJH0016-SRM1	49.00		1.00	CARBON	8/4/2021 6:04 AM	2.798	0.549	3.348	bl	627 822	155 481	200 871	1.0358	1.0000



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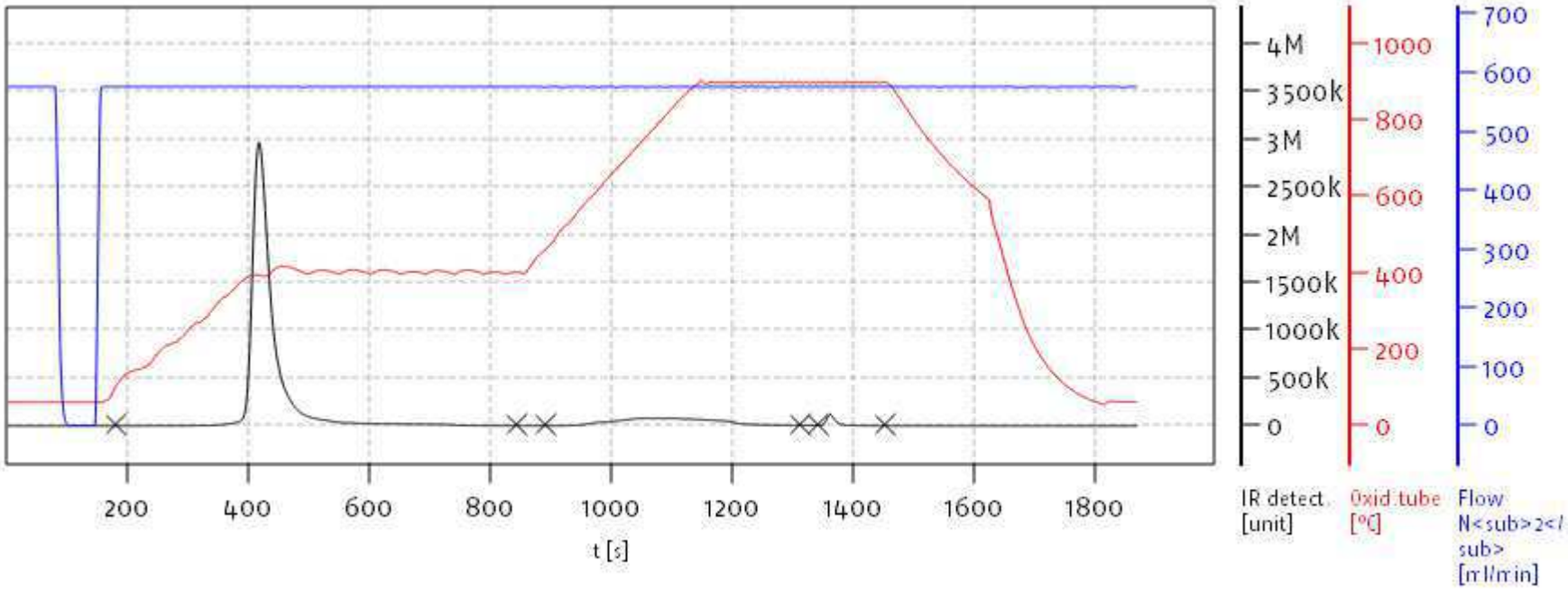
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
73	51	21G0211-04	506.40		1.00	CARBON	8/4/2021 6:36 AM	1.381	0.196	1.576	bl	4 267 440	623 831	81 277	1.0358	1.0000



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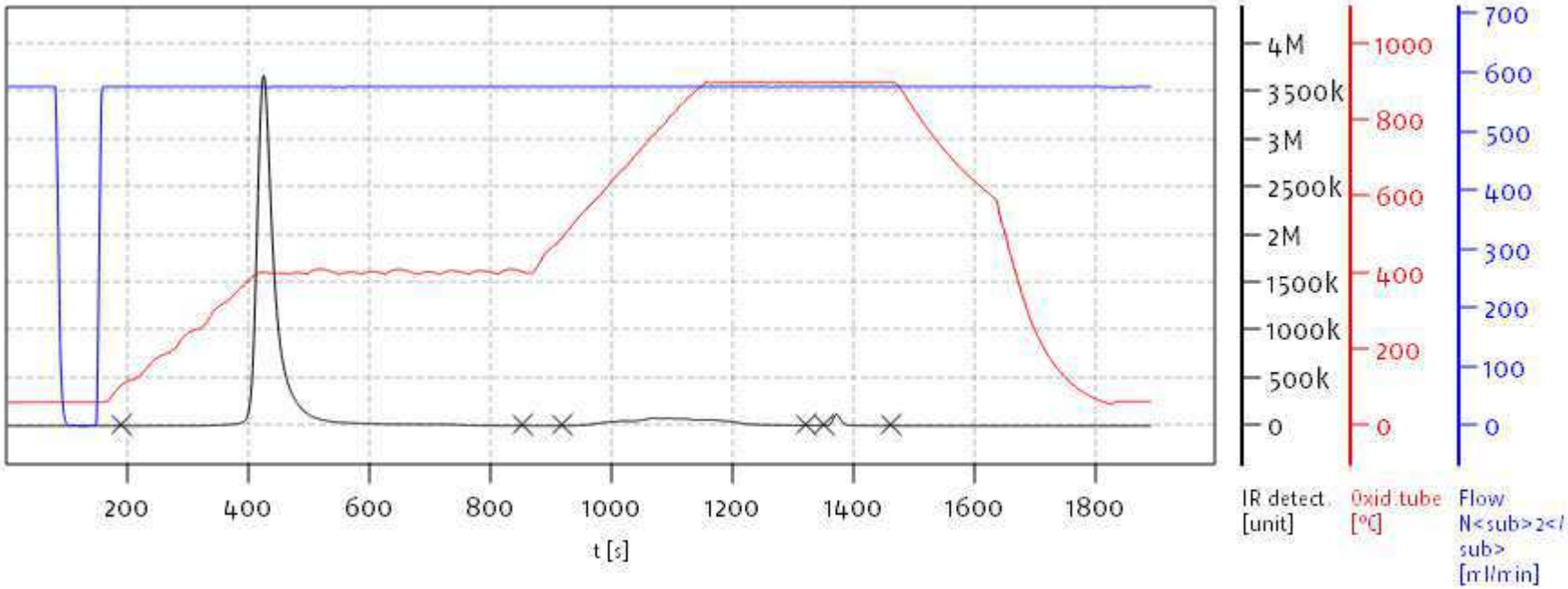
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
74	52	BJH0016-DUP1	559.60		1.00	CARBON	8/4/2021 7:08 AM	1.420	0.165	1.585	bl	4 872 270	582 056	74 492	1.0358	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
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Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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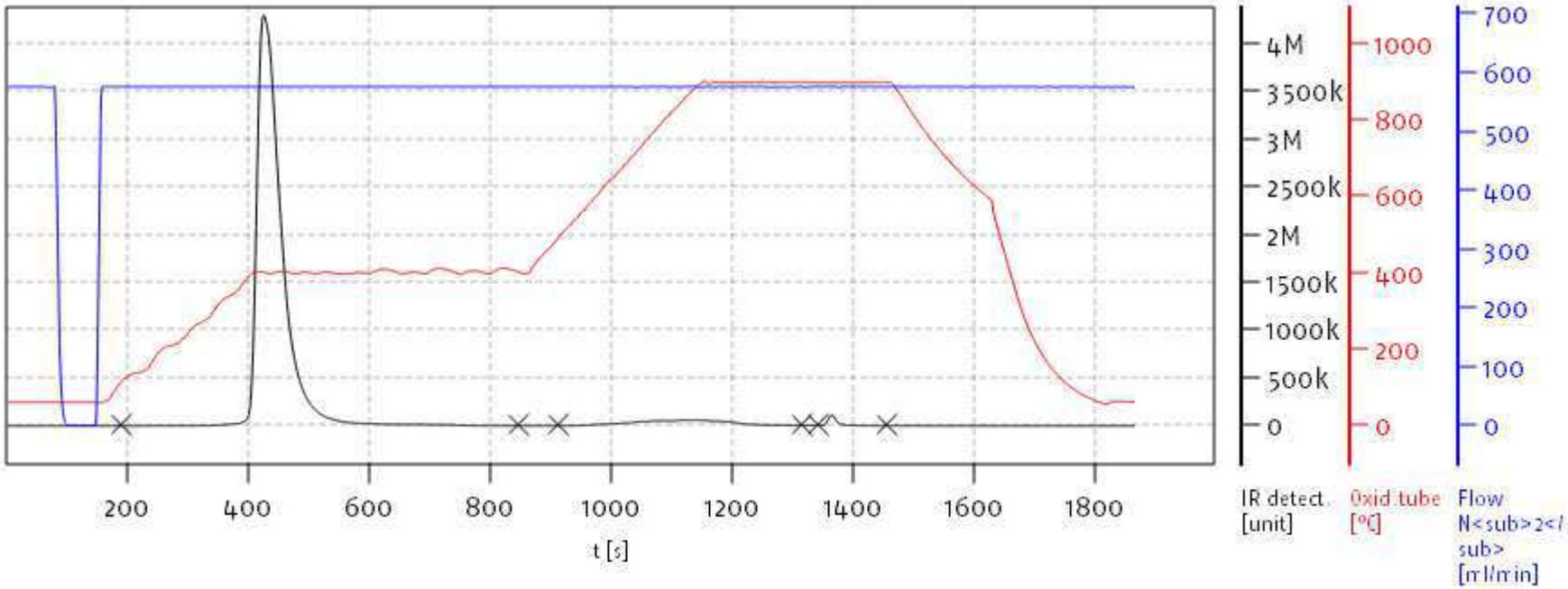
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
75	53	BJH0016-MS1	529.80	0.0108	1.00	CARBON	8/4/2021 7:39 AM	2.328	0.133	2.461	bl	7 623 910	437 299	74 600	1.0358	1.0000



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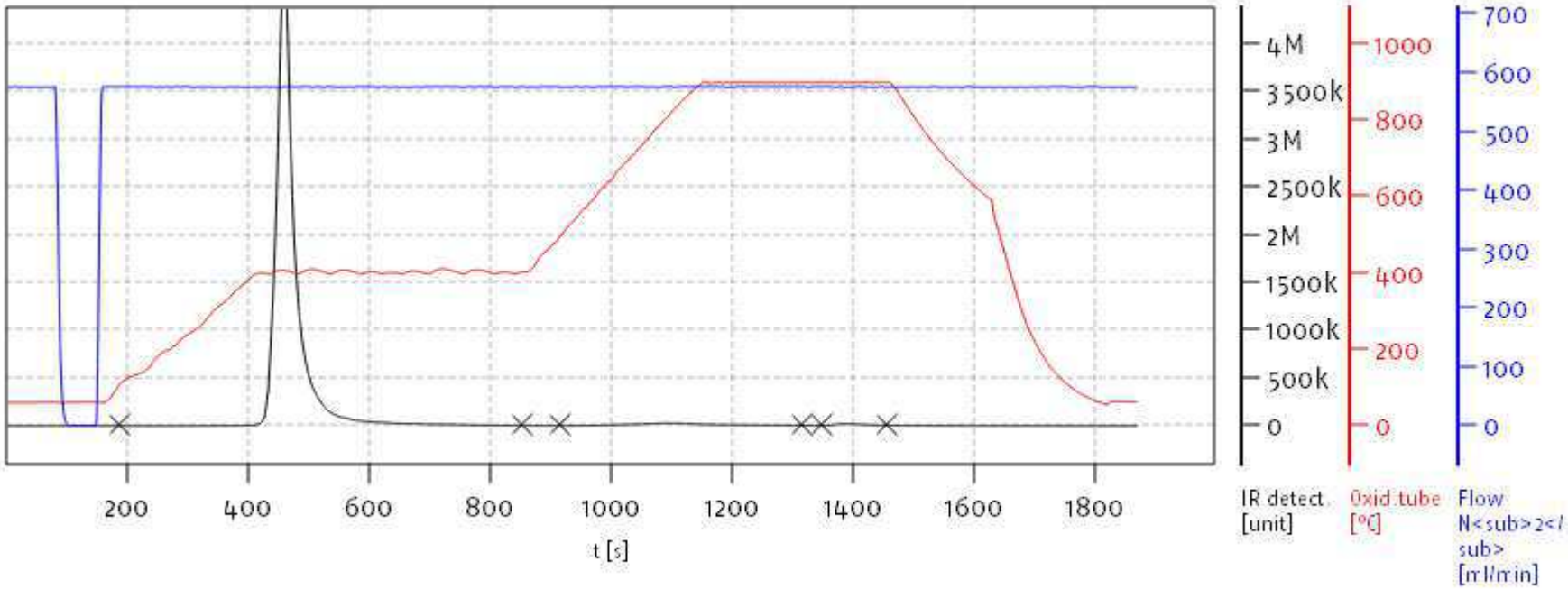
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
76	54	SJH0006-CCV6	24.40		1.00	CARBON	8/4/2021 8:11 AM	42.406	1.320	43.725	bl	6 401 110	189 776	50 108	1.0358	1.0000



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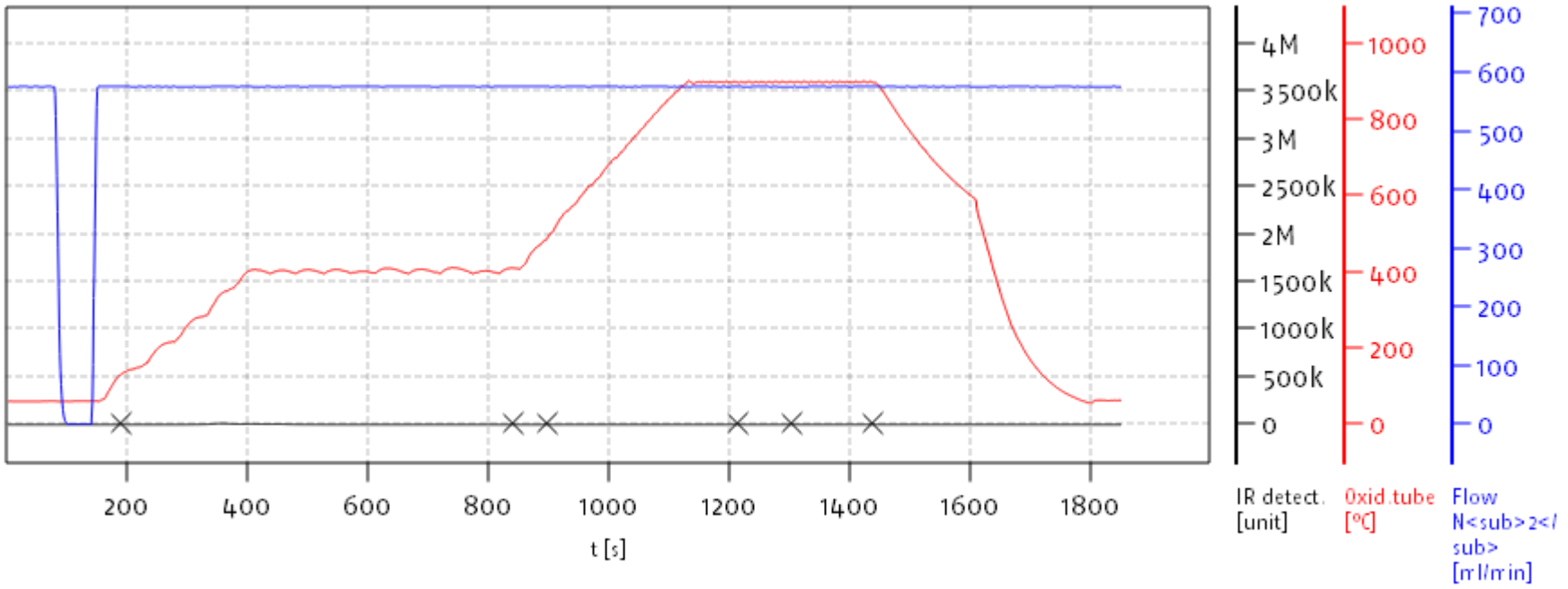
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
77	55	SJH0006-CCB6	578.50		1.00	CARBON	8/4/2021 8:42 AM	0.021	0.006	0.027	bl,C3u,C2u	38 415	1 384	847	1.0358	1.0000



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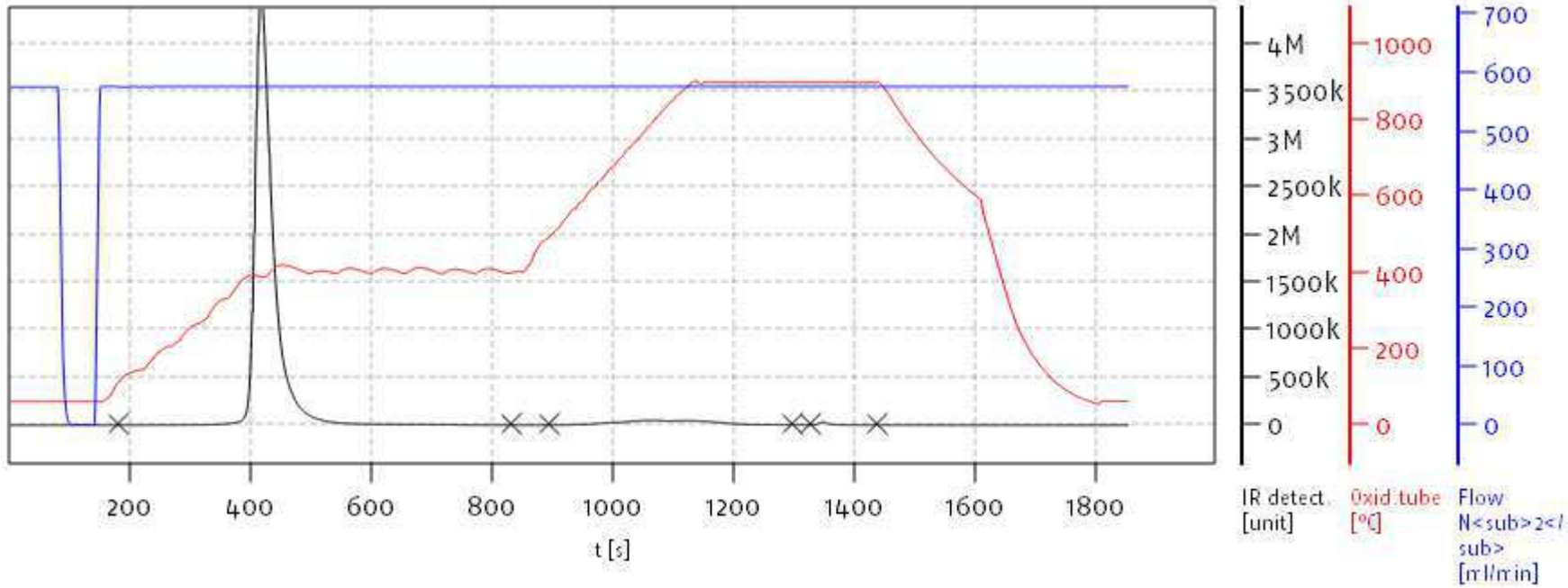
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
78	56	21G0211-05	561.90		1.00	CARBON	8/4/2021 9:13 AM	1.682	0.103	1.785	bl	5 863 020	355 028	26 044	1.0358	1.0000



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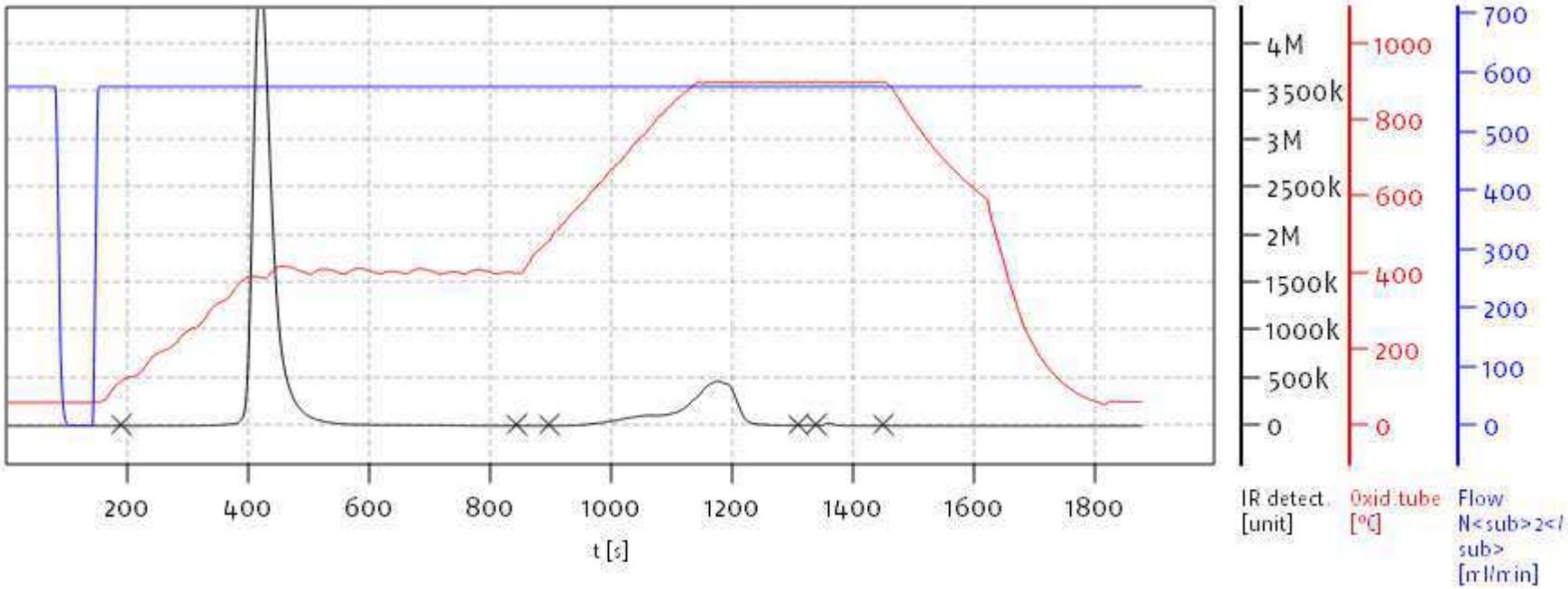
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
79	57	21G0211-06	687.00		1.00	CARBON	8/4/2021 9:45 AM	1.550	0.420	1.970	bl	6 616 950	1 855 910	22 598	1.0358	1.0000



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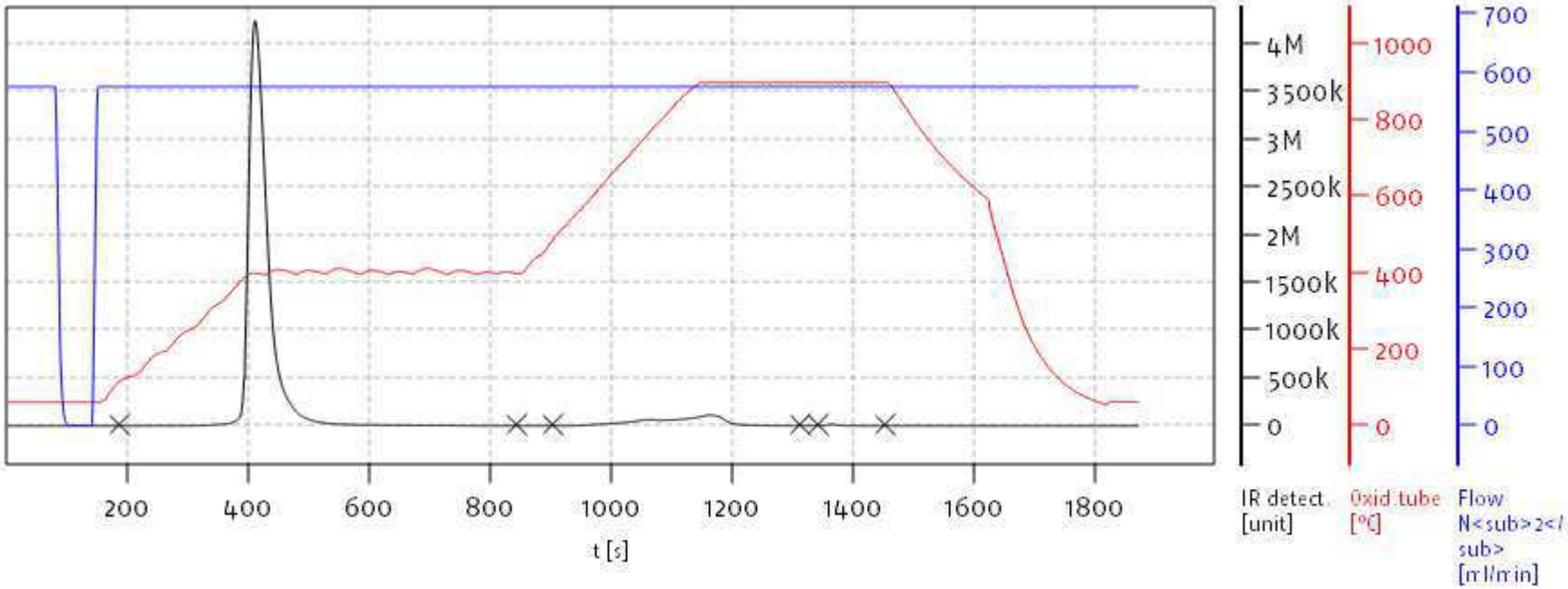
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
80	58	21G0211-07	585.50		1.00	CARBON	8/4/2021 10:17 AM	1.590	0.148	1.738	bl	5 786 180	543 638	14 898	1.0358	1.0000



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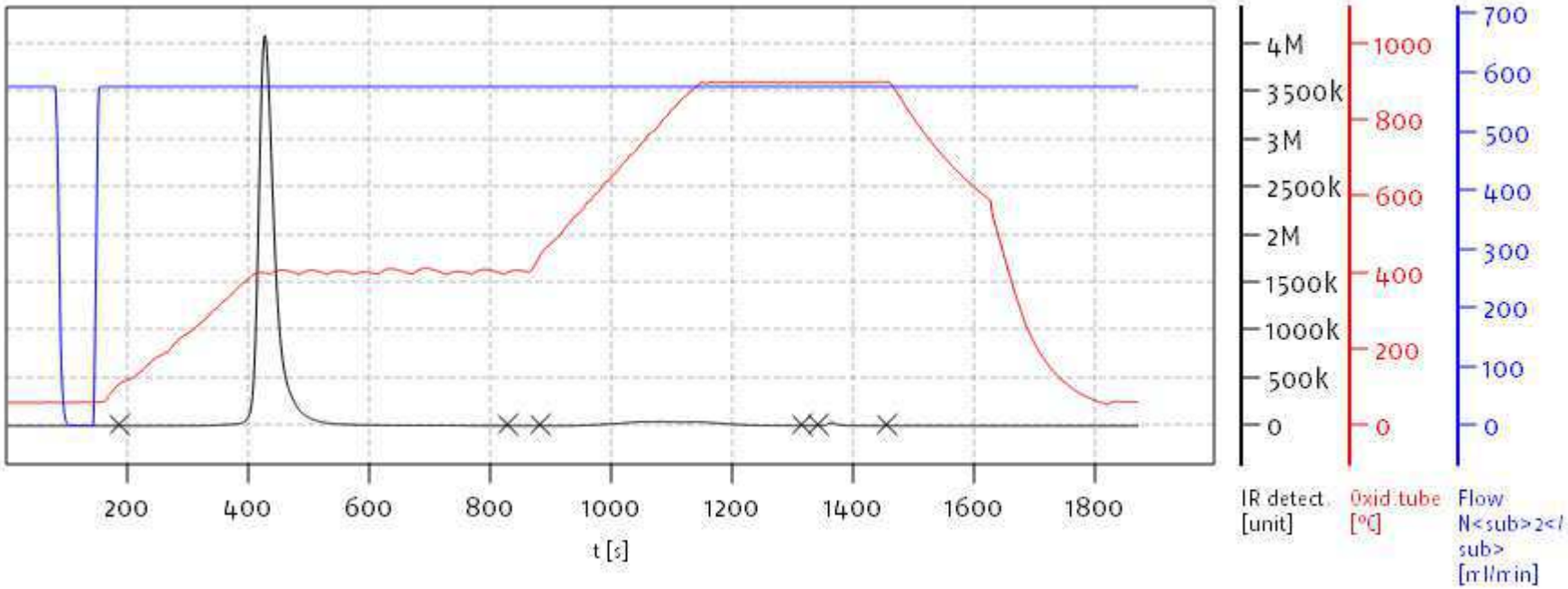
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
81	59	21G0211-08	508.70		1.00	CARBON	8/4/2021 10:48 AM	1.561	0.102	1.663	bl	4 916 210	317 146	25 371	1.0358	1.0000



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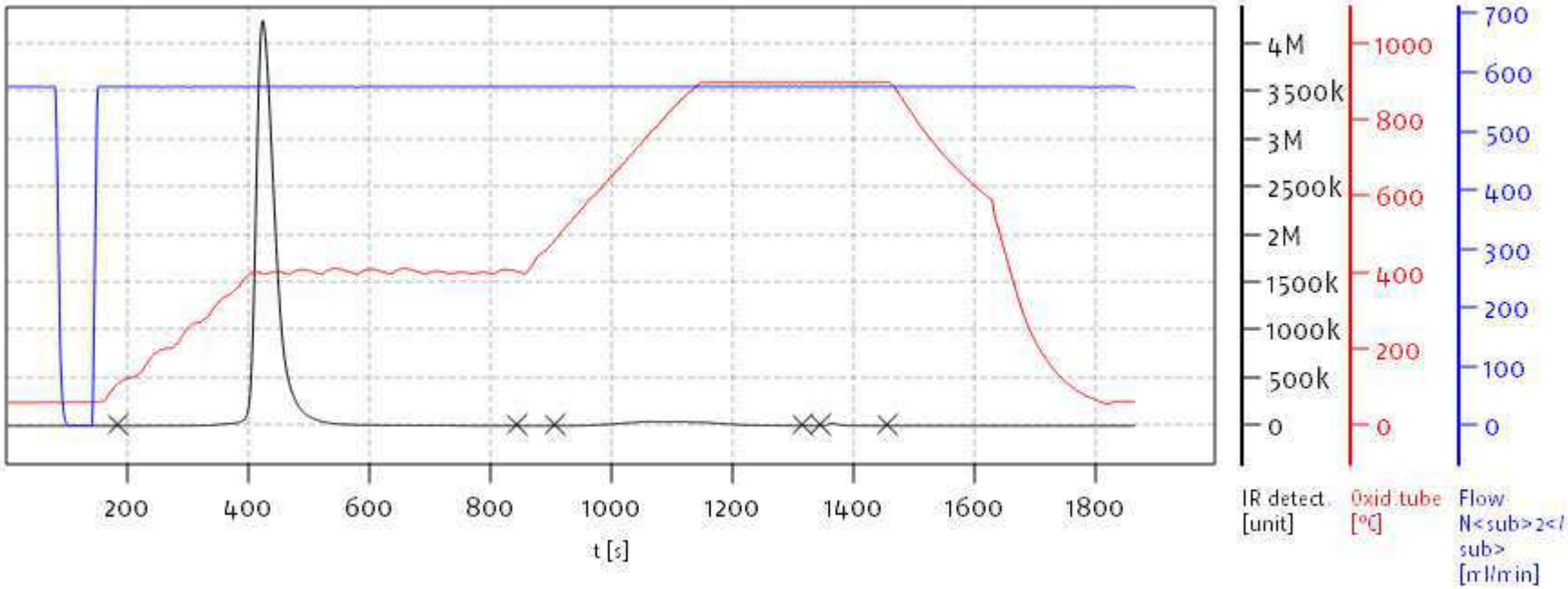
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
82	60	21G0211-09	594.70		1.00	CARBON	8/4/2021 11:20 AM	1.615	0.084	1.699	bl	5 962 440	305 455	22 610	1.0358	1.0000



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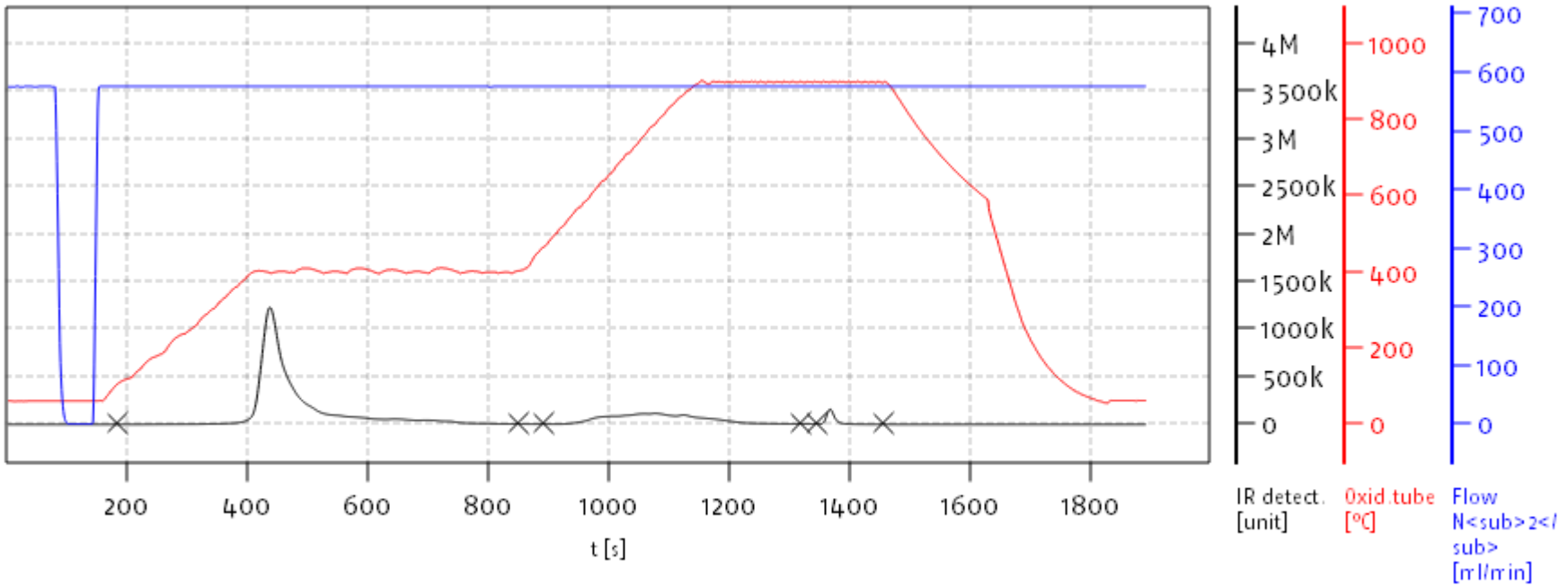
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
83	61	21G0211-10	546.90		1.00	CARBON	8/4/2021 11:52 AM	0.852	0.239	1.091	bl	2 788 800	830 562	98 116	1.0358	1.0000



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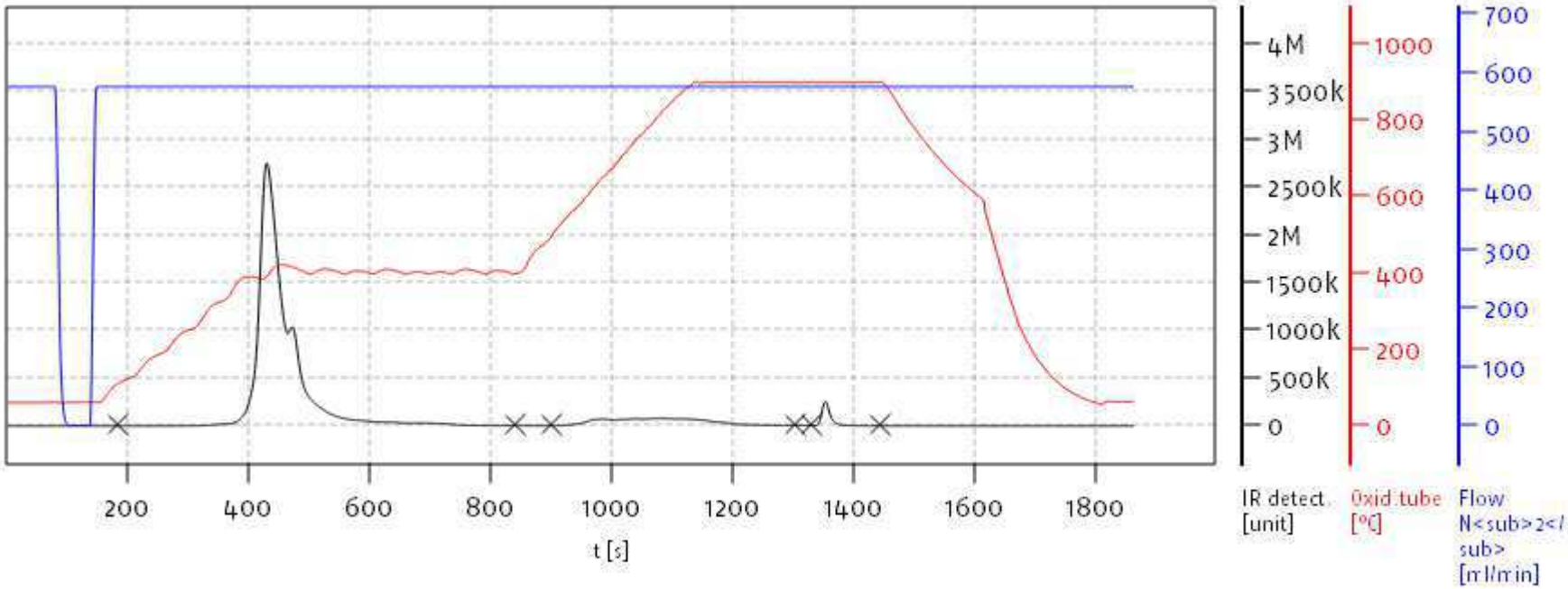
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
84	62	21G0211-11	537.20		1.00	CARBON	8/4/2021 12:23 PM	1.672	0.190	1.862	bl	5 442 420	643 683	157 005	1.0358	1.0000



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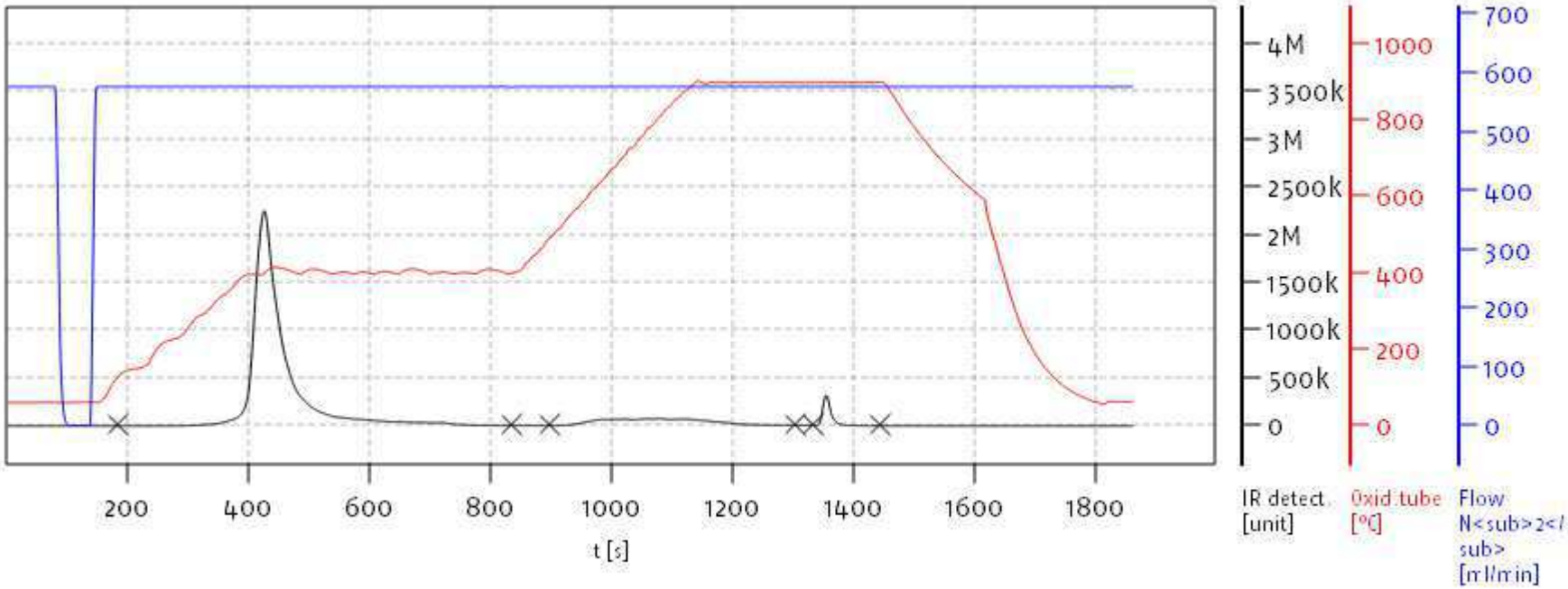
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
85	63	21G0211-12	594.20		1.00	CARBON	8/4/2021 12:55 PM	1.313	0.169	1.482	bl	4 664 280	632 551	195 205	1.0358	1.0000



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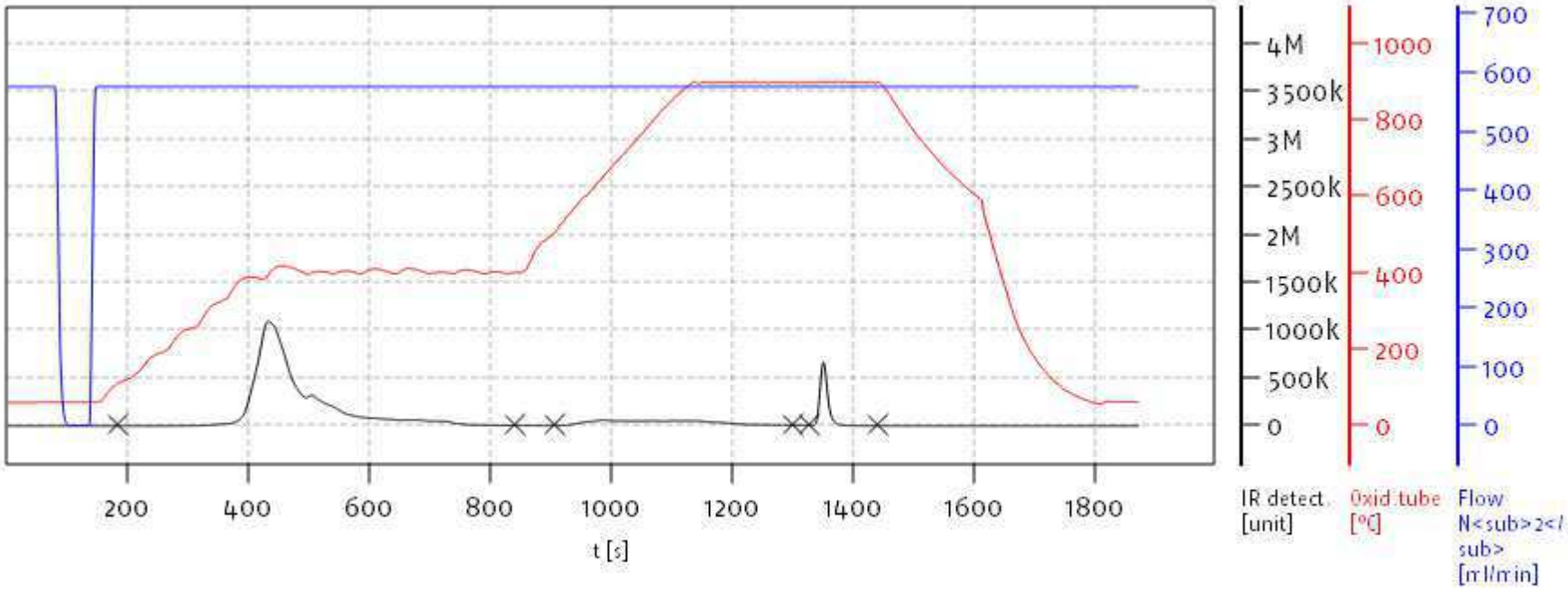
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
86	64	21G0211-13	681.00		1.00	CARBON	8/4/2021 1:26 PM	0.945	0.121	1.067	bl	3 637 950	516 781	373 835	1.0358	1.0000



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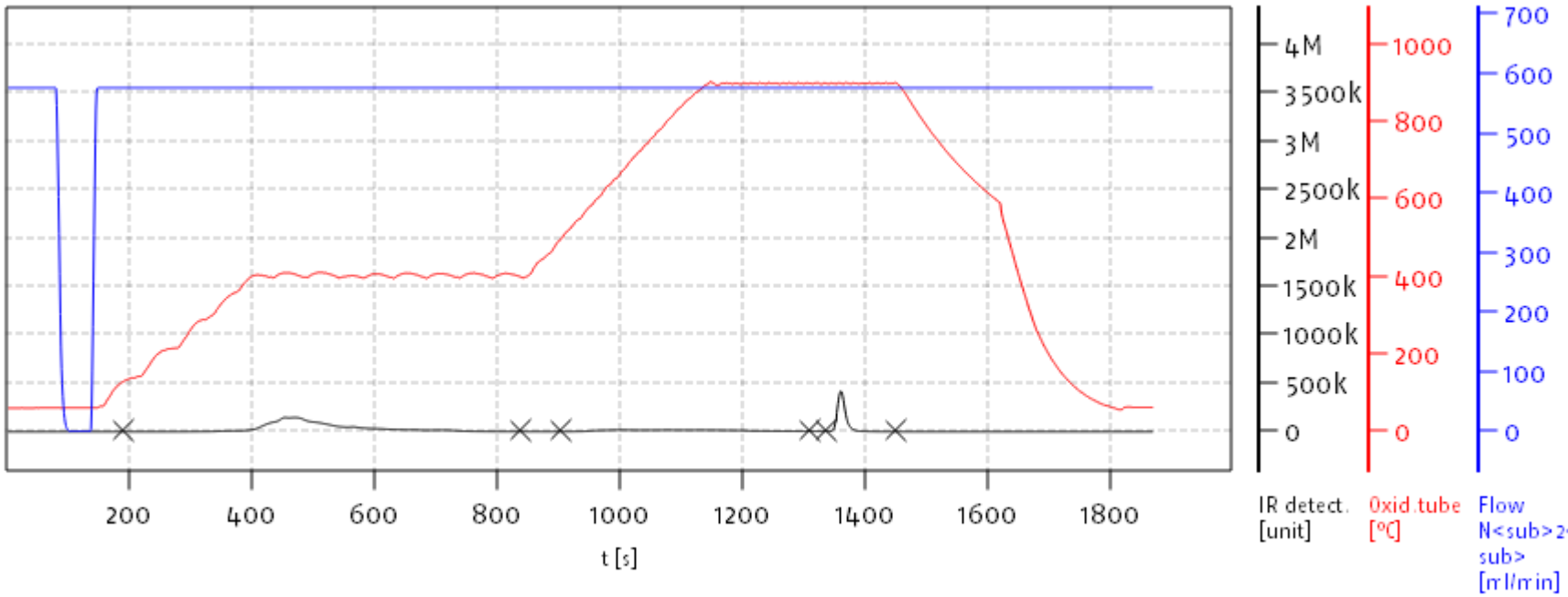
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
87	65	21G0211-14	622.10		1.00	CARBON	8/4/2021 1:58 PM	0.258	0.048	0.306	bl	736 127	175 418	240 623	1.0358	1.0000



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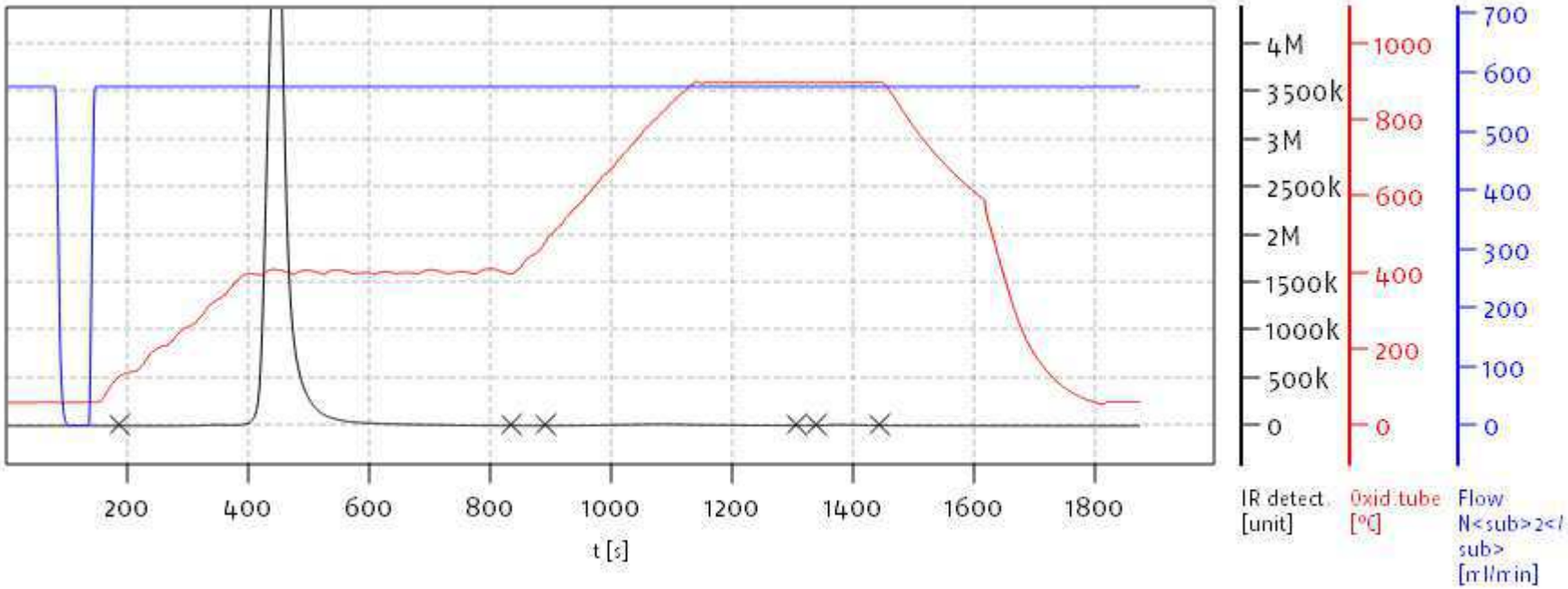
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
88	66	SJH0006-CCV7	28.10		1.00	CARBON	8/4/2021 2:30 PM	44.717	0.807	45.524	bl	7 813 570	128 006	27 796	1.0358	1.0000



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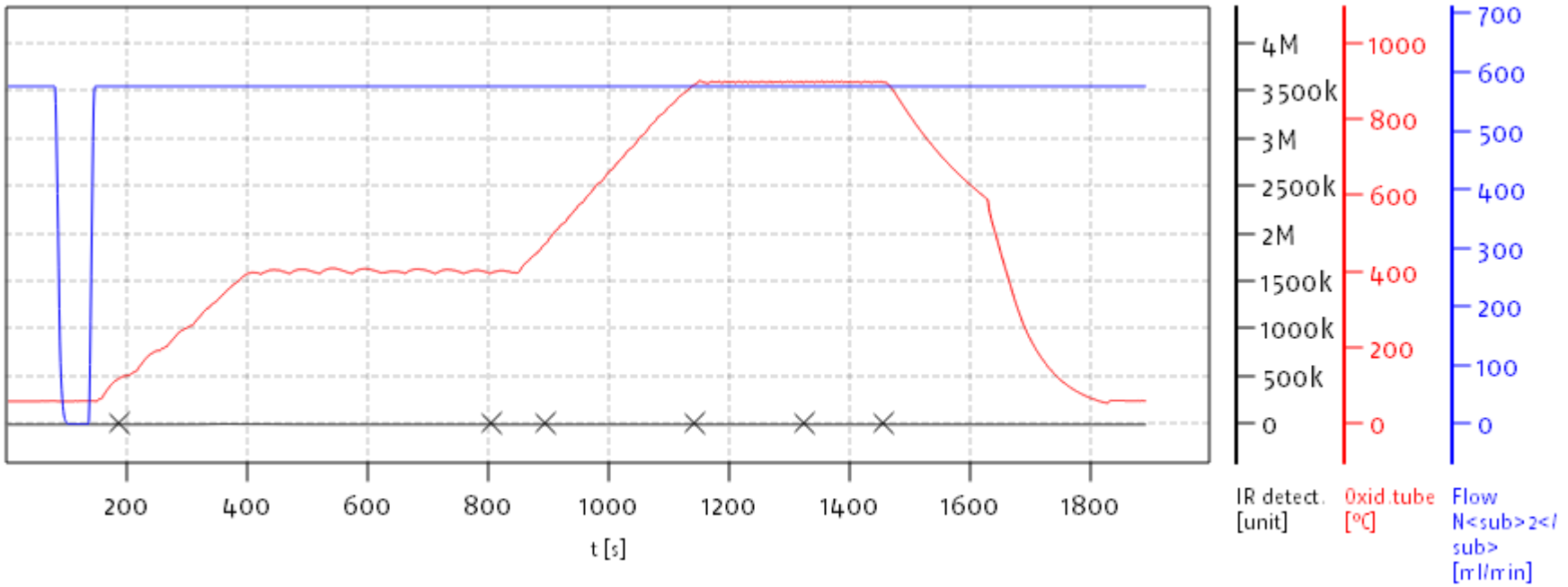
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
89	67	SJH0006-CCB7	616.70		1.00	CARBON	8/4/2021 3:02 PM	0.015	0.005	0.020	bl,C3u,C2u	19 447	1 327	671	1.0358	1.0000



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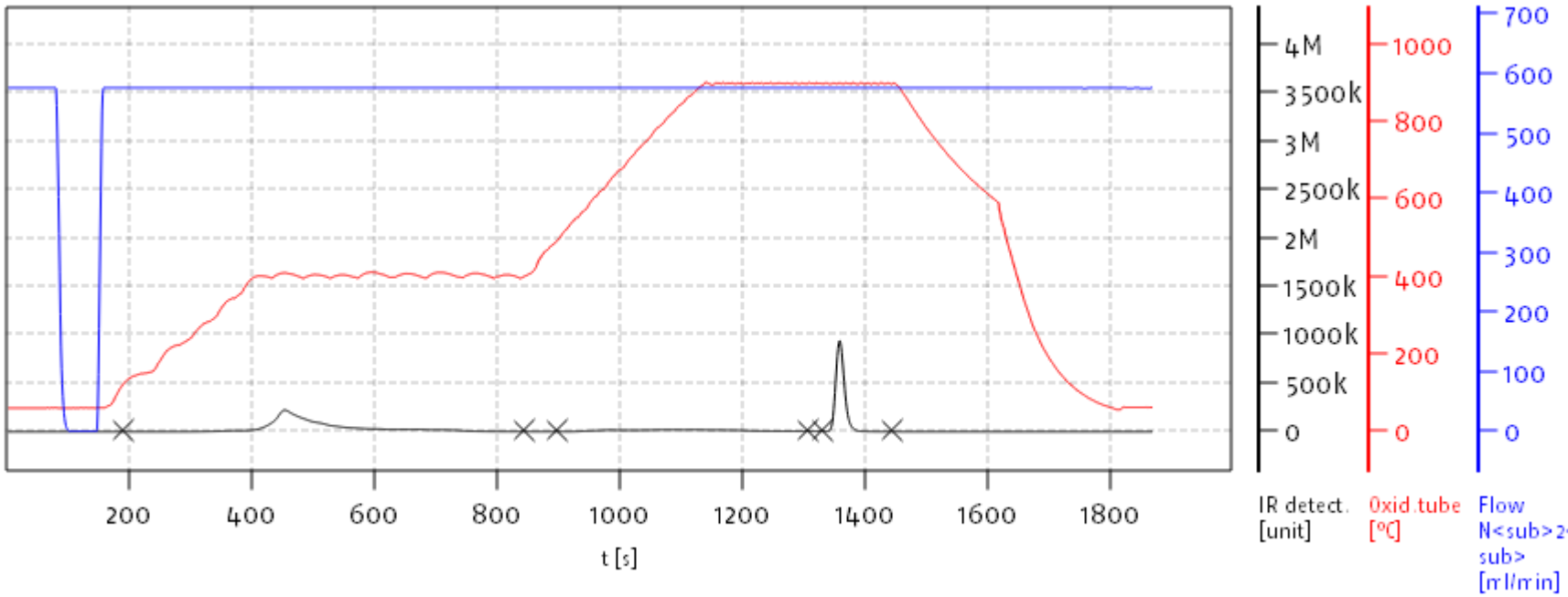
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
90	68	21G0211-15	511.70		1.00	CARBON	8/4/2021 3:33 PM	0.435	0.061	0.496	bl	797 889	183 963	580 331	1.0358	1.0000



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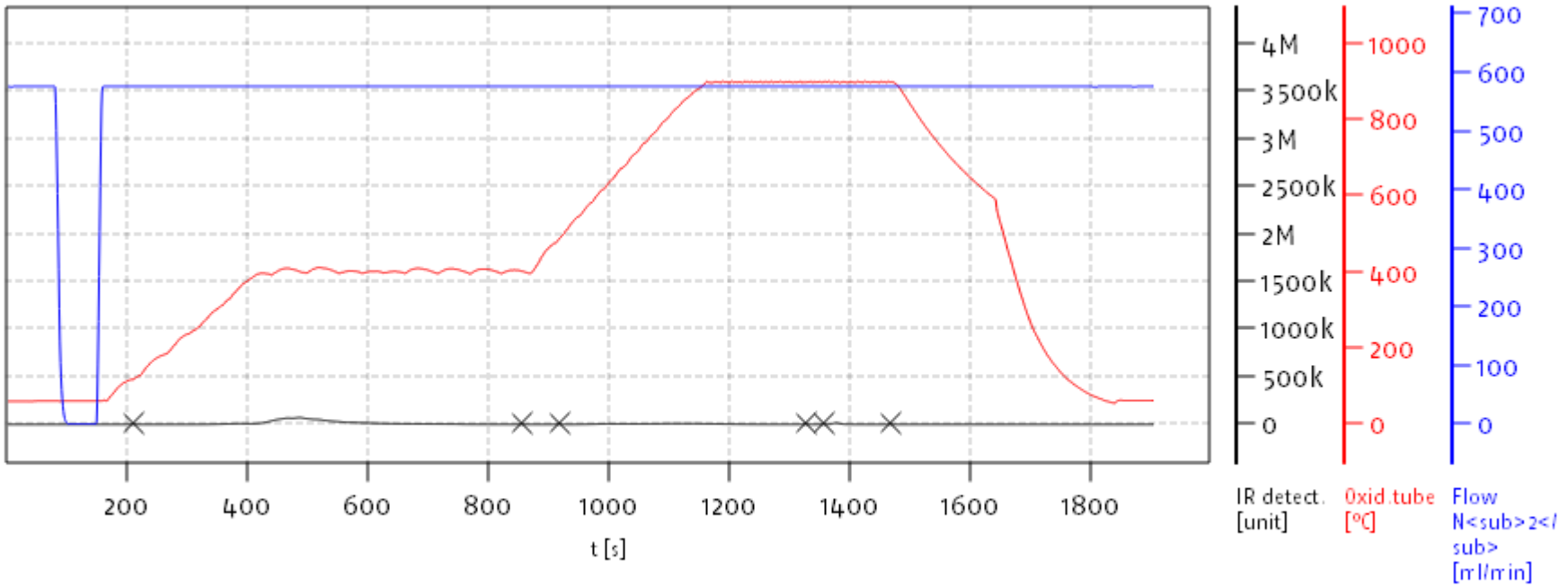
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
91	69	21G0211-16	763.00		1.00	CARBON	8/4/2021 4:05 PM	0.081	0.017	0.098	bl	340 510	63 964	9 435	1.0358	1.0000



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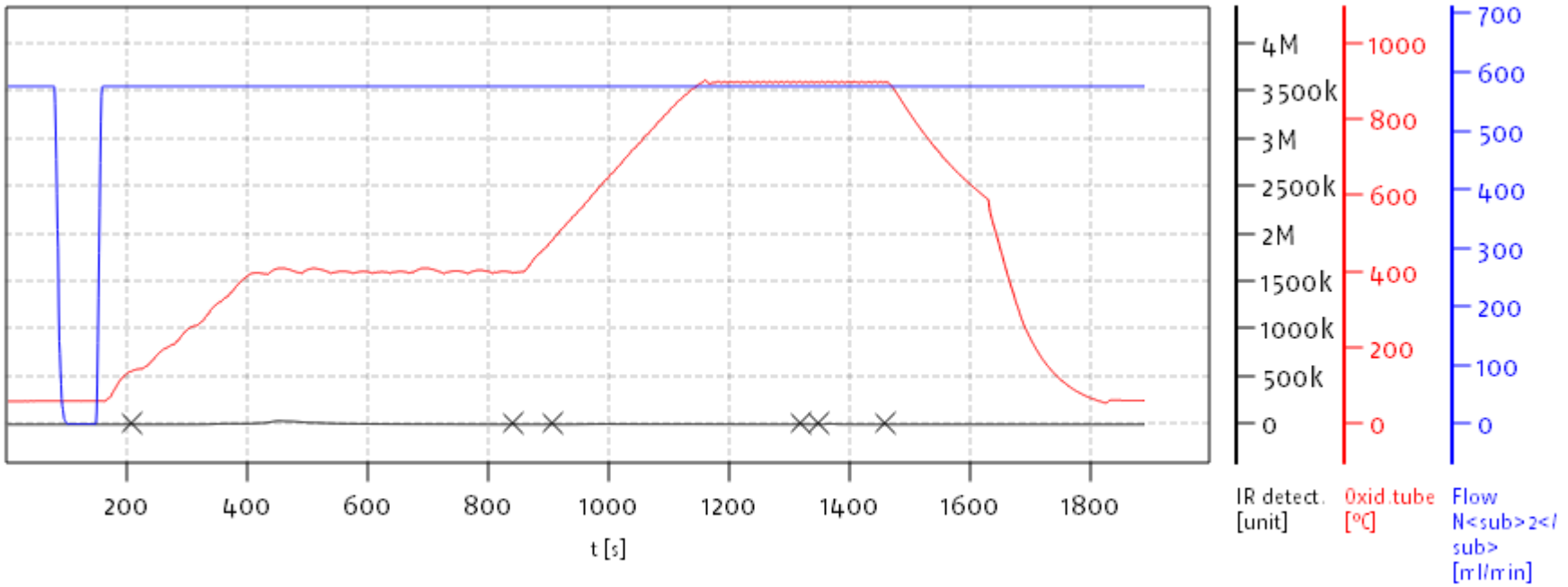
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
92	70	21G0213-01	542.20		1.00	CARBON	8/4/2021 4:37 PM	0.062	0.014	0.077	bl,C2u	168 361	31 329	5 842	1.0358	1.0000



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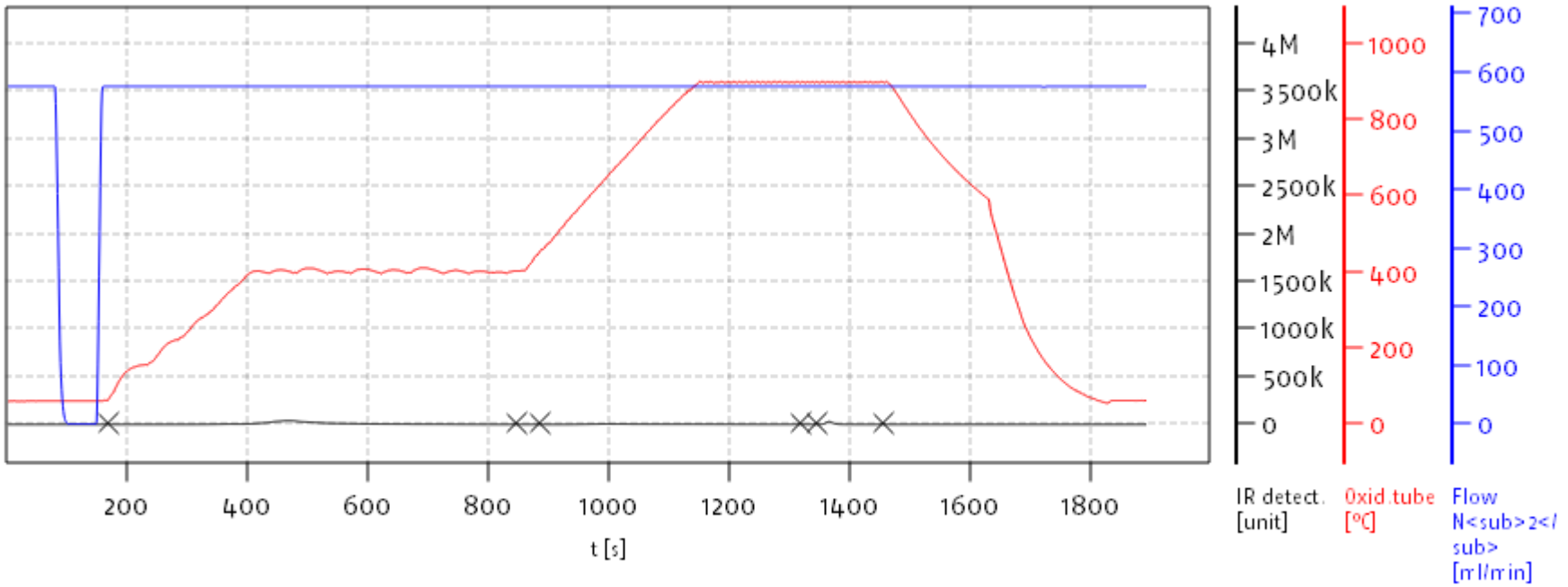
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
93	71	21G0213-02	539.10		1.00	CARBON	8/4/2021 5:09 PM	0.066	0.015	0.082	bl	170 207	34 273	16 332	1.0358	1.0000



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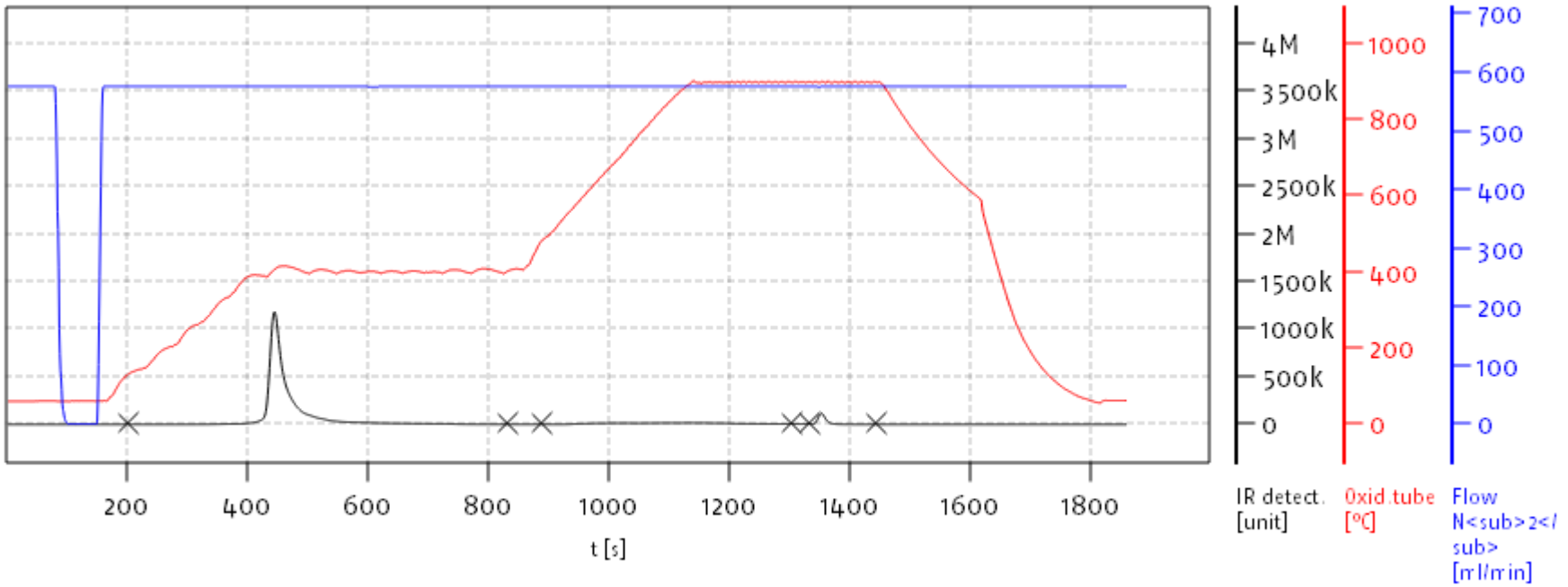
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
94	72	21G0213-03	599.20		1.00	CARBON	8/4/2021 5:41 PM	0.420	0.046	0.465	bl	1 473 960	158 178	67 298	1.0358	1.0000



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Access: soliTOC superuser

Date: Sat Aug 7 21:02:20 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

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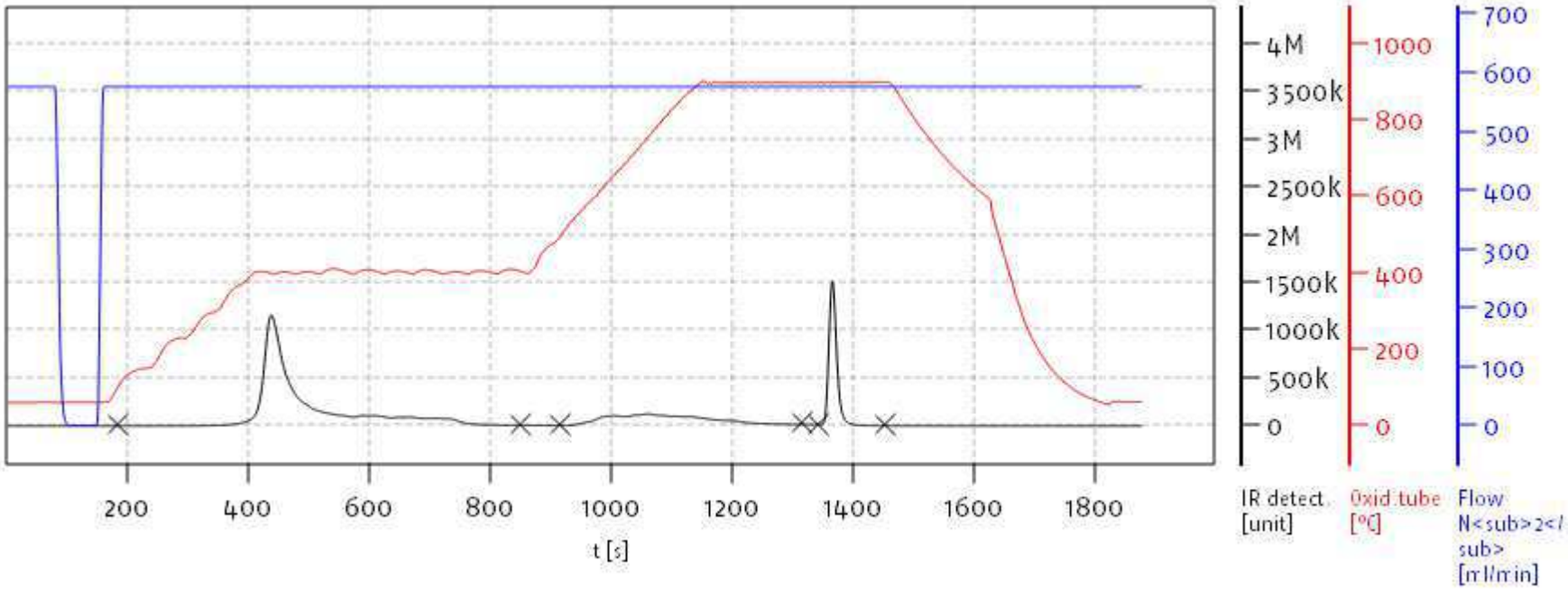
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
95	73	21G0213-04	665.40		1.00	CARBON	8/4/2021 6:12 PM	0.905	0.226	1.132	bl	2 897 880	958 031	871 694	1.0358	1.0000



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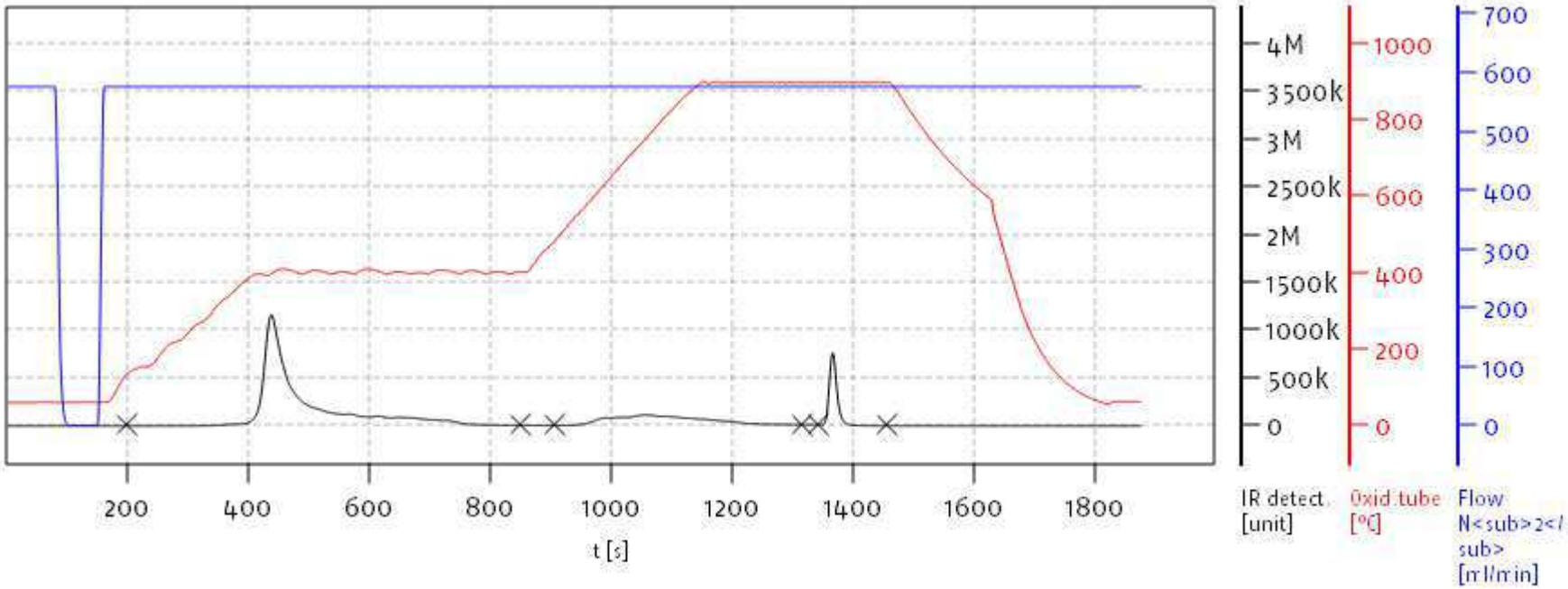
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
96	74	21G0213-05	614.10		1.00	CARBON	8/4/2021 6:44 PM	0.854	0.214	1.068	bl	2 832 240	836 053	432 032	1.0358	1.0000



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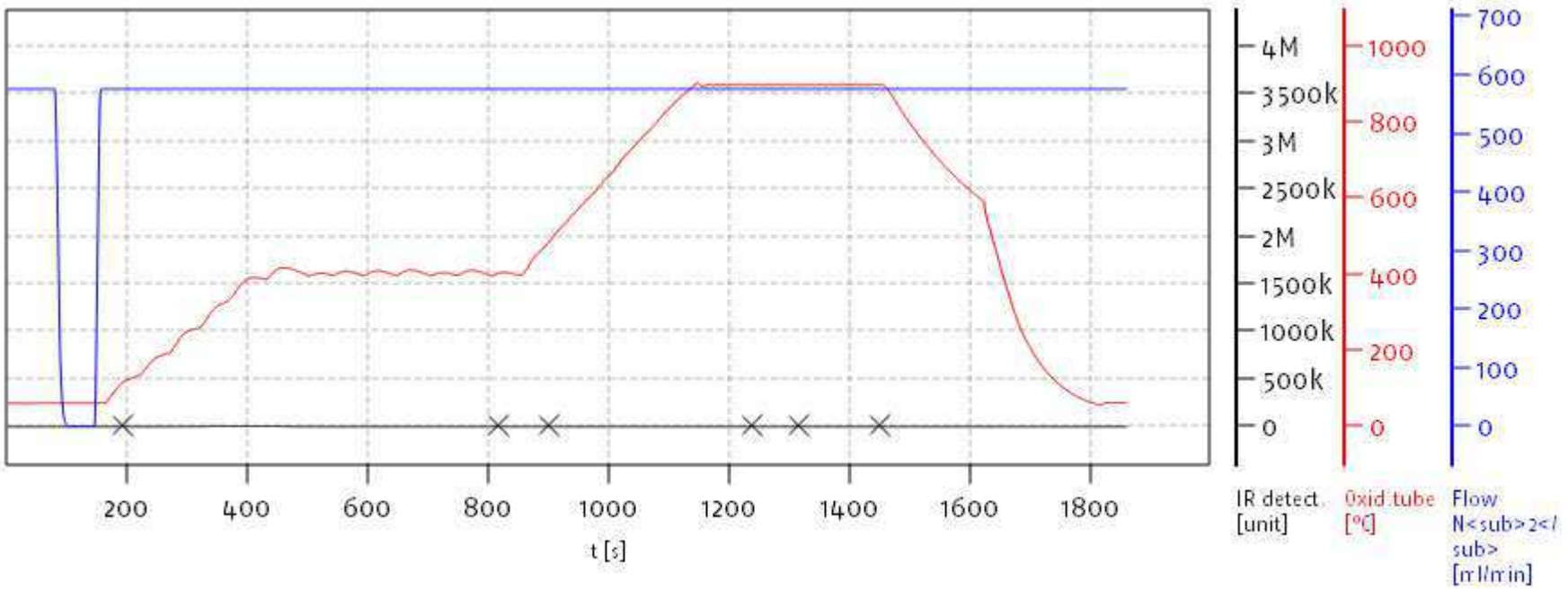
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
97	75	BLANK	1.00		1.00	CARBON	8/4/2021 7:15 PM	0.000	0.000	0.000	bl	29 596	1 890	153	1.0358	1.0000



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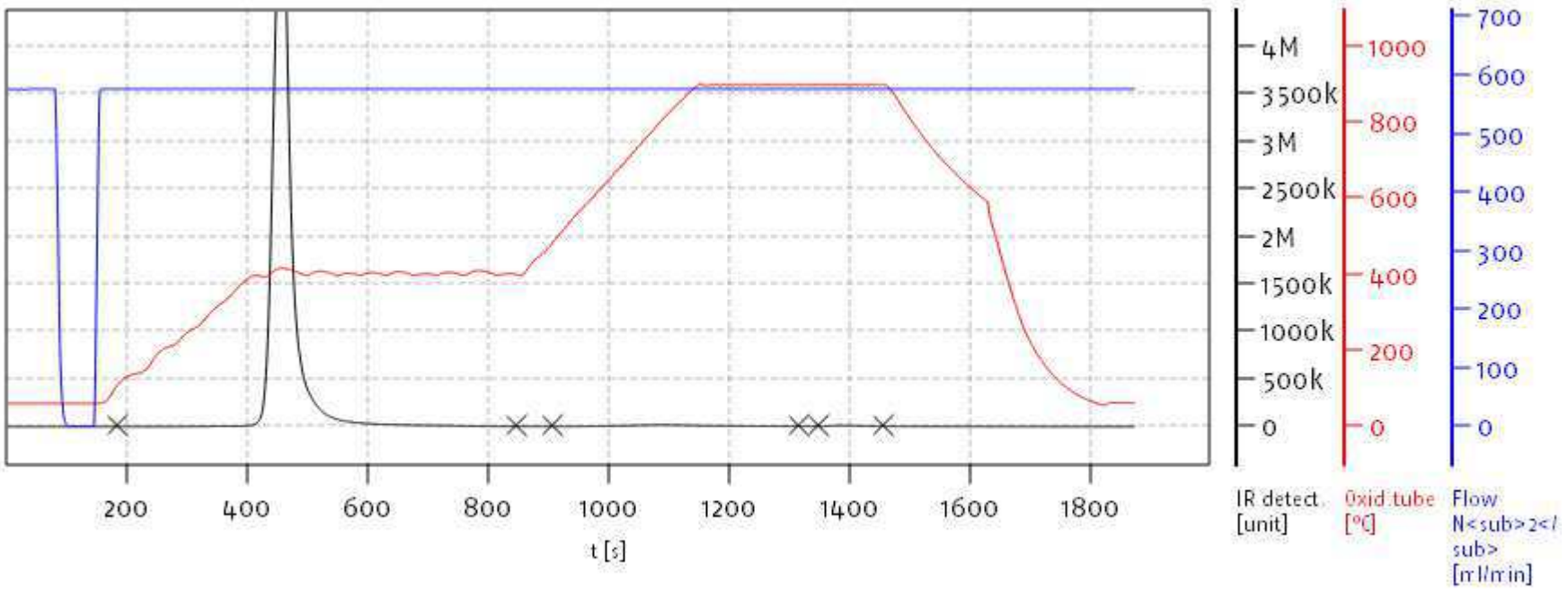
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
98	76	Dfactor	26.70		1.00	CARBON	8/4/2021 7:47 PM	44.726	0.850	45.577	bl	7 423 470	128 155	29 360	1.0355	1.0000



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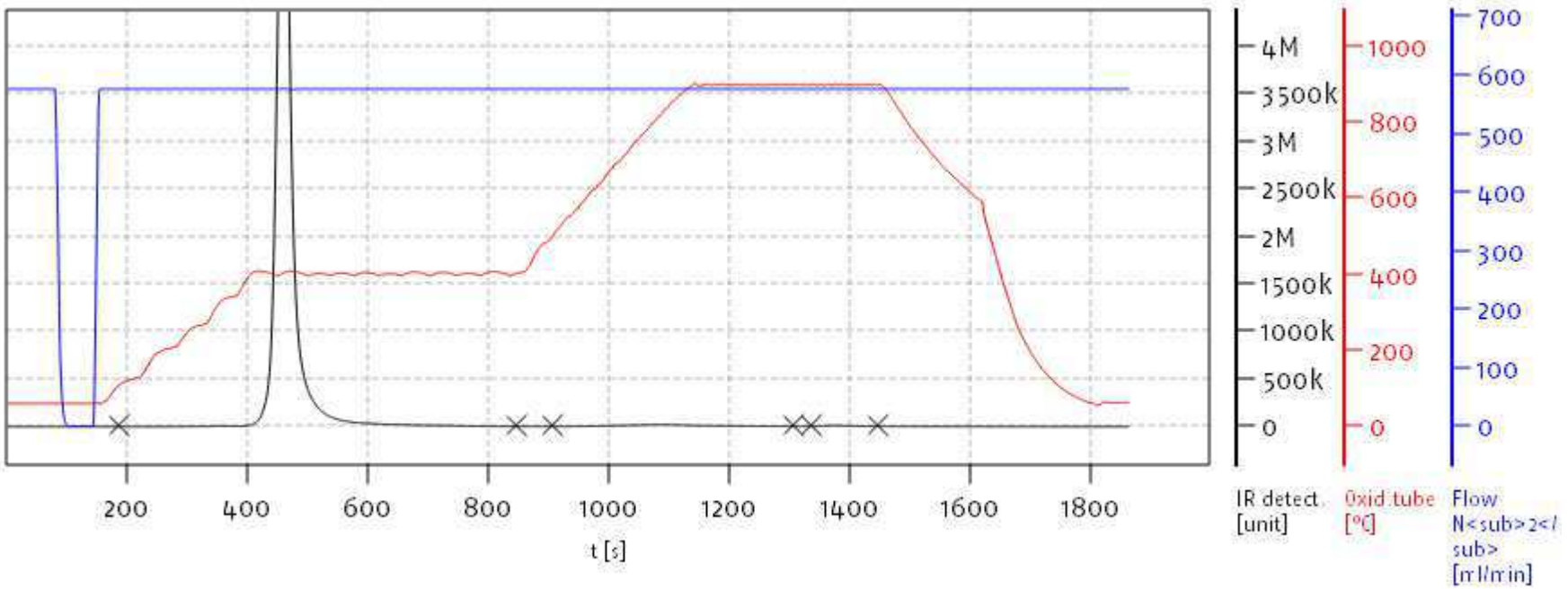
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
99	77	Dfactor	27.00		1.00	CARBON	8/4/2021 8:18 PM	44.712	0.907	45.620	bl	7 524 730	139 766	27 450	1.0331	1.0000



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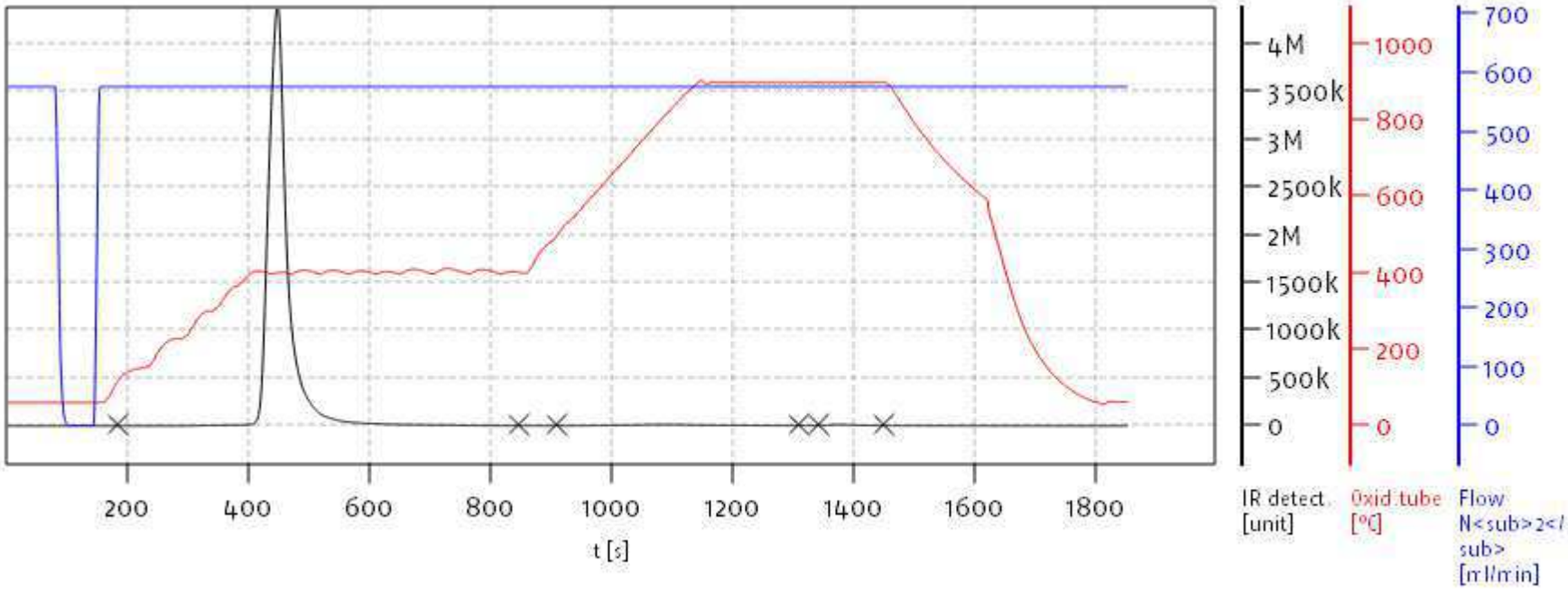
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
100	78	SJH0006-CCV8	21.60		1.00	CARBON	8/4/2021 8:50 PM	44.657	0.840	45.497	bl	5 991 650	98 530	28 160	1.0343	1.0000



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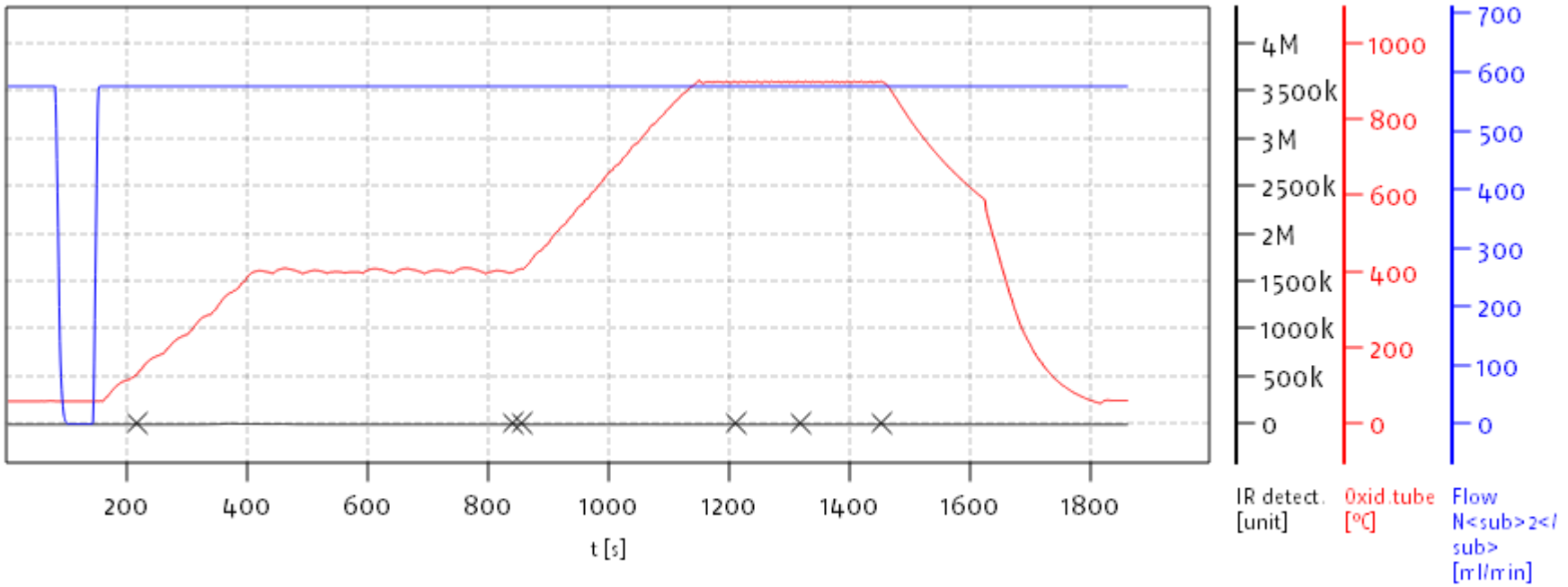
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
101	79	SJH0006-CCB8	640.50		1.00	CARBON	8/4/2021 9:21 PM	0.016	0.005	0.022	bl,C3u,C2u	27 340	2 022	885	1.0343	1.0000



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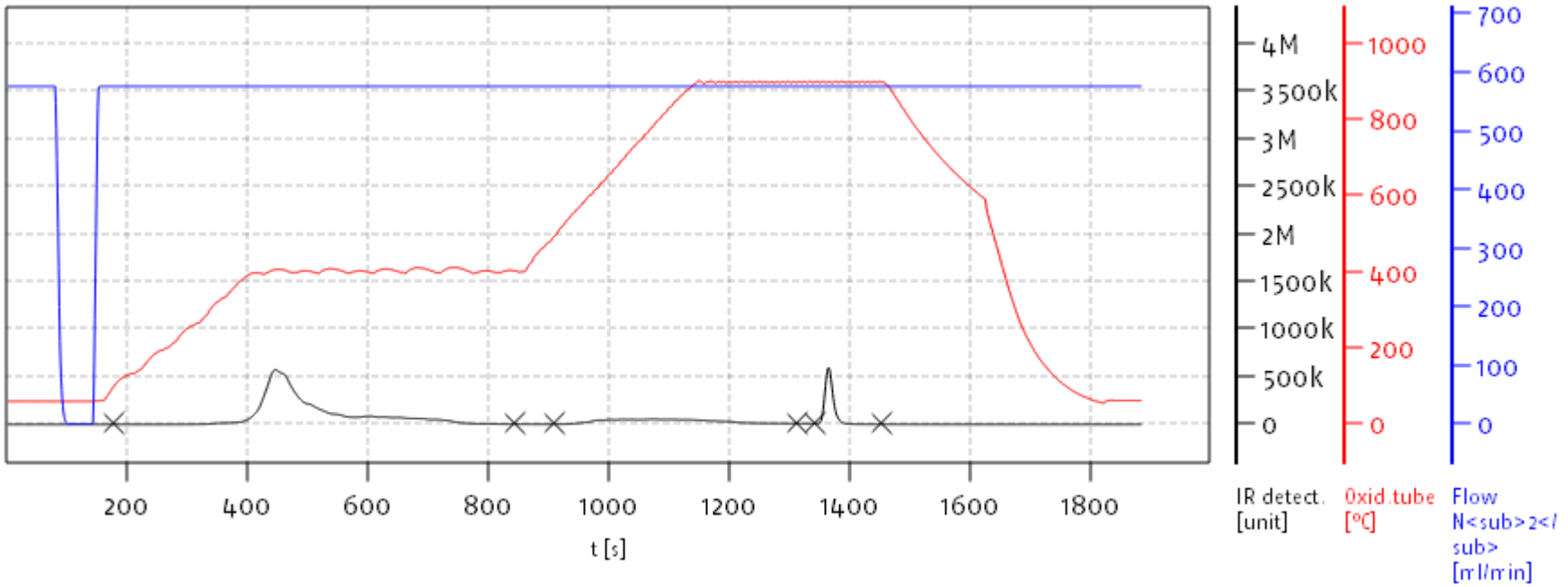
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
102	80	21G0213-06	516.40		1.00	CARBON	8/4/2021 9:53 PM	0.774	0.151	0.925	bl	2 127 450	486 367	356 685	1.0343	1.0000



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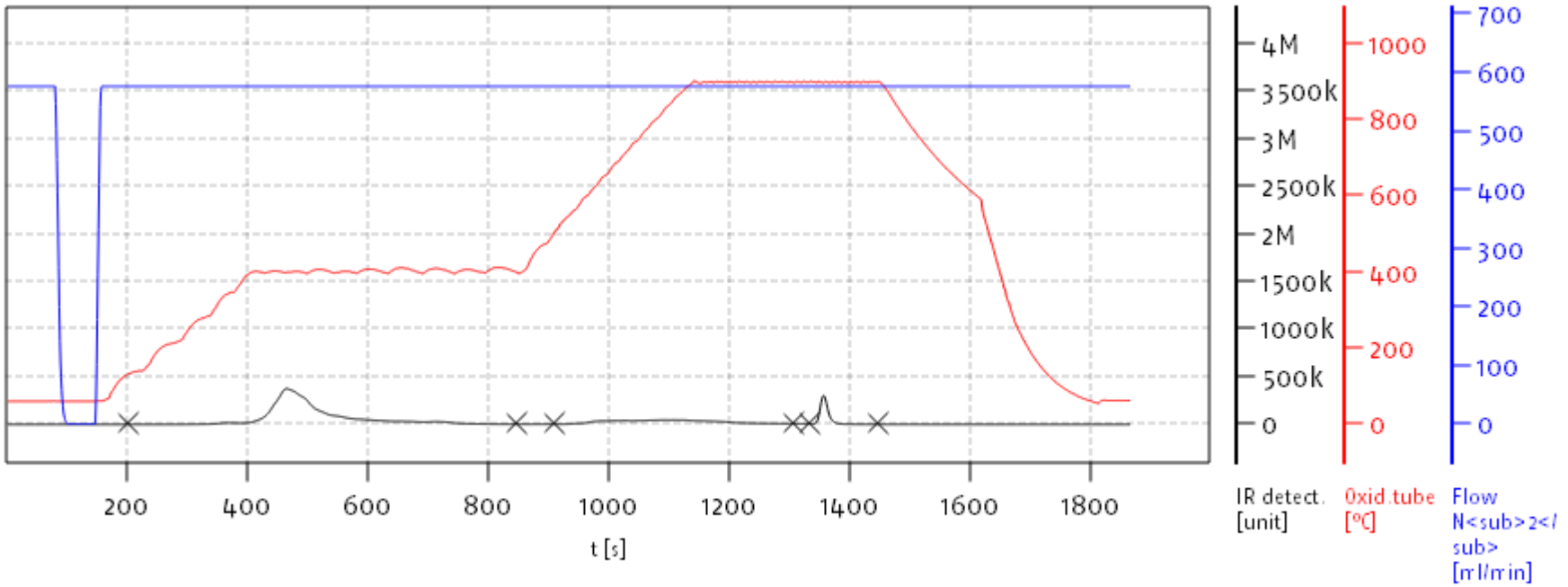
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
103	81	21G0213-07	610.60		1.00	CARBON	8/4/2021 10:25 PM	0.416	0.106	0.522	bl	1 383 520	402 532	178 370	1.0343	1.0000



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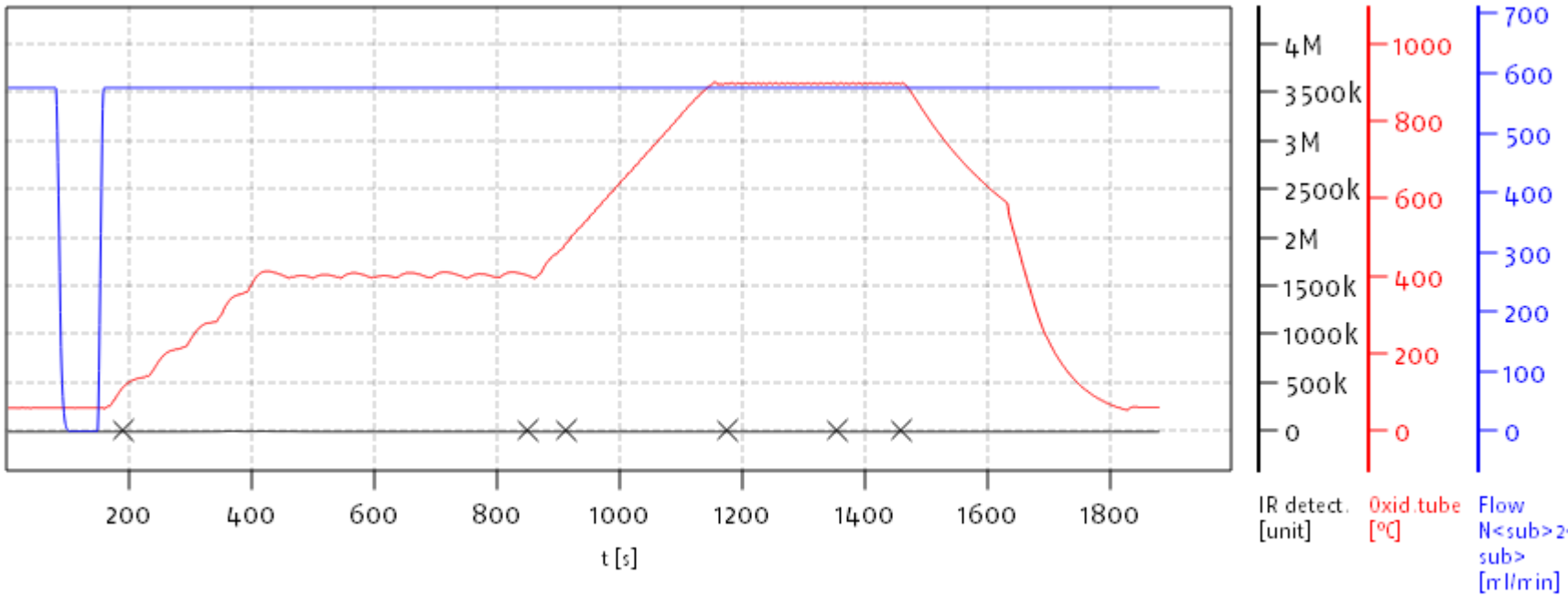
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
104	82	BJH0022-MRL1	543.80		1.00	CARBON	8/4/2021 10:56 PM	0.018	0.006	0.024	bl,C3u,C2u	22 798	968	310	1.0343	1.0000



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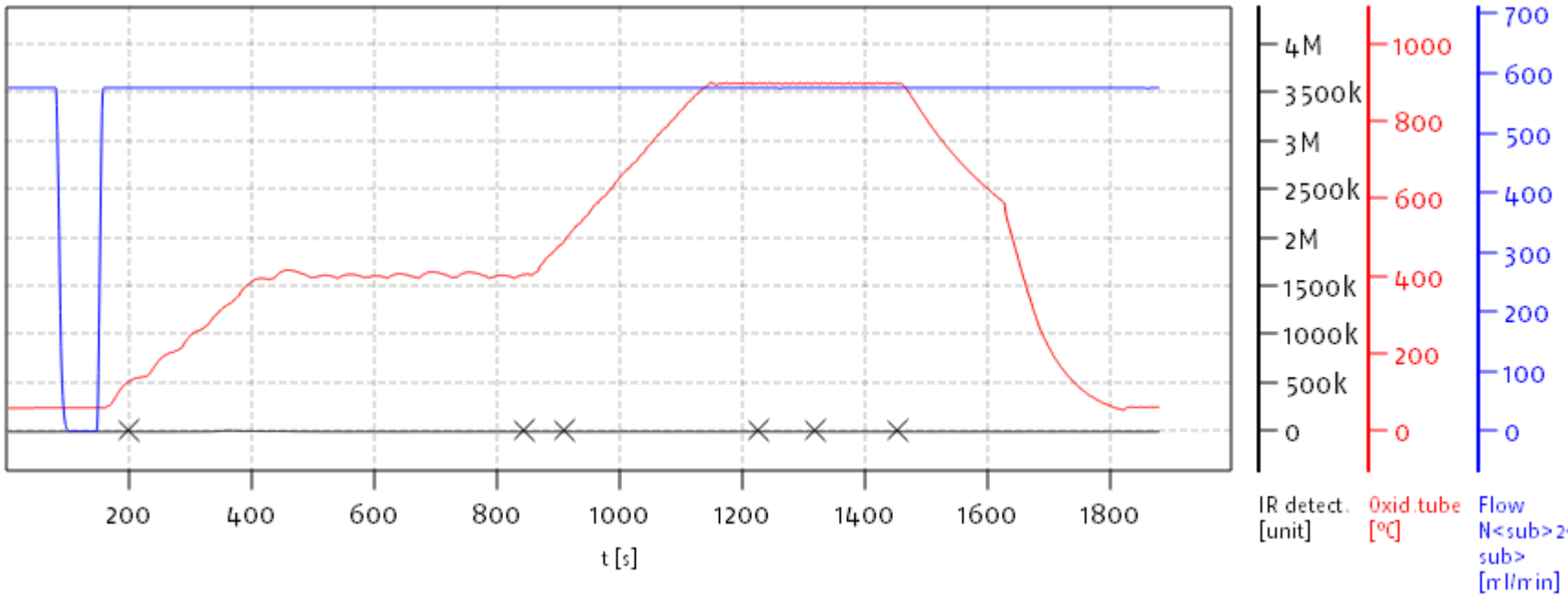
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
105	83	BJH0022-BLK1	520.70		1.00	CARBON	8/4/2021 11:28 PM	0.022	0.006	0.029	bl,C3u,C2u	34 392	1 903	444	1.0343	1.0000



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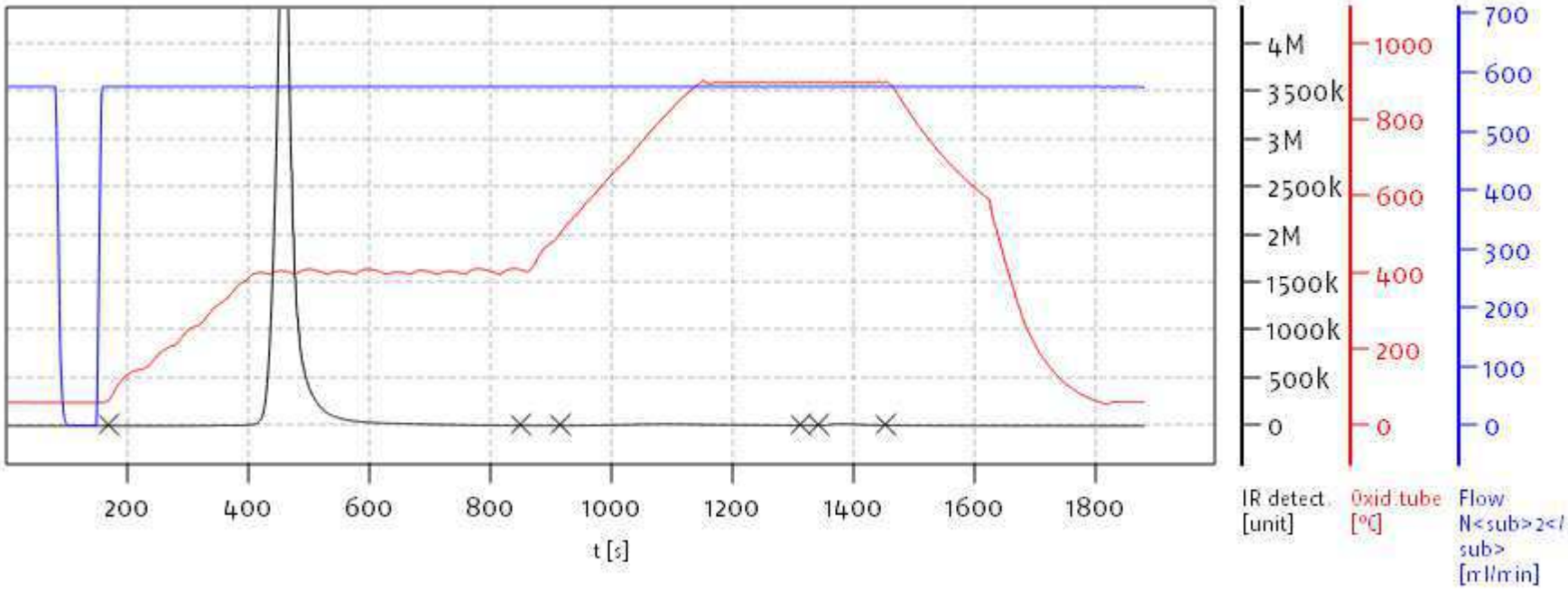
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
106	84	BJH0022-BS1	25.70		1.00	CARBON	8/5/2021 12:00 AM	44.048	0.999	45.047	bl	7 023 270	147 441	48 534	1.0343	1.0000



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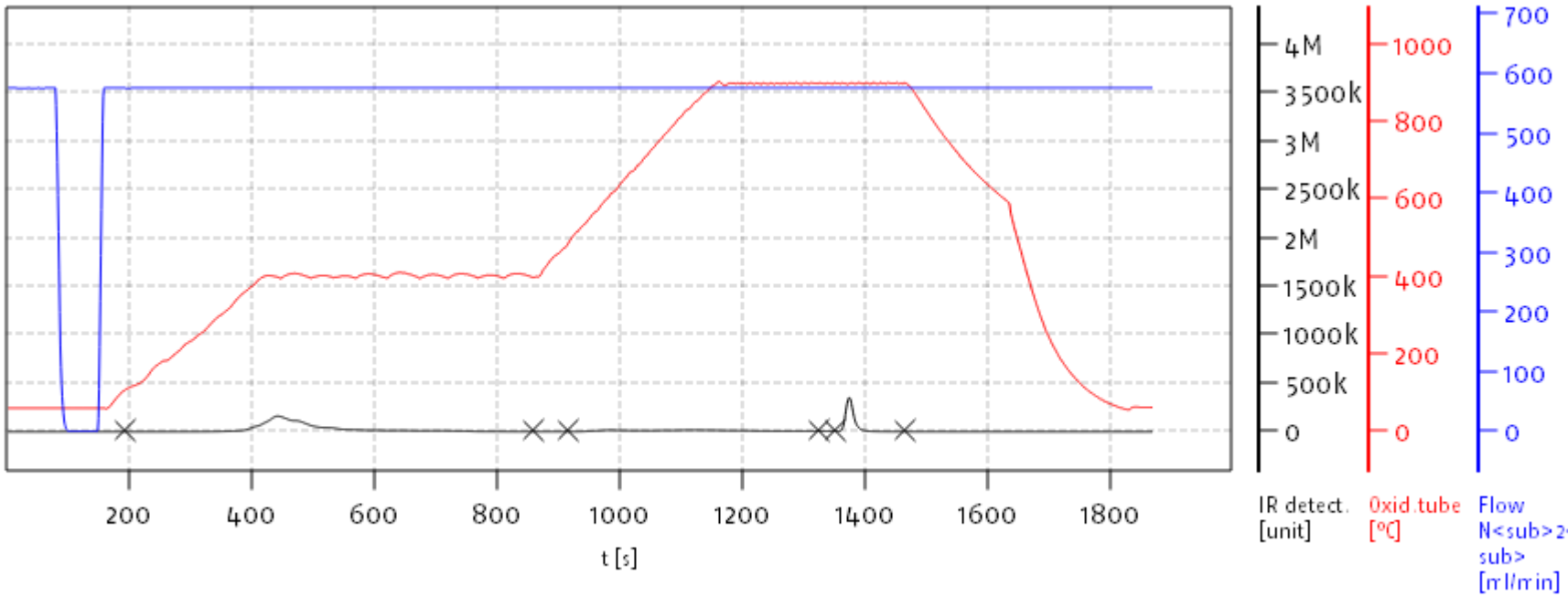
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
107	85	BJH0022-SRM1	48.40		1.00	CARBON	8/5/2021 12:31 AM	2.727	0.552	3.279	bl	591 184	154 250	206 389	1.0343	1.0000



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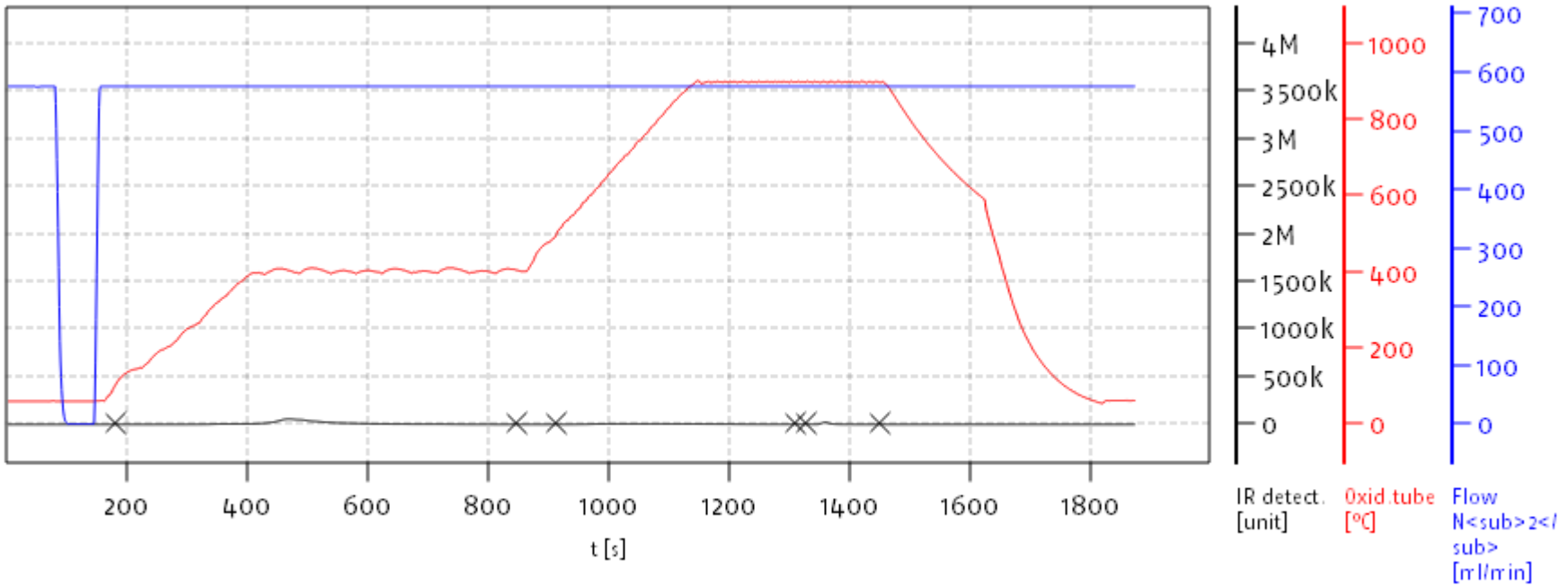
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
108	86	21G0213-08	544.50		1.00	CARBON	8/5/2021 1:03 AM	0.083	0.022	0.105	bl	230 040	58 069	15 083	1.0343	1.0000



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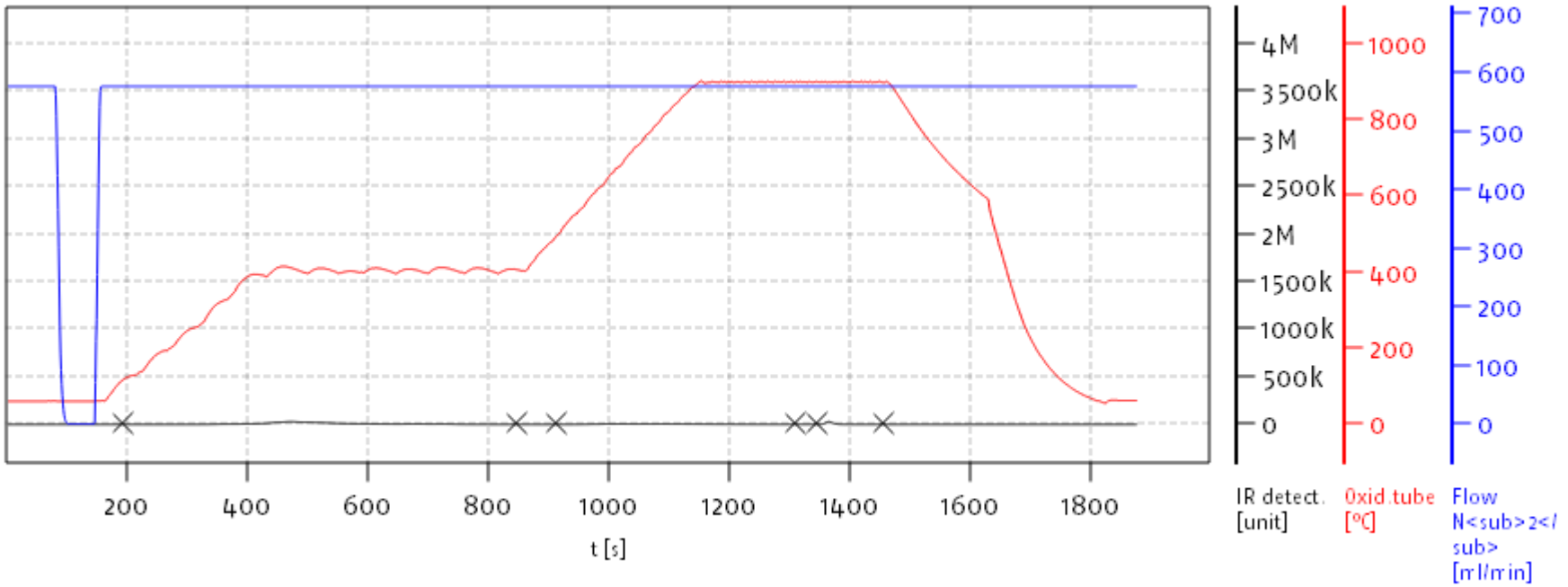
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
109	87	BJH0022-DUP1	593.20		1.00	CARBON	8/5/2021 1:35 AM	0.056	0.016	0.072	bl	153 706	41 906	16 781	1.0343	1.0000



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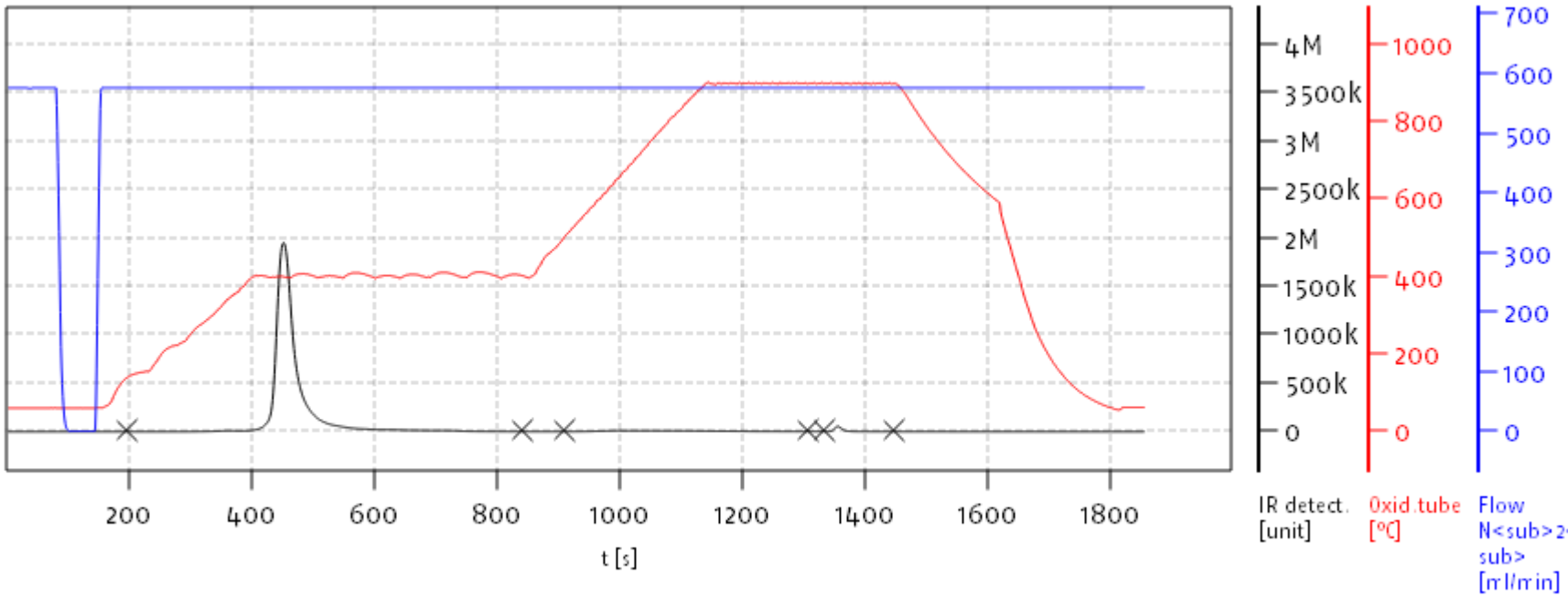
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
110	88	BJH0022-MS1	522.50	0.0094	1.00	CARBON	8/5/2021 2:06 AM	0.851	0.031	0.882	bl	2 721 090	86 391	33 451	1.0343	1.0000



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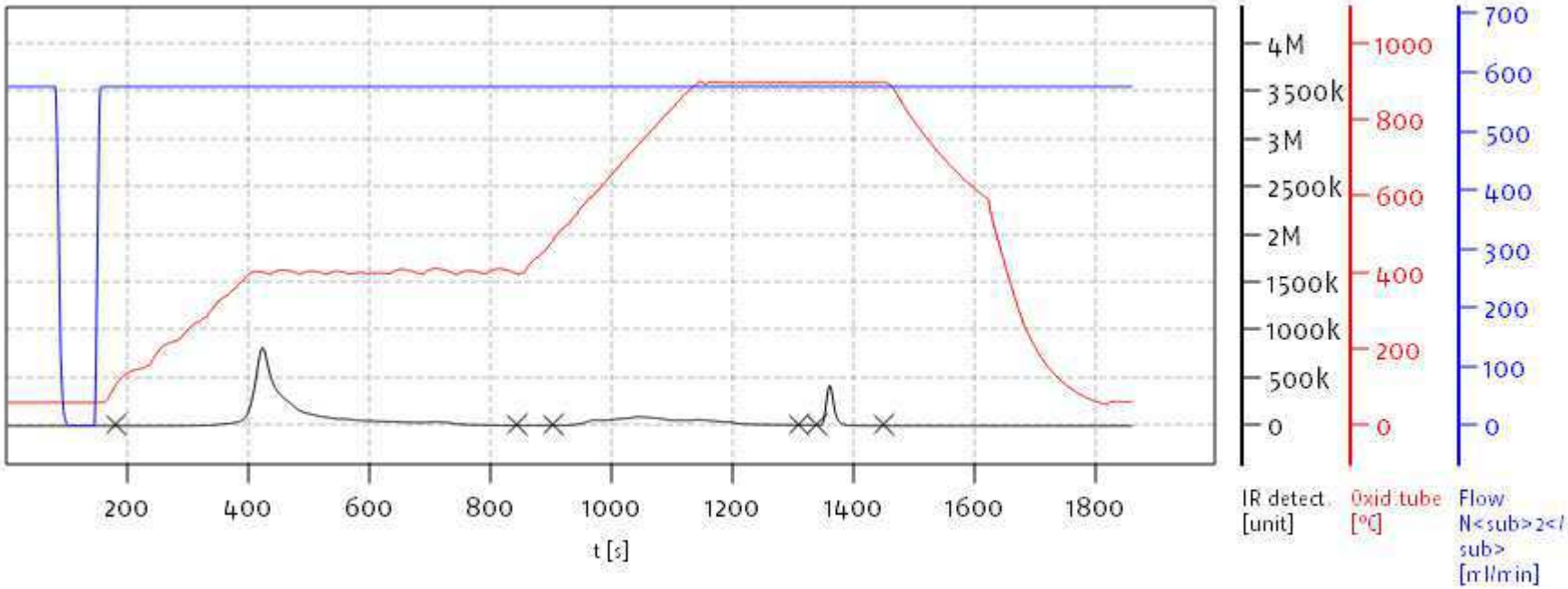
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
111	89	21G0253-01	551.70		1.00	CARBON	8/5/2021 2:37 AM	0.659	0.193	0.852	bl	2 009 460	673 470	242 975	1.0343	1.0000



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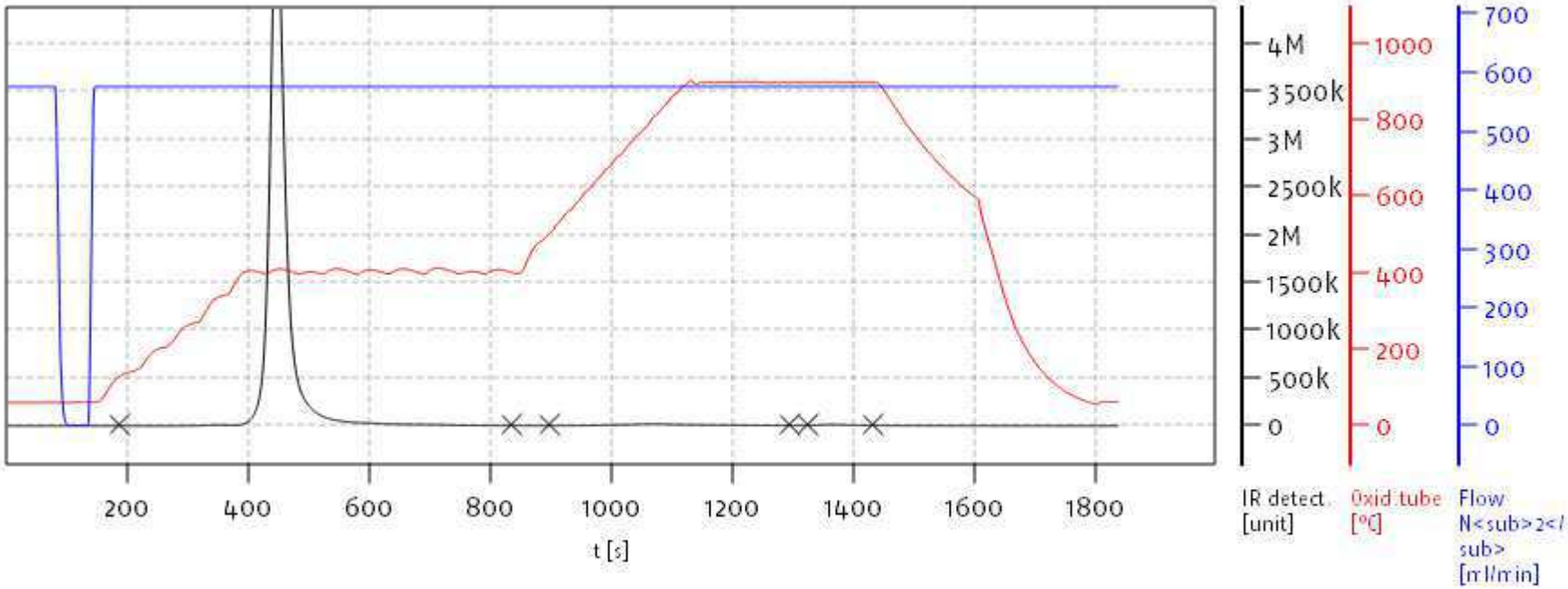
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
112	1	SJH0006-CCV9	23.80		1.00	CARBON	8/5/2021 3:08 AM	43.956	0.968	44.924	bl	6 500 160	130 287	31 824	1.0343	1.0000



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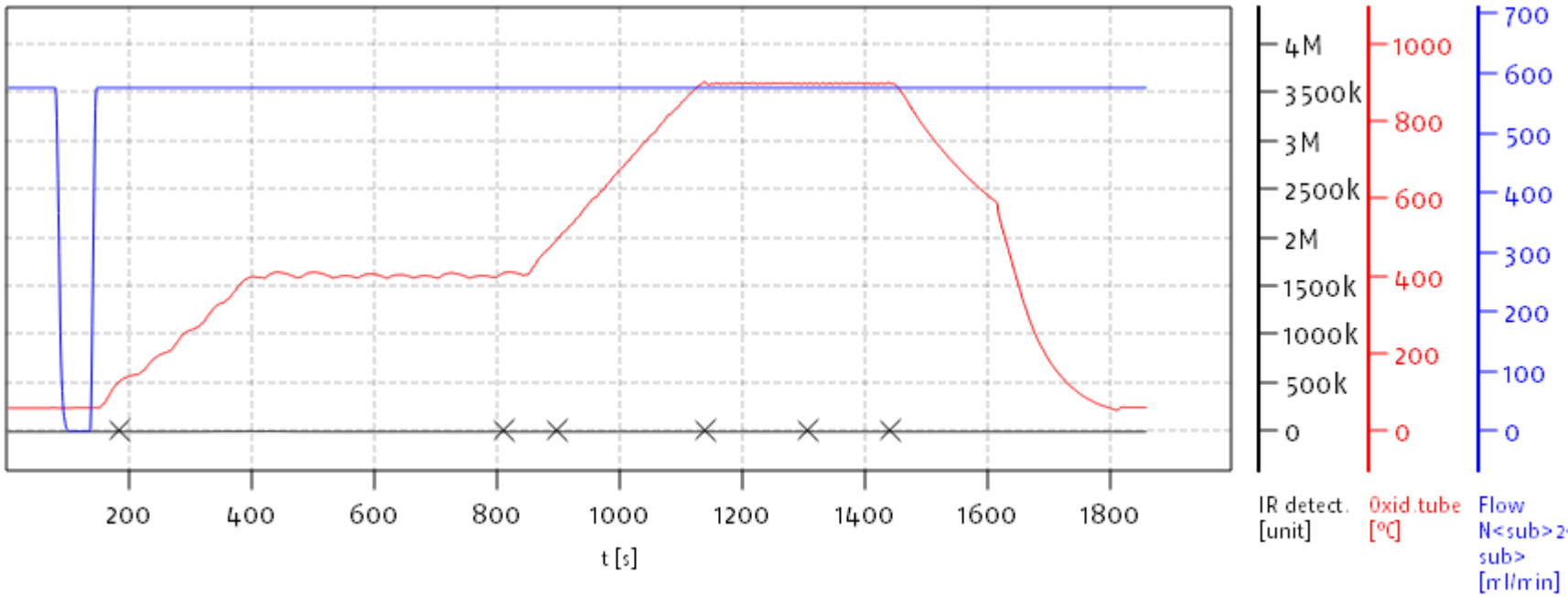
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
113	2	SJH0006-CCB9	570.10		1.00	CARBON	8/5/2021 3:40 AM	0.016	0.005	0.021	bl,C3u,C2u	17 880	374	723	1.0343	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

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Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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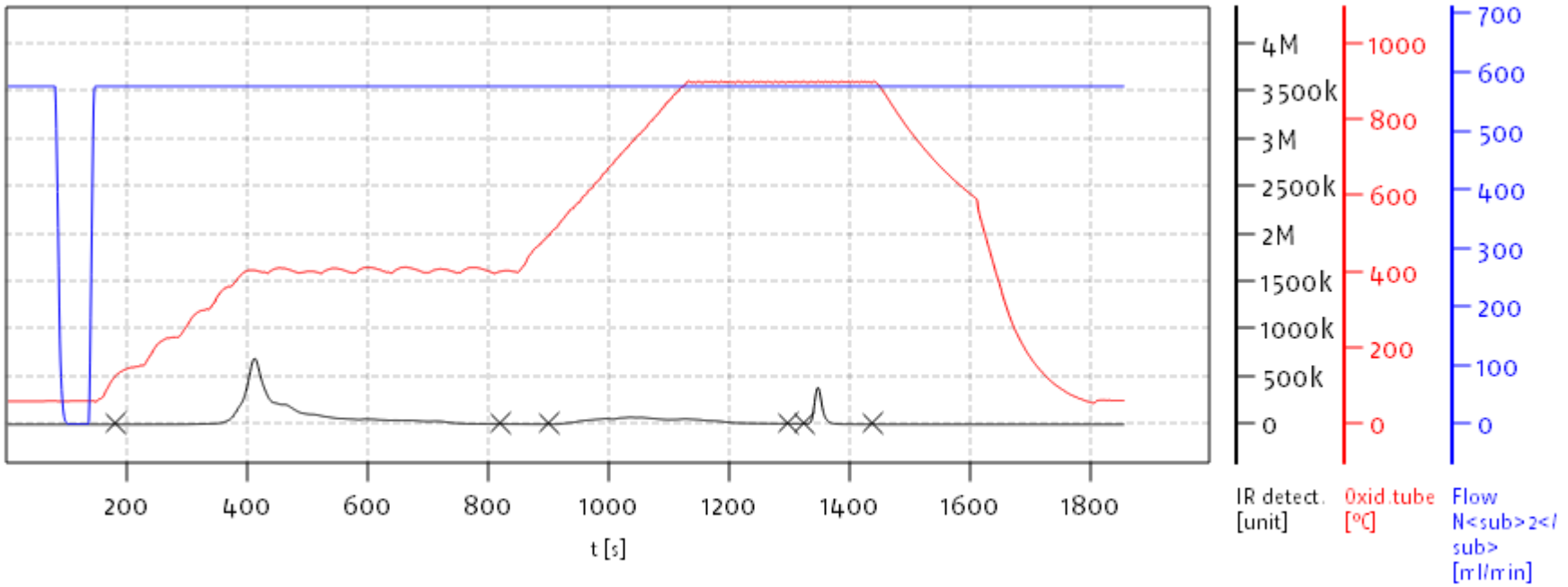
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
114	3	BJH0022-DUP2	505.00		1.00	CARBON	8/5/2021 4:11 AM	0.665	0.178	0.844	bl	1 856 870	564 504	222 791	1.0343	1.0000



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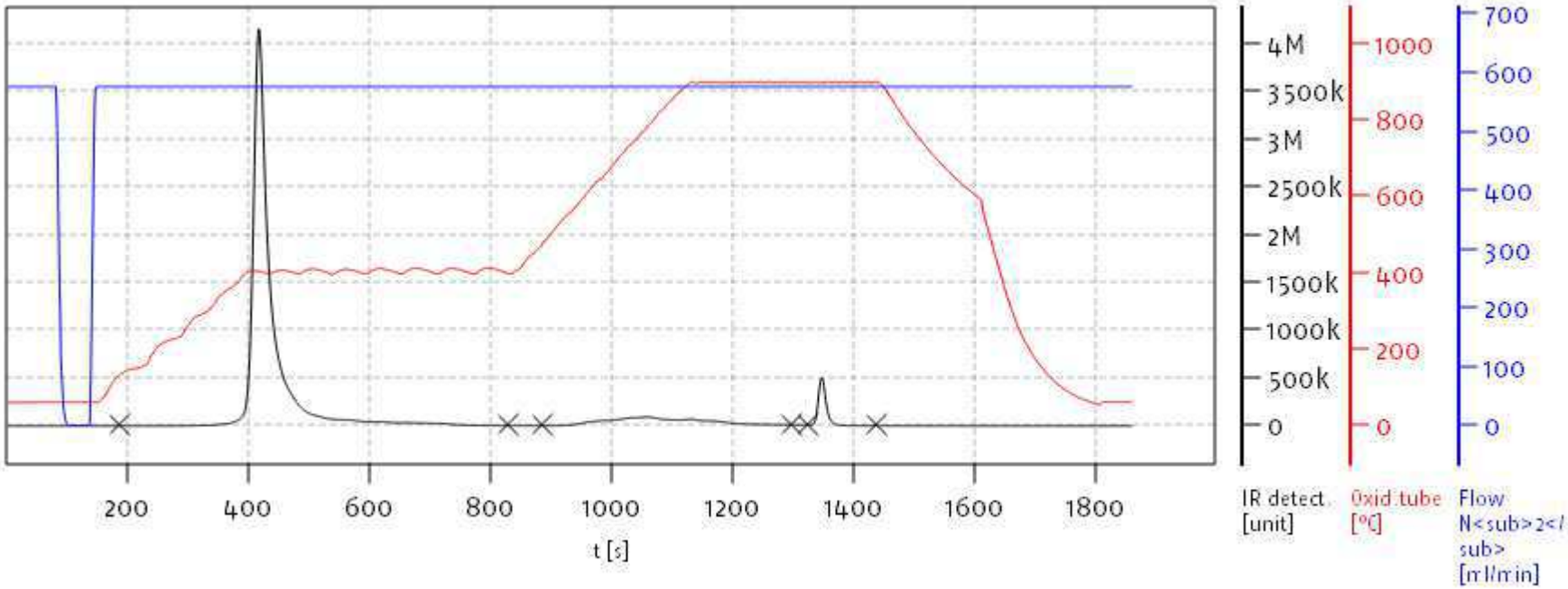
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
115	4	BJH0022-MS2	512.80	0.0122	1.00	CARBON	8/5/2021 4:43 AM	1.716	0.203	1.919	bl	5 206 440	658 244	290 363	1.0343	1.0000



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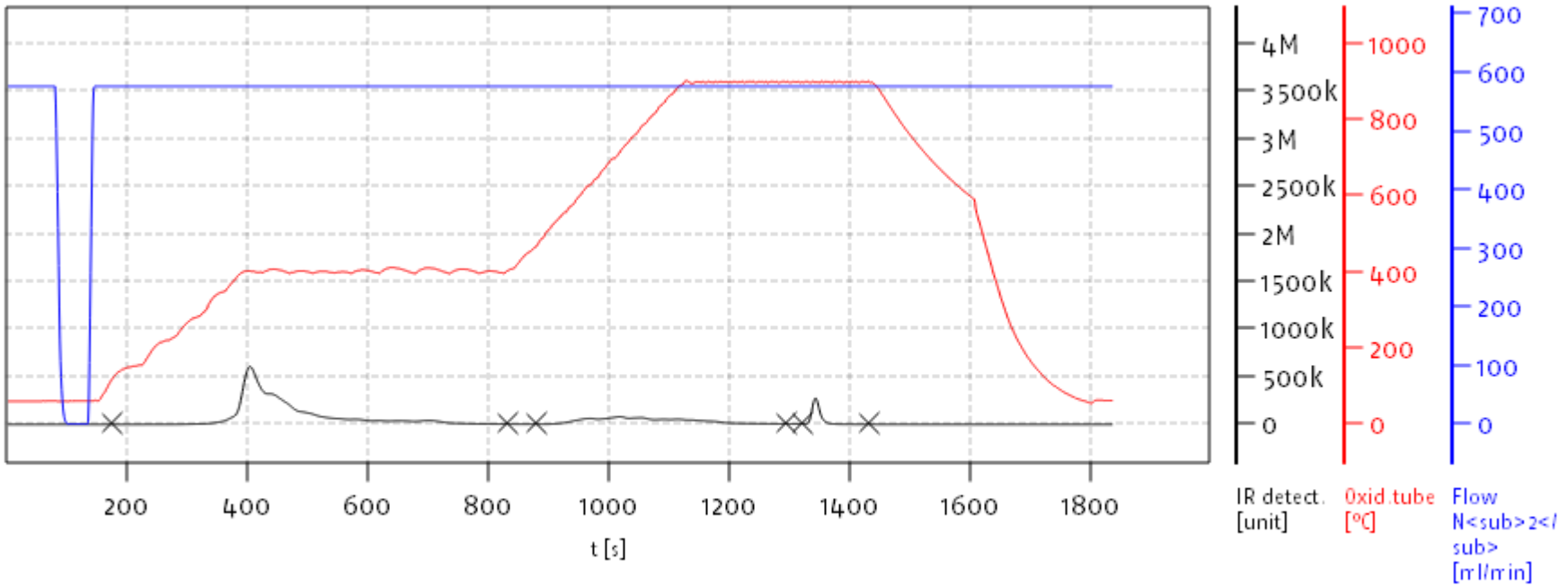
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
116	5	21G0253-02	503.50		1.00	CARBON	8/5/2021 5:14 AM	0.660	0.179	0.839	bl	1 890 870	565 813	162 480	1.0343	1.0000



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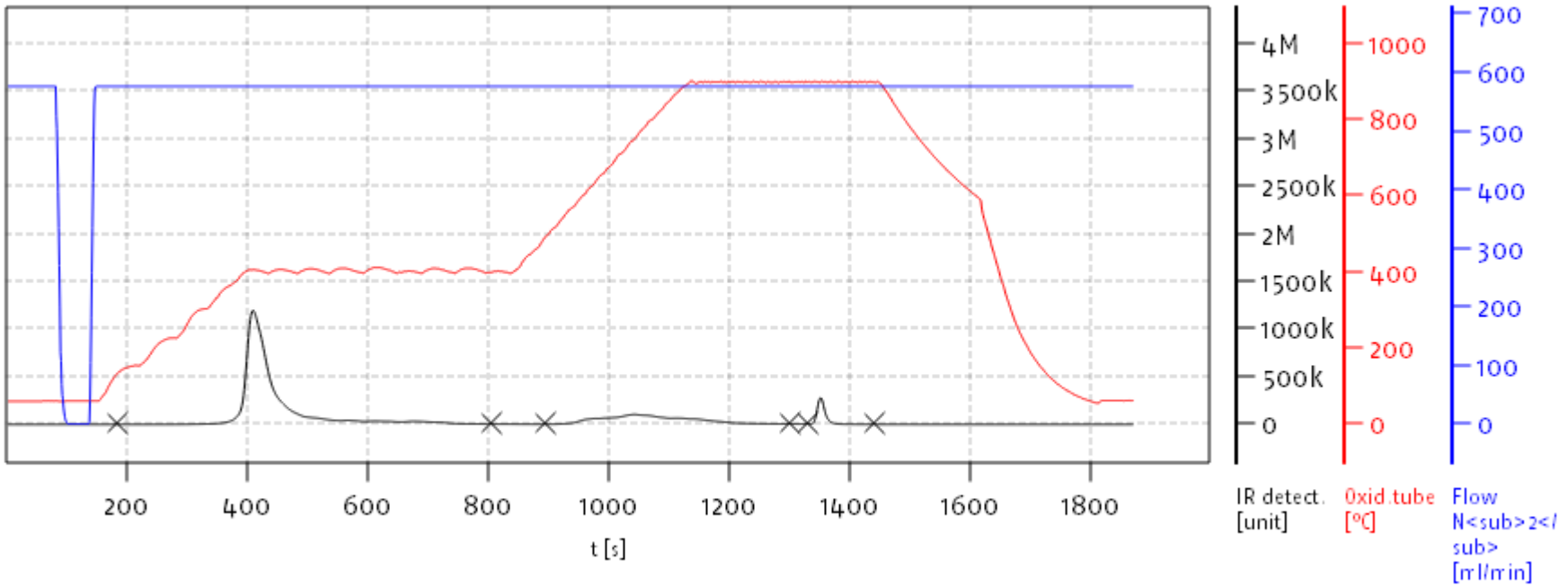
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
117	6	21G0253-03	579.90		1.00	CARBON	8/5/2021 5:45 AM	0.693	0.182	0.875	bl	2 326 310	665 762	163 811	1.0343	1.0000



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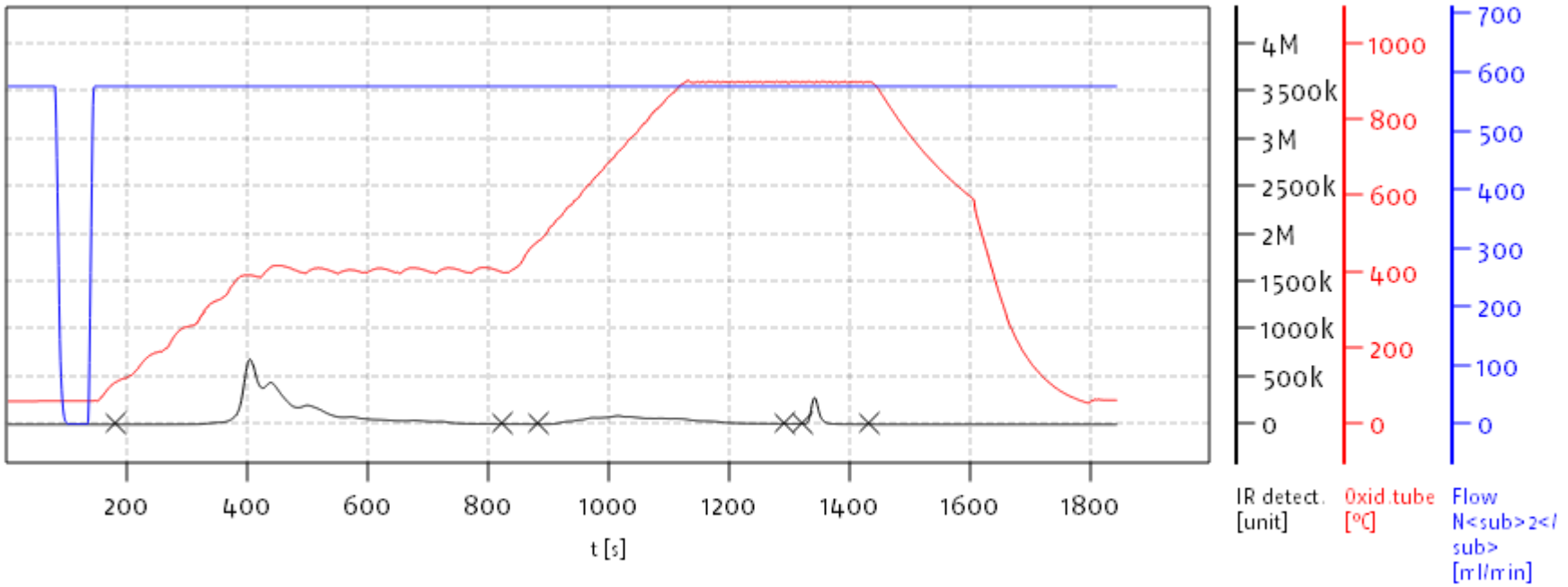
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
118	7	21G0253-04	552.00		1.00	CARBON	8/5/2021 6:16 AM	0.698	0.179	0.877	bl	2 222 210	623 725	164 218	1.0343	1.0000



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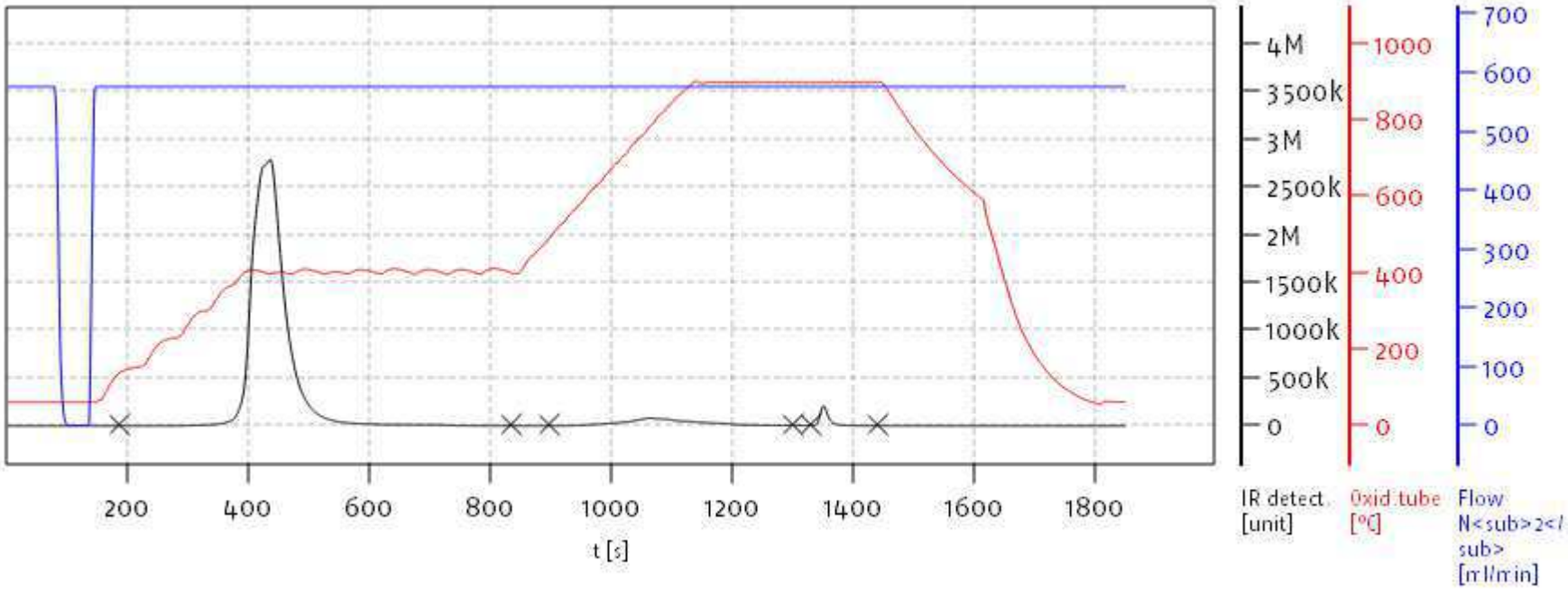
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
119	8	21G0253-05	563.50		1.00	CARBON	8/5/2021 6:48 AM	1.904	0.121	2.025	bl	6 571 750	423 387	131 294	1.0343	1.0000



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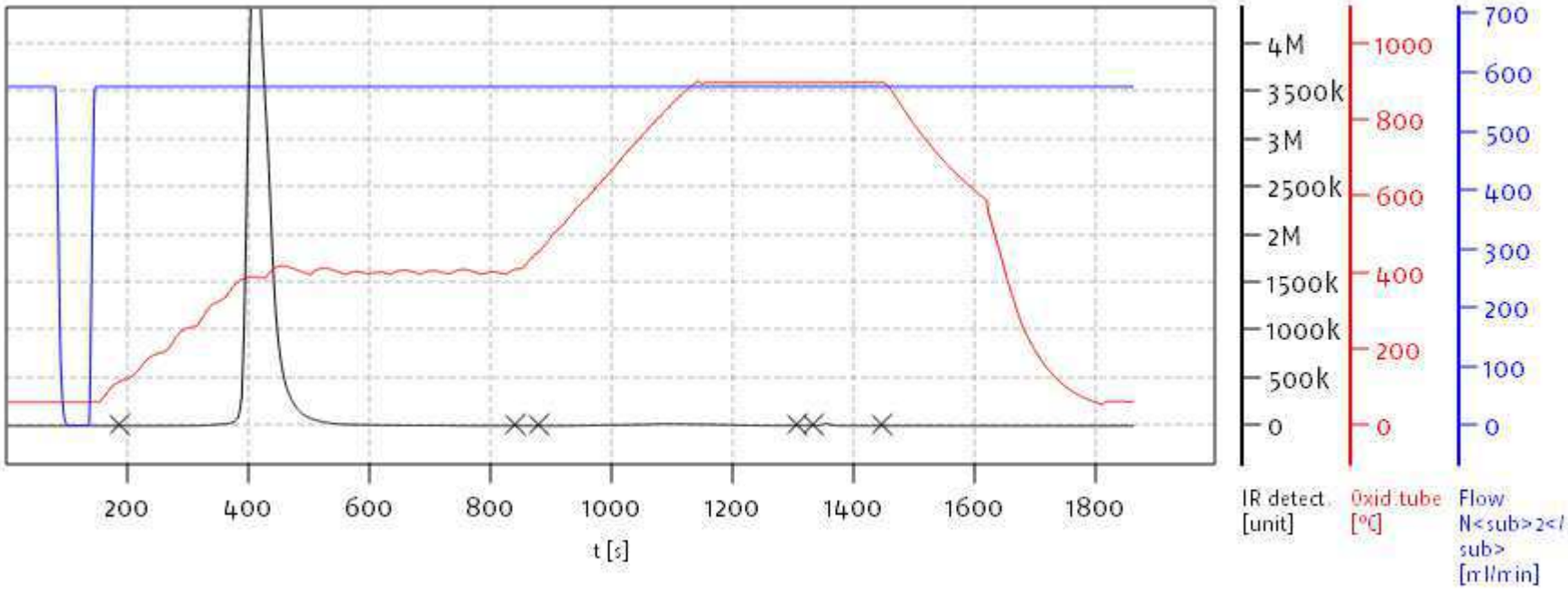
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
120	9	21G0253-06	368.80		1.00	CARBON	8/5/2021 7:19 AM	3.376	0.066	3.442	bl	7 762 860	138 885	16 646	1.0343	1.0000



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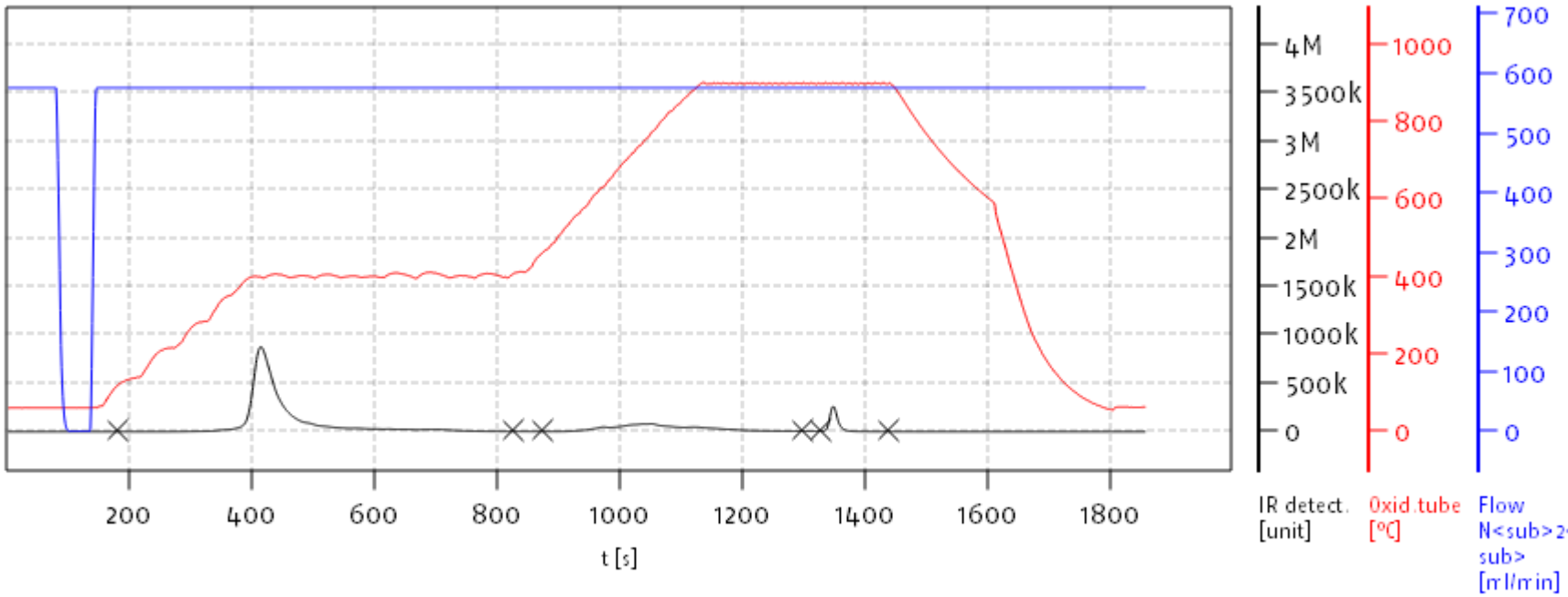
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
121	10	21G0253-07	381.90		1.00	CARBON	8/5/2021 7:50 AM	0.842	0.208	1.049	bl	1 832 130	495 368	153 076	1.0343	1.0000



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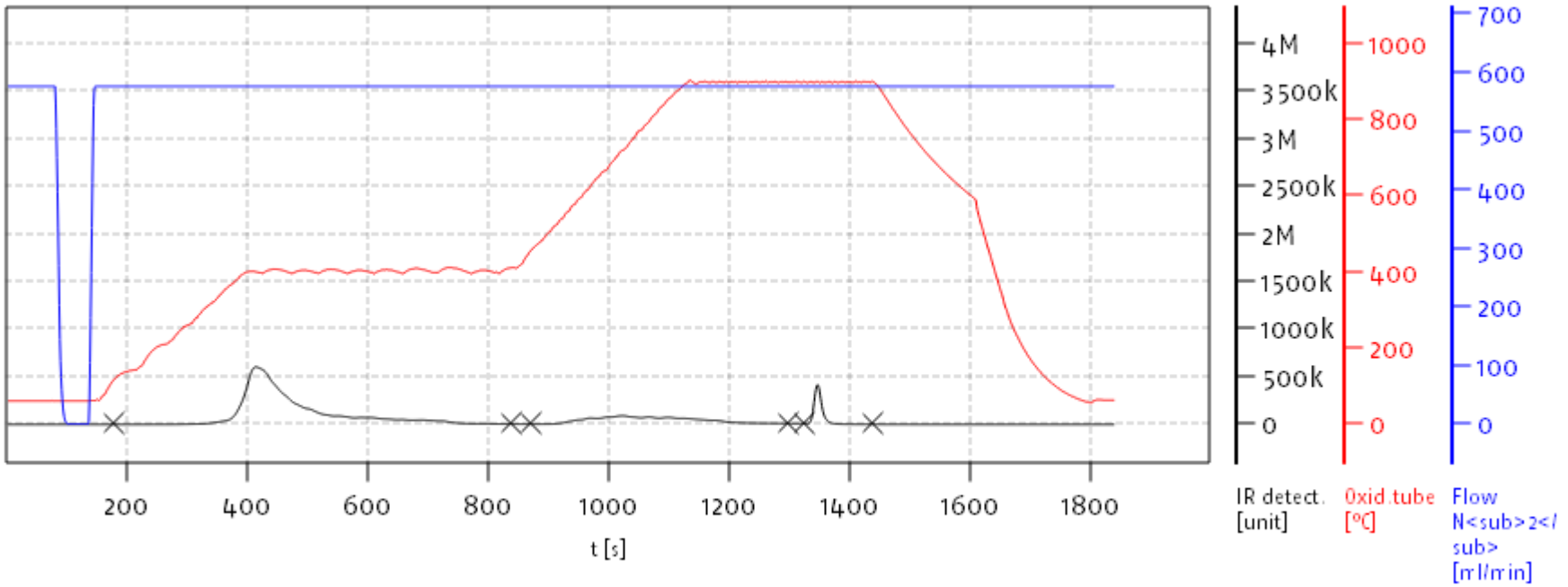
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
122	11	21G0253-08	553.70		1.00	CARBON	8/5/2021 8:21 AM	0.751	0.199	0.950	bl	2 342 330	696 988	238 221	1.0343	1.0000



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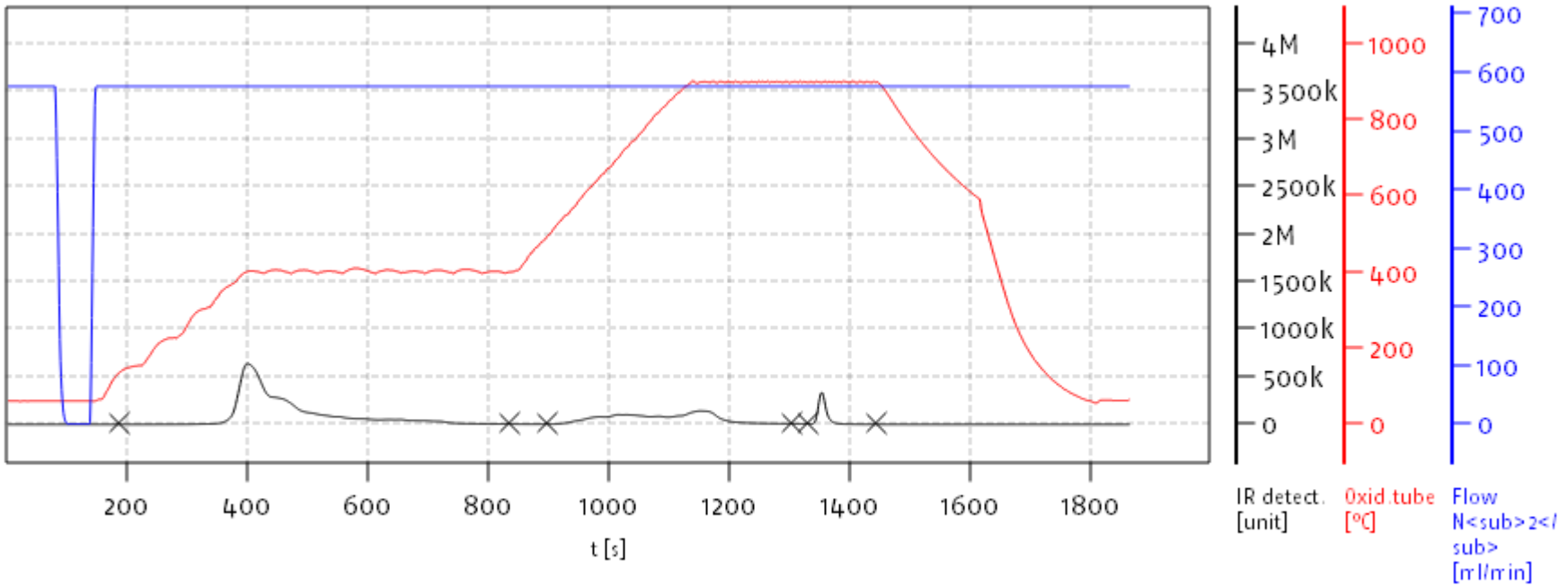
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
123	12	21G0253-09	580.30		1.00	CARBON	8/5/2021 8:53 AM	0.658	0.252	0.910	bl	2 168 560	931 267	195 895	1.0343	1.0000



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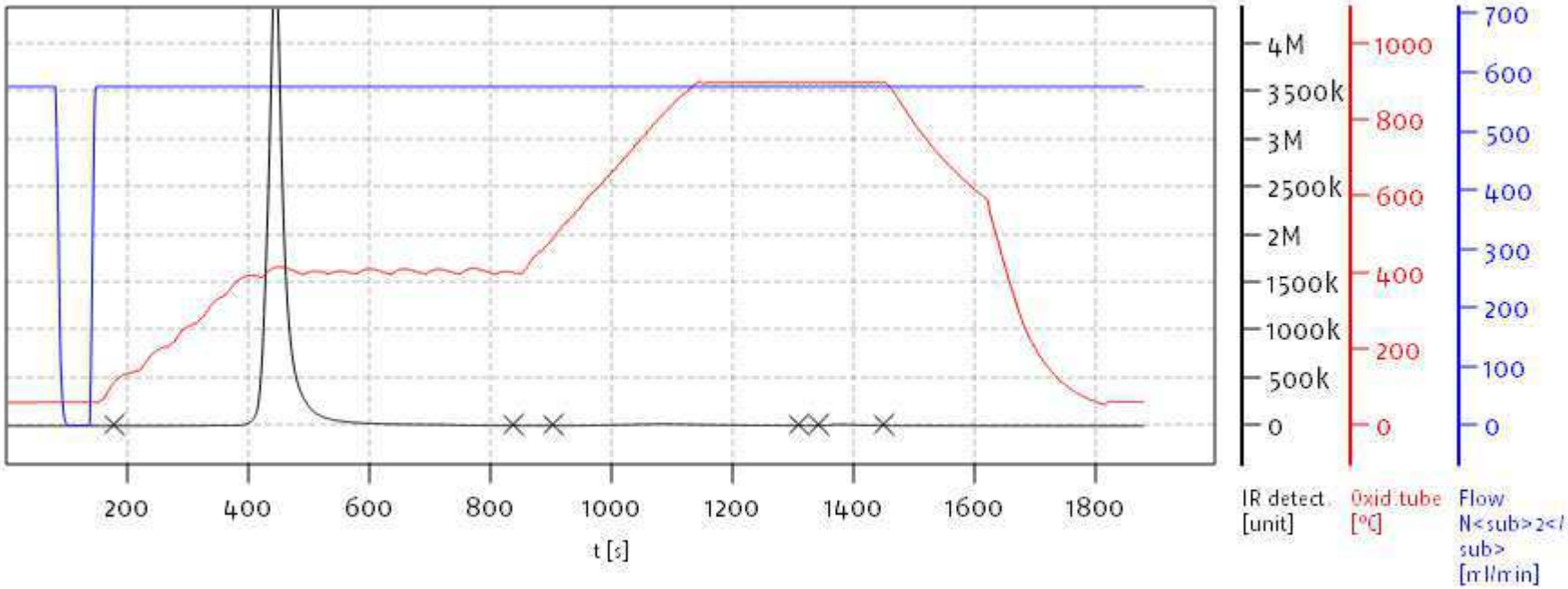
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
124	13	SJH0006-CCVA	21.40		1.00	CARBON	8/5/2021 9:25 AM	43.413	1.096	44.508	bl	5 766 020	132 958	30 555	1.0343	1.0000



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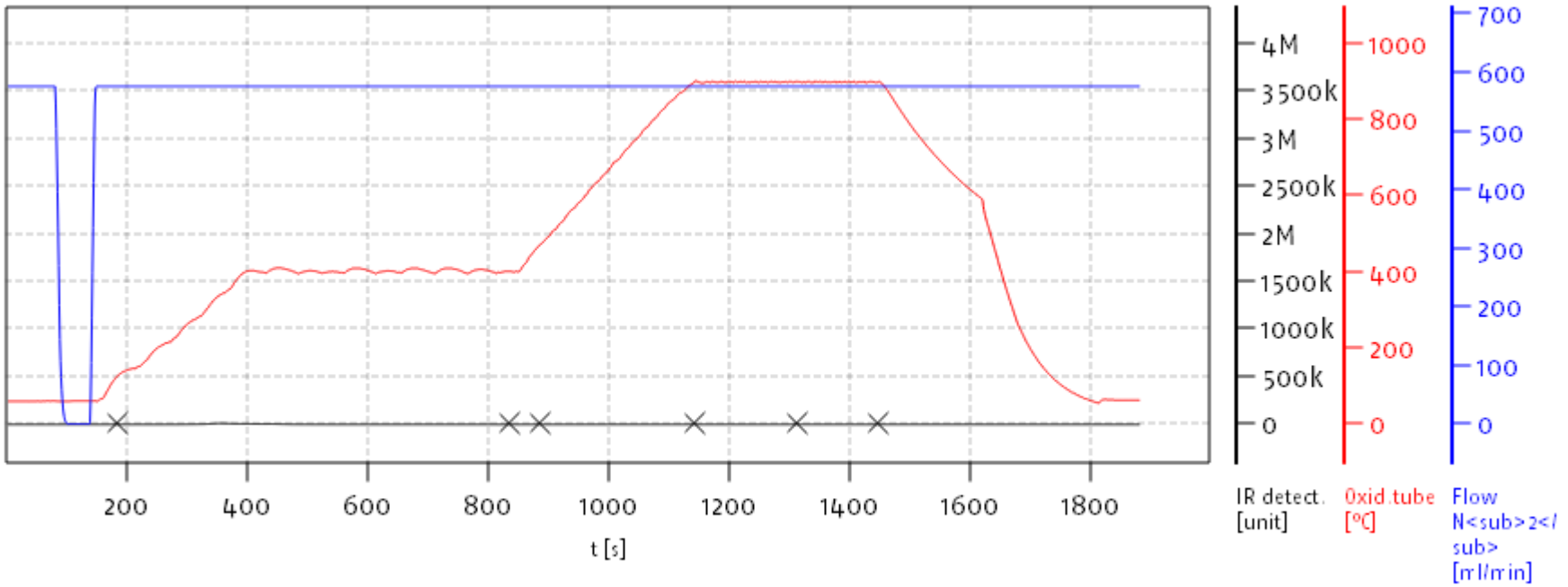
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
125	14	SJH0006-CCBA	577.60		1.00	CARBON	8/5/2021 9:57 AM	0.021	0.006	0.027	bl,C3u,C2u	37 839	1 638	781	1.0343	1.0000



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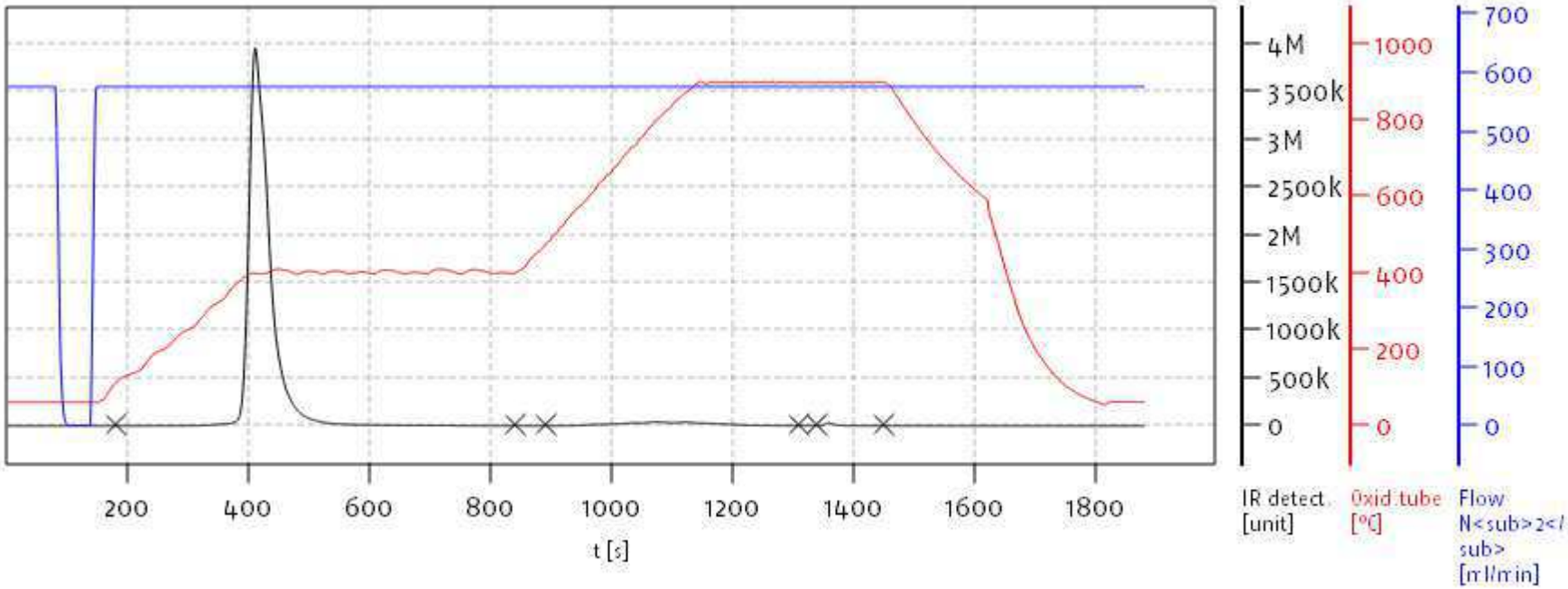
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
126	15	21G0285-01	556.10		1.00	CARBON	8/5/2021 10:28 AM	1.697	0.080	1.777	bl	5 865 580	269 448	22 857	1.0343	1.0000



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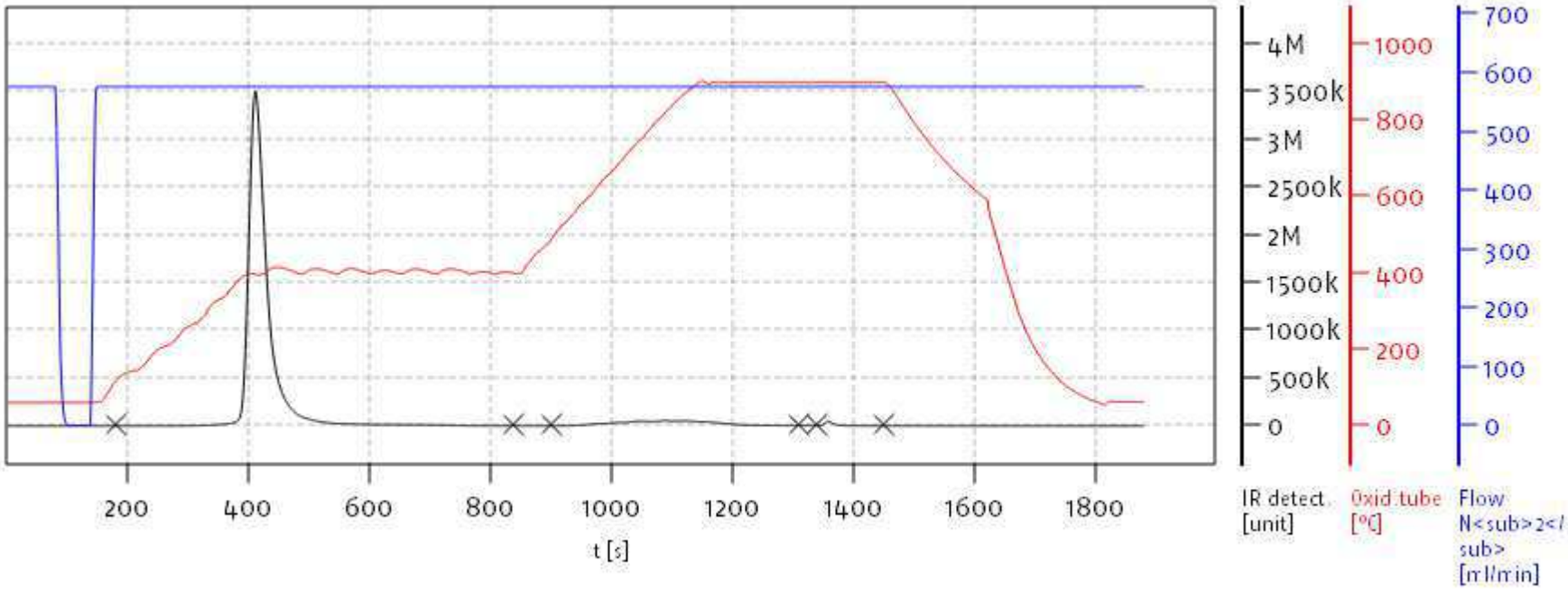
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
127	16	21G0285-02	507.20		1.00	CARBON	8/5/2021 11:00 AM	1.493	0.123	1.615	bl	4 683 400	384 265	33 350	1.0343	1.0000



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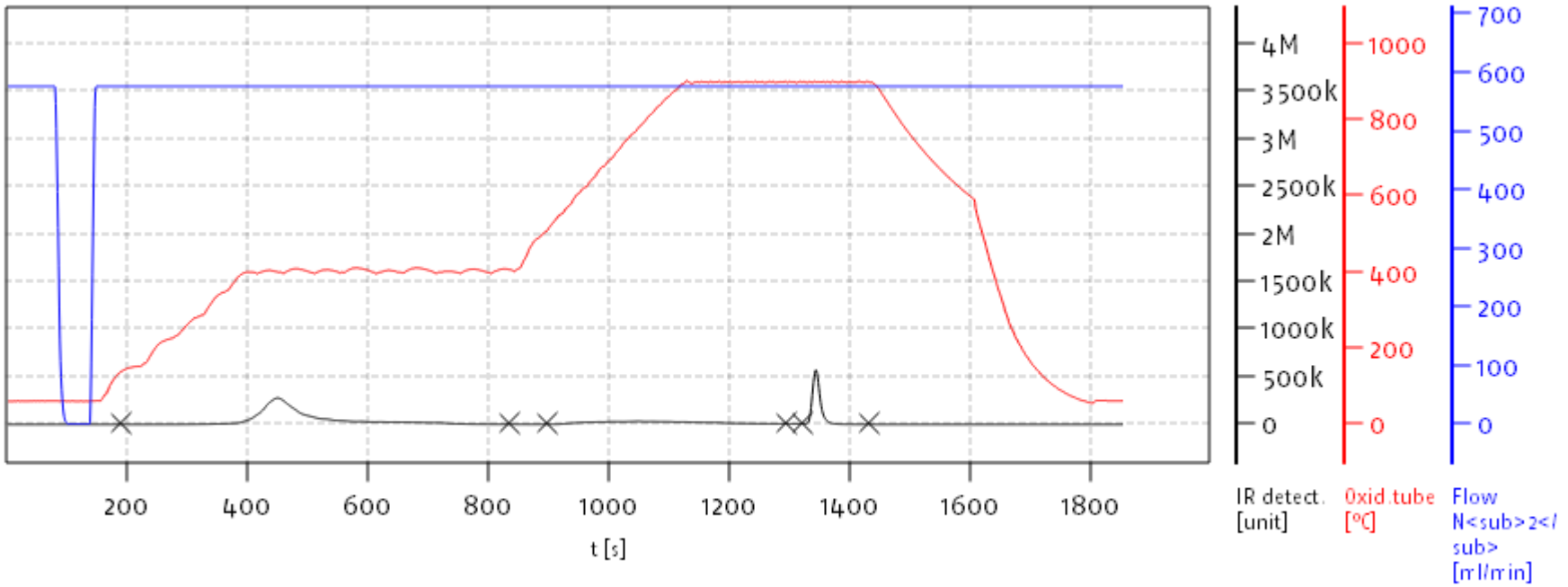
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
128	17	21G0285-03	517.00		1.00	CARBON	8/5/2021 11:31 AM	0.405	0.090	0.495	bl	966 211	281 304	322 465	1.0343	1.0000



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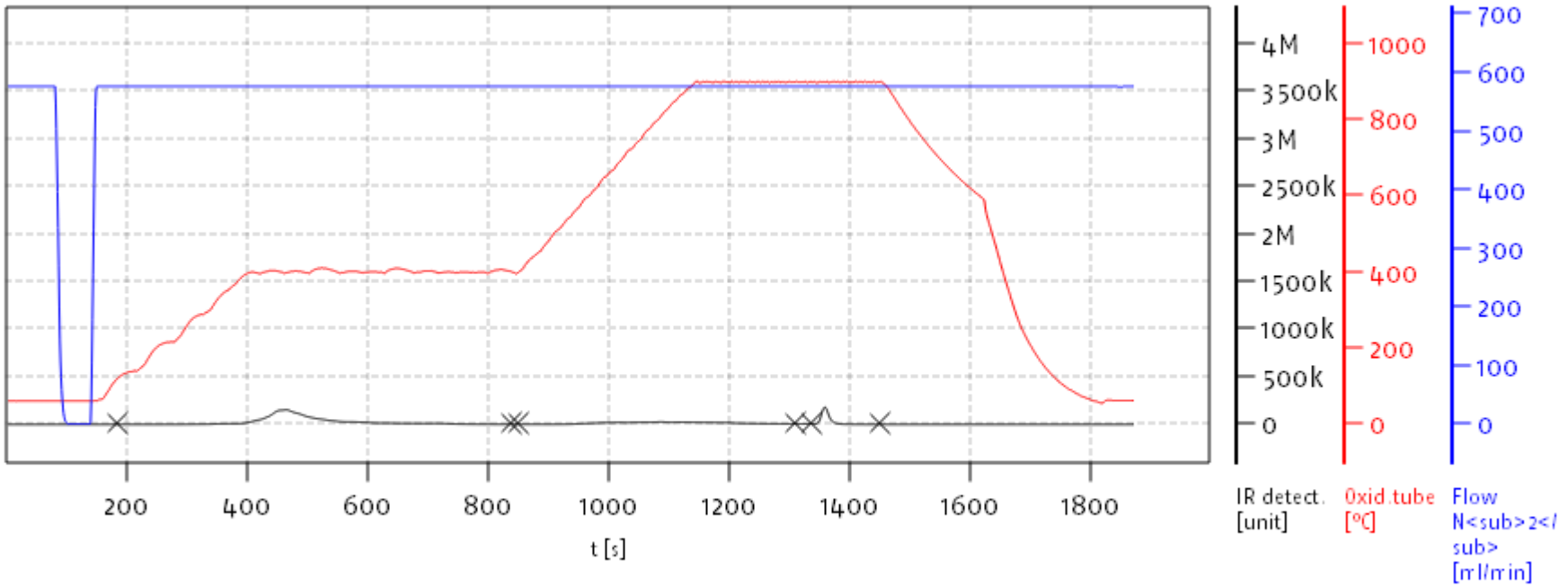
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
129	18	21G0285-04	647.30		1.00	CARBON	8/5/2021 12:03 PM	0.183	0.060	0.243	bl	605 700	231 020	104 487	1.0343	1.0000



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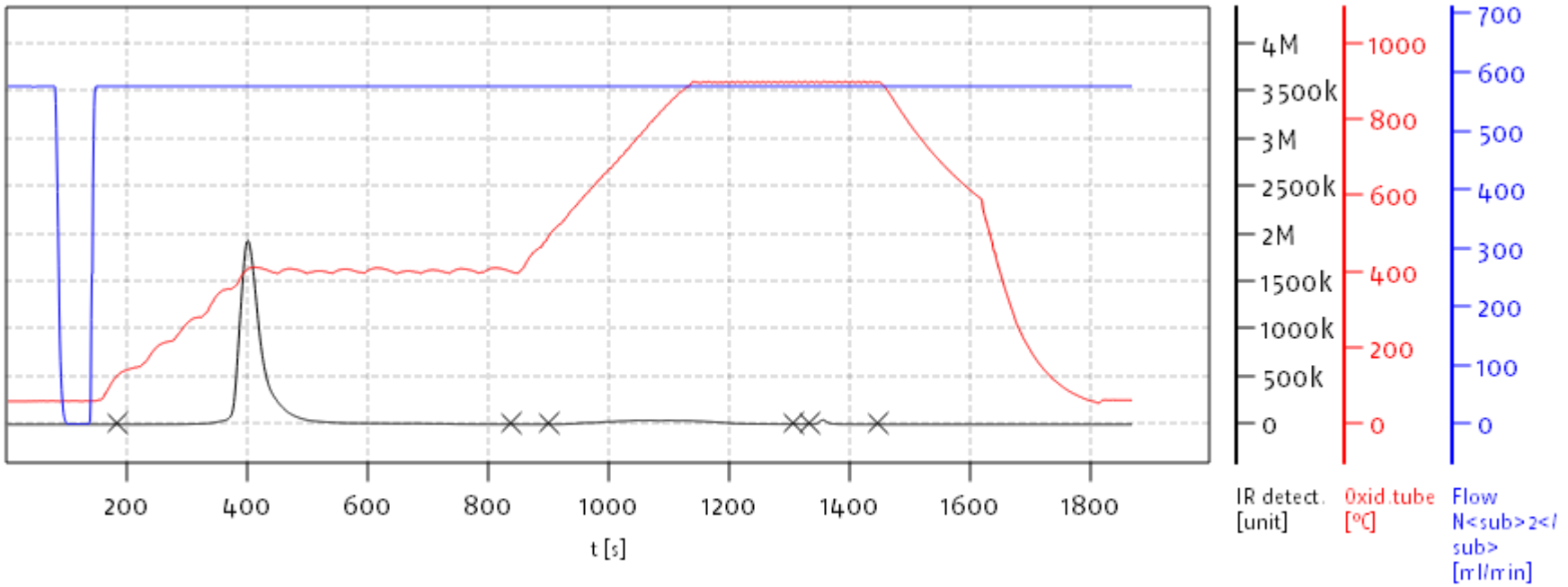
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
130	19	21G0285-05	328.30		1.00	CARBON	8/5/2021 12:34 PM	1.540	0.163	1.703	bl	3 106 230	328 755	30 761	1.0343	1.0000



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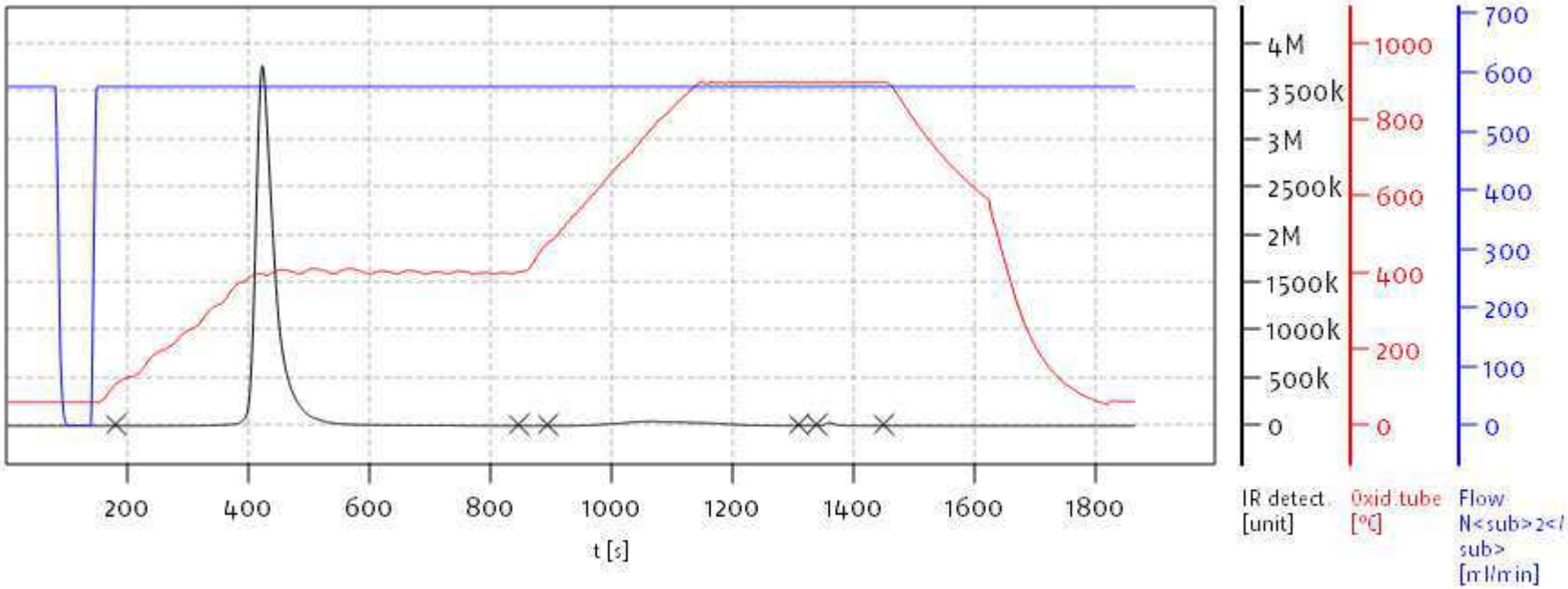
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
131	20	21G0285-06	541.50		1.00	CARBON	8/5/2021 1:06 PM	1.545	0.090	1.636	bl	5 191 460	297 934	26 179	1.0343	1.0000



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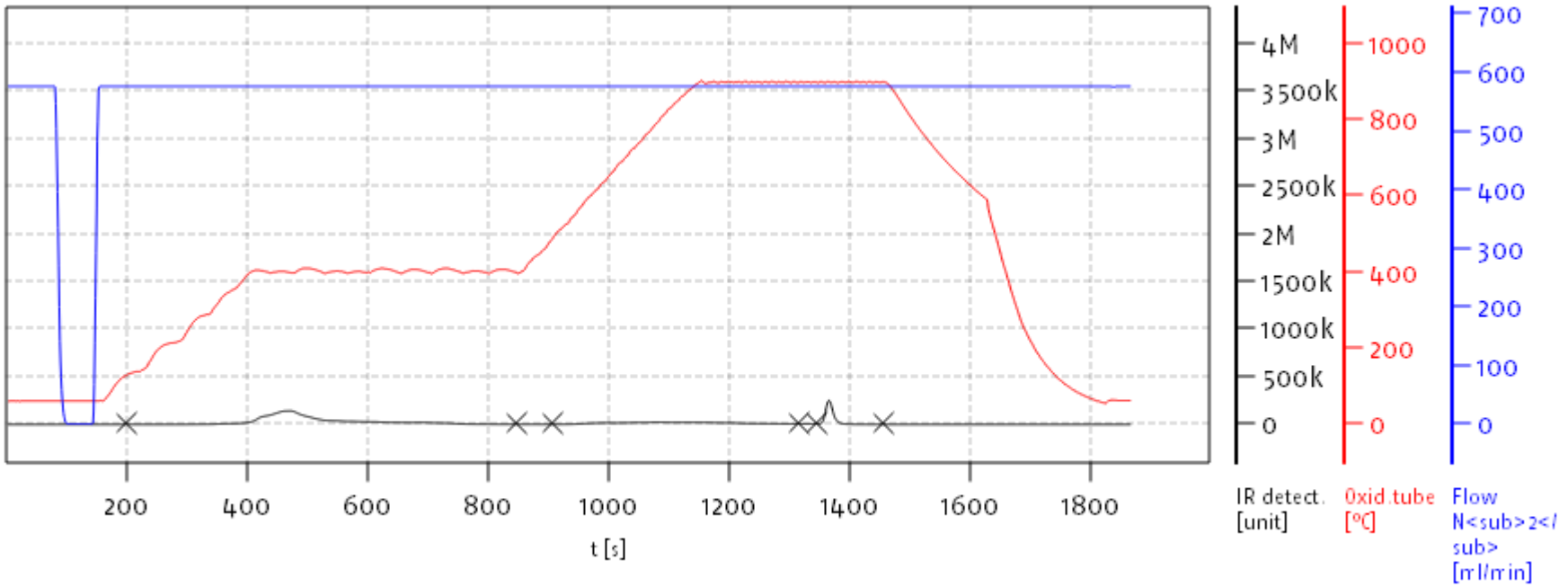
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
132	21	21G0285-07	519.20		1.00	CARBON	8/5/2021 1:38 PM	0.257	0.070	0.327	bl	663 217	216 026	142 313	1.0343	1.0000



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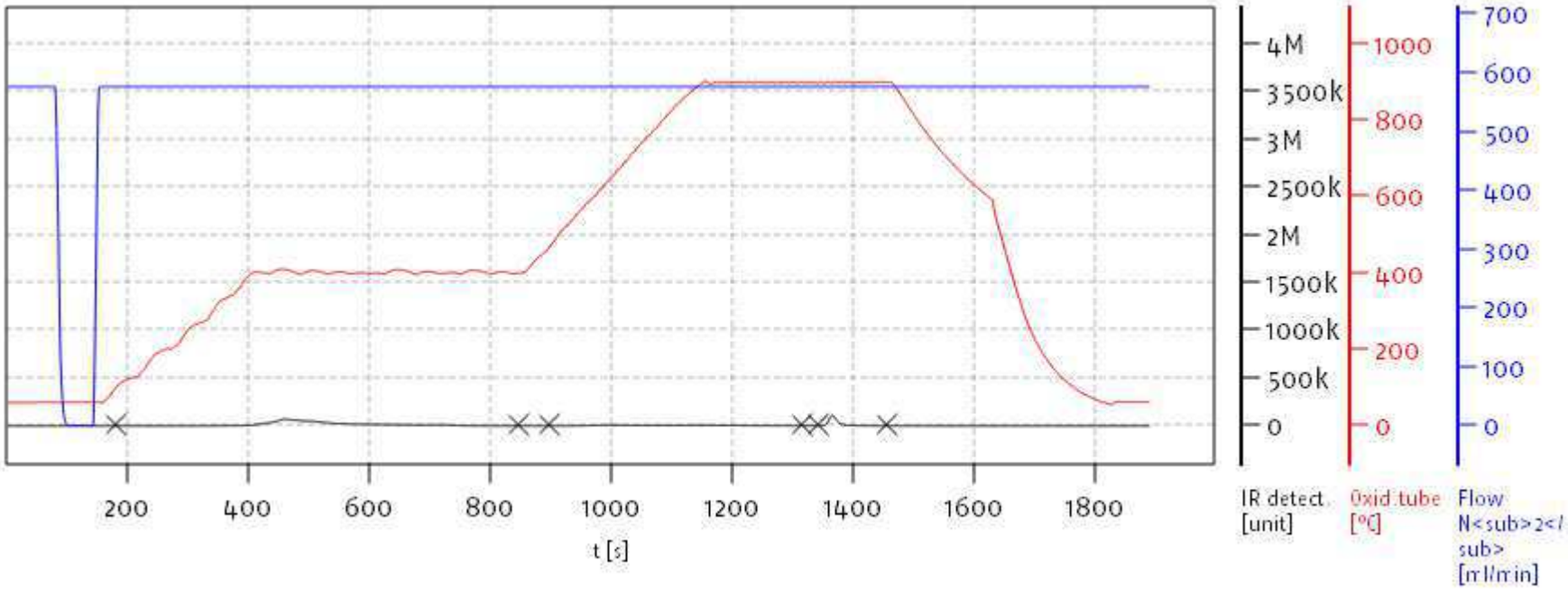
elementar
EXCELLENCE IN ELEMENTS

Document: 080221BF from: 8/6/2021 9:23 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
133	22	21G0289-01	575.00		1.00	CARBON	8/5/2021 2:09 PM	0.123	0.026	0.149	bl	335 298	76 743	73 060	1.0343	1.0000



Name:

Access: soliTOC superuser

Date: Sat Aug 7 21:02:20 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
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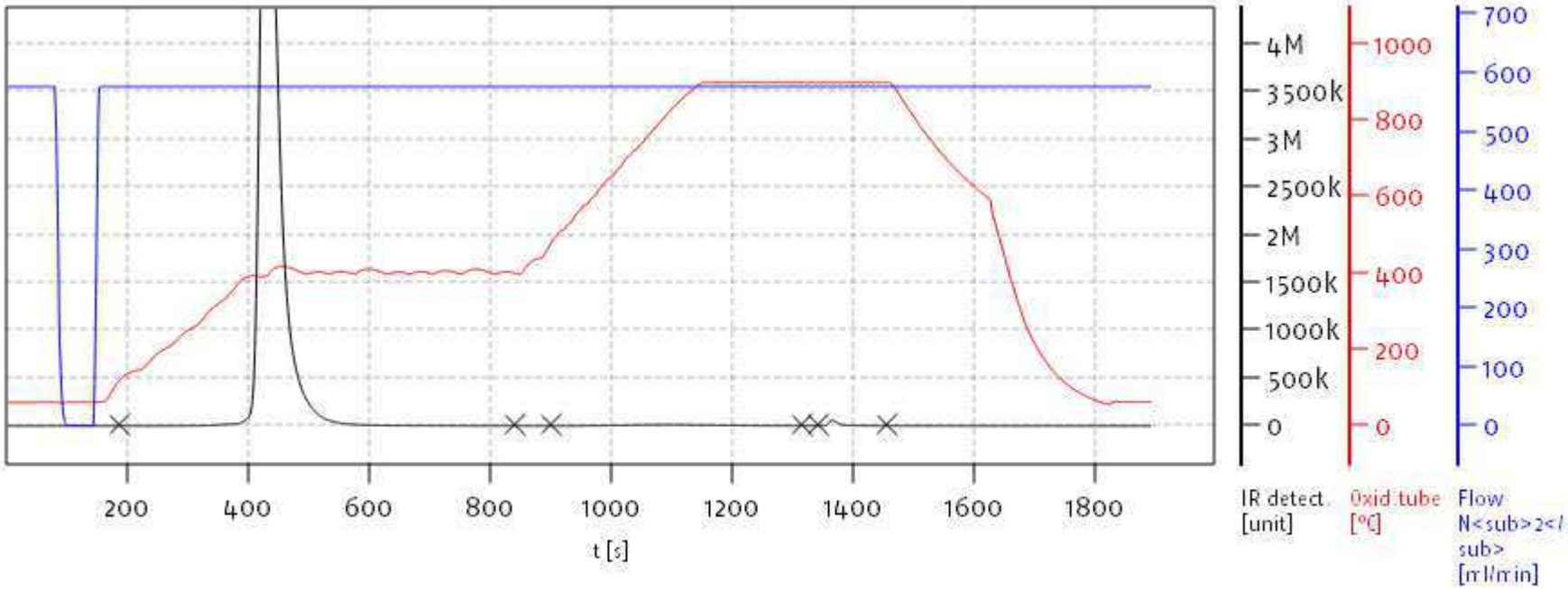
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
134	23	21G0289-02	465.60		1.00	CARBON	8/5/2021 2:41 PM	3.161	0.035	3.196	bl	9 160 320	86 539	43 997	1.0343	1.0000



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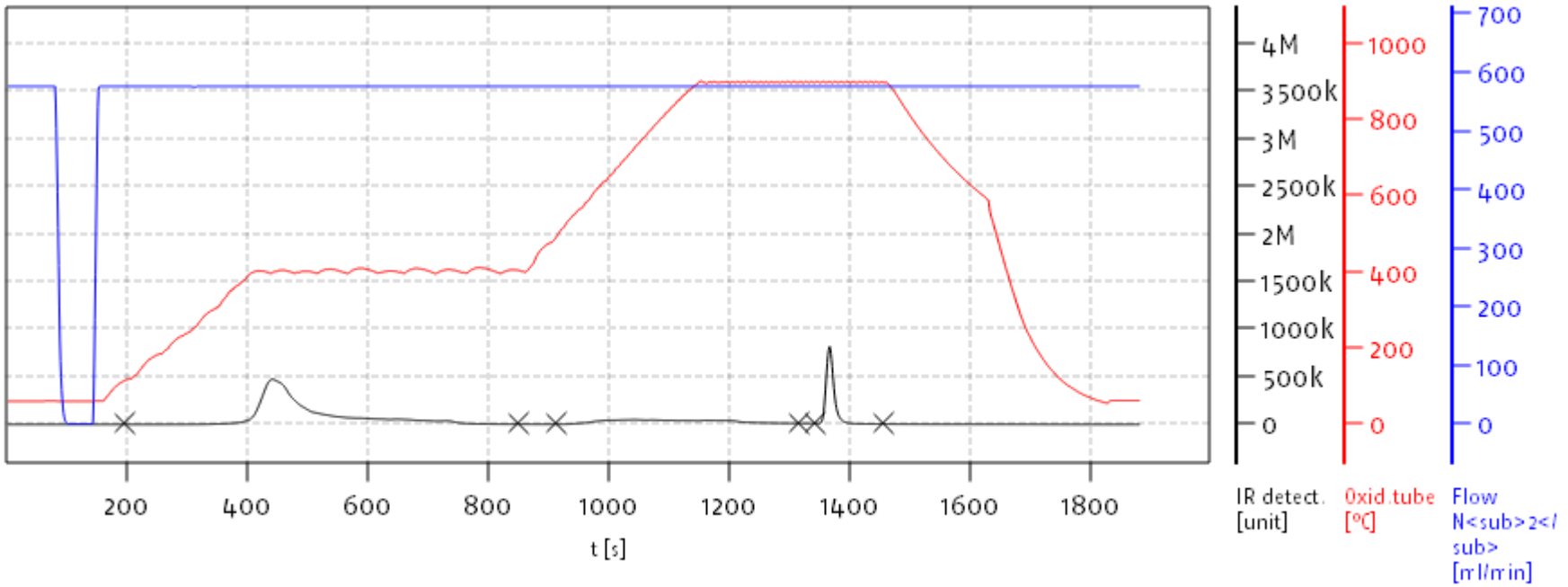
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
135	24	21G0289-05	559.20		1.00	CARBON	8/5/2021 3:13 PM	0.632	0.135	0.767	bl	1 722 300	470 922	474 056	1.0343	1.0000



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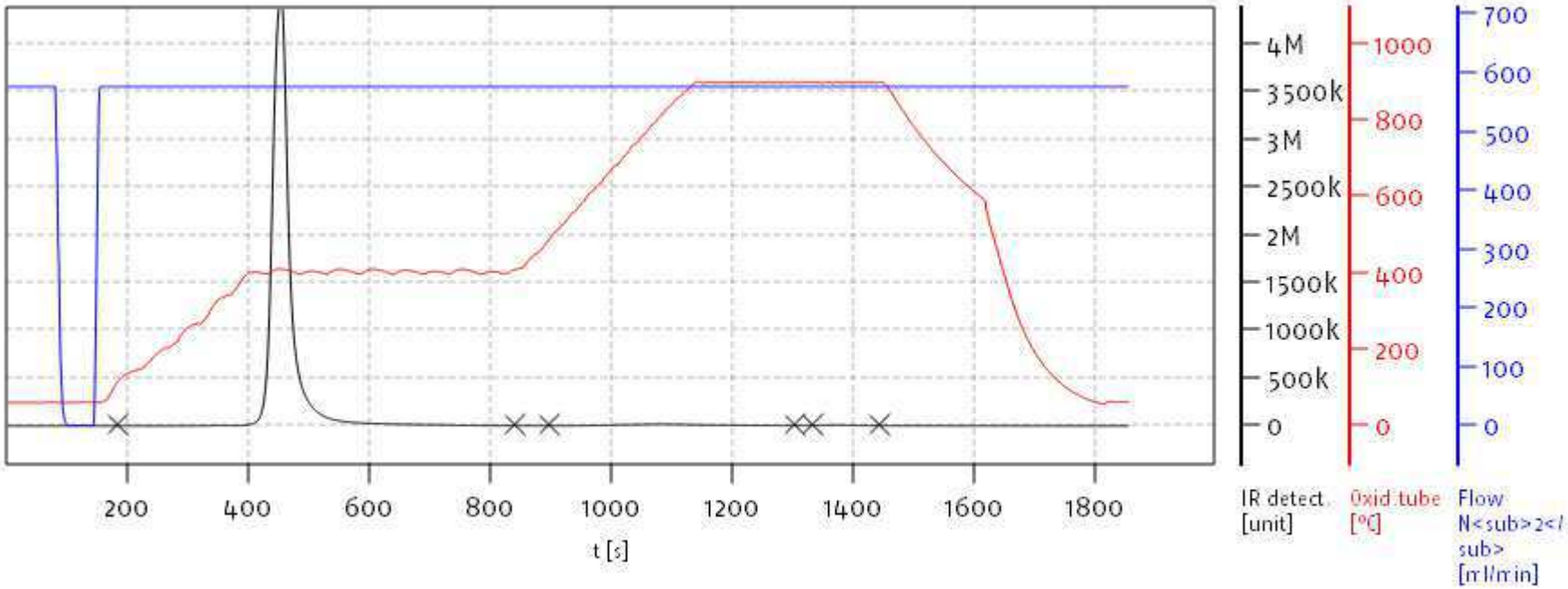
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
136	25	SJH0006-CCVB	20.80		1.00	CARBON	8/5/2021 3:45 PM	43.522	1.022	44.544	bl	5 625 500	118 697	21 519	1.0343	1.0000



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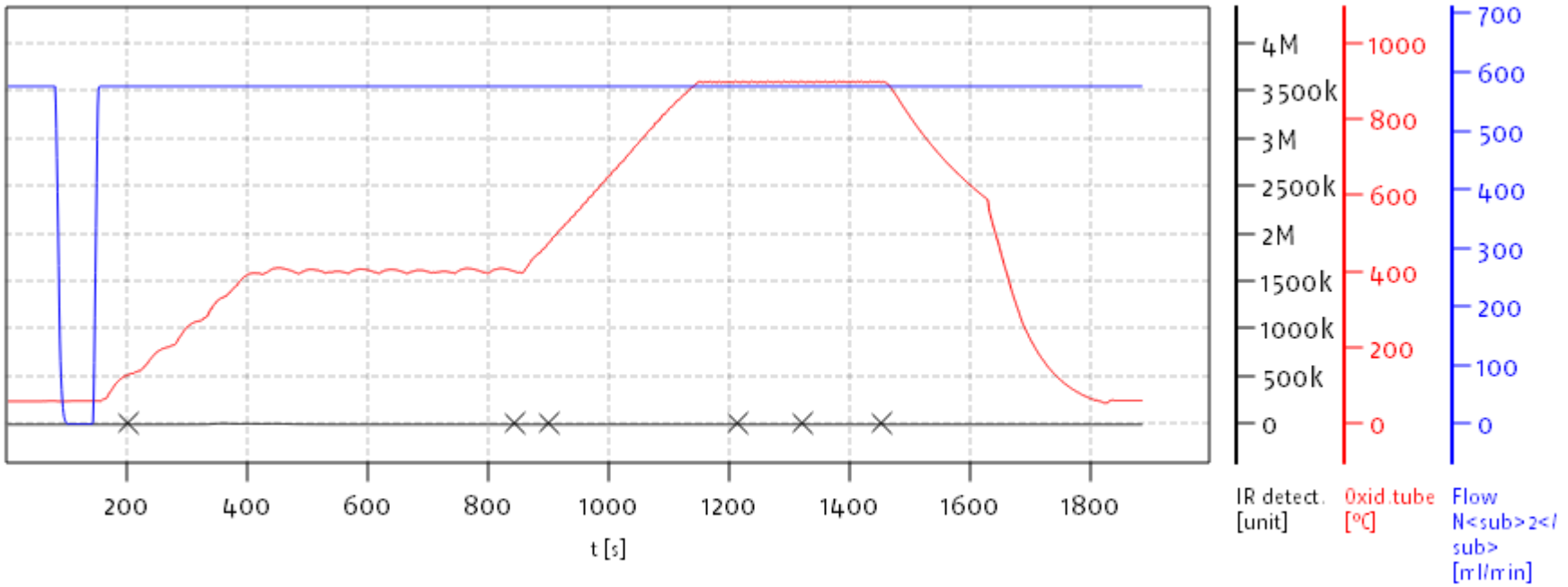
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
137	26	SJH0006-CCBB	599.30		1.00	CARBON	8/5/2021 4:16 PM	0.022	0.005	0.027	bl,C3u,C2u	42 509	1 664	558	1.0343	1.0000



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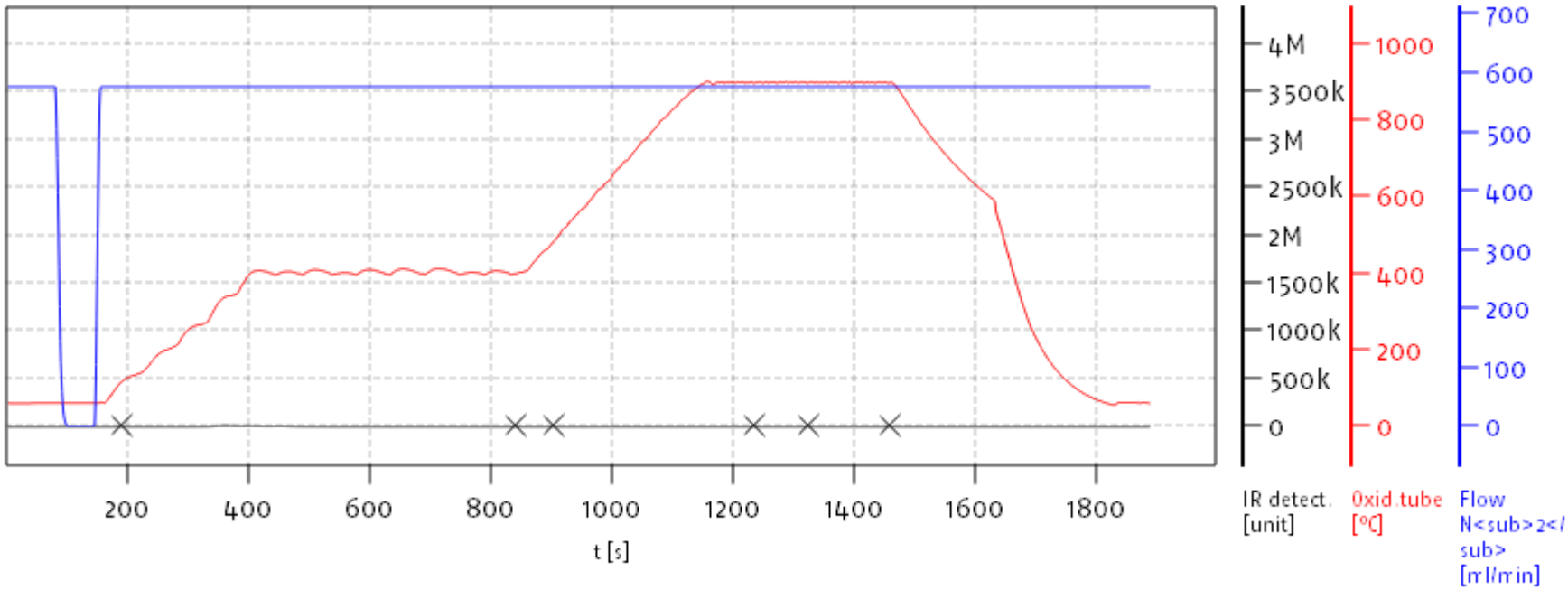
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
138	27	BJH0059-MRL1	534.00		1.00	CARBON	8/5/2021 4:48 PM	0.022	0.006	0.029	bl,C3u,C2u	36 635	2 342	576	1.0343	1.0000



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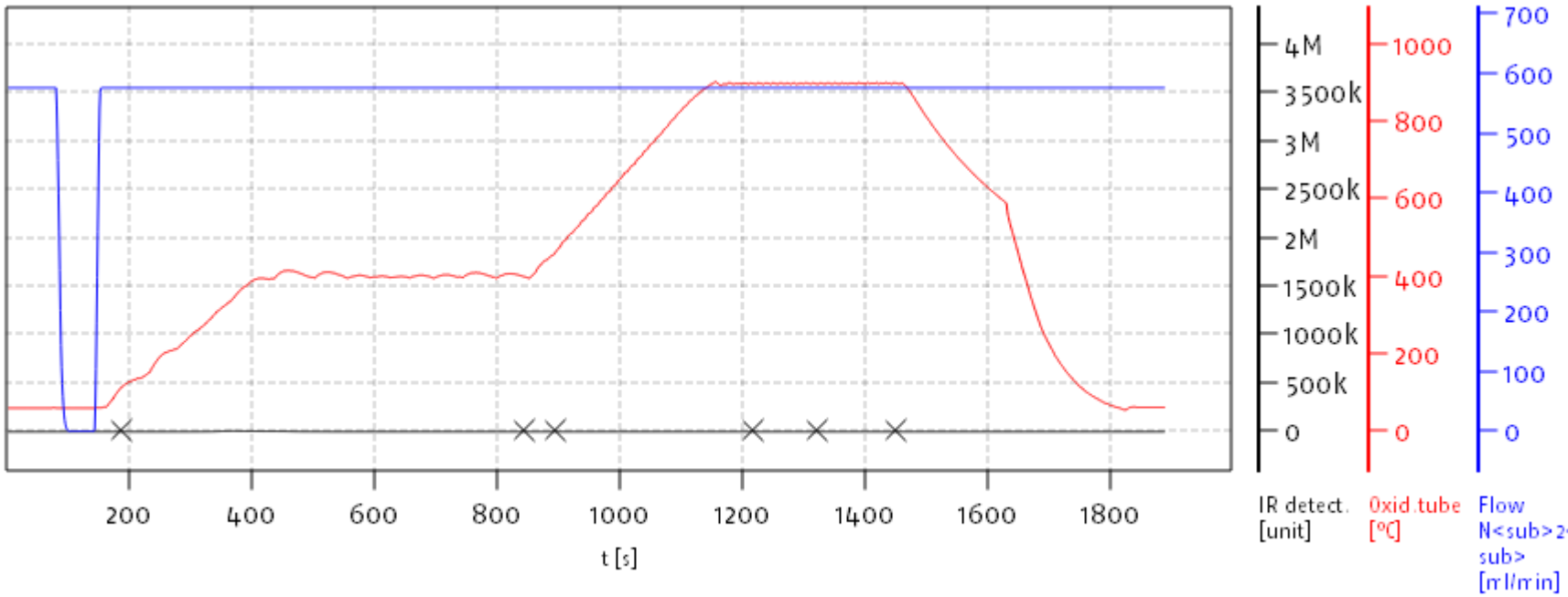
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
139	28	BJH0059-BLK1	574.00		1.00	CARBON	8/5/2021 5:20 PM	0.019	0.006	0.025	bl,C3u,C2u	30 150	1 417	370	1.0343	1.0000



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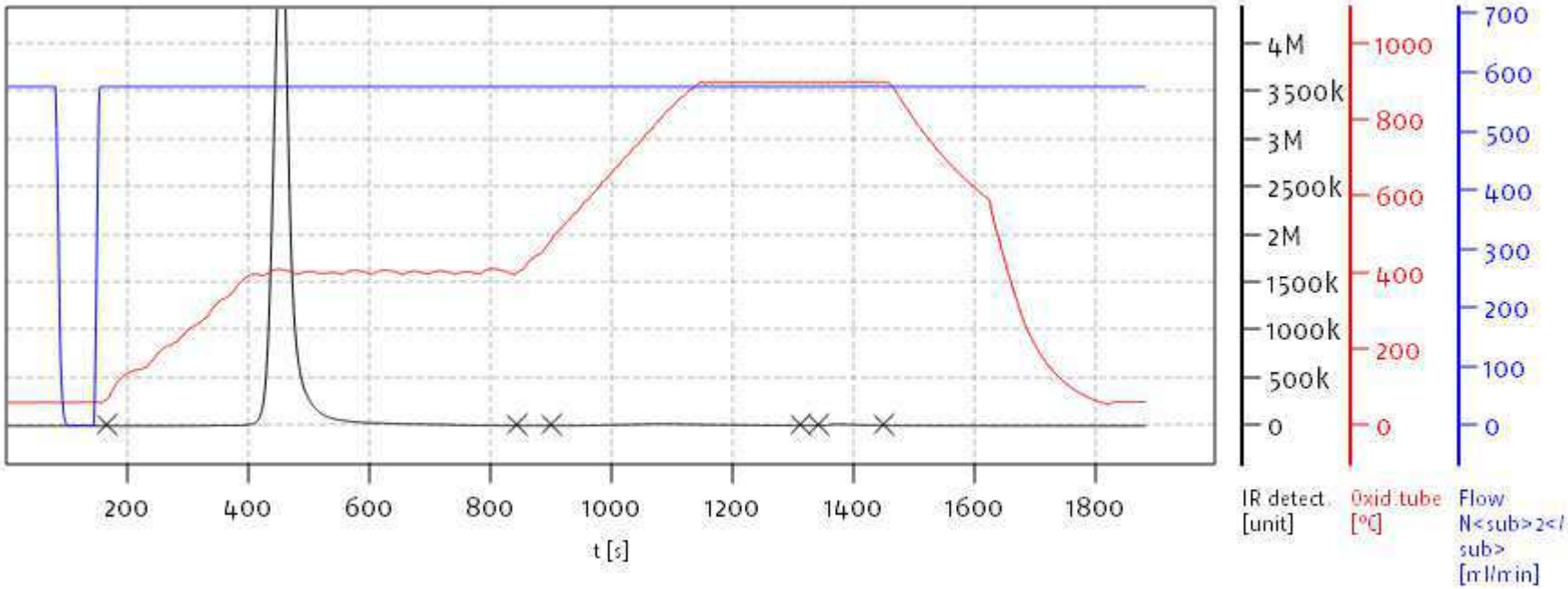
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
140	29	BJH0059-BS1	24.00		1.00	CARBON	8/5/2021 5:52 PM	44.151	1.082	45.233	bl	6 580 310	149 308	36 471	1.0343	1.0000



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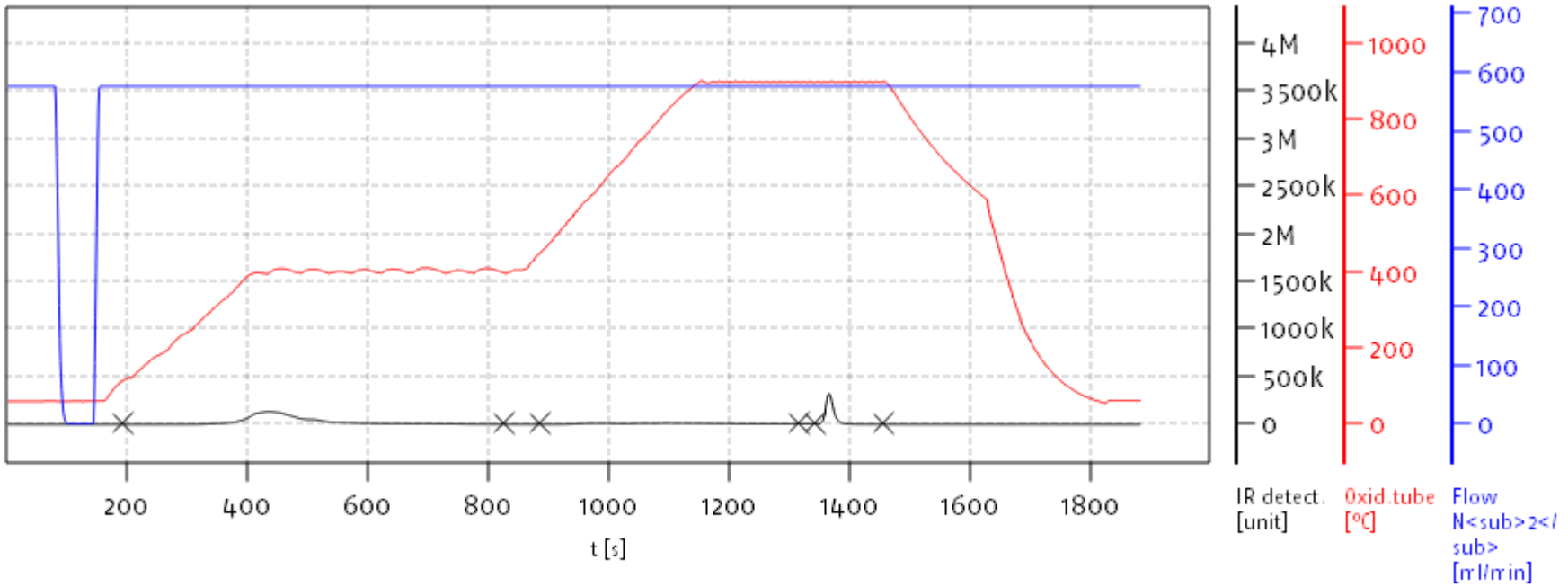
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
141	30	BJH0059-SRM1	46.10		1.00	CARBON	8/5/2021 6:24 PM	2.805	0.552	3.357	bl	593 078	145 870	187 085	1.0343	1.0000



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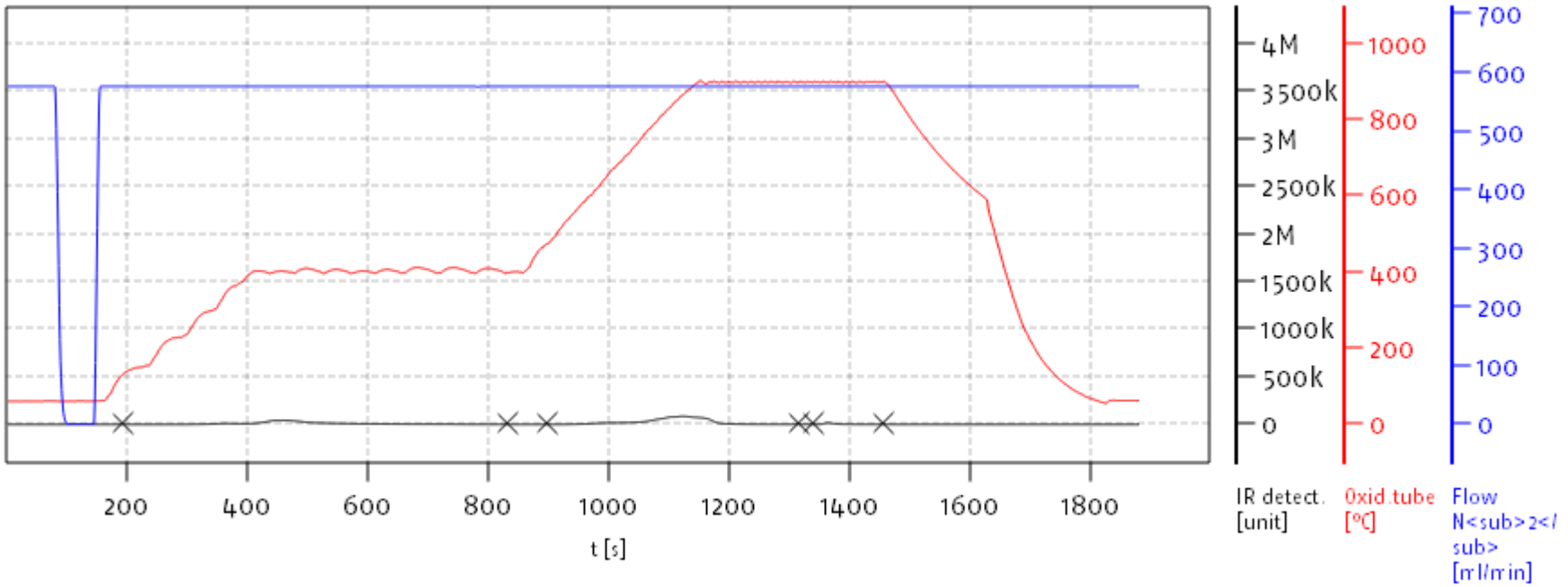
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
142	31	21G0246-01	521.90		1.00	CARBON	8/5/2021 6:56 PM	0.078	0.114	0.192	bl	201 523	368 043	15 487	1.0343	1.0000



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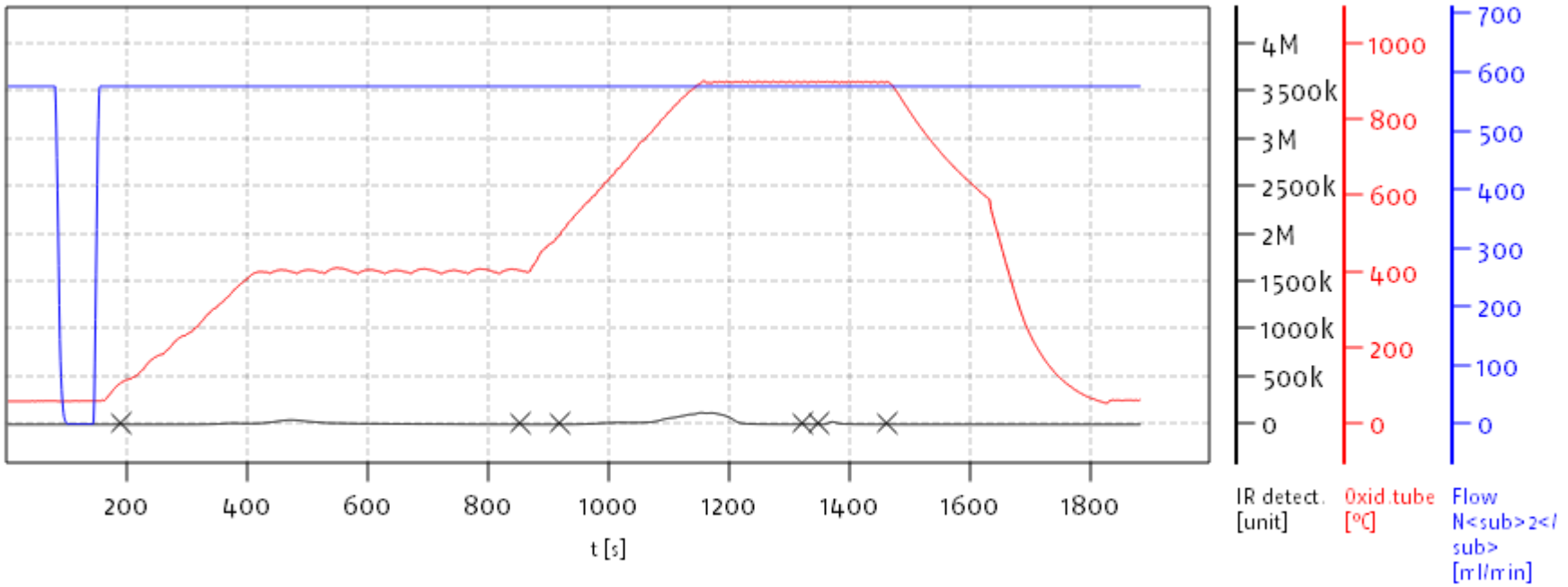
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
143	32	BJH0059-DUP1	509.10		1.00	CARBON	8/5/2021 7:27 PM	0.086	0.168	0.254	bl	216 159	535 618	22 263	1.0343	1.0000



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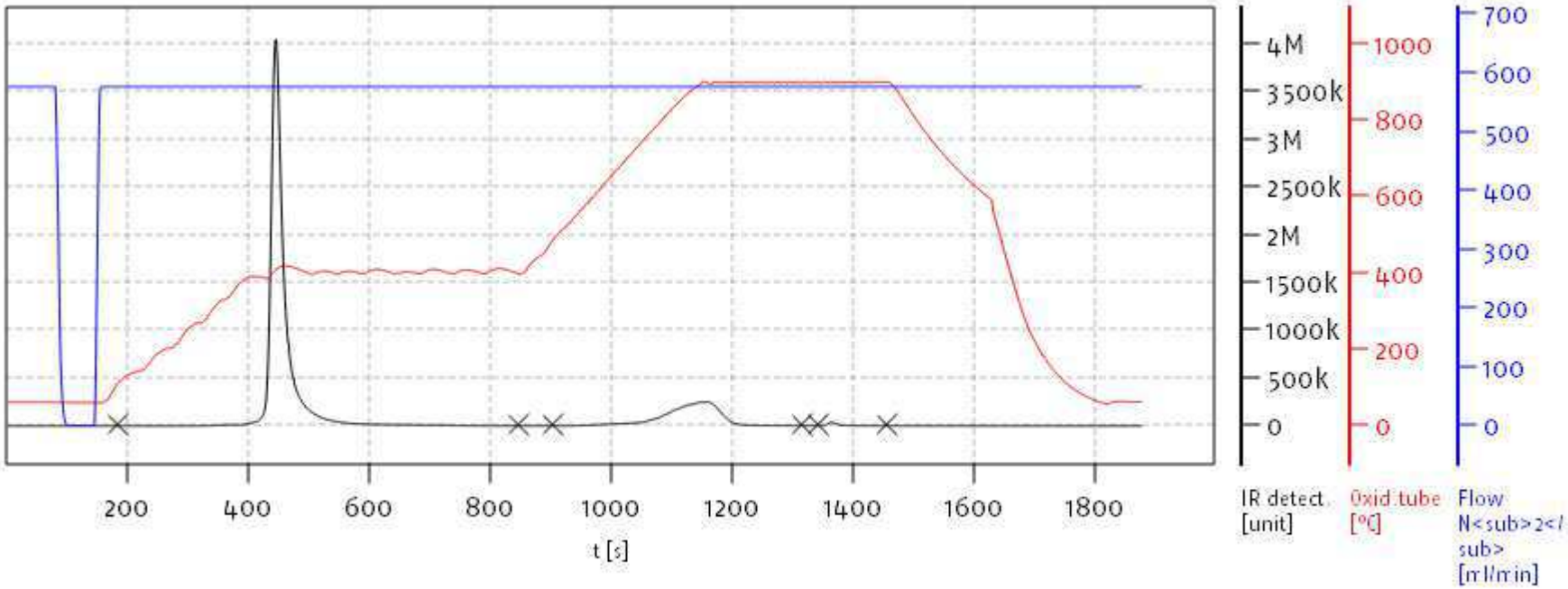
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
144	33	BJH0059-MS1	505.80	0.0133	1.00	CARBON	8/5/2021 7:59 PM	1.252	0.300	1.553	bl	3 909 460	967 424	30 357	1.0343	1.0000



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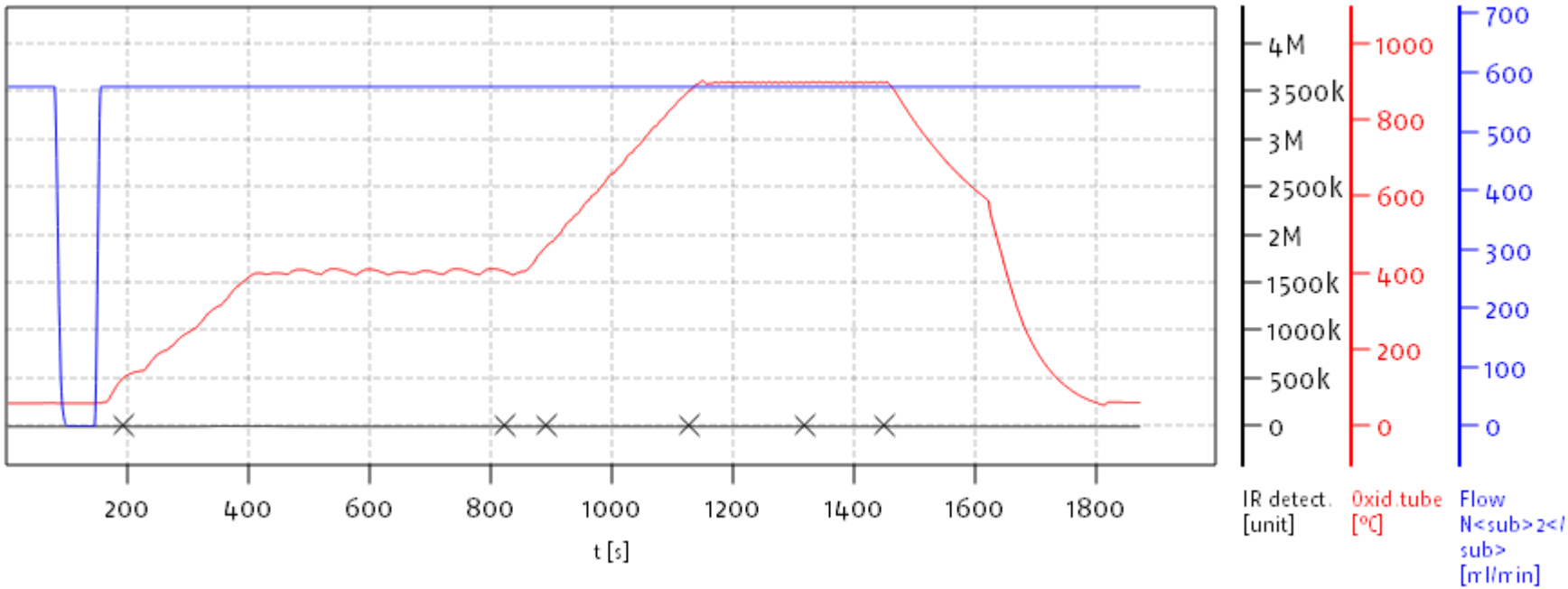
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
145	34	BLANK	1.00		1.00	CARBON	8/5/2021 8:31 PM	0.000	0.000	0.000	bl	20 189	1 286	401	1.0343	1.0000



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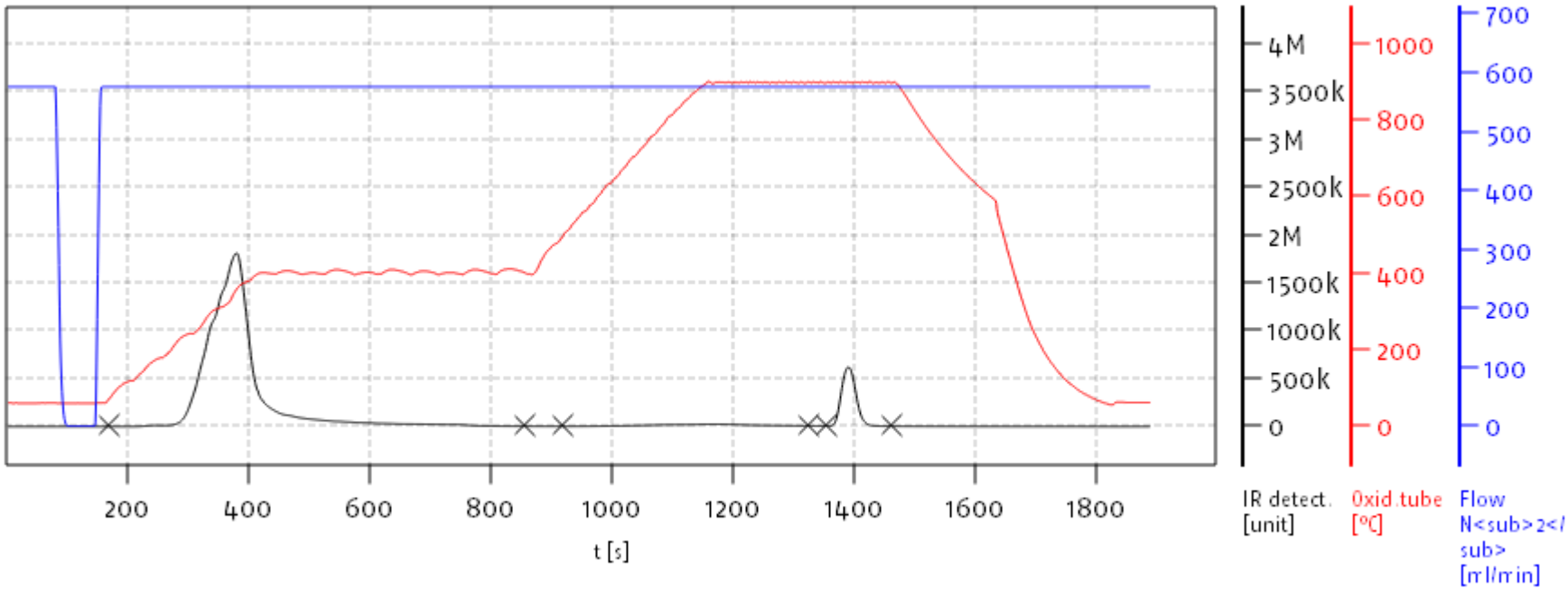
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
146	35	Dfactor	22.90		1.00	CARBON	8/5/2021 9:03 PM	48.991	1.429	50.421	bl	5 491 740	193 228	656 745	1.1994	1.0000



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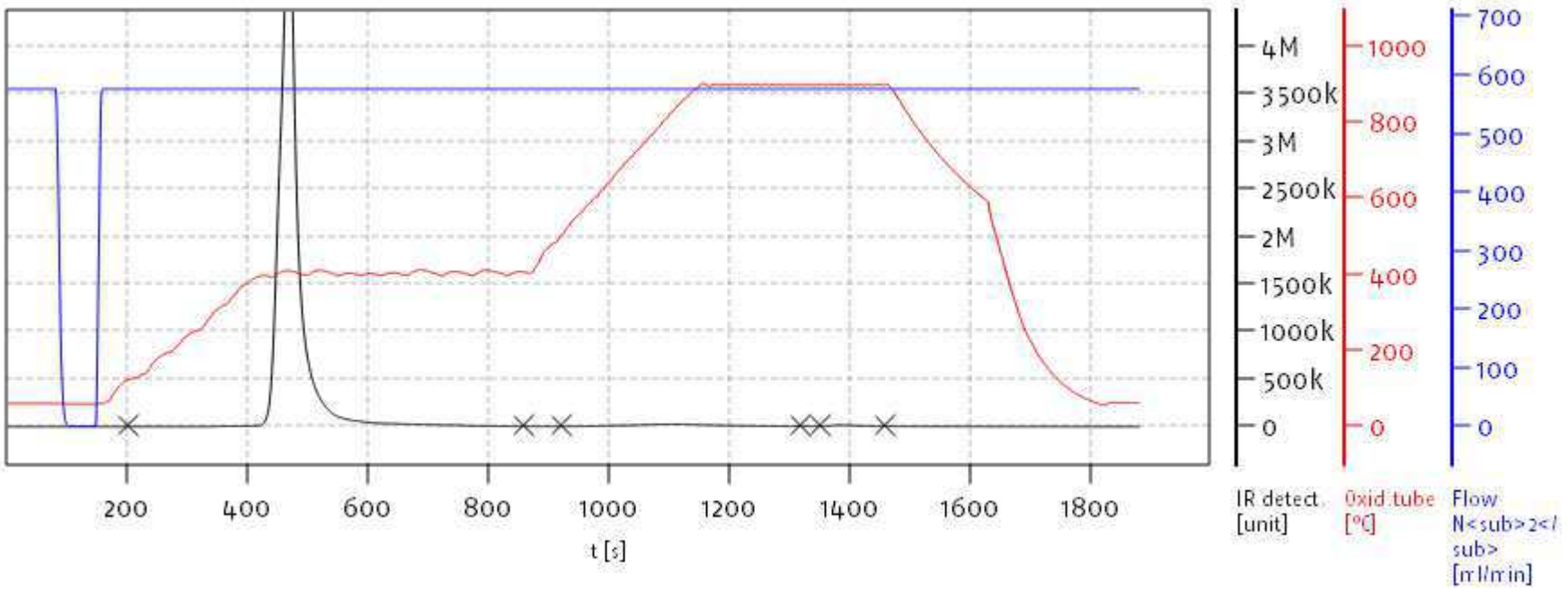
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
147	36	Dfactor	26.80		1.00	CARBON	8/5/2021 9:34 PM	44.762	1.133	45.895	bl	7 209 290	177 792	35 784	1.0702	1.0000



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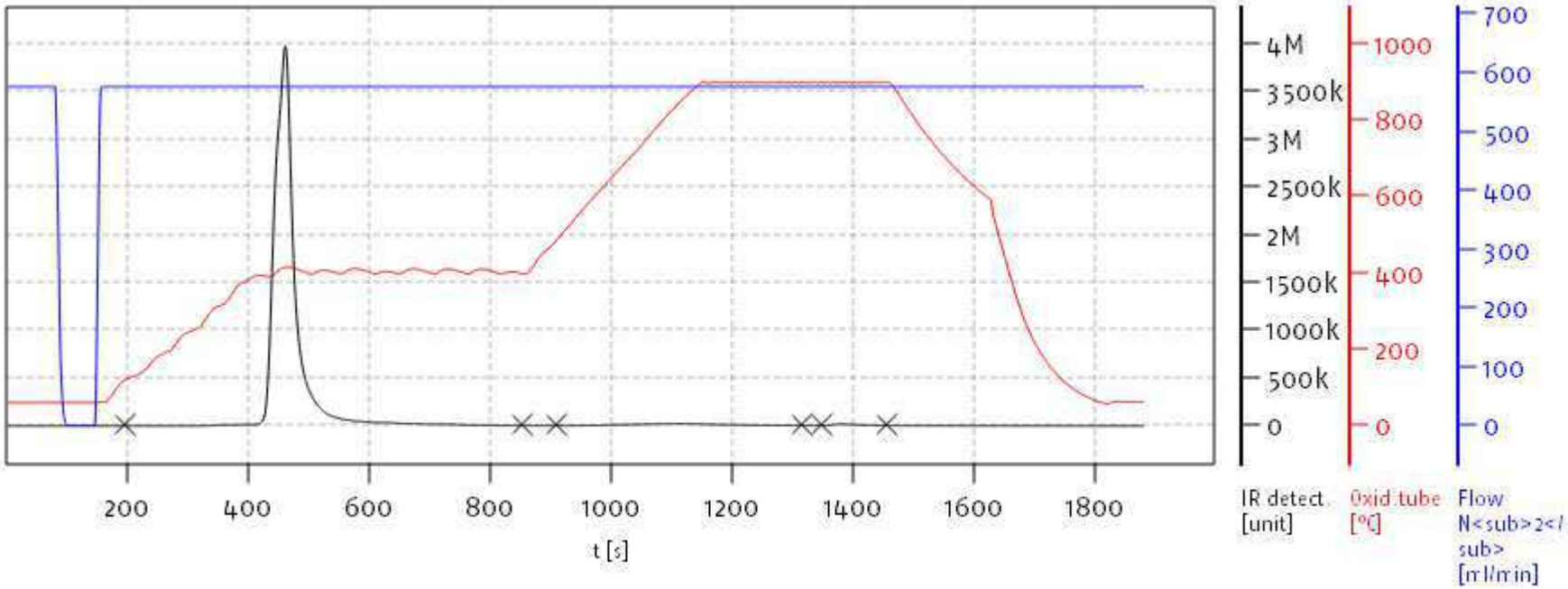
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
148	37	SJH0006-CCVC	21.40		1.00	CARBON	8/5/2021 10:06 PM	47.632	1.348	48.980	bl	5 763 150	168 034	38 780	1.1348	1.0000



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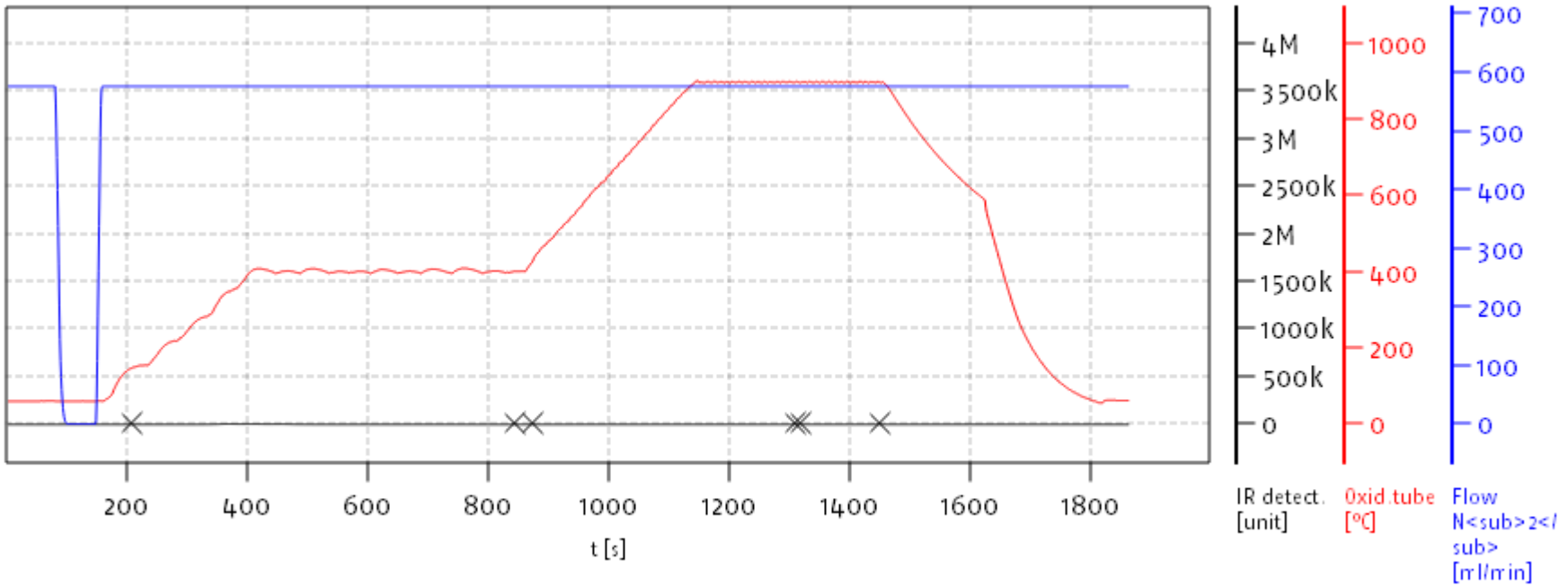
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
149	38	SJH0006-CCBC	530.70		1.00	CARBON	8/5/2021 10:38 PM	0.019	0.006	0.025	bl,C3u,C2u	21 303	1 108	1 083	1.1348	1.0000



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Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	5JH0006
Unacceptable Blank:	✓	Date of Event:	8/2/21
Unacceptable Duplicate:		Client ID:	
Unacceptable Spike:		Method/Element:	TOC (s)
Unacceptable Reference:		Prep Code:	

Details of Problem/Recommended Corrective Action:

ICB1 @ 0.02%
CCB2 @ 0.02%
CCB6 @ 0.02%
CCBA @ 0.02%
CCBB @ 0.02%

Samples Affected: All samples in affected brackets

Corrective Action Taken: All samples in affected bracket greater than 10x the reporting limit will be reported due to any contamination to be insignificant. samples less than 10x the RL will be reanalyzed

Analyst Initials: BF
Date: 8/9/21

Supervisor: KMS
Date: 8/9/21

5049F

Revision 007
6/11/10

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0323	Instrument:	TOC Cube
		Calibration:	EH00065

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Cal Standard	SJH0323-CAL1	peData_08252021@1209-(	NA	08/24/21 19:03
Cal Standard	SJH0323-CAL2	peData_08252021@1209-(	NA	08/24/21 19:34
Cal Standard	SJH0323-CAL3	peData_08252021@1209-(	NA	08/24/21 20:06
Cal Standard	SJH0323-CAL4	peData_08252021@1209-(	NA	08/24/21 20:38
Cal Standard	SJH0323-CAL5	peData_08252021@1209-(	NA	08/24/21 21:10
Cal Standard	SJH0323-CAL6	peData_08252021@1209-(	NA	08/24/21 21:41
Cal Standard	SJH0323-CAL7	peData_08252021@1209-(	NA	08/24/21 22:13
Cal Standard	SJH0323-CAL8	peData_08252021@1209-(	NA	08/24/21 22:44
Cal Standard	SJH0323-CAL9	peData_08252021@1209-(	NA	08/24/21 23:16
Cal Standard	SJH0323-CALA	peData_08252021@1209-(	NA	08/24/21 23:48
Cal Standard	SJH0323-CALB	peData_08252021@1209-(	NA	08/25/21 00:19
Cal Standard	SJH0323-CALC	peData_08252021@1209-(	NA	08/25/21 00:51
Cal Standard	SJH0323-CALD	peData_08252021@1209-(	NA	08/25/21 01:22
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Cal Standard	SJH0323-CALF	peData_08252021@1209-(	NA	08/25/21 02:26
Cal Standard	SJH0323-CALG	peData_08252021@1209-(	NA	08/25/21 02:58
Cal Standard	SJH0323-CALH	peData_08252021@1209-(	NA	08/25/21 03:29
Cal Standard	SJH0323-CALI	peData_08252021@1209-(	NA	08/25/21 04:01
Cal Standard	SJH0323-CALJ	peData_08252021@1209-(	NA	08/25/21 04:33
Initial Cal Check	SJH0323-ICV1	peData_08252021@1209-(	NA	08/25/21 09:19
Initial Cal Blank	SJH0323-ICB1	peData_08252021@1209-(	NA	08/25/21 09:51
Cal Standard	SJH0323-CALK	peData_08252021@1209-(	NA	08/25/21 11:41
Cal Standard	SJH0323-CALL	peData_08252021@1209-(	NA	08/25/21 11:42
Cal Standard	SJH0323-CALM	peData_08252021@1209-(	NA	08/25/21 11:43
Cal Standard	SJH0323-CALN	peData_08252021@1209-(	NA	08/25/21 11:45
Cal Standard	SJH0323-CALO	peData_08252021@1209-(	NA	08/25/21 11:46

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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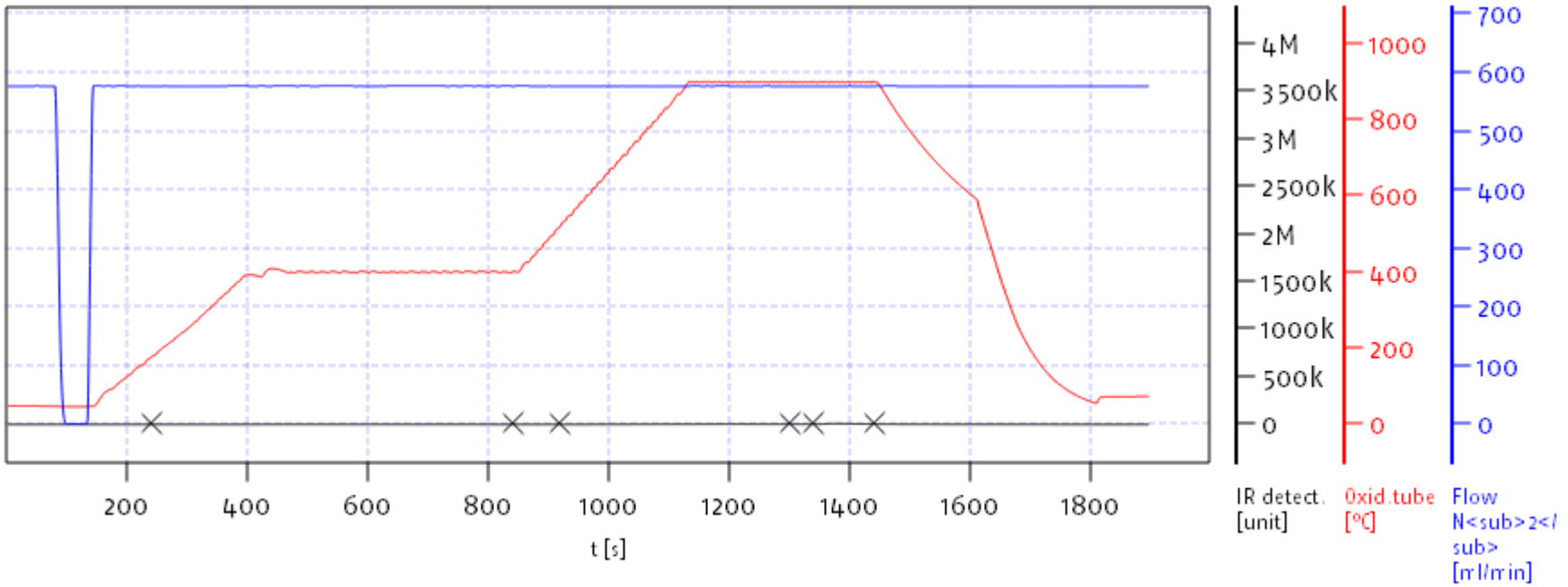
Analytical Chemists and Consultants

	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	9	BLANK	1.00		1.00	CARBON	8/24/2021 6:00 PM	0.000	0.000	0.000	bl	13 861	33 454	21 567	1.0000	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
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Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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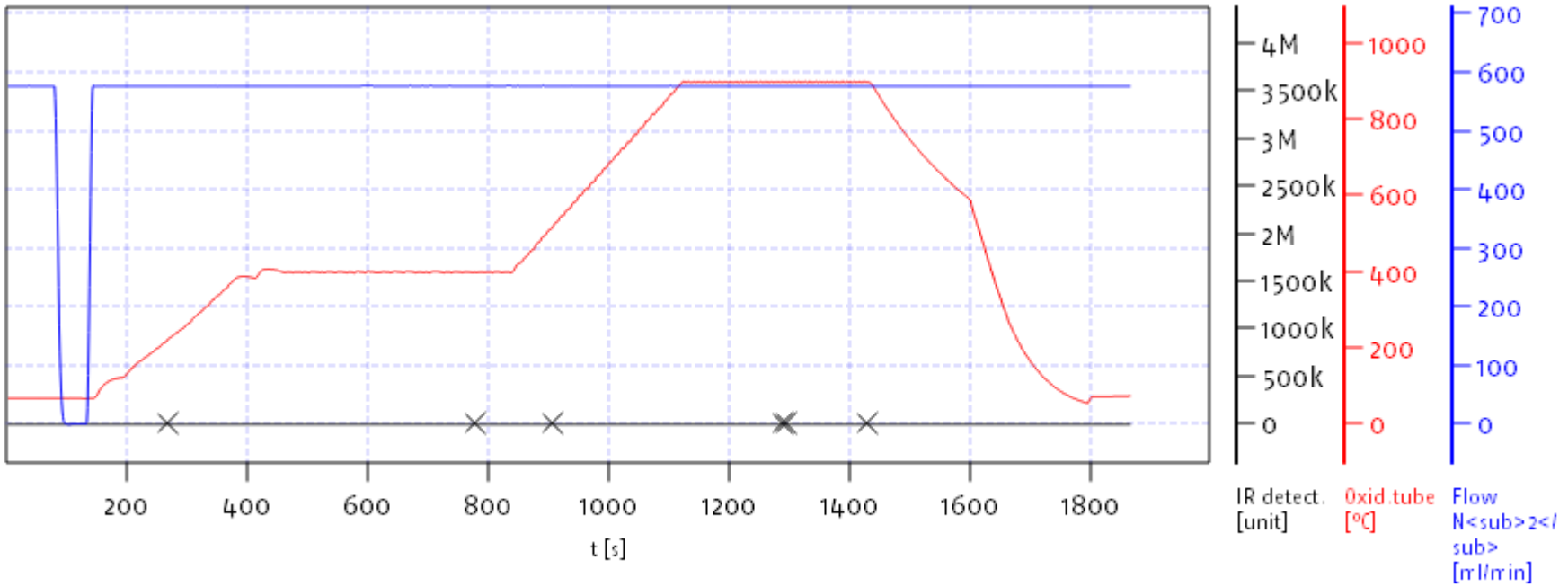
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
2	10	BLANK	1.00		1.00	CARBON	8/24/2021 6:31 PM	0.000	0.000	0.000	bl	1 643	8	245	1.0000	1.0000



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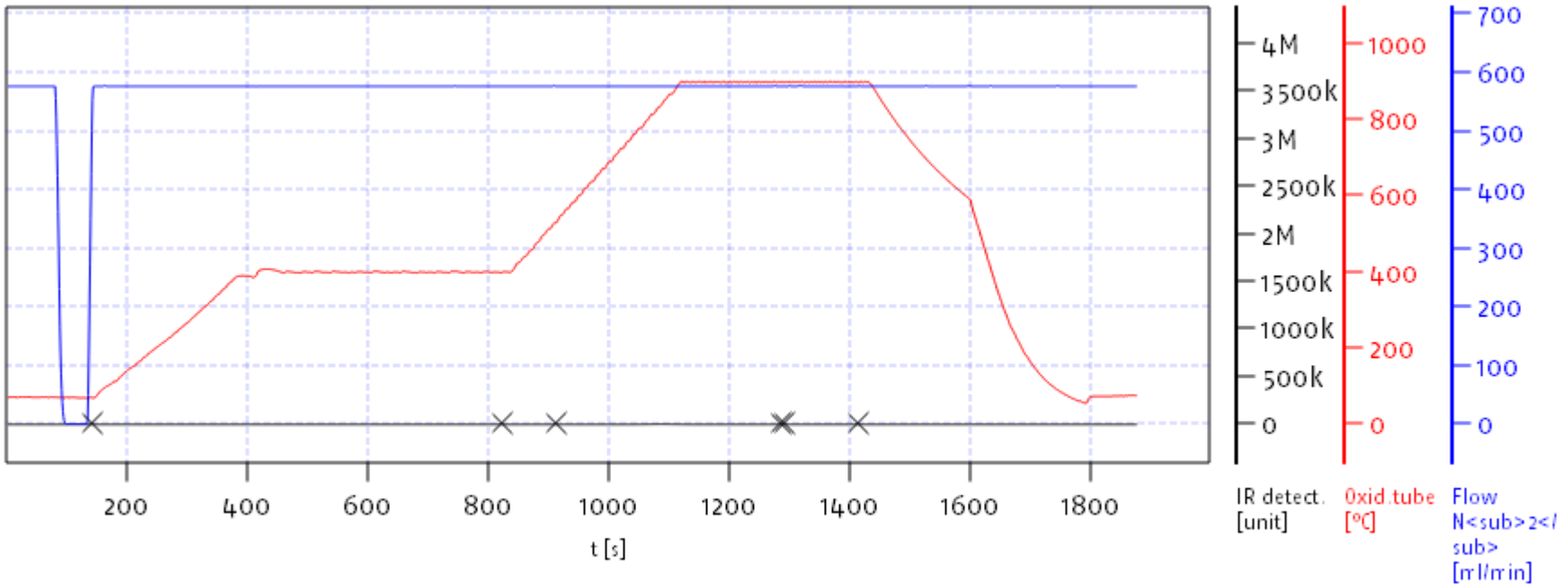
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
3	11	SEQ-CAL1	200.00	0.0017	1.00	CARBON	8/24/2021 7:03 PM	0.000	0.008	0.008	bl,C1u,C3u,C2u	1 070	6 478	141	1.0000	1.1719



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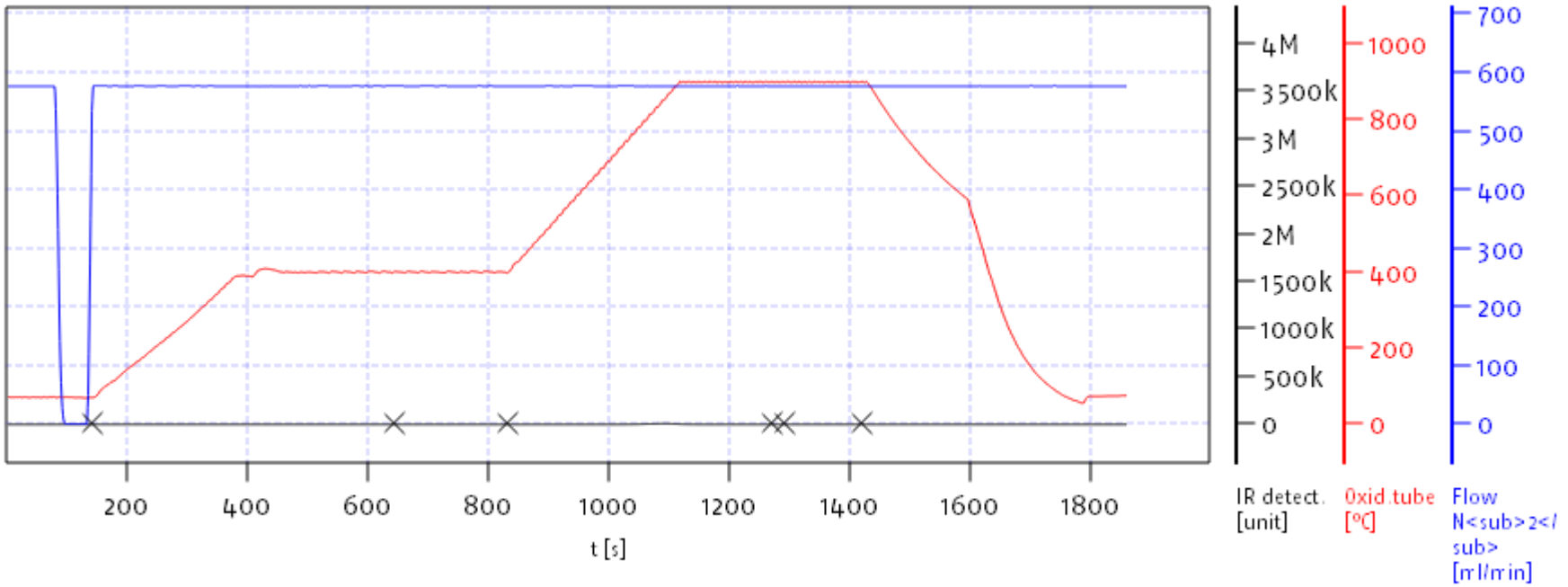
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
4	12	SEQ-CAL2	200.00	0.0054	1.00	CARBON	8/24/2021 7:34 PM	0.000	0.015	0.015	bl,C1u,C2u	660	18 783	85	1.0000	0.9072



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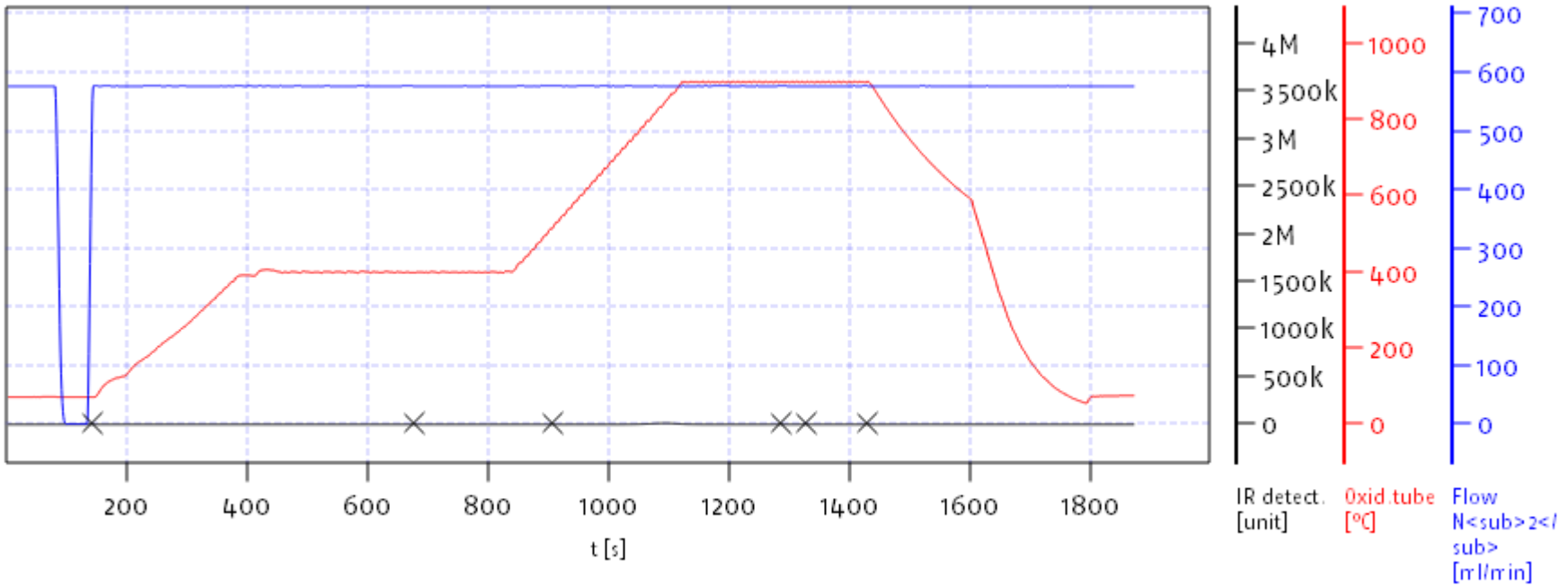
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
5	13	SEQ-CAL3	200.00	0.0068	1.00	CARBON	8/24/2021 8:06 PM	0.000	0.022	0.022	bl,C1u,C2u	889	24 712	60	1.0000	1.0307



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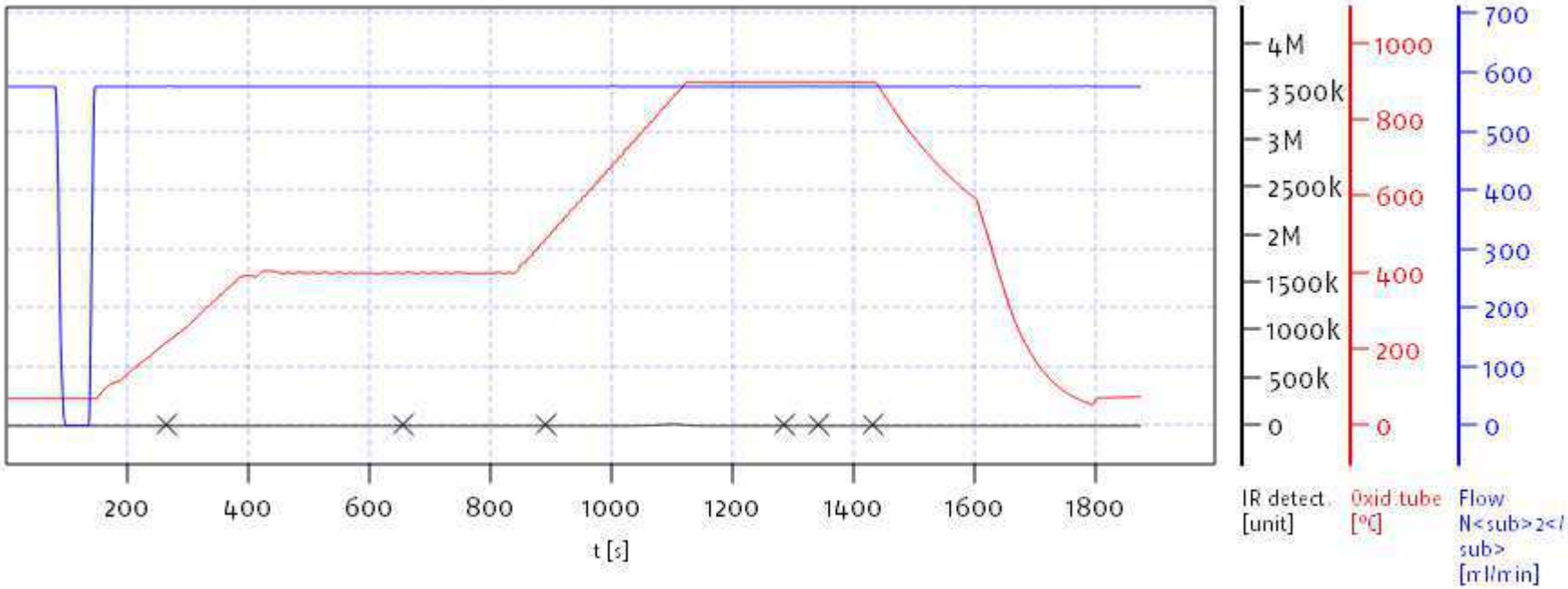
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
6	14	SEQ-CAL4	200.00	0.0101	1.00	CARBON	8/24/2021 8:38 PM	0.000	0.030	0.030	bl,C1u,C2u	1 503	31 221	84	1.0000	1.1361



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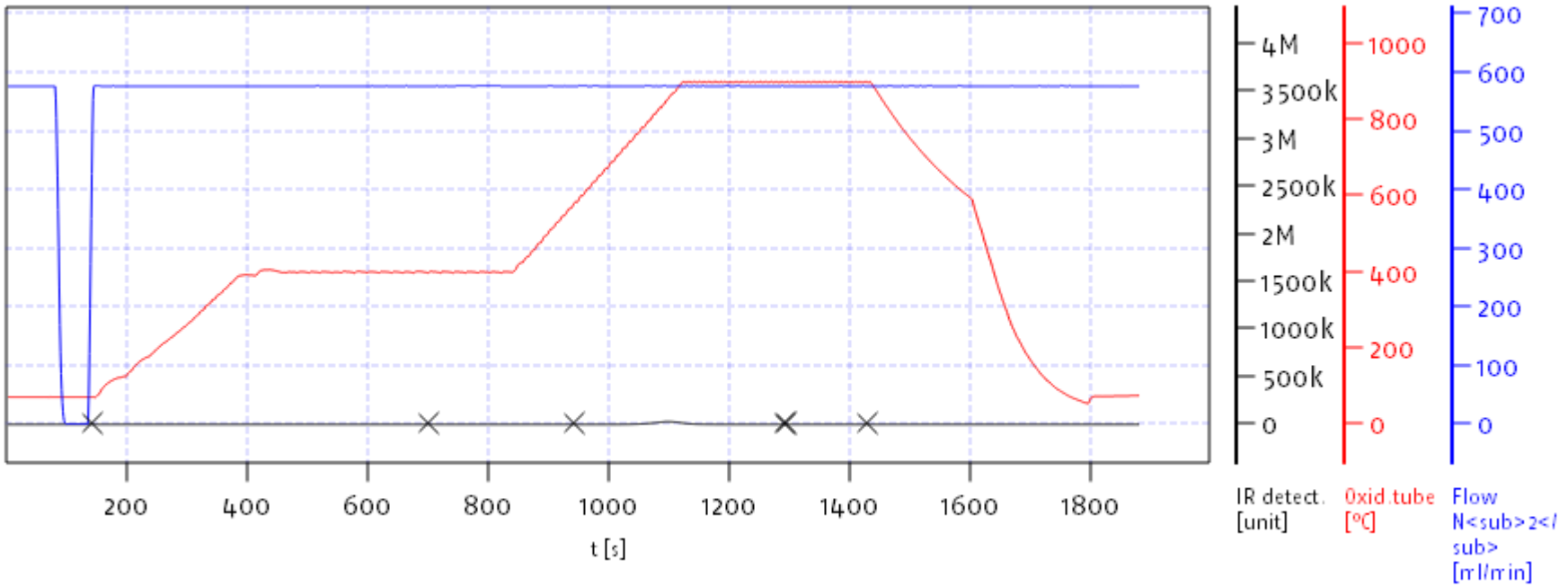
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
7	15	SEQ-CAL5	200.00	0.0151	1.00	CARBON	8/24/2021 9:10 PM	0.000	0.045	0.045	bl,C1u,C2u	776	61 535	62	1.0000	0.8900



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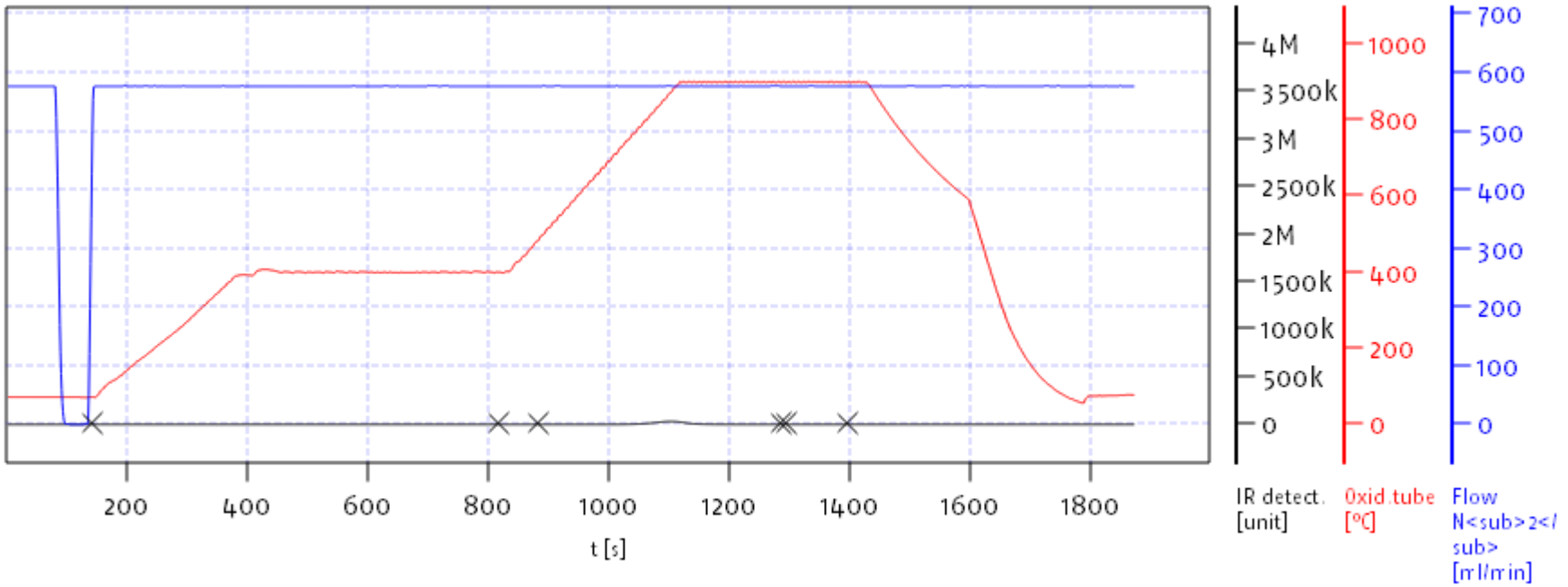
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
8	16	SEQ-CAL6	200.00	0.0200	1.00	CARBON	8/24/2021 9:41 PM	0.000	0.061	0.061	bl,C1u,C2u	1 086	73 745	55	1.0000	1.0168



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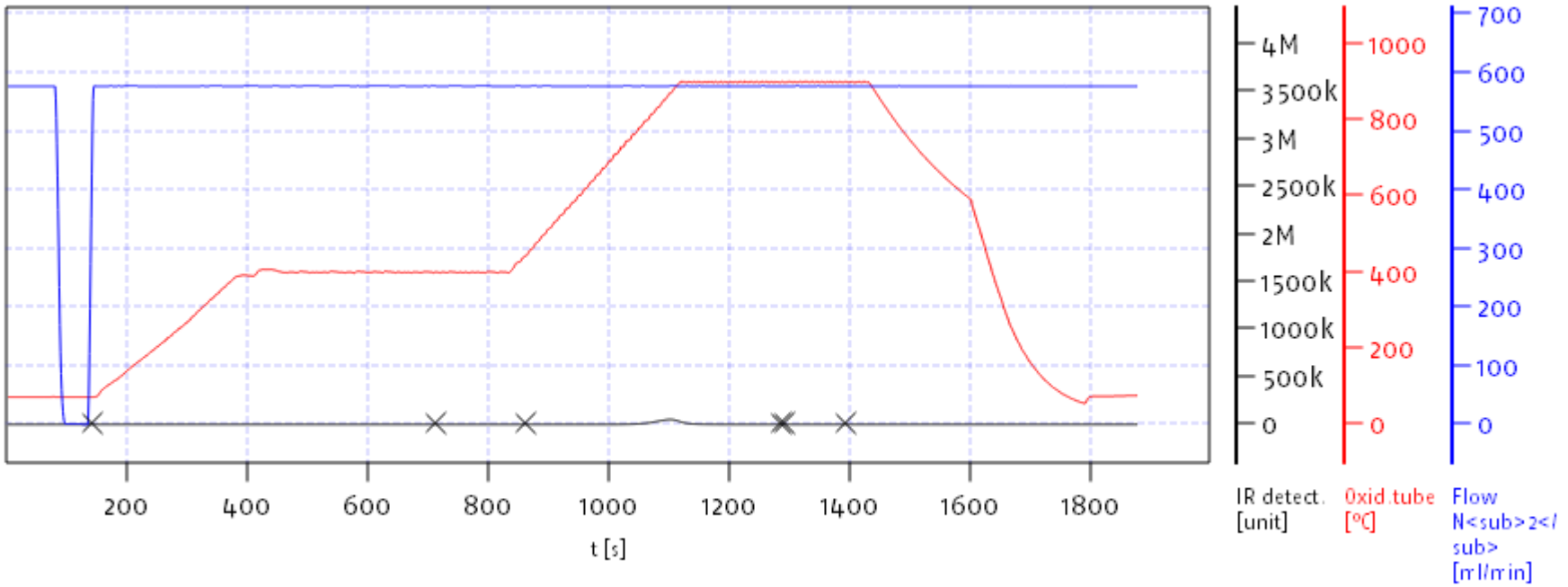
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
9	17	SEQ-CAL7	200.00	0.0256	1.00	CARBON	8/24/2021 10:13 PM	0.000	0.075	0.075	bl,C1u,C2u	1 149	100 193	99	1.0000	0.9293



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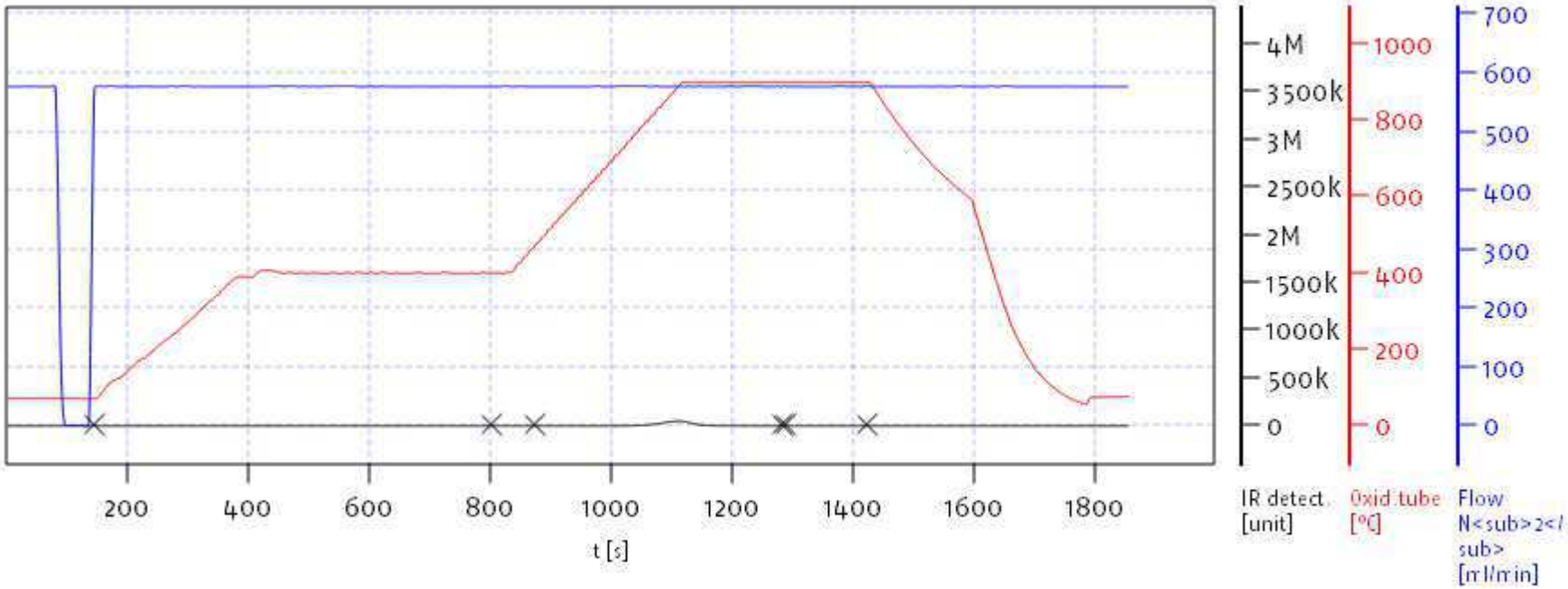
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
10	18	SEQ-CAL8	200.00	0.0303	1.00	CARBON	8/24/2021 10:44 PM	0.000	0.091	0.091	bl,C1u,C2u	779	118 482	109	1.0000	0.9492



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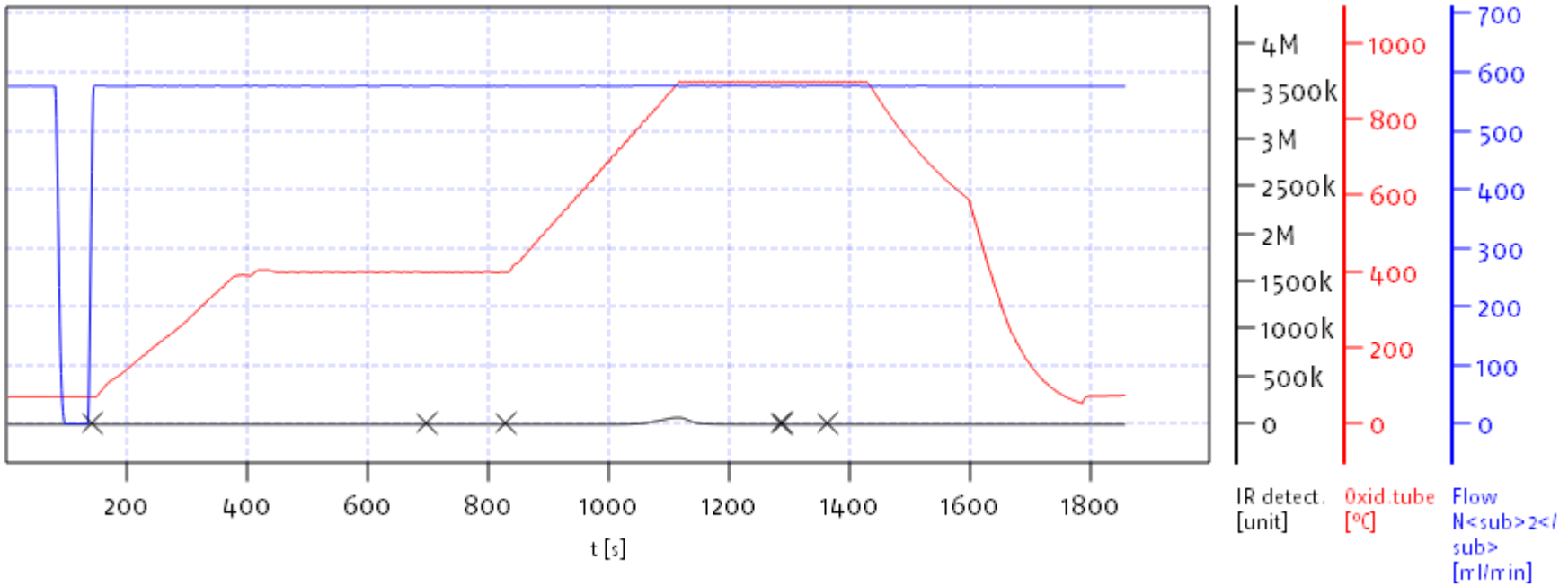
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
11	19	SEQ-CAL9	200.00	0.0396	1.00	CARBON	8/24/2021 11:16 PM	0.000	0.120	0.120	bl,C1u,C2u	848	163 267	93	1.0000	0.9178



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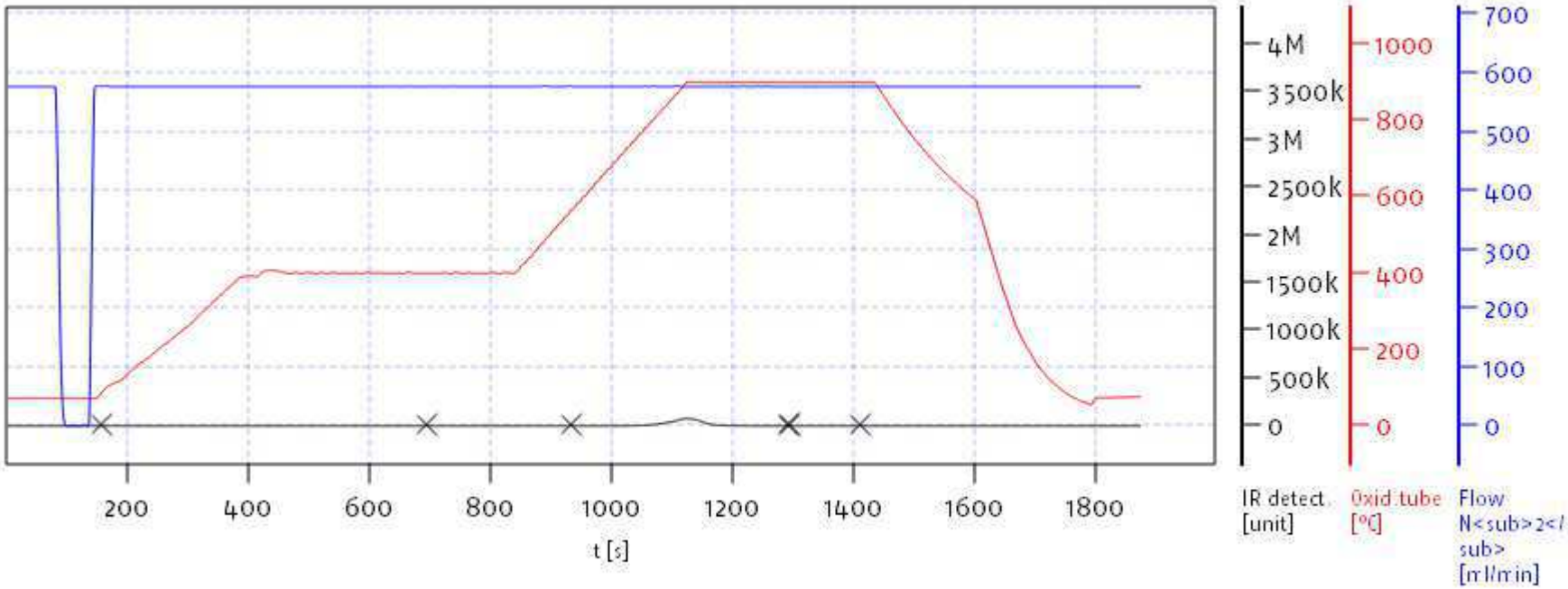
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
12	20	SEQ-CALA	200.00	0.0498	1.00	CARBON	8/24/2021 11:48 PM	0.000	0.151	0.151	bl,C1u,C2u	1 818	184 410	146	1.0000	1.0237



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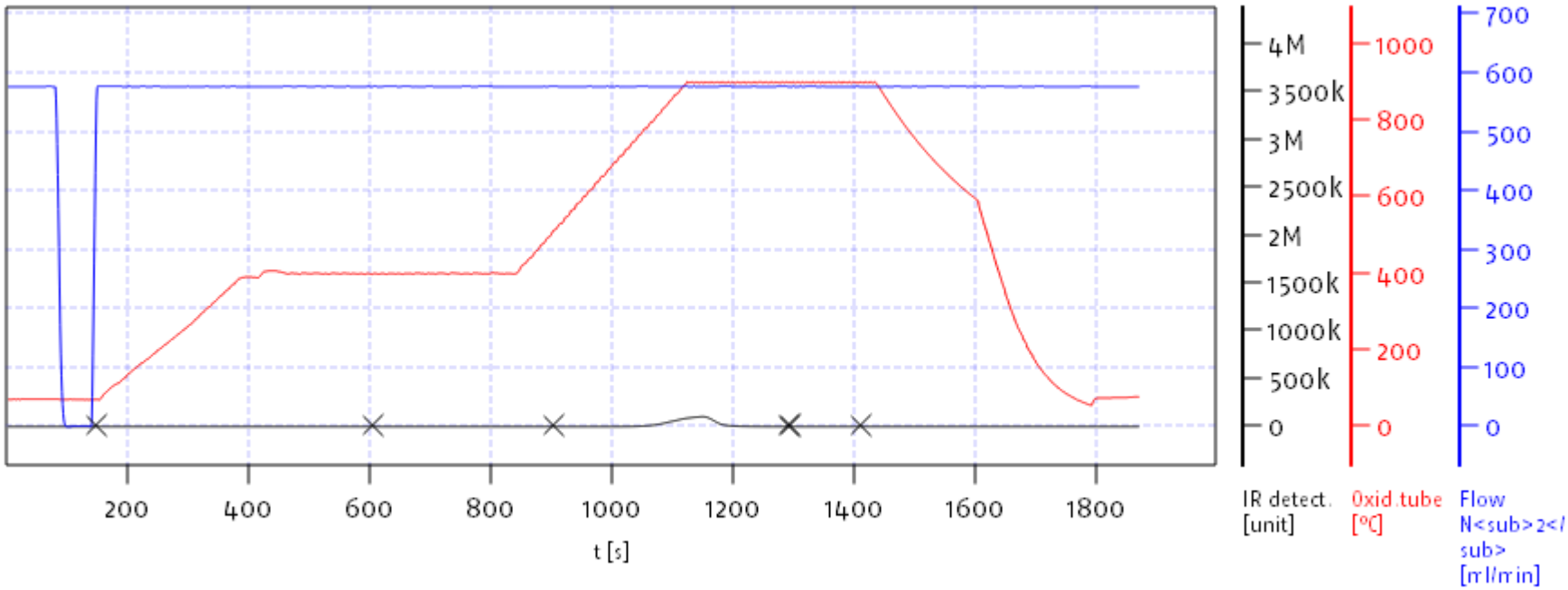
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
13	21	SEQ-CALB	200.00	0.0042	1.00	CARBON	8/25/2021 12:19 AM	0.000	0.258	0.258	bl,C1u,C2u	972	305 136	284	1.0000	1.0636



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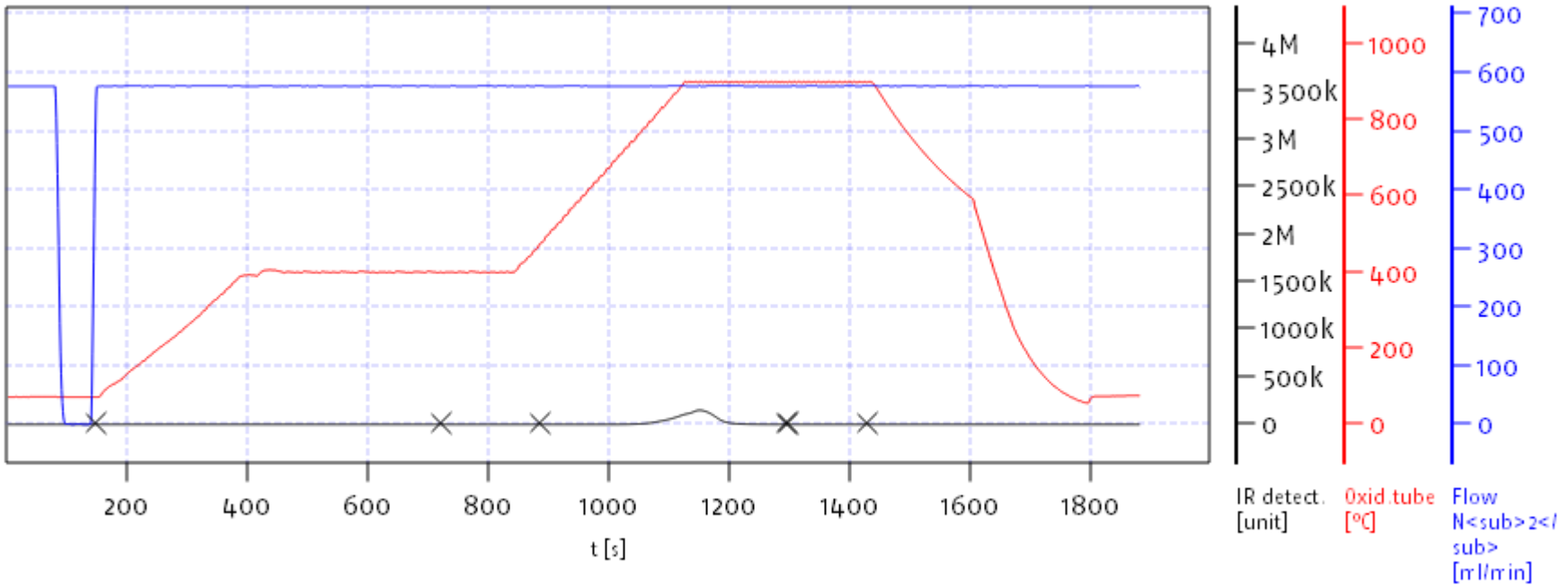
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
14	22	SEQ-CALC	200.00	0.0056	1.00	CARBON	8/25/2021 12:51 AM	0.000	0.324	0.324	bl,C1u,C2u	925	413 926	393	1.0000	0.9869



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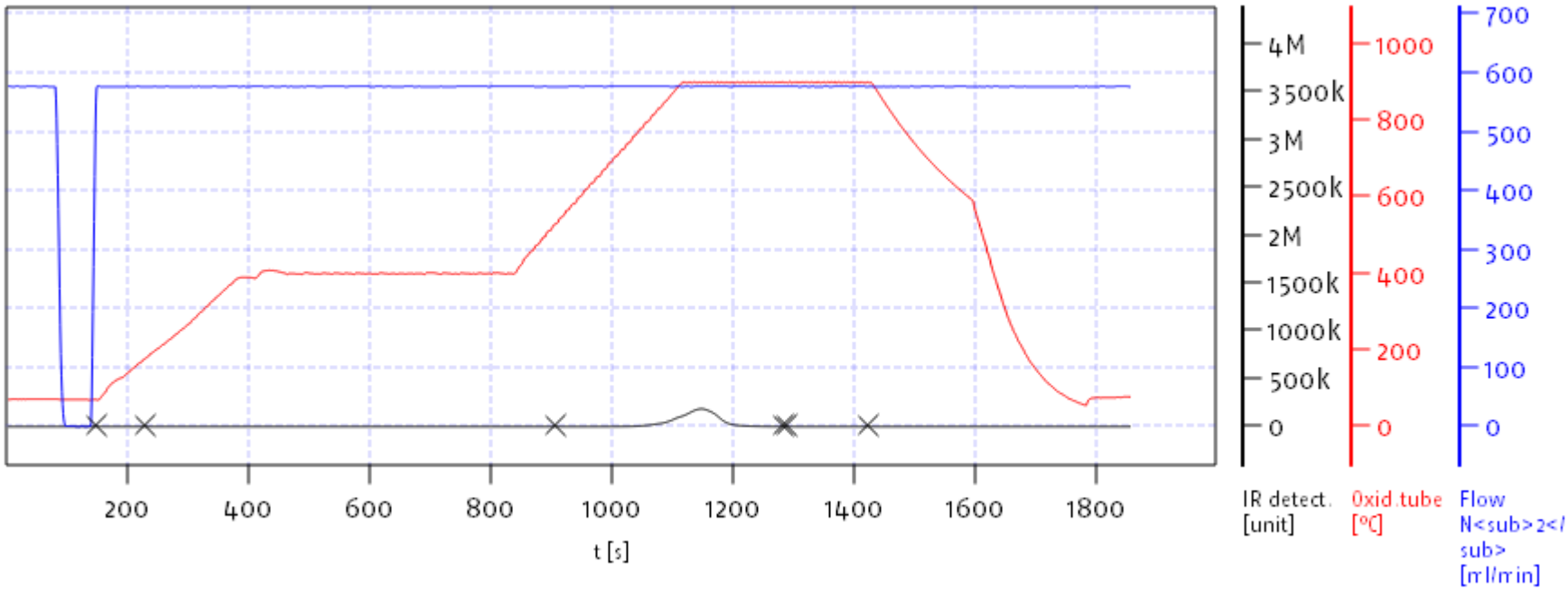
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
15	23	SEQ-CALD	200.00	0.0069	1.00	CARBON	8/25/2021 1:22 AM	0.000	0.444	0.444	bl,C1u,C2u	172	525 080	677	1.0000	1.0675



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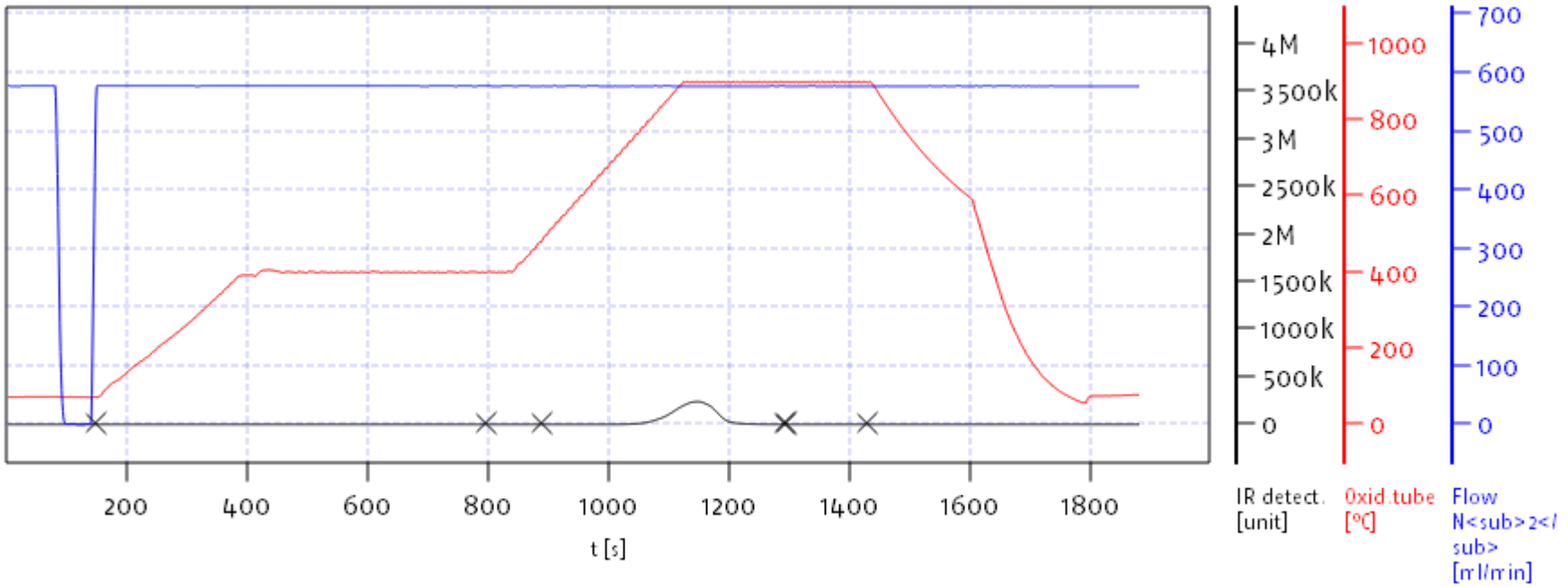
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
16	24	SEQ-CALE	200.00	0.0097	1.00	CARBON	8/25/2021 1:54 AM	0.000	0.600	0.600	bl,C1u,C2u	989	743 966	687	1.0000	1.0196



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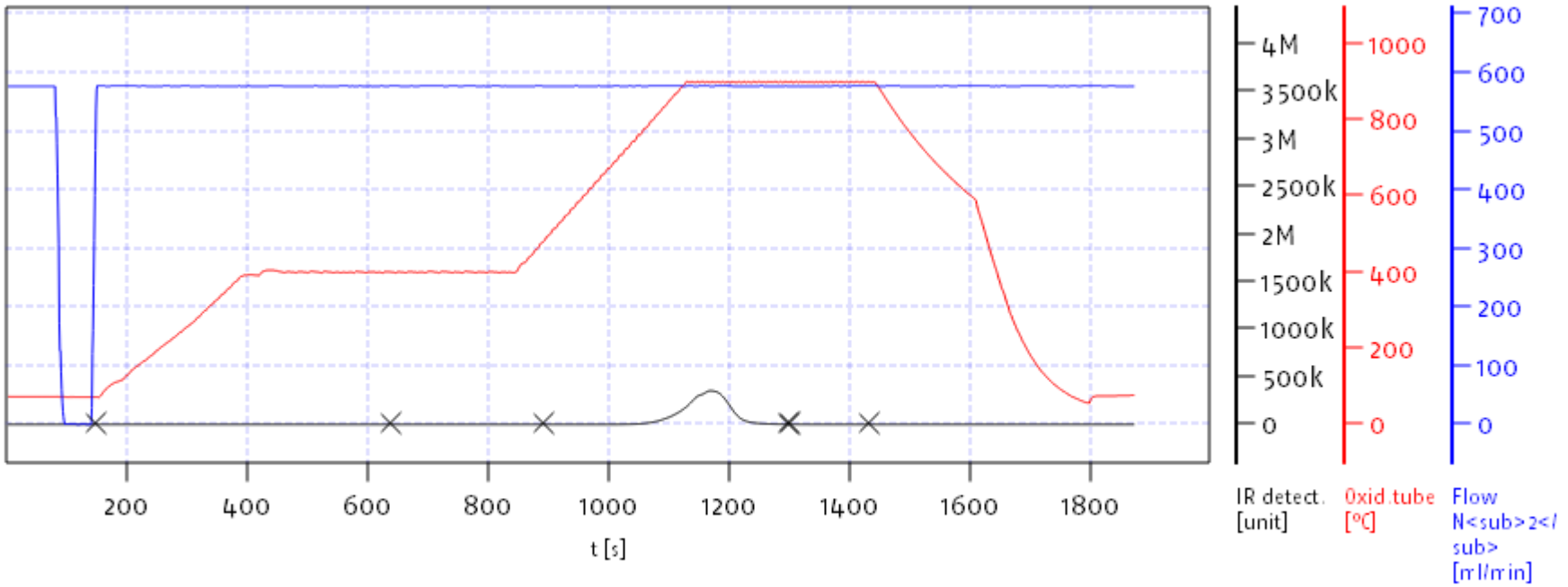
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
17	25	SEQ-CALF	200.00	0.0147	1.00	CARBON	8/25/2021 2:26 AM	0.000	0.906	0.906	bl,C1u,C2u	925	1 115 840	1 898	1.0000	1.0277



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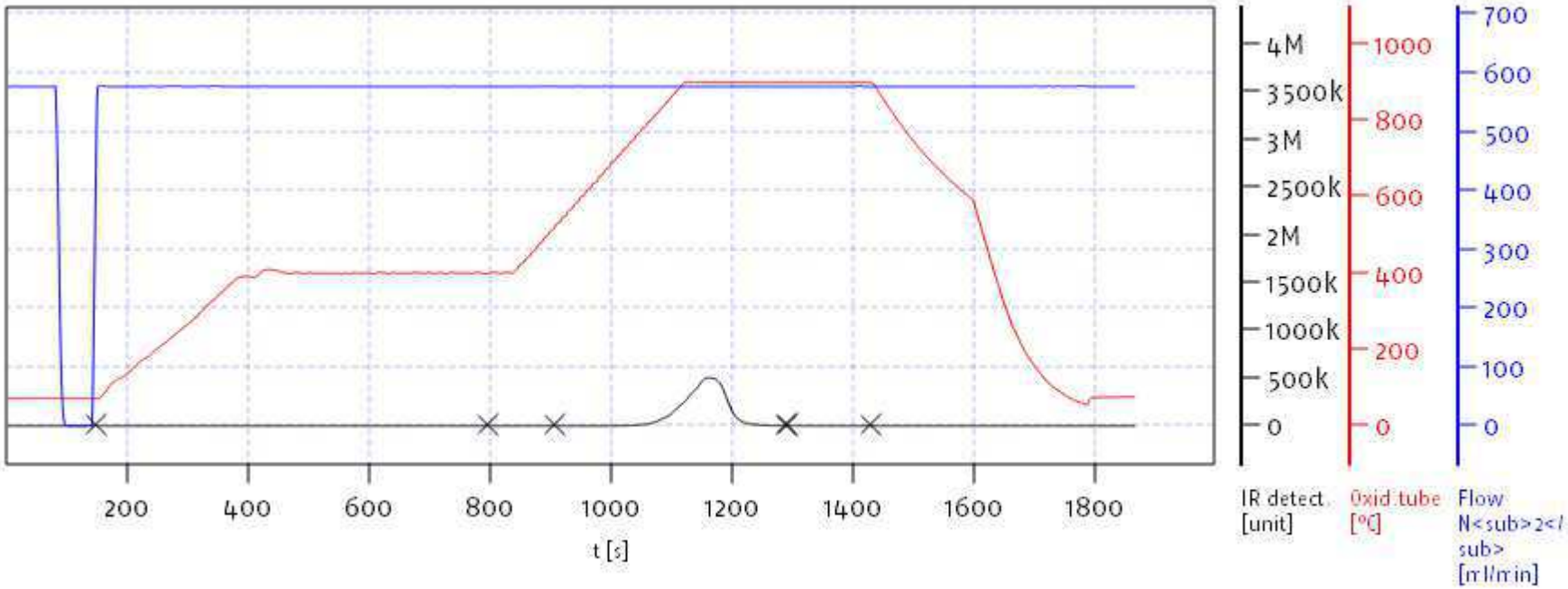
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
18	26	SEQ-CALG	200.00	0.0199	1.00	CARBON	8/25/2021 2:58 AM	0.000	1.206	1.206	bl,C1u,C2u	1 253	1 509 240	2 258	1.0000	1.0121



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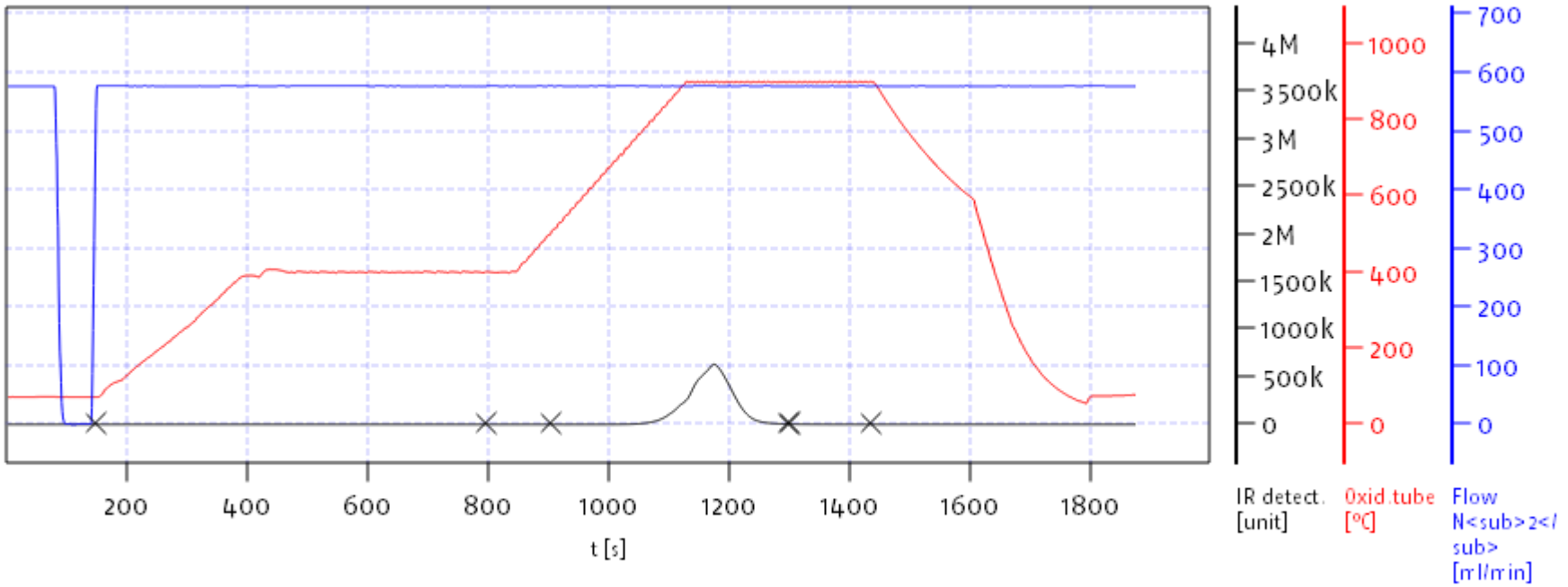
Document: TOC Calibration EH00065 082421BFb from: 8/25/2021 11:47 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
19	27	SEQ-CALH	200.00	0.0253	1.00	CARBON	8/25/2021 3:29 AM	0.000	1.524	1.524	bl,C1u,C2u	1 233	1 930 390	4 311	1.0000	1.0003



Name:

Access: soliTOC superuser

Date: Wed Aug 25 11:48:01 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

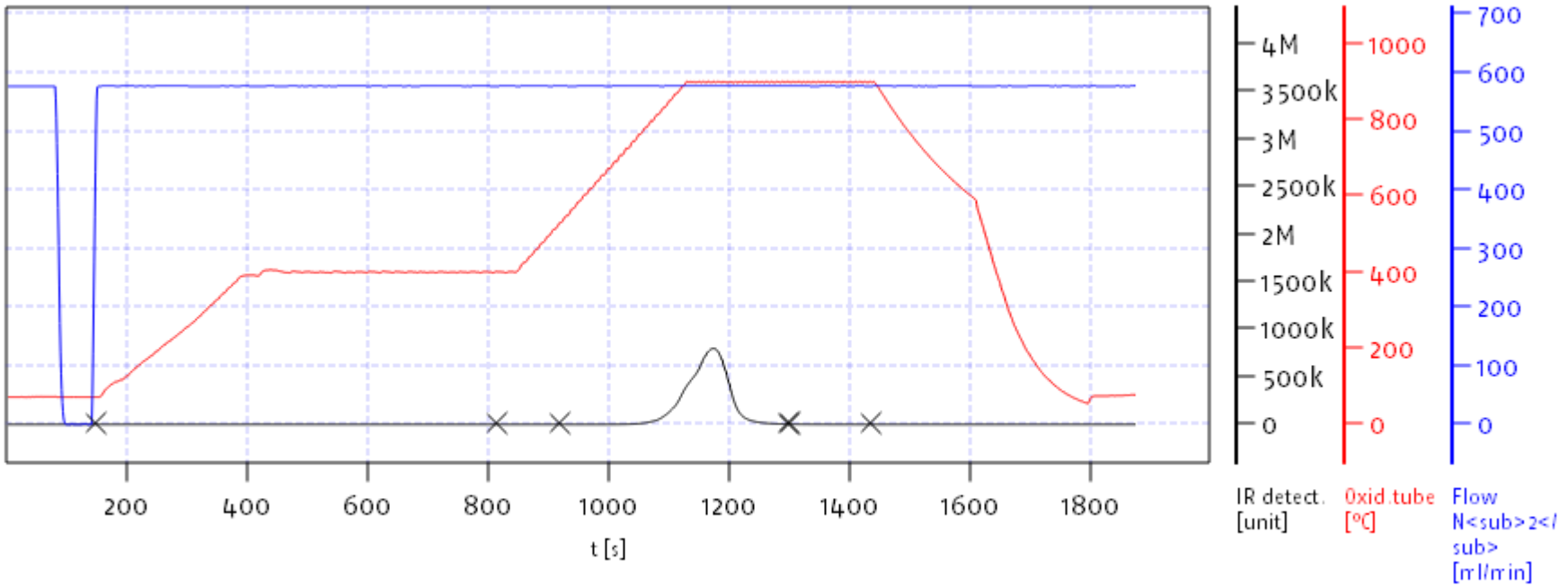
elementar
EXCELLENCE IN ELEMENTS

Document: TOC Calibration EH00065 082421BFb from: 8/25/2021 11:47 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
20	28	SEQ-CALI	200.00	0.0302	1.00	CARBON	8/25/2021 4:01 AM	0.000	1.800	1.800	bl,C1u,C2u	1 600	2 286 540	3 907	1.0000	0.9976



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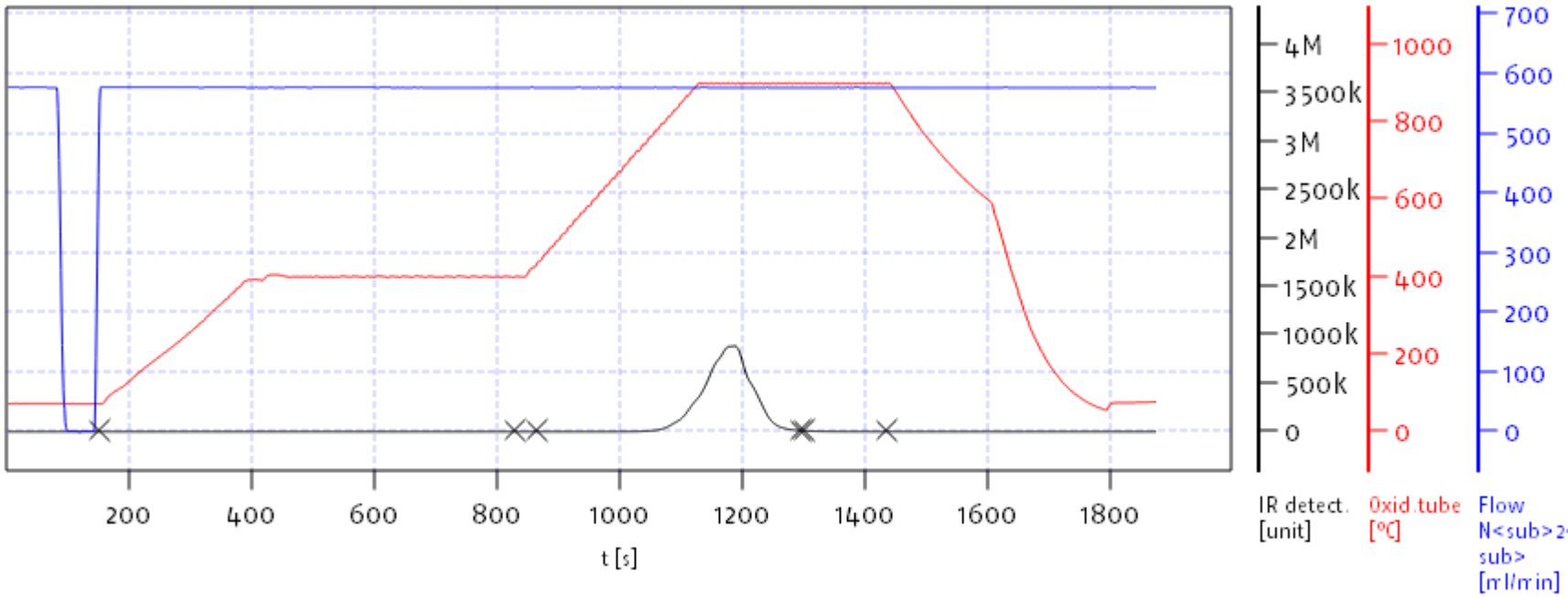
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
21	29	SEQ-CALJ	200.00	0.0400	1.00	CARBON	8/25/2021 4:33 AM	0.000	2.400	2.400	bl,C1u	1 589	**3 013 270**	**9 826**	1.0000	1.0096



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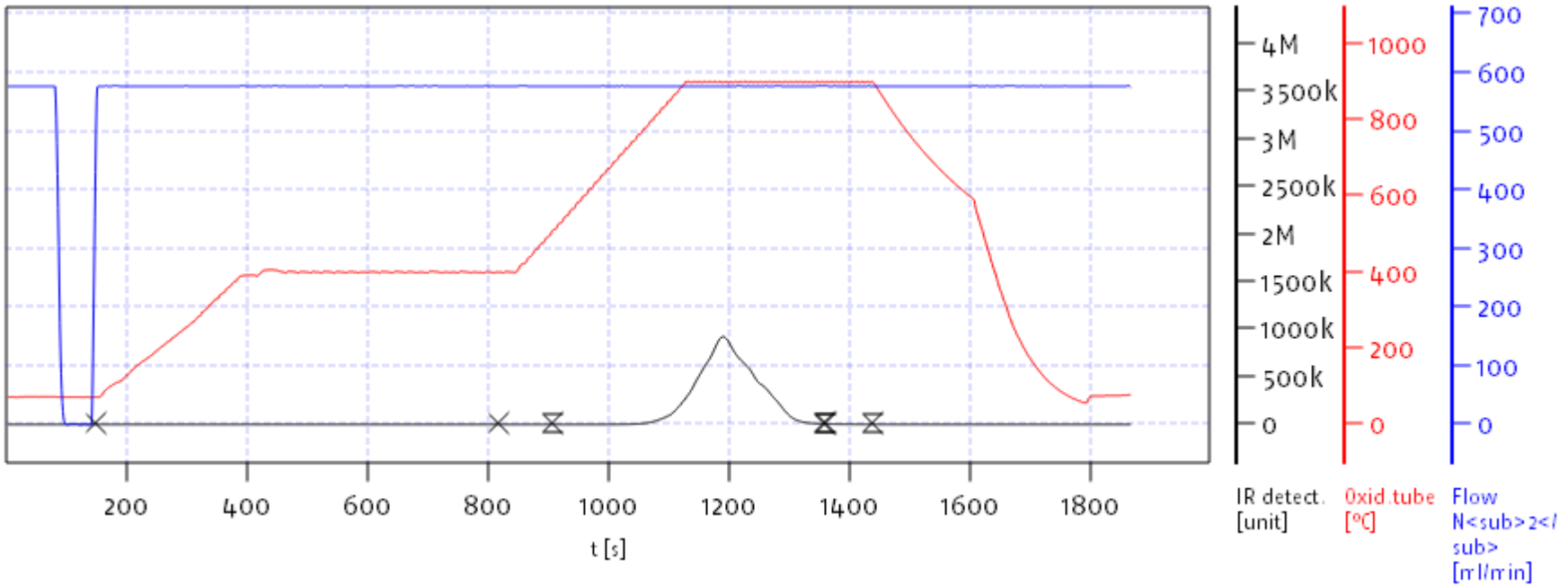
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
22	30	SEQ-CALK	200.00	0.0498	1.00	CARBON	8/25/2021 11:41 AM	0.000	3.012	3.012	bl,C1u	2 117	**3 411 713**	**0**	1.0000	1.0310



Name:

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Date: Wed Aug 25 11:48:01 2021

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Soli TOC Cube, Carbon
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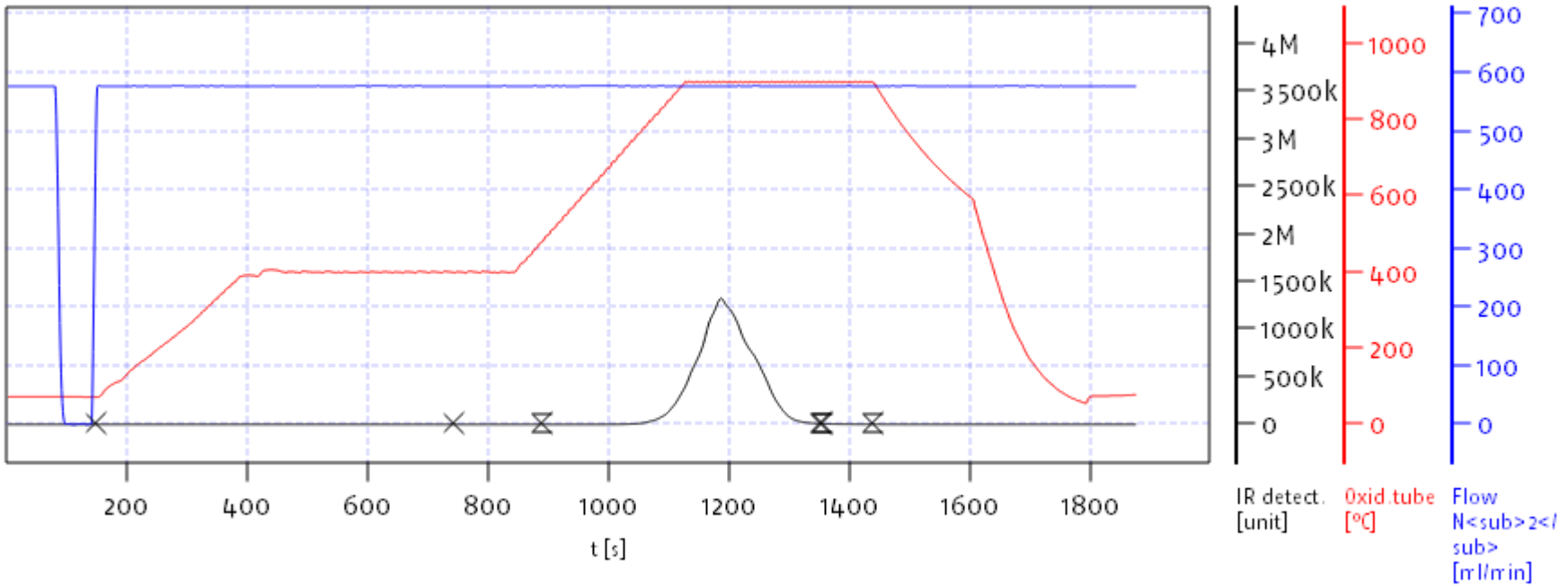
Analyst: BF

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	31	SEQ-CALL	200.00	0.0699	1.00	CARBON	8/25/2021 11:42 AM	0.000	4.206	4.206	bl,C1u	1 285	**4 920 073**	**0**	1.0000	1.0206



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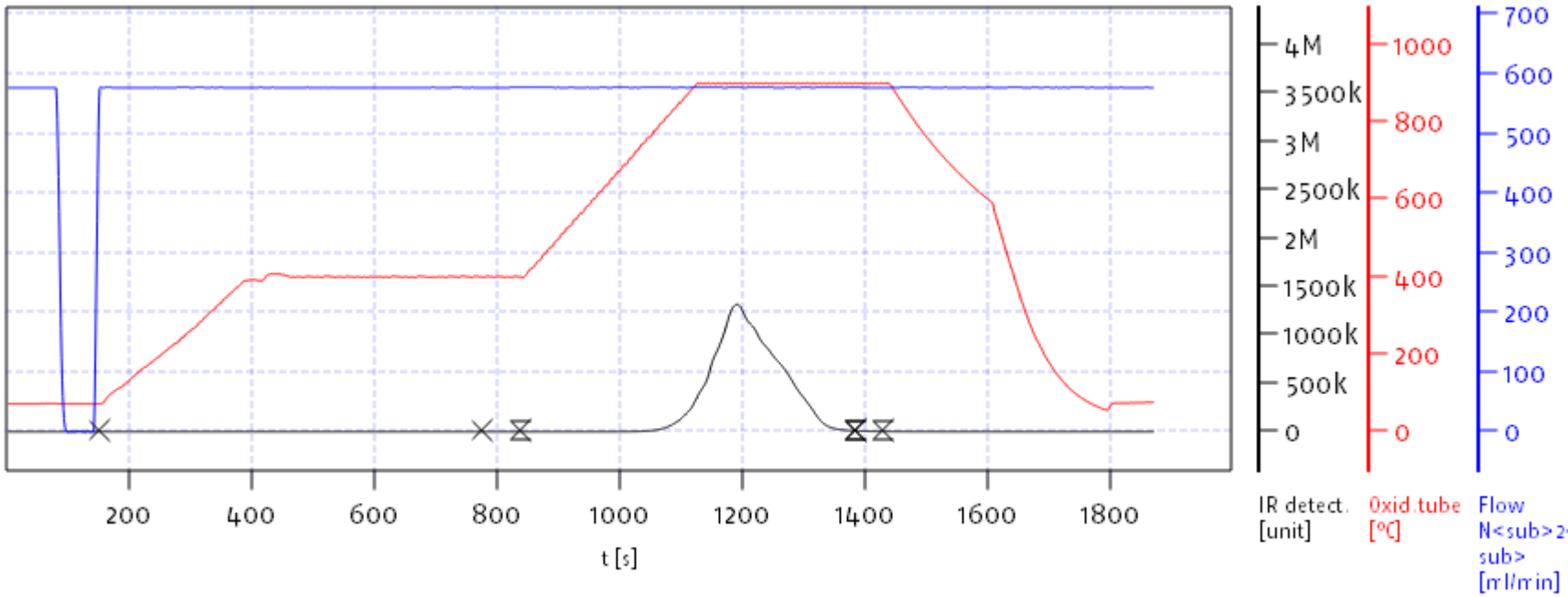
Analytical Chemists and Consultants

	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	32	SEQ-CALM	200.00	0.0803	1.00	CARBON	8/25/2021 11:43 AM	0.000	4.812	4.812	bl,C1u	1 537	**5 655 573**	**0**	1.0000	1.0683



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EXCELLENCE IN ELEMENTS

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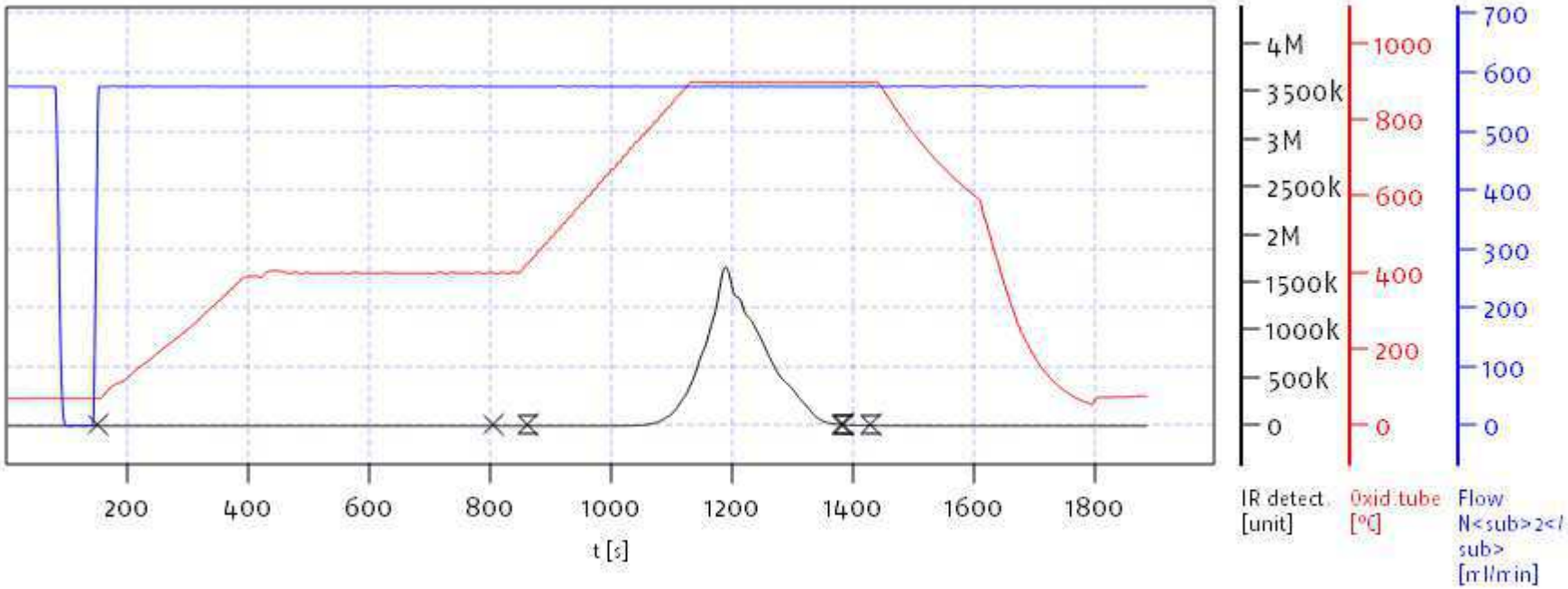
Analytical Chemists and Consultants

	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	33	SEQ-CALN	200.00	0.0902	1.00	CARBON	8/25/2021 11:45 AM	0.000	5.406	5.406	bl,C1u	1 694	**6 449 031**	**0**	1.0000	1.0610



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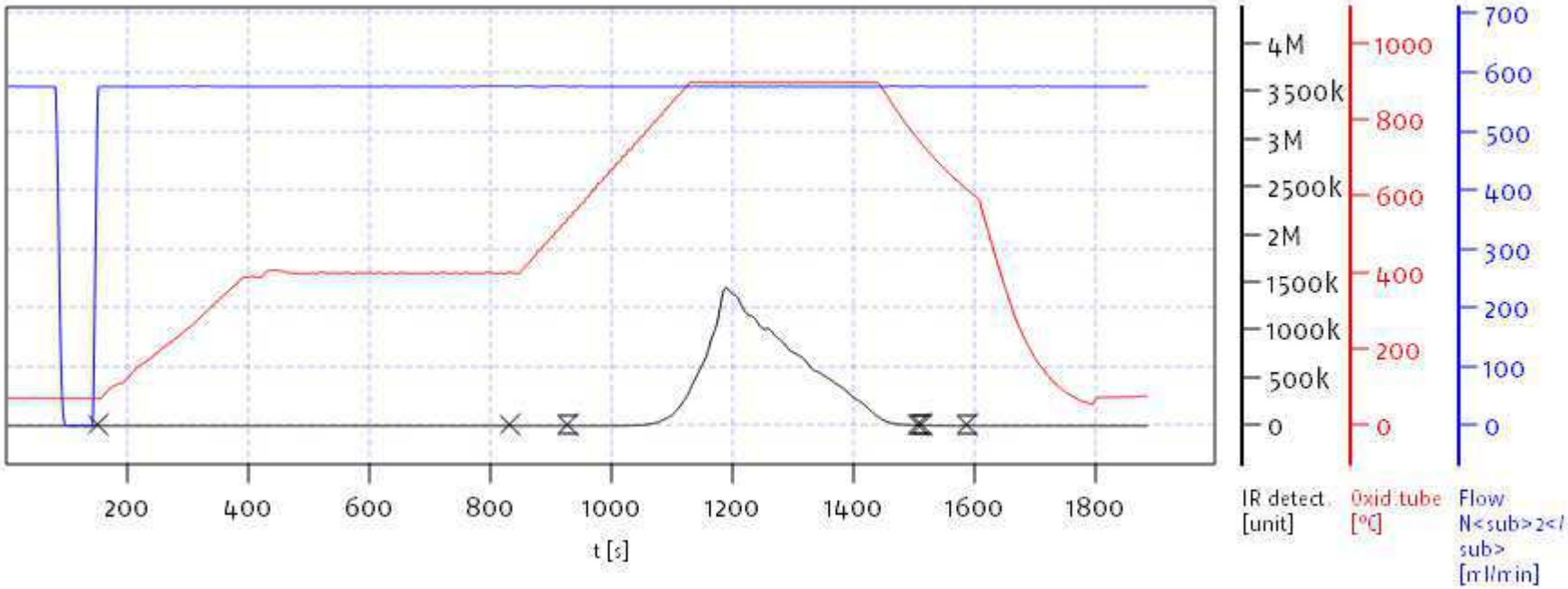
Analyst: BF

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	34	SEQ-CALO	200.00	0.1204	1.00	CARBON	8/25/2021 11:46 AM	0.000	7.218	7.218	bl,C1u,C3o	1 658	8 593 324	0	1.0000	1.3657



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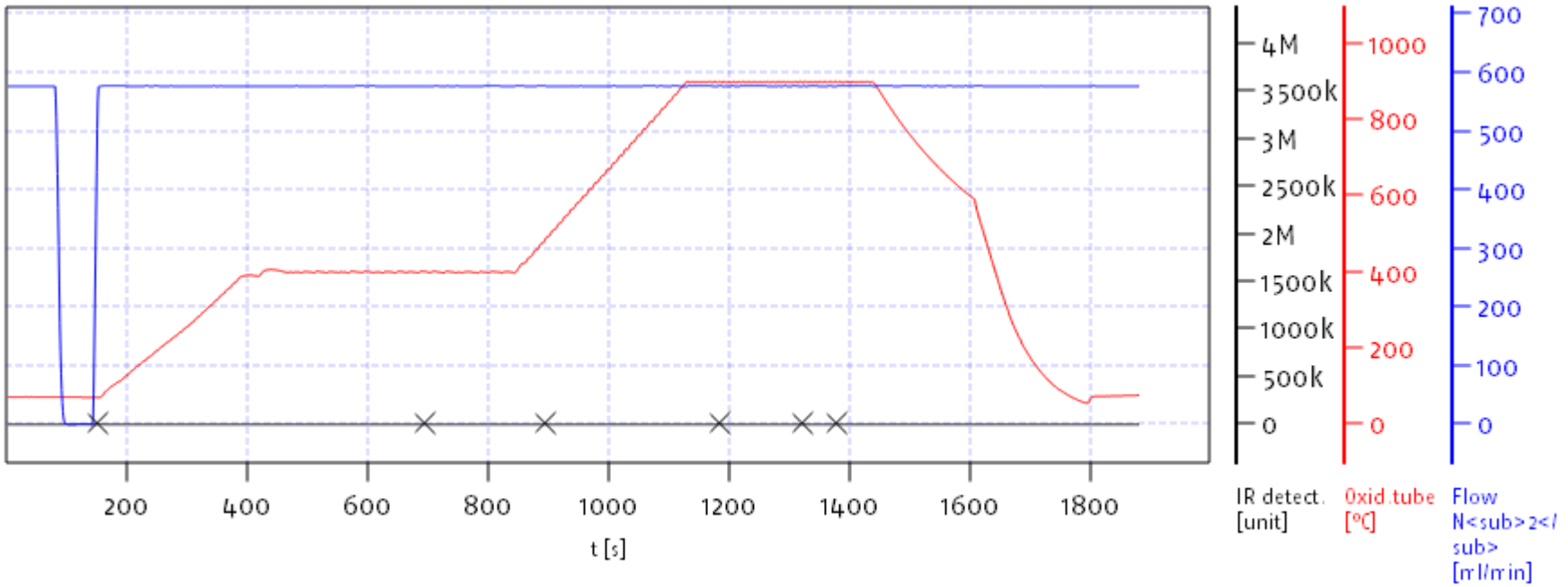
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
27	35	BLANK	1.00		1.00	CARBON	8/25/2021 7:43 AM	0.000	0.000	0.000	bl	708	0	0	1.0000	1.0293



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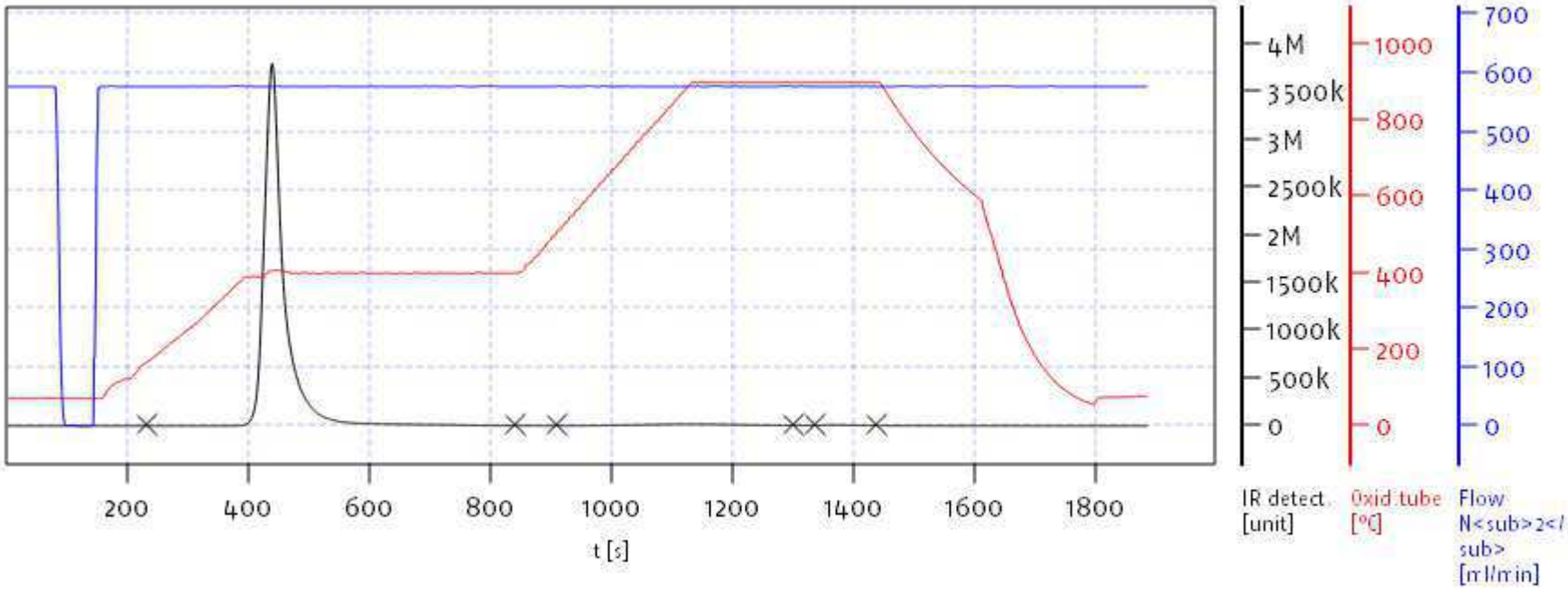
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
28	36	Dfactor	20.30		1.00	CARBON	8/25/2021 8:15 AM	44.446	0.000	44.446	bl	5 319 150	136 410	24 452	1.0755	1.0000



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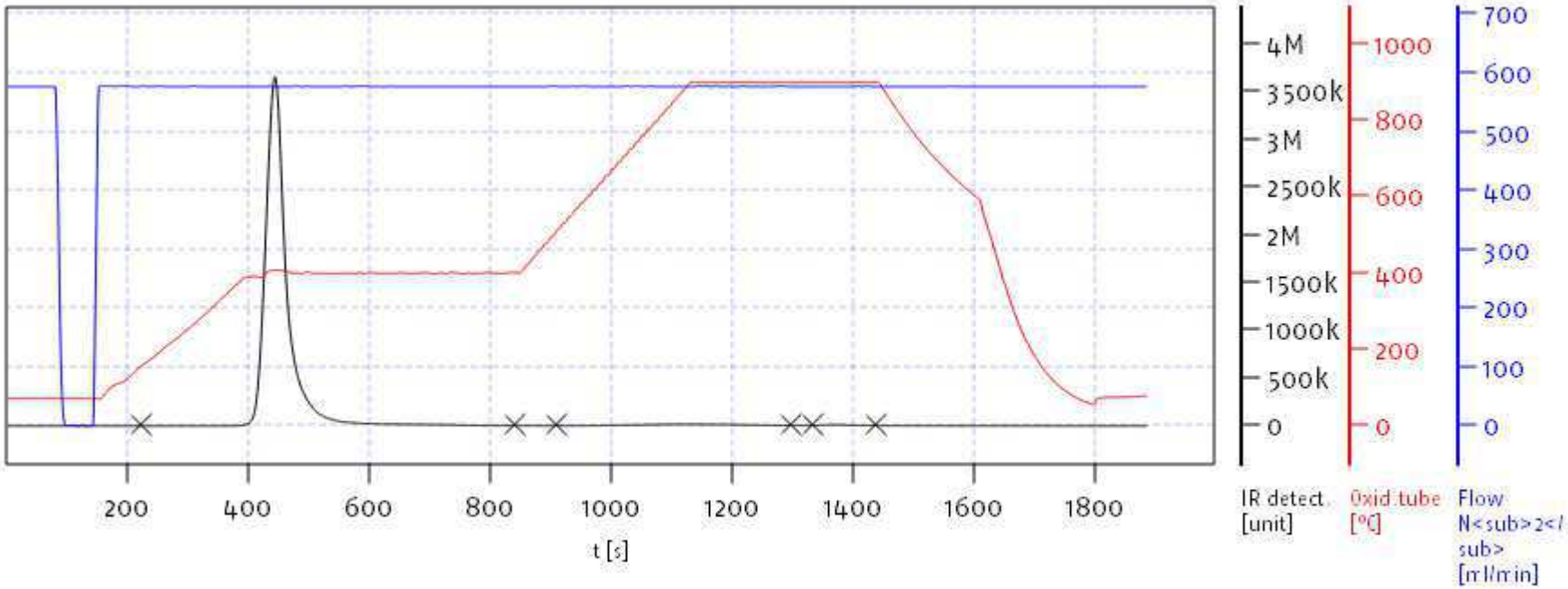
Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
29	37	Dfactor	21.00		1.00	CARBON	8/25/2021 8:47 AM	44.446	0.000	44.446	bl	5 524 800	134 598	27 280	1.0712	1.0000



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Balance: BAL3
Analyst: BF

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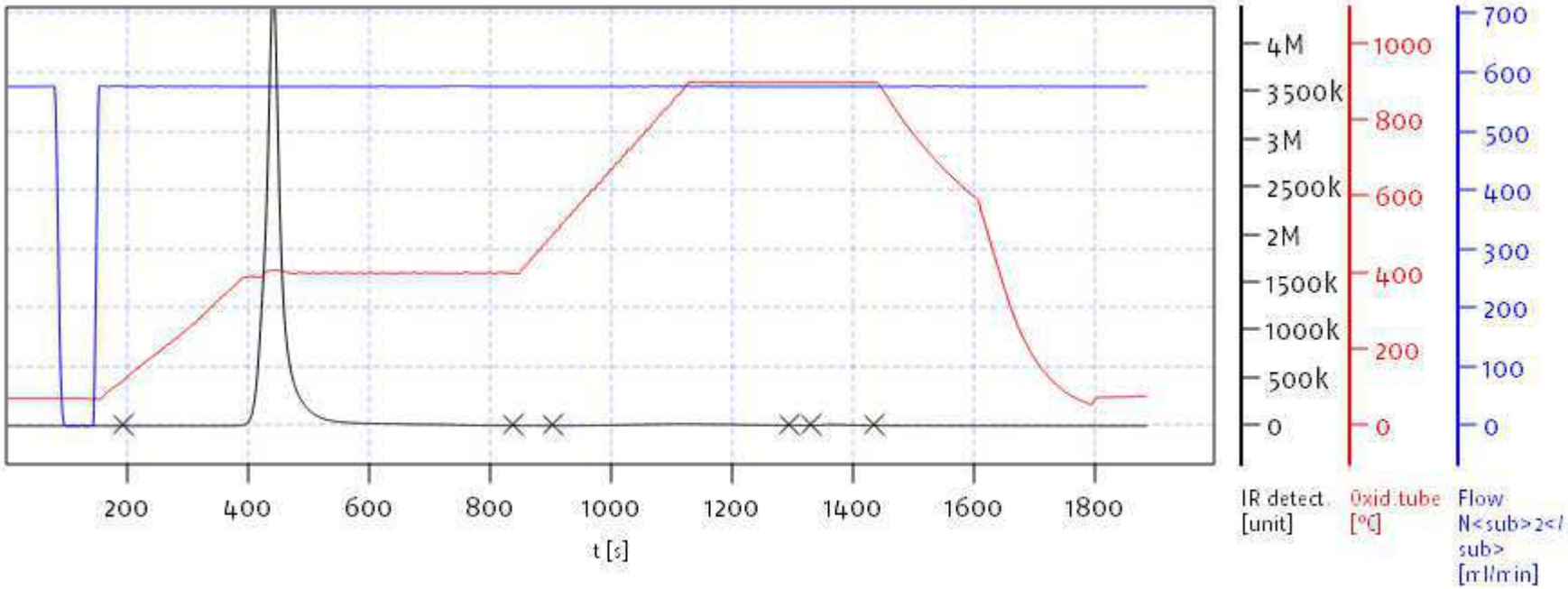
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
30	38	SEQ-ICV1	20.50		1.00	CARBON	8/25/2021 9:19 AM	47.154	1.091	48.245	bl	5 328 380	151 538	28 760	1.0733	1.0293



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Soli TOC Cube, Carbon
Balance: BAL3
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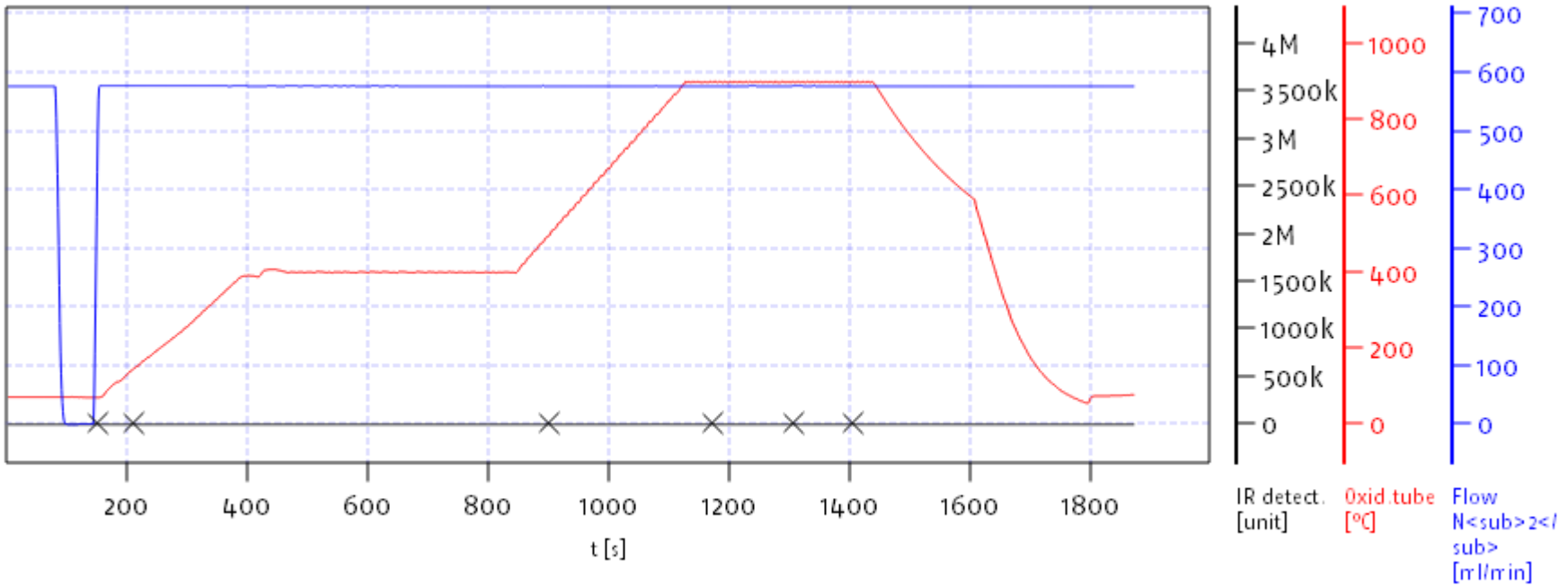
Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
31	39	SEQ-ICB1	599.20		1.00	CARBON	8/25/2021 9:51 AM	0.000	0.000	0.000	bl,C1u,C3u,C2u	172	1 307	338	1.0733	1.0293



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Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0417	Instrument:	TOC Cube
		Calibration:	EH00065

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Initial Cal Check	SJH0417-ICV1	peData_09062021@0807-(	NA	09/01/21 12:46
Initial Cal Blank	SJH0417-ICB1	peData_09062021@0807-(	NA	09/01/21 13:17
Calibration Check	SJH0417-CCV1	peData_09062021@0807-(	NA	09/01/21 18:57
Calibration Blank	SJH0417-CCB1	peData_09062021@0807-1	NA	09/01/21 19:28
Calibration Check	SJH0417-CCV2	peData_09062021@0807-1	NA	09/02/21 01:07
Calibration Blank	SJH0417-CCB2	peData_09062021@0807-1	NA	09/02/21 01:37
Calibration Check	SJH0417-CCV3	peData_09062021@0807-2	NA	09/02/21 07:16
Calibration Blank	SJH0417-CCB3	peData_09062021@0807-2	NA	09/02/21 07:47
Calibration Check	SJH0417-CCV4	peData_09062021@0807-3	NA	09/02/21 13:25
Calibration Blank	SJH0417-CCB4	peData_09062021@0807-3	NA	09/02/21 13:56
Calibration Check	SJH0417-CCV5	peData_09062021@0807-4	NA	09/02/21 19:35
Calibration Blank	SJH0417-CCB5	peData_09062021@0807-4	NA	09/02/21 20:06
Calibration Check	SJH0417-CCV6	peData_09062021@0807-4	NA	09/03/21 01:42
Calibration Blank	SJH0417-CCB6	peData_09062021@0807-4	NA	09/03/21 02:13
Calibration Check	SJH0417-CCV7	peData_09062021@0807-5	NA	09/03/21 07:48
Calibration Blank	SJH0417-CCB7	peData_09062021@0807-5	NA	09/03/21 08:19
Calibration Check	SJH0417-CCV8	peData_09062021@0807-(	NA	09/03/21 13:55
Calibration Blank	SJH0417-CCB8	peData_09062021@0807-(	NA	09/03/21 14:25
Calibration Check	SJH0417-CCV9	peData_09062021@0807-1	NA	09/03/21 20:03
Calibration Blank	SJH0417-CCB9	peData_09062021@0807-1	NA	09/03/21 20:33
Calibration Check	SJH0417-CCVA	peData_09062021@0807-2	NA	09/04/21 02:09
Calibration Blank	SJH0417-CCBA	peData_09062021@0807-2	NA	09/04/21 02:39
Calibration Check	SJH0417-CCVB	peData_09062021@0807-3	NA	09/04/21 08:14
Calibration Blank	SJH0417-CCBB	peData_09062021@0807-3	NA	09/04/21 08:45
Calibration Check	SJH0417-CCVC	peData_09062021@0807-3	NA	09/04/21 14:21
Calibration Blank	SJH0417-CCBC	peData_09062021@0807-3	NA	09/04/21 14:52
LDW21-SC539A	21G0212-13RE1	peData_09062021@0807-5	Solid	09/04/21 16:54
Calibration Check	SJH0417-CCVD	peData_09062021@0807-4	NA	09/04/21 20:28
Calibration Blank	SJH0417-CCBD	peData_09062021@0807-4	NA	09/04/21 20:59
Calibration Check	SJH0417-CCVE	peData_09062021@0807-5	NA	09/05/21 02:04

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

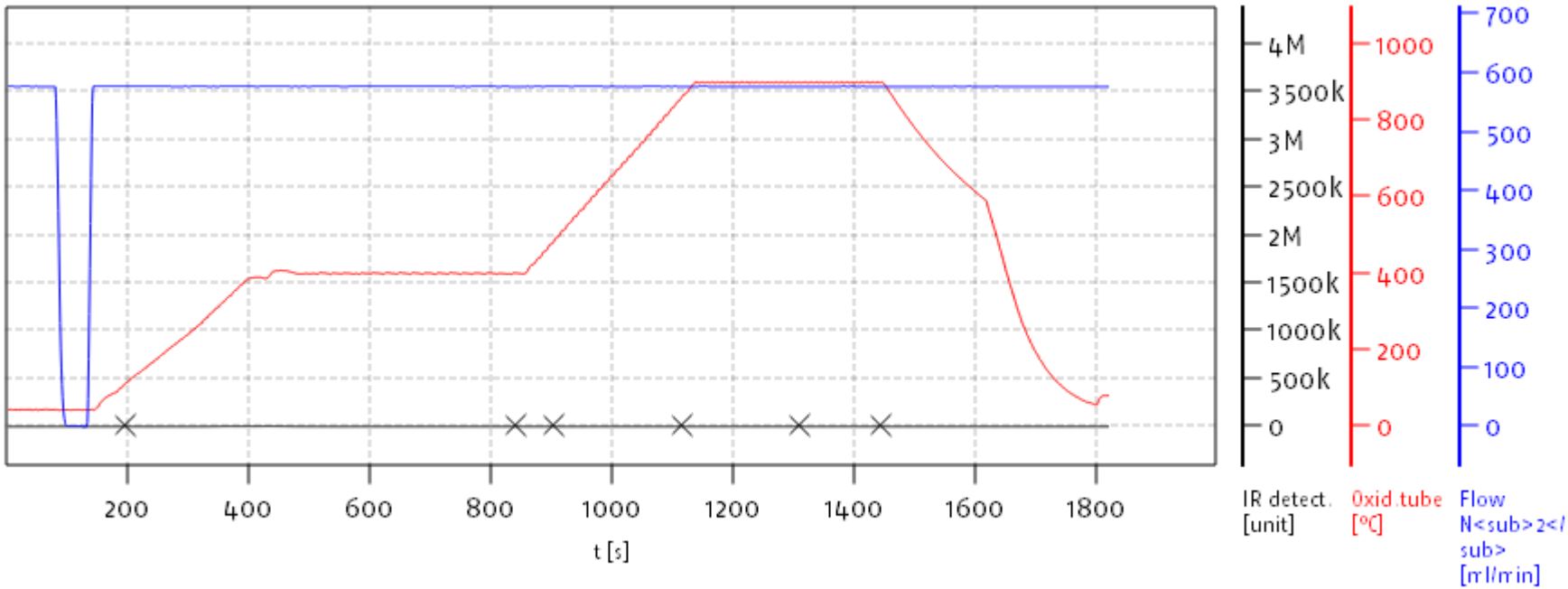
Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Sequence:	SJH0417	Instrument:	TOC Cube
		Calibration:	EH00065

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SJH0417-CCBE	beData_09062021@0807-5	NA	09/05/21 02:35

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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	9/1/2021 11:14 AM	0.000	0.000	0.000	bl	19 392	2 288	1 495	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Mon Sep 6 07:32:29 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

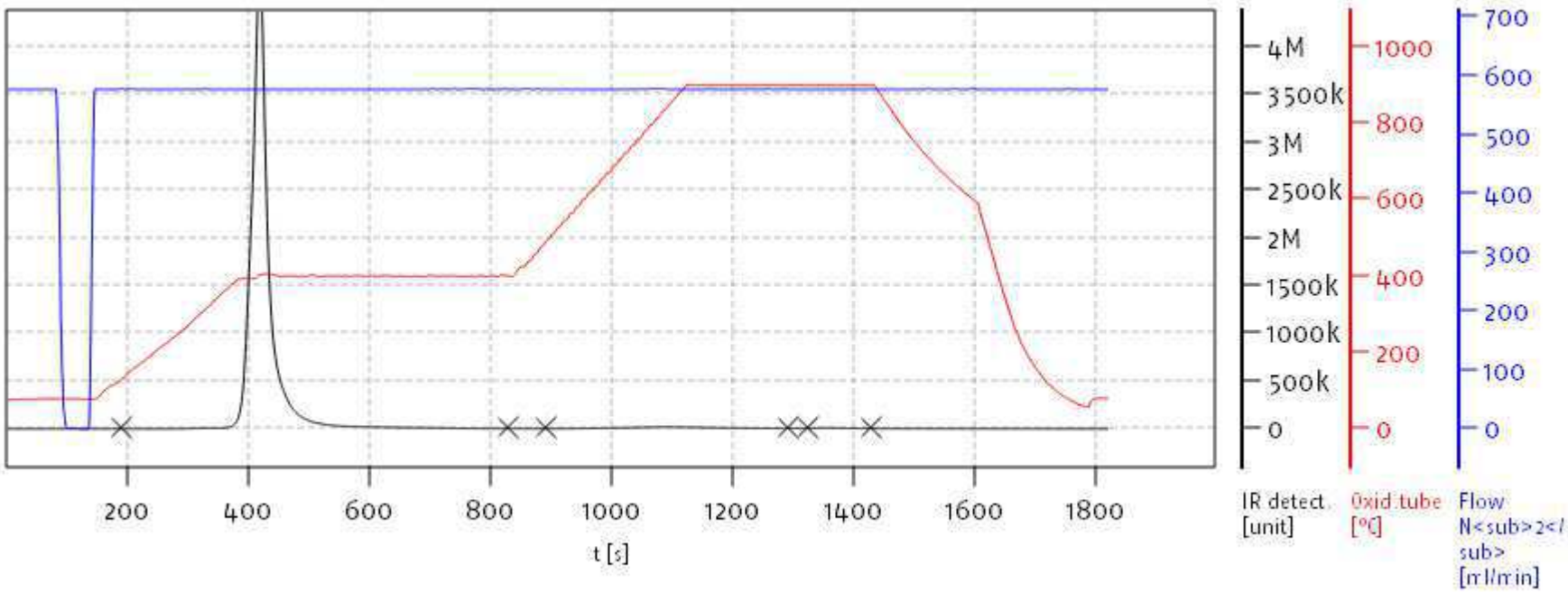
elementar
EXCELLENCE IN ELEMENTS

Document: from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
2	2	Dfactor	21.40		1.00	CARBON	9/1/2021 11:45 AM	44.526	0.984	45.510	bl	5 774 930	136 398	21 855	0.9772	1.0000



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Access: soliTOC superuser

Date: Mon Sep 6 07:32:29 2021

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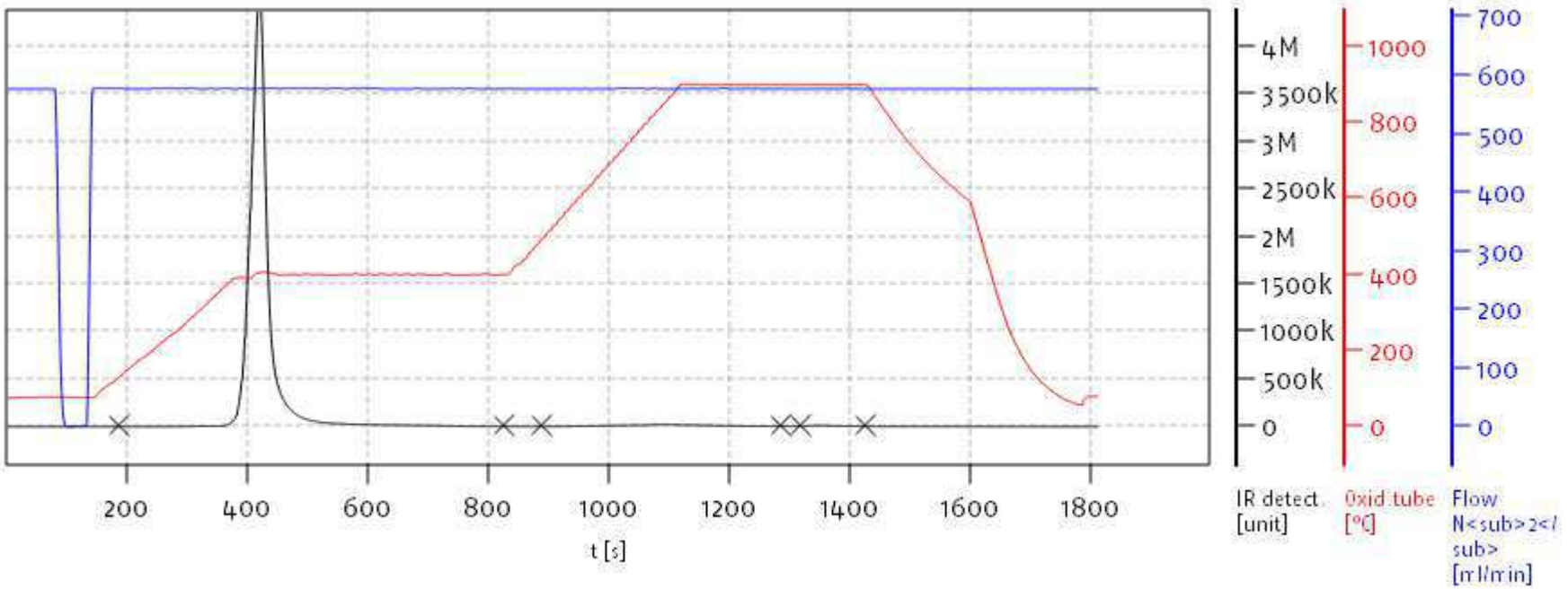
Document: from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
3	3	Dfactor	21.30		1.00	CARBON	9/1/2021 12:16 PM	44.552	1.070	45.622	bl	5 673 250	146 630	25 106	0.9901	1.0000



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Access: soliTOC superuser

Date: Mon Sep 6 07:32:29 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

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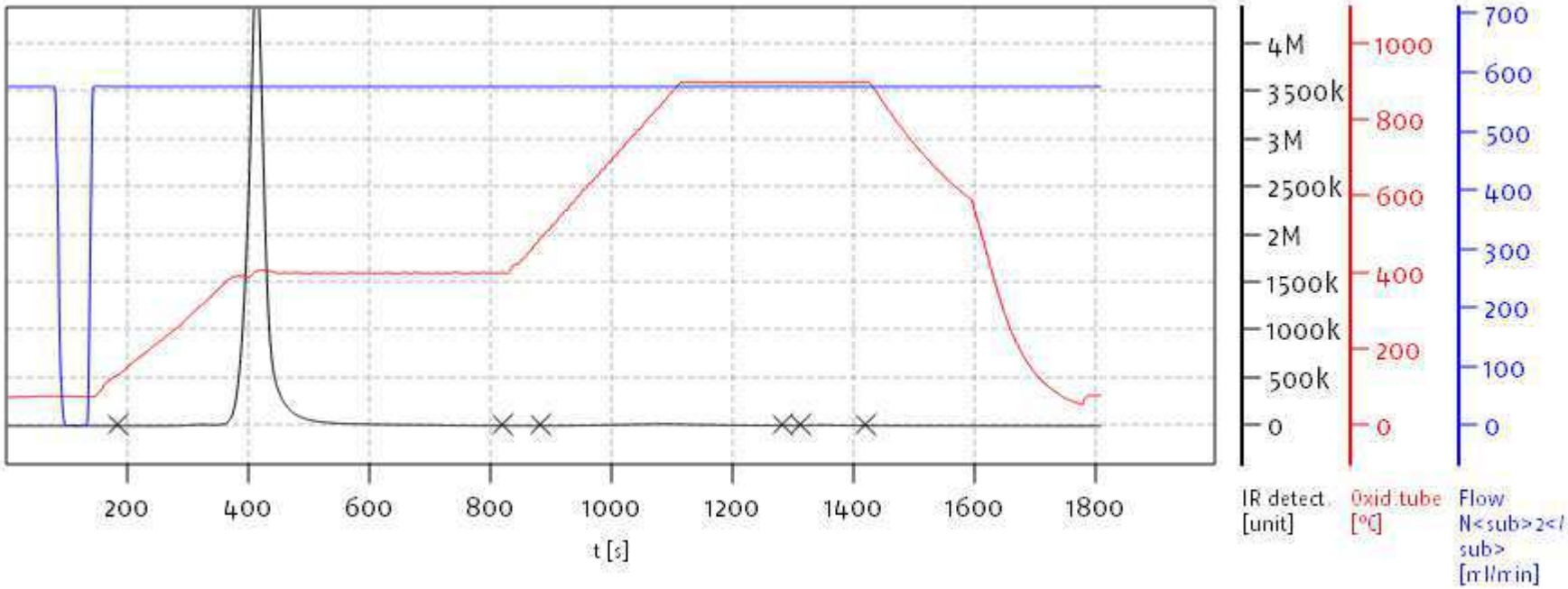
Document: from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
4	4	SJH0417-ICV1	22.10		1.00	CARBON	9/1/2021 12:46 PM	44.958	0.922	45.880	bl	5 983 630	132 286	20 538	0.9836	1.0000



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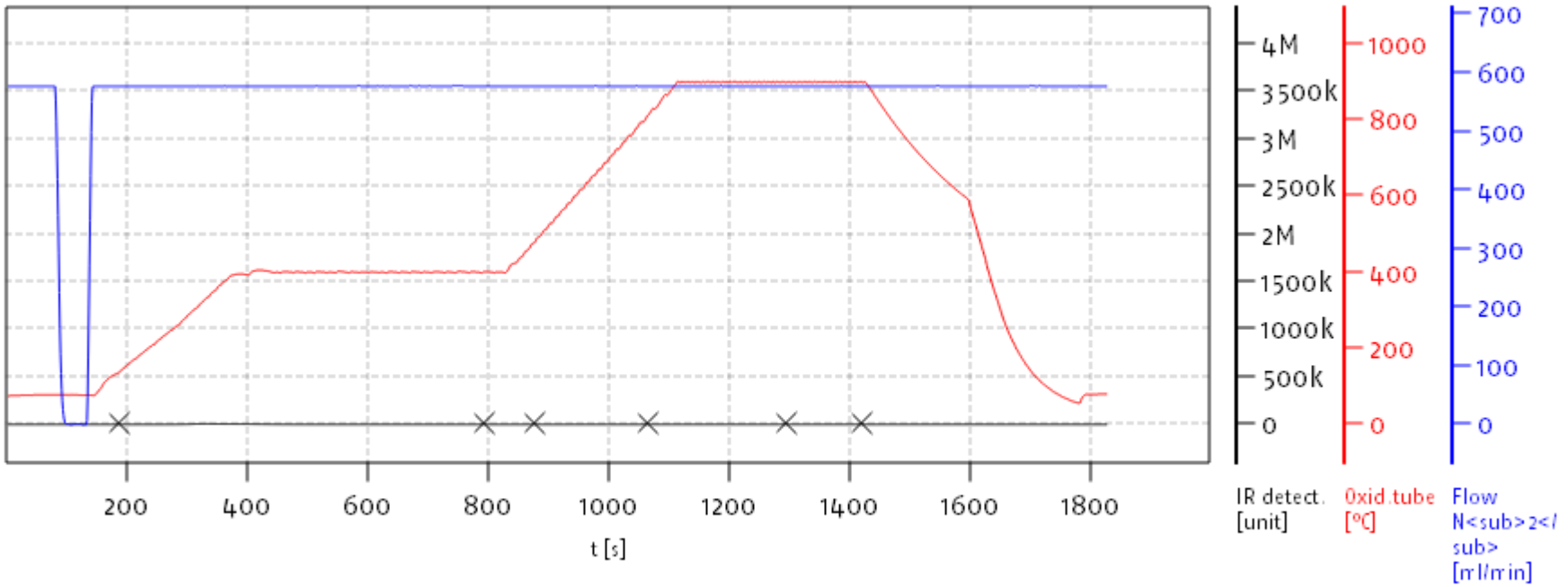
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
5	5	SJH0417-ICB1	516.10		1.00	CARBON	9/1/2021 1:17 PM	0.005	0.000	0.005	bl,C3u,C2u	25 651	148	694	0.9836	1.0000



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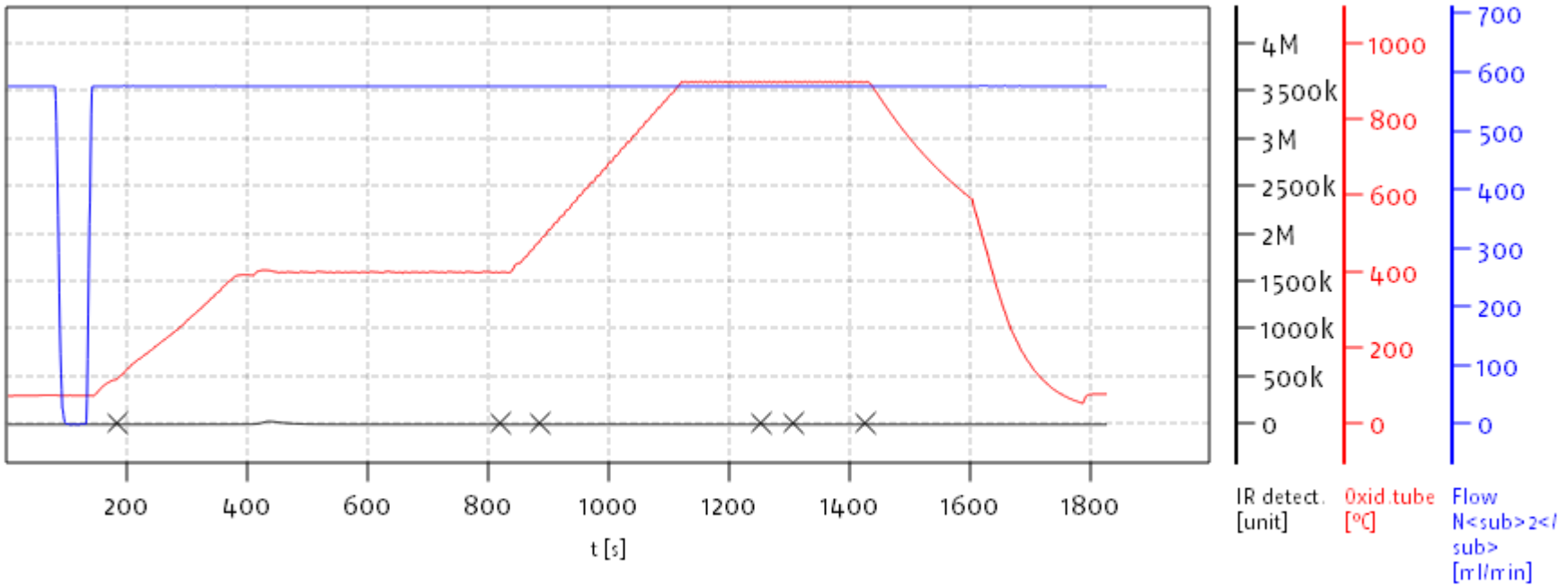
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
6	6	BJH0805-MRL1	561.40		1.00	CARBON	9/1/2021 1:48 PM	0.015	0.000	0.015	bl,C3u,C2u	61 766	6 003	757	0.9836	1.0000



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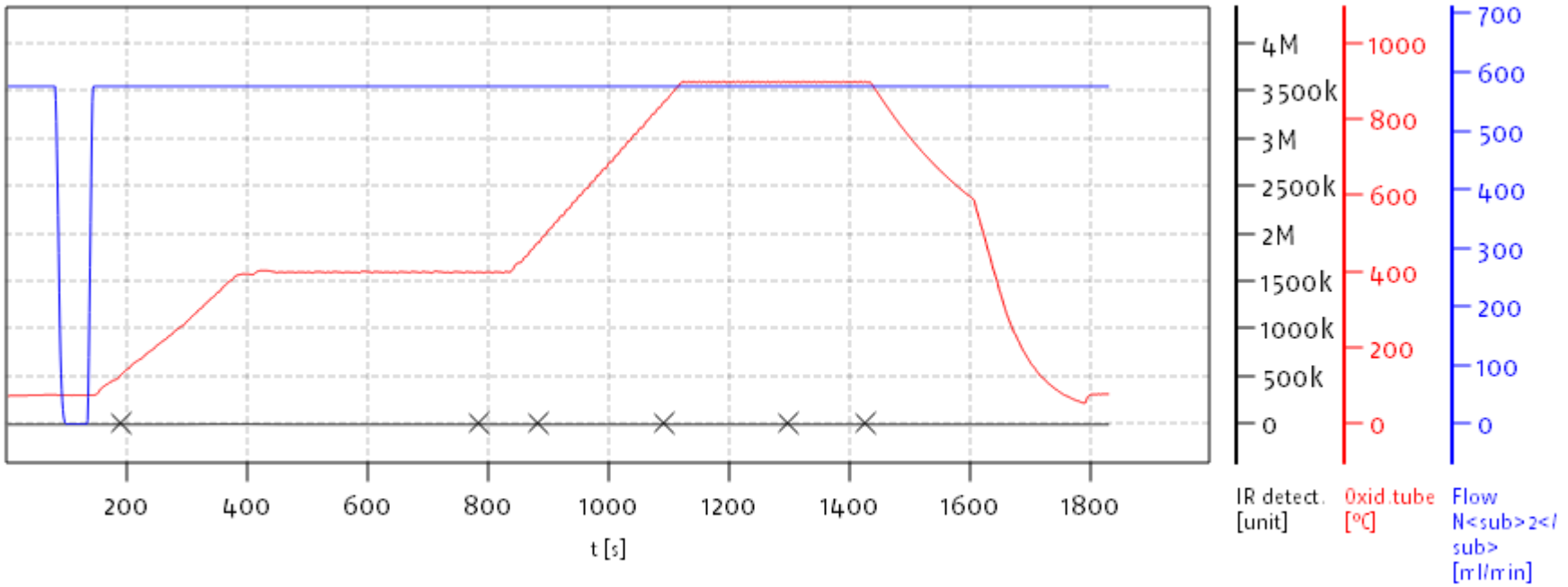
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
7	7	BJH0805-BLK1	547.50		1.00	CARBON	9/1/2021 2:19 PM	0.001	0.000	0.001	bl,C3u,C2u	13 848	794	598	0.9836	1.0000



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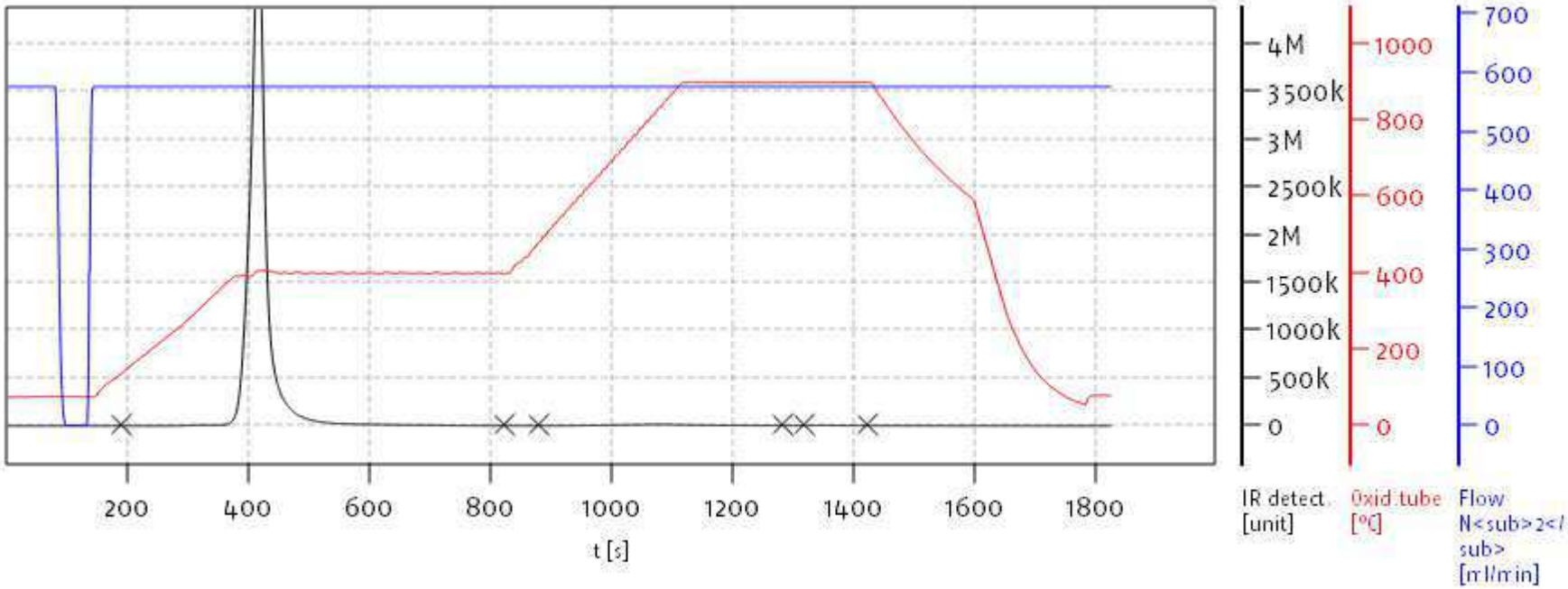
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
8	8	BJH0805-BS1	21.70		1.00	CARBON	9/1/2021 2:50 PM	45.666	0.716	46.382	bl	5 972 750	103 721	15 665	0.9836	1.0000



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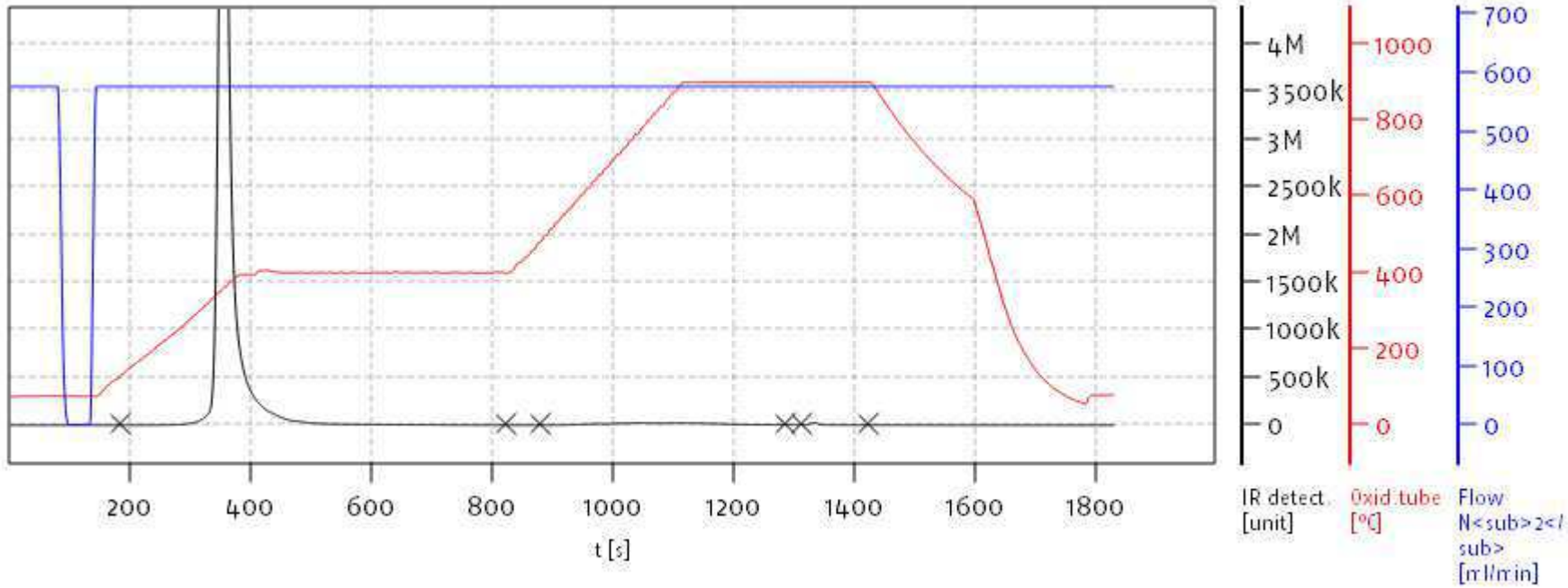
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
9	9	21H0301-01	509.10		1.00	CARBON	9/1/2021 3:21 PM	2.246	0.057	2.303	bl	6 886 360	184 572	19 916	0.9836	1.0000



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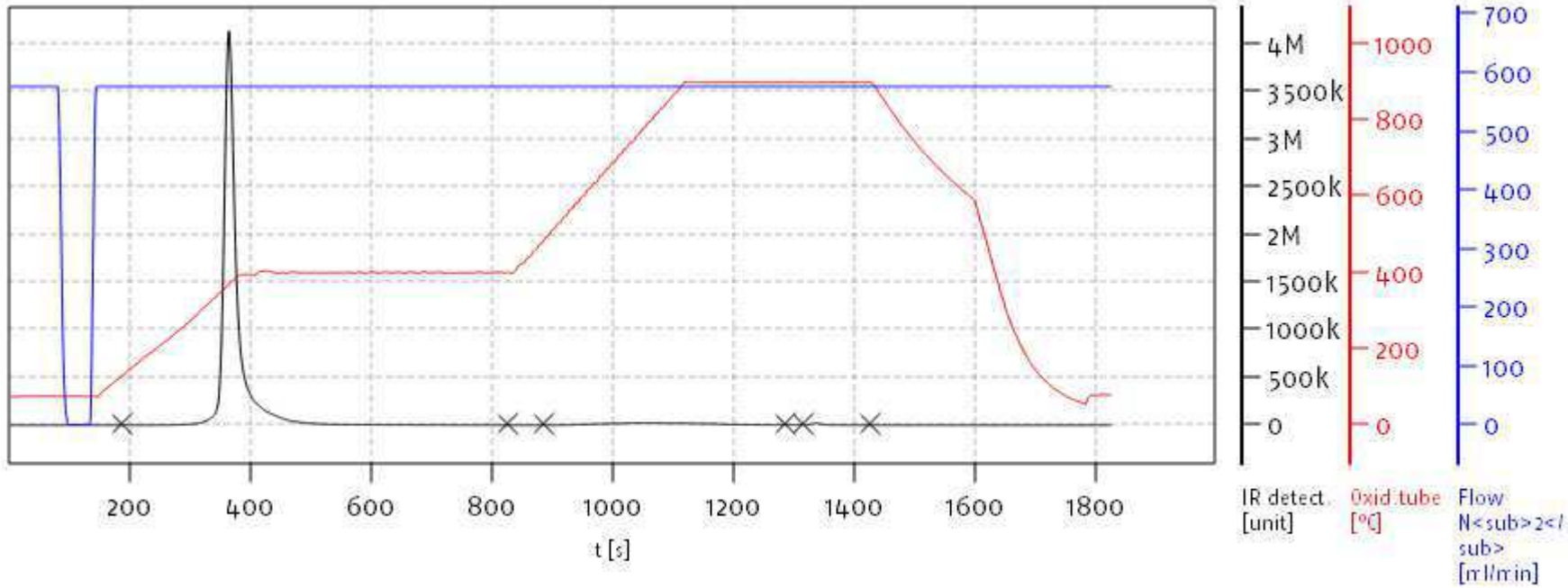
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
10	10	21H0301-02	506.70		1.00	CARBON	9/1/2021 3:52 PM	1.264	0.055	1.318	bl	3 860 660	175 546	17 091	0.9836	1.0000



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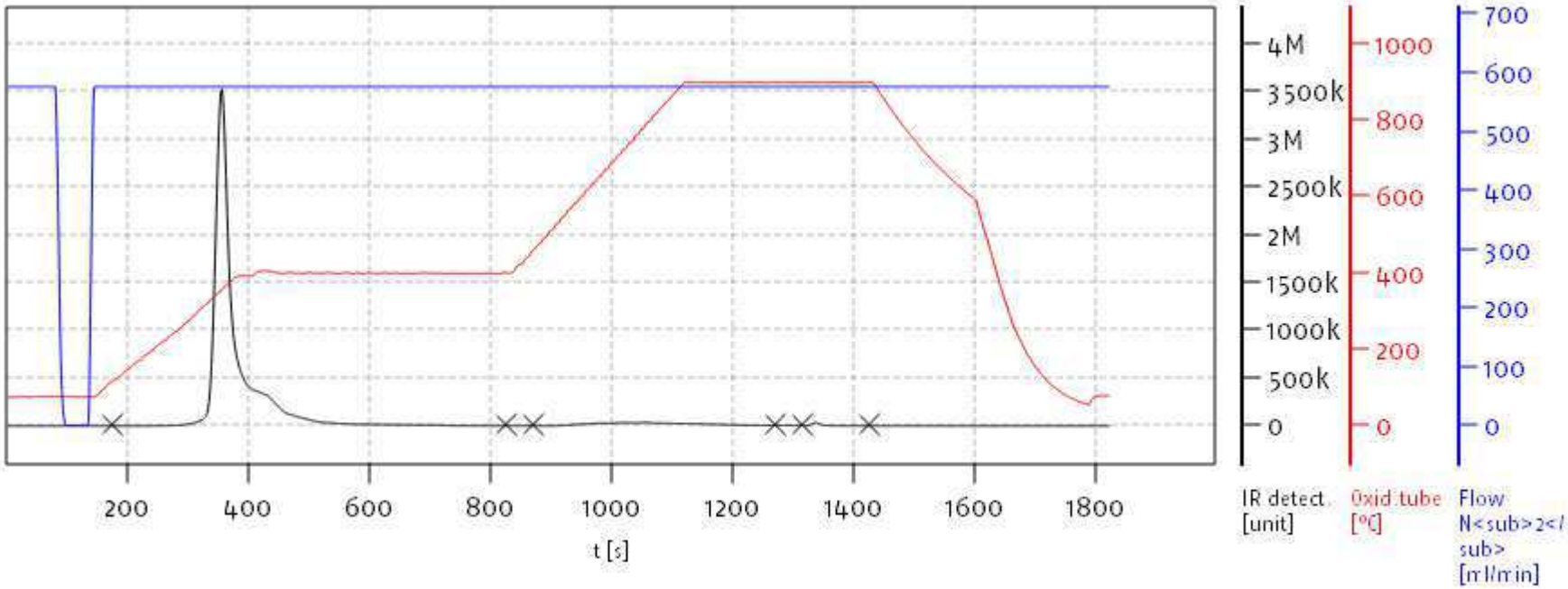
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
11	11	21H0301-03	511.10		1.00	CARBON	9/1/2021 4:22 PM	1.531	0.083	1.615	bl	4 709 730	264 254	24 597	0.9836	1.0000



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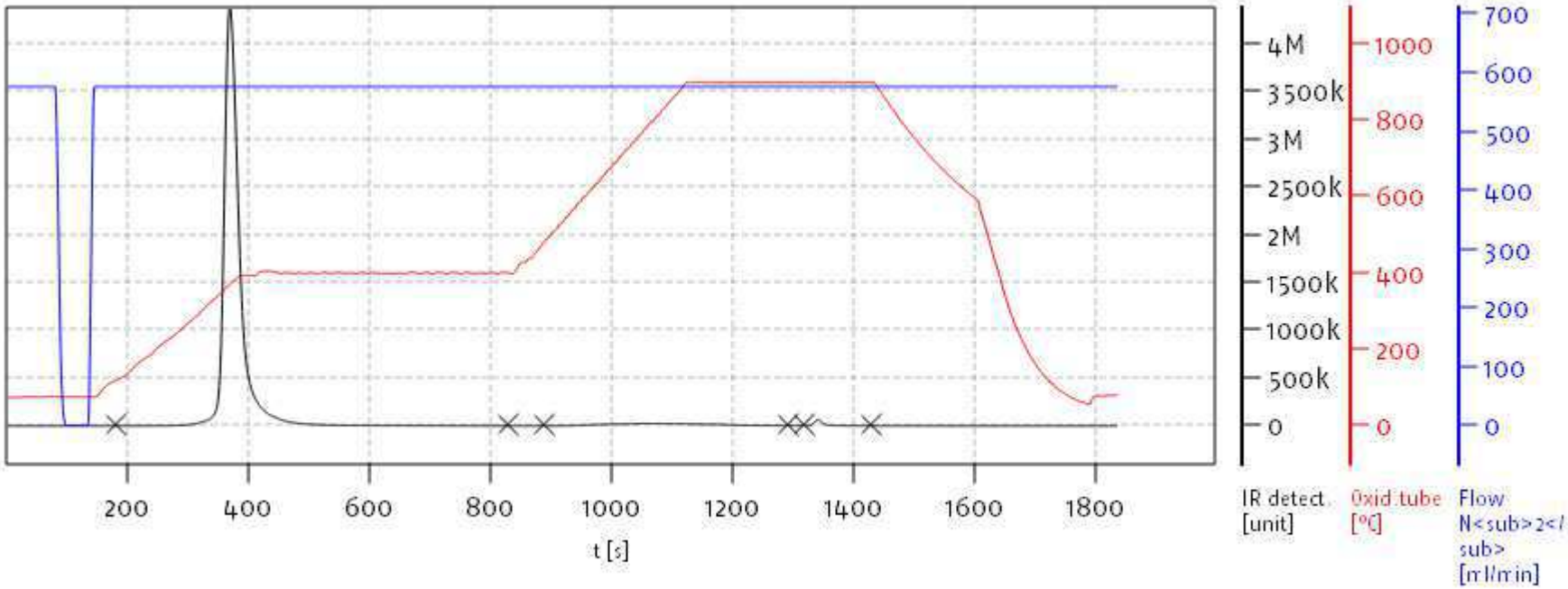
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
12	12	21H0301-04	517.90		1.00	CARBON	9/1/2021 4:54 PM	1.564	0.057	1.621	bl	4 853 460	187 521	44 238	0.9836	1.0000



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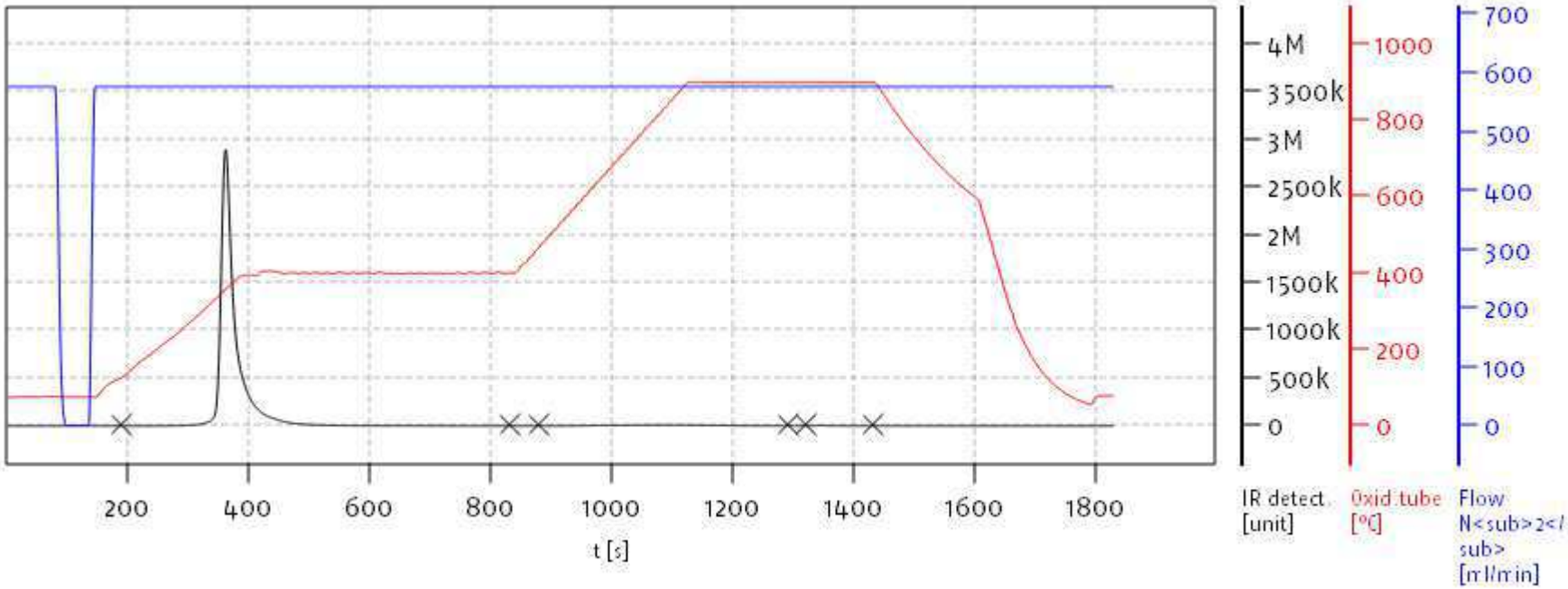
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
13	13	21H0301-08	361.70		1.00	CARBON	9/1/2021 5:24 PM	1.347	0.027	1.374	bl,C2u	2 945 180	69 832	6 388	0.9836	1.0000



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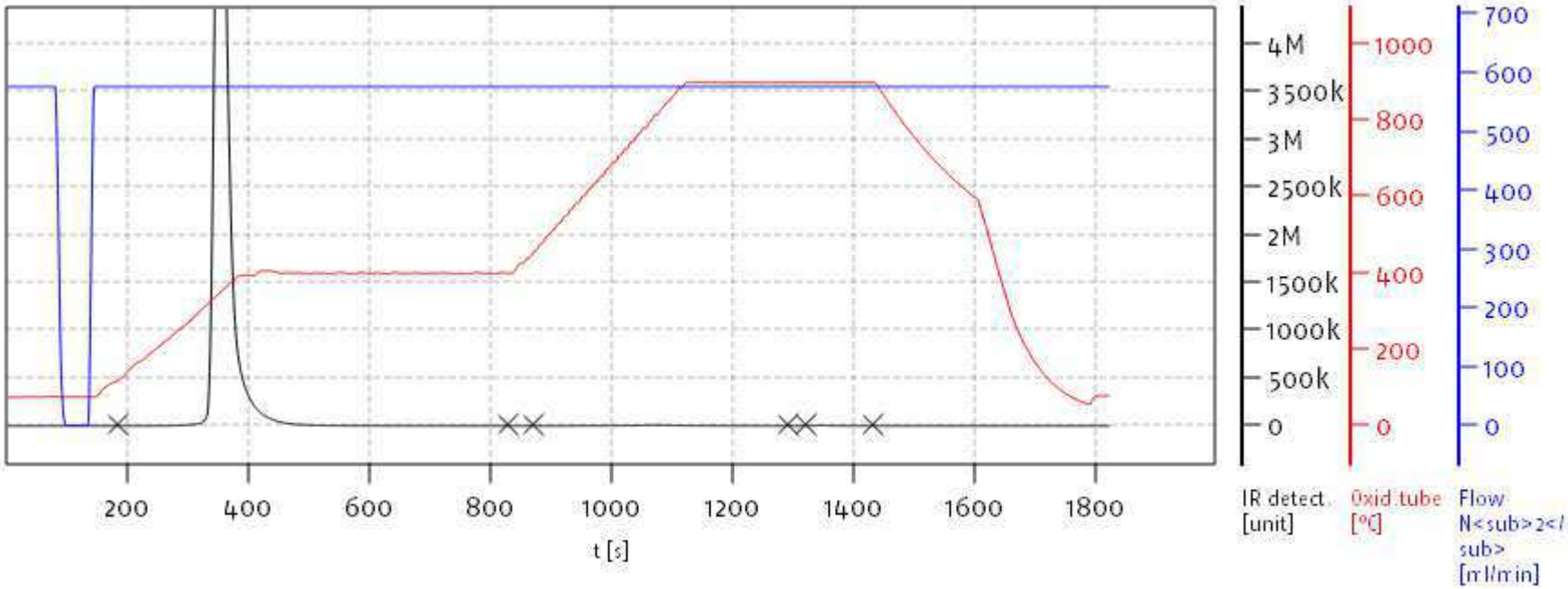
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
14	14	21H0301-09	246.90		1.00	CARBON	9/1/2021 5:55 PM	4.890	0.018	4.908	bl,C2u	7 279 390	37 651	7 027	0.9836	1.0000



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Soli TOC Cube, Carbon
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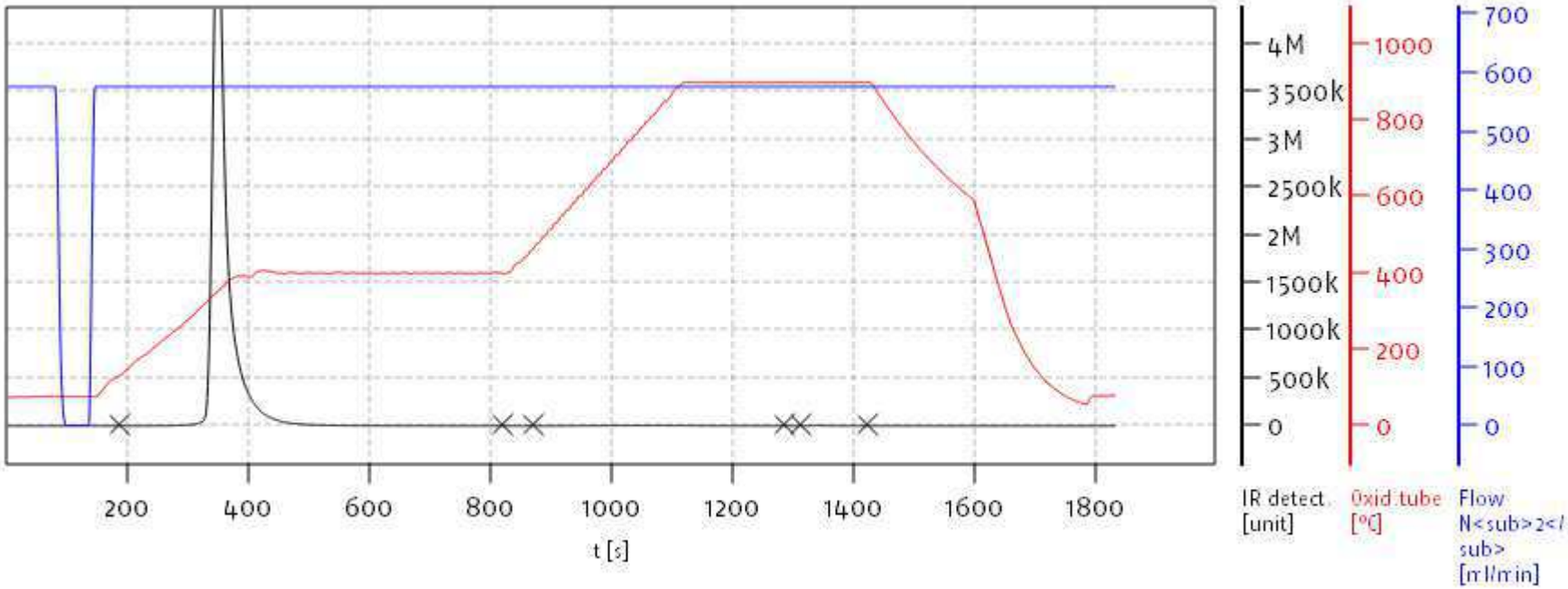
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
15	15	21H0301-10	243.80		1.00	CARBON	9/1/2021 6:26 PM	3.837	0.013	3.850	bl,C2u	5 643 060	30 755	5 245	0.9836	1.0000



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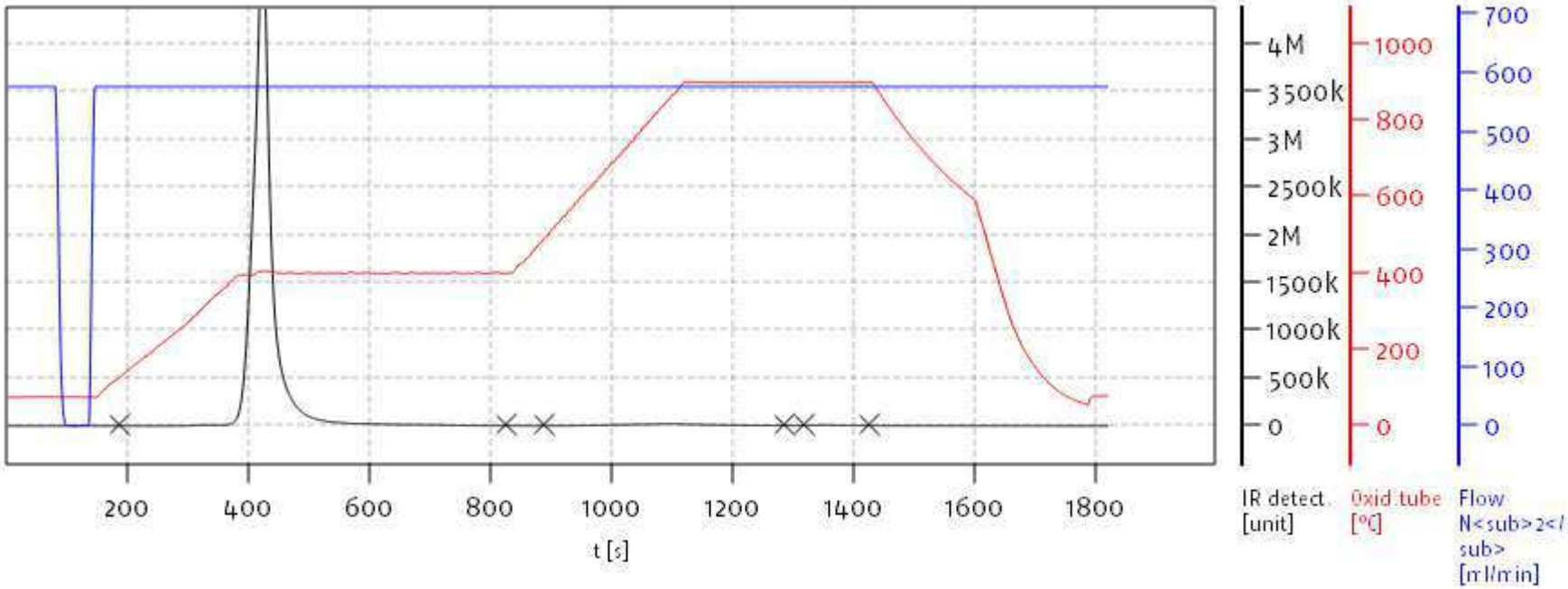
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
16	16	SJH0417-CCV1	23.90		1.00	CARBON	9/1/2021 6:57 PM	44.993	0.899	45.892	bl	6 474 380	138 898	21 876	0.9836	1.0000



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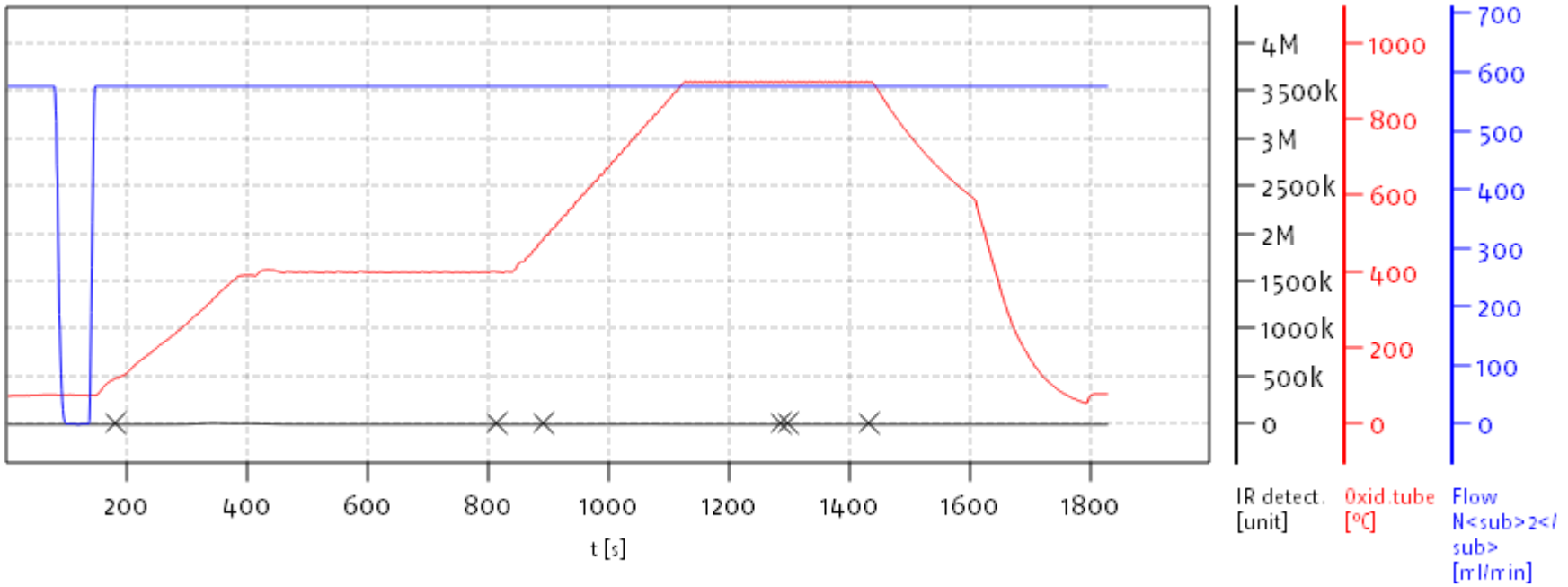
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
17	17	SJH0417-CCB1	522.80		1.00	CARBON	9/1/2021 7:28 PM	0.013	0.000	0.013	bl,C2u	53 522	7 948	433	0.9836	1.0000



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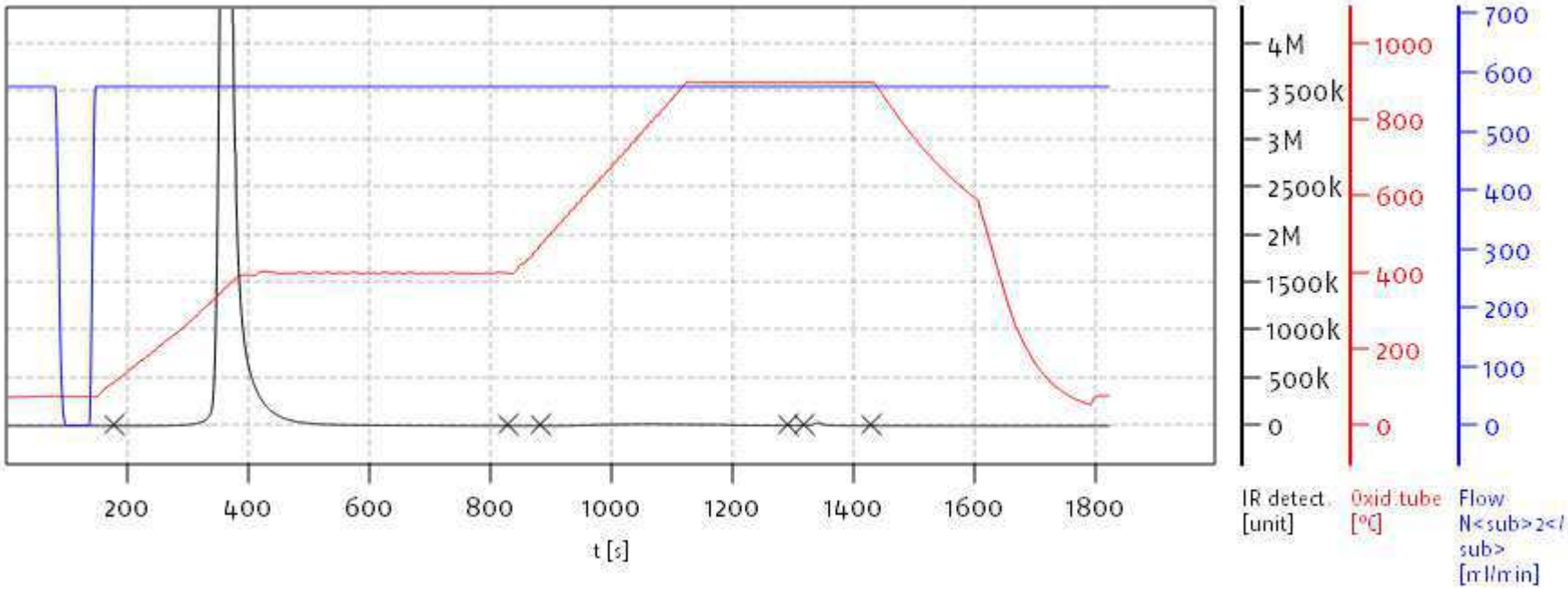
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
18	18	21H0301-11	522.80		1.00	CARBON	9/1/2021 7:59 PM	2.697	0.045	2.741	bl	8 481 430	150 326	28 066	0.9836	1.0000



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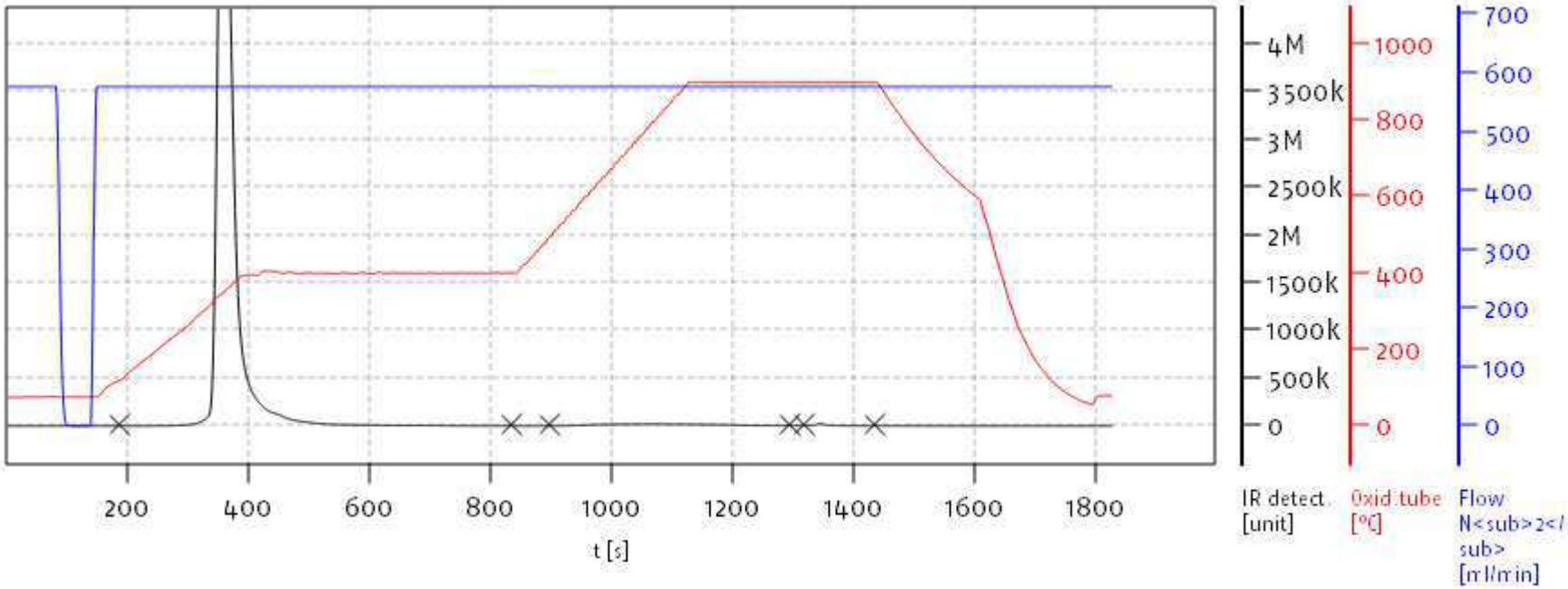
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
19	19	21H0301-12	521.60		1.00	CARBON	9/1/2021 8:30 PM	2.496	0.046	2.543	bl	7 840 130	155 027	21 532	0.9836	1.0000



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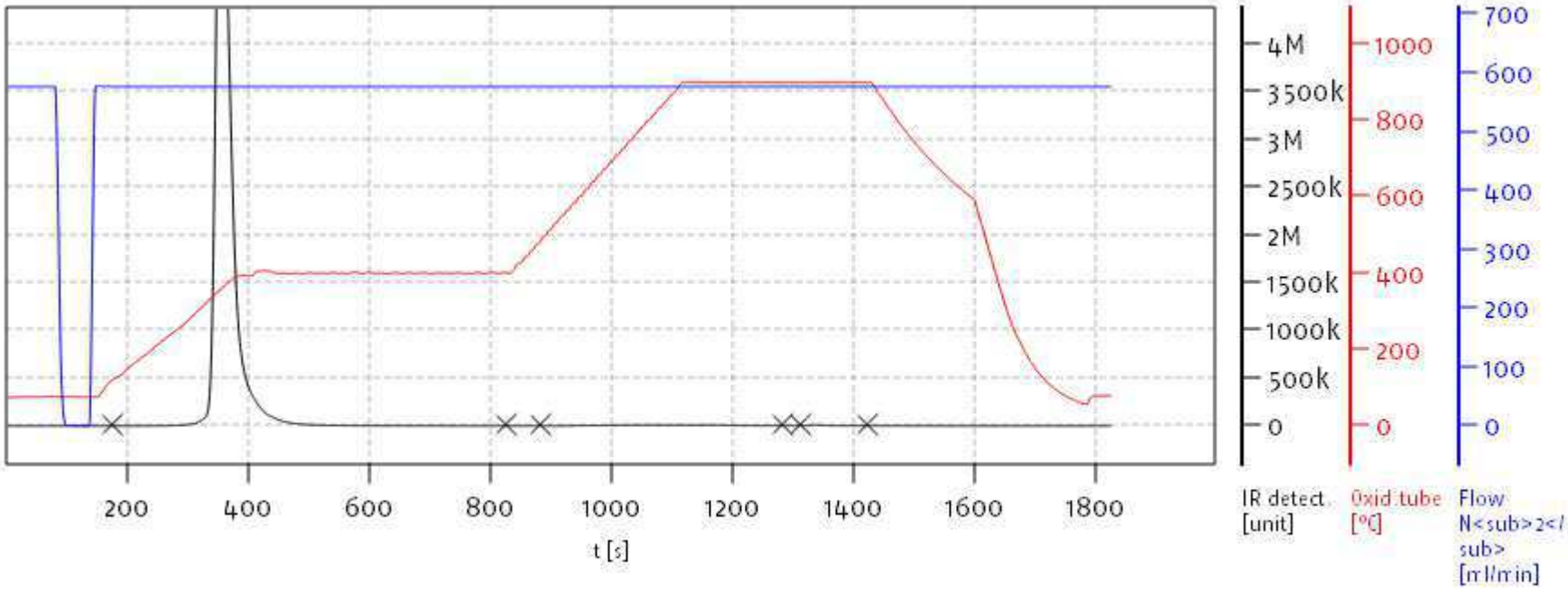
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
20	20	BJH0805-DUP1	585.20		1.00	CARBON	9/1/2021 9:00 PM	2.126	0.020	2.146	bl	7 496 130	80 357	15 307	0.9836	1.0000



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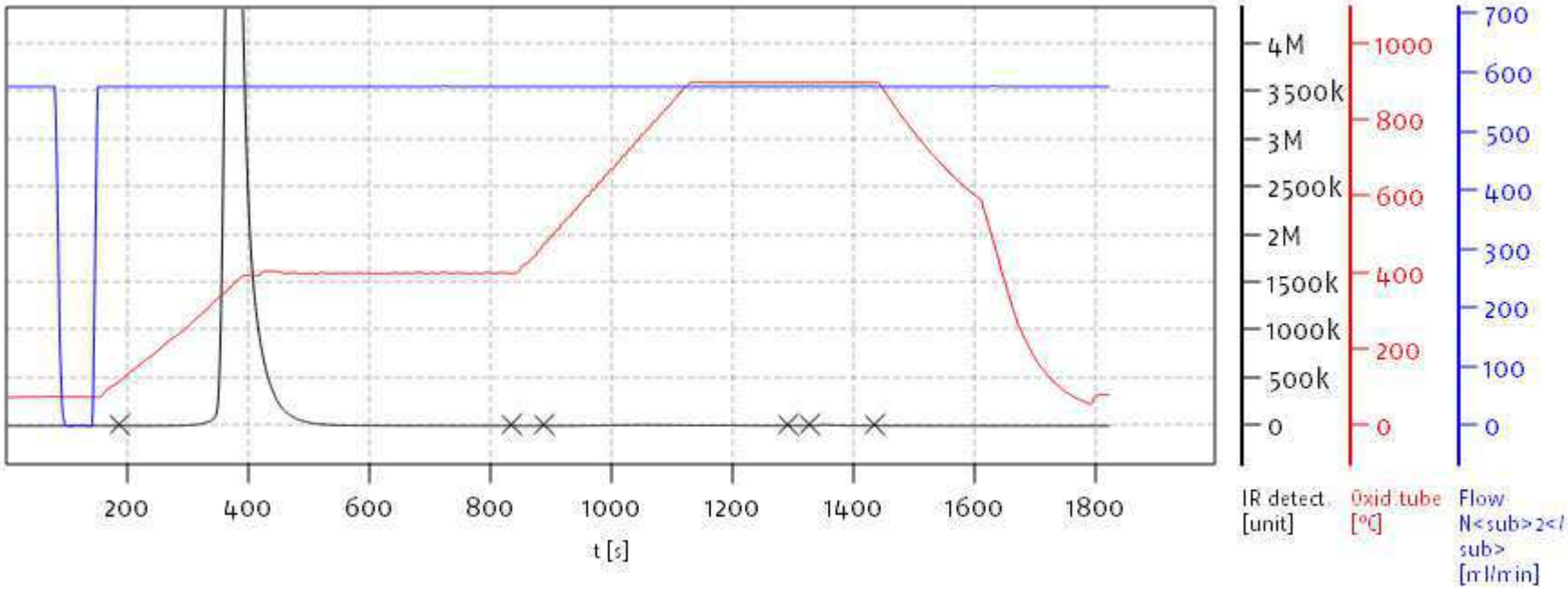
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
21	21	BJH0805-MS1	538.90	0.0104	1.00	CARBON	9/1/2021 9:31 PM	3.469	0.018	3.486	bl,C1o	11 258700	67 954	17 225	0.9836	1.0000



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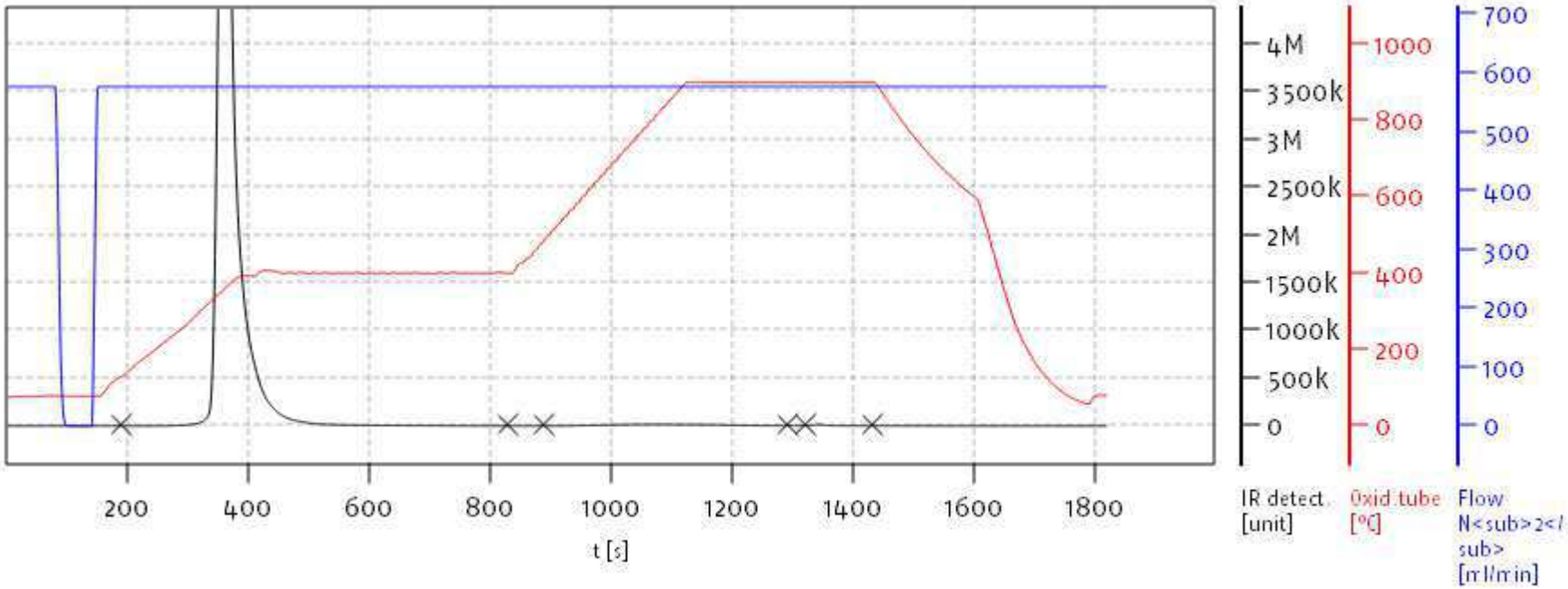
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
22	22	BJH0805-MSD1	544.10	0.0116	1.00	CARBON	9/1/2021 10:02 PM	2.993	0.035	3.028	bl,Cl o	9 808 310	124 456	16 672	0.9836	1.0000



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Date: Mon Sep 6 07:32:29 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

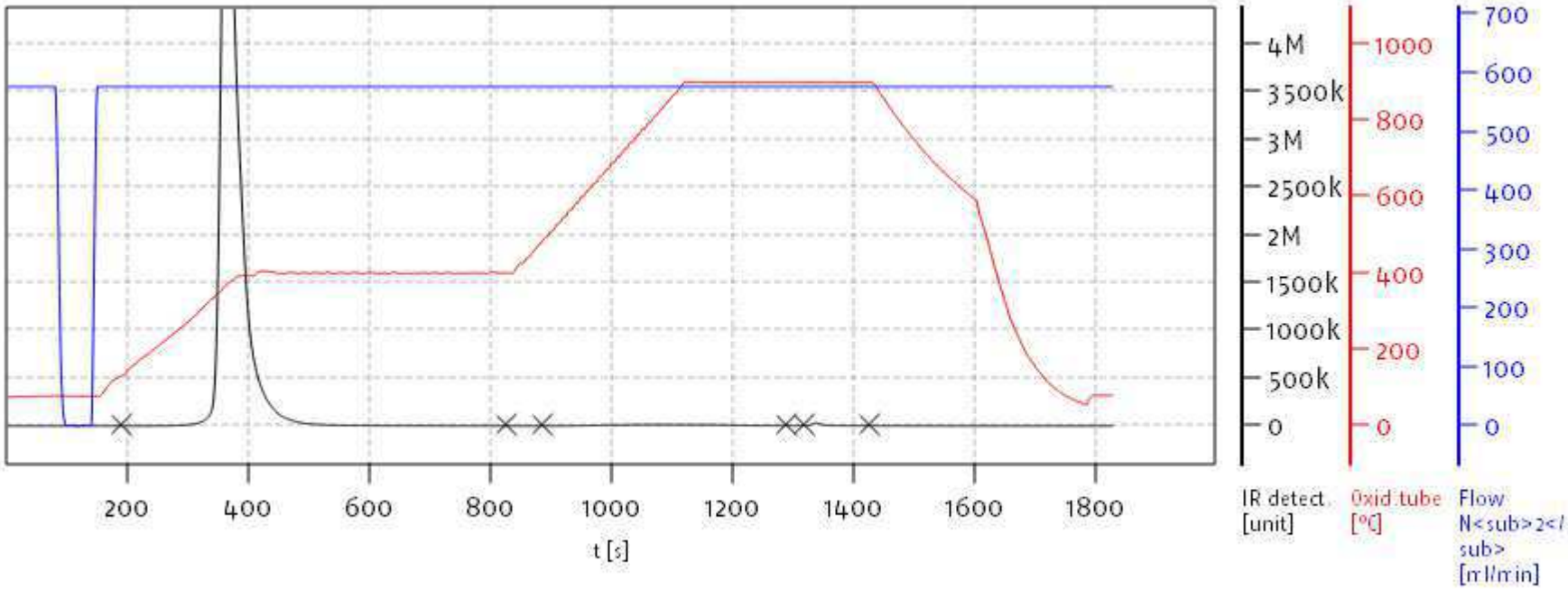
elementar
EXCELLENCE IN ELEMENTS

Document: from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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	21H0301-17	540.20		1.00	CARBON	9/1/2021 10:33 PM	2.760	0.029	2.790	bl,Cl o	8 972 190	105 943	26 602	0.9836	1.0000



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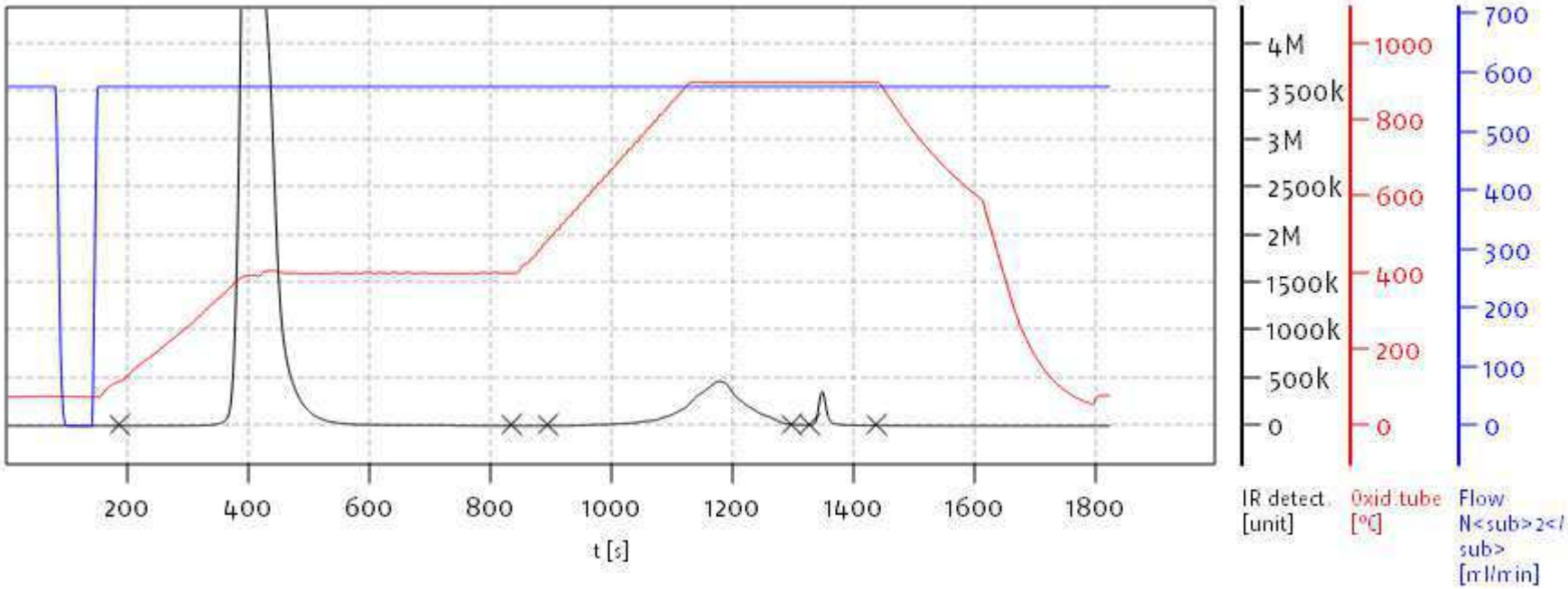
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
24	24	21H0321-01	523.00		1.00	CARBON	9/1/2021 11:04 PM	4.606	0.618	5.224	bl,C1o	14 301 500	1 926 710	218 618	0.9836	1.0000



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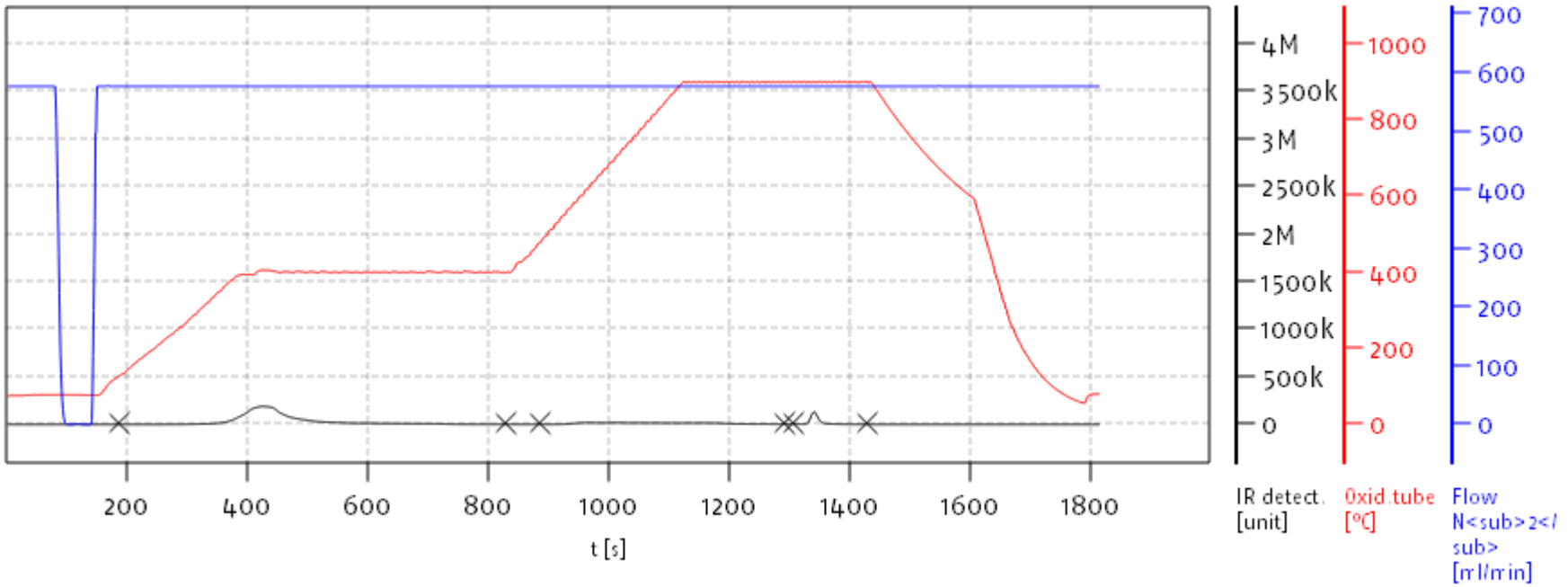
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
25	25	21H0321-03	517.60		1.00	CARBON	9/1/2021 11:34 PM	0.248	0.052	0.300	bl	714 743	170 381	79 981	0.9836	1.0000



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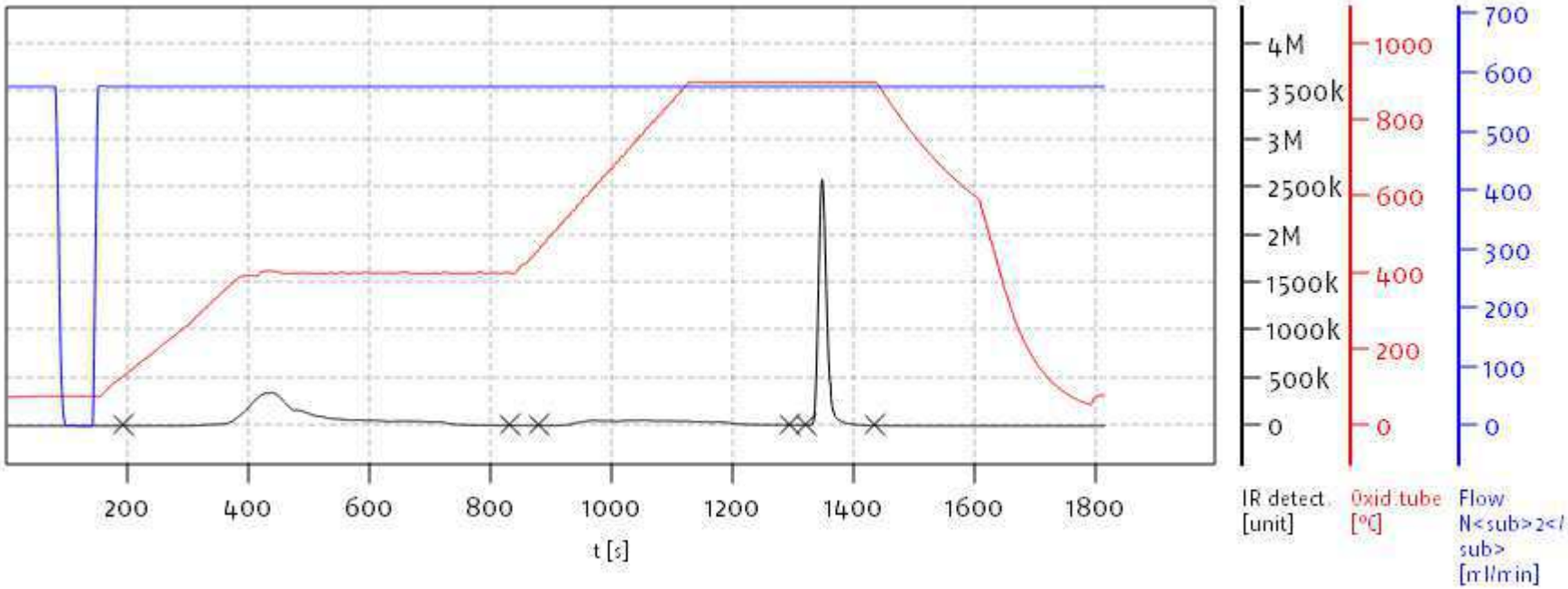
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
26	26	21H0321-05	609.40		1.00	CARBON	9/2/2021 12:05 AM	0.869	0.145	1.014	bl	1 637 500	534 090	1 549 410	0.9836	1.0000



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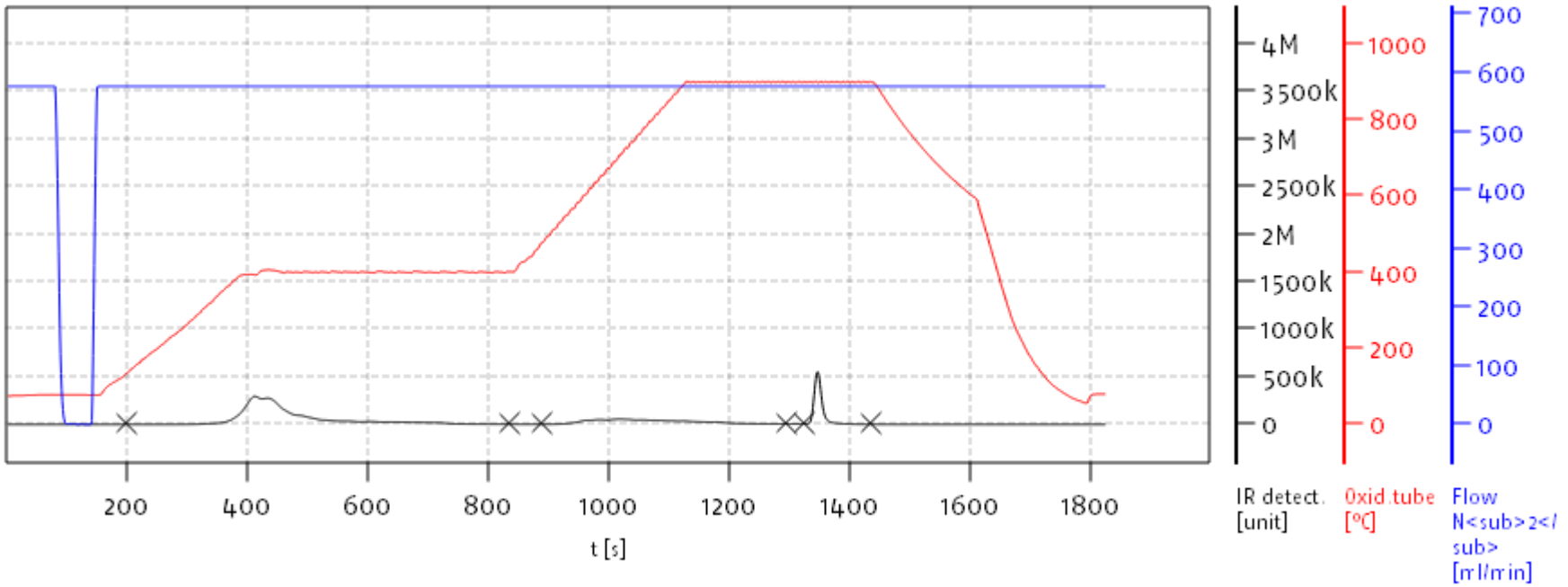
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
27	27	21H0321-07	525.20		1.00	CARBON	9/2/2021 12:36 AM	0.461	0.129	0.590	bl	1 162 470	412 583	313 081	0.9836	1.0000



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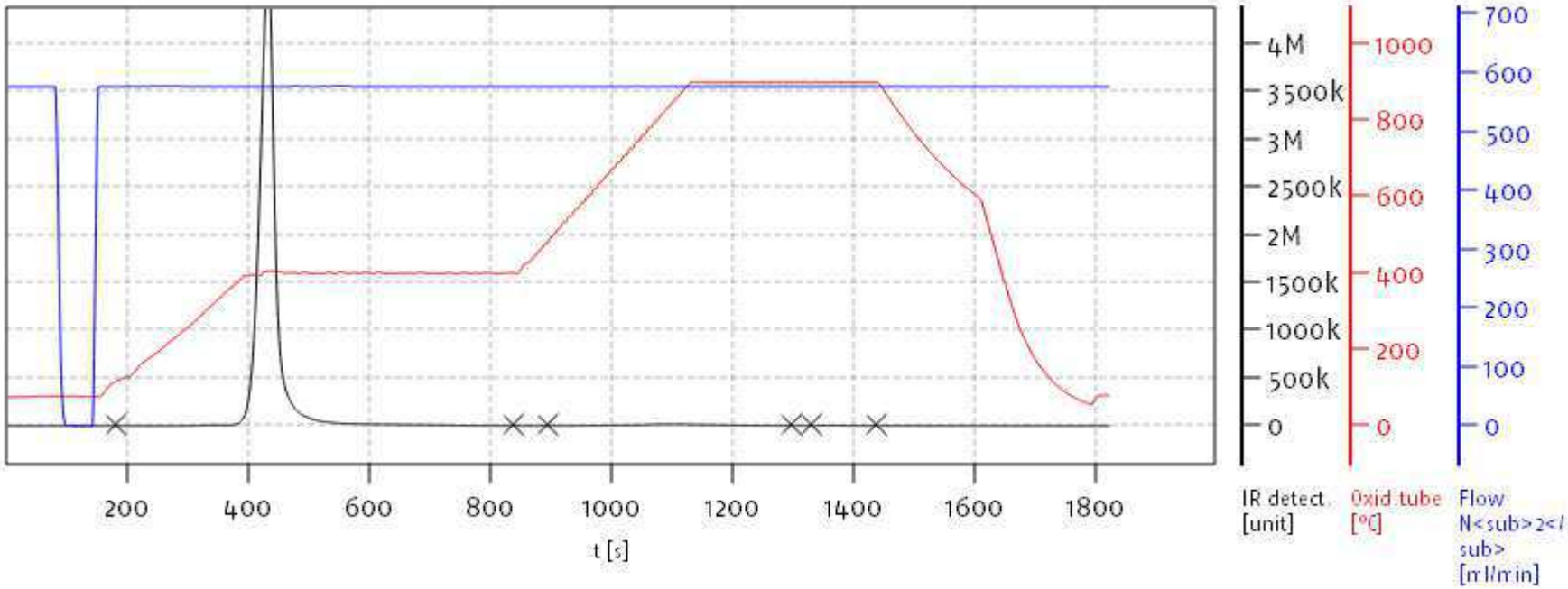
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
28	28	SJH0417-CCV2	20.40		1.00	CARBON	9/2/2021 1:07 AM	44.998	0.852	45.850	bl	5 535 420	114 604	13 625	0.9836	1.0000



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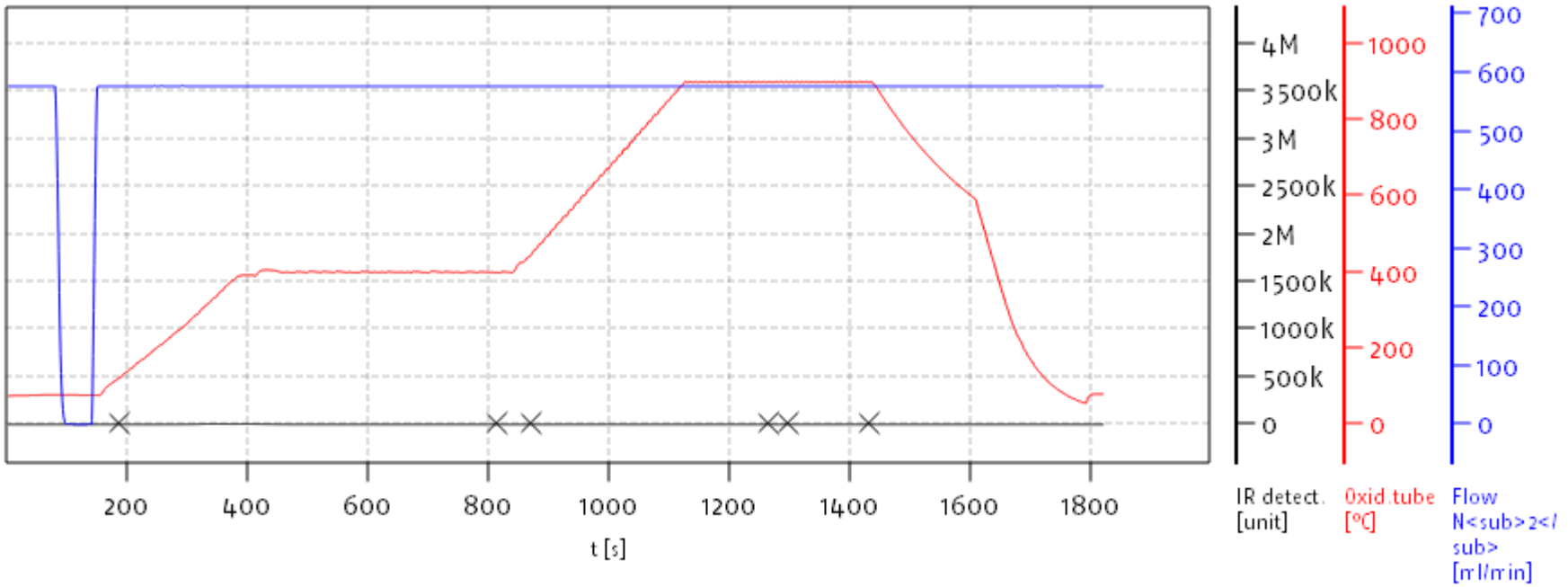
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
29	29	SJH0417-CCB2	512.80		1.00	CARBON	9/2/2021 1:37 AM	0.004	0.000	0.004	bl,C3u,C2u	24 219	1 399	345	0.9836	1.0000



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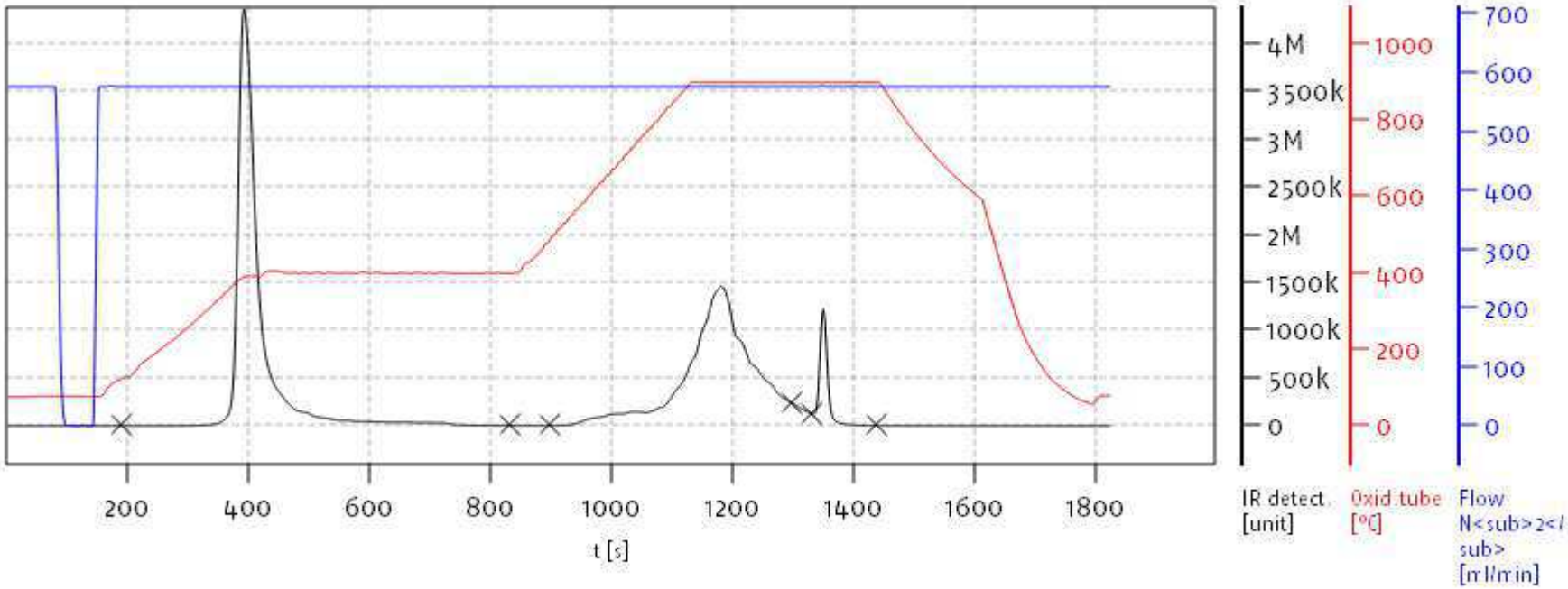
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
30	30	21H0321-09	524.90		1.00	CARBON	9/2/2021 2:08 AM	2.237	2.048	4.286	bl	6 364 930	6 378 240	715 512	0.9836	1.0000



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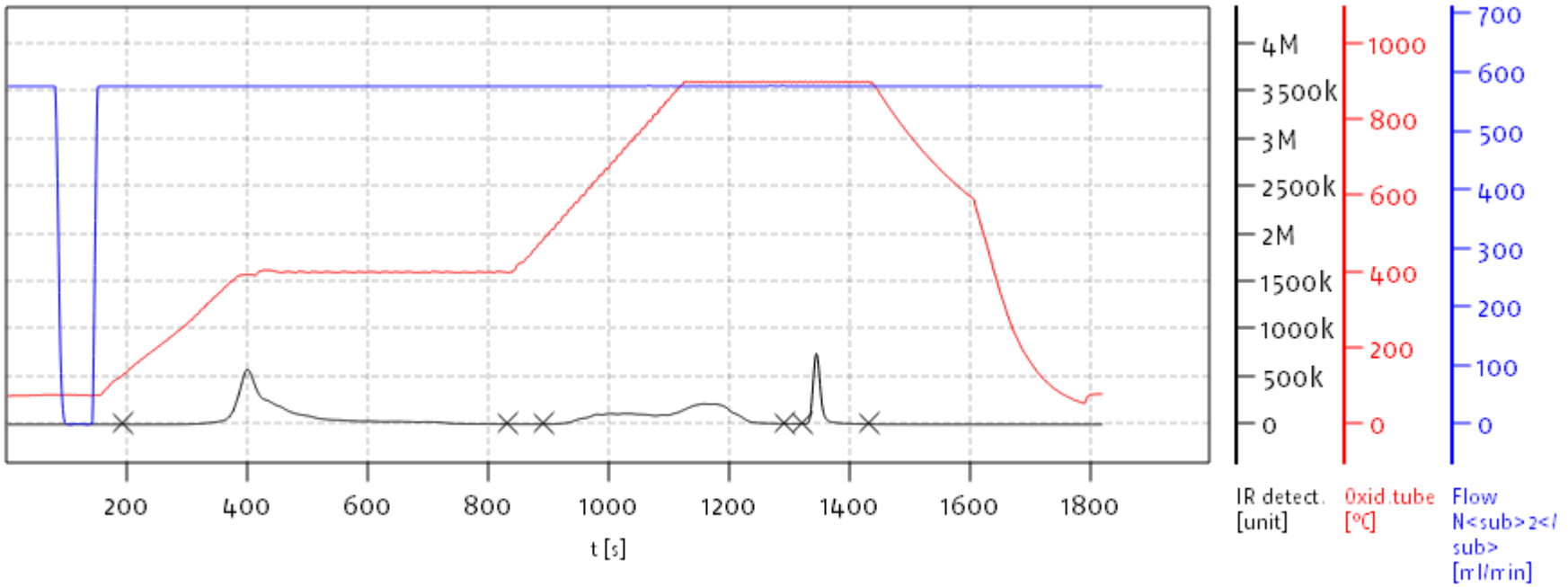
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
31	31	21H0321-11	377.50		1.00	CARBON	9/2/2021 2:39 AM	0.891	0.623	1.513	bl	1 619 210	1 403 380	421 601	0.9836	1.0000



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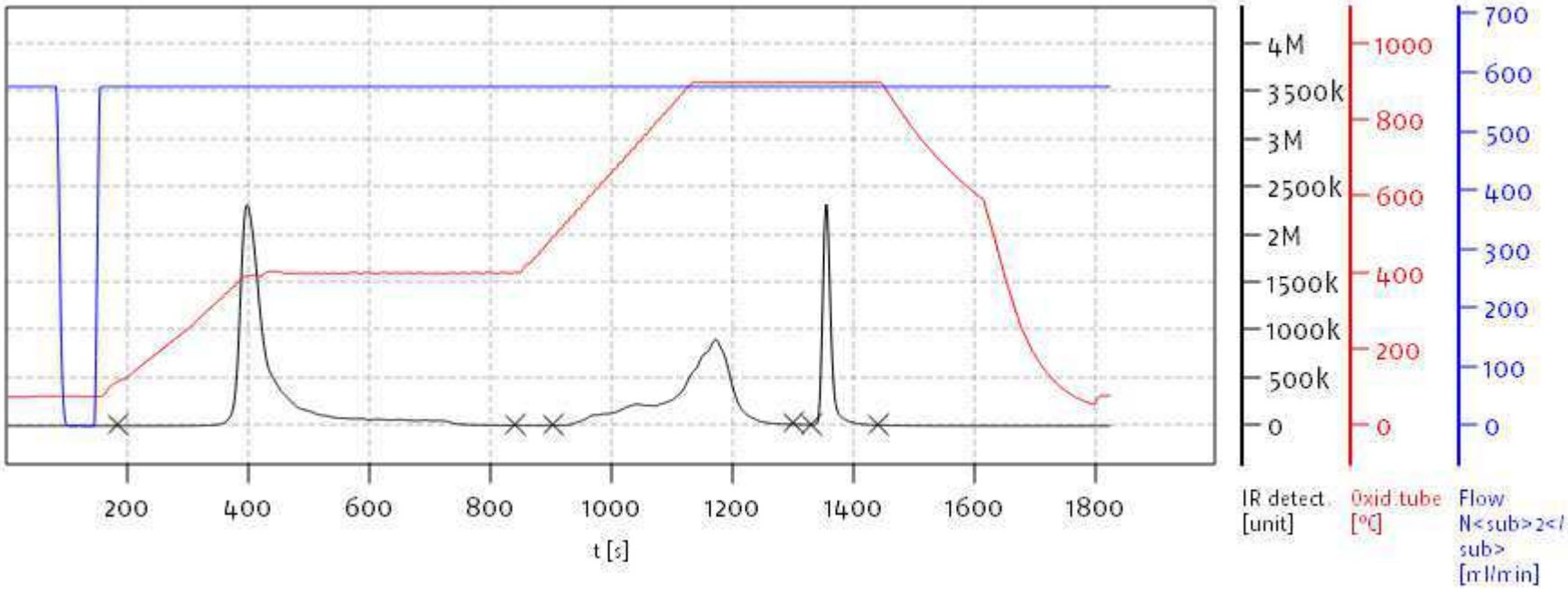
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
32	32	21H0321-13	513.10		1.00	CARBON	9/2/2021 3:10 AM	1.929	1.188	3.117	bl	4 568 090	3 619 720	1 390 500	0.9836	1.0000



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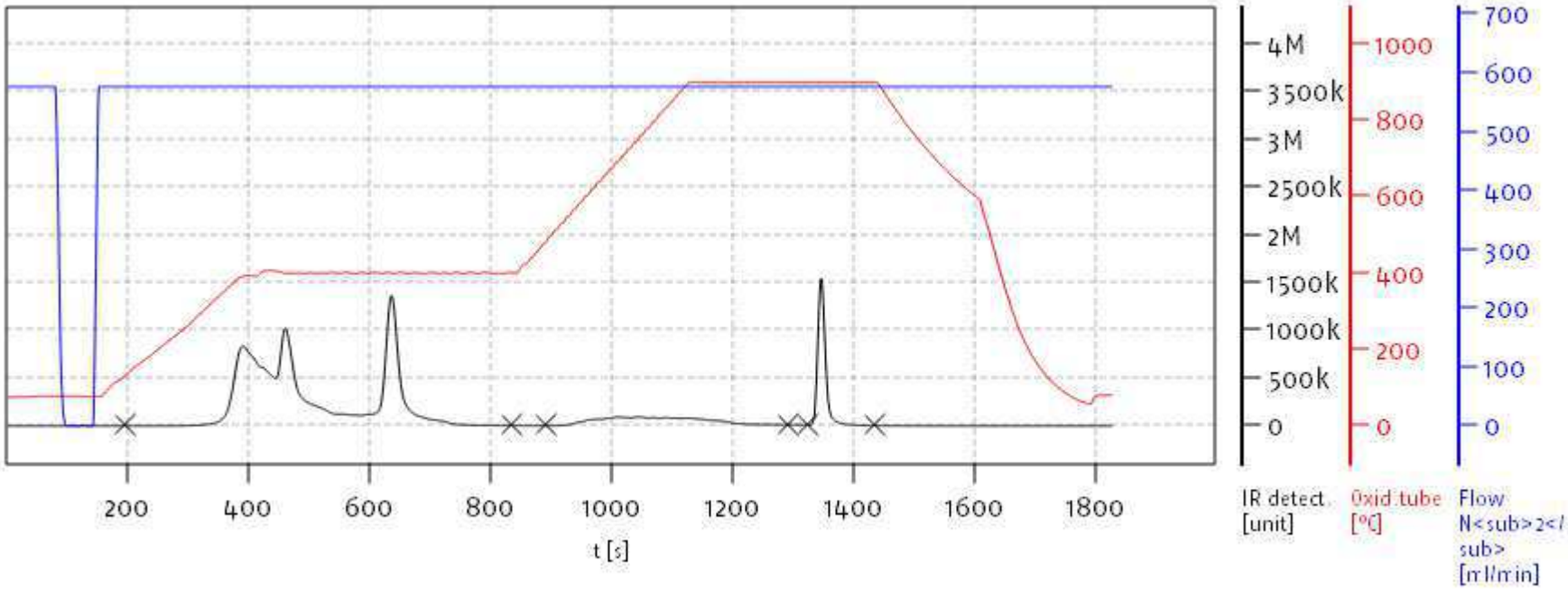
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
33	33	21H0321-15	554.90		1.00	CARBON	9/2/2021 3:41 AM	1.811	0.233	2.044	bl	5 190 940	776 799	867 539	0.9836	1.0000



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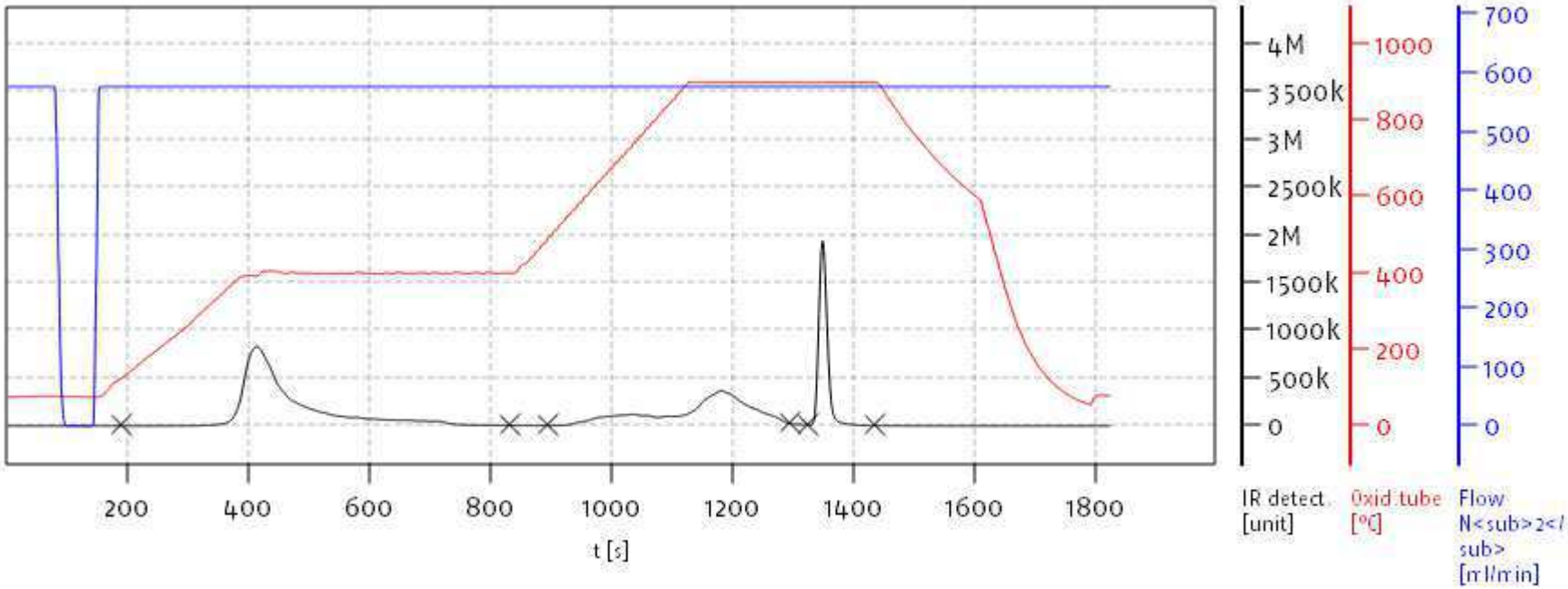
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
34	34	BJH0805-DUP2	533.60		1.00	CARBON	9/2/2021 4:11 AM	1.269	0.628	1.898	bl	2 884 130	1 997 060	1 196 010	0.9836	1.0000



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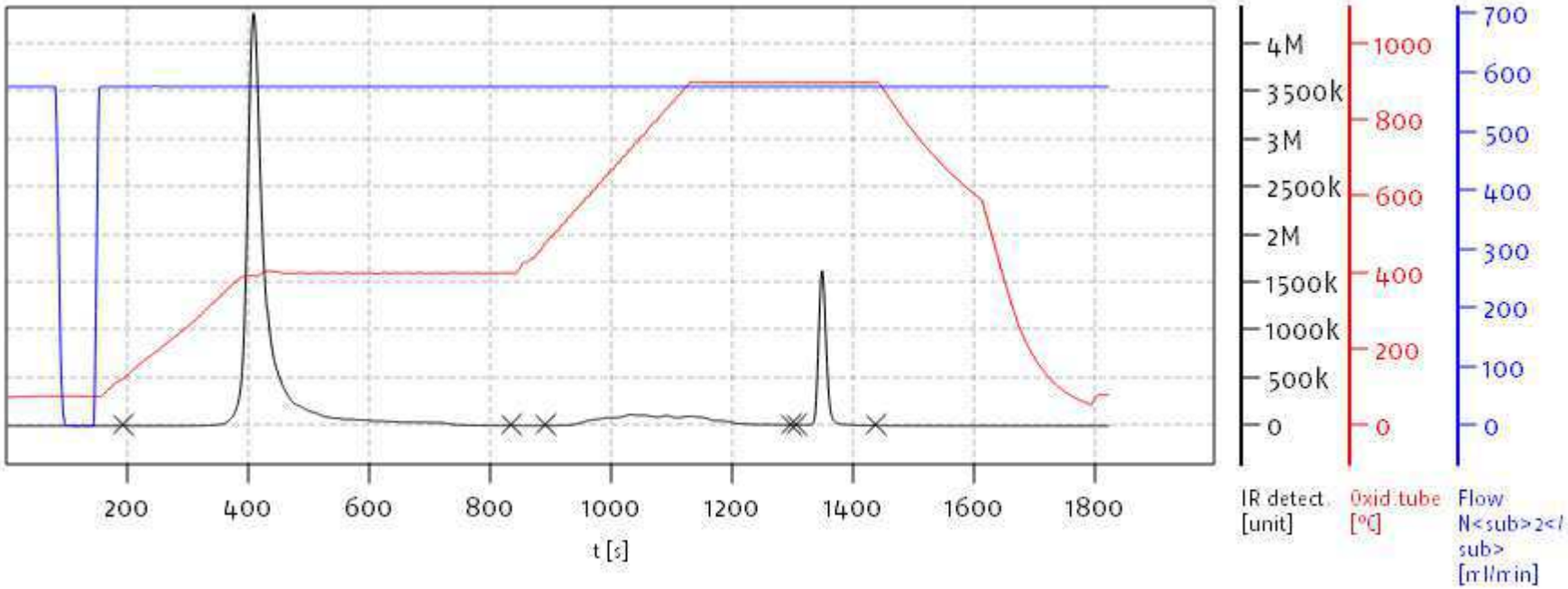
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
35	35	BJH0805-MS2	353.70	0.0111	1.00	CARBON	9/2/2021 4:42 AM	3.202	0.412	3.614	bl	5 911 260	874 764	915 204	0.9836	1.0000



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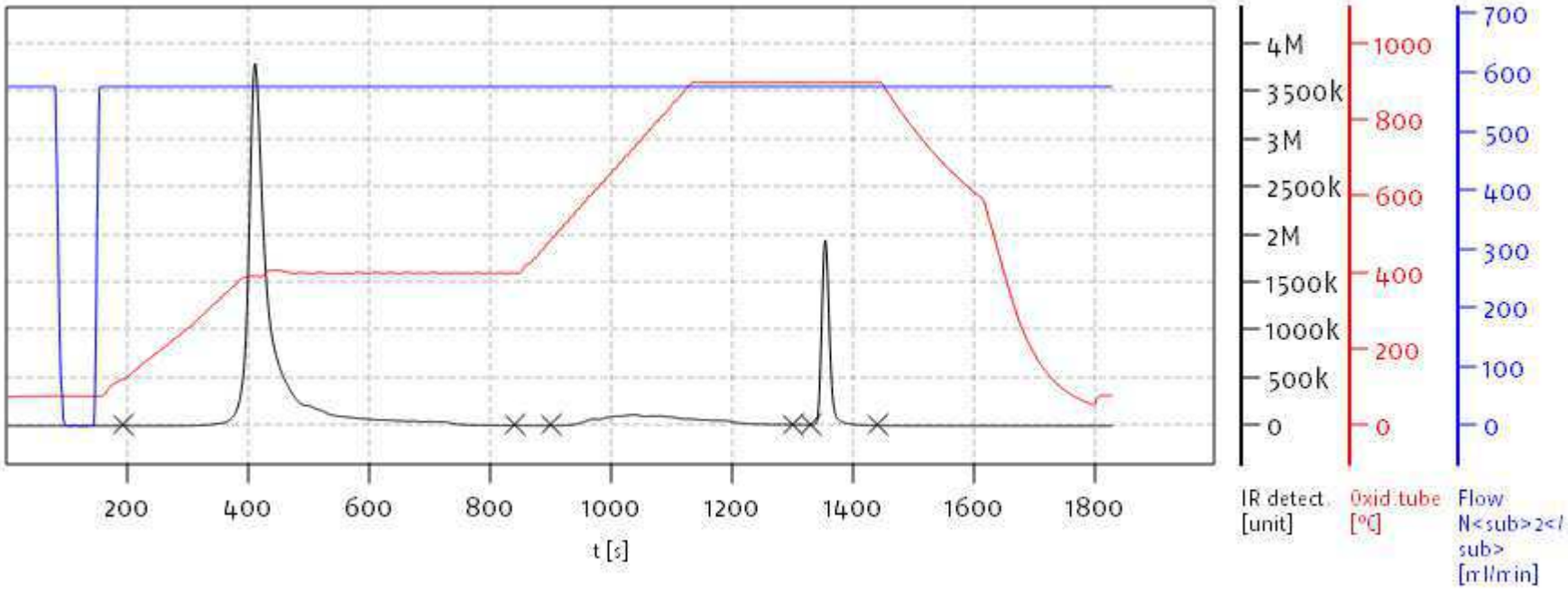
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
36	36	BJH0805-MSD2	535.10	0.0097	1.00	CARBON	9/2/2021 5:13 AM	2.133	0.267	2.401	bl	5 768 650	858 105	1 108 370	0.9836	1.0000



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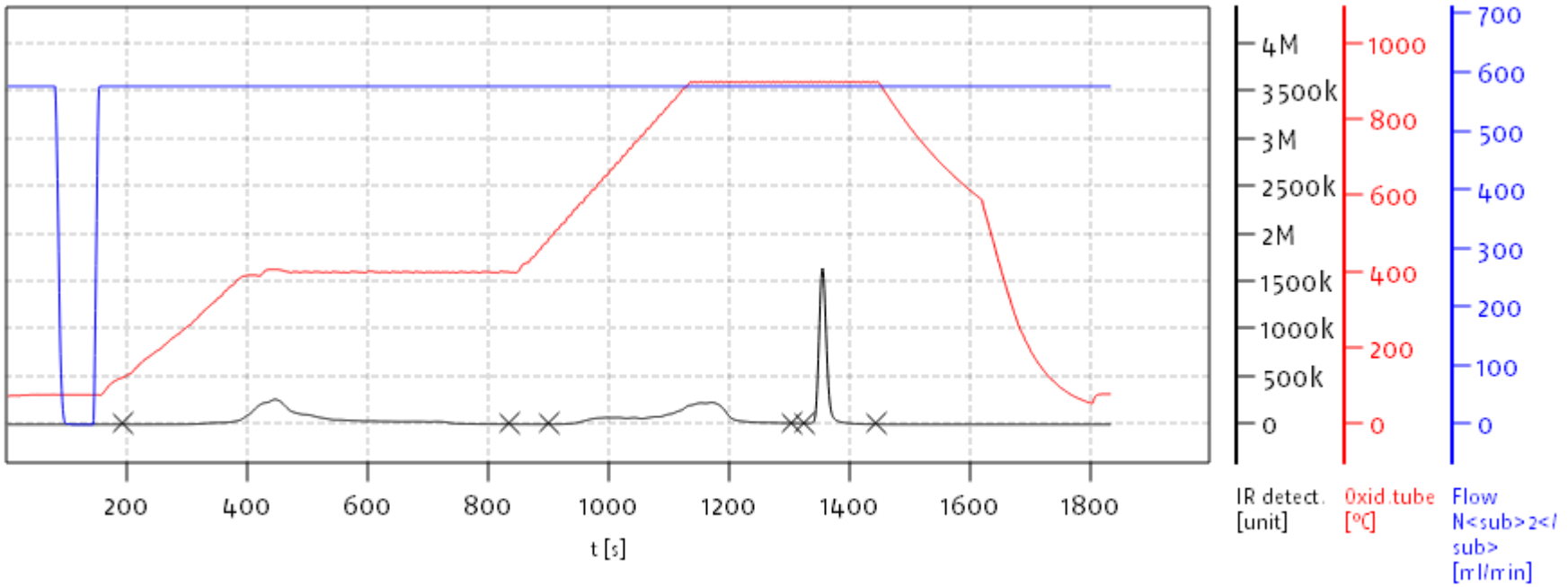
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
37	37	21H0321-17	526.40		1.00	CARBON	9/2/2021 5:44 AM	0.641	0.375	1.016	bl	1 130 960	1 180 020	907 704	0.9836	1.0000



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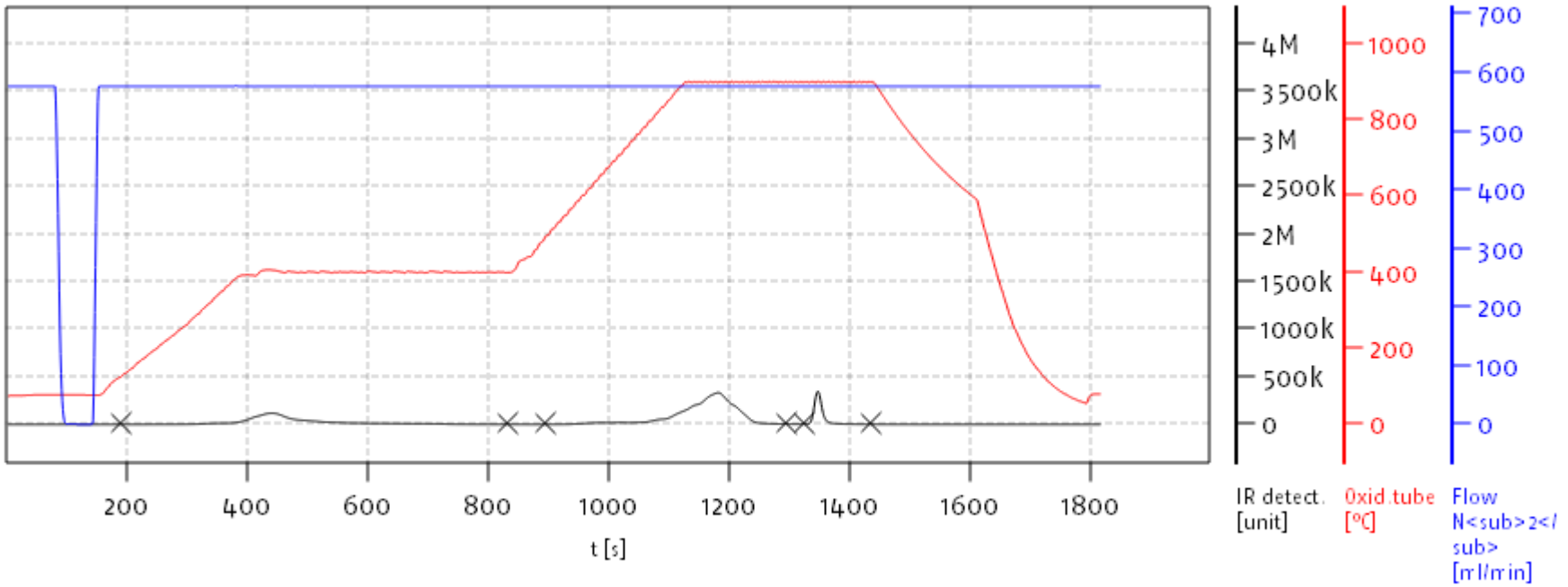
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
38	38	21H0321-19	587.10		1.00	CARBON	9/2/2021 6:15 AM	0.188	0.333	0.521	bl	480 507	1 170 590	202 698	0.9836	1.0000



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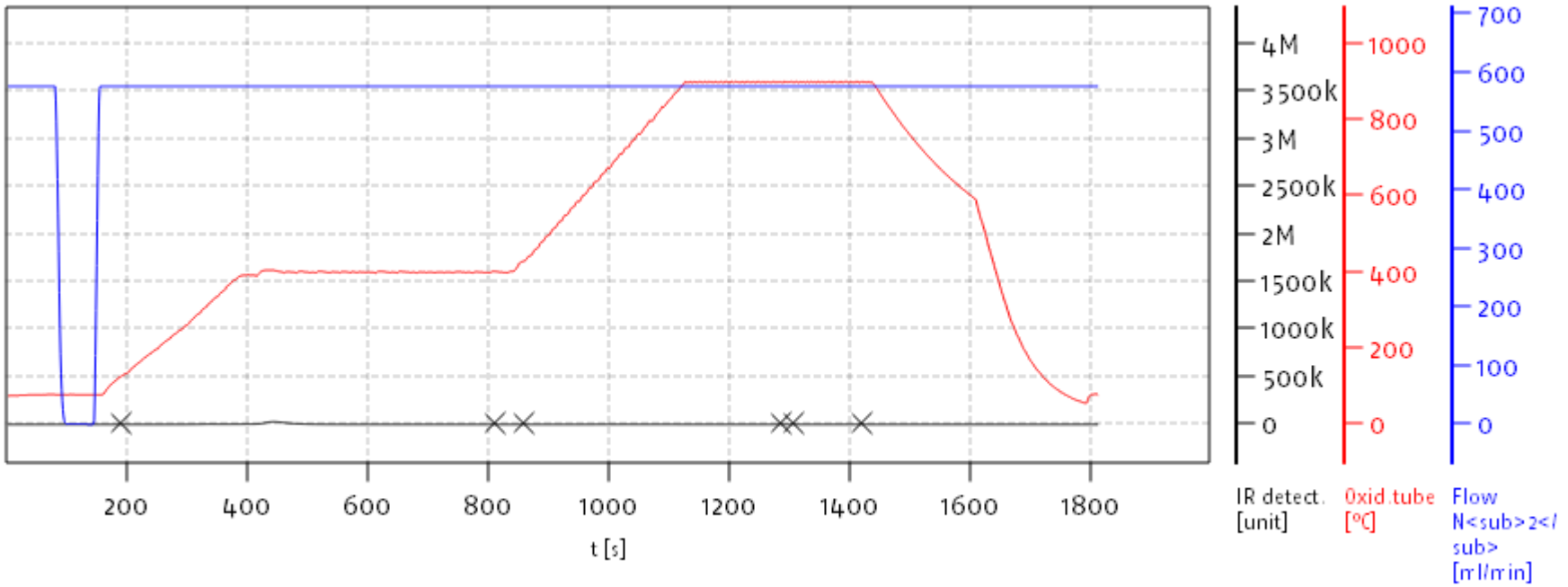
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
39	39	BJH0806-MRL1	522.50		1.00	CARBON	9/2/2021 6:45 AM	0.016	0.000	0.016	bl,C3u,C2u	63 361	6 237	430	0.9836	1.0000



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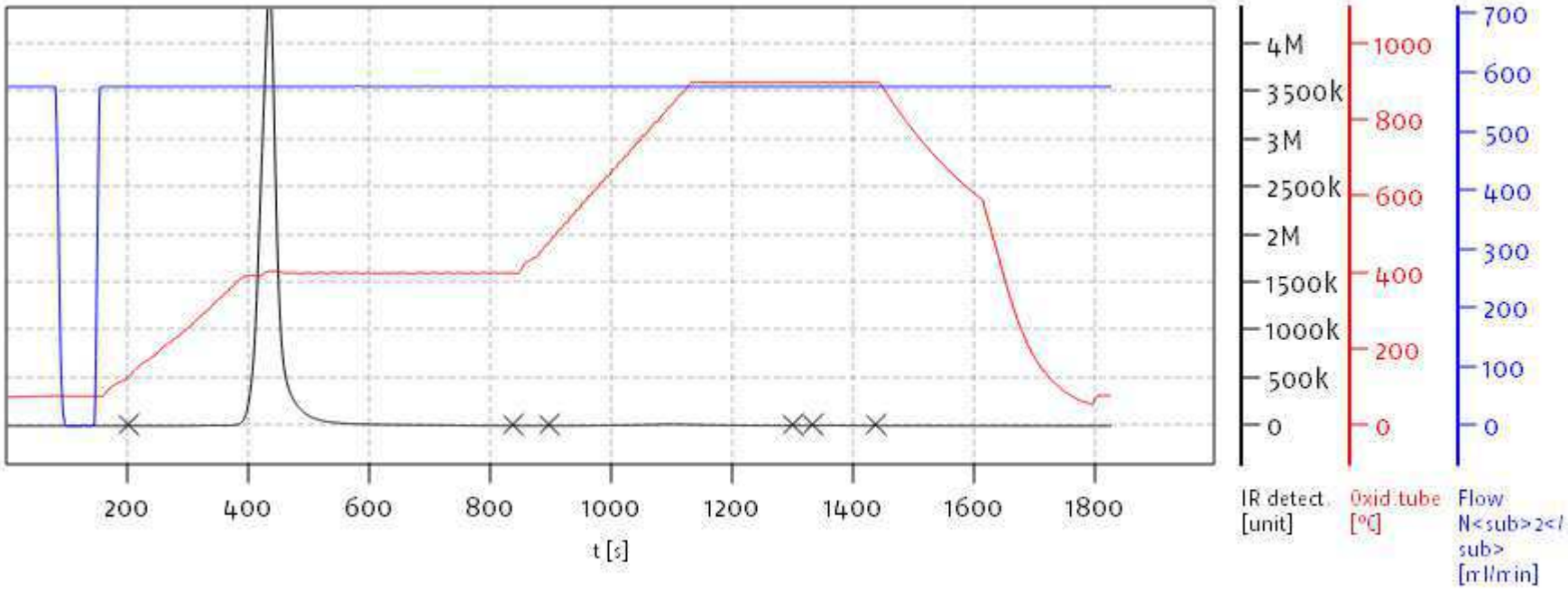
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
40	40	SJH0417-CCV3	20.70		1.00	CARBON	9/2/2021 7:16 AM	45.042	0.758	45.800	bl	5 621 860	104 600	13 930	0.9836	1.0000



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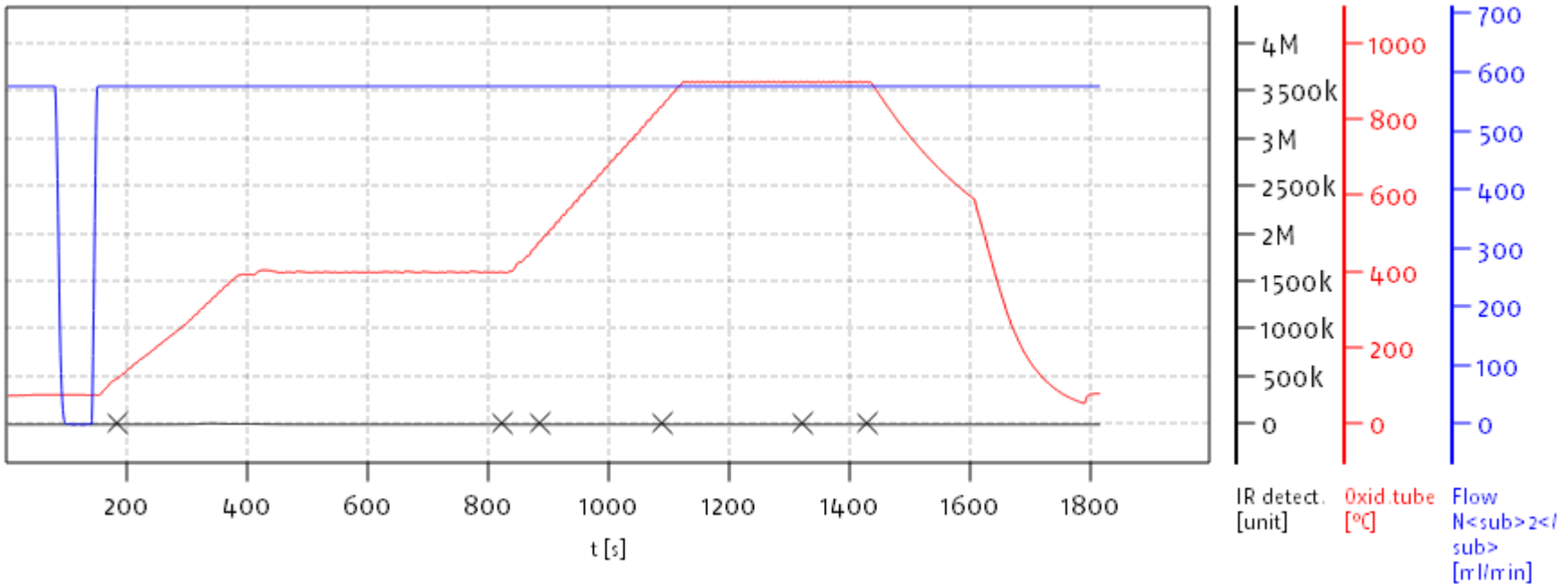
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
41	41	SJH0417-CCB3	525.90		1.00	CARBON	9/2/2021 7:47 AM	0.007	0.000	0.007	bl,C3u,C2u	32 311	986	414	0.9836	1.0000



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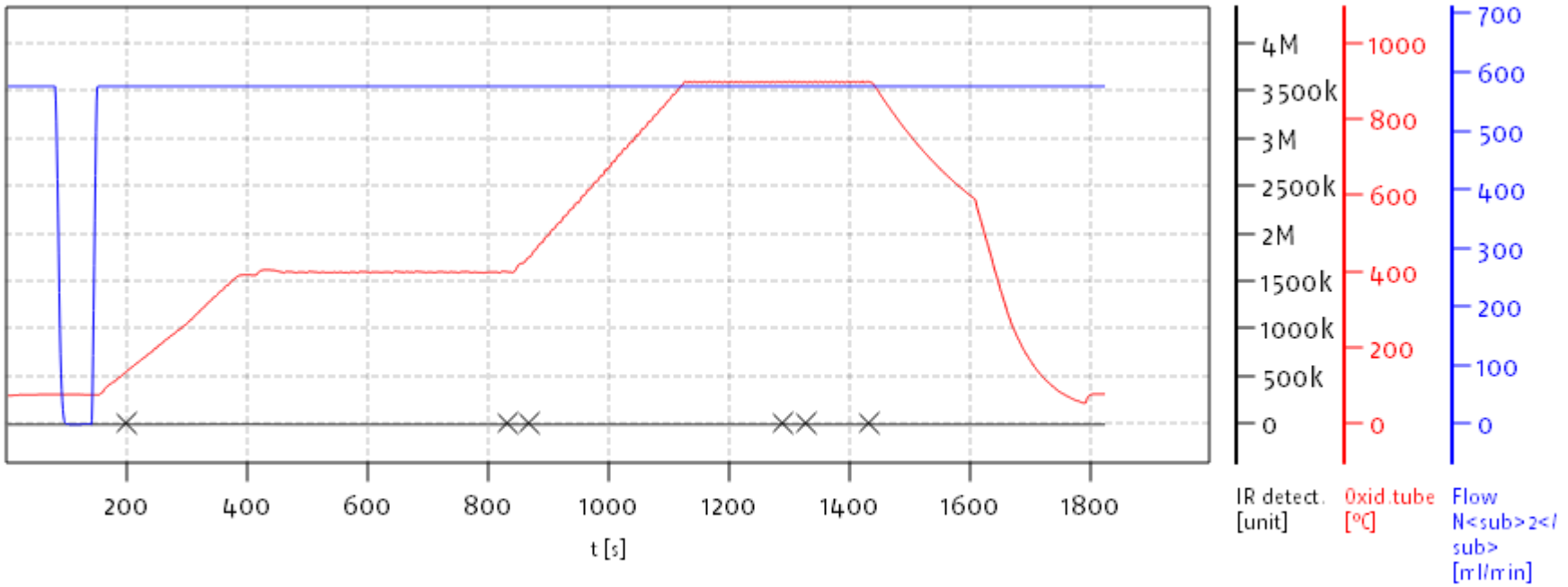
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
42	42	BJH0806-BLK1	549.90		1.00	CARBON	9/2/2021 8:18 AM	0.000	0.000	0.000	bl,C3u,C2u	9 719	1 723	472	0.9836	1.0000



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Access: soliTOC superuser

Date: Mon Sep 6 07:32:29 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

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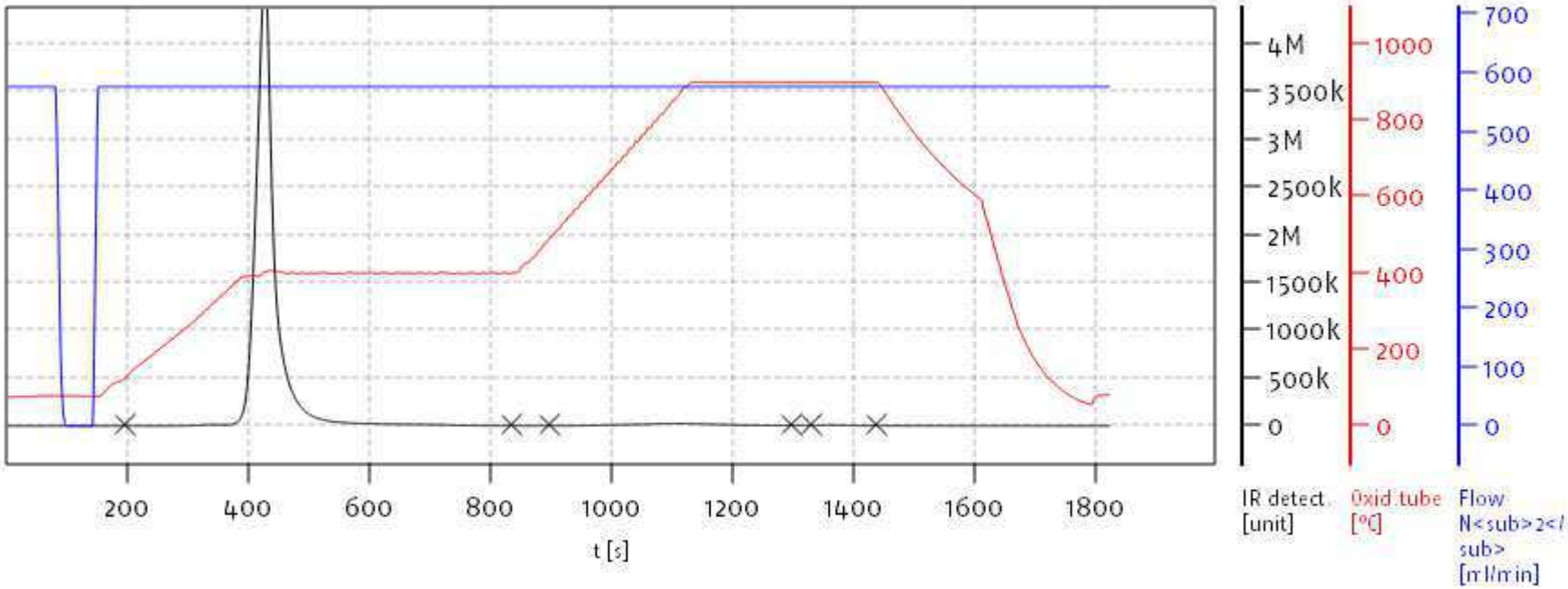
Document: from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
43	43	BJH0806-BS1	23.10		1.00	CARBON	9/2/2021 8:49 AM	44.876	1.142	46.018	bl	6 243 940	167 834	19 475	0.9836	1.0000



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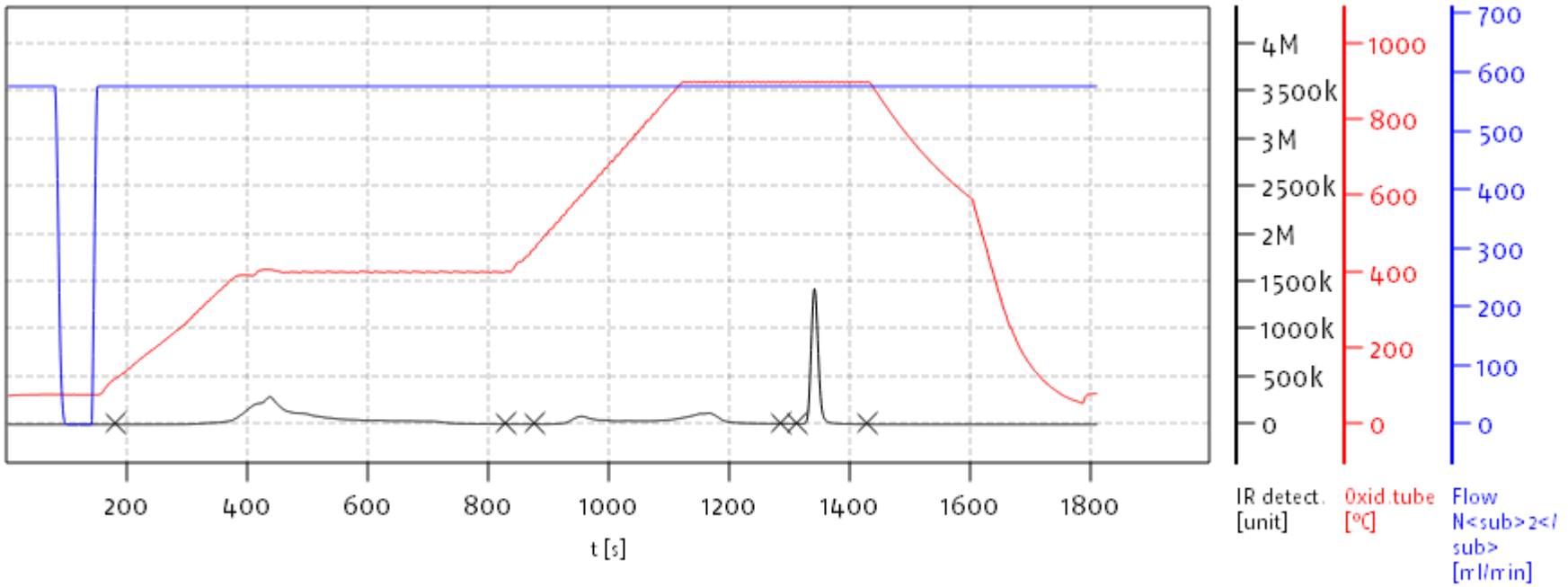
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
44	44	21H0321-21	534.10		1.00	CARBON	9/2/2021 9:19 AM	0.619	0.197	0.817	bl	1 255 020	636 223	747 033	0.9836	1.0000



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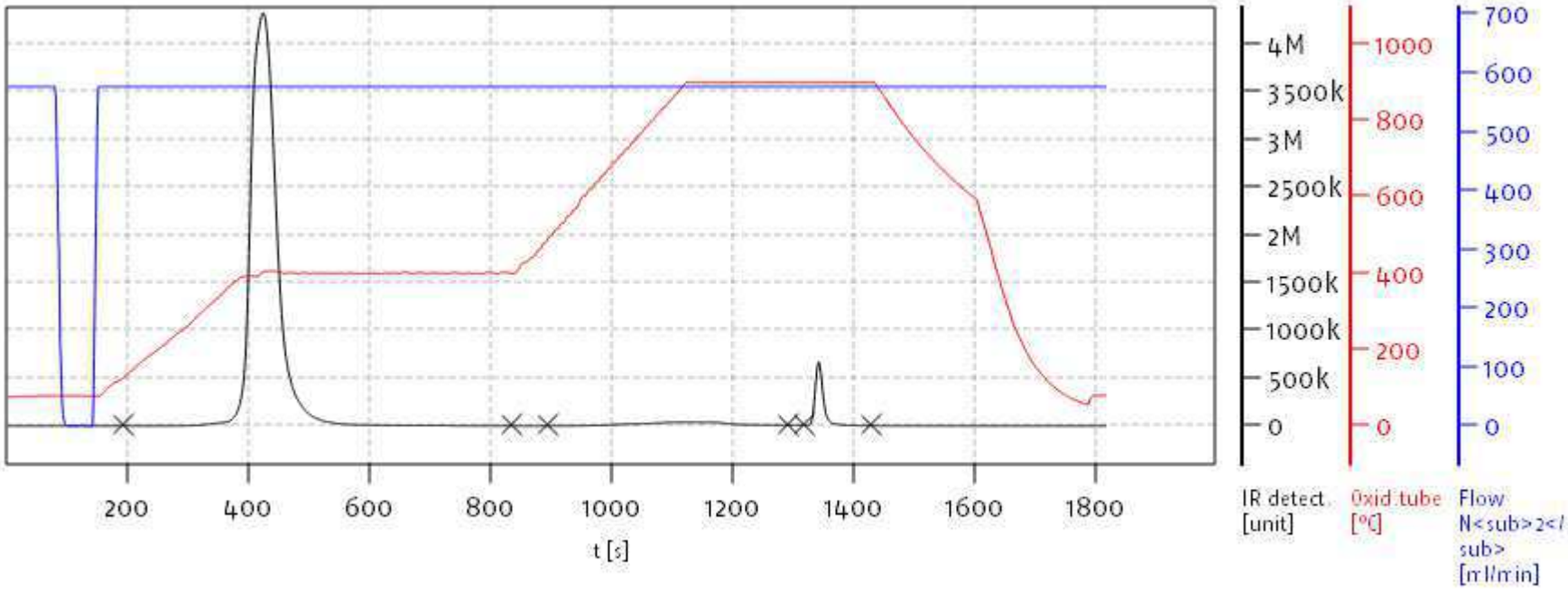
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
45	45	21H0321-23	525.50		1.00	CARBON	9/2/2021 9:50 AM	2.656	0.081	2.737	bl	8 028 750	263 291	391 546	0.9836	1.0000



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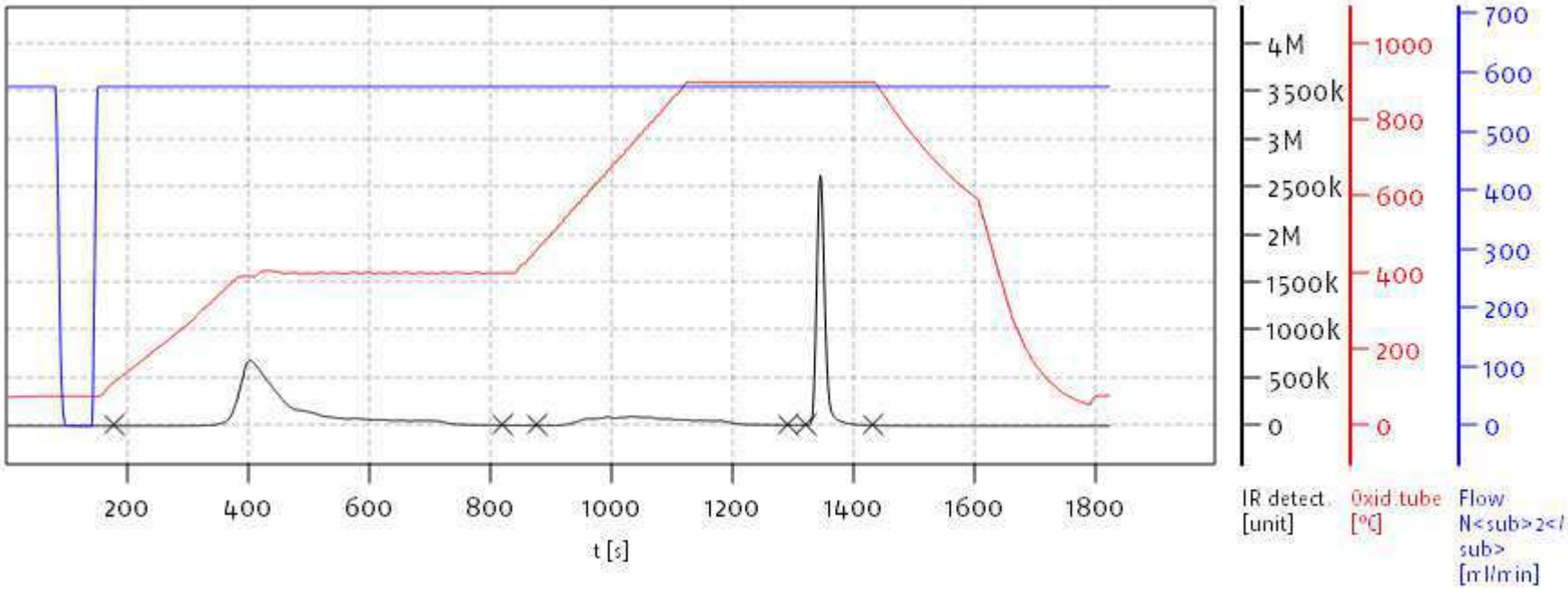
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
46	46	21H0321-25	511.80		1.00	CARBON	9/2/2021 10:21 AM	1.308	0.246	1.553	bl	2 463 410	755 802	1 563 360	0.9836	1.0000



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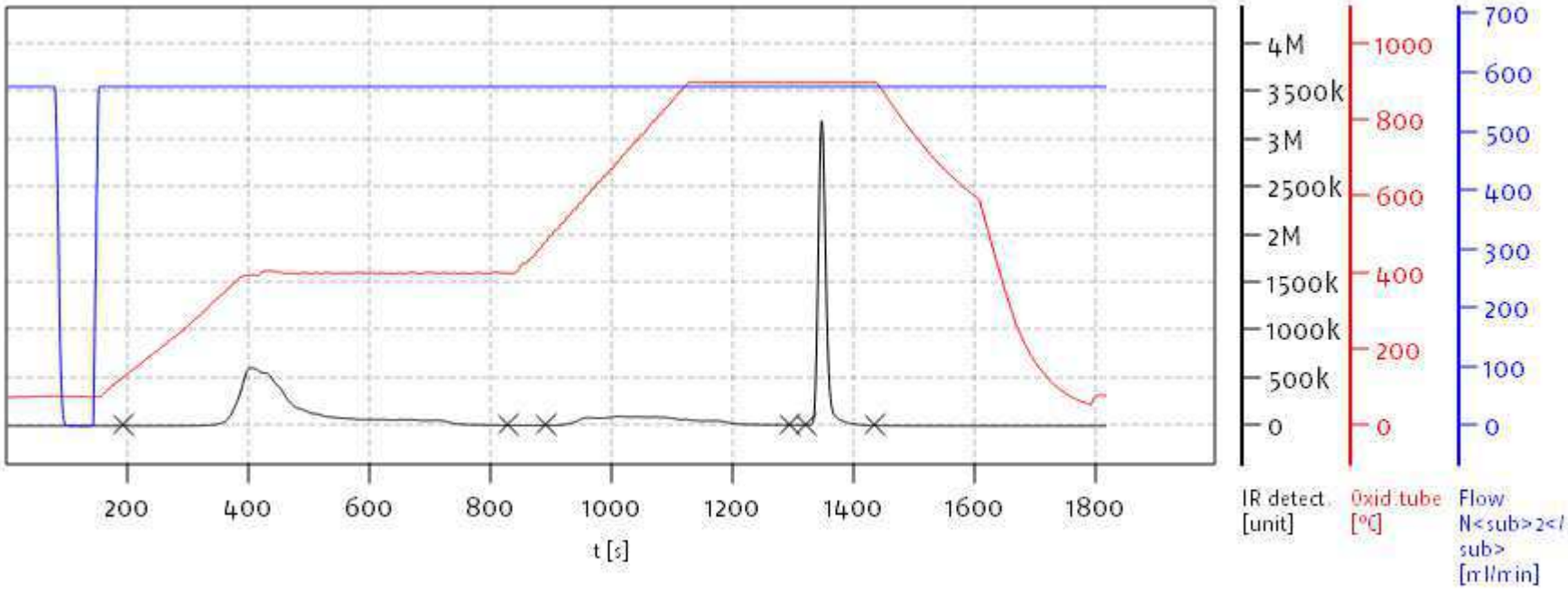
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
47	47	21H0321-27	560.20		1.00	CARBON	9/2/2021 10:51 AM	1.299	0.239	1.538	bl	2 574 550	805 359	1 799 210	0.9836	1.0000



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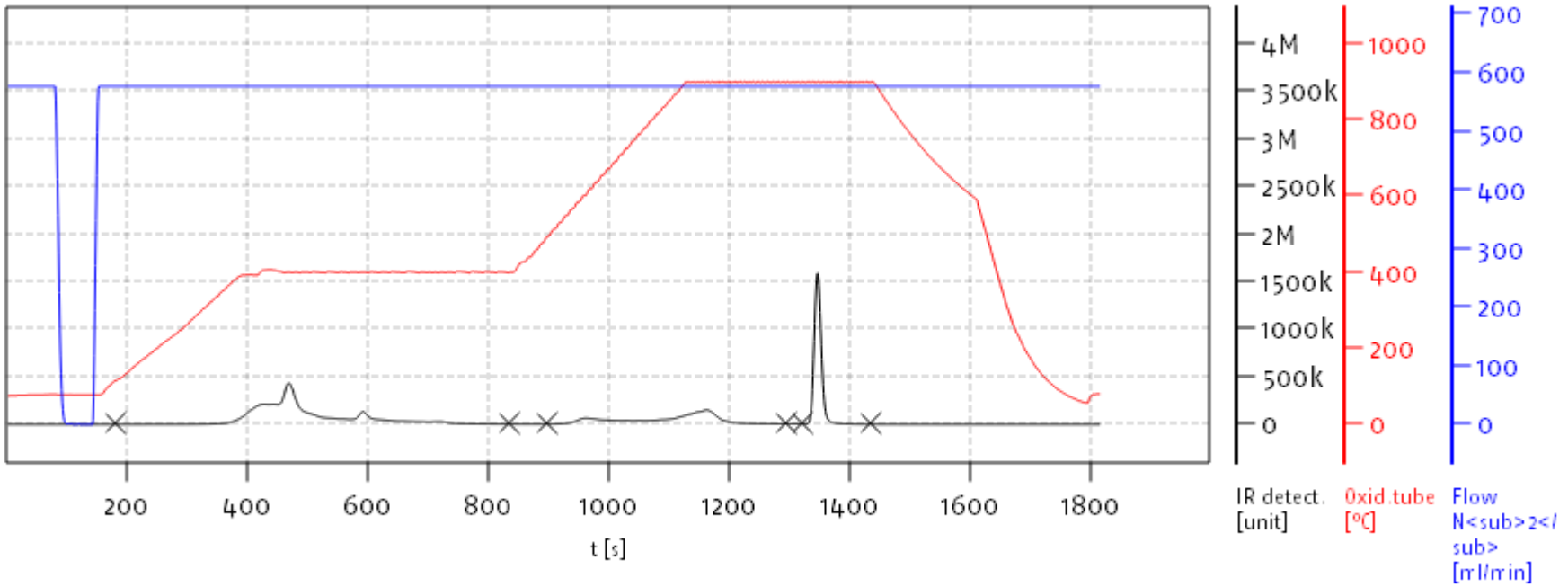
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
48	48	21H0321-29	536.10		1.00	CARBON	9/2/2021 11:22 AM	0.702	0.211	0.912	bl	1 440 650	680 090	833 032	0.9836	1.0000



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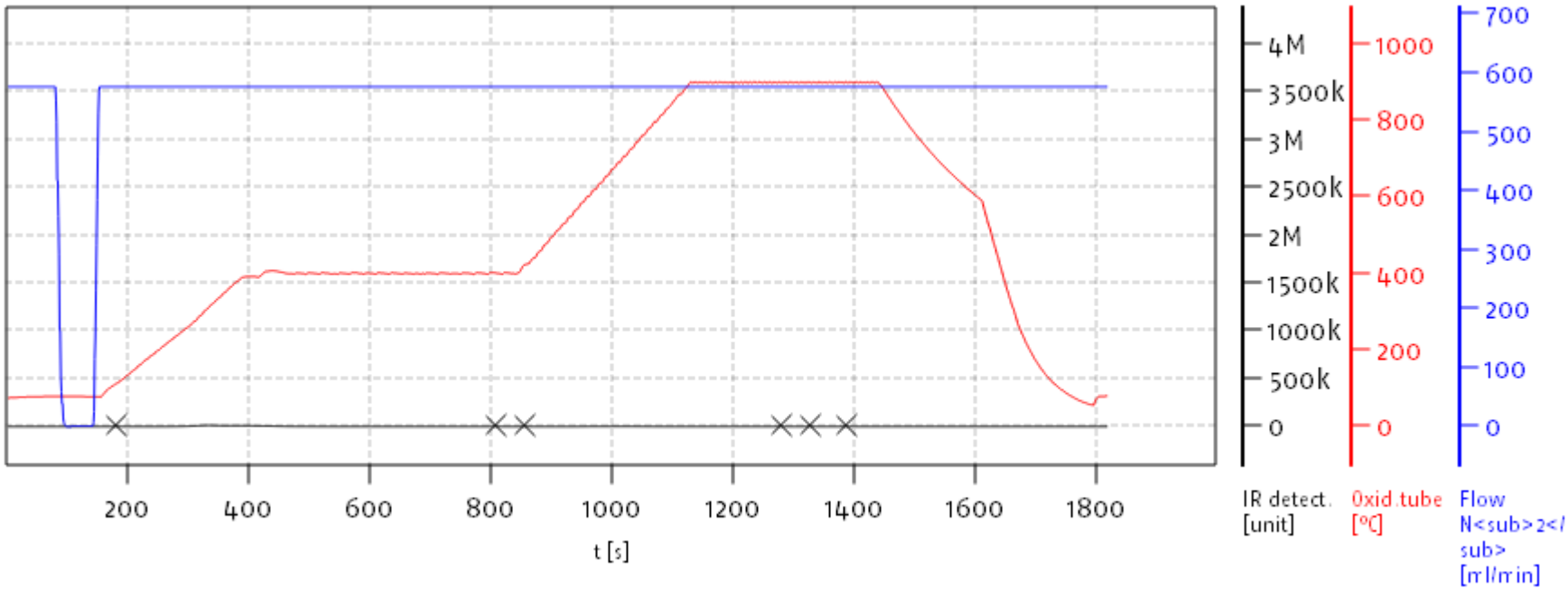
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
49	49	BLANK	1.00		1.00	CARBON	9/2/2021 11:53 AM	0.000	0.000	0.000	bl	52 548	7 479	173	0.9836	1.0000



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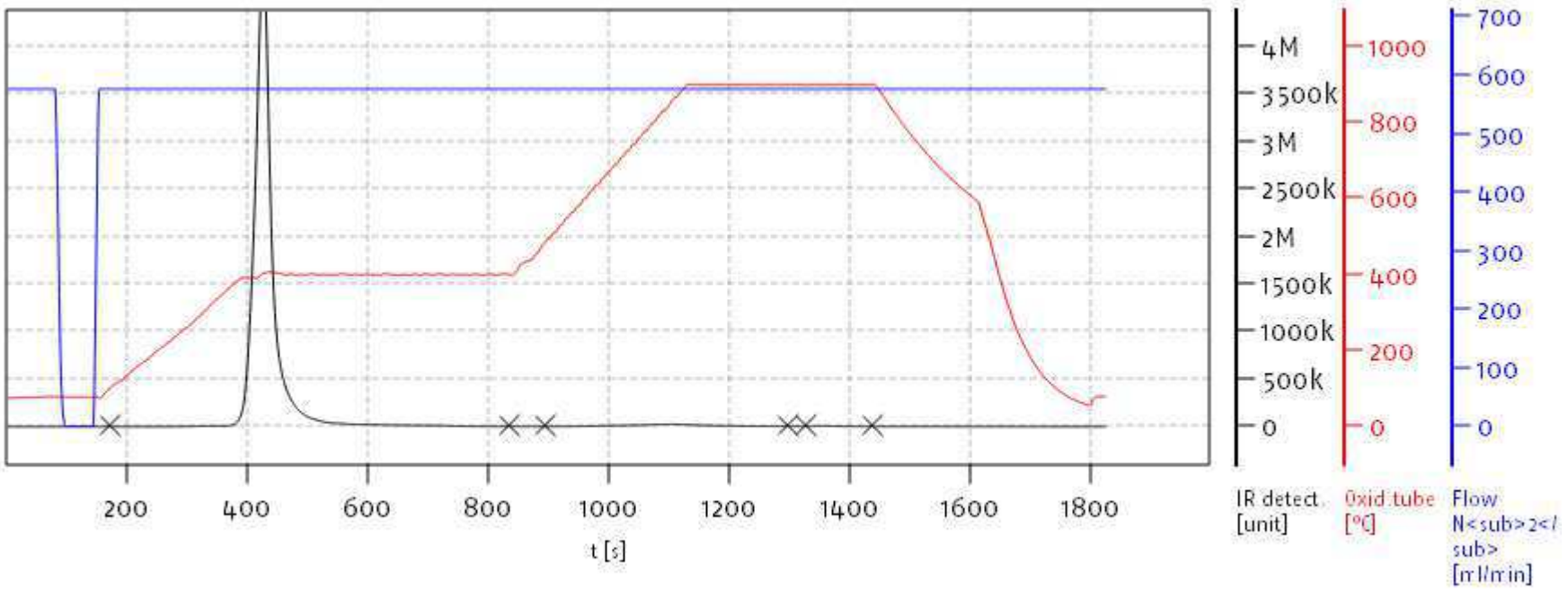
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
50	50	Dfactor	22.30		1.00	CARBON	9/2/2021 12:24 PM	44.476	1.093	45.568	bl	6 088 960	155 949	15 641	0.9657	1.0000



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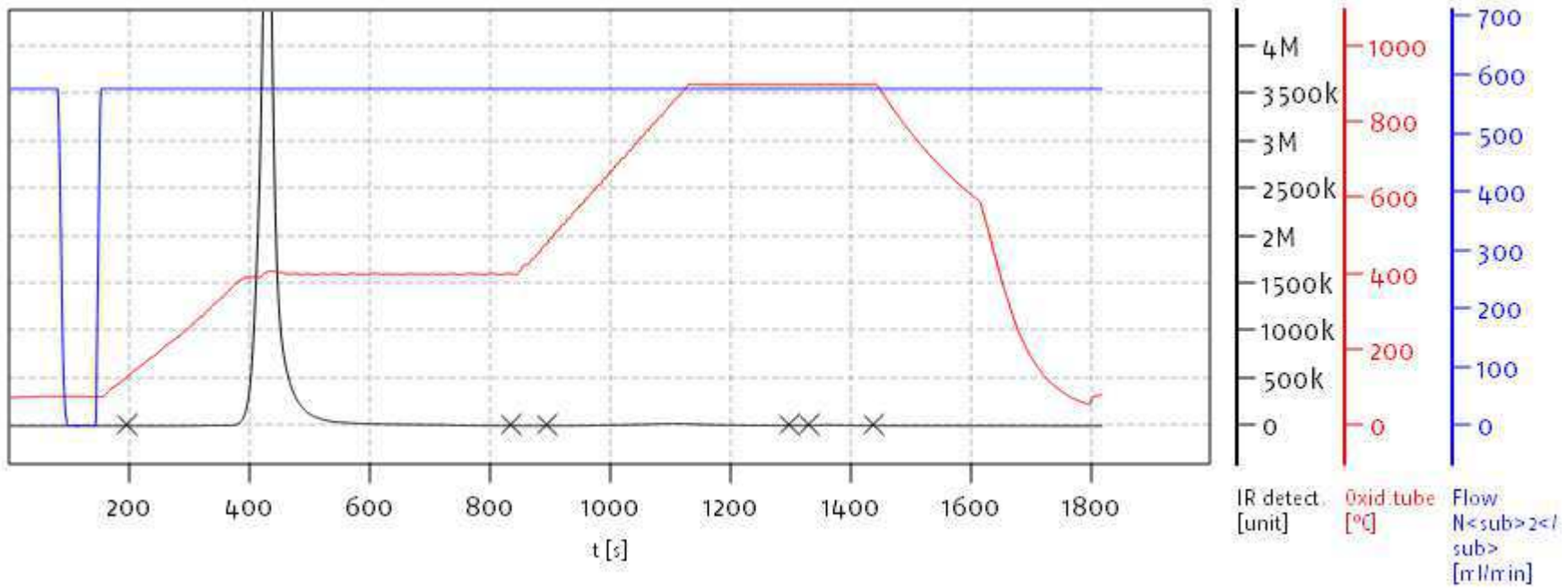
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
51	51	Dfactor	25.50		1.00	CARBON	9/2/2021 12:54 PM	44.491	0.880	45.372	bl	6 906 920	144 593	18 588	0.9733	1.0000



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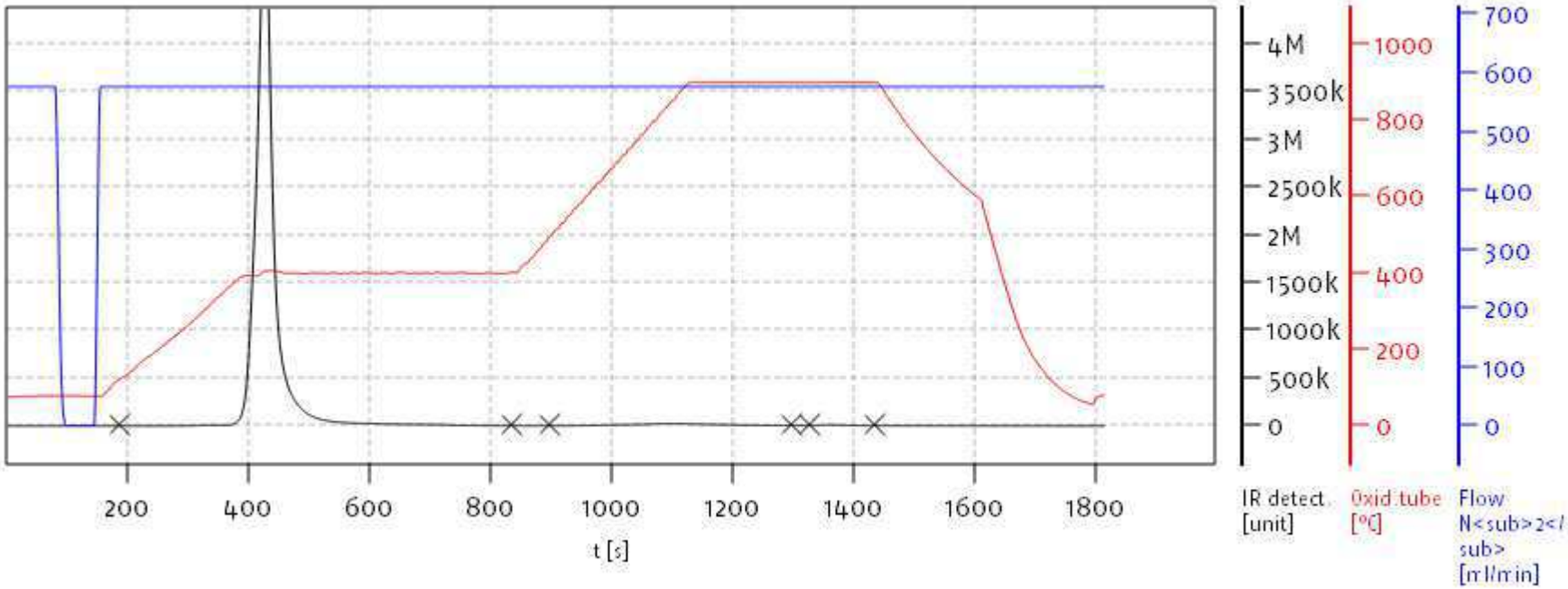
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
52	52	SJH0417-CCV4	24.90		1.00	CARBON	9/2/2021 1:25 PM	44.121	1.025	45.146	bl	6 709 400	162 761	23 546	0.9695	1.0000



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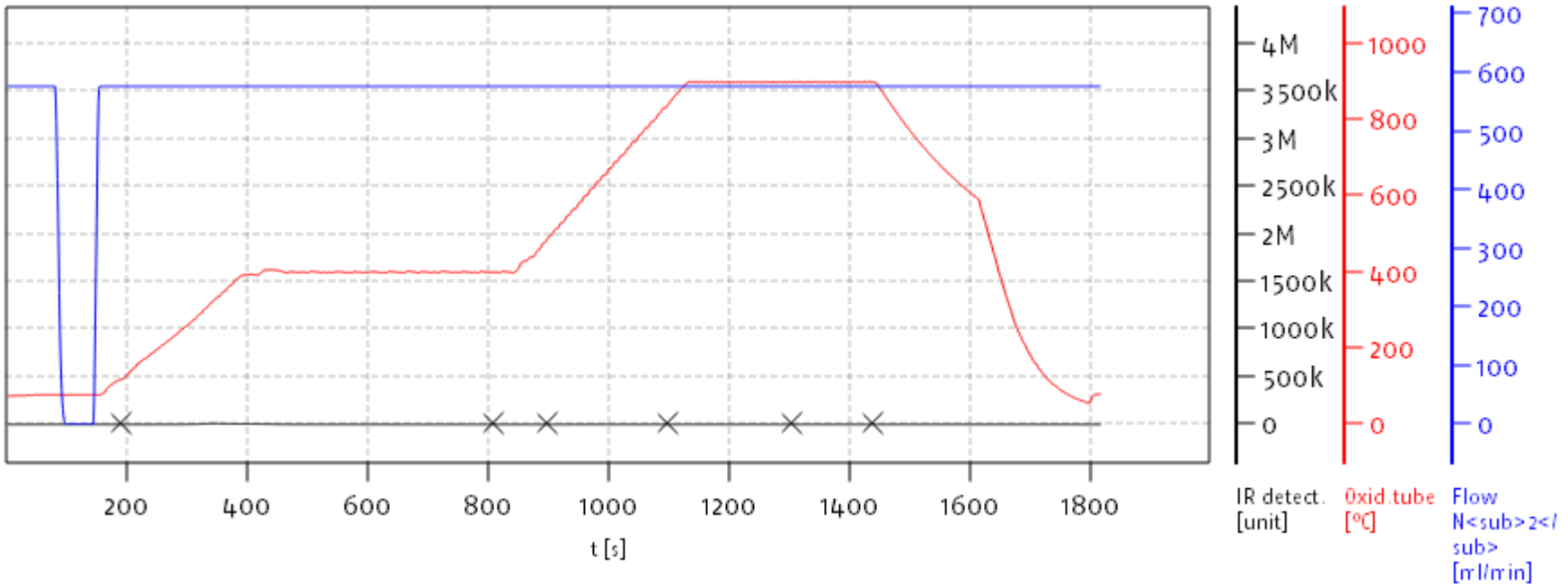
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
53	53	SJH0417-CCB4	535.50		1.00	CARBON	9/2/2021 1:56 PM	0.007	0.000	0.007	bl,C3u,C2u	33 017	1 669	575	0.9695	1.0000



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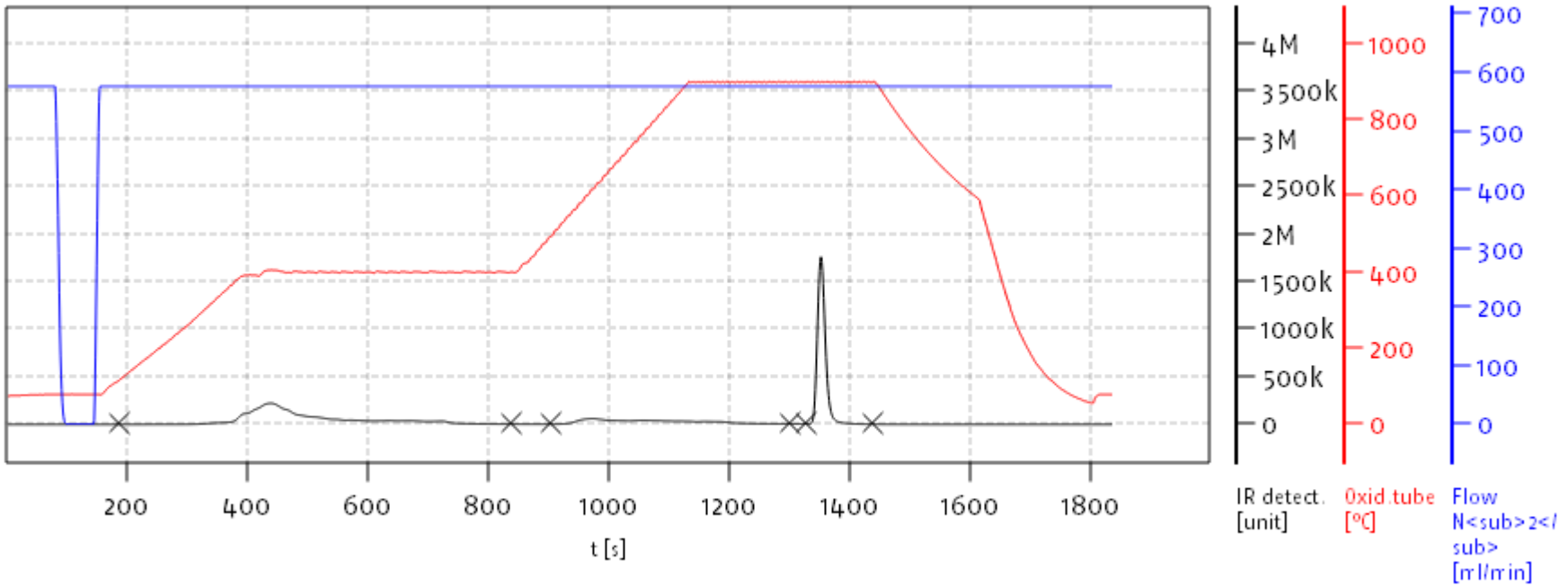
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
54	54	BJH0806-DUP1	563.60		1.00	CARBON	9/2/2021 2:27 PM	0.622	0.122	0.744	bl	1 111 790	418 885	1 021 670	0.9695	1.0000



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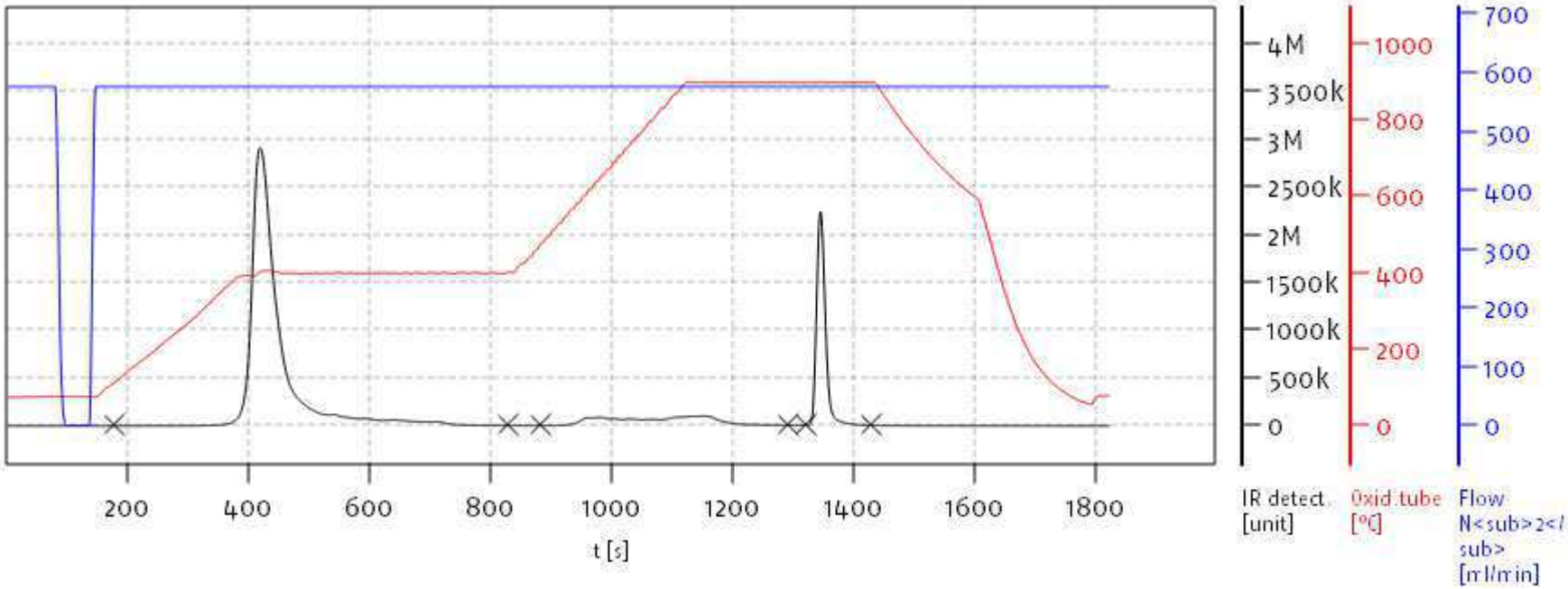
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
55	55	BJH0806-MS1	582.20	0.0152	1.00	CARBON	9/2/2021 2:58 PM	1.959	0.225	2.184	bl	5 506 470	787 495	1 439 440	0.9695	1.0000



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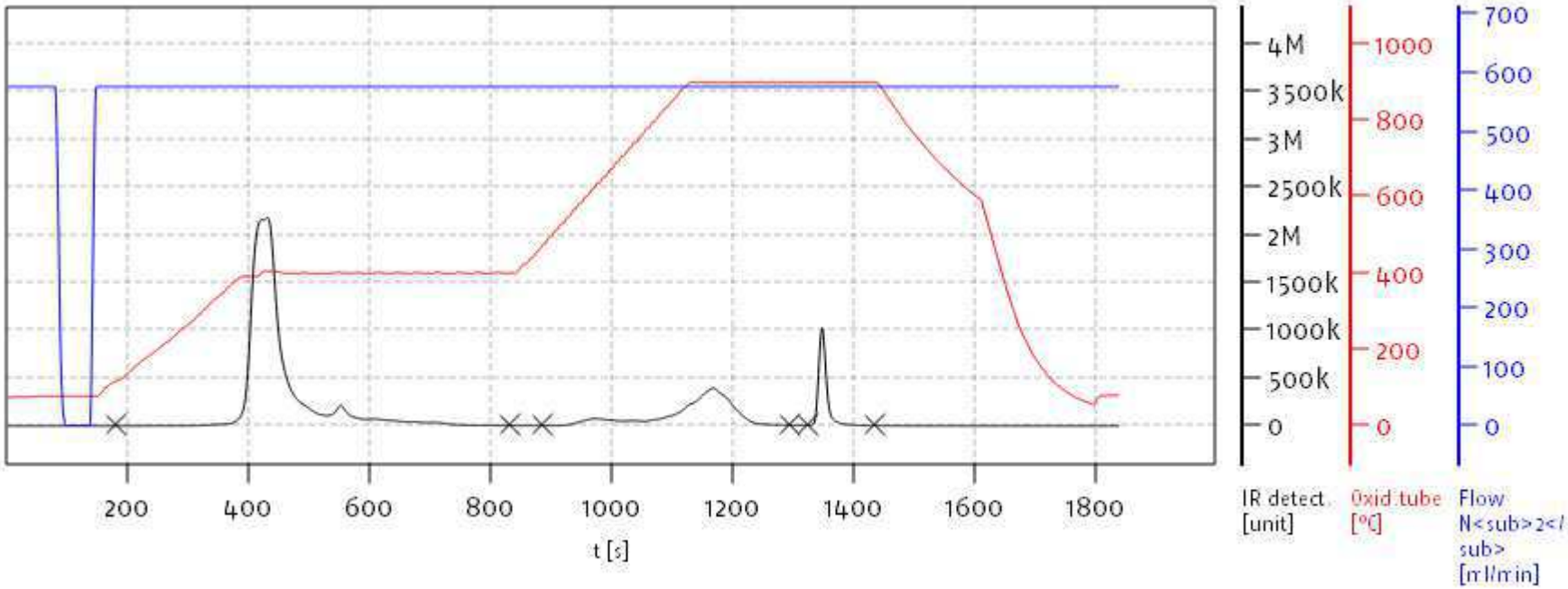
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
56	56	BJH0806-MSD1	647.00	0.0136	1.00	CARBON	9/2/2021 3:29 PM	1.412	0.407	1.818	bl	4 998 770	1 568 990	586 039	0.9695	1.0000



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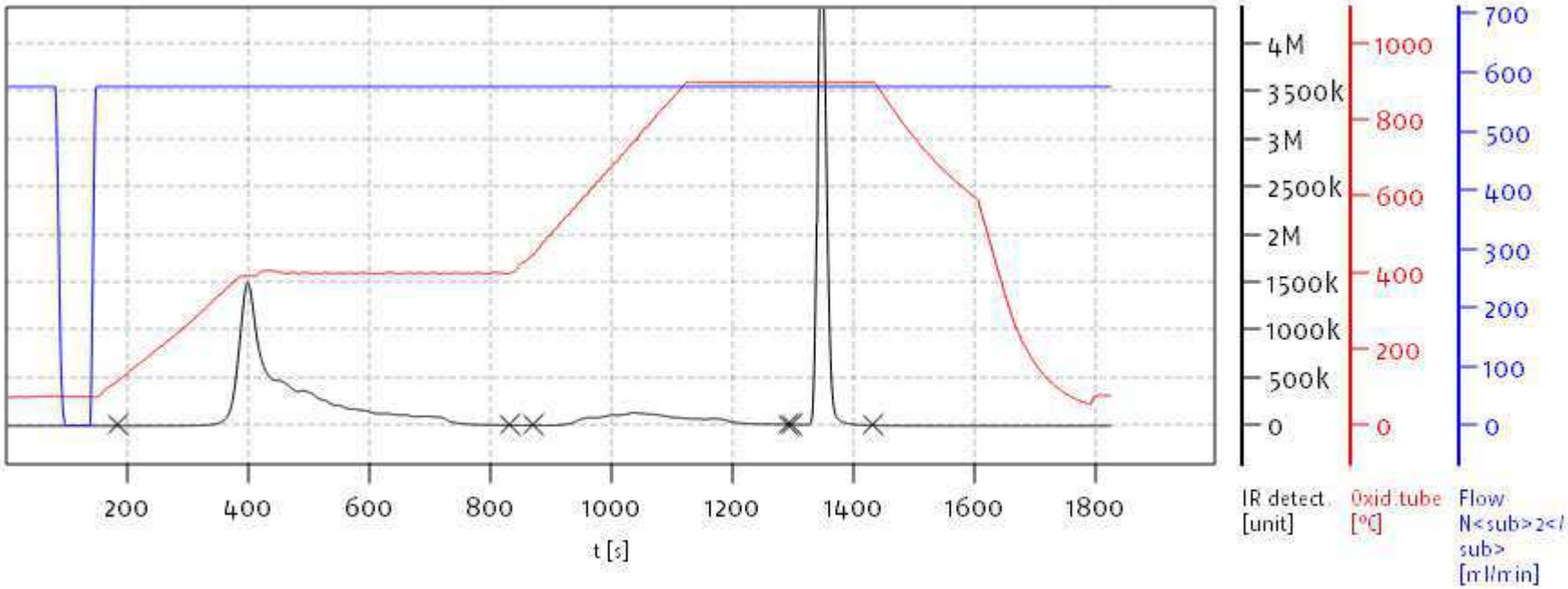
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
57	57	21H0340-01	543.10		1.00	CARBON	9/2/2021 4:00 PM	2.419	0.310	2.729	bl	4 648 150	1 009 120	3 294 230	0.9695	1.0000



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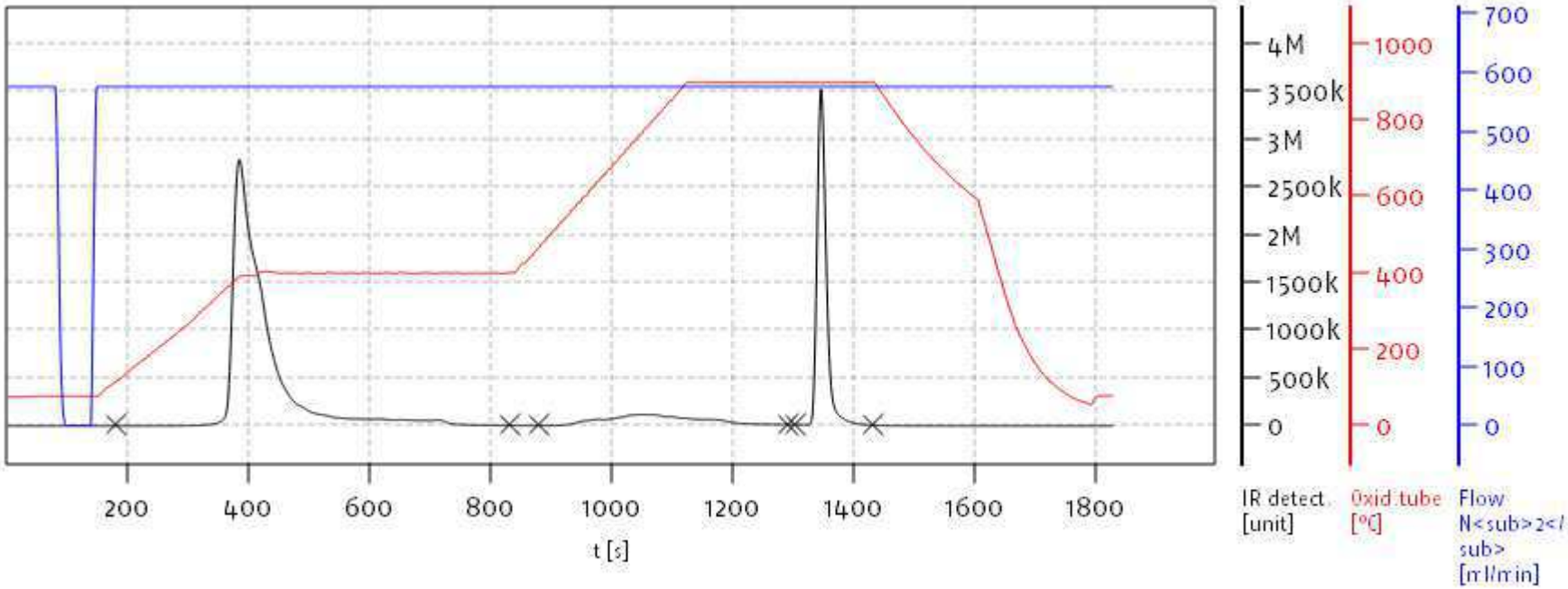
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
58	58	BJH0806-DUP2	524.60		1.00	CARBON	9/2/2021 4:30 PM	2.696	0.275	2.971	bl	6 233 690	865 158	2 354 140	0.9695	1.0000



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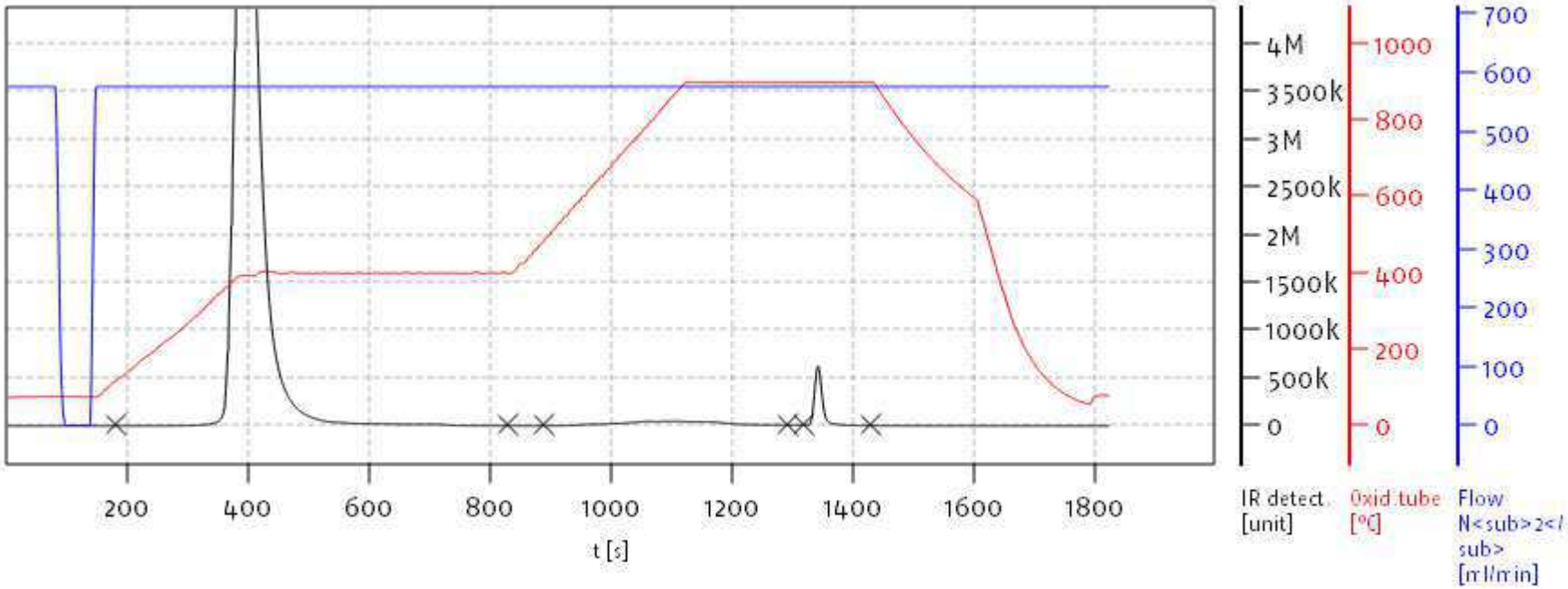
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
59	59	BJH0806-MS2	504.50	0.0113	1.00	CARBON	9/2/2021 5:01 PM	4.147	0.122	4.268	bl,C1o	12 428 400	375 475	360 884	0.9695	1.0000



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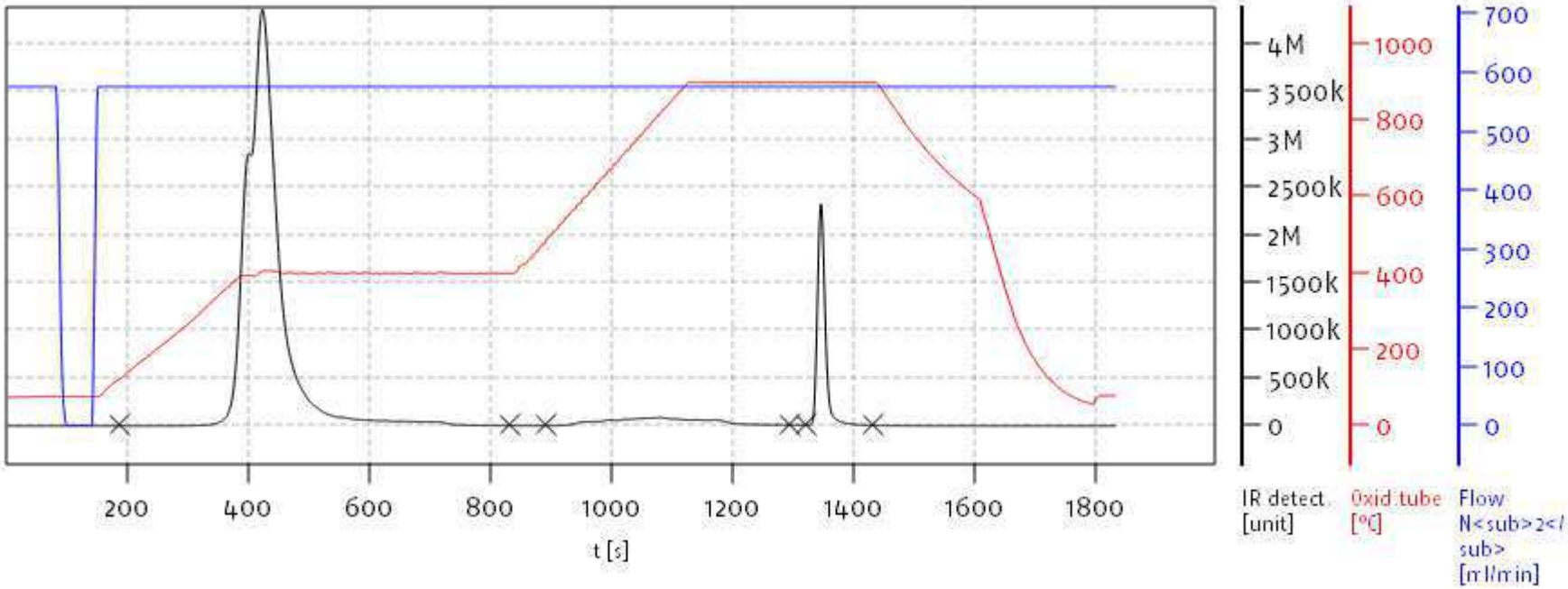
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
60	60	BJH0806-MSD2	504.50	0.0114	1.00	CARBON	9/2/2021 5:32 PM	3.648	0.218	3.866	bl,C1o	9 900 300	663 513	1 322 580	0.9695	1.0000



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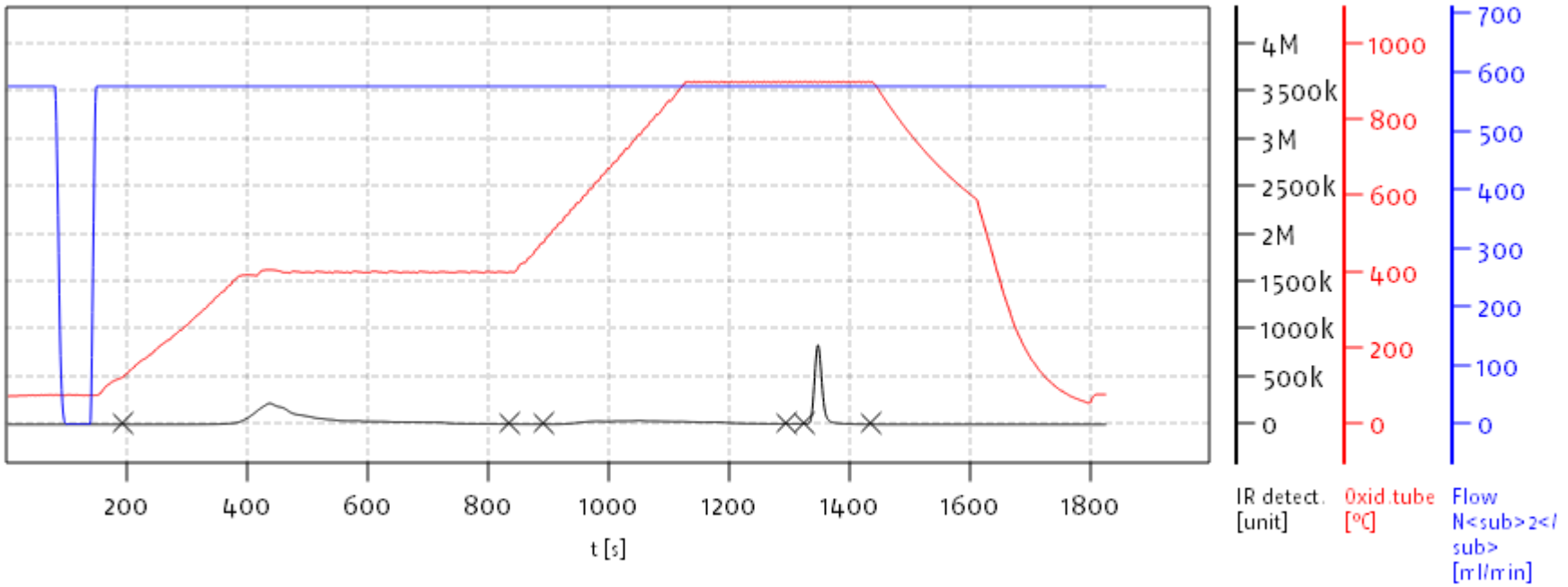
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
61	61	21H0340-03	633.90		1.00	CARBON	9/2/2021 6:03 PM	0.354	0.082	0.436	bl	915 800	319 228	462 975	0.9695	1.0000



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Date: Mon Sep 6 07:32:29 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

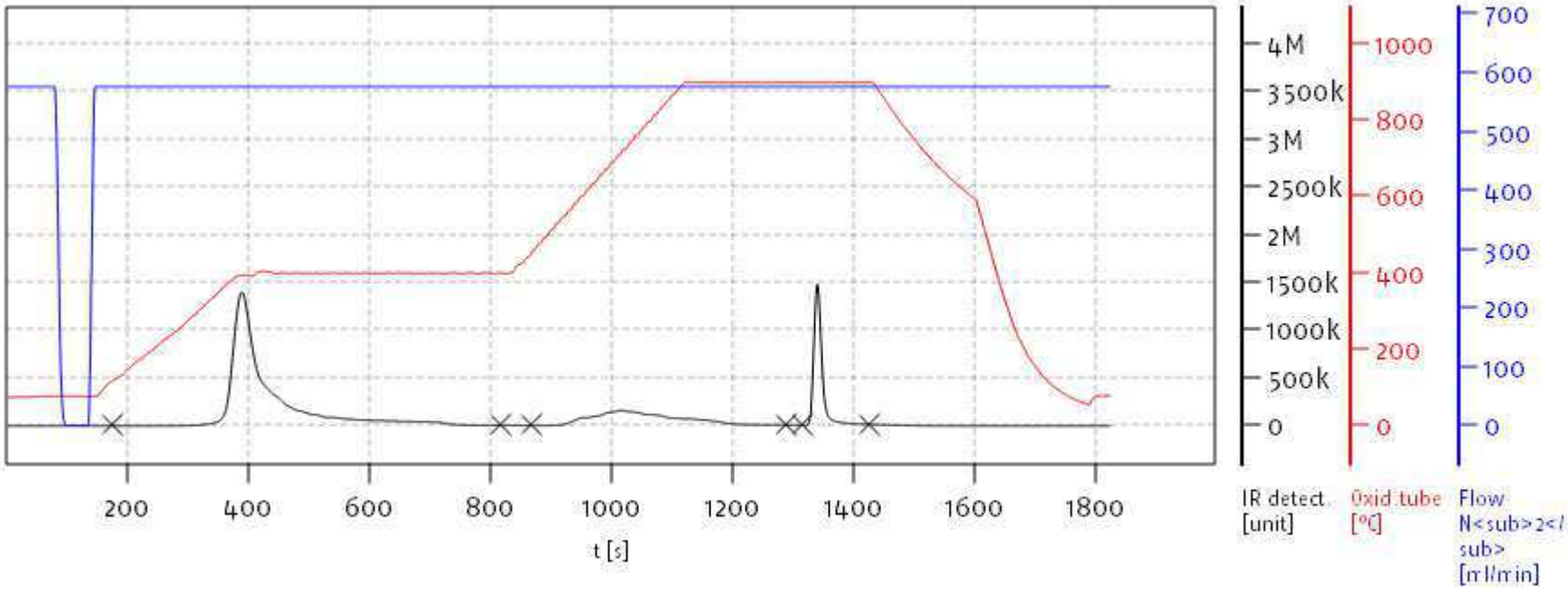
elementar
EXCELLENCE IN ELEMENTS

Document: from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
62	62	21H0340-05	573.70		1.00	CARBON	9/2/2021 6:34 PM	1.200	0.292	1.491	bl	3 304 260	1 002 180	895 014	0.9695	1.0000



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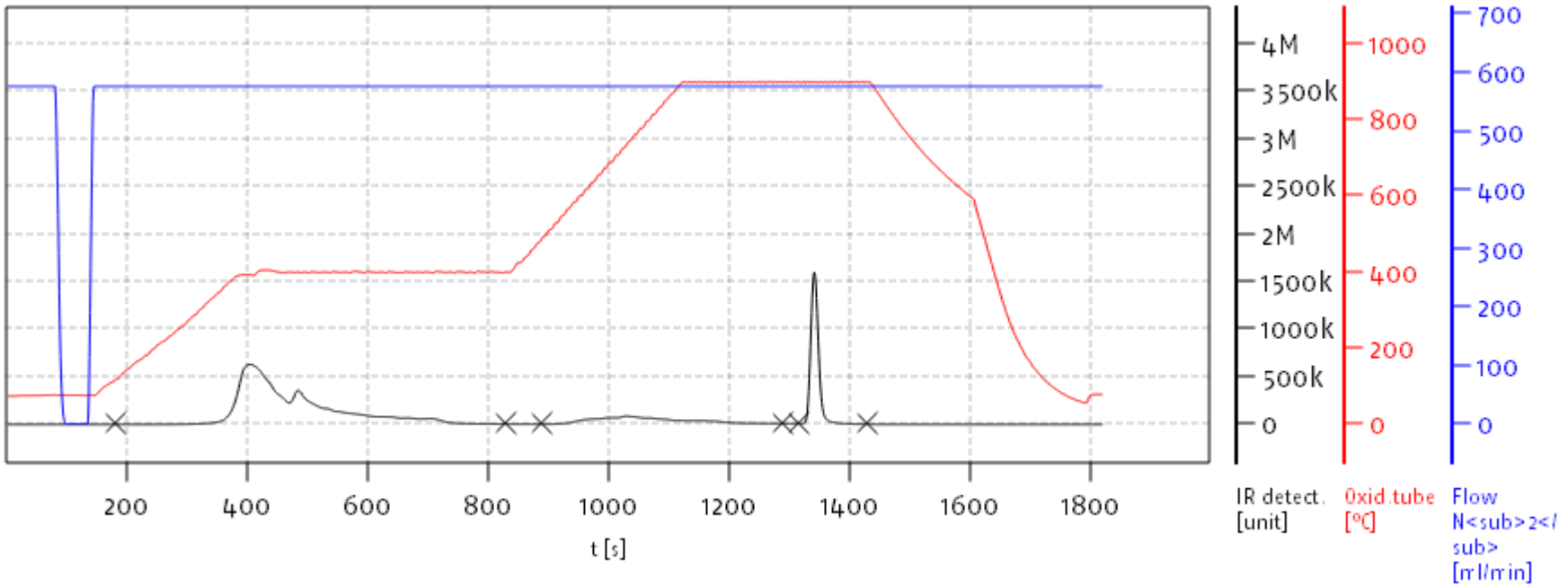
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
63	63	21H0340-07	561.20		1.00	CARBON	9/2/2021 7:05 PM	1.107	0.168	1.275	bl	2 881 690	569 035	908 510	0.9695	1.0000



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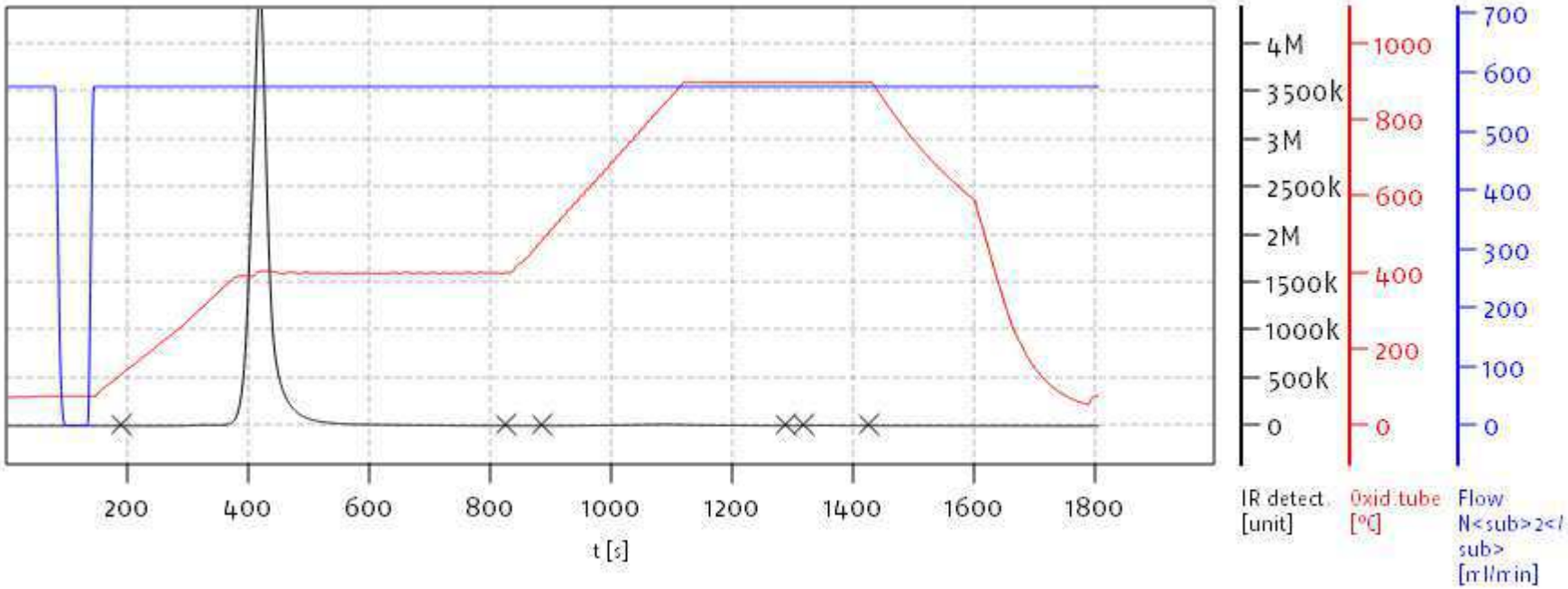
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
64	64	SJH0417-CCV5	20.90		1.00	CARBON	9/2/2021 7:35 PM	44.804	0.689	45.493	bl	5 728 880	96 951	13 637	0.9695	1.0000



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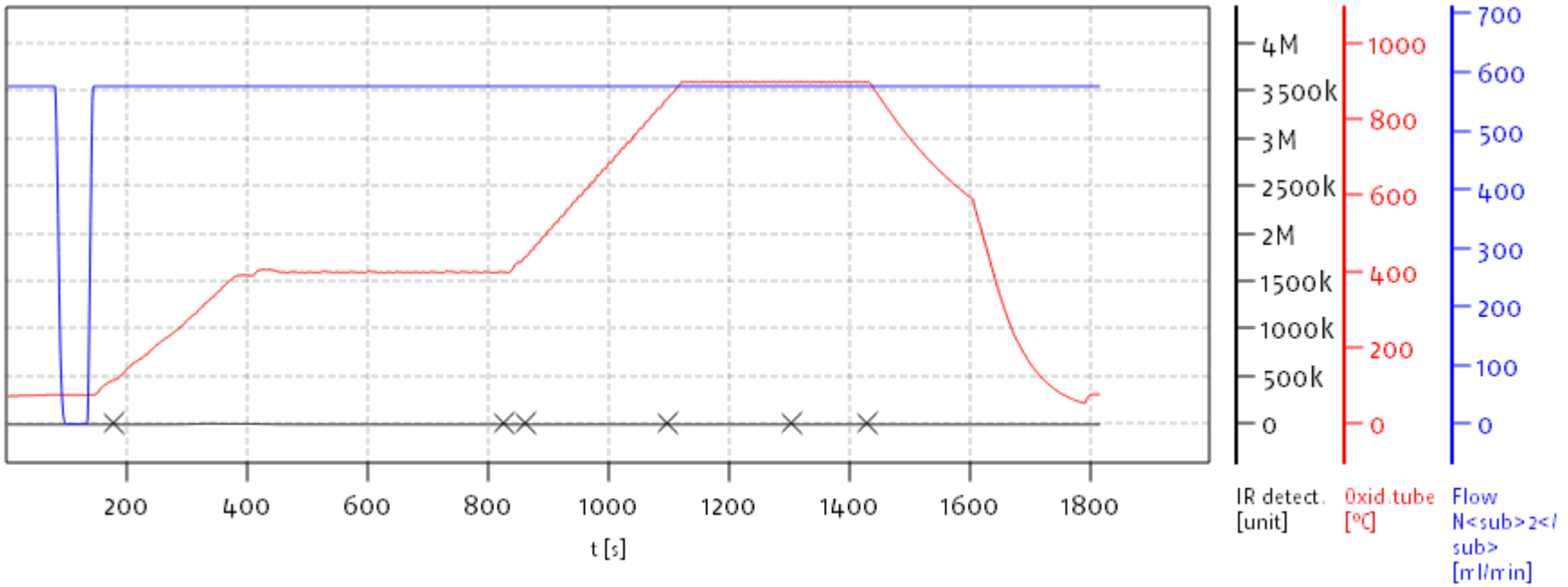
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
65	65	SJH0417-CCB5	567.60		1.00	CARBON	9/2/2021 8:06 PM	0.007	0.000	0.007	bl,C3u,C2u	34 359	1 295	395	0.9695	1.0000



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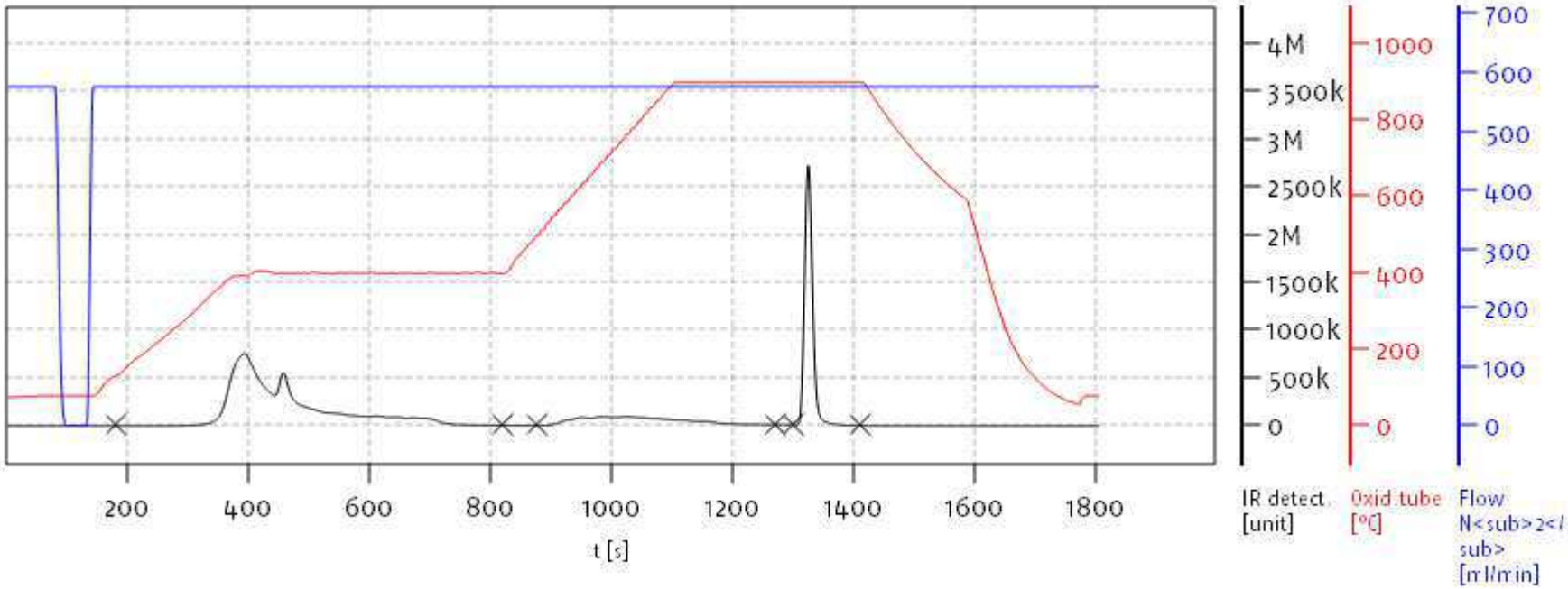
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
66	66	21H0340-09	506.00		1.00	CARBON	9/2/2021 8:36 PM	1.606	0.260	1.866	bl	3 346 540	789 910	1 590 190	0.9695	1.0000



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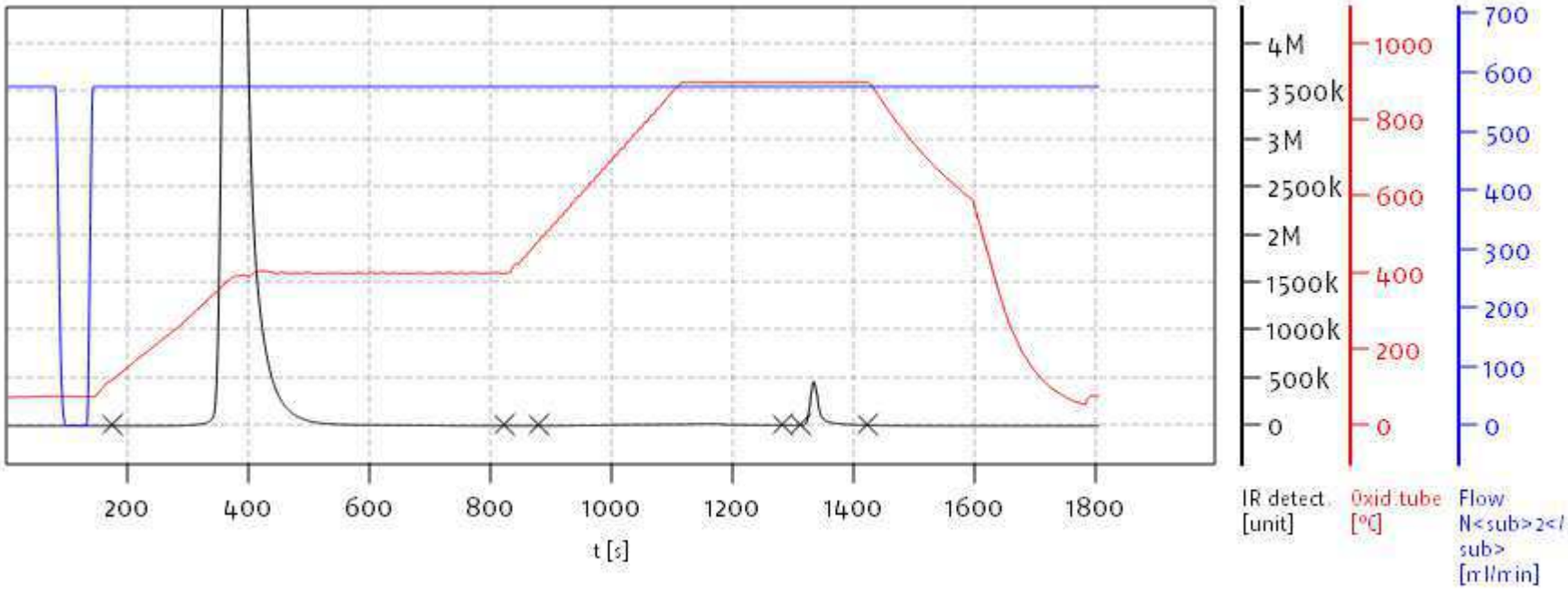
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
67	67	21H0340-11	373.90		1.00	CARBON	9/2/2021 9:07 PM	6.768	0.063	6.832	bl,C1o	15 152 400	151 900	317 720	0.9695	1.0000



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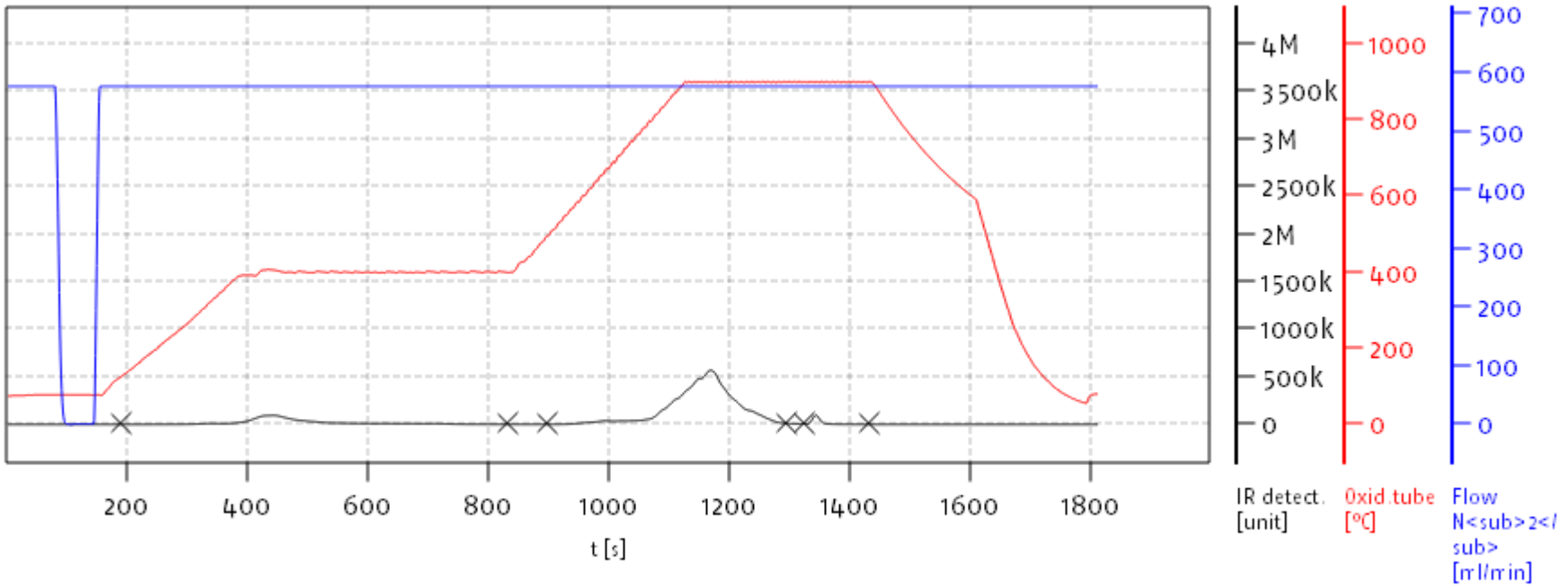
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
68	68	21H0340-13	358.50		1.00	CARBON	9/2/2021 9:38 PM	0.205	1.054	1.259	bl	412 280	2 249 620	58 443	0.9695	1.0000



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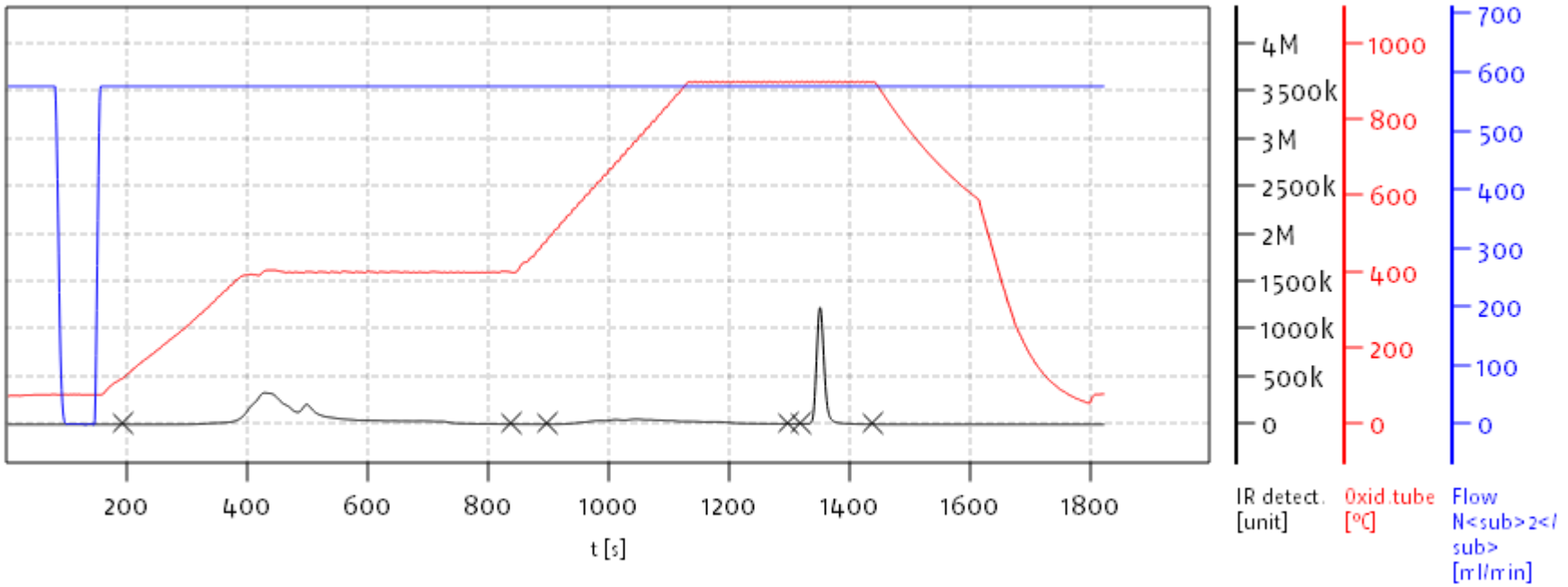
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
69	69	21H0340-15	607.80		1.00	CARBON	9/2/2021 10:08 PM	0.578	0.106	0.684	bl	1 459 570	392 693	687 016	0.9695	1.0000



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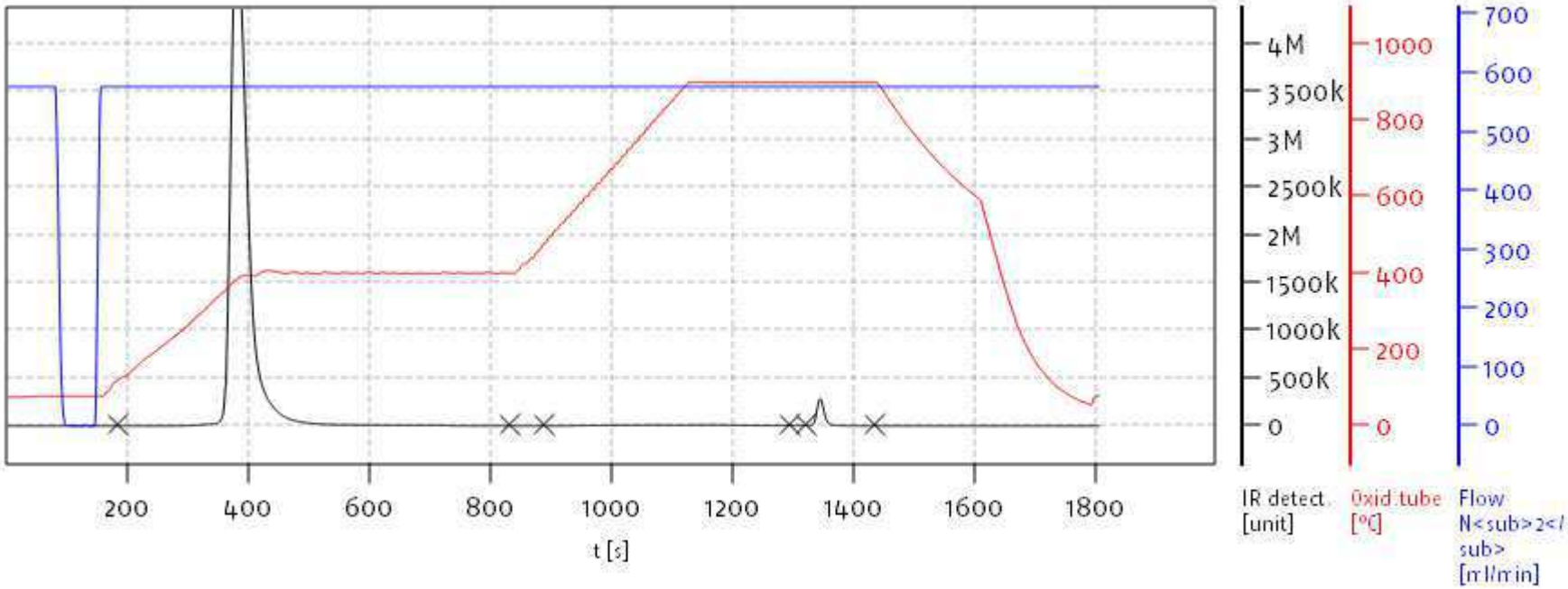
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
70	70	21H0340-17	152.10		1.00	CARBON	9/2/2021 10:39 PM	7.034	0.085	7.120	bl	6 401 440	88 482	152 338	0.9695	1.0000



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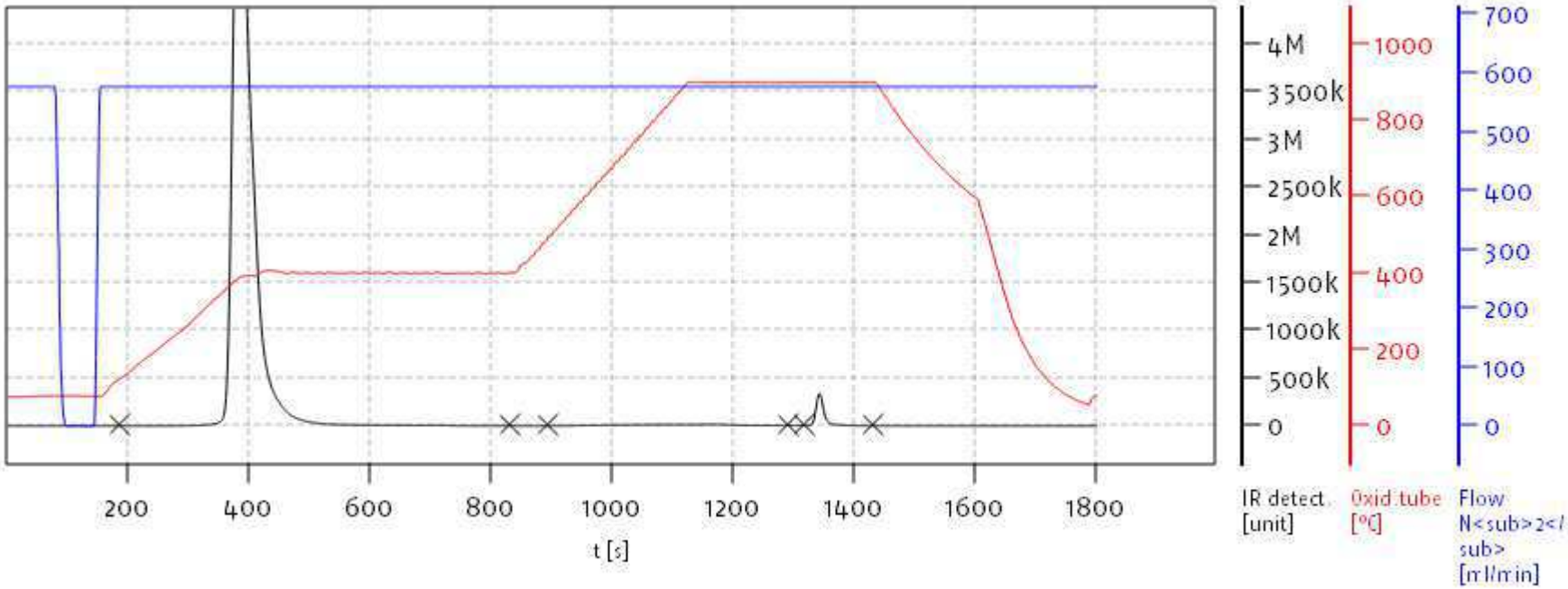
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
71	71	21H0340-19	239.80		1.00	CARBON	9/2/2021 11:09 PM	5.927	0.078	6.006	bl	8 502 160	122 768	196 781	0.9695	1.0000



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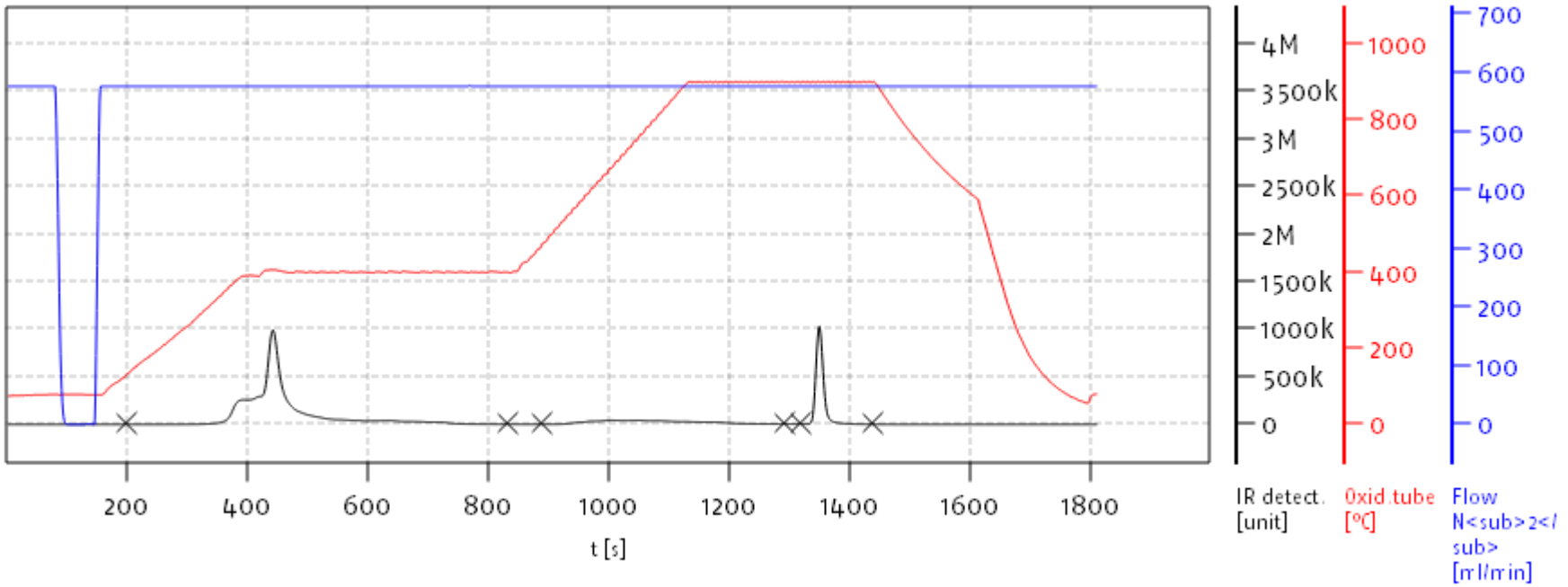
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
72	72	21H0340-21	317.60		1.00	CARBON	9/2/2021 11:40 PM	1.328	0.177	1.504	bl	2 018 730	343 690	562 736	0.9695	1.0000



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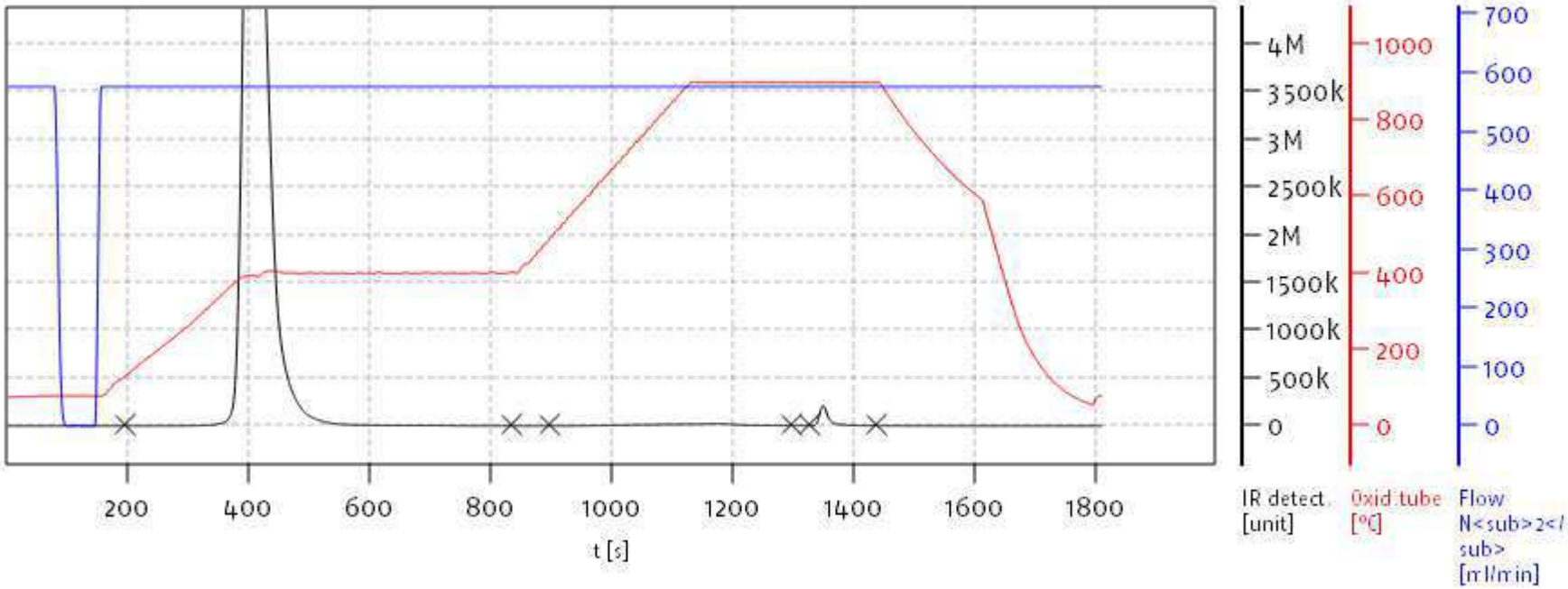
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
73	73	21H0340-23	533.50		1.00	CARBON	9/3/2021 12:11 AM	4.292	0.041	4.333	bl,C1o	13 859 600	140 789	145 060	0.9695	1.0000



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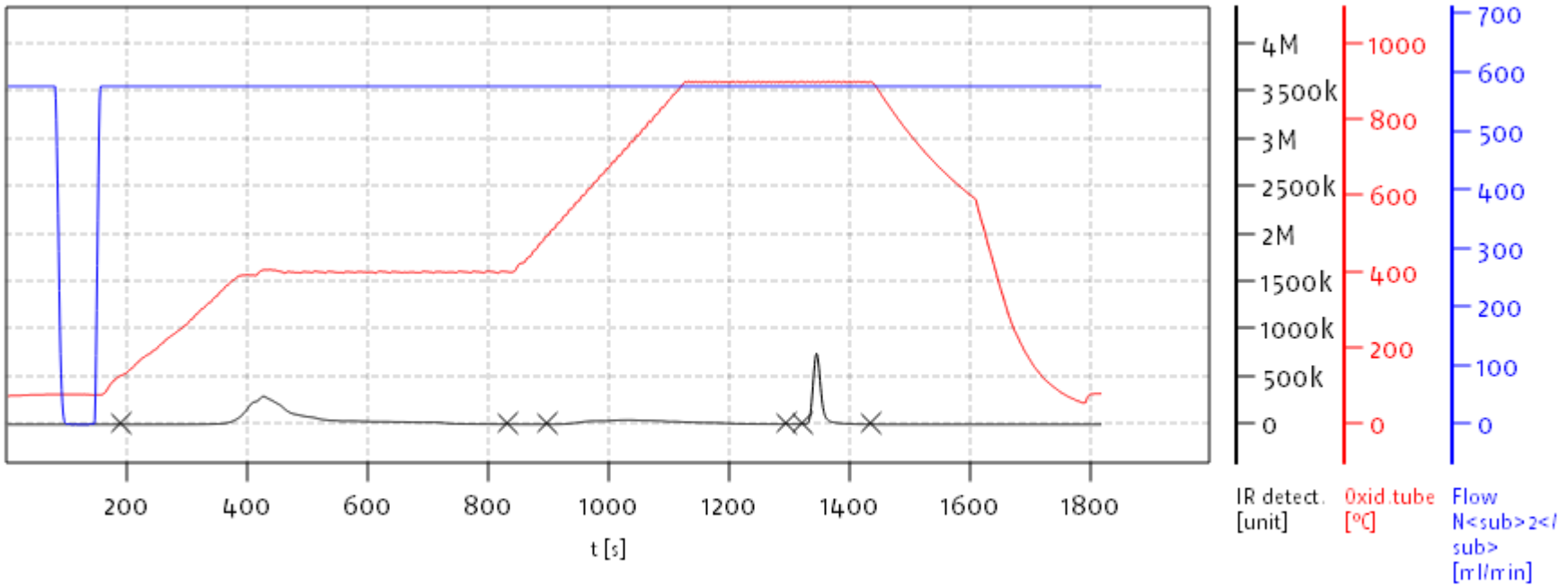
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
74	74	21H0340-25	557.00		1.00	CARBON	9/3/2021 12:41 AM	0.452	0.094	0.546	bl	1 110 300	322 102	436 273	0.9695	1.0000



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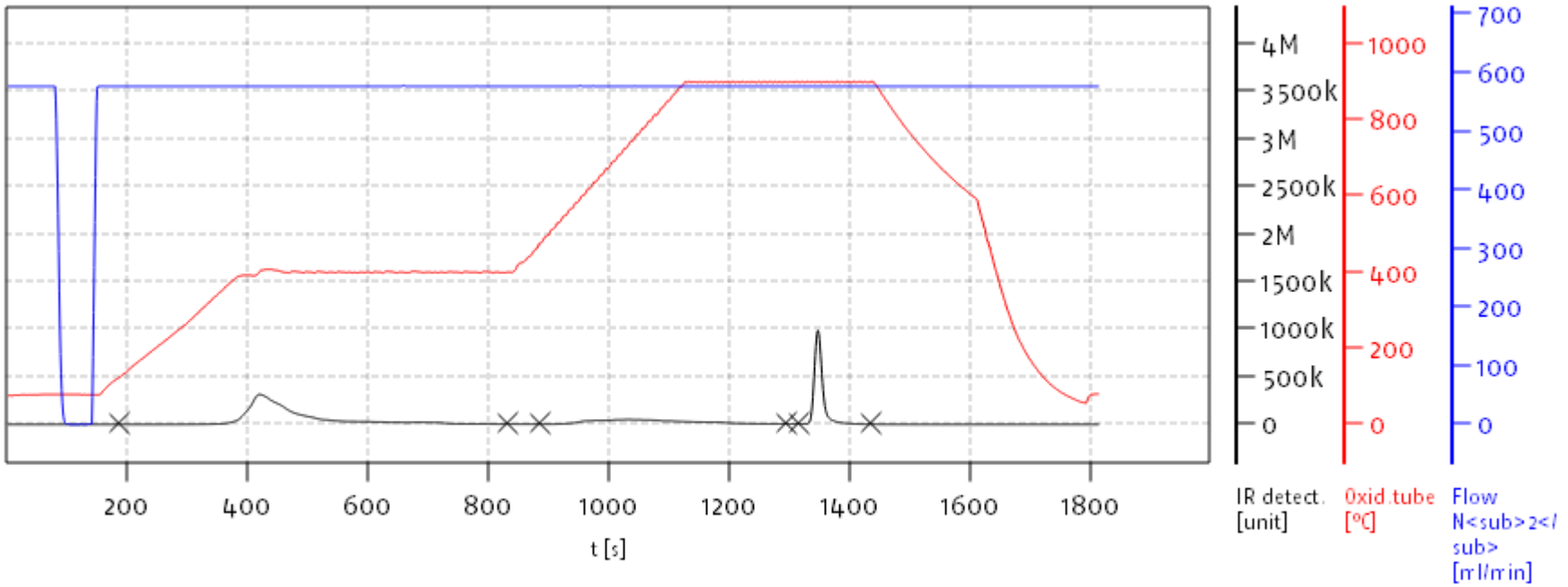
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
75	75	21H0340-27	510.00		1.00	CARBON	9/3/2021 1:12 AM	0.544	0.125	0.669	bl	1 116 780	387 741	584 104	0.9695	1.0000



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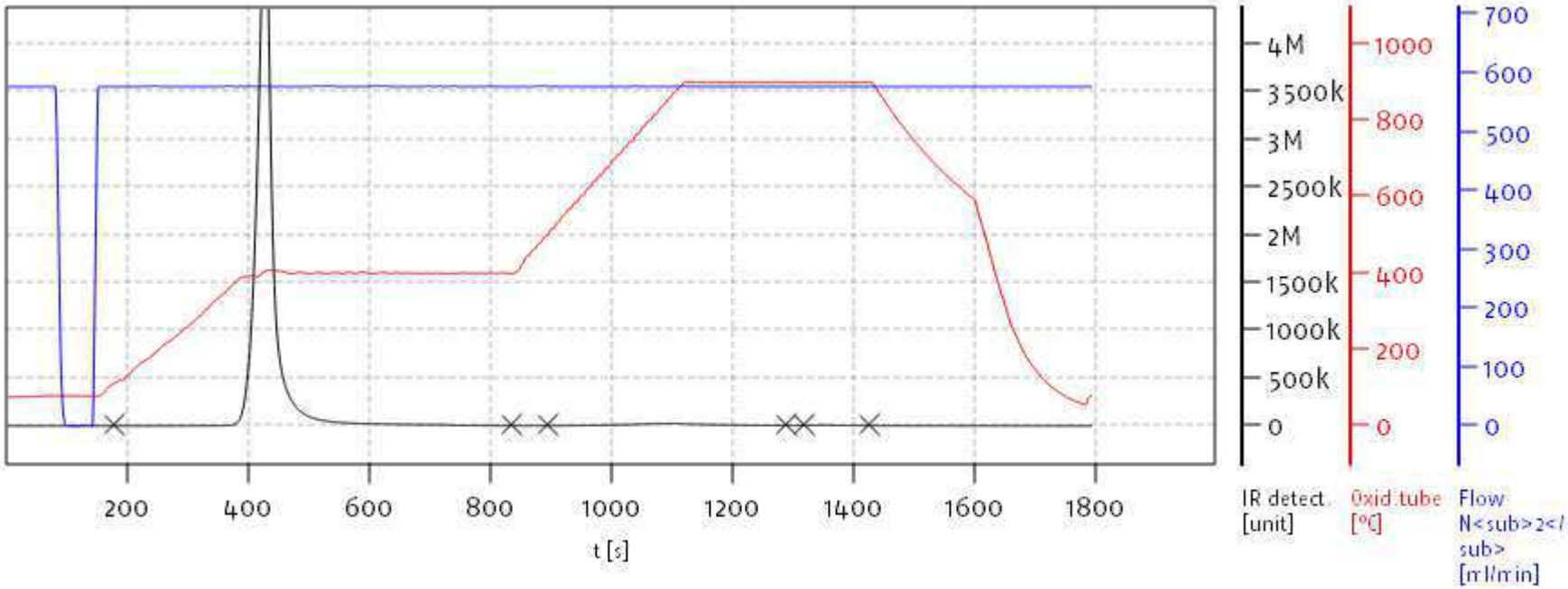
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
76	76	SJH0417-CCV6	23.30		1.00	CARBON	9/3/2021 1:42 AM	43.705	1.095	44.800	bl	6 221 630	162 760	21 043	0.9695	1.0000



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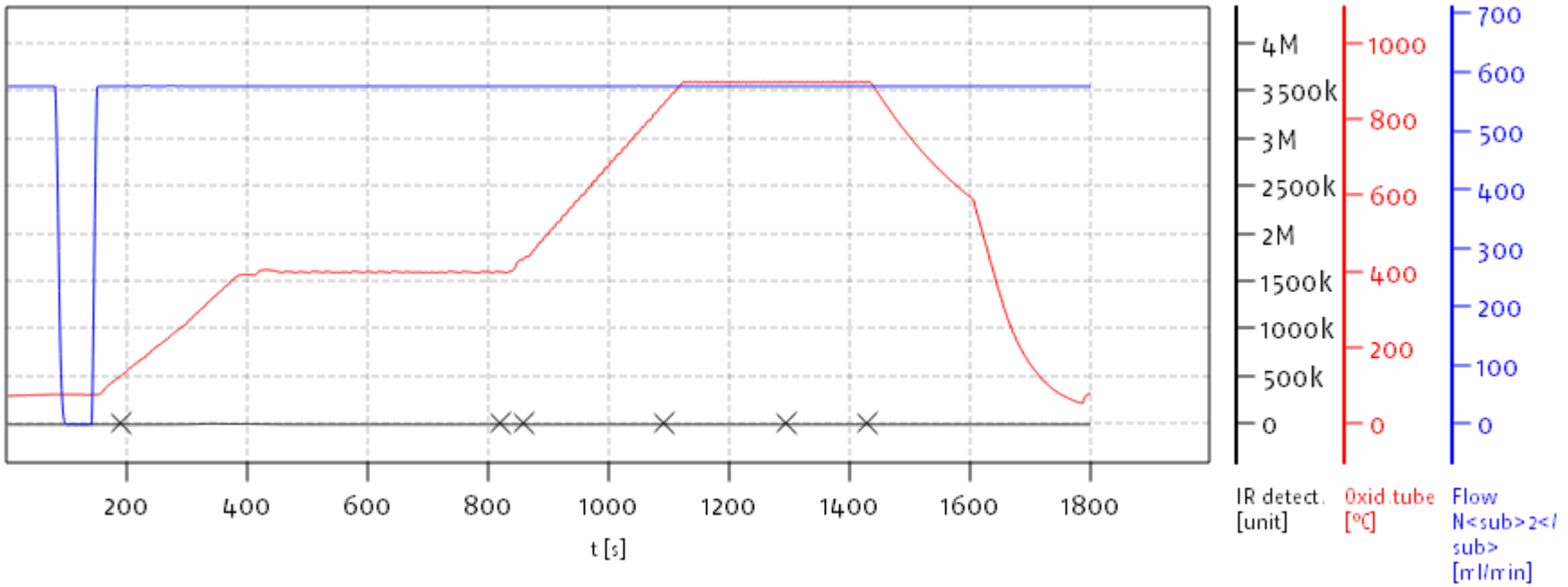
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
77	77	SJH0417-CCB6	524.50		1.00	CARBON	9/3/2021 2:13 AM	0.005	0.000	0.005	bl,C3u,C2u	27 480	516	346	0.9695	1.0000



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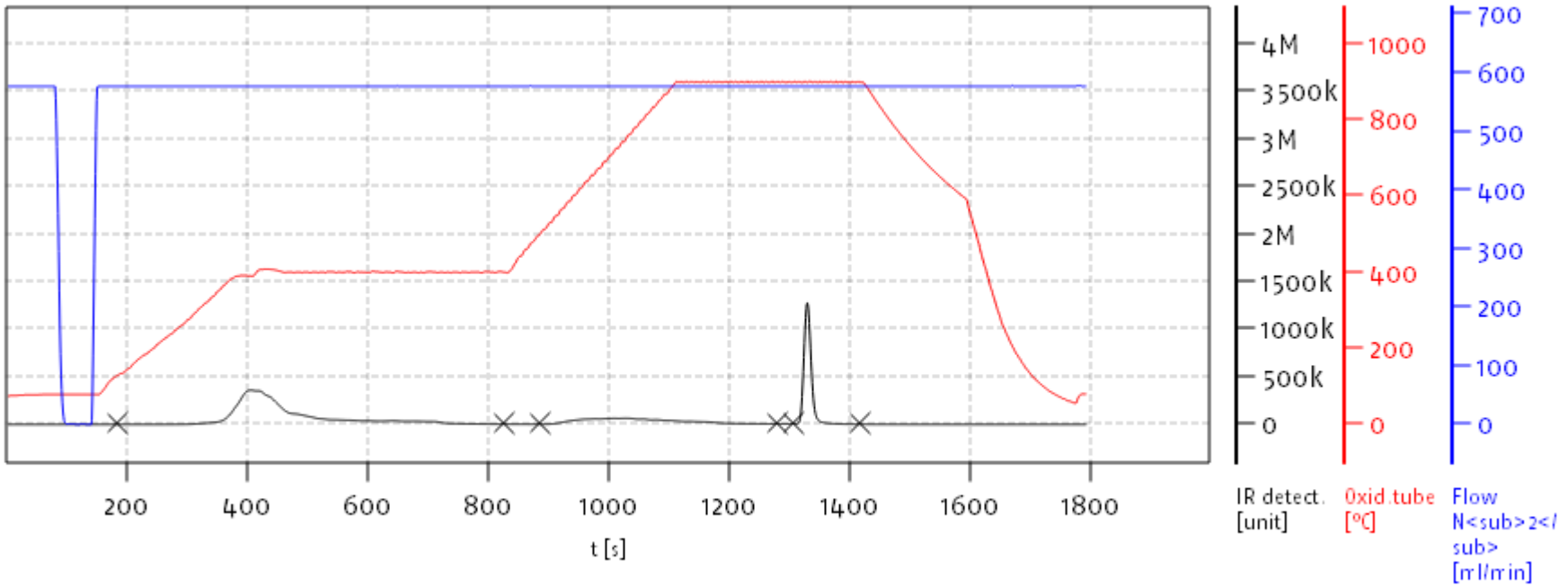
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
78	78	21H0340-29	508.10		1.00	CARBON	9/3/2021 2:43 AM	0.708	0.158	0.865	bl	1 522 420	485 549	676 412	0.9695	1.0000



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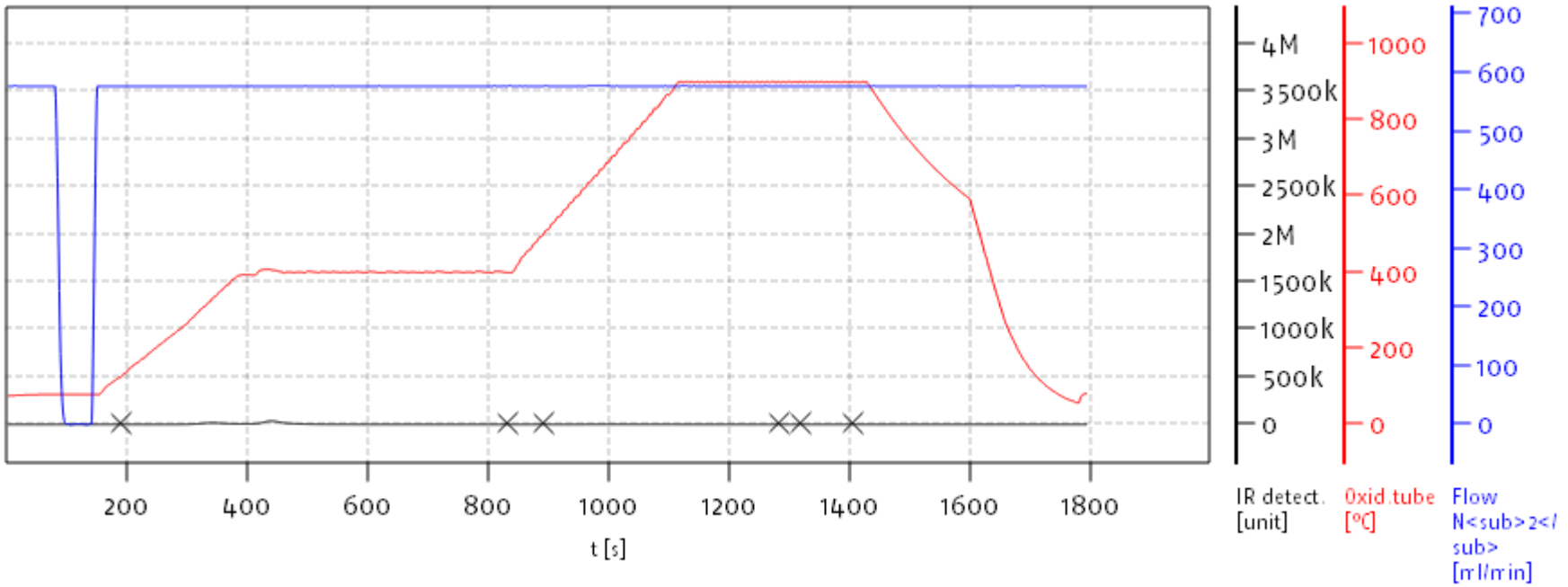
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
79	79	BJH0807-MRL1	515.10		1.00	CARBON	9/3/2021 3:13 AM	0.028	0.000	0.028	bl,C3u,C2u	100 052	6 913	344	0.9695	1.0000



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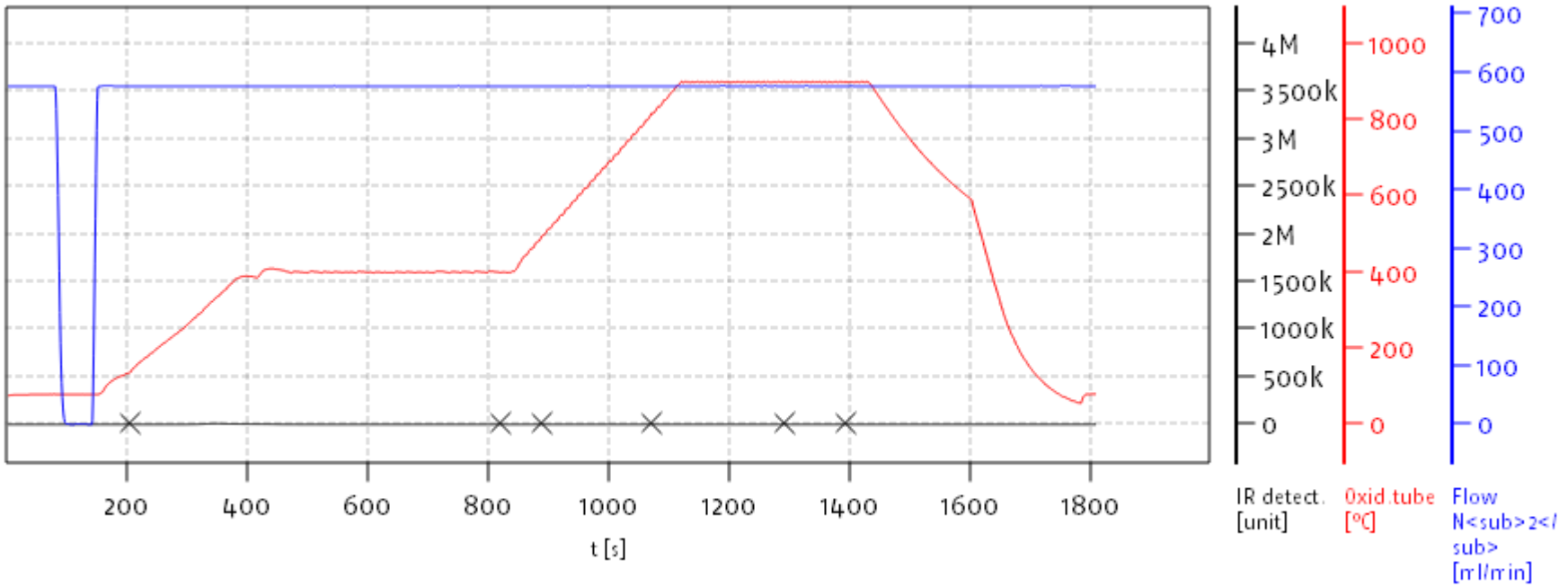
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
80	80	BJH0807-BLK1	643.50		1.00	CARBON	9/3/2021 3:44 AM	0.004	0.000	0.004	bl,C3u,C2u	27 276	797	357	0.9695	1.0000



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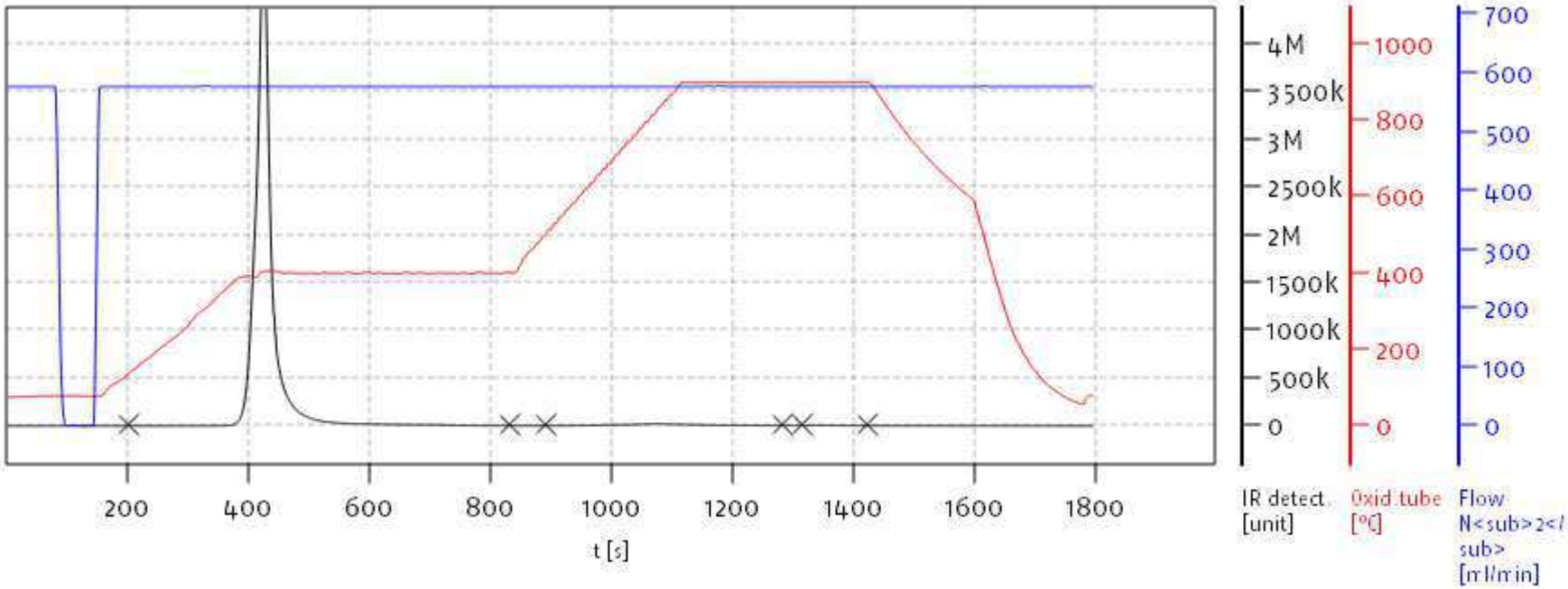
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
81	81	BJH0807-BS1	20.40		1.00	CARBON	9/3/2021 4:14 AM	44.064	0.980	45.044	bl	5 496 470	129 990	16 947	0.9695	1.0000



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Access: soliTOC superuser

Date: Mon Sep 6 07:32:29 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
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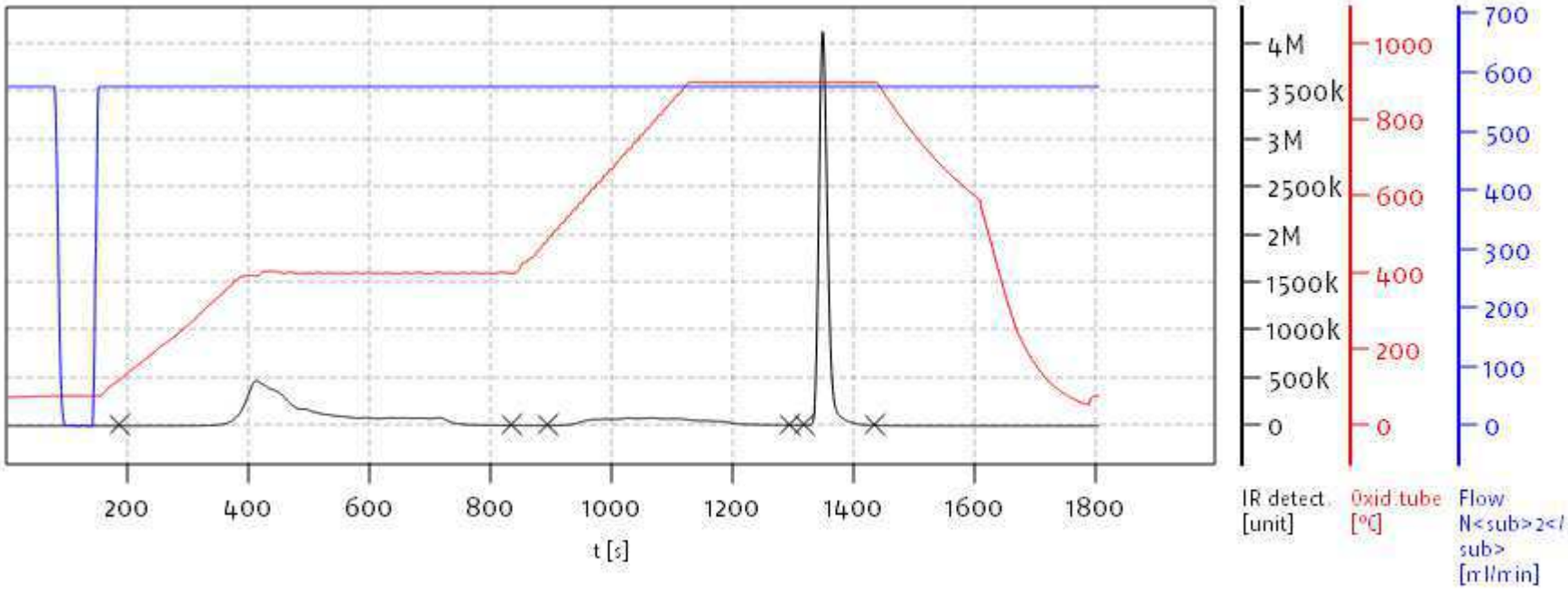
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
82	82	21H0340-31	530.50		1.00	CARBON	9/3/2021 4:45 AM	1.511	0.216	1.727	bl	2 233 330	690 590	2 603 960	0.9695	1.0000



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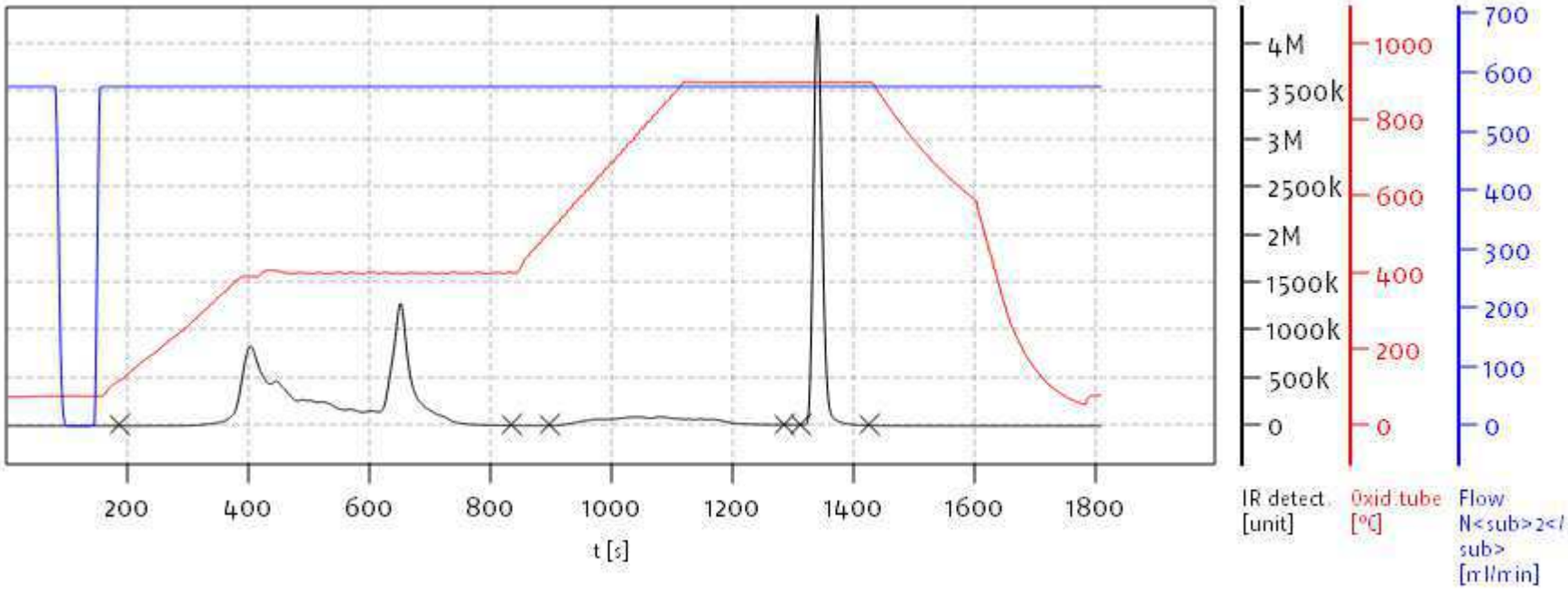
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
83	83	21H0340-33	529.60		1.00	CARBON	9/3/2021 5:15 AM	2.376	0.242	2.618	bl	4 879 440	770 403	2 743 010	0.9695	1.0000



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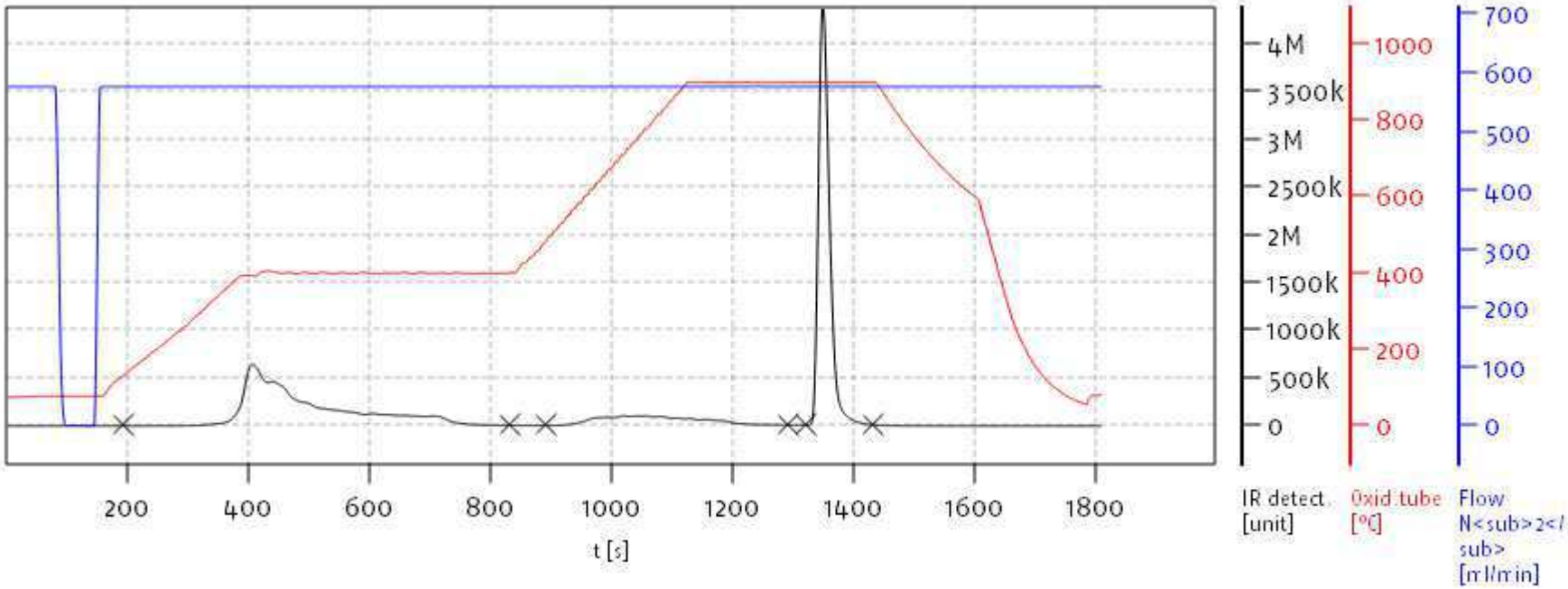
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
84	84	BJH0807-DUP1	504.90		1.00	CARBON	9/3/2021 5:46 AM	2.171	0.274	2.445	bl	3 064 720	829 732	3 542 080	0.9695	1.0000



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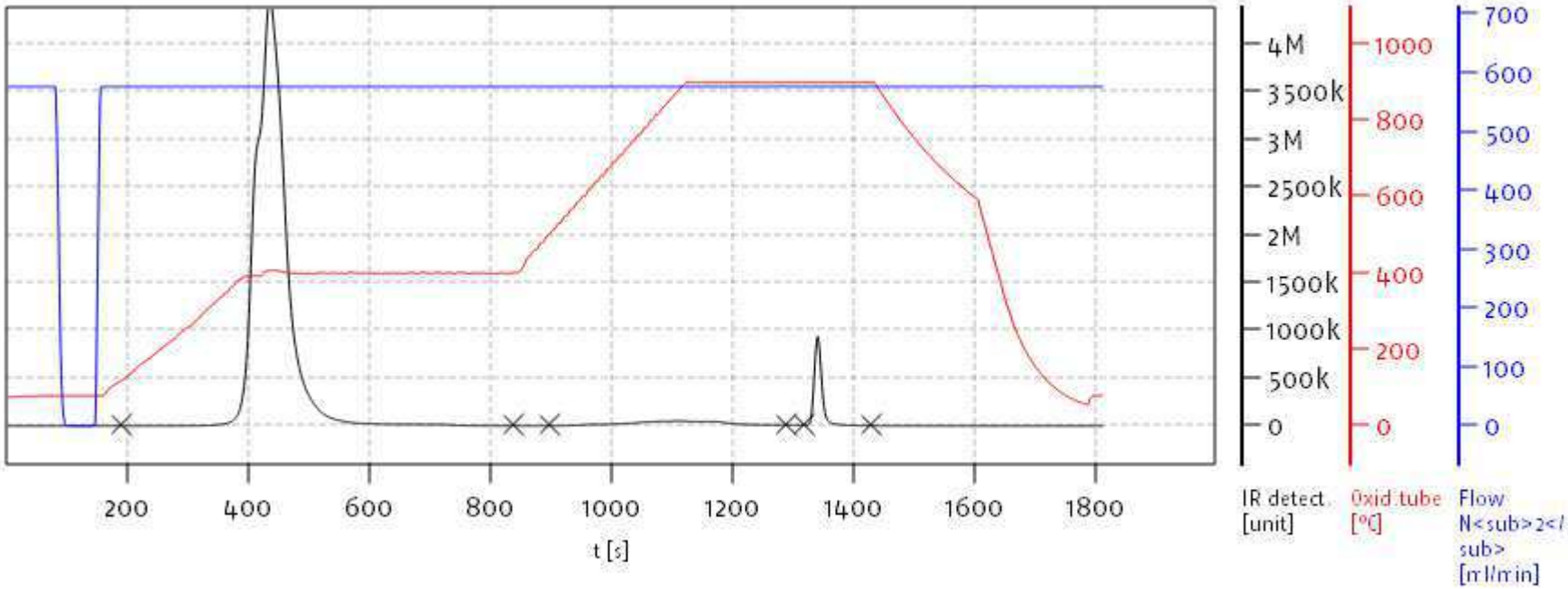
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
85	85	BJH0807-MS1	532.30	0.0093	1.00	CARBON	9/3/2021 6:16 AM	3.077	0.114	3.191	bl,Cl o	9 495 300	369 591	516 757	0.9695	1.0000



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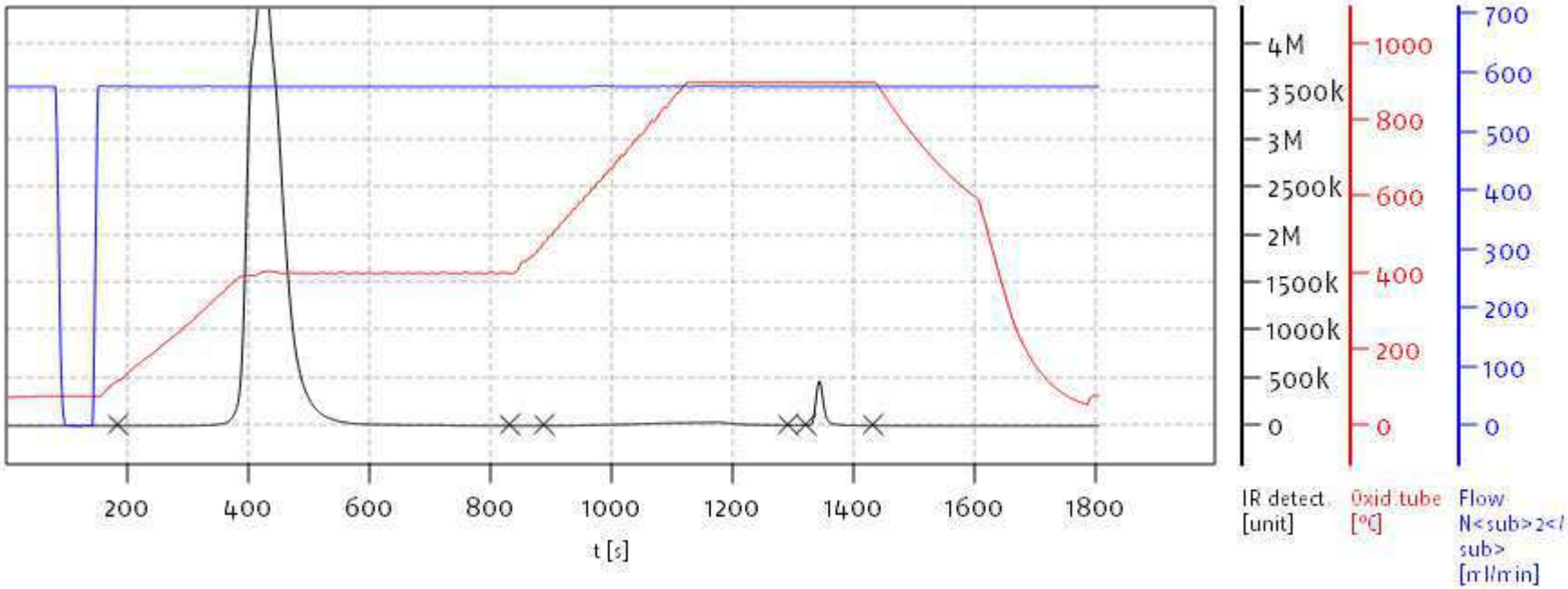
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
86	86	BJH0807-MSD1	536.60	0.0122	1.00	CARBON	9/3/2021 6:47 AM	3.533	0.077	3.610	bl,C1o	11 317 400	257 339	275 317	0.9695	1.0000



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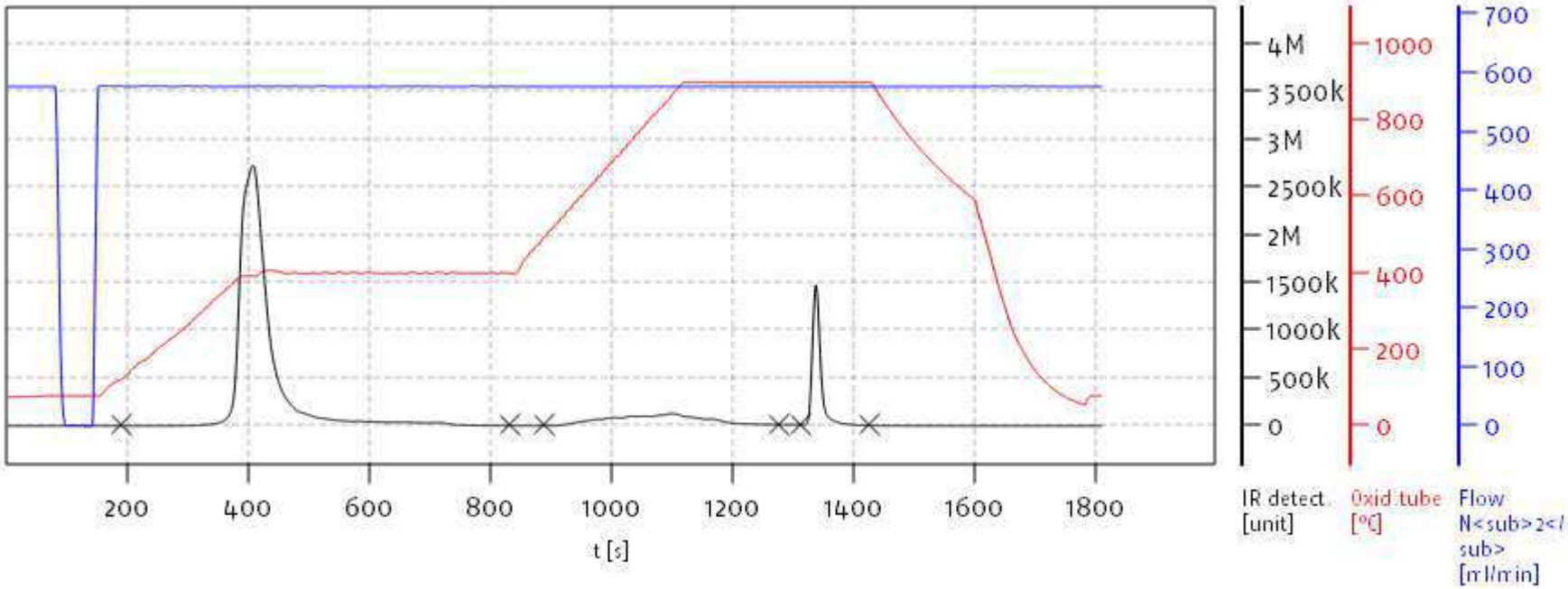
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
87	87	21H0350-04	488.10		1.00	CARBON	9/3/2021 7:18 AM	2.176	0.300	2.476	bl	5 594 510	878 181	887 492	0.9695	1.0000



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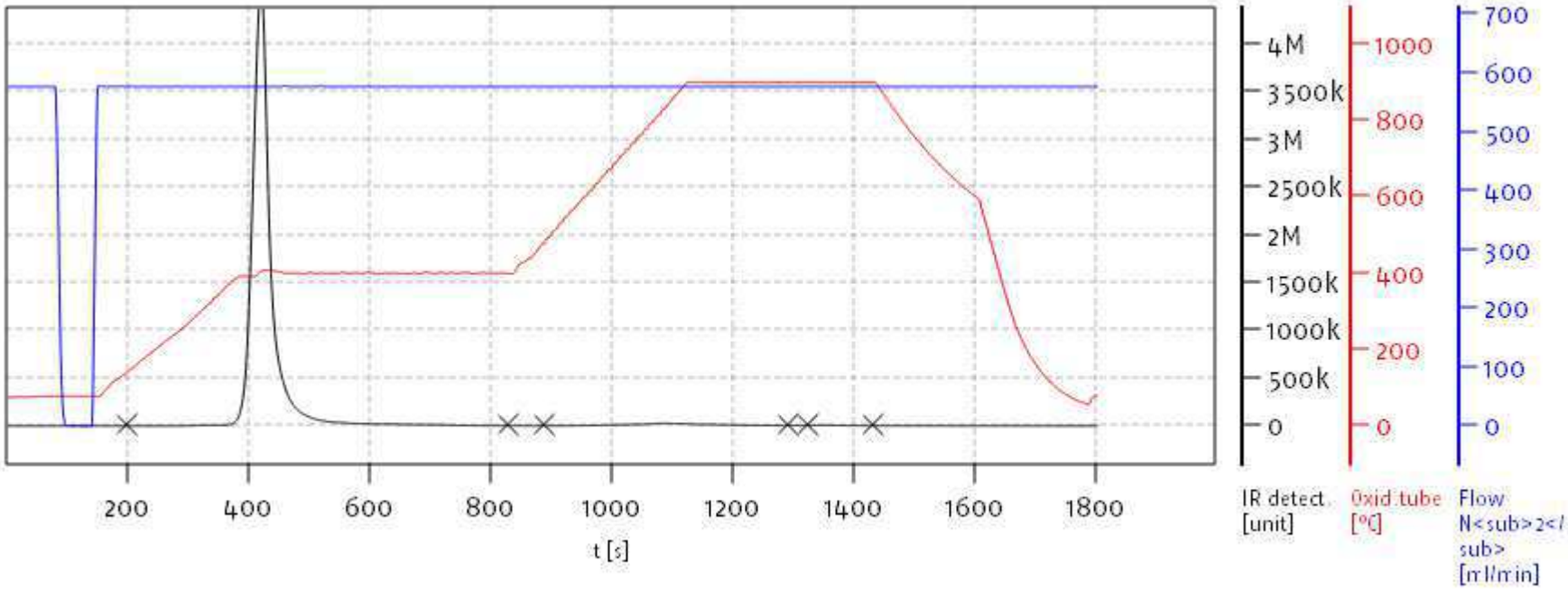
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
88	88	SJH0417-CCV7	22.40		1.00	CARBON	9/3/2021 7:48 AM	43.450	1.147	44.596	bl	5 949 080	163 742	18 486	0.9695	1.0000



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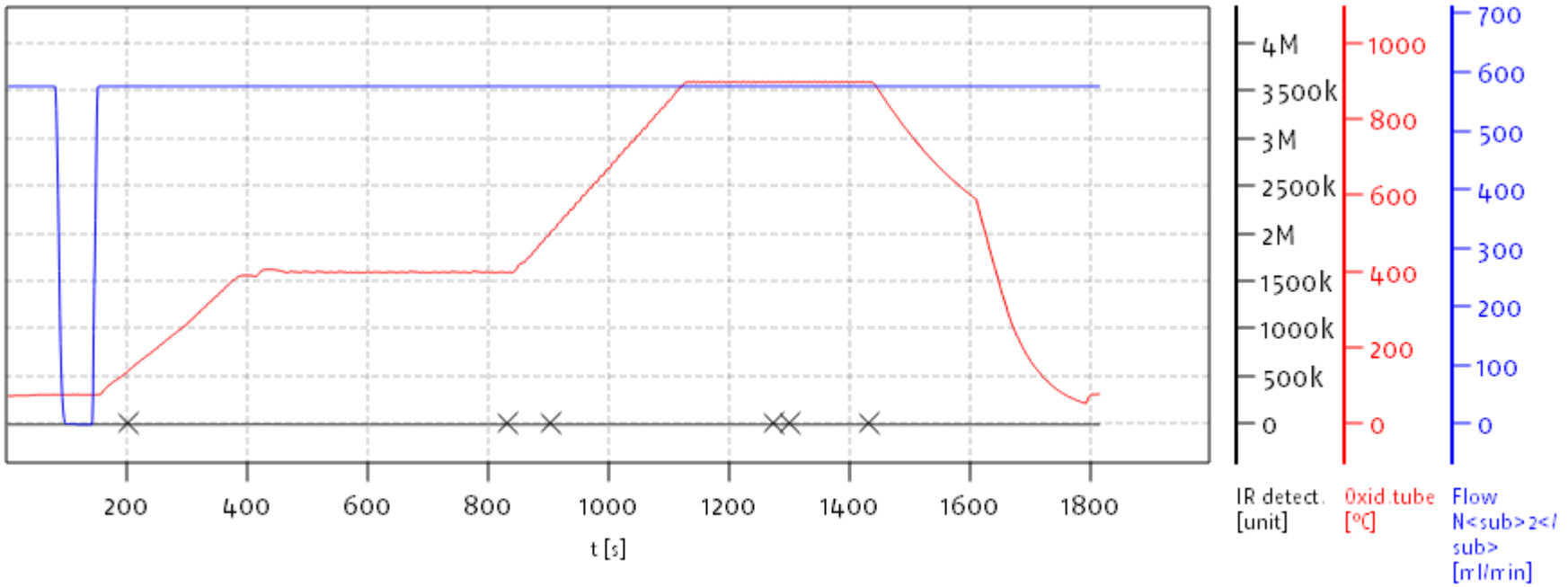
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
89	89	SJH0417-CCB7	620.40		1.00	CARBON	9/3/2021 8:19 AM	0.000	0.000	0.000	bl,C1u,C3u,C2u	5 063	425	470	0.9695	1.0000



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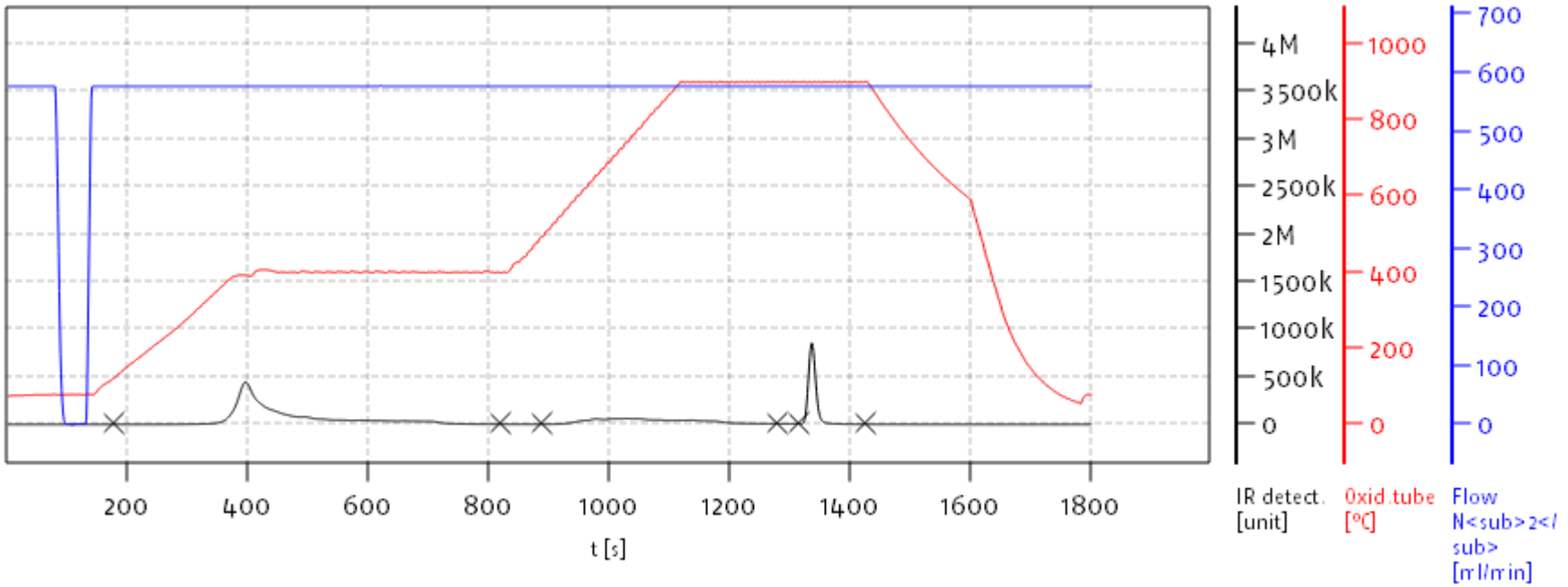
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
90	1	21H0350-08	340.00		1.00	CARBON	9/3/2021 8:49 AM	0.857	0.234	1.090	bl	1 323 280	481 919	464 559	0.9695	1.0000



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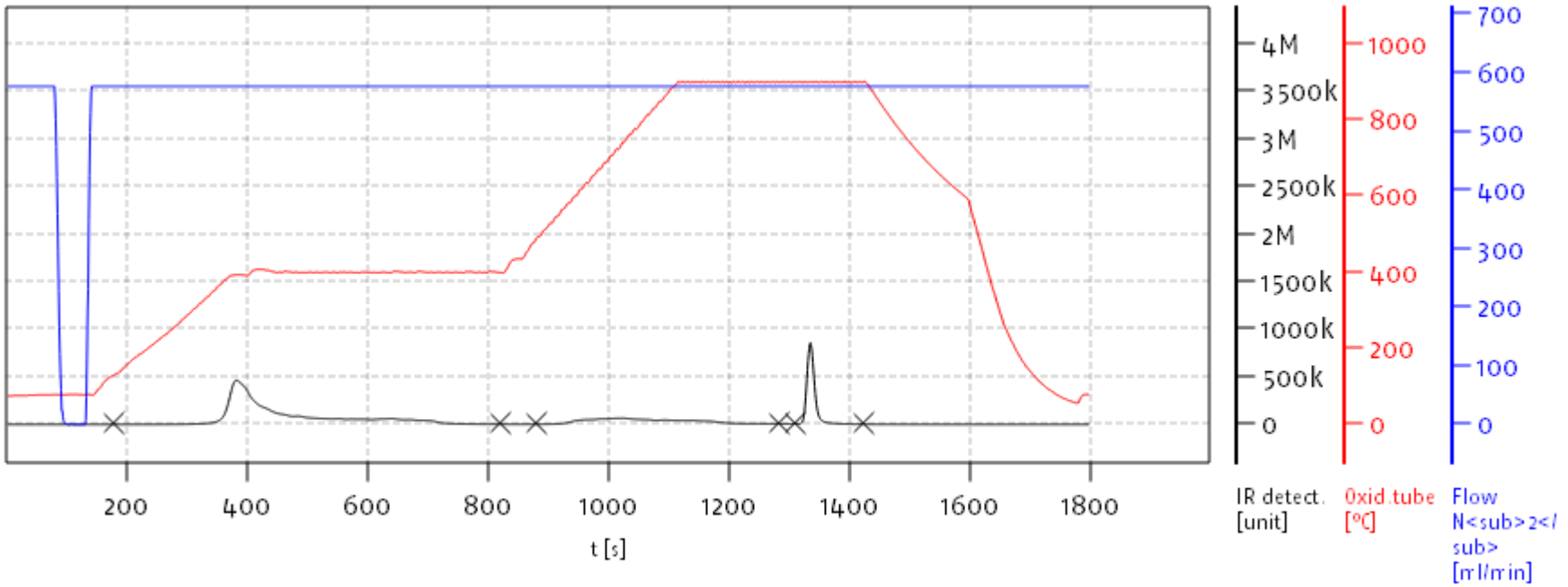
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
91	2	BJH0807-DUP2	318.90		1.00	CARBON	9/3/2021 9:20 AM	1.045	0.253	1.298	bl	1 563 210	488 978	481 545	0.9695	1.0000



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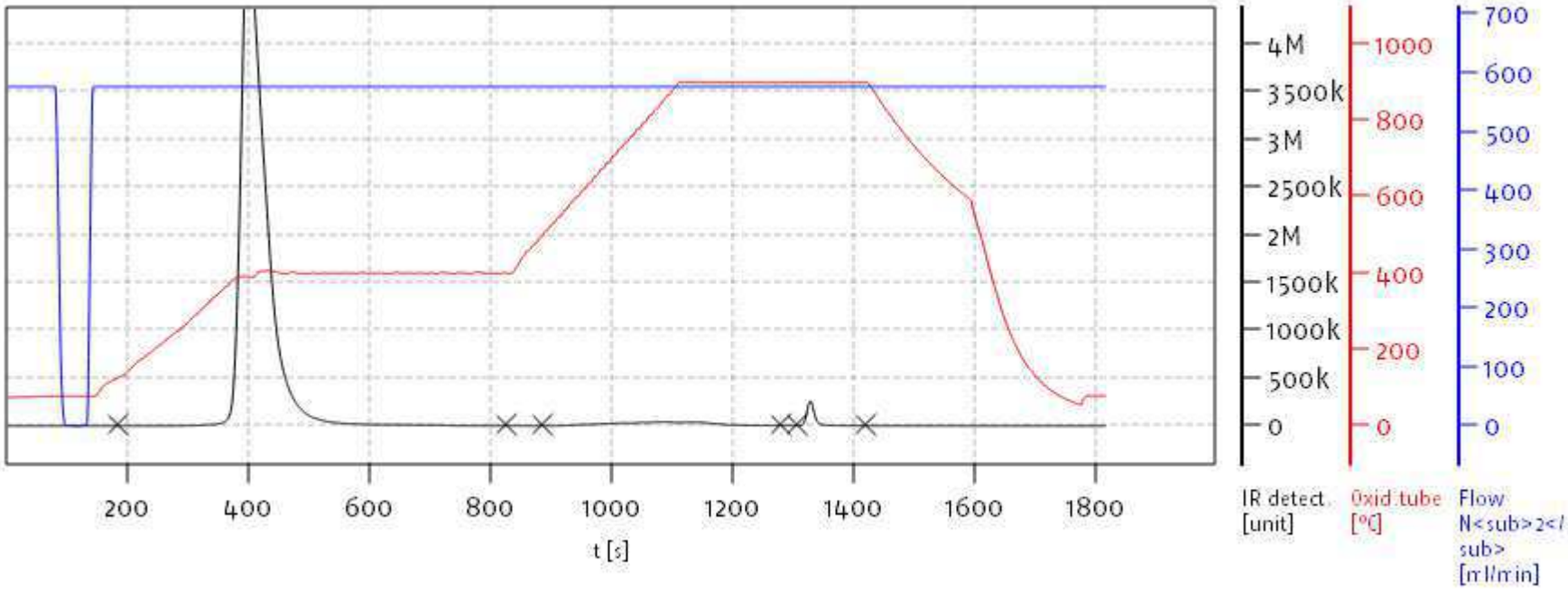
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
92	3	BJH0807-MS2	374.50	0.0140	1.00	CARBON	9/3/2021 9:50 AM	4.031	0.127	4.158	bl,C1o	9 092 430	293 149	147 886	0.9695	1.0000



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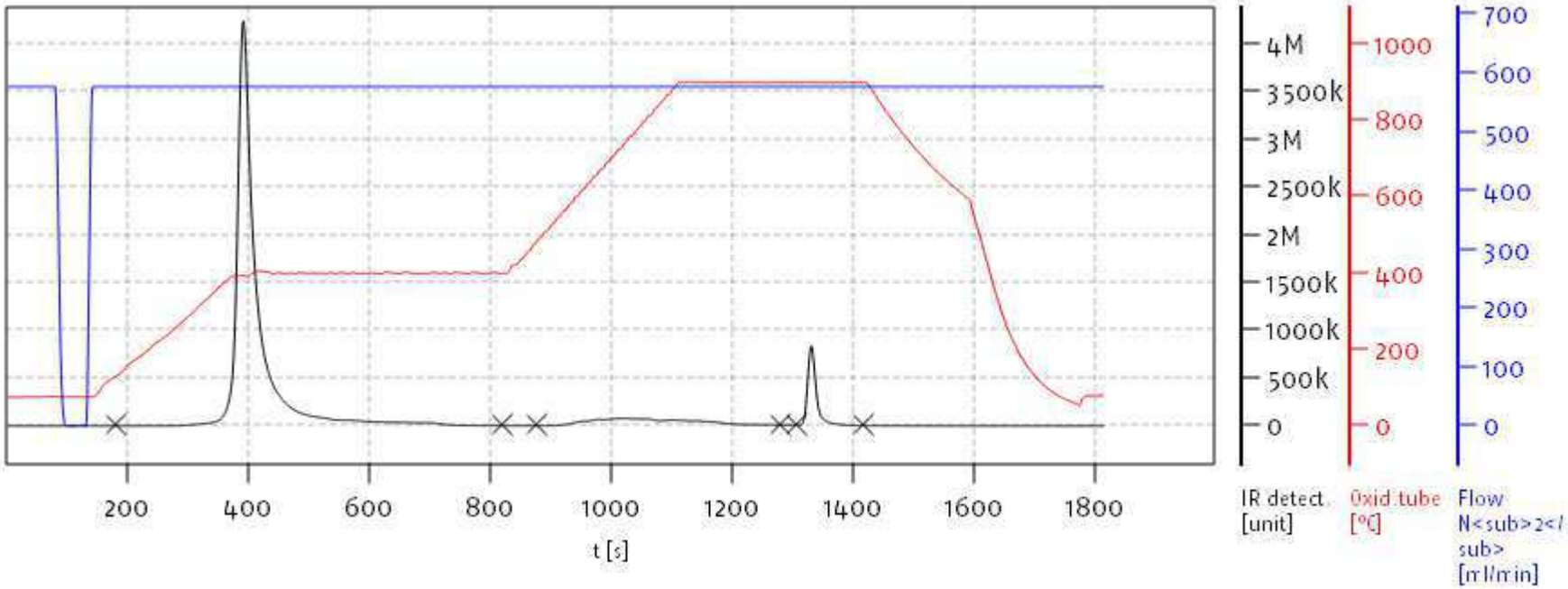
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
93	4	BJH0807-MSD2	387.20	0.0126	1.00	CARBON	9/3/2021 10:21 AM	2.675	0.261	2.936	bl	5 801 620	611 022	530 385	0.9695	1.0000



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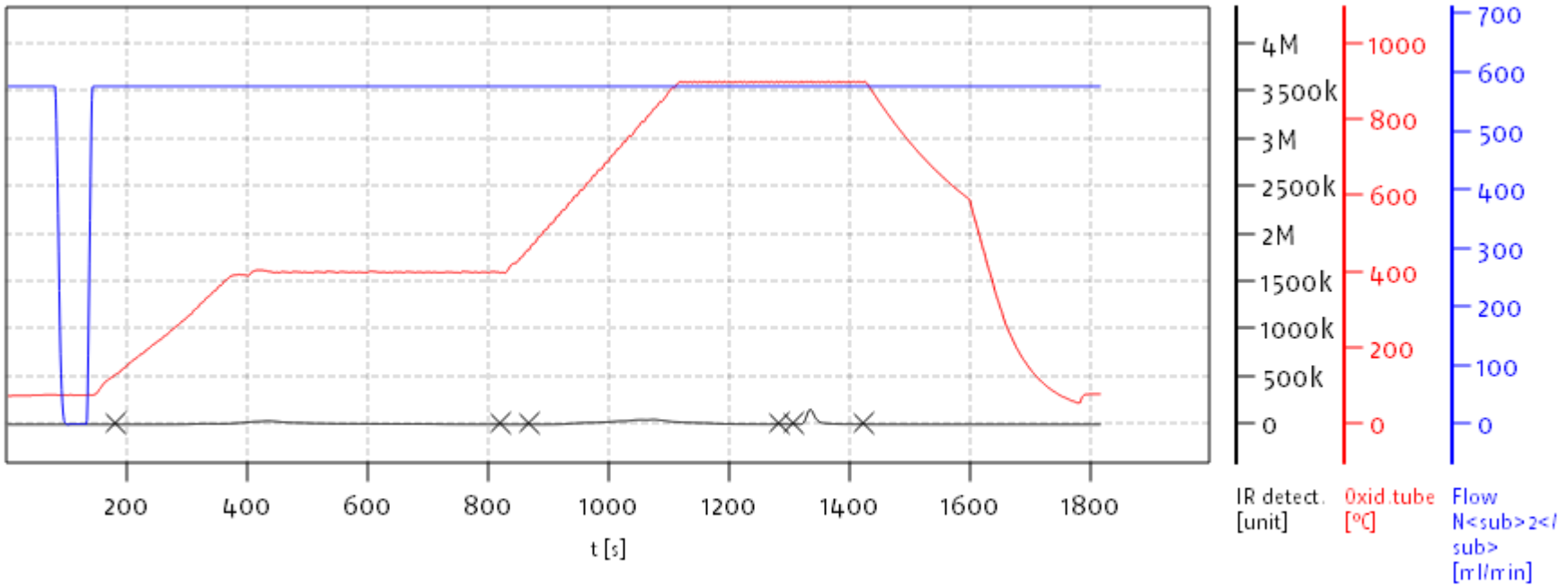
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
94	5	21H0352-01	507.00		1.00	CARBON	9/3/2021 10:52 AM	0.090	0.086	0.177	bl	192 882	270 823	107 095	0.9695	1.0000



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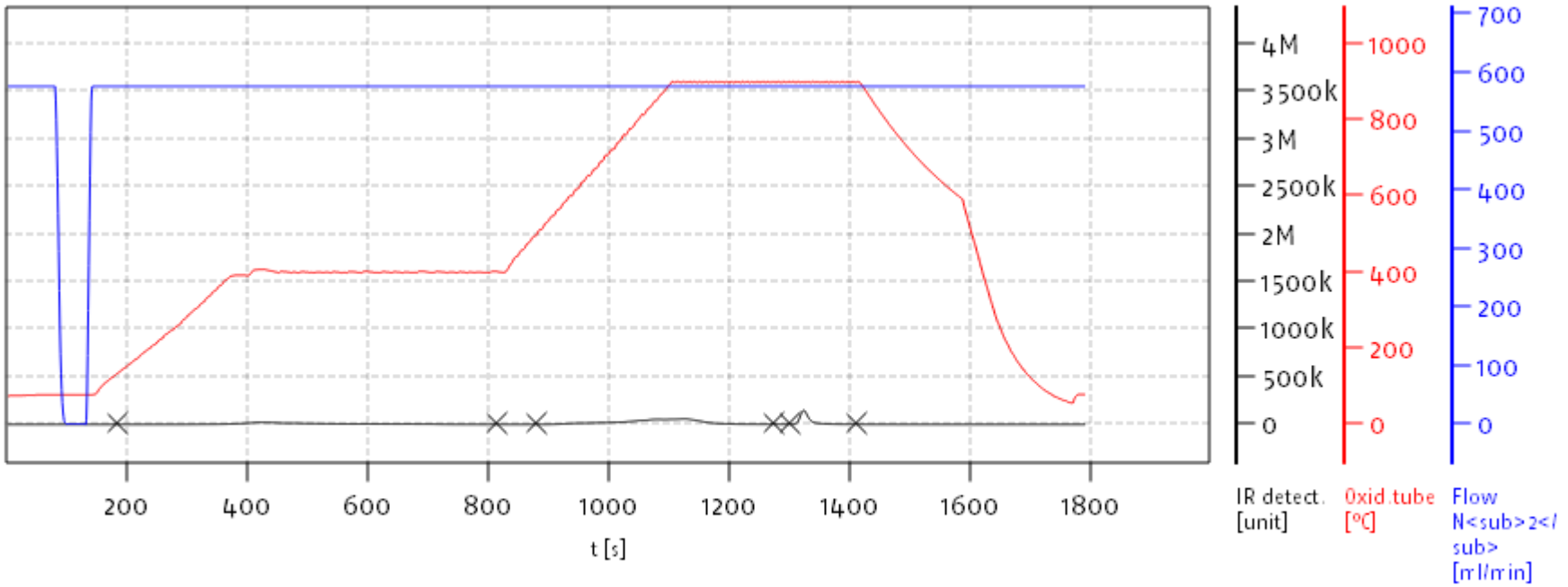
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
95	6	21H0352-02	509.60		1.00	CARBON	9/3/2021 11:22 AM	0.065	0.103	0.168	bl	123 396	322 075	99 756	0.9695	1.0000



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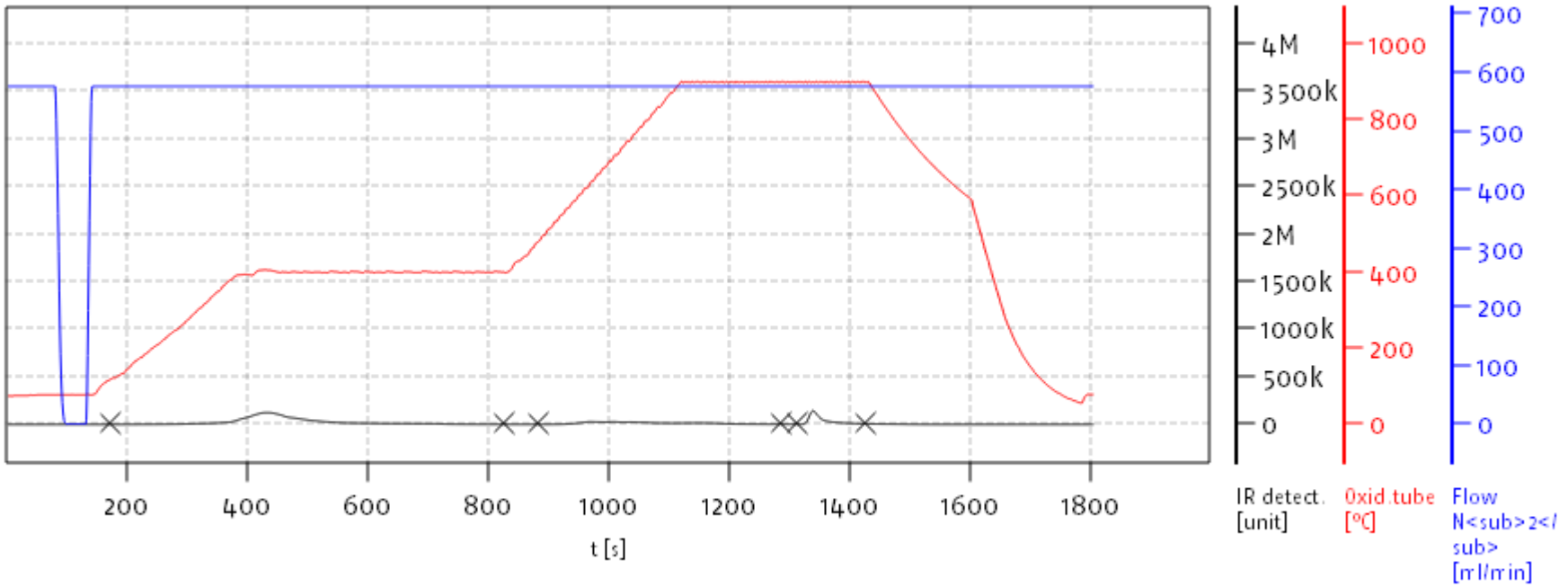
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
96	7	21H0352-03	508.00		1.00	CARBON	9/3/2021 11:52 AM	0.225	0.060	0.285	bl	570 878	191 038	146 786	0.9695	1.0000



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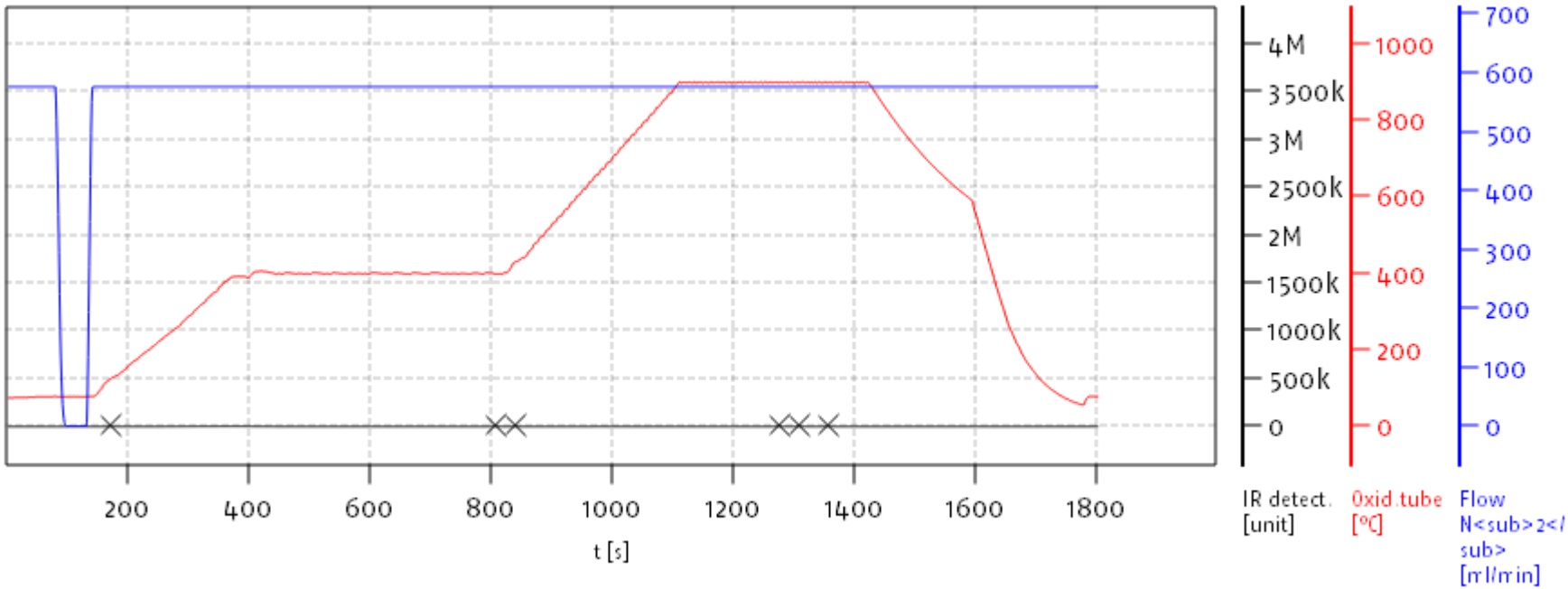
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
97	8	BLANK	1.00		1.00	CARBON	9/3/2021 12:23 PM	0.000	0.000	0.000	bl	13 281	3 010	101	0.9695	1.0000



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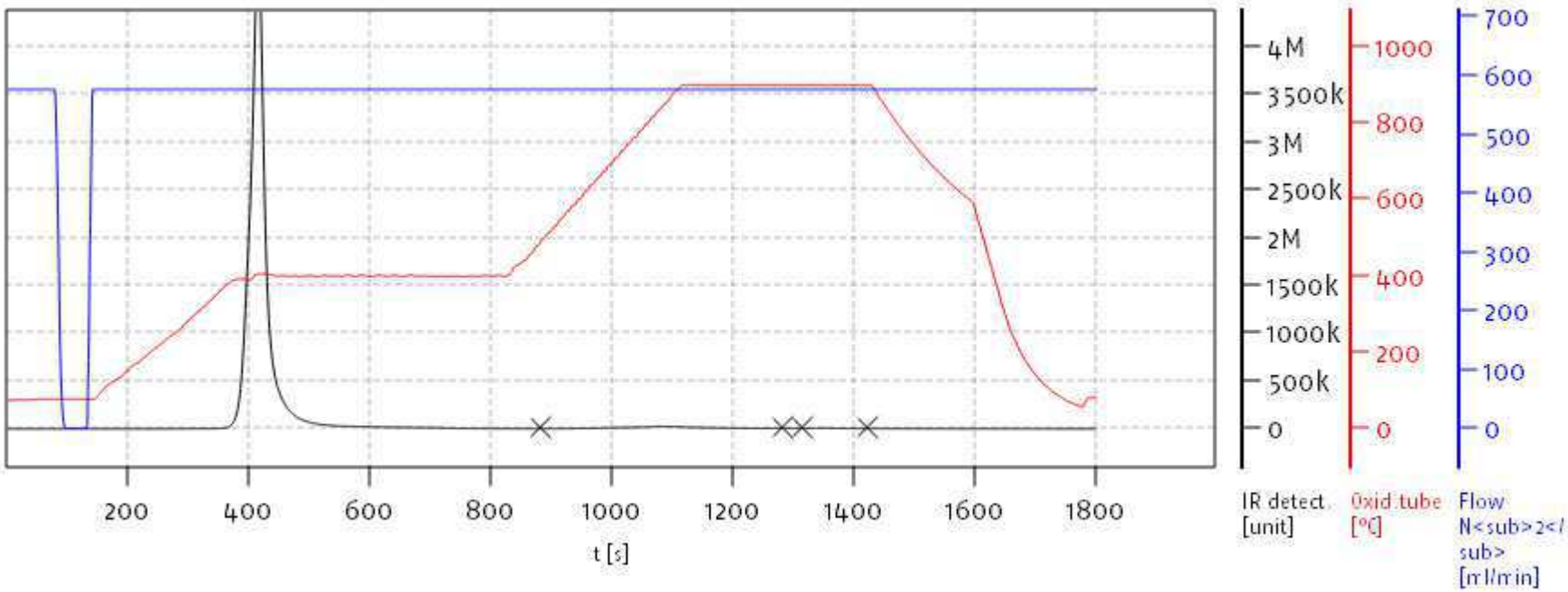
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
98	9	Dfactor	21.50		1.00	CARBON	9/3/2021 12:53 PM	0.062	1.117	1.178		0	153 864	19 501	1.0000	1.0000



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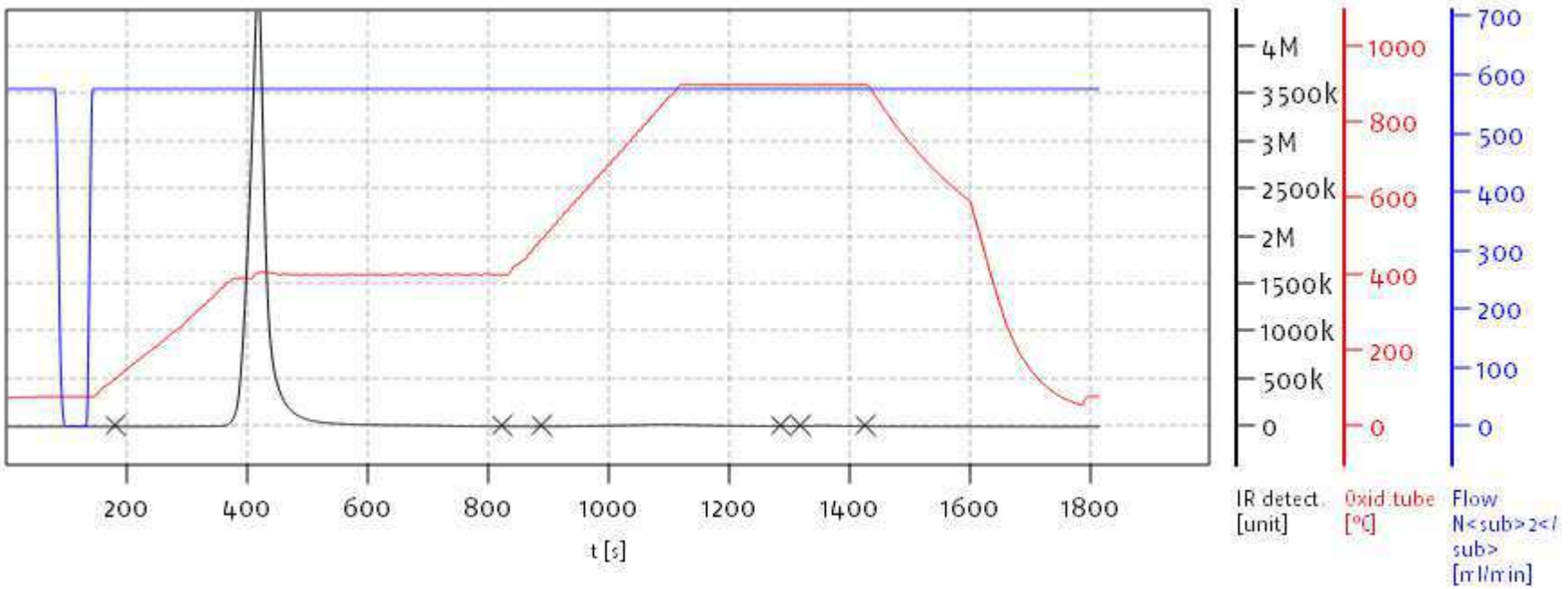
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
99	10	Dfactor	21.40		1.00	CARBON	9/3/2021 1:24 PM	44.552	1.104	45.655	bl	5 680 790	151 525	25 097	0.9934	1.0000



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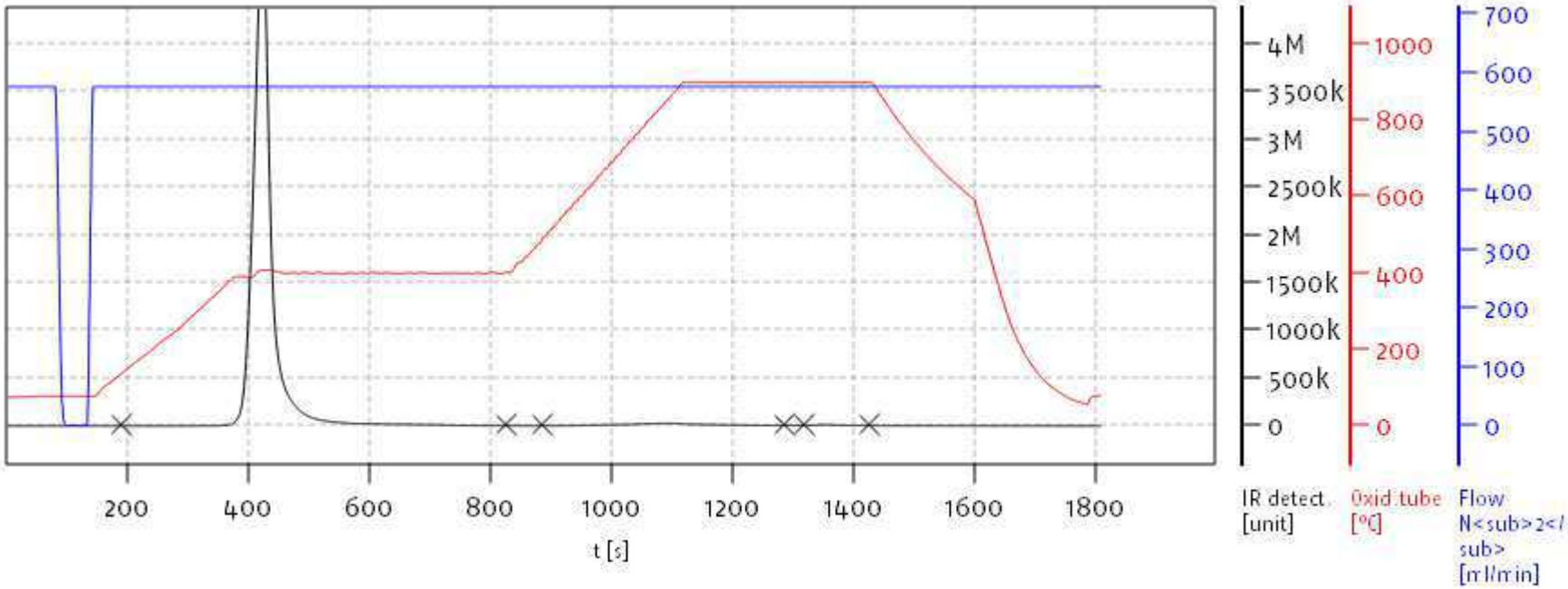
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
100	11	SJH0417-CCV8	24.30		1.00	CARBON	9/3/2021 1:55 PM	44.902	1.087	45.988	bl	6 502 360	168 032	24 323	0.9934	1.0000



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Date: Mon Sep 6 07:32:29 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

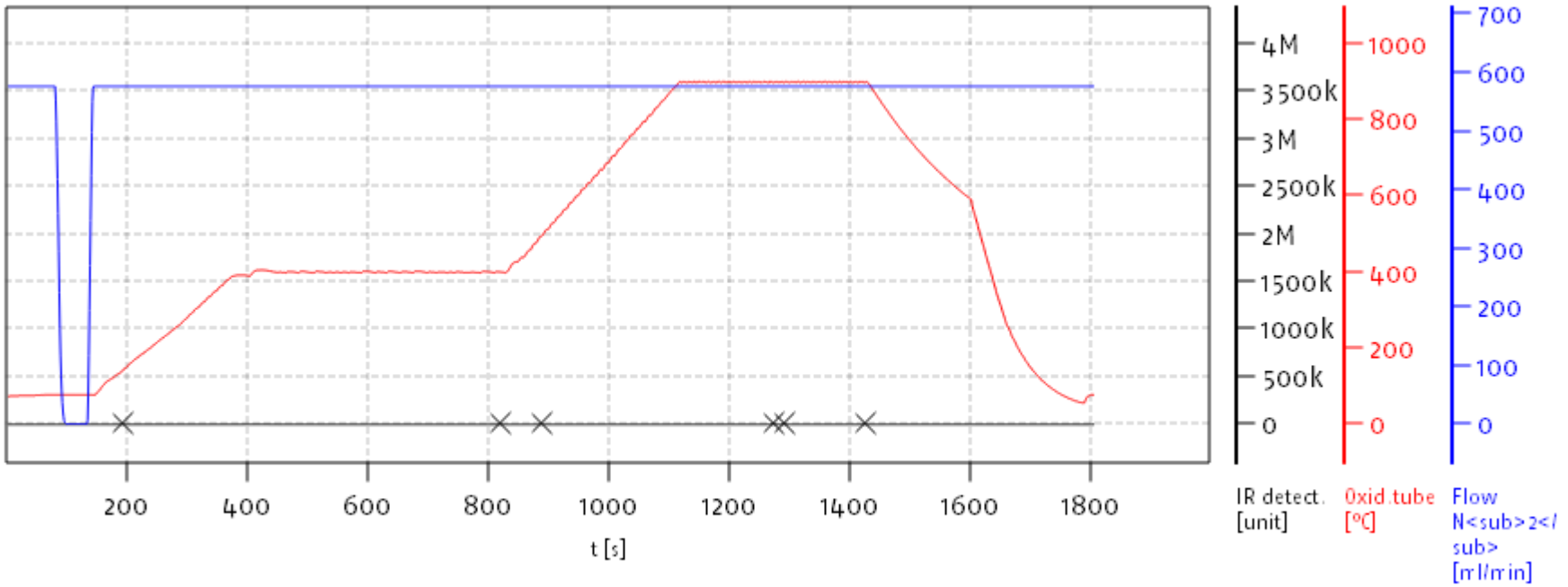
elementar
EXCELLENCE IN ELEMENTS

Document: from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
101	12	SJH0417-CCB8	577.30		1.00	CARBON	9/3/2021 2:25 PM	0.000	0.000	0.000	bl,C1u,C3u,C2u	2 593	182	600	0.9934	1.0000



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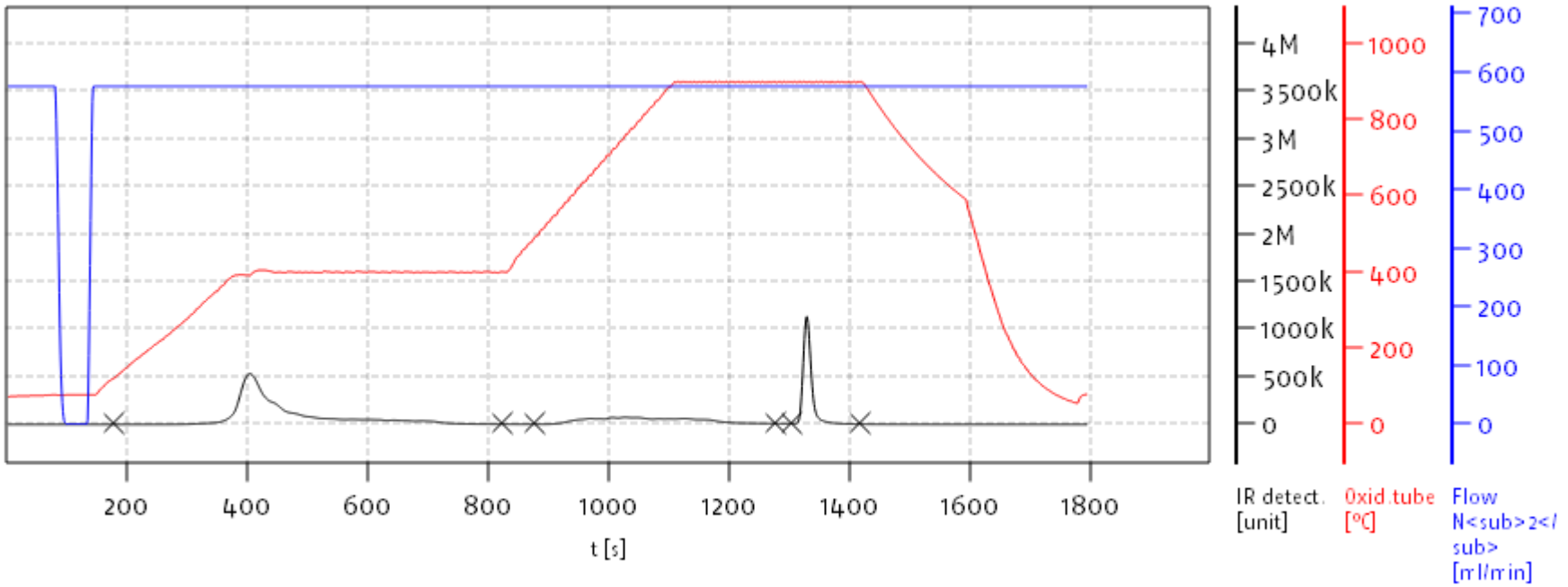
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
102	13	21H0352-07	502.40		1.00	CARBON	9/3/2021 2:56 PM	0.780	0.203	0.983	bl	1 677 240	614 581	678 381	0.9934	1.0000



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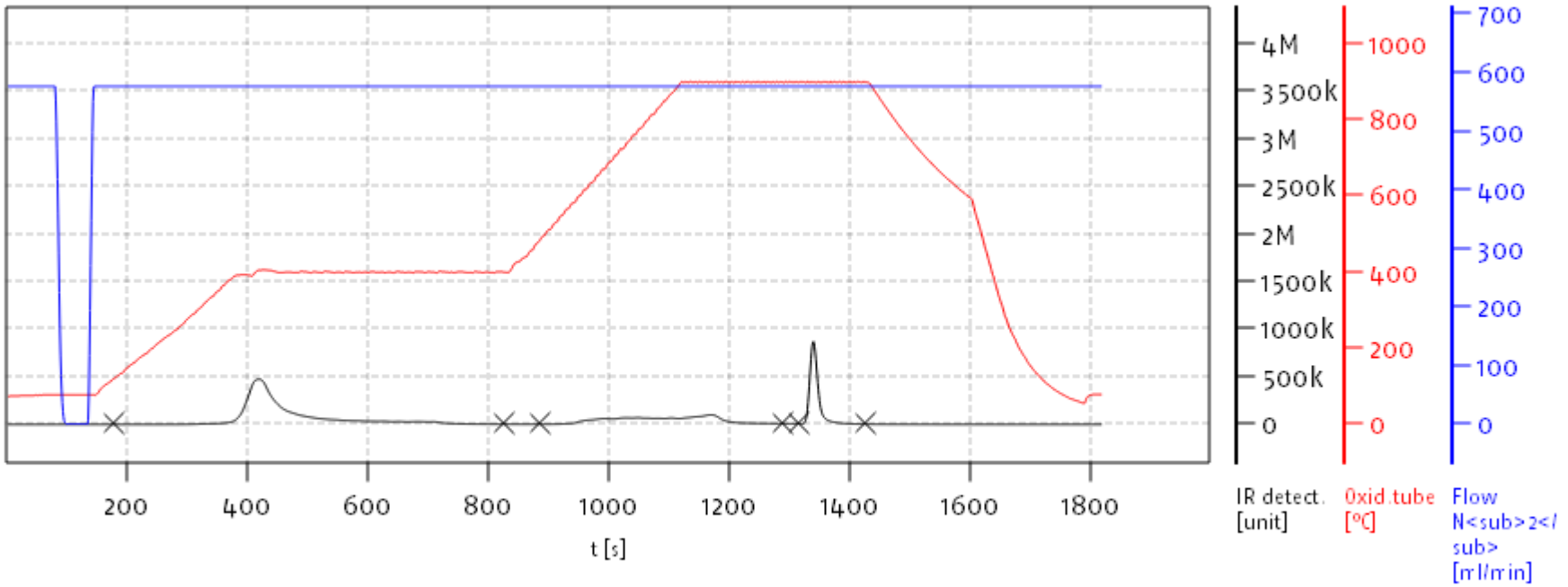
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
103	14	BJH0807-DUP3	501.90		1.00	CARBON	9/3/2021 3:26 PM	0.645	0.221	0.866	bl	1 415 080	669 466	533 841	0.9934	1.0000



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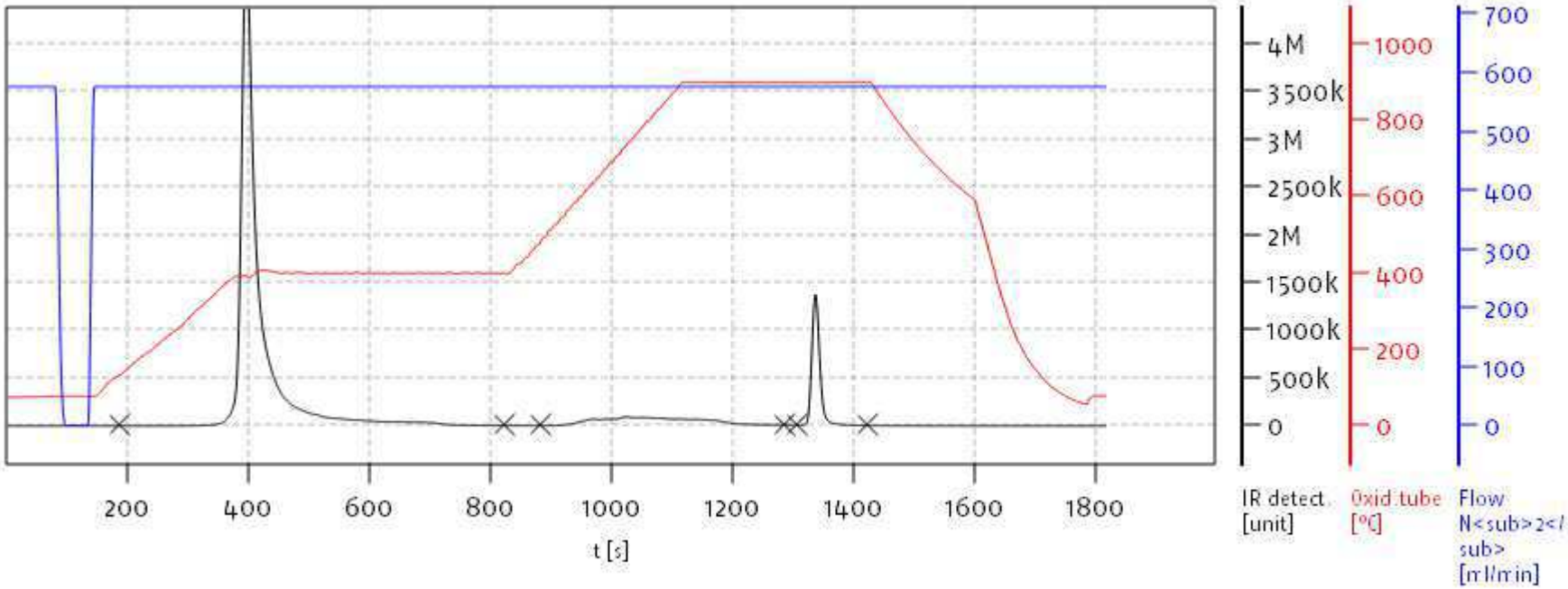
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
104	15	BJH0807-MS3	564.90	0.0155	1.00	CARBON	9/3/2021 3:57 PM	2.016	0.216	2.232	bl	6 000 240	735 816	805 479	0.9934	1.0000



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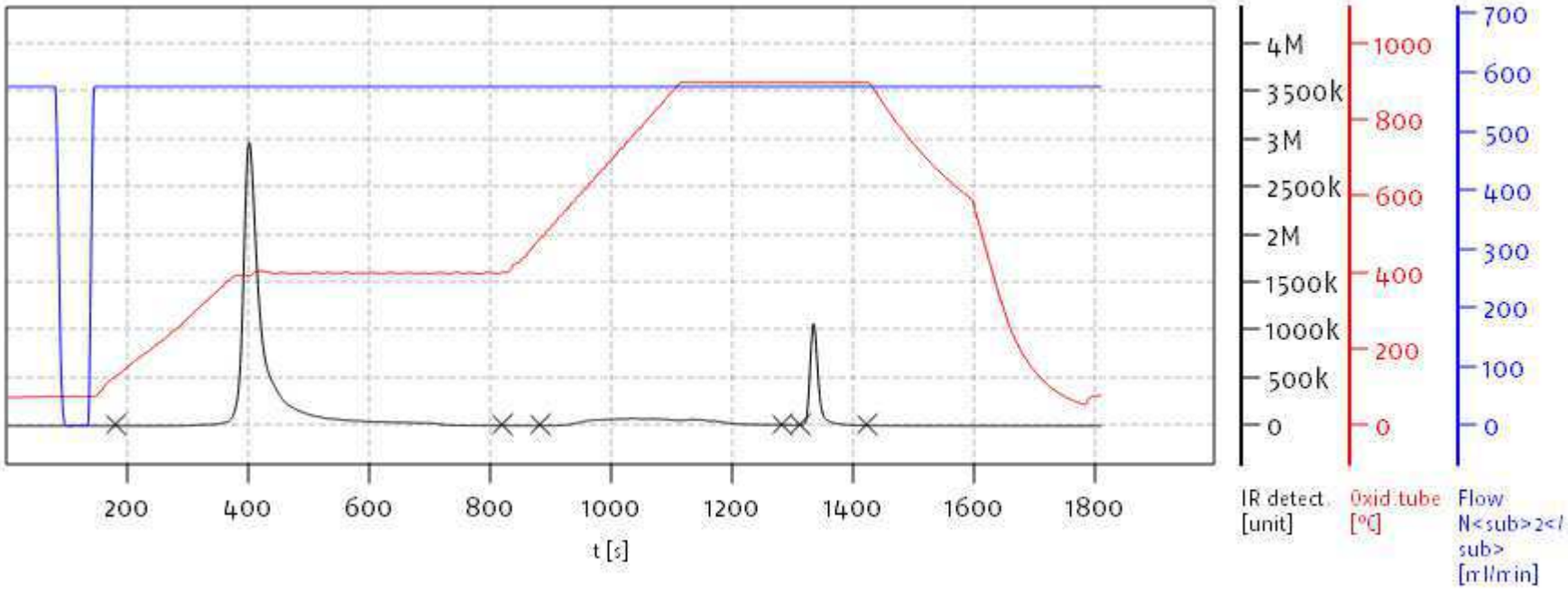
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
105	16	BJH0807-MSD3	521.10	0.0100	1.00	CARBON	9/3/2021 4:28 PM	1.552	0.207	1.758	bl	4 187 490	650 118	650 615	0.9934	1.0000



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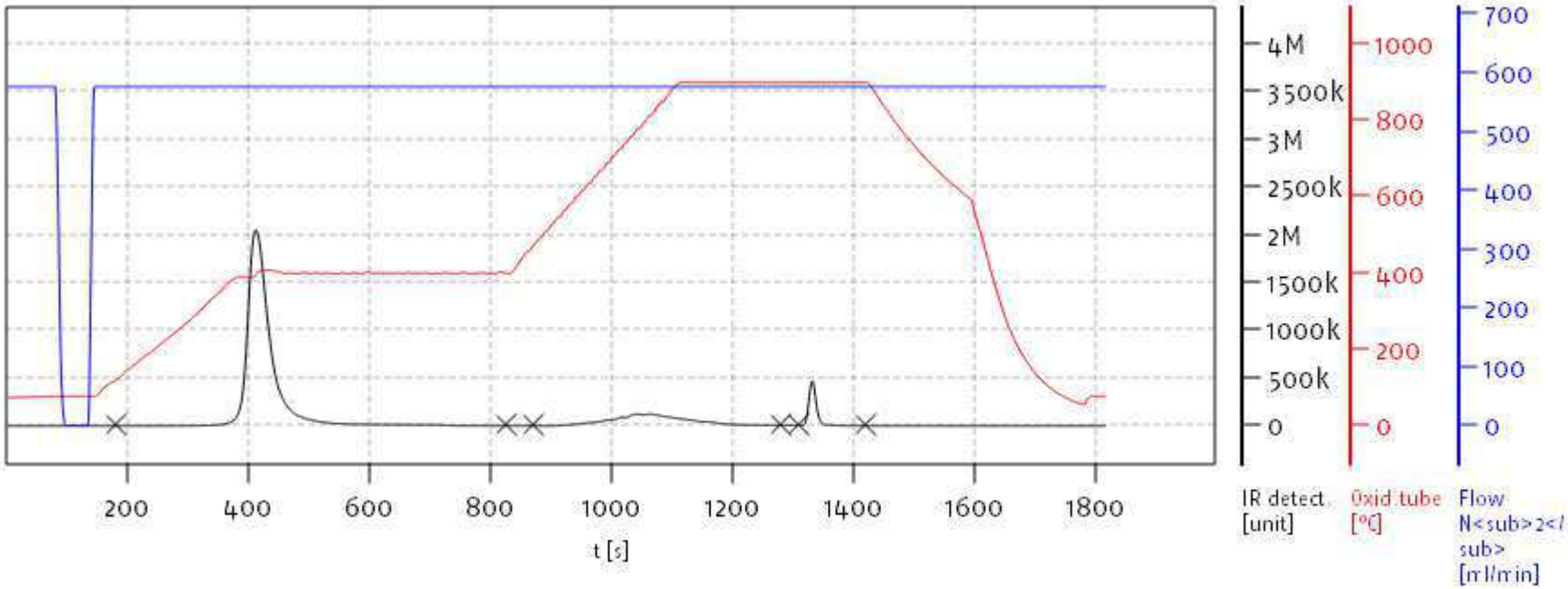
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
106	17	21H0352-08	525.90		1.00	CARBON	9/3/2021 4:58 PM	1.147	0.217	1.364	bl	3 360 850	686 288	256 996	0.9934	1.0000



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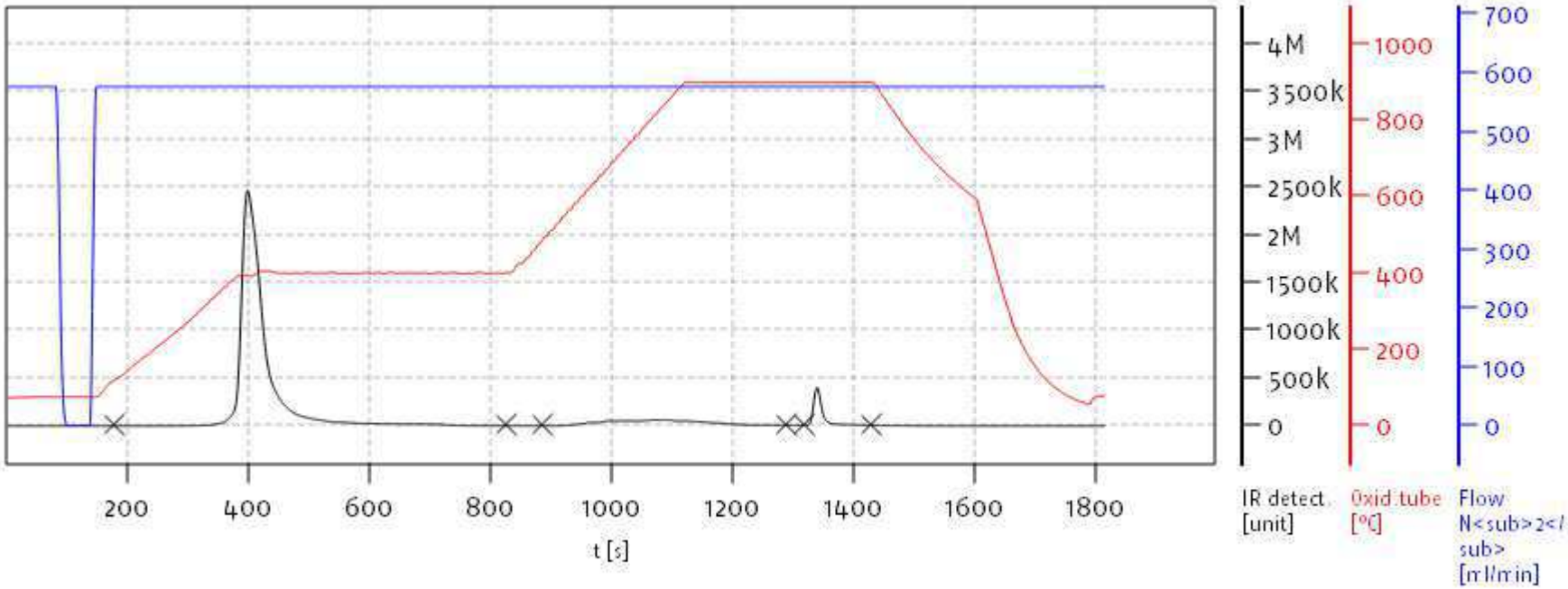
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
107	18	21H0078-32	505.20		1.00	CARBON	9/3/2021 5:29 PM	1.405	0.154	1.560	bl	3 991 000	473 572	262 050	0.9934	1.0000



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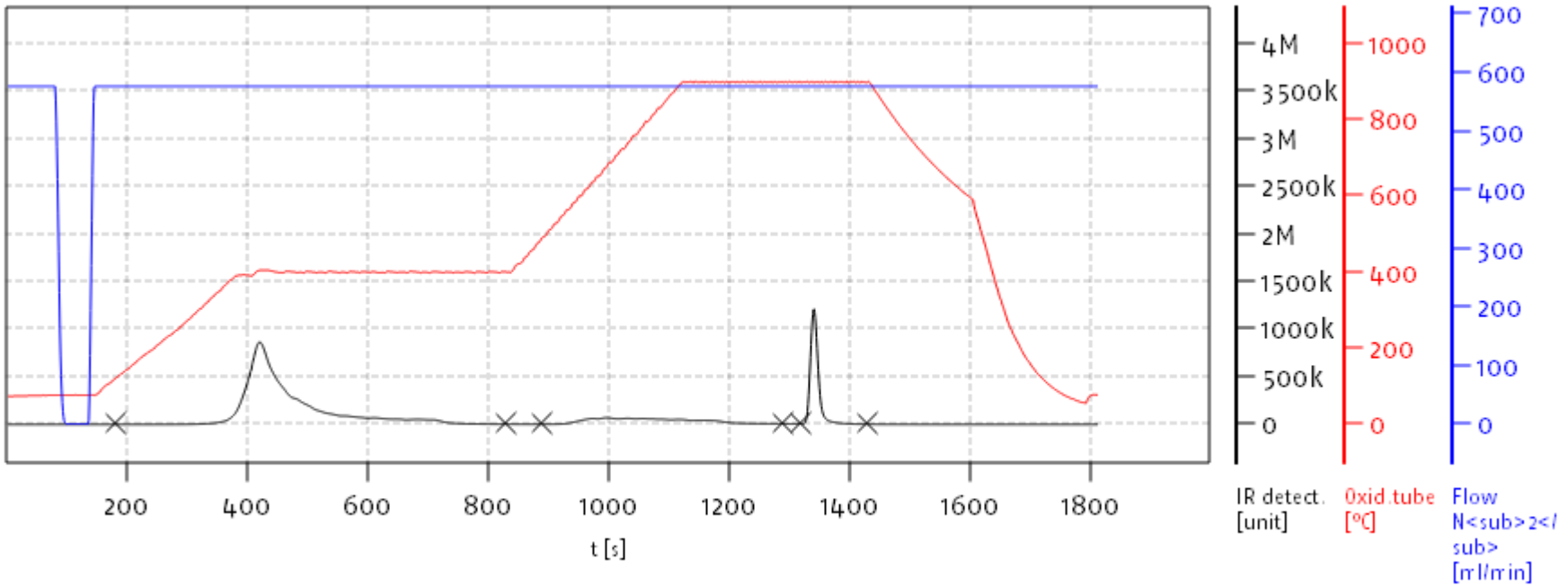
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
108	19	21H0078-34	503.30		1.00	CARBON	9/3/2021 6:00 PM	1.149	0.178	1.327	bl	2 771 310	542 174	694 723	0.9934	1.0000



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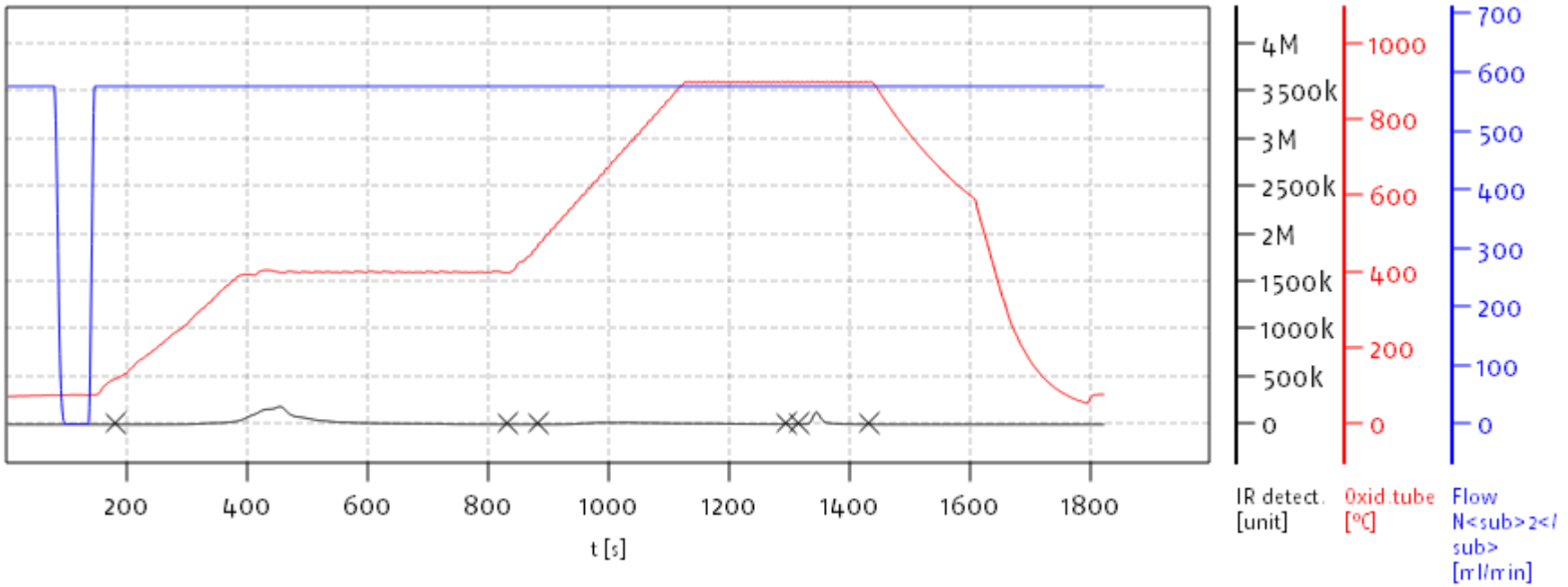
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
109	20	BJH0434-DUP5	640.30		1.00	CARBON	9/3/2021 6:31 PM	0.202	0.035	0.236	bl	704 426	142 797	88 777	0.9934	1.0000



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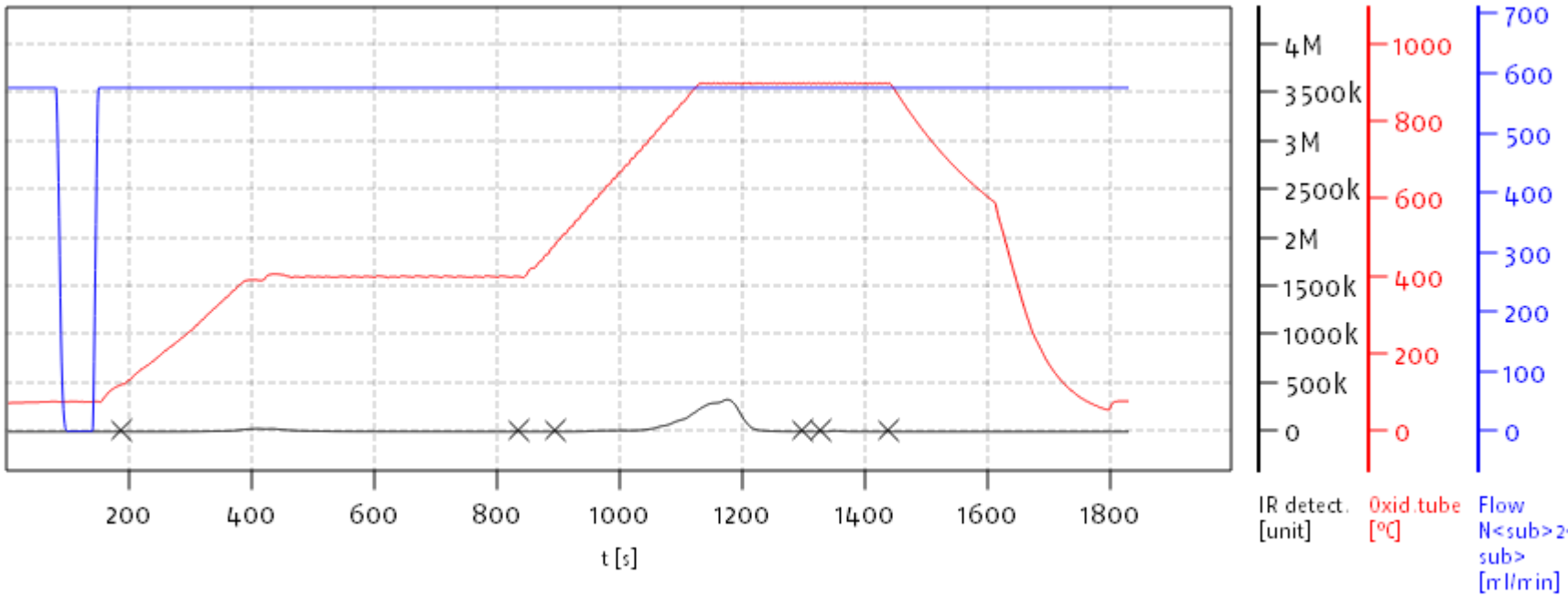
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
110	21	21H0089-02RE1	178.50		1.00	CARBON	9/3/2021 7:02 PM	0.110	1.108	1.219	bl	129 071	1 182 940	8 754	0.9934	1.0000



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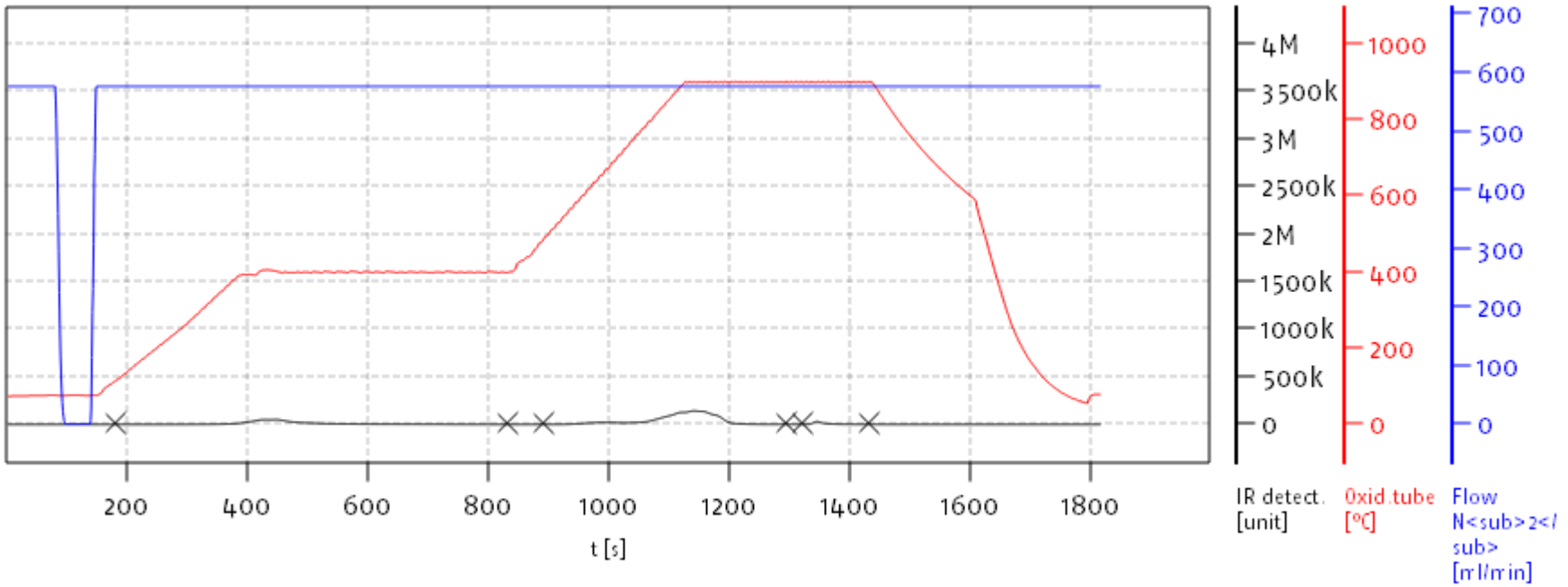
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
111	22	BJH0435-DUP2	506.40		1.00	CARBON	9/3/2021 7:32 PM	0.067	0.191	0.258	bl	199 576	585 675	25 656	0.9934	1.0000



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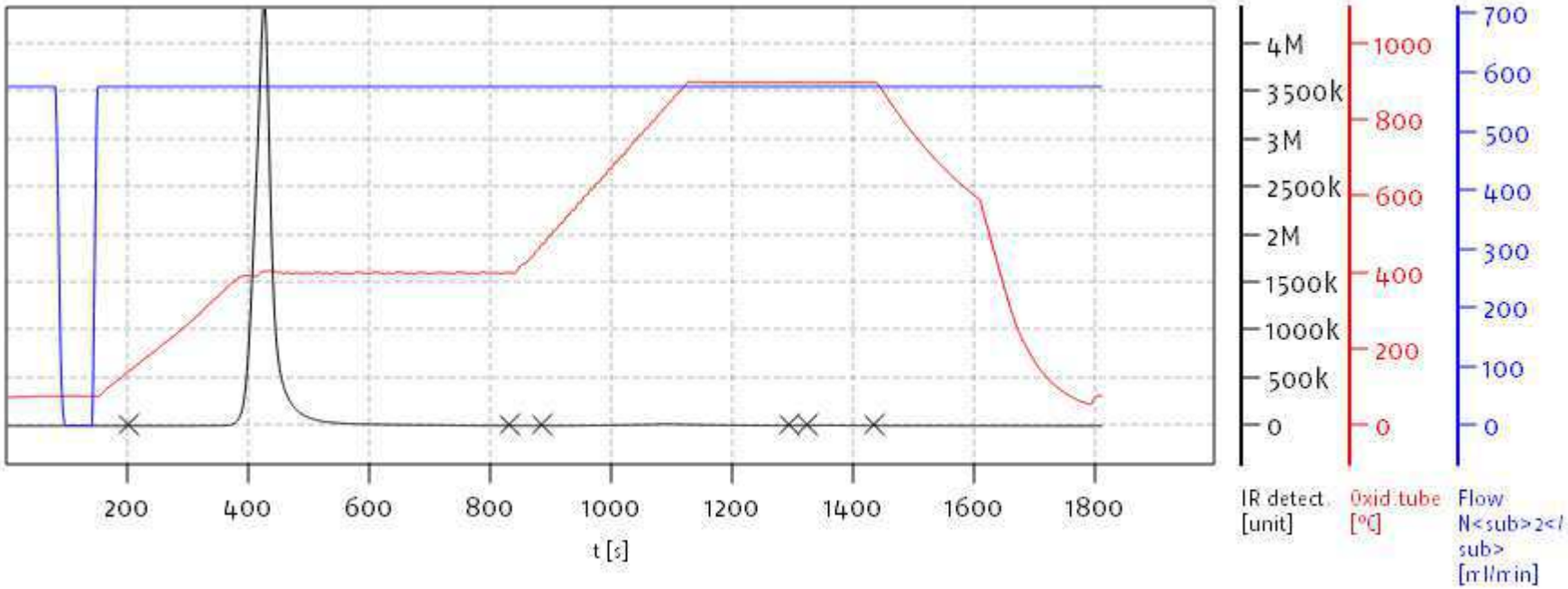
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
112	23	SJH0417-CCV9	20.60		1.00	CARBON	9/3/2021 8:03 PM	44.885	0.853	45.739	bl	5 517 480	115 775	16 972	0.9934	1.0000



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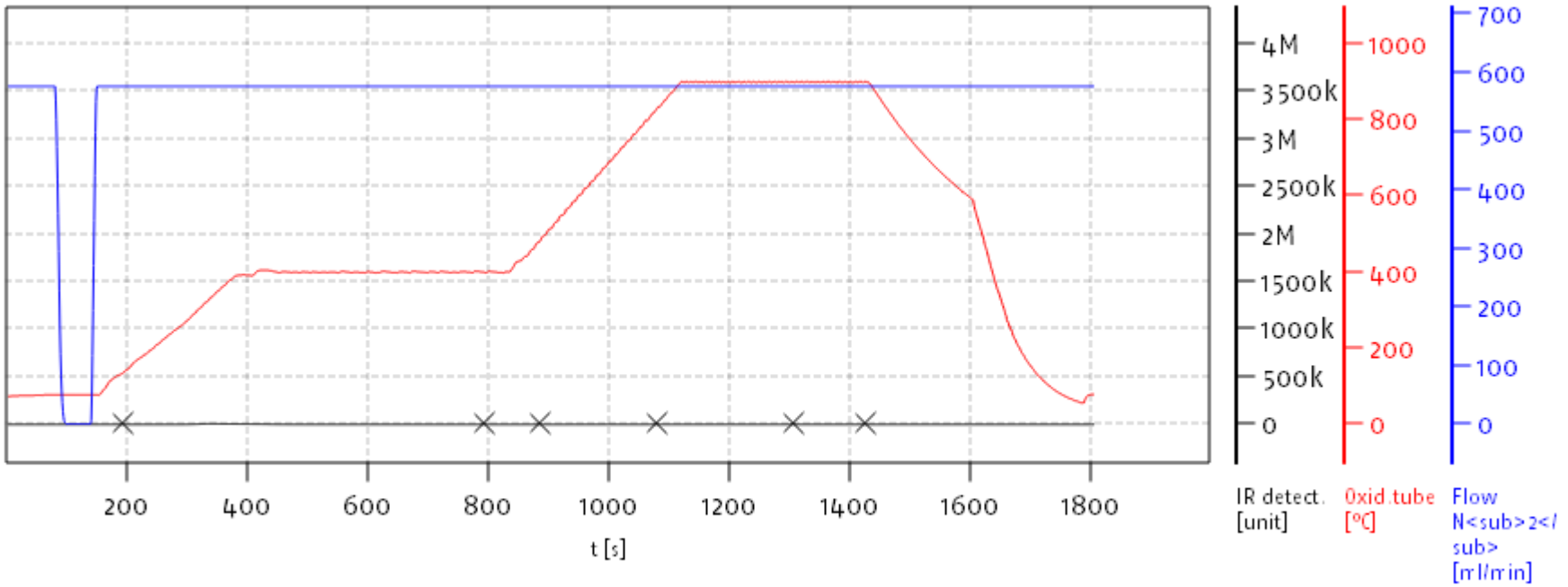
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
113	24	SJH0417-CCB9	542.20		1.00	CARBON	9/3/2021 8:33 PM	0.004	0.000	0.004	bl,C3u,C2u	24 910	589	247	0.9934	1.0000



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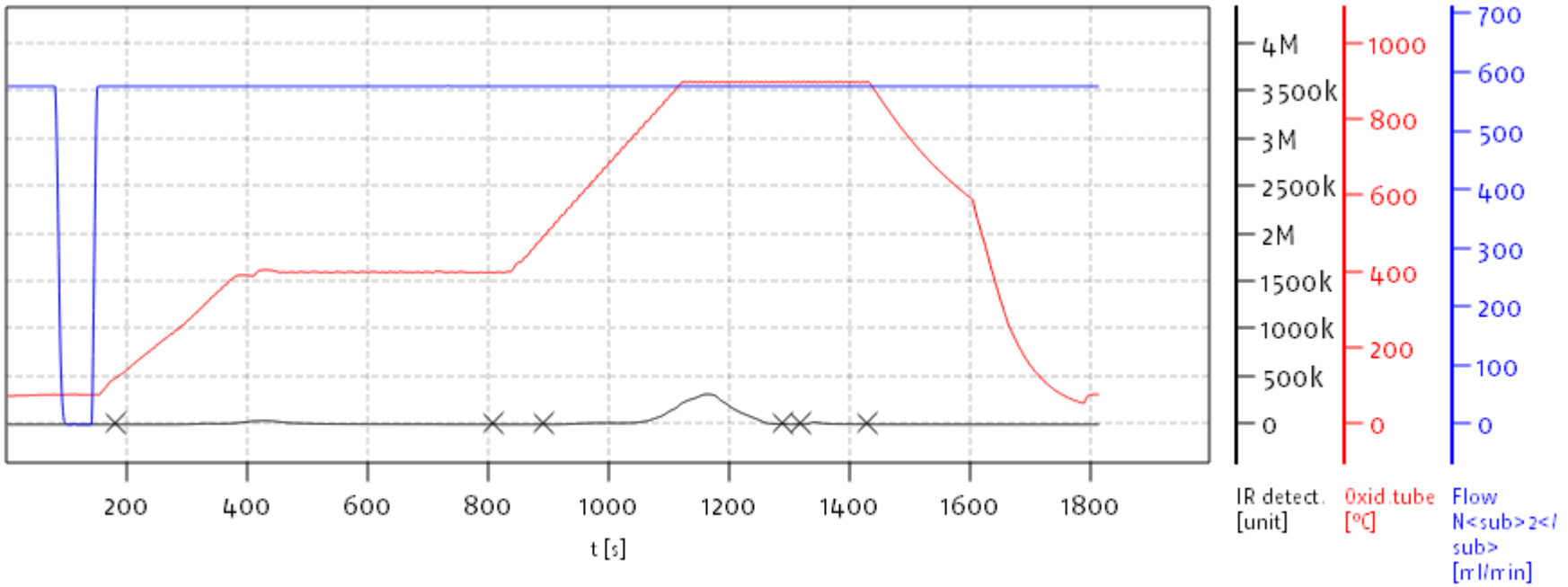
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
114	25	21H0089-11RE1	326.10		1.00	CARBON	9/3/2021 9:04 PM	0.088	0.697	0.785	bl	166 944	1 357 640	26 706	0.9934	1.0000



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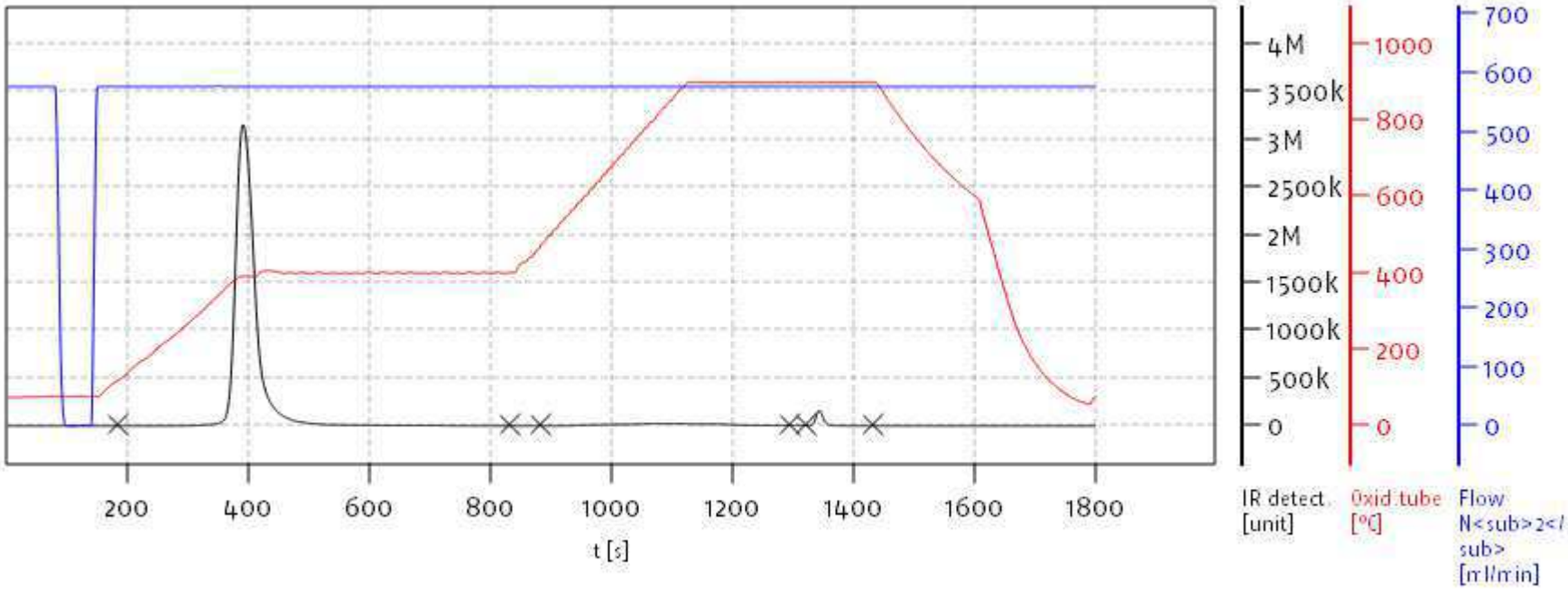
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
115	26	21H0140-09RE1	281.30		1.00	CARBON	9/3/2021 9:34 PM	2.658	0.106	2.764	bl	4 392 200	188 321	87 875	0.9934	1.0000



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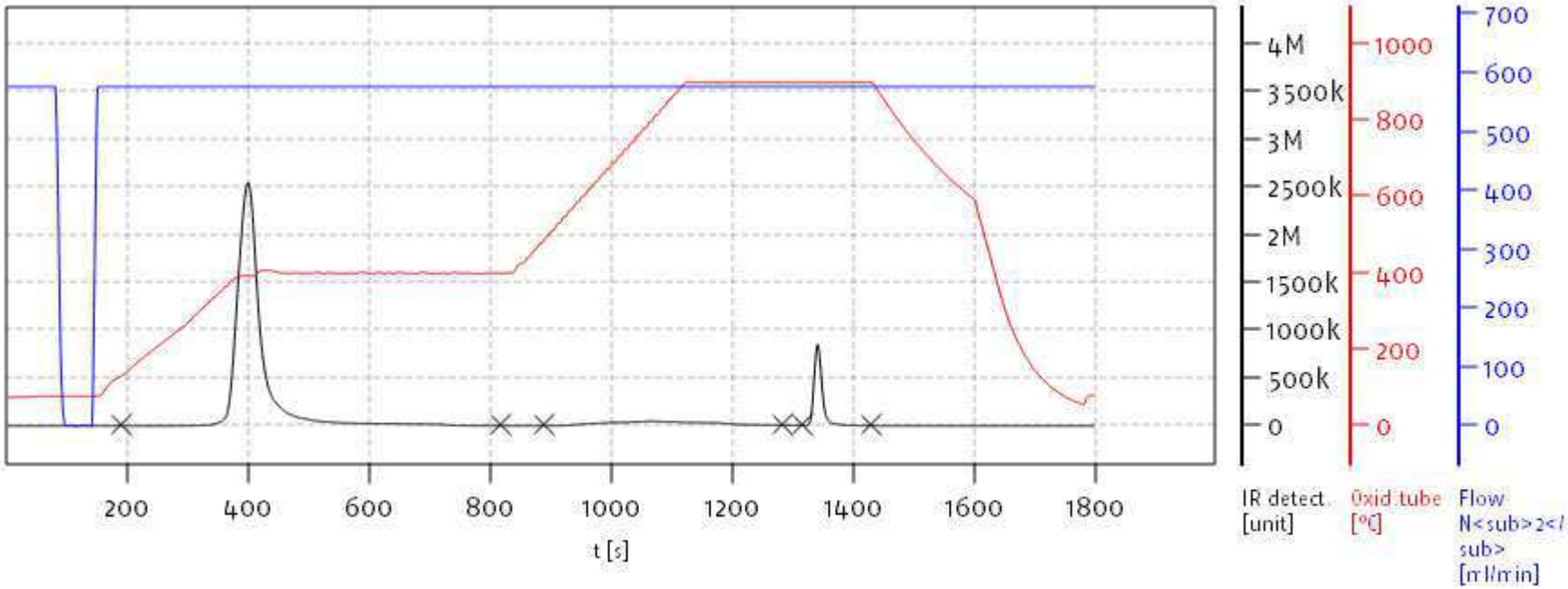
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
116	27	21H0184-16RE1	268.10		1.00	CARBON	9/3/2021 10:05 PM	2.940	0.227	3.167	bl	4 219 730	372 042	498 197	0.9934	1.0000



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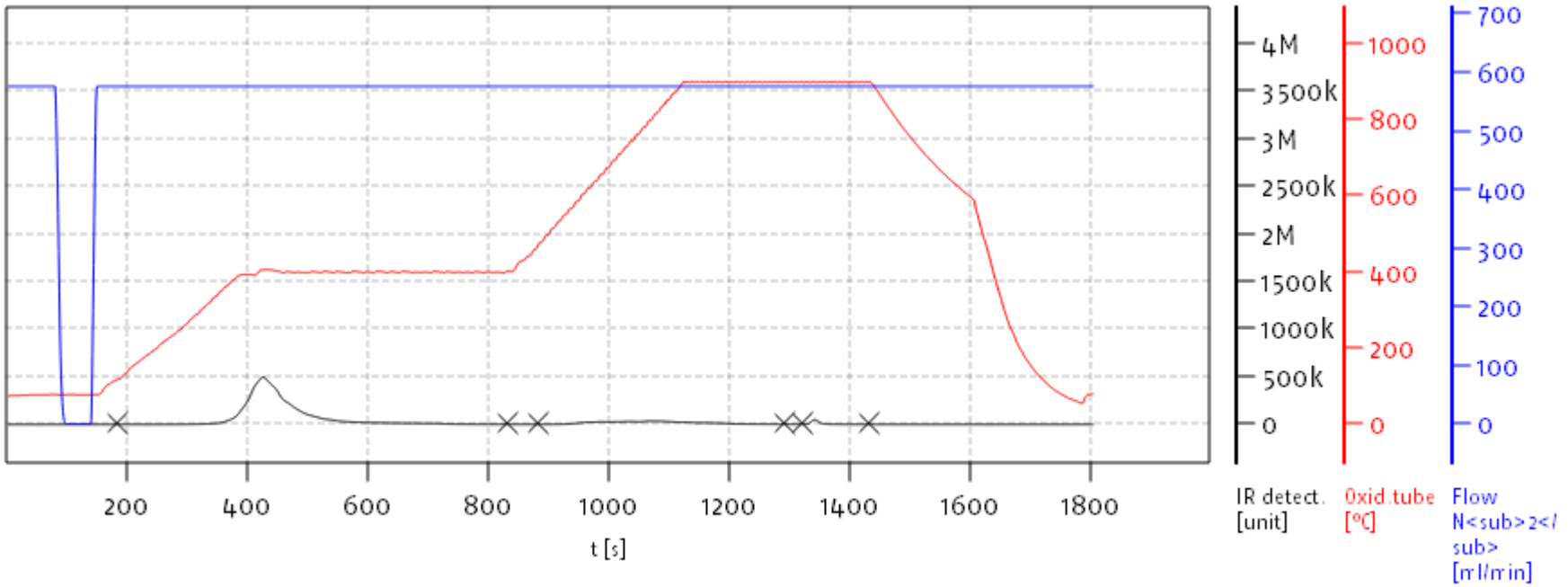
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
117	28	BJH0513-DUP4	557.20		1.00	CARBON	9/3/2021 10:35 PM	0.471	0.072	0.544	bl	1 556 930	250 483	31 935	0.9934	1.0000



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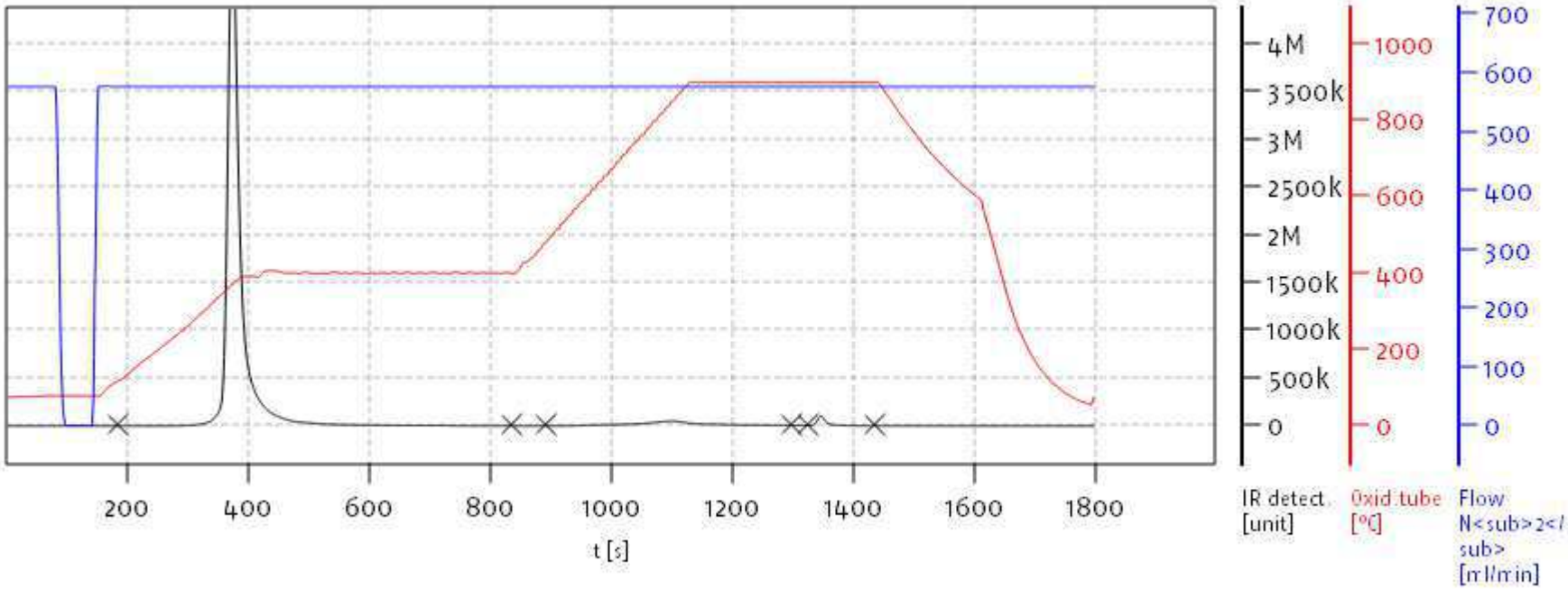
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
118	29	21H0260-01RE1	87.40		1.00	CARBON	9/3/2021 11:06 PM	9.323	0.436	9.760	bl	4 809 280	237 538	70 533	0.9934	1.0000



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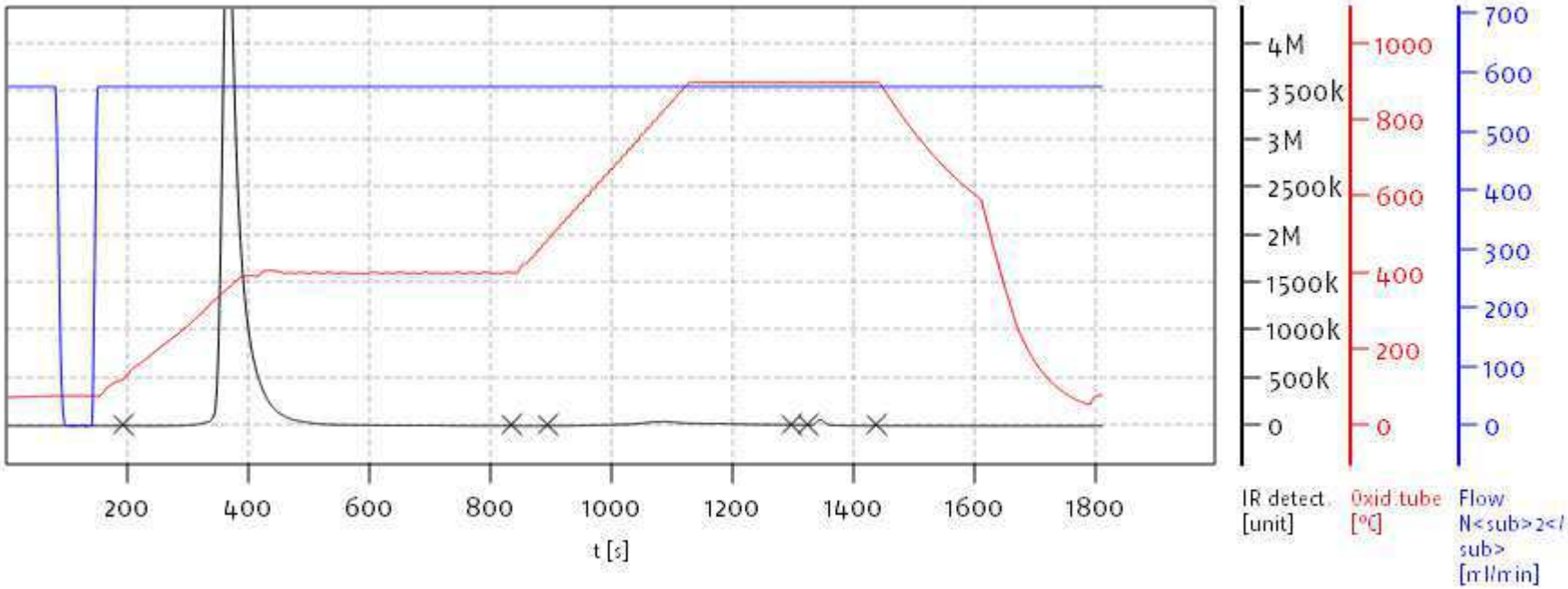
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
119	30	21H0260-02RE1	63.60		1.00	CARBON	9/3/2021 11:36 PM	17.777	0.688	18.466	bl	6 713 090	270 882	49 004	0.9934	1.0000



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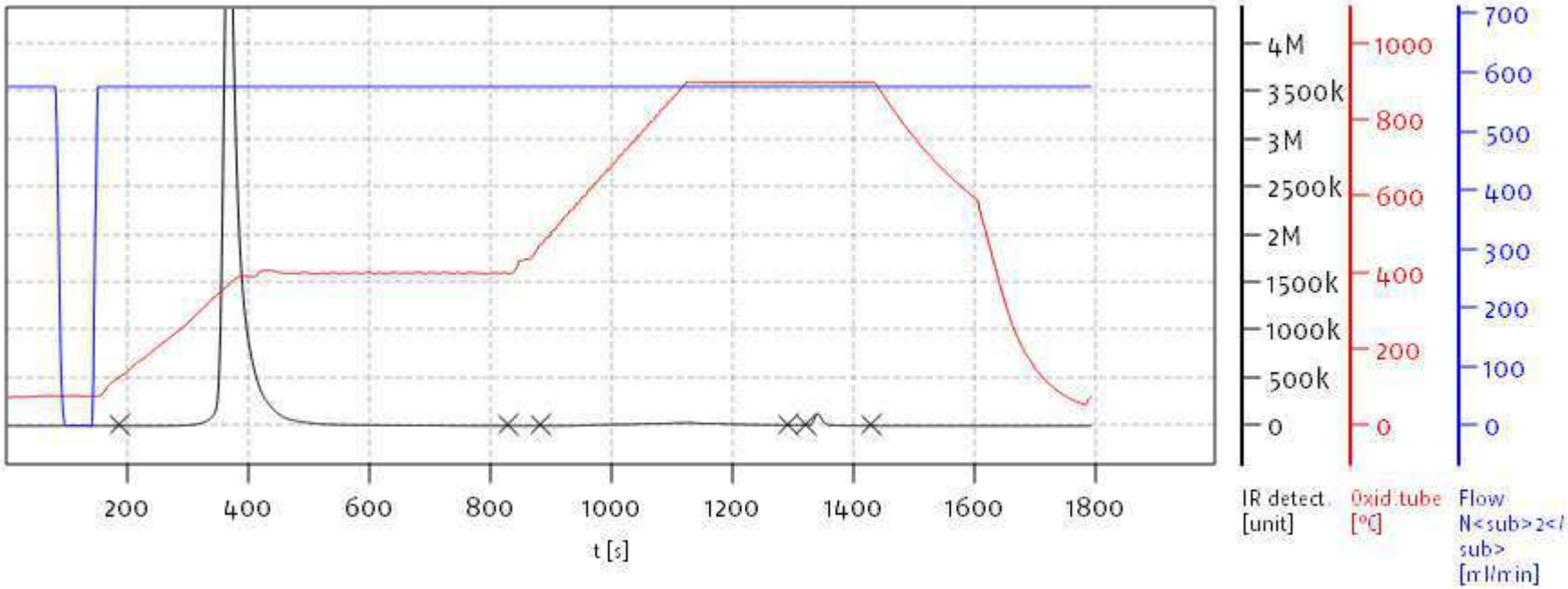
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
120	31	21H0261-01RE1	72.60		1.00	CARBON	9/4/2021 12:07 AM	14.733	0.515	15.248	bl	6 318 590	232 862	79 747	0.9934	1.0000



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Access: soliTOC superuser

Date: Mon Sep 6 07:32:29 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

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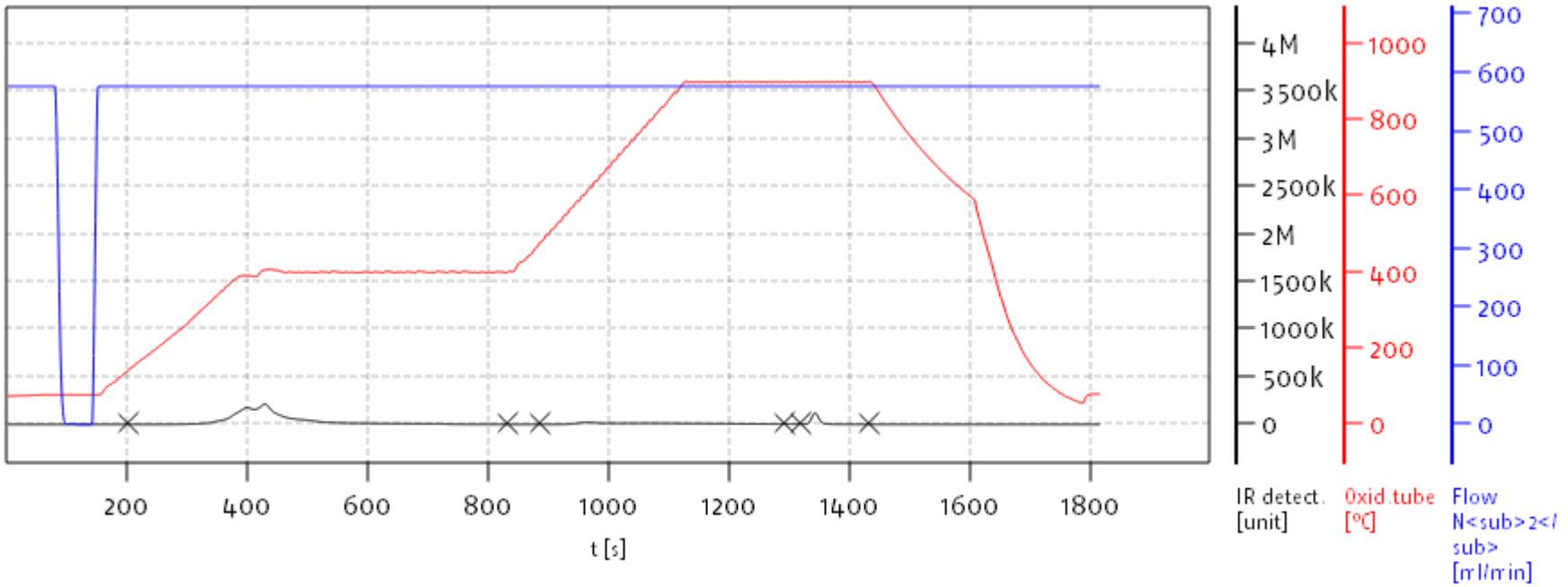
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
121	32	21H0262-01RE1	68.20		1.00	CARBON	9/4/2021 12:37 AM	2.000	0.313	2.313	bl	767 177	138 246	68 653	0.9934	1.0000



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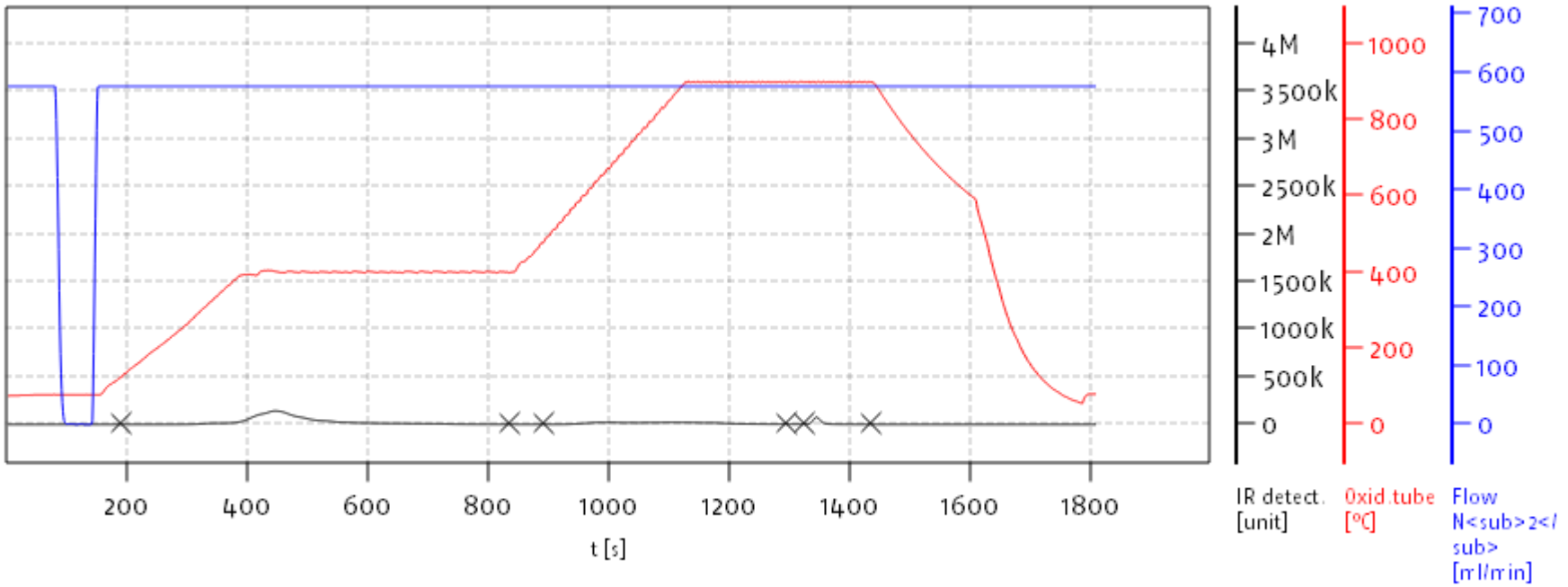
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
122	33	BJH0674-DUP2	504.60		1.00	CARBON	9/4/2021 1:08 AM	0.209	0.060	0.269	bl	606 908	190 542	46 291	0.9934	1.0000



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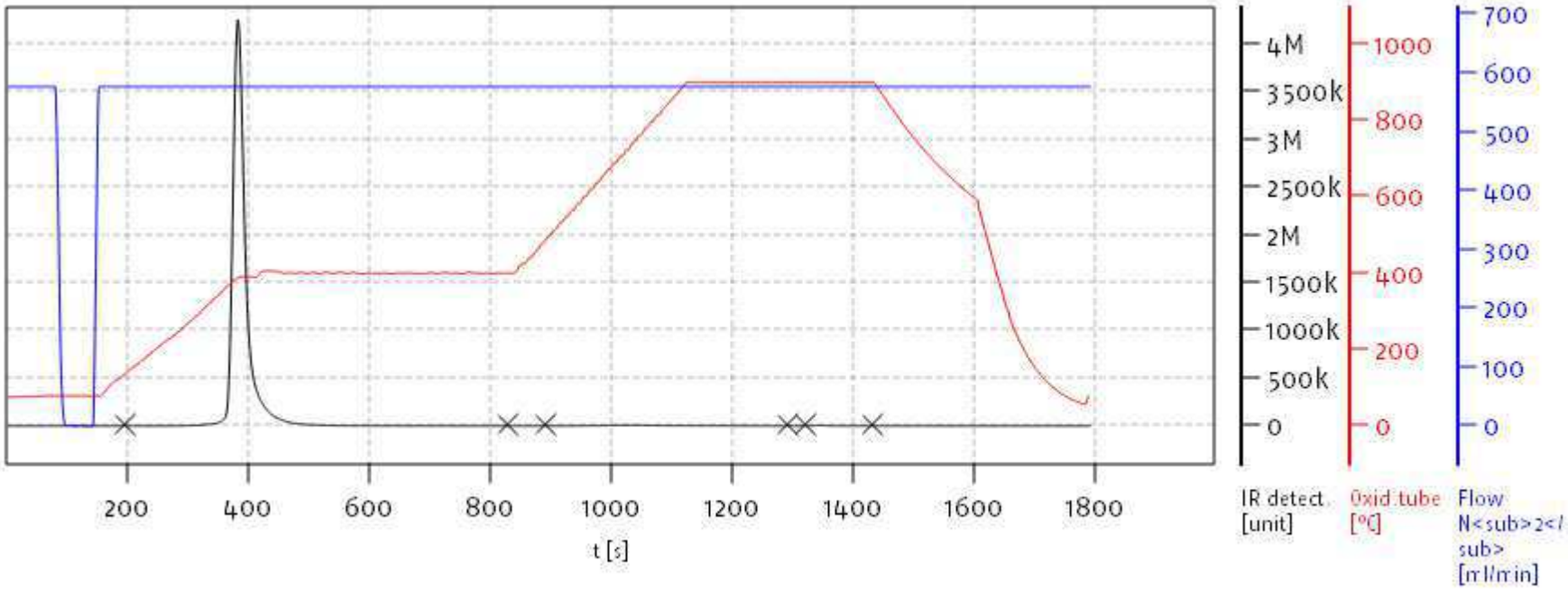
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
123	34	21H0274-03RE1	201.70		1.00	CARBON	9/4/2021 1:38 AM	3.256	0.026	3.281	bl,C2u	3 925 640	42 303	6 590	0.9934	1.0000



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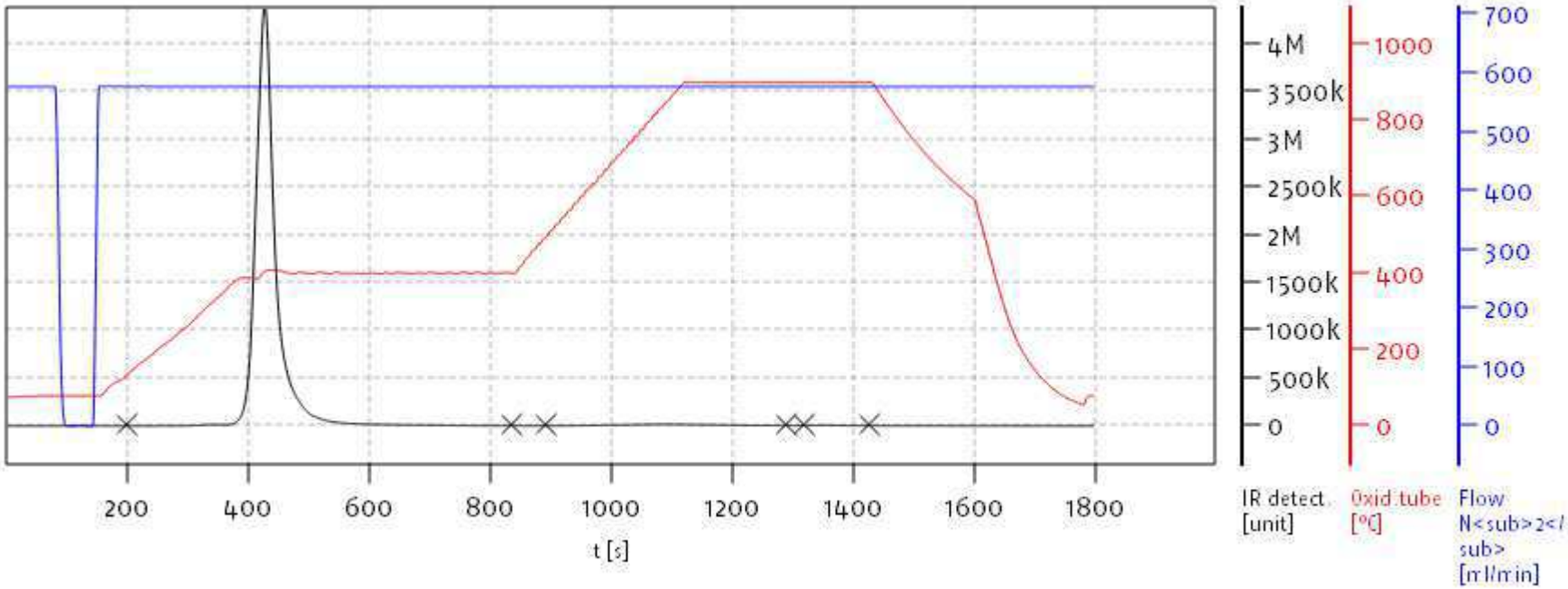
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
124	35	SJH0417-CCVA	23.20		1.00	CARBON	9/4/2021 2:09 AM	45.048	0.820	45.868	bl	6 235 010	124 372	17 518	0.9934	1.0000



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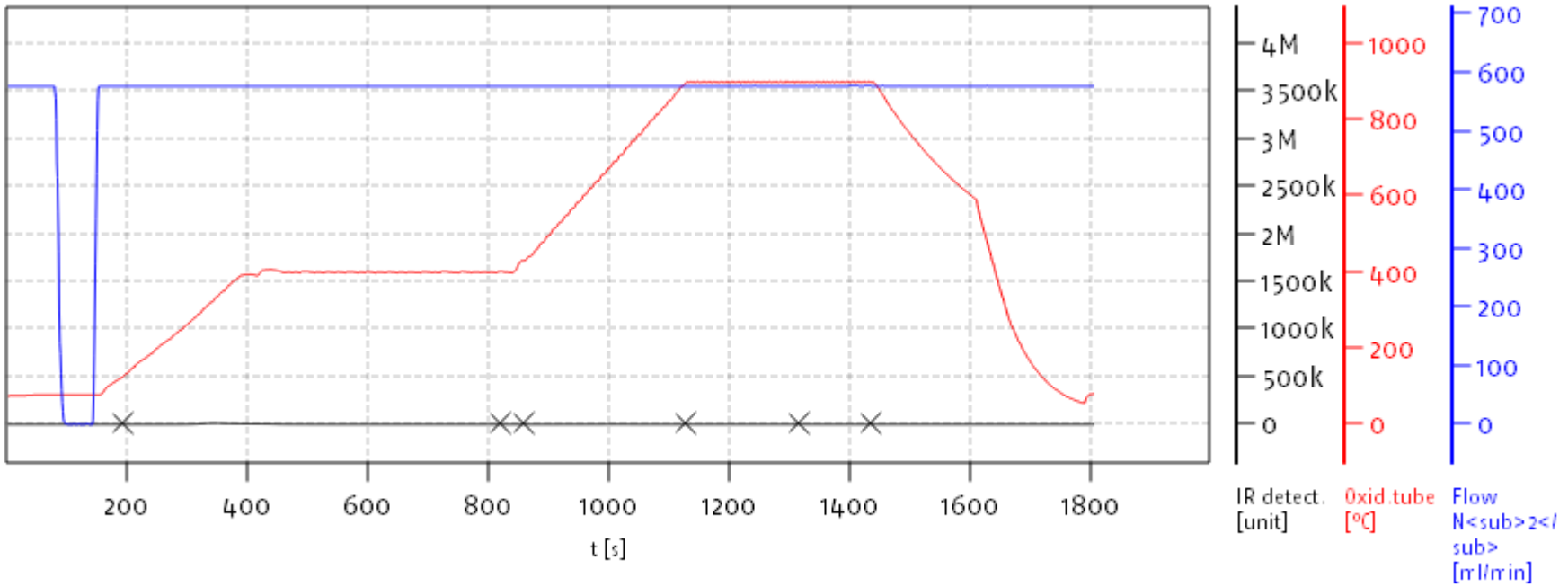
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
125	36	SJH0417-CCBA	555.10		1.00	CARBON	9/4/2021 2:39 AM	0.009	0.000	0.009	bl,C3u,C2u	41 446	2 172	358	0.9934	1.0000



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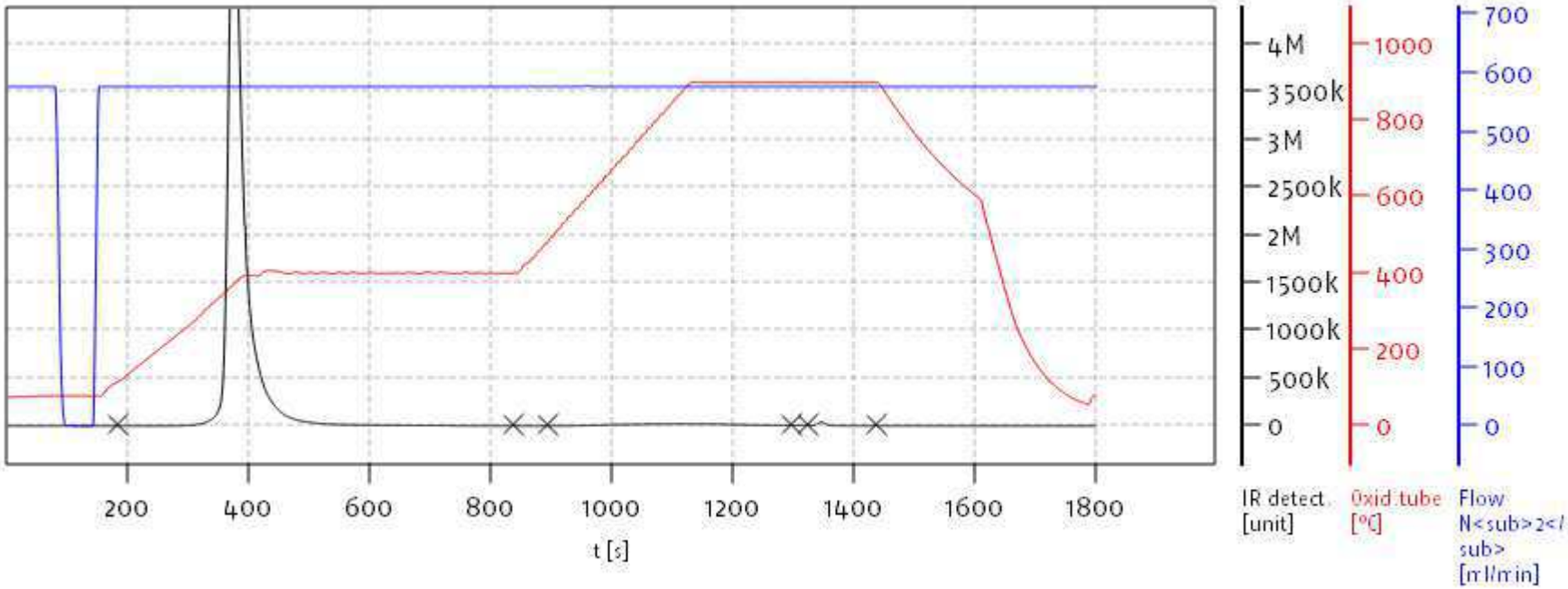
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
126	37	21H0275-01RE1	52.60		1.00	CARBON	9/4/2021 3:10 AM	21.405	0.525	21.930	bl	6 706 260	175 202	27 764	0.9934	1.0000



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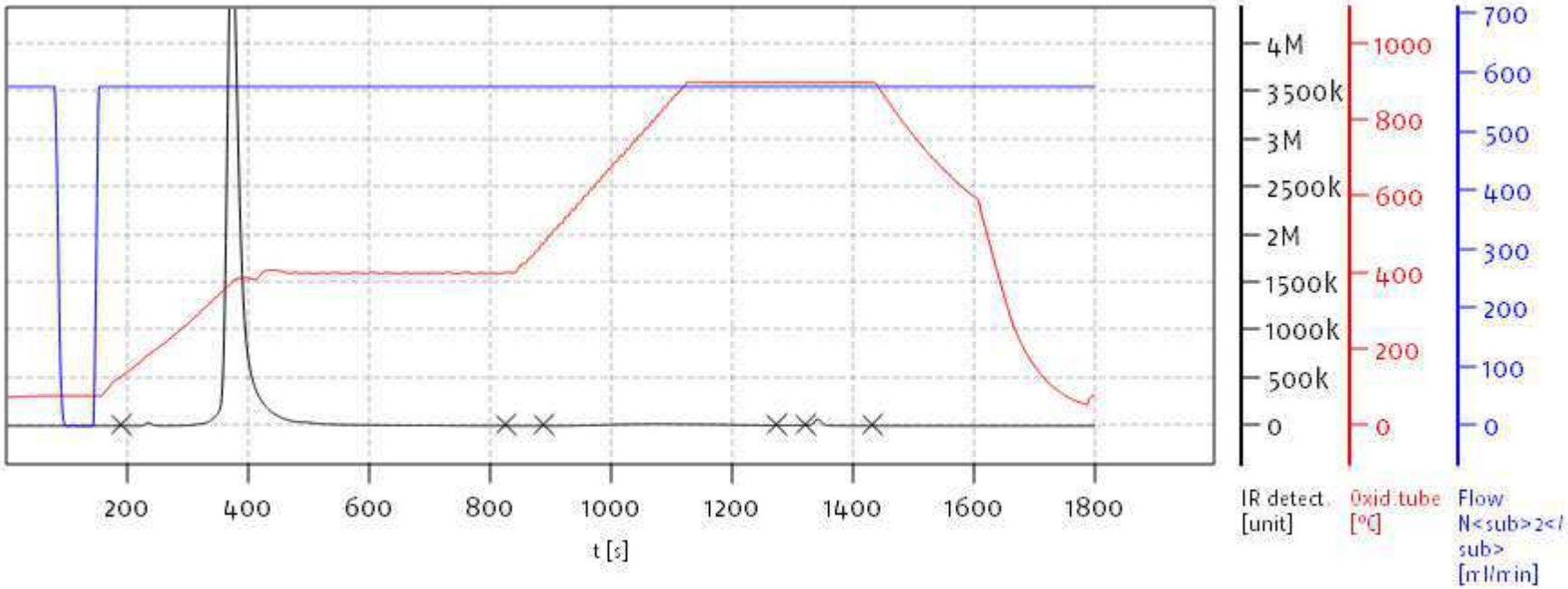
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
127	38	21H0275-03RE1	58.50		1.00	CARBON	9/4/2021 3:40 AM	14.961	0.407	15.368	bl	5 198 730	152 749	40 890	0.9934	1.0000



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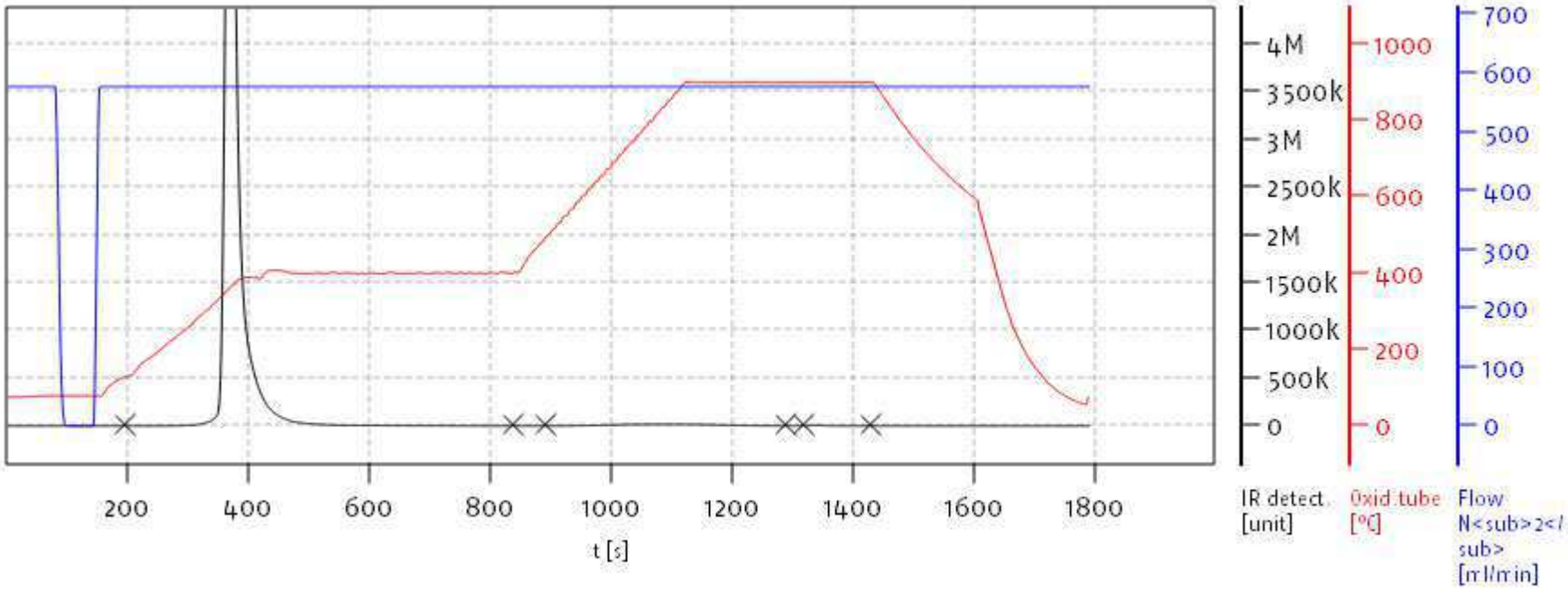
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
128	39	21H0275-06RE1	54.60		1.00	CARBON	9/4/2021 4:10 AM	23.200	0.351	23.550	bl	7 561 650	125 020	8 527	0.9934	1.0000



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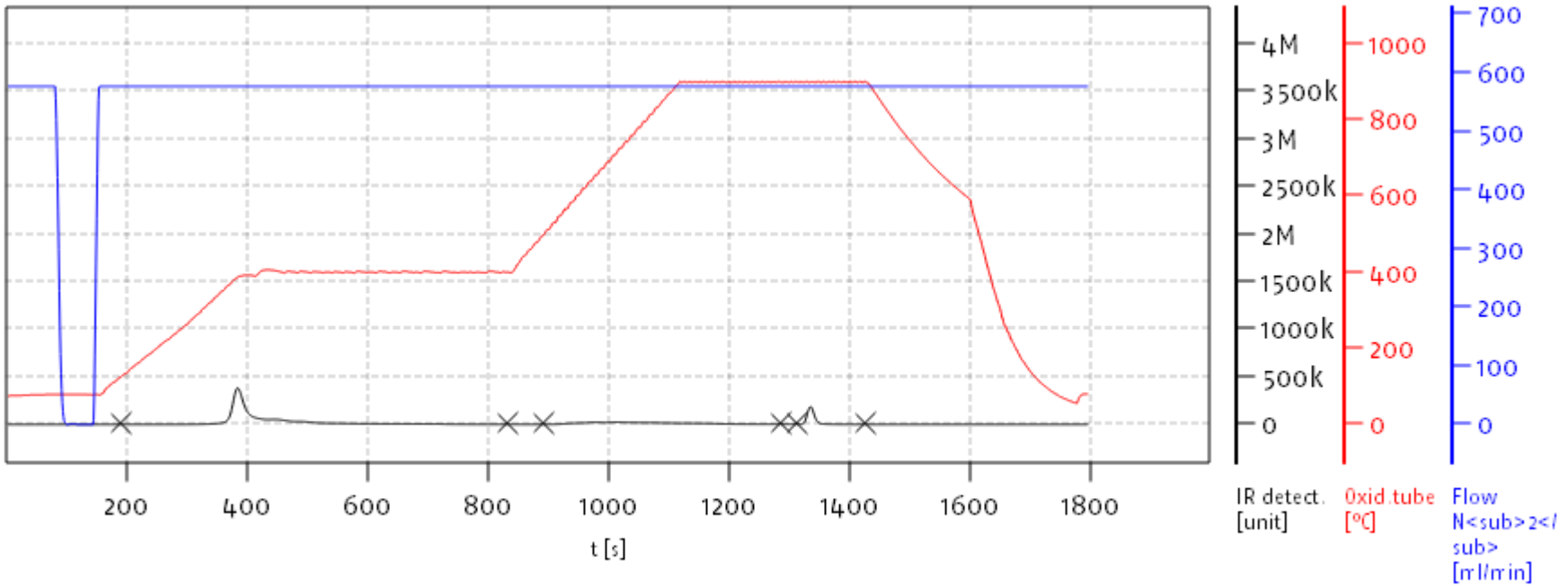
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
129	40	21H0224-08RE1	130.60		1.00	CARBON	9/4/2021 4:41 AM	0.842	0.206	1.048	bl	578 148	170 686	100 163	0.9934	1.0000



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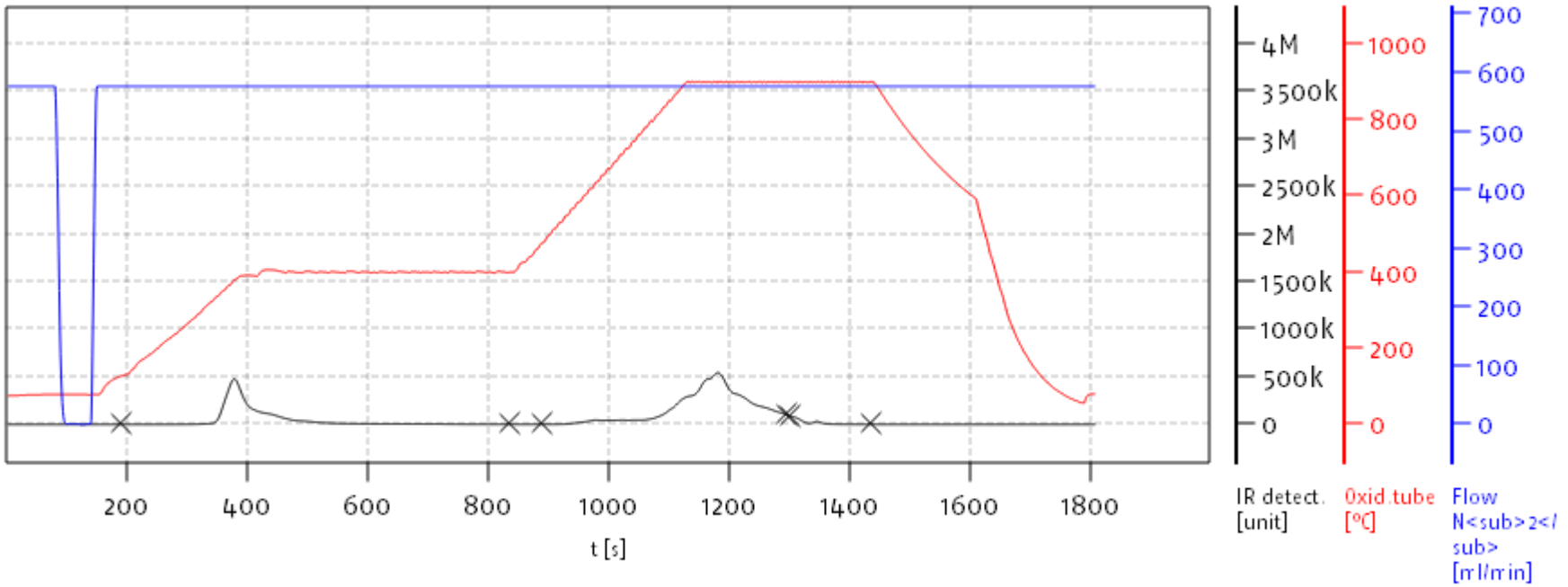
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
130	41	21H0234-01RE1	148.30		1.00	CARBON	9/4/2021 5:11 AM	1.218	2.776	3.994	bl	1 016 790	2 449 230	82 919	0.9934	1.0000



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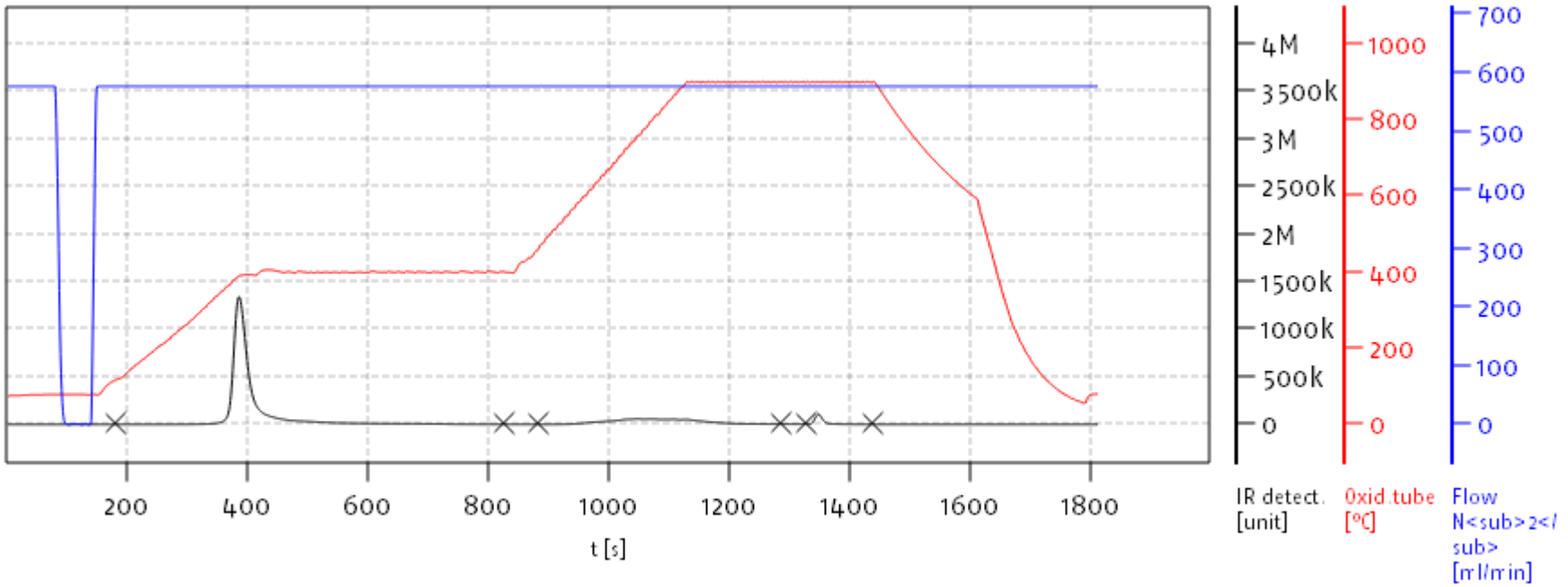
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
131	42	BJH0677-DUP3	222.40		1.00	CARBON	9/4/2021 5:42 AM	1.249	0.288	1.538	bl	1 612 950	391 499	65 783	0.9934	1.0000



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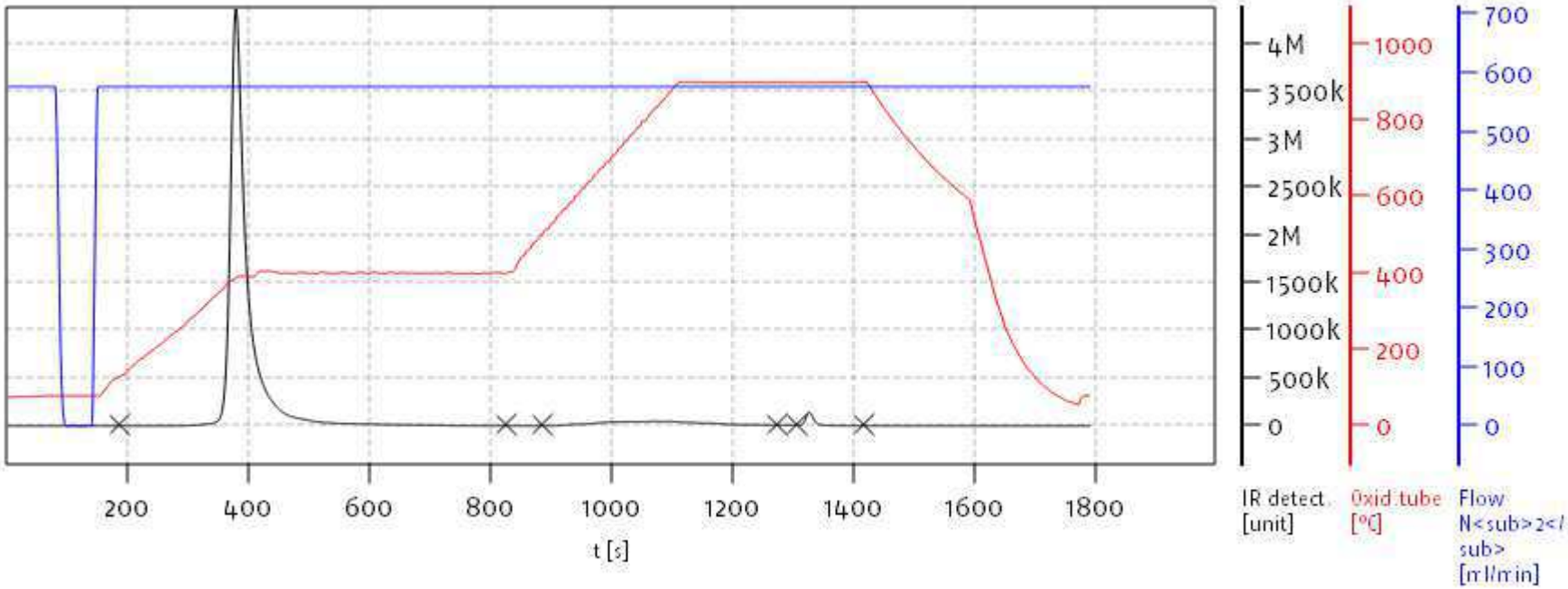
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
132	43	BJH0677-MS3	262.40	0.0118	1.00	CARBON	9/4/2021 6:12 AM	3.403	0.236	3.639	bl	5 258 690	378 093	86 584	0.9934	1.0000



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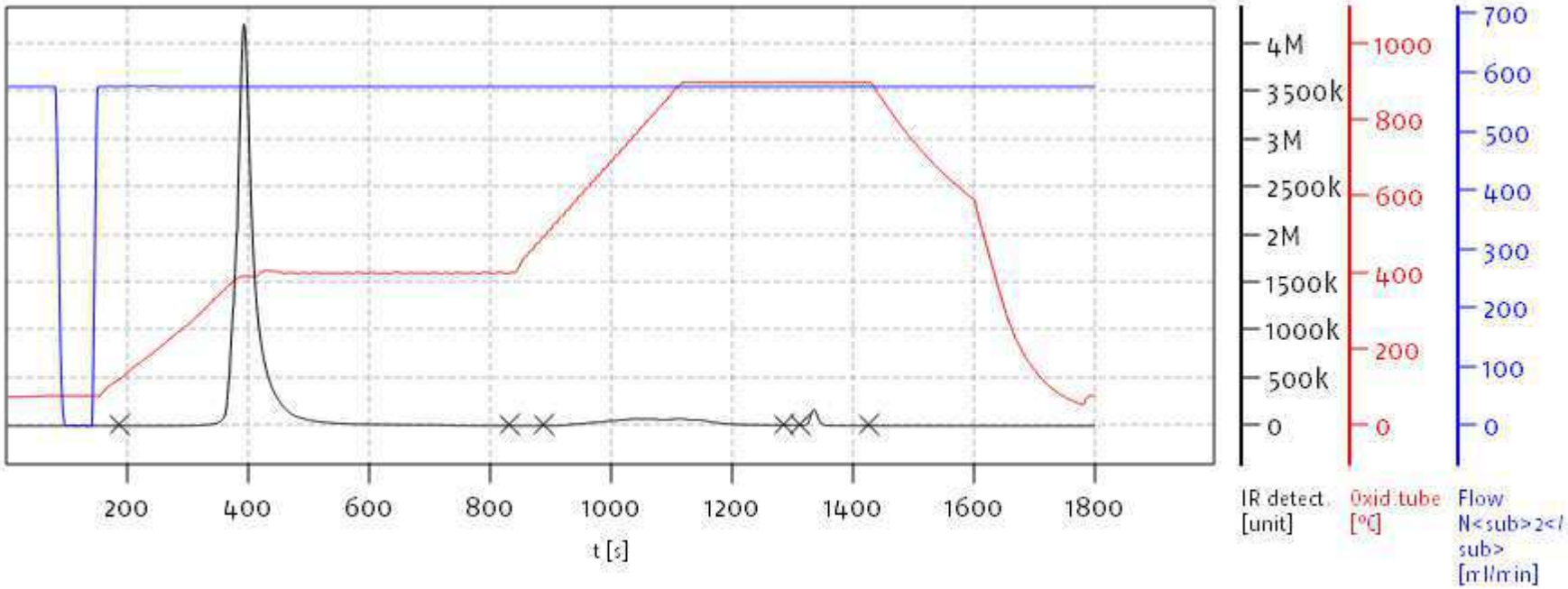
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
133	44	BJH0677-MSD3	234.20	0.0140	1.00	CARBON	9/4/2021 6:43 AM	4.011	0.396	4.408	bl	5 522 710	561 441	99 186	0.9934	1.0000



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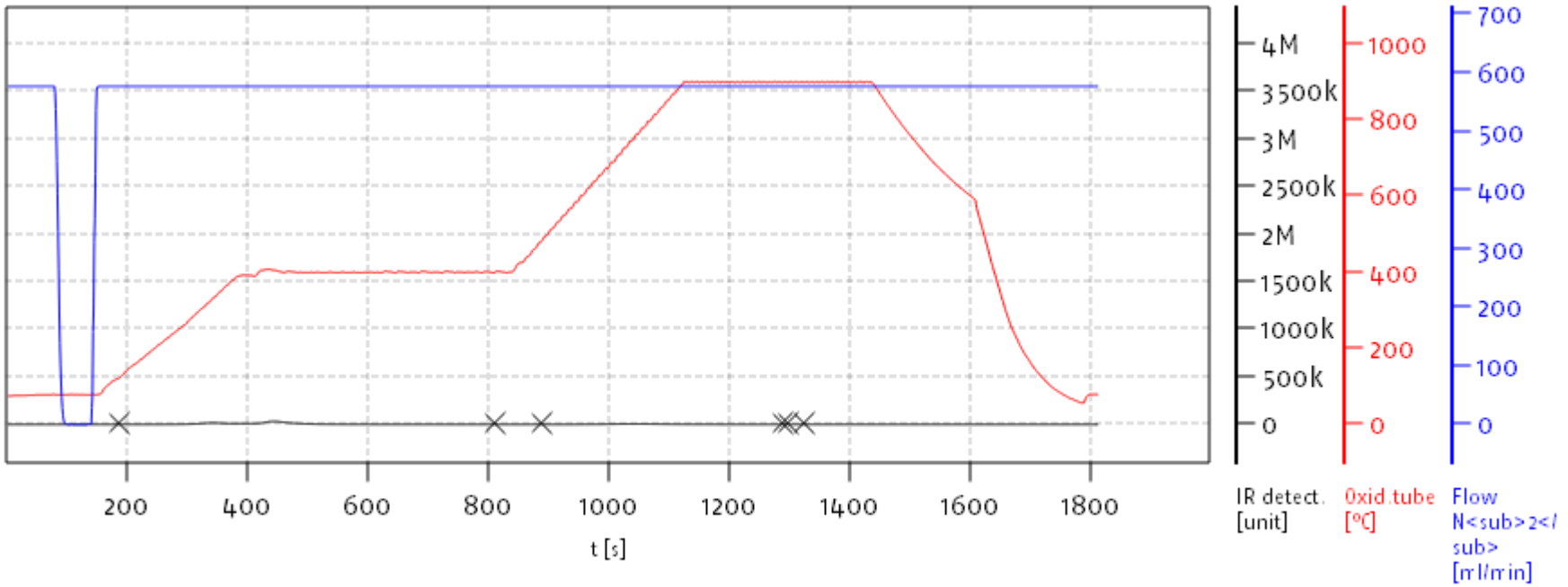
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
134	45	BJI0020-MRL1	555.10		1.00	CARBON	9/4/2021 7:13 AM	0.031	0.004	0.035	bl,C2u	113 783	24 431	88	0.9934	1.0000



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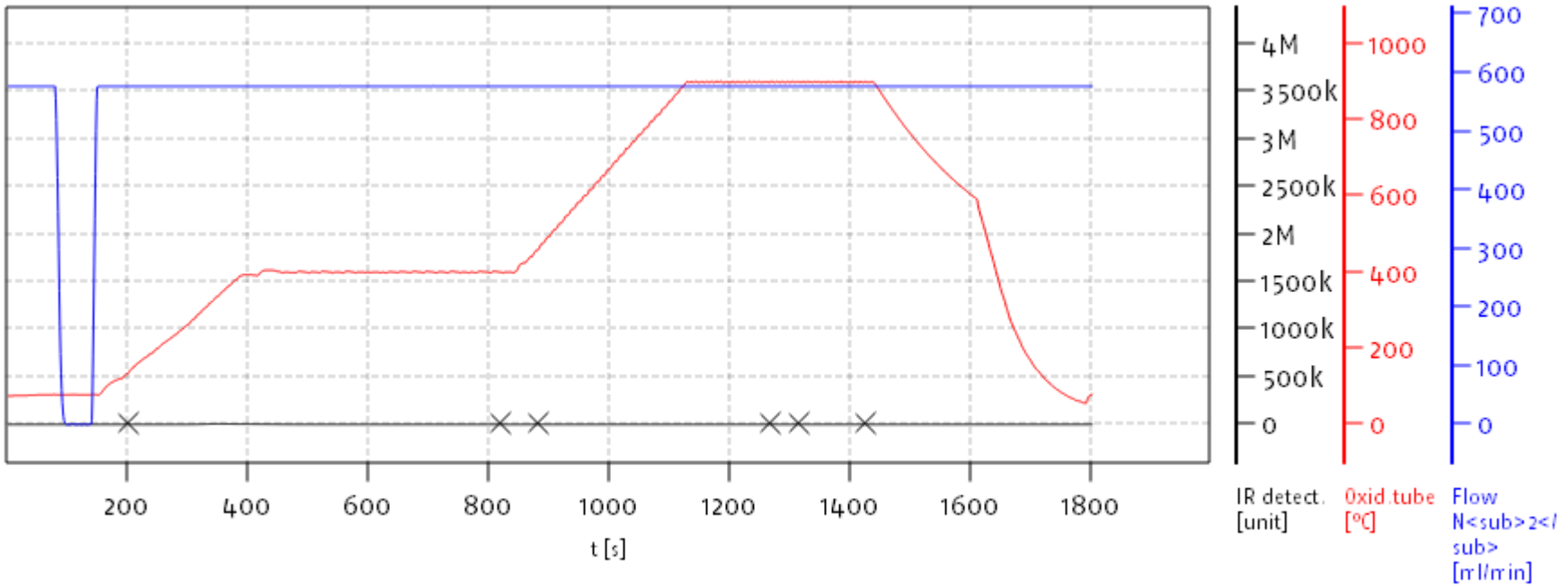
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
135	46	BJI0020-BLK1	590.20		1.00	CARBON	9/4/2021 7:44 AM	0.003	0.000	0.003	bl,C3u,C2u	22 846	2 237	357	0.9934	1.0000



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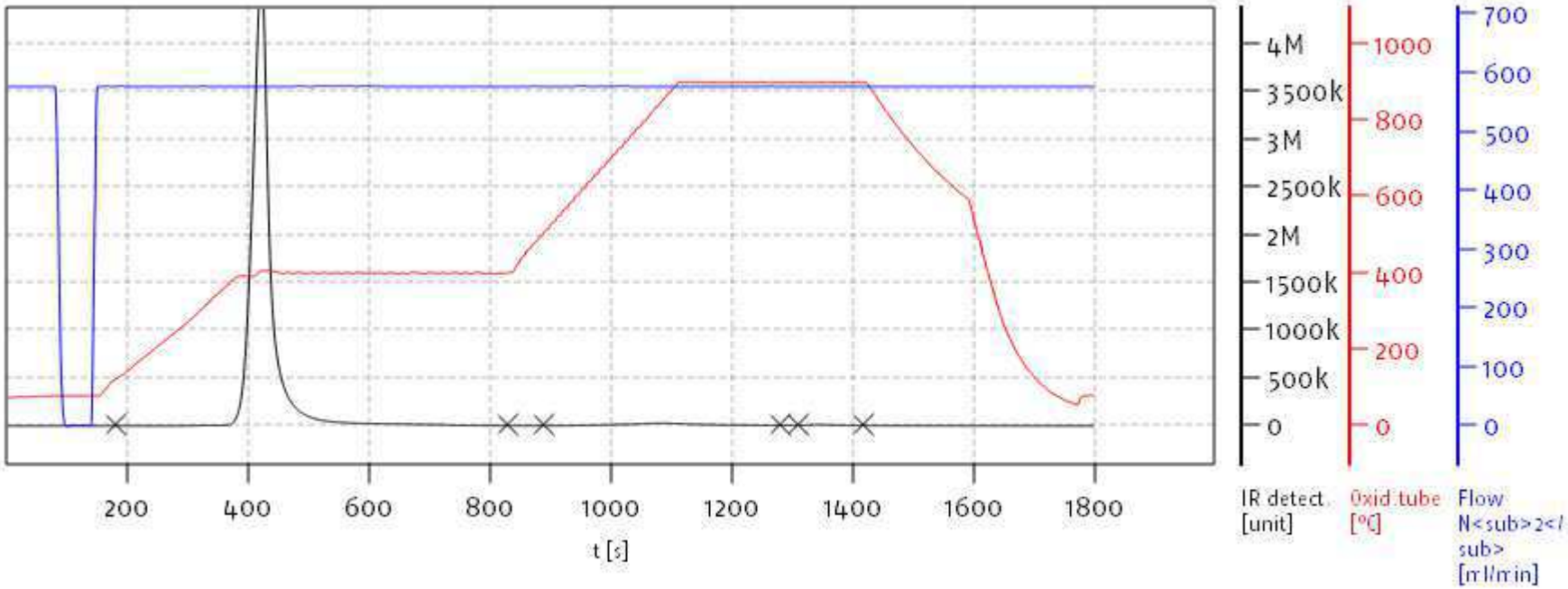
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
136	47	SJH0417-CCVB	23.20		1.00	CARBON	9/4/2021 8:14 AM	44.275	1.190	45.465	bl	6 116 640	175 084	28 999	0.9934	1.0000



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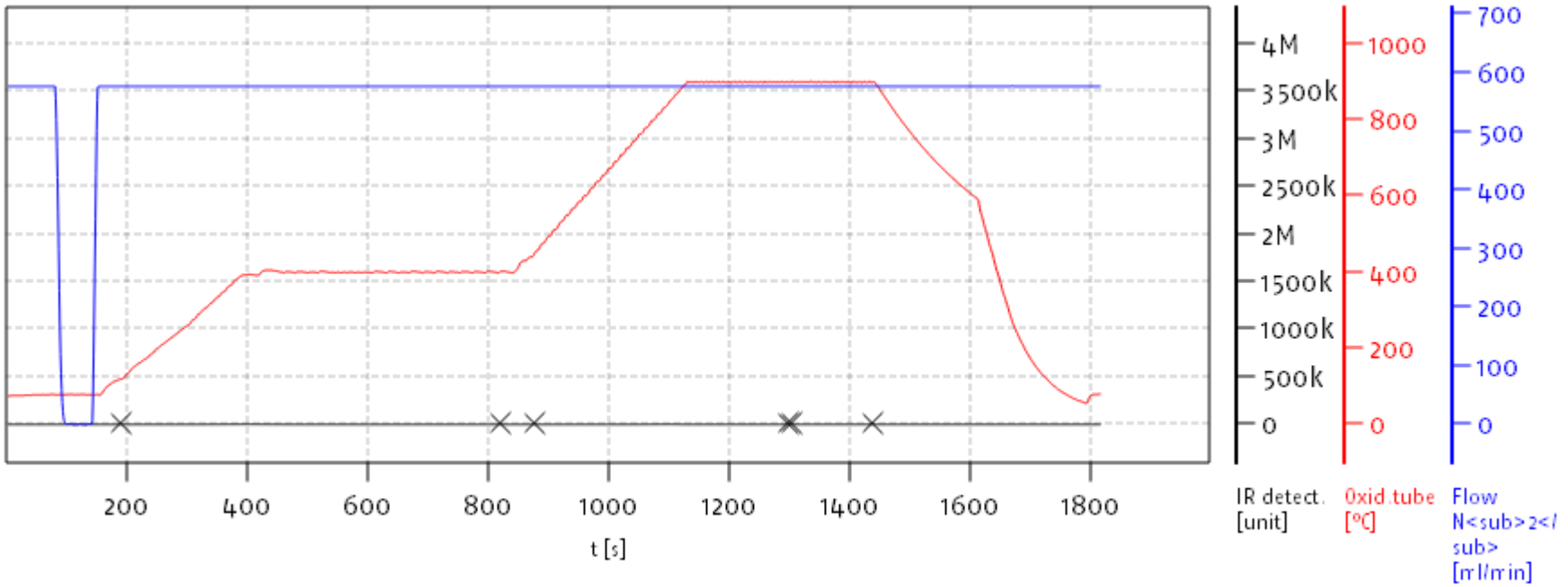
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
137	48	SJH0417-CCBB	671.00		1.00	CARBON	9/4/2021 8:45 AM	0.000	0.000	0.000	bl,C1u,C3u,C2u	7 053	3 769	344	0.9934	1.0000



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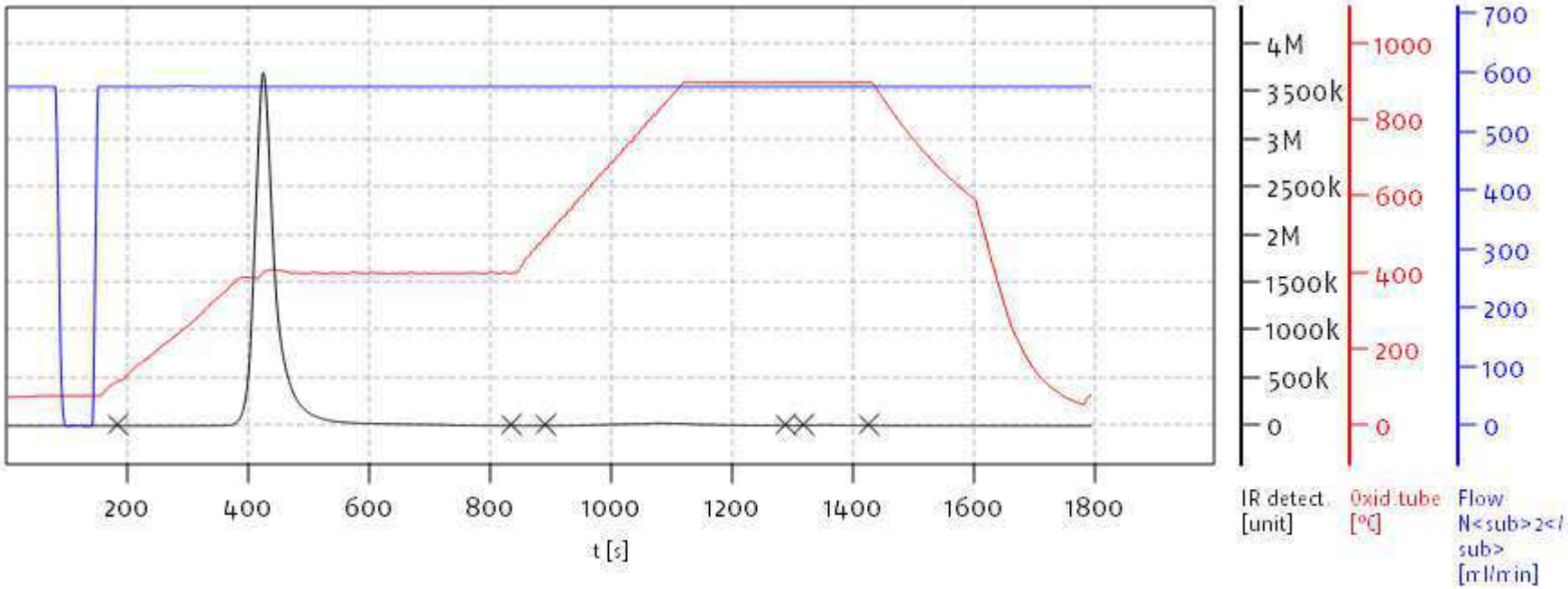
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
138	49	BJI0020-BS1	20.80		1.00	CARBON	9/4/2021 9:15 AM	44.997	1.344	46.341	bl	5 579 820	177 218	21 972	0.9934	1.0000



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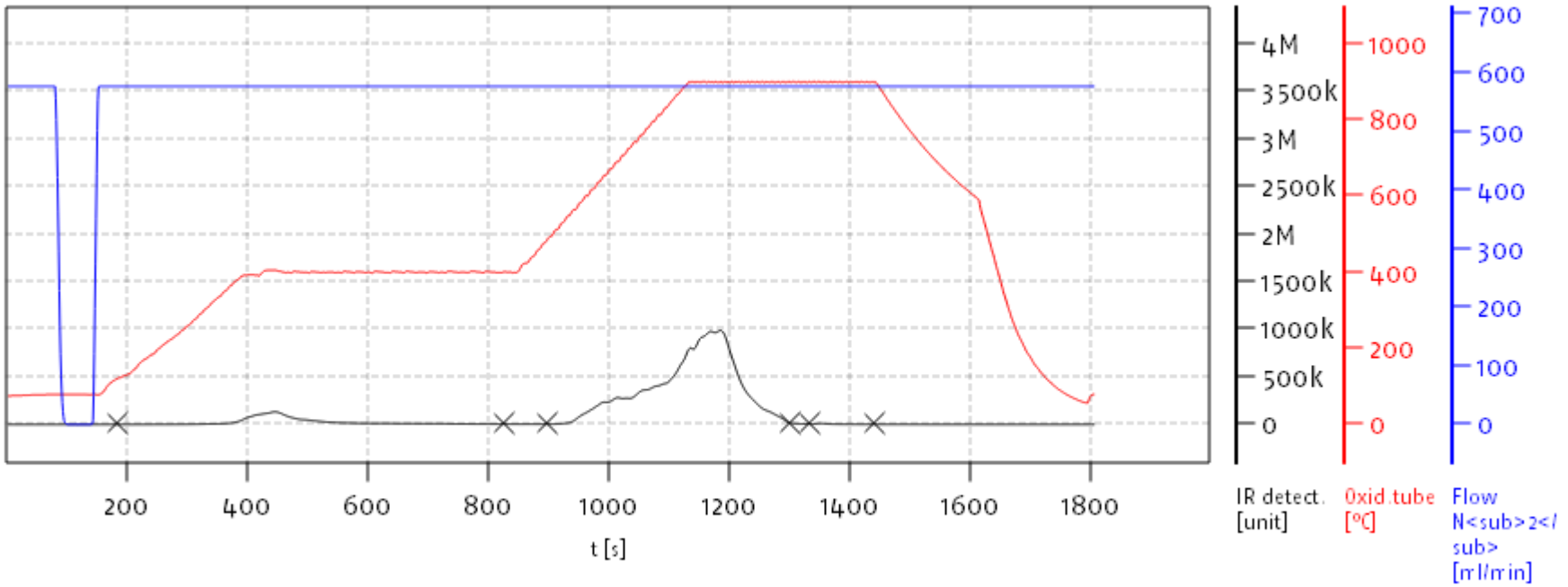
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
139	50	21G0404-01	522.30		1.00	CARBON	9/4/2021 9:46 AM	0.173	1.814	1.987	bl	548 547	5 621 650	13 691	0.9934	1.0000



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Access: soliTOC superuser

Date: Mon Sep 6 07:32:29 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
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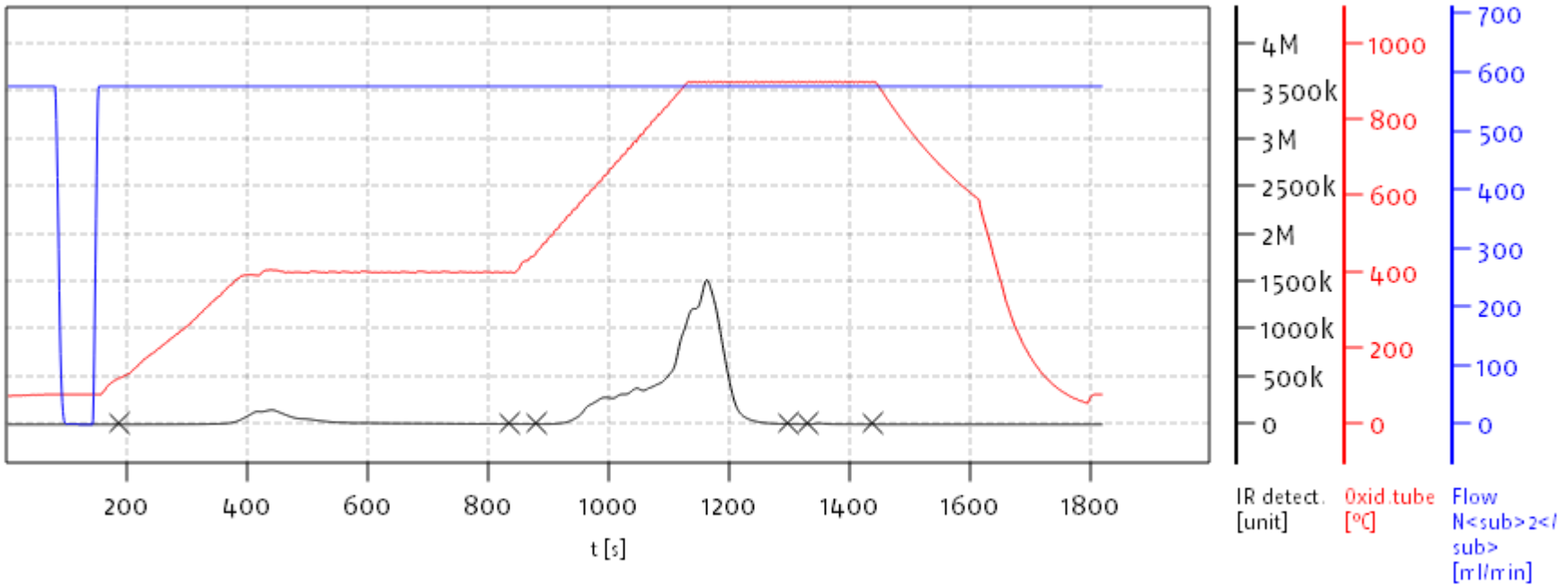
Document: from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
140	51	BJI0020-DUP1	581.00		1.00	CARBON	9/4/2021 10:16 AM	0.184	1.745	1.929	bl	645 498	6 016 200	13 903	0.9934	1.0000



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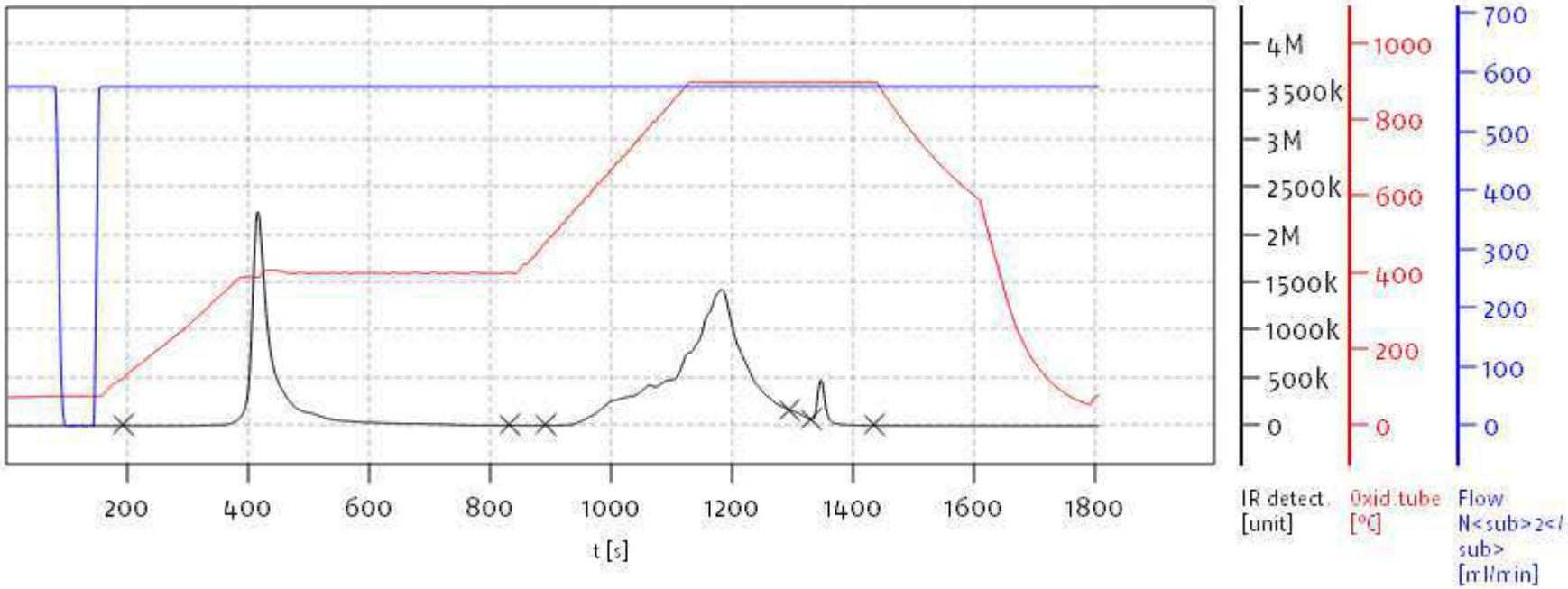
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
141	52	BJI0020-MS1	612.90	0.0111	1.00	CARBON	9/4/2021 10:47 AM	0.979	1.919	2.898	bl	3 292 890	6 974 070	305 999	0.9934	1.0000



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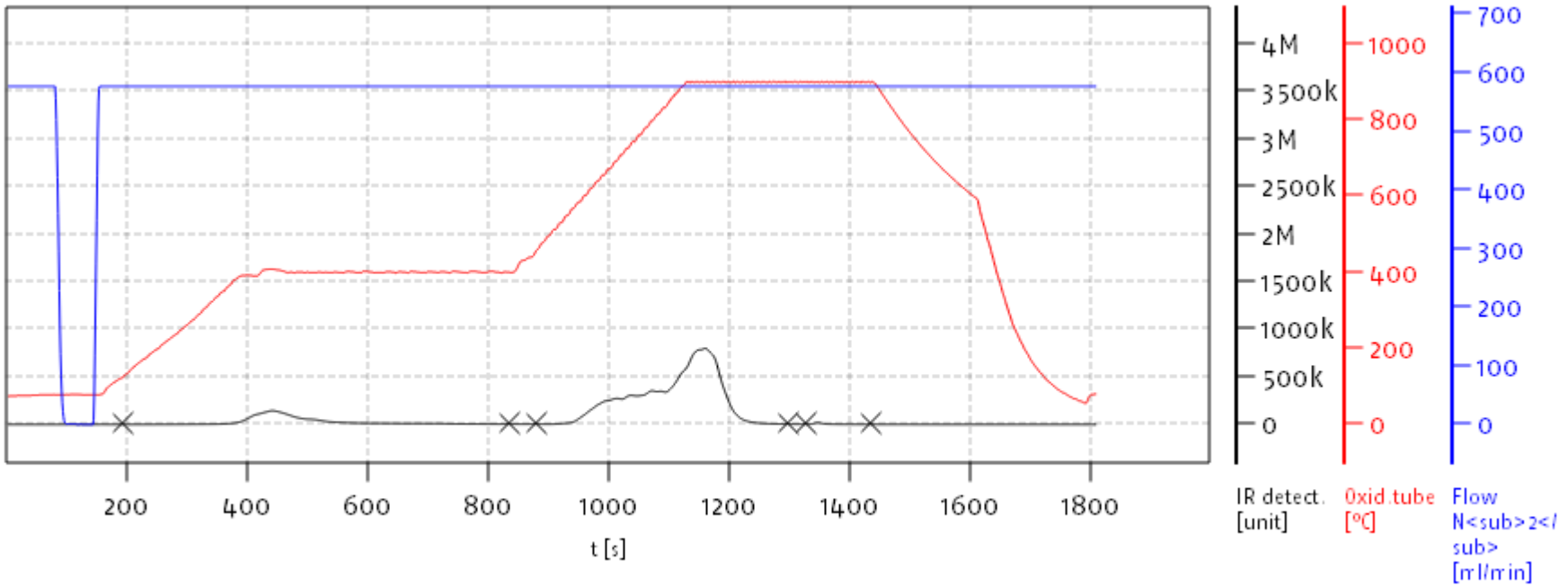
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
142	53	21G0404-02	525.30		1.00	CARBON	9/4/2021 11:18 AM	0.189	1.243	1.432	bl	598 291	3 878 040	16 854	0.9934	1.0000



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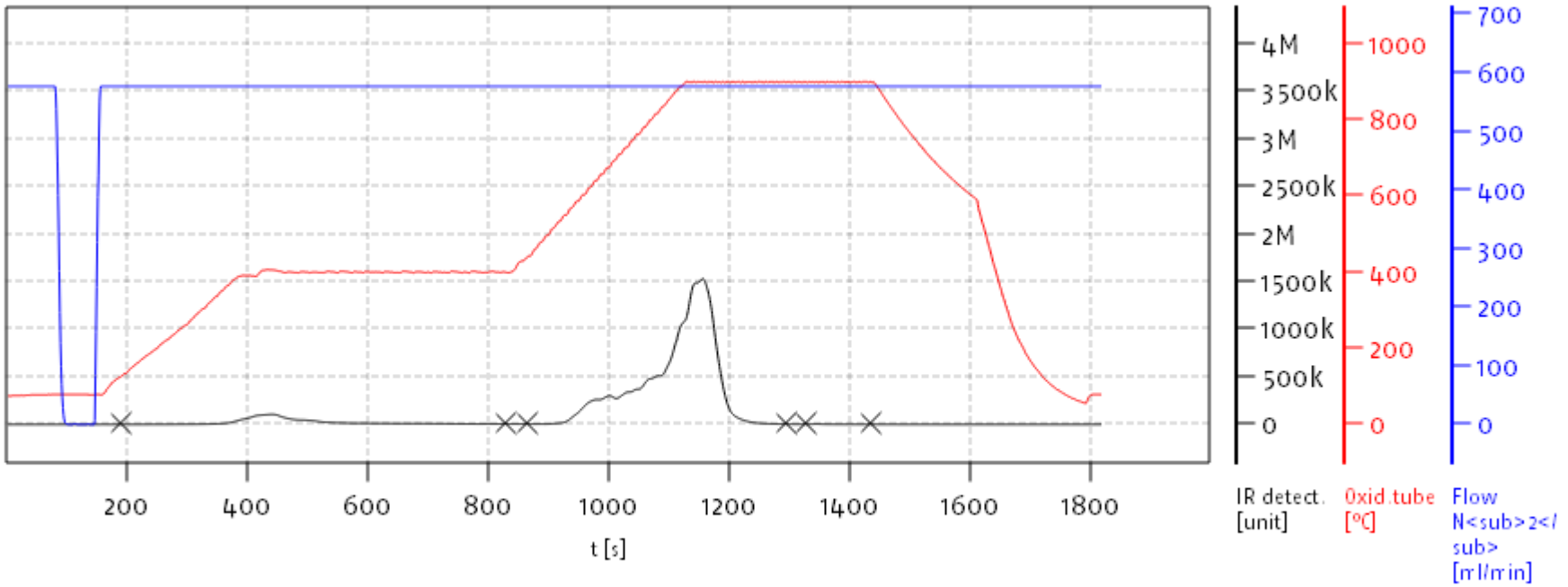
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
143	54	21G0404-03	639.30		1.00	CARBON	9/4/2021 11:48 AM	0.127	1.583	1.710	bl,C2u	495 307	6 002 960	7 000	0.9934	1.0000



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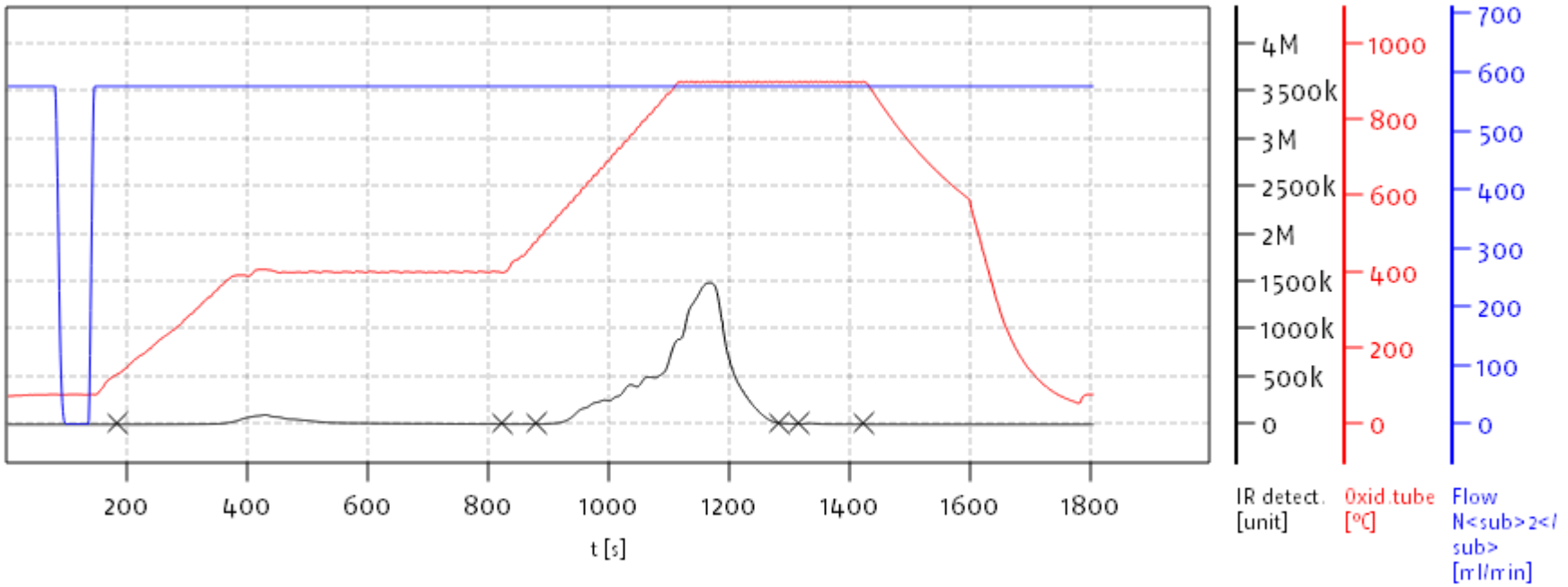
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
144	55	21G0404-04	633.10		1.00	CARBON	9/4/2021 12:19 PM	0.122	1.903	2.025	bl	468 750	7 145 870	14 459	0.9934	1.0000



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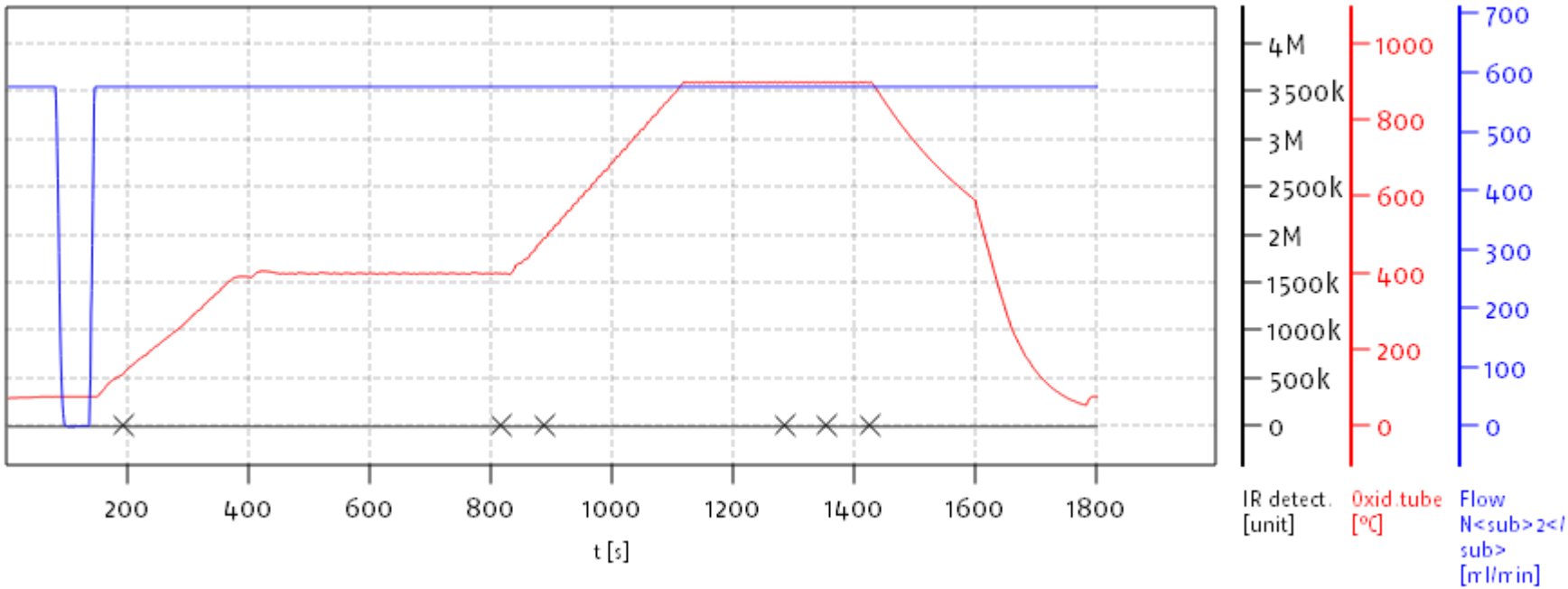
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
145	56	BLANK	1.00		1.00	CARBON	9/4/2021 12:49 PM	0.000	0.000	0.000	bl	6 526	3 629	43	0.9934	1.0000



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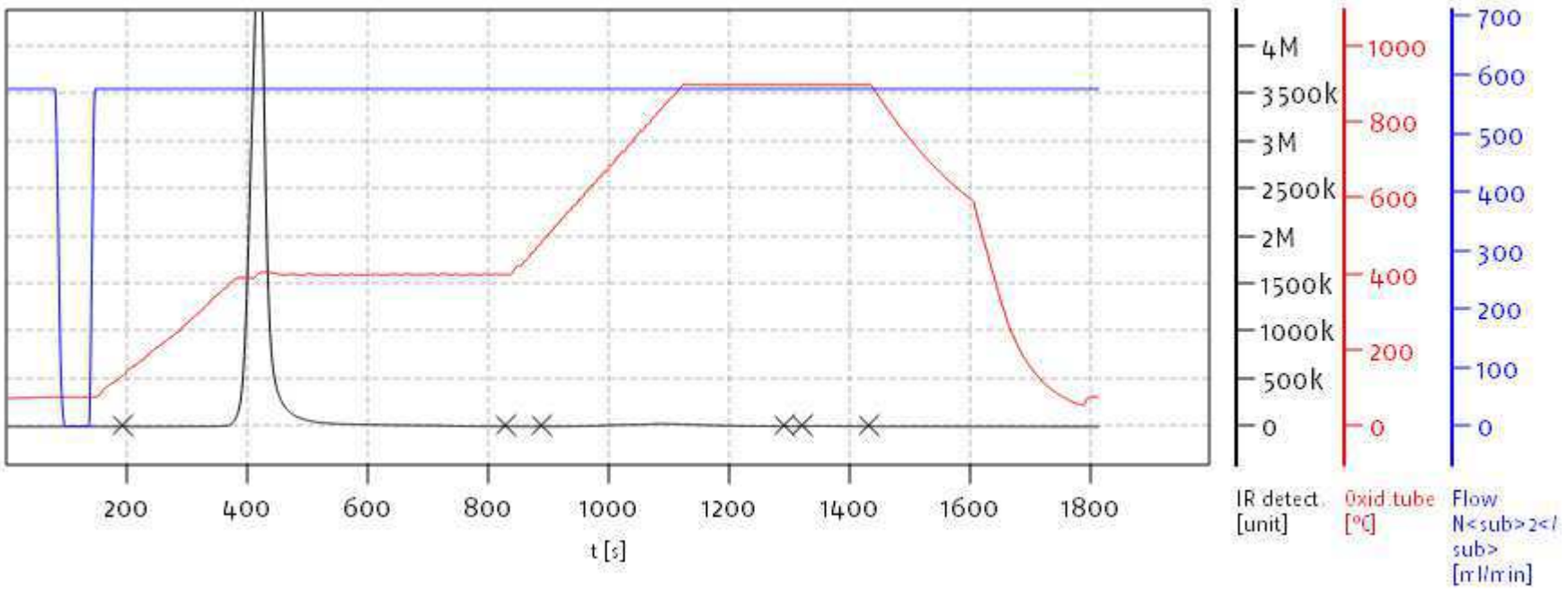
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
146	57	Dfactor	22.10		1.00	CARBON	9/4/2021 1:20 PM	44.478	1.375	45.853	bl	6 029 760	191 631	15 936	0.9664	1.0000



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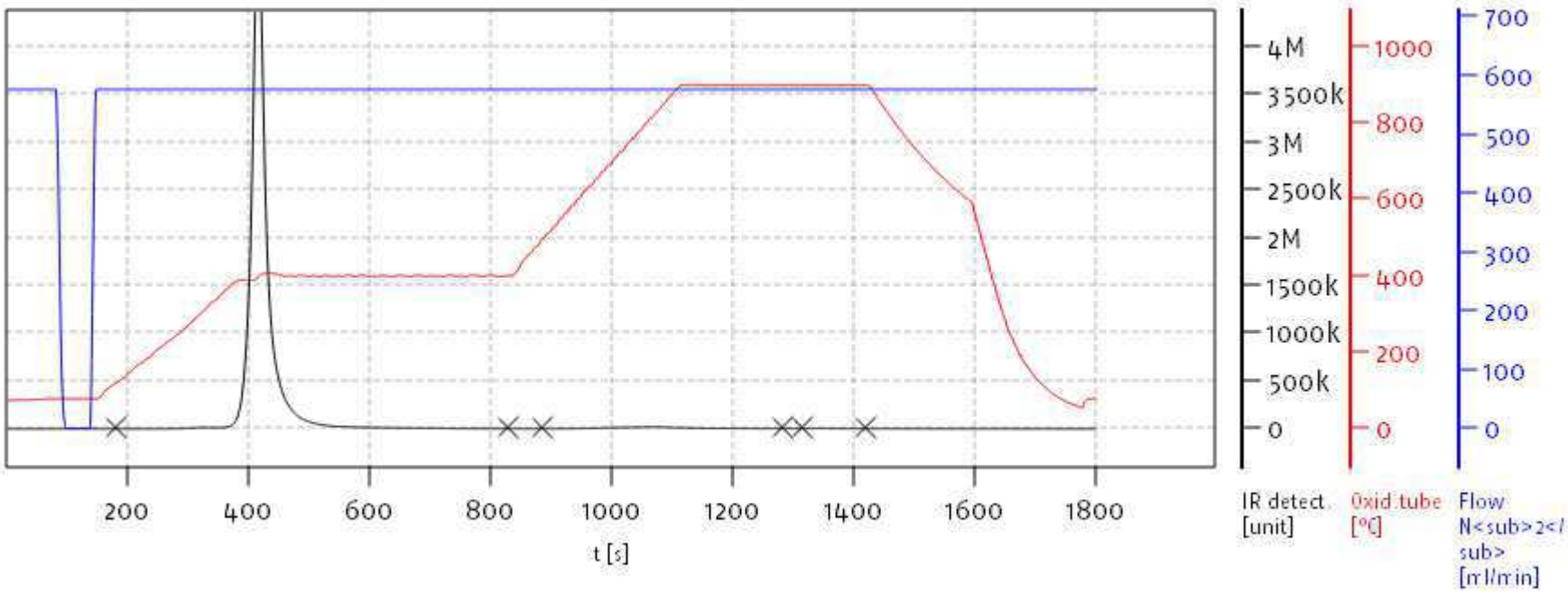
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
147	58	Dfactor	21.20		1.00	CARBON	9/4/2021 1:50 PM	44.446	0.812	45.257	bl	5 790 610	113 570	11 430	0.9654	1.0000



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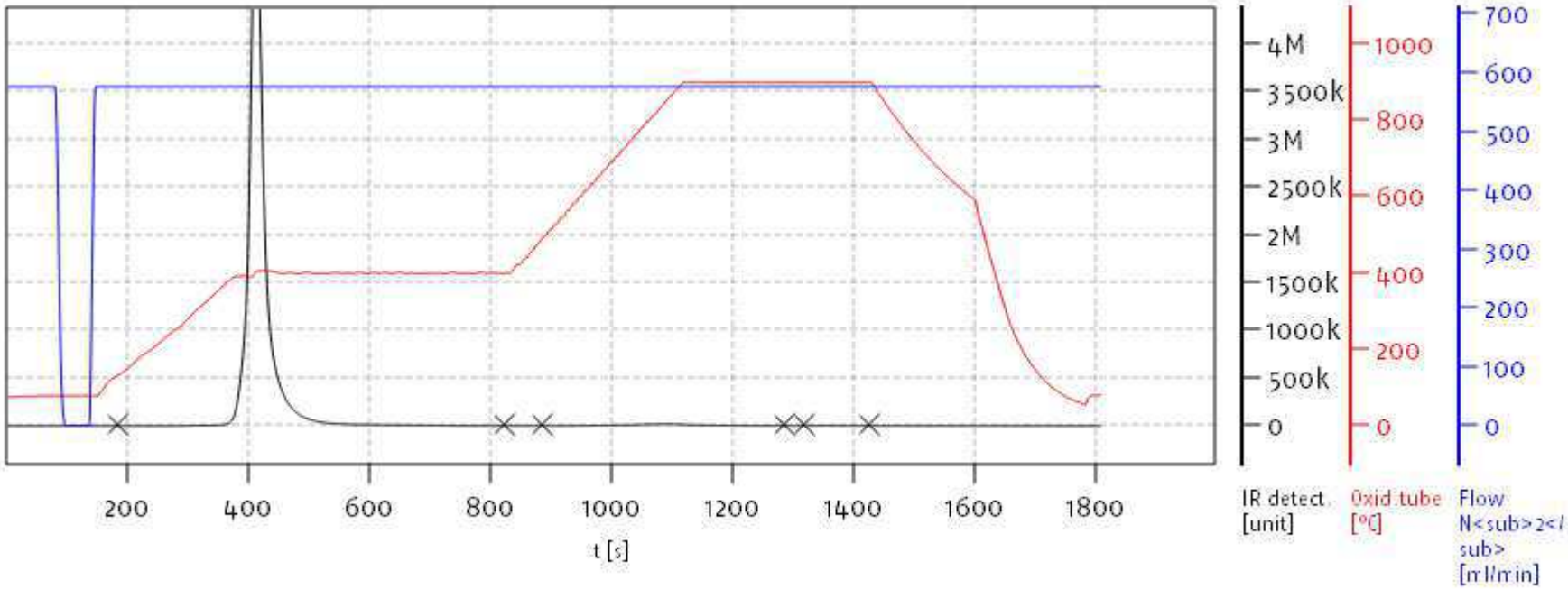
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
148	59	SJH0417-CCVC	22.20		1.00	CARBON	9/4/2021 2:21 PM	45.176	0.686	45.863	bl	6 159 530	101 875	8 921	0.9659	1.0000



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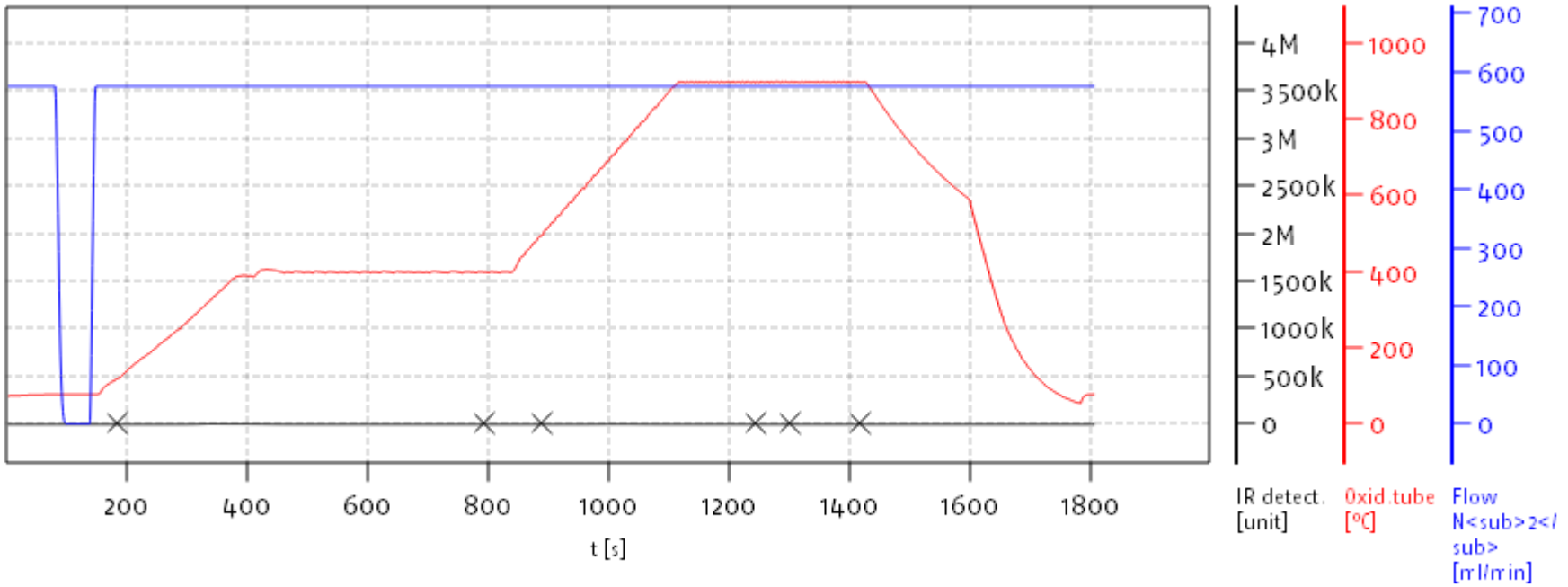
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
149	60	SJH0417-CCBC	615.10		1.00	CARBON	9/4/2021 2:52 PM	0.002	0.000	0.002	bl,C3u,C2u	19 312	6 926	510	0.9659	1.0000



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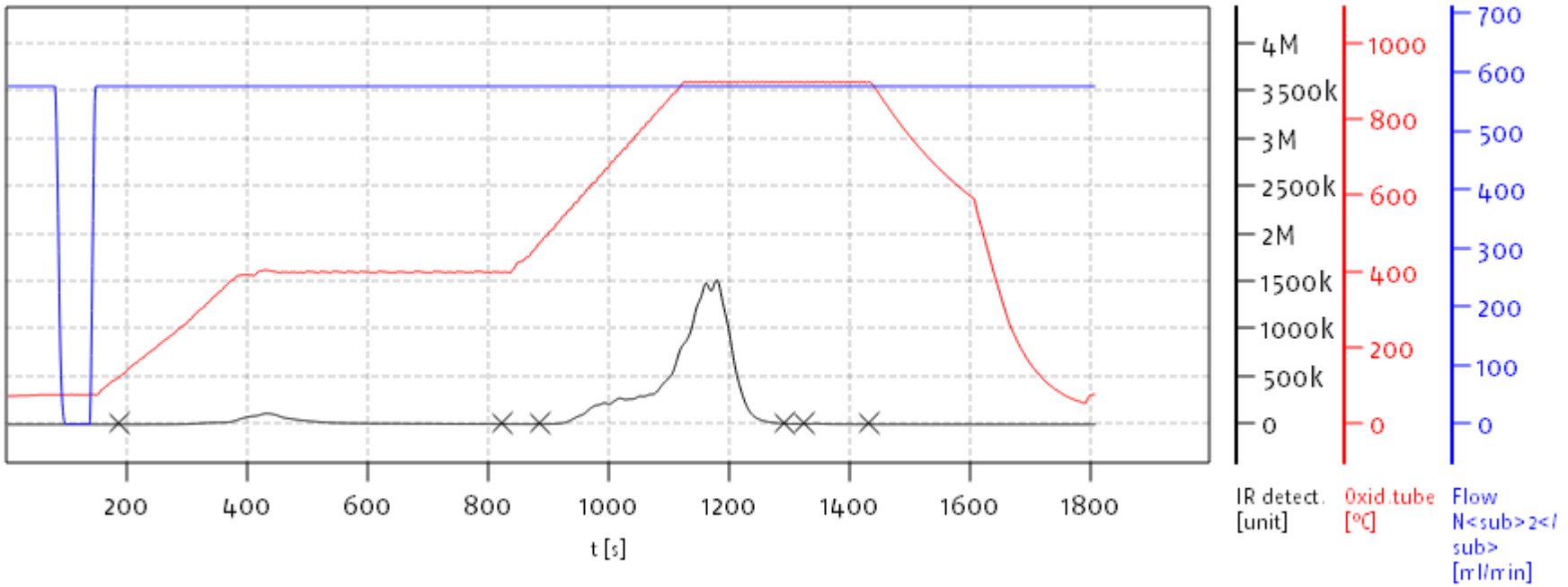
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
150	61	21G0404-05	521.40		1.00	CARBON	9/4/2021 3:22 PM	0.161	2.055	2.216	bl	523 278	6 356 600	13 821	0.9659	1.0000



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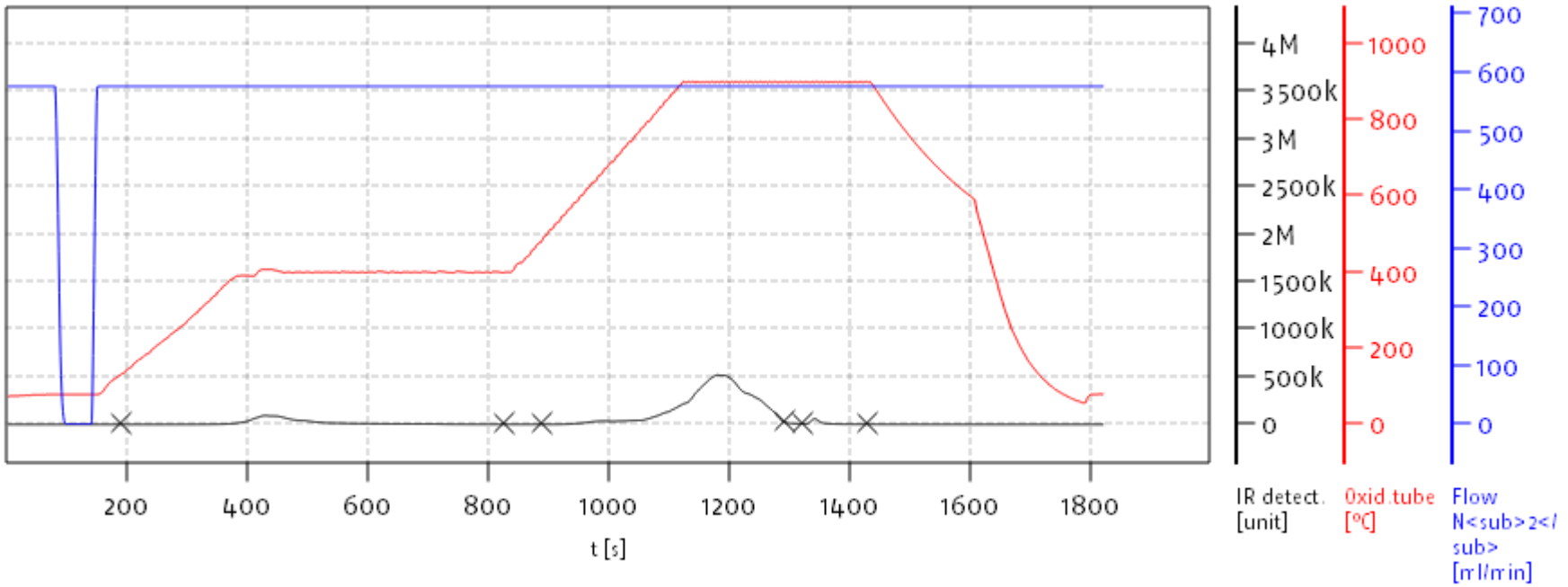
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
151	79	21G0246-01RE1	942.50		1.00	CARBON	9/4/2021 3:53 PM	0.067	0.447	0.514	bl	363 635	2 504 590	46 067	0.9659	1.0000



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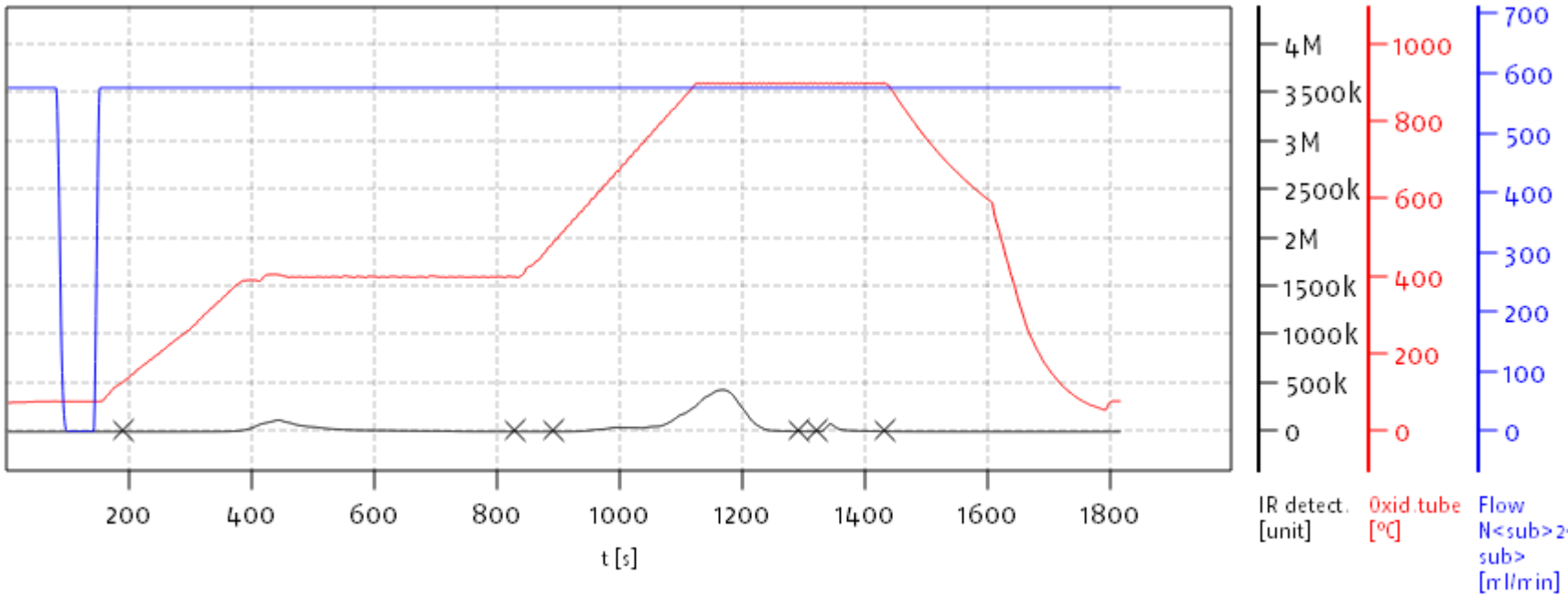
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
152	80	BJH0059-DUP3	941.80		1.00	CARBON	9/4/2021 4:24 PM	0.090	0.306	0.397	bl	467 496	1 719 420	75 580	0.9659	1.0000



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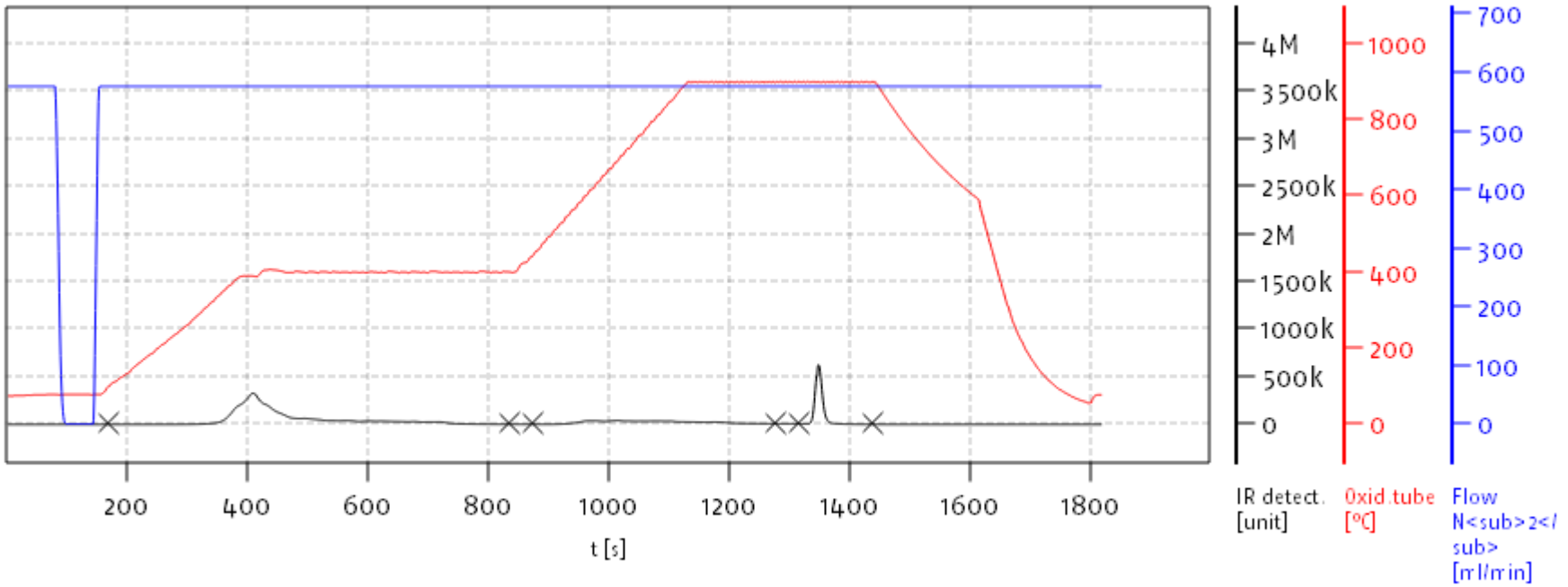
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
153	81	21G0212-13RE1	222.40		1.00	CARBON	9/4/2021 4:54 PM	1.087	0.245	1.332	bl	1 163 090	334 092	331 194	0.9659	1.0000



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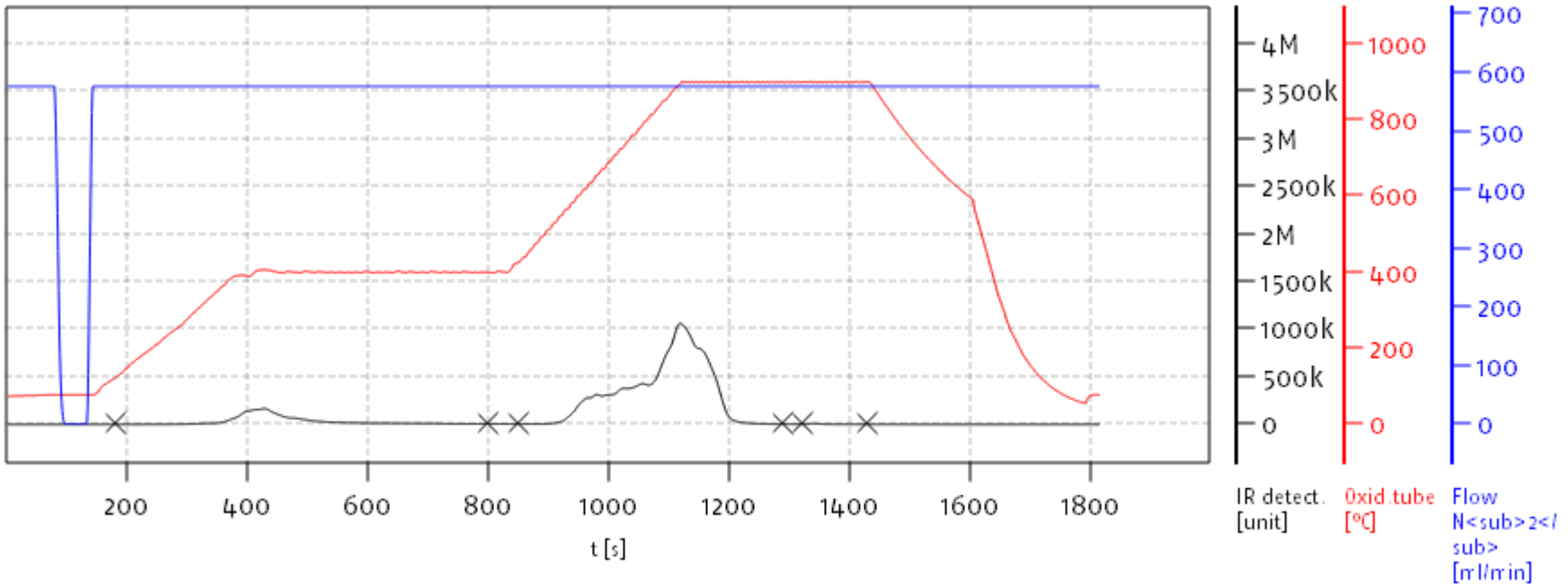
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
154	65	21G0404-09	552.80		1.00	CARBON	9/4/2021 5:25 PM	0.207	1.534	1.741	bl	712 562	5 033 350	11 887	0.9659	1.0000



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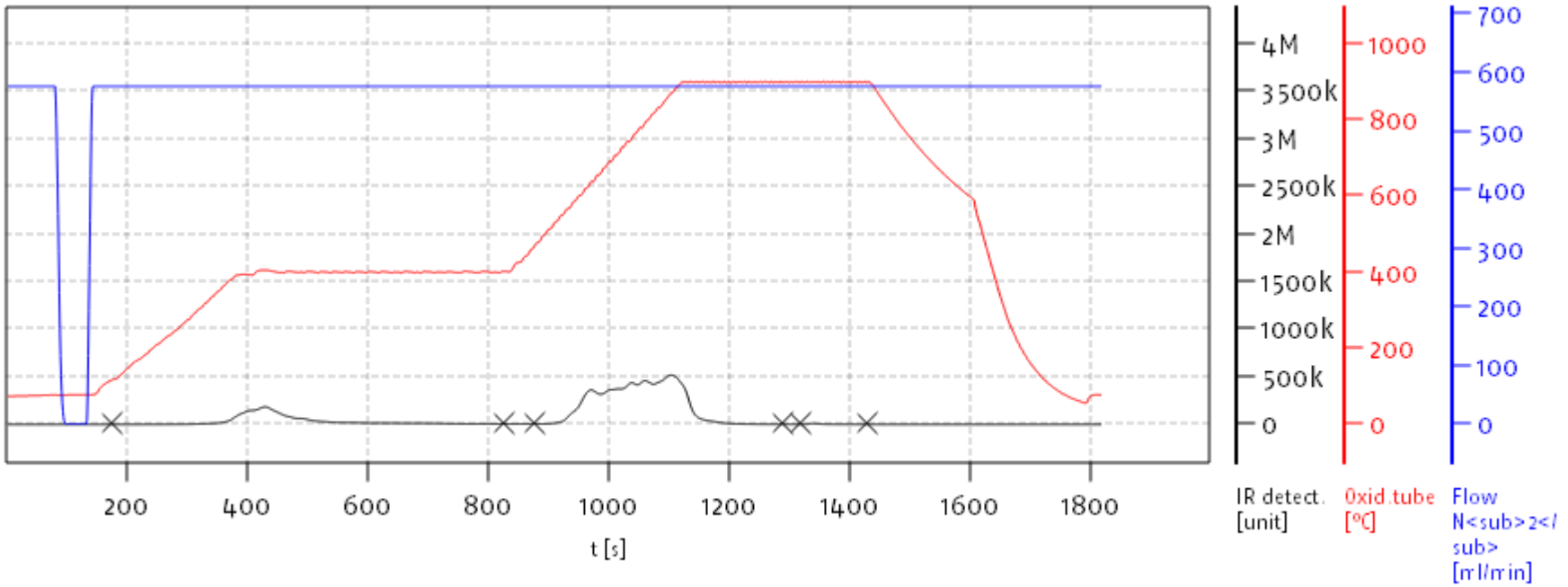
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
155	66	21G0404-10	620.20		1.00	CARBON	9/4/2021 5:56 PM	0.198	0.817	1.014	bl	763 245	3 010 330	10 658	0.9659	1.0000



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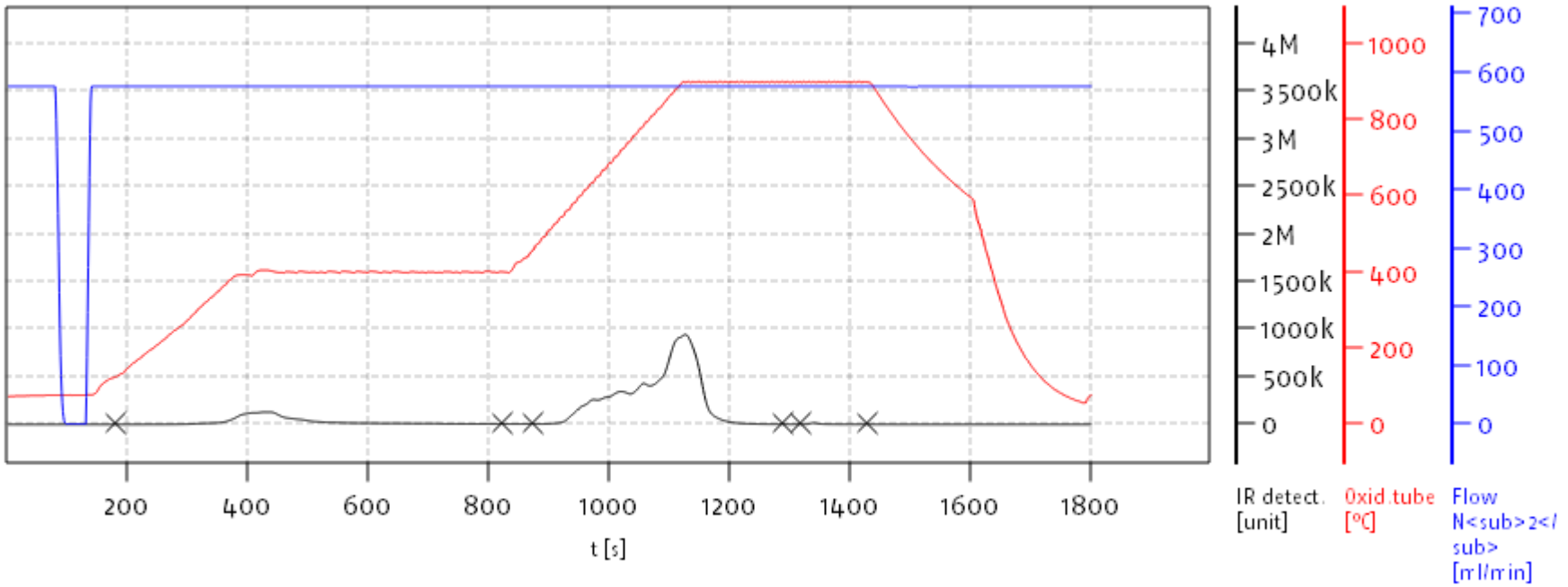
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
156	67	21G0404-11	546.20		1.00	CARBON	9/4/2021 6:26 PM	0.186	1.213	1.400	bl	633 854	3 935 900	13 681	0.9659	1.0000



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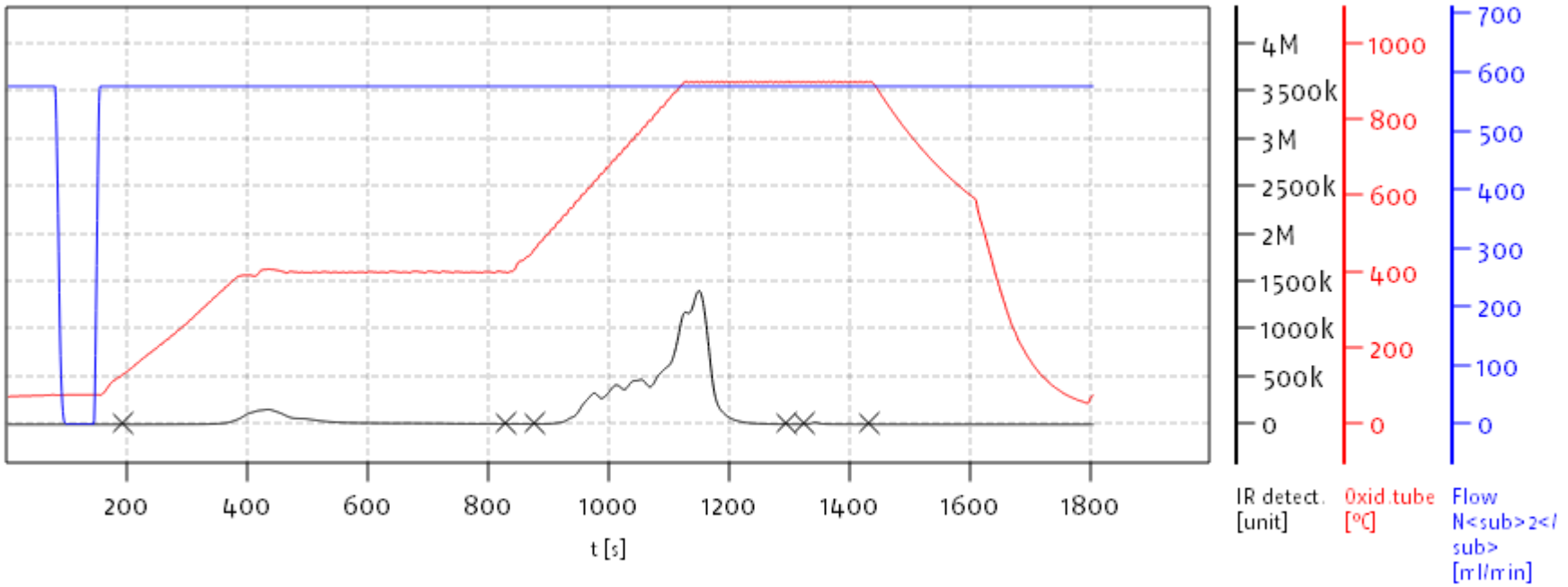
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
157	68	21G0404-12	633.50		1.00	CARBON	9/4/2021 6:57 PM	0.175	1.427	1.602	bl	685 397	5 364 700	17 550	0.9659	1.0000



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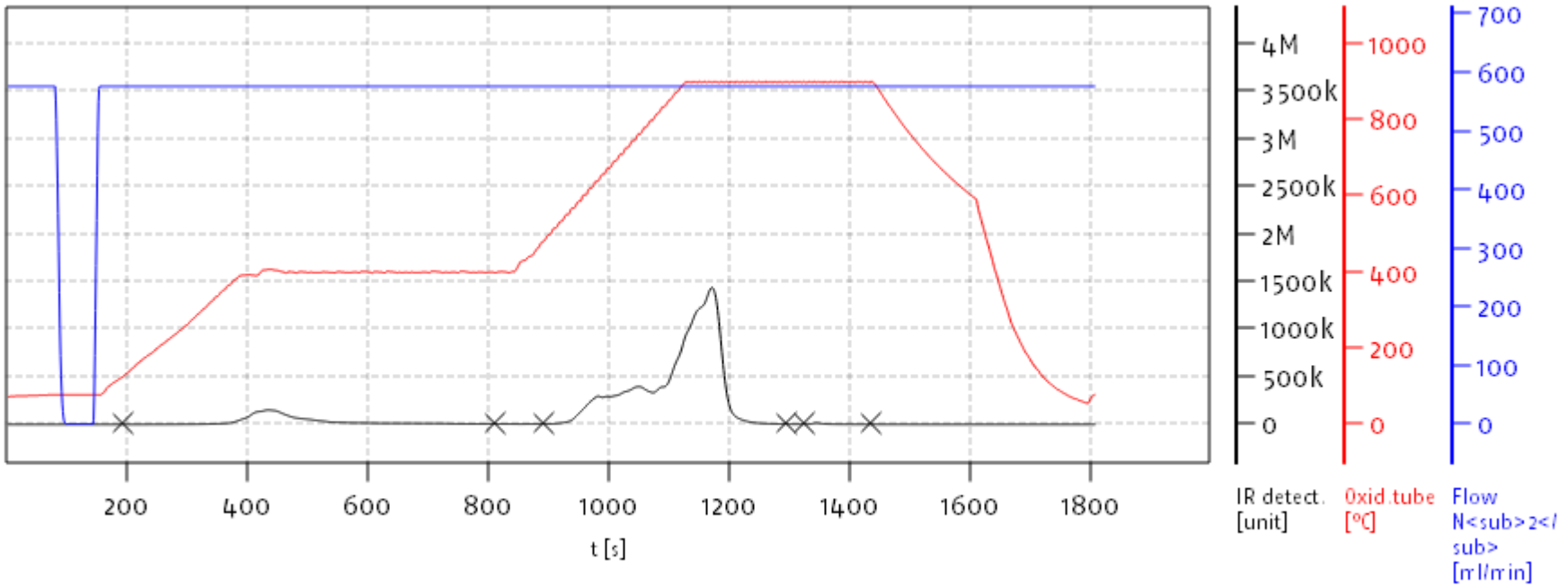
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
158	69	21G0404-13	637.40		1.00	CARBON	9/4/2021 7:27 PM	0.163	1.473	1.636	bl	643 456	5 569 870	16 083	0.9659	1.0000



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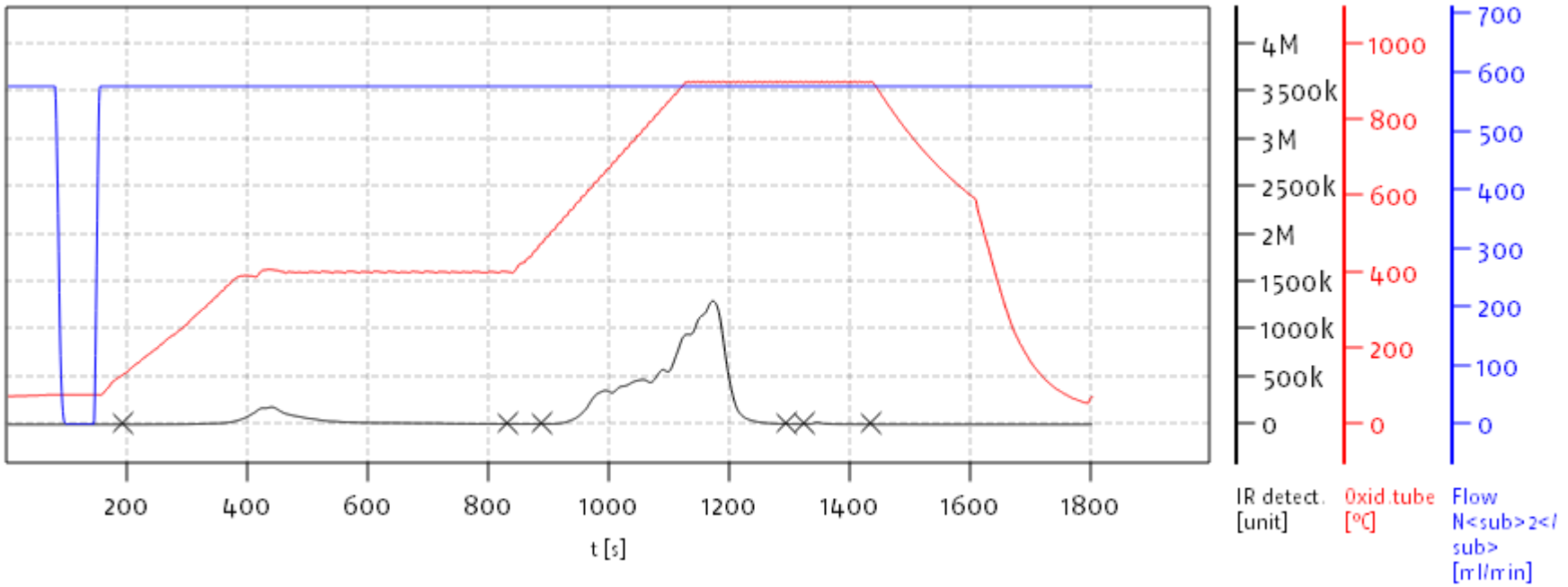
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
159	70	21G0404-14	710.00		1.00	CARBON	9/4/2021 7:58 PM	0.176	1.453	1.629	bl	765 817	6 121 060	21 081	0.9659	1.0000



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Access: soliTOC superuser

Date: Mon Sep 6 07:32:29 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

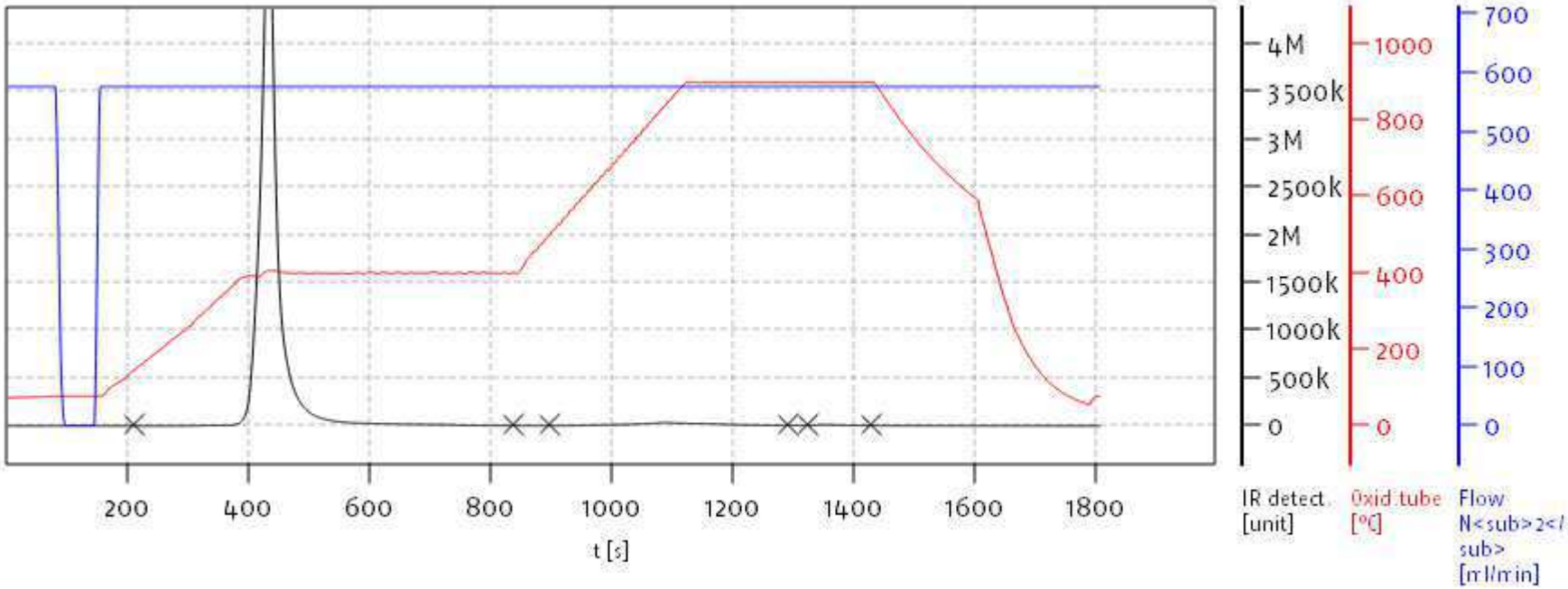
elementar
EXCELLENCE IN ELEMENTS

Document: from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
160	71	SJH0417-CCVD	24.20		1.00	CARBON	9/4/2021 8:28 PM	44.639	1.387	46.026	bl	6 619 220	210 384	25 610	0.9659	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
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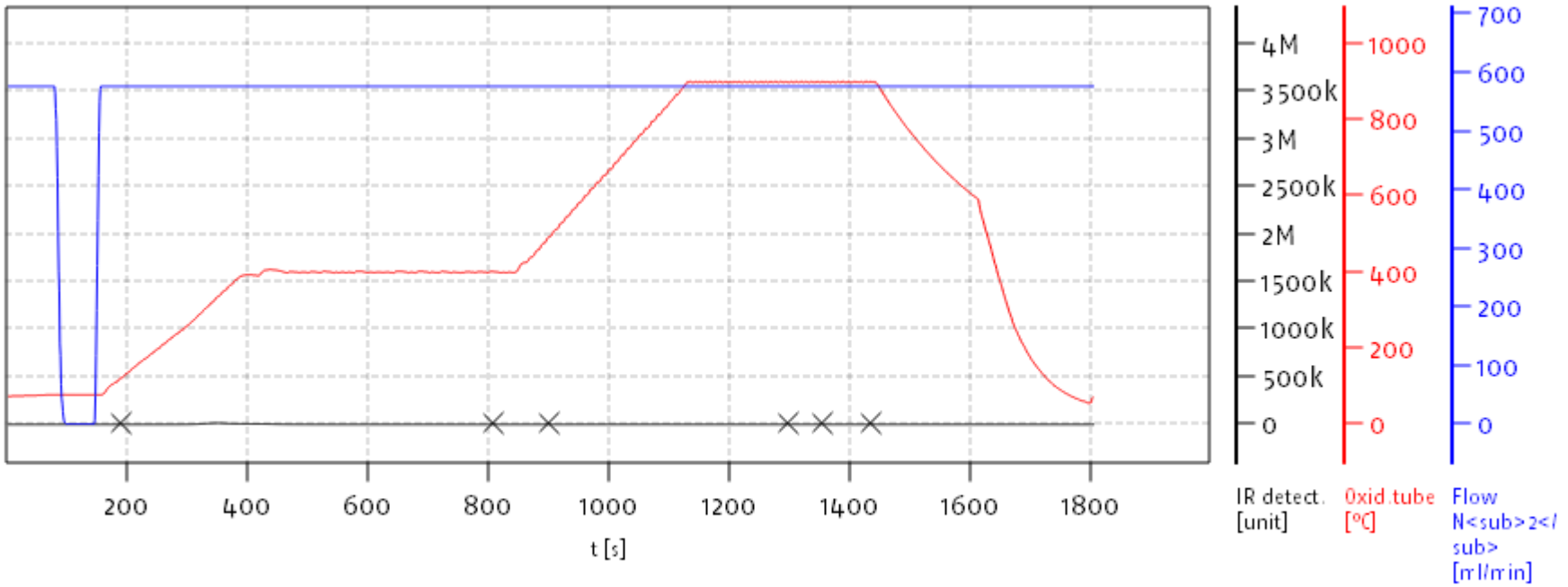
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
161	72	SJH0417-CCBD	601.00		1.00	CARBON	9/4/2021 8:59 PM	0.008	0.000	0.008	bl,C3u,C2u	42 640	3 332	353	0.9659	1.0000



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Date: Mon Sep 6 07:32:29 2021

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Serial No: 0300.181017
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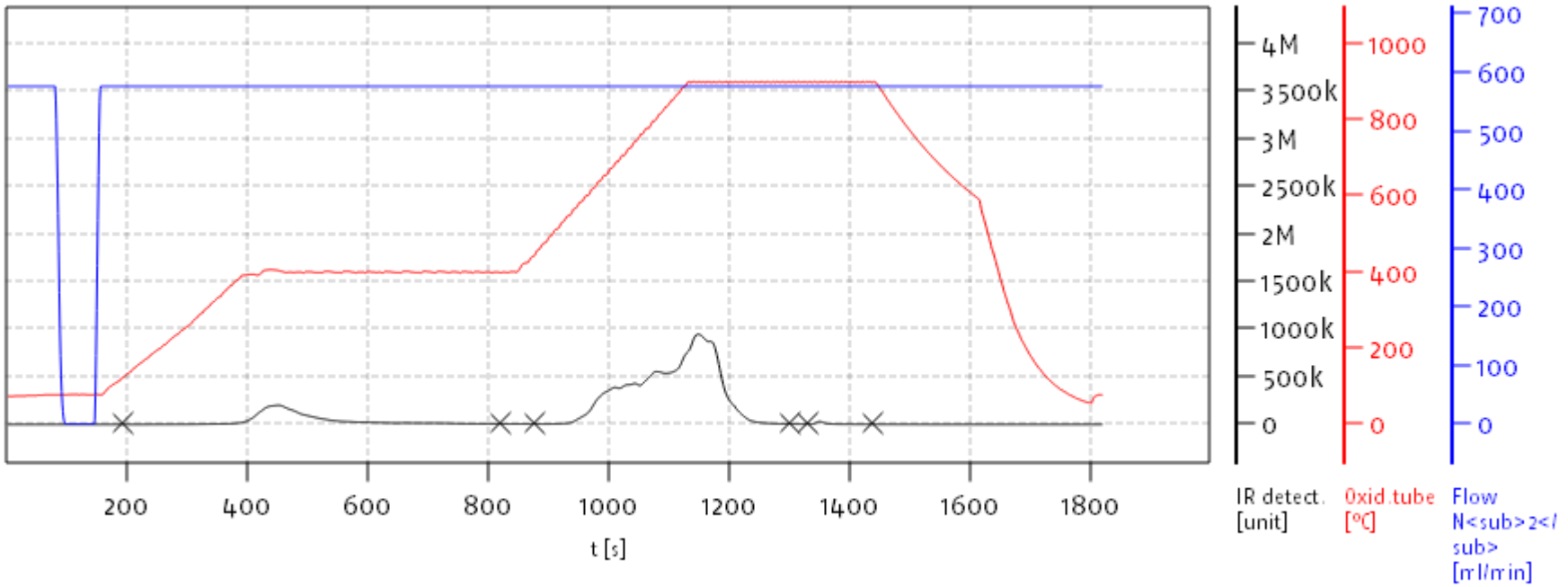
Document: from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
162	73	21G0404-15	677.90		1.00	CARBON	9/4/2021 9:30 PM	0.202	1.241	1.442	bl	834 934	4 991 450	25 967	0.9659	1.0000



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Access: soliTOC superuser

Date: Mon Sep 6 07:32:29 2021

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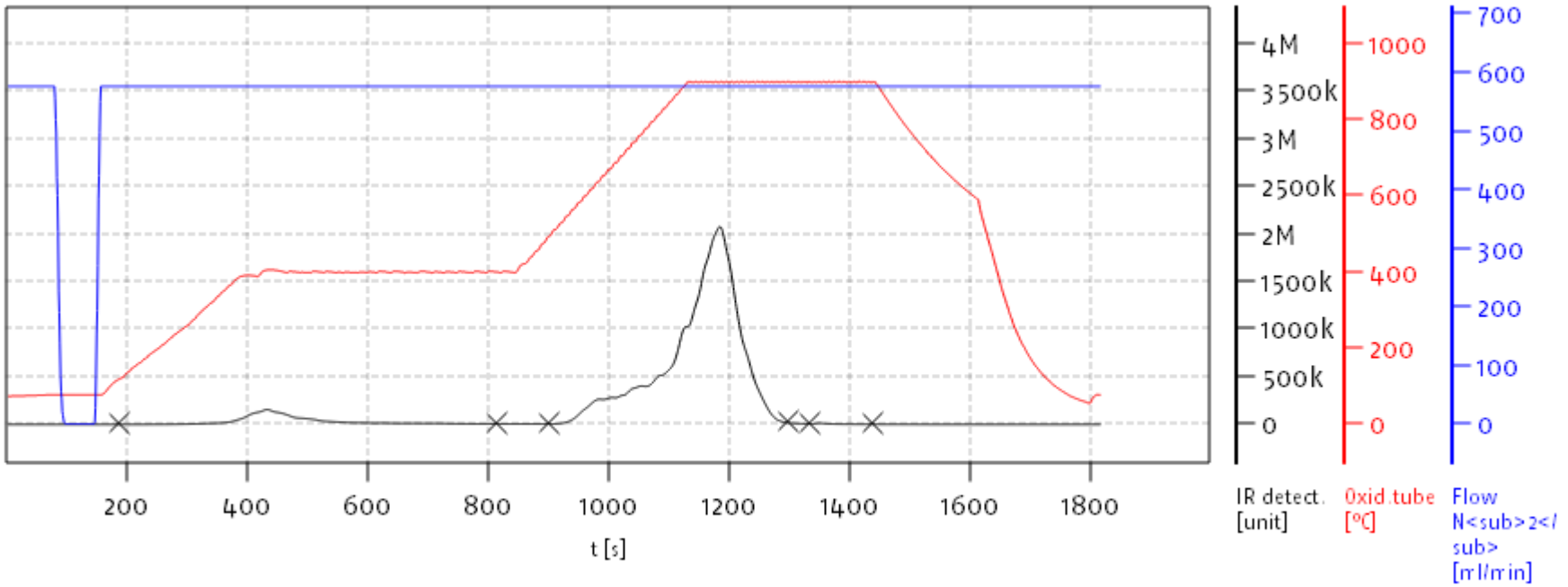
Document: from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
163	74	21G0404-16	663.10		1.00	CARBON	9/4/2021 10:00 PM	0.169	2.297	2.466	bl,C3o	690 940	9 029 690	18 887	0.9659	1.0000



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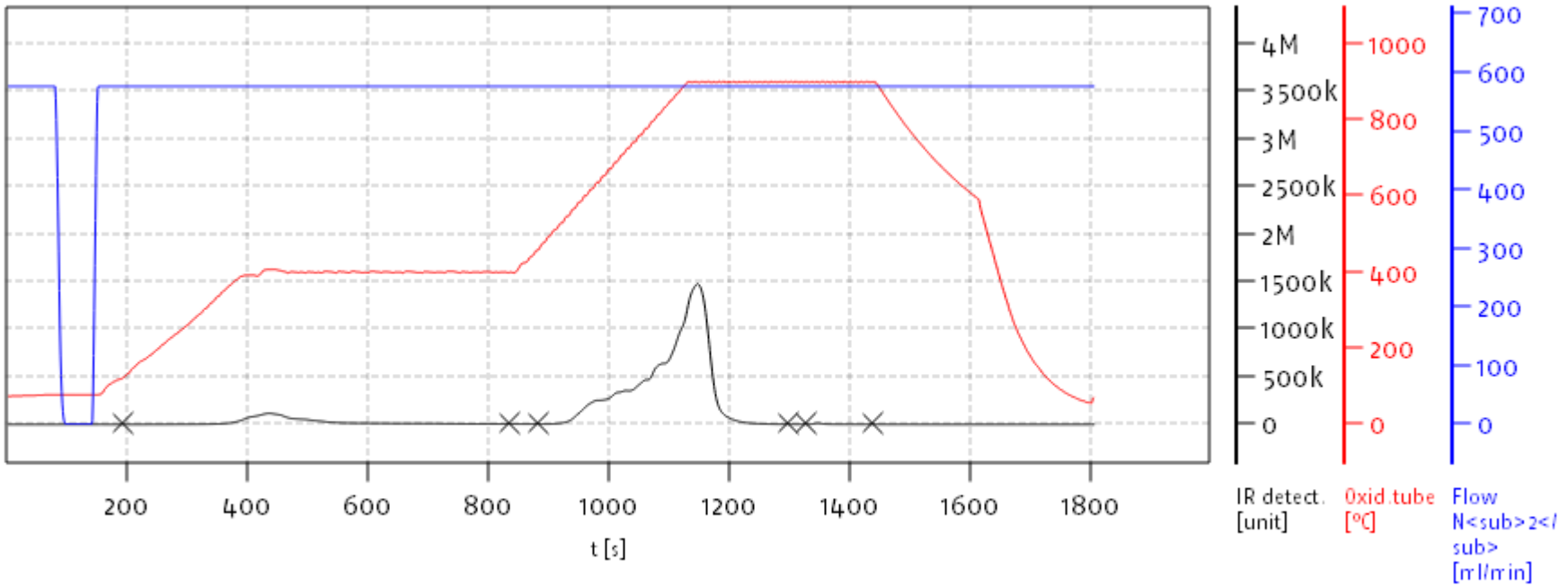
Document: from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
164	75	21G0404-17	566.00		1.00	CARBON	9/4/2021 10:31 PM	0.150	1.606	1.756	bl	530 918	5 394 360	12 925	0.9659	1.0000



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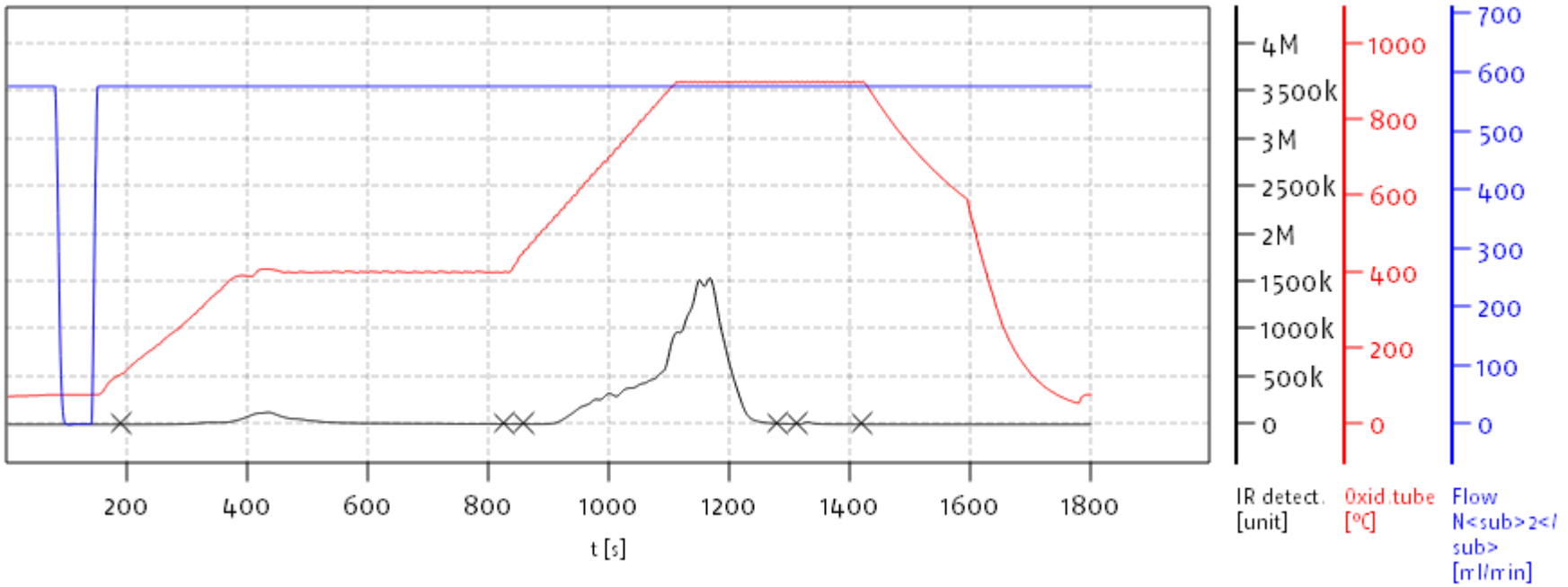
Document: from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
165	76	21G0404-18	622.30		1.00	CARBON	9/4/2021 11:01 PM	0.153	1.899	2.052	bl	583 694	7 009 080	21 249	0.9659	1.0000



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Date: Mon Sep 6 07:32:29 2021

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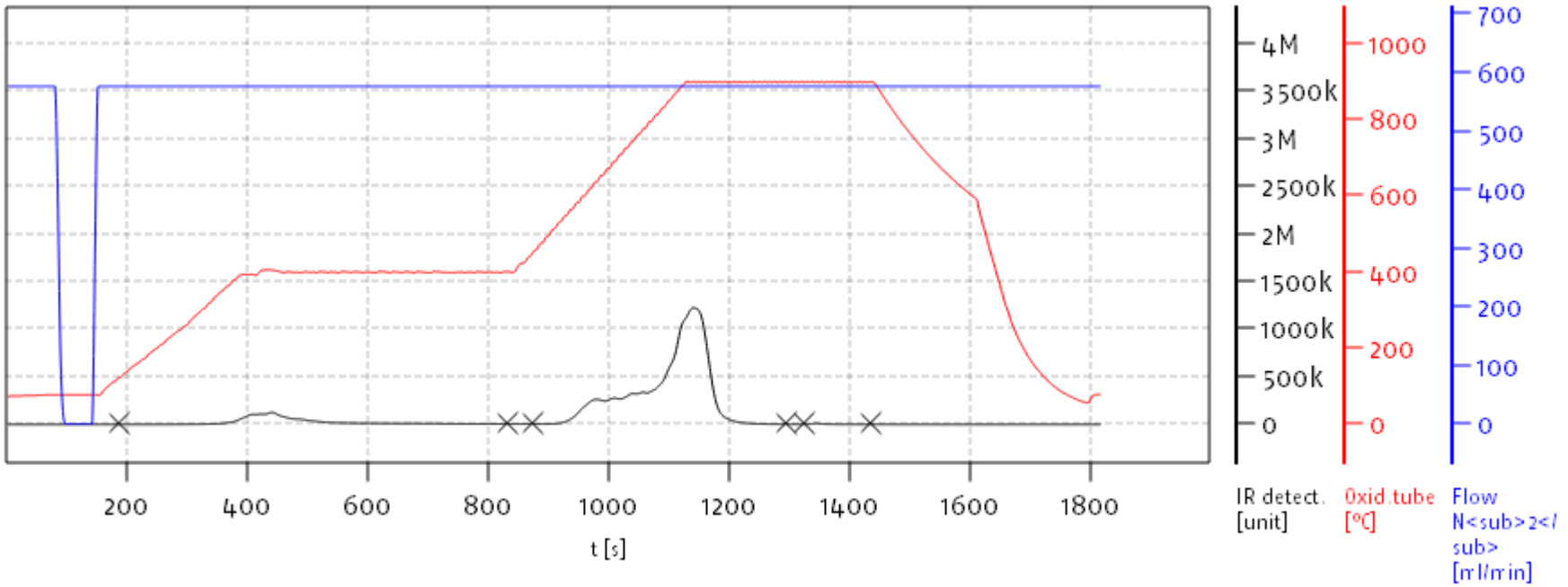
Document: from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
166	77	21G0404-19	541.80		1.00	CARBON	9/4/2021 11:32 PM	0.162	1.427	1.589	bl	550 013	4 588 350	12 027	0.9659	1.0000



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Date: Mon Sep 6 07:32:29 2021

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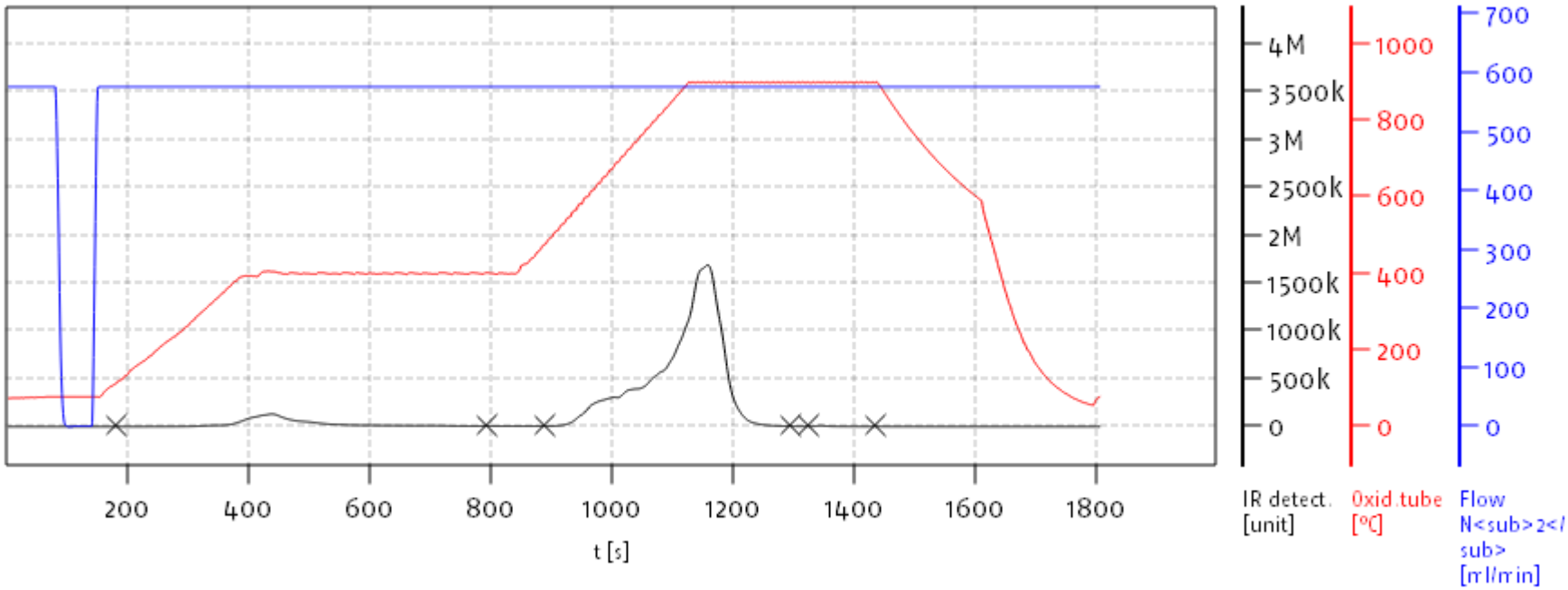
EXCELLENCE IN ELEMENTS

Document: from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
167	78	21G0404-20	591.30		1.00	CARBON	9/5/2021 12:03 AM	0.160	1.918	2.078	bl	590 136	6 727 000	12 136	0.9659	1.0000



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Date: Mon Sep 6 07:32:29 2021

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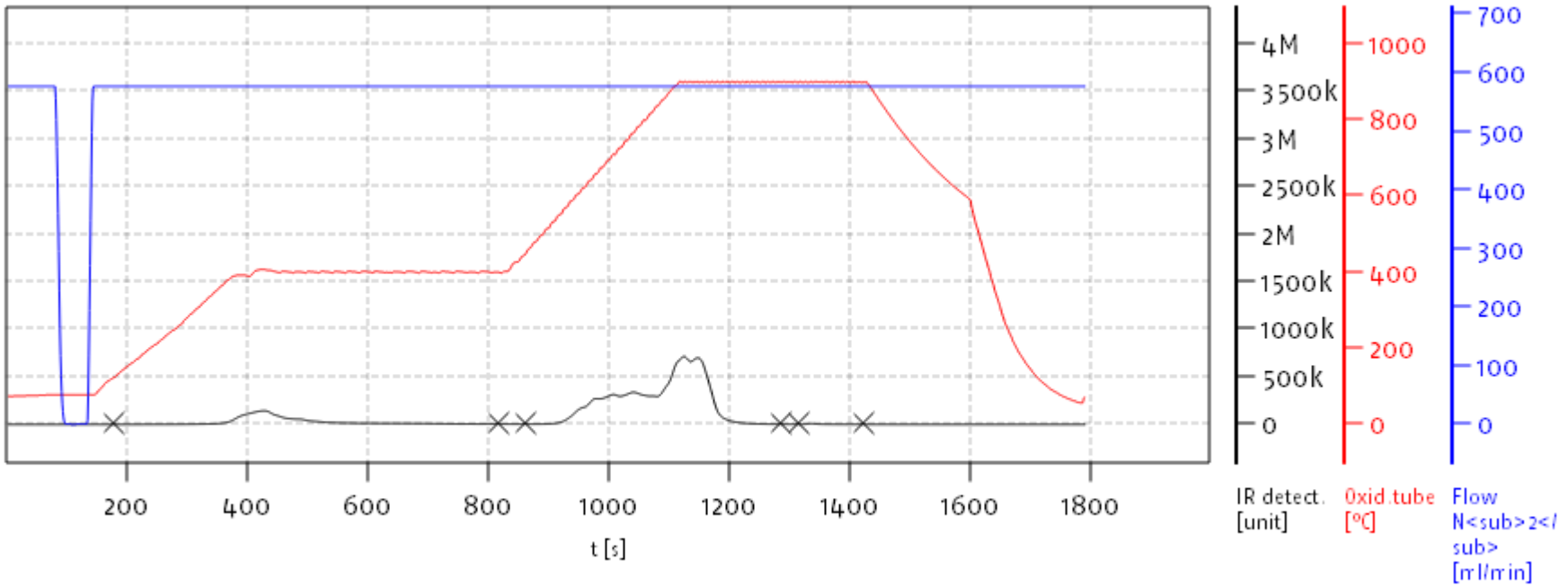
Document: from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
168	62	21G0404-06	533.50		1.00	CARBON	9/5/2021 12:33 AM	0.179	1.125	1.304	bl	597 419	3 565 740	10 508	0.9659	1.0000



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Date: Mon Sep 6 07:32:29 2021

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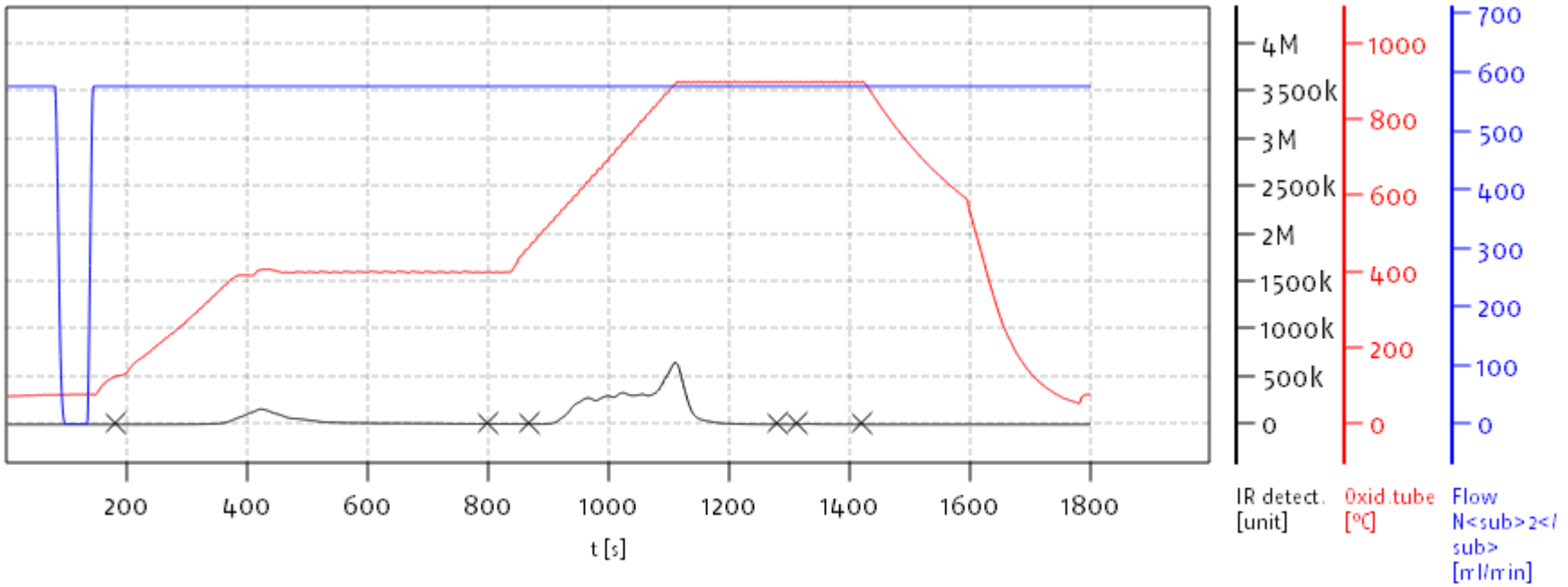
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
169	63	21G0404-07	539.20		1.00	CARBON	9/5/2021 1:03 AM	0.191	0.846	1.037	bl	643 913	2 712 040	7 911	0.9659	1.0000



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Date: Mon Sep 6 07:32:29 2021

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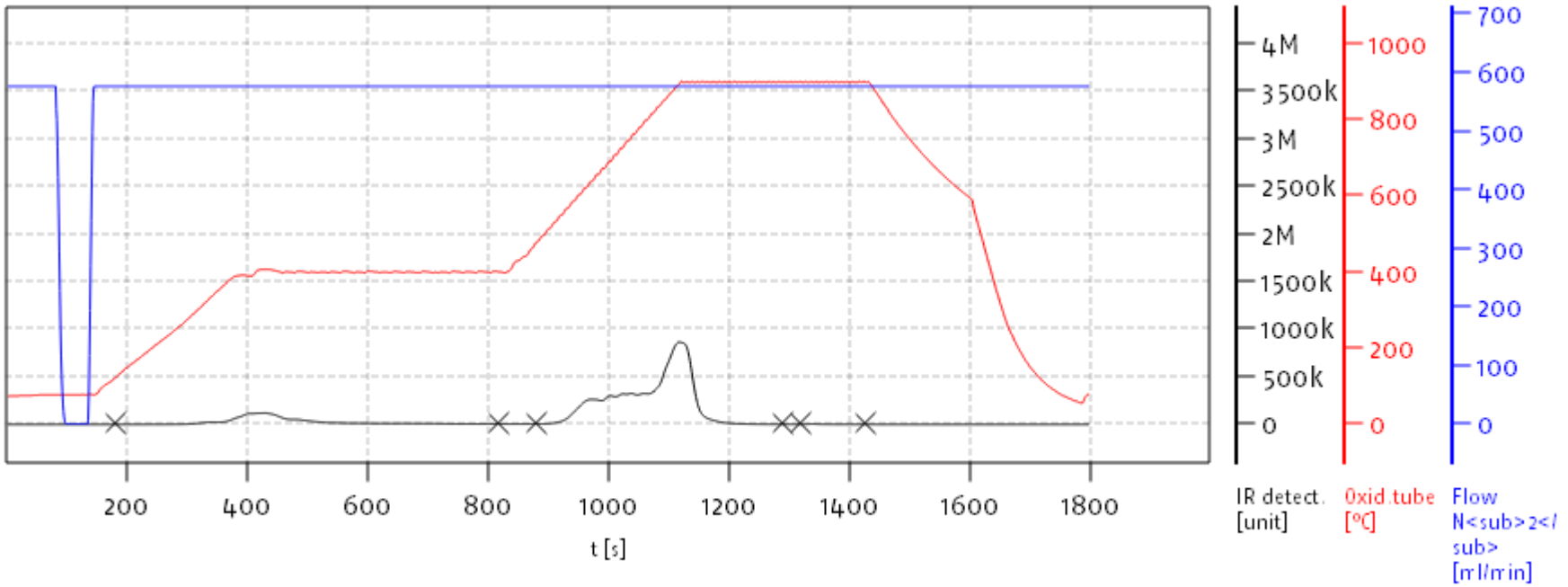
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
170	64	21G0404-08	516.70		1.00	CARBON	9/5/2021 1:34 AM	0.183	1.078	1.261	bl,C2u	591 304	3 310 160	6 897	0.9659	1.0000



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Date: Mon Sep 6 07:32:29 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
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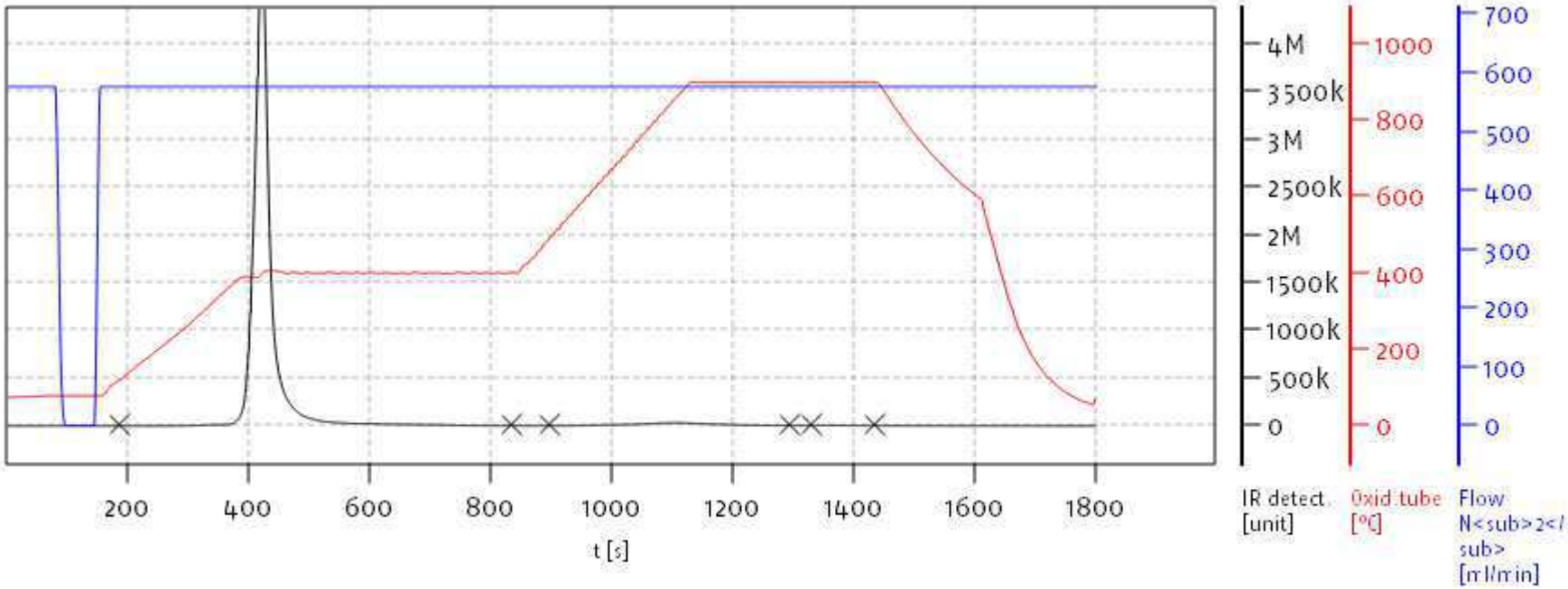
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
171	82	SJH0417-CCVE	20.70		1.00	CARBON	9/5/2021 2:04 AM	44.006	1.526	45.532	bl	5 590 000	198 692	17 093	0.9659	1.0000



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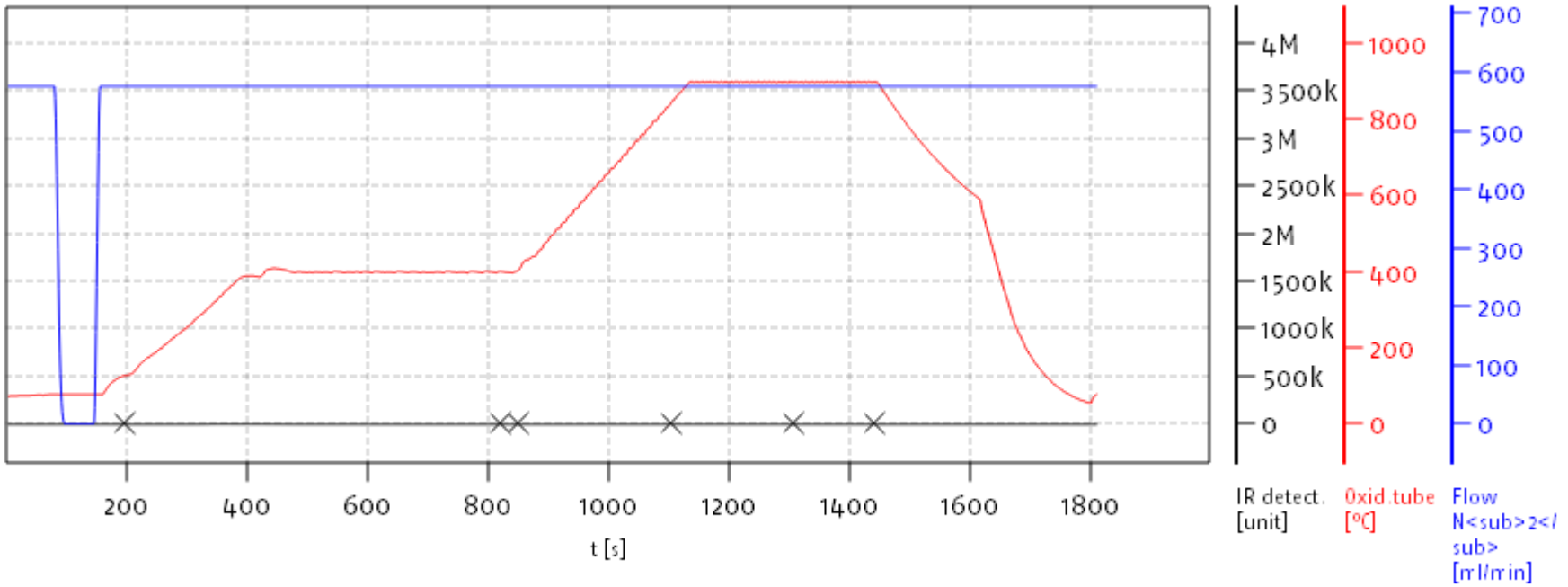
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
172	83	SJH0417-CCBE	669.30		1.00	CARBON	9/5/2021 2:35 AM	0.000	0.000	0.000	bl,C3u,C2u	9 031	185	277	0.9659	1.0000



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Serial No: 0300.181017
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Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EG00035	Instrument:	TOC Cube
Calibration Date:	07/13/2021 13:33		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Total Organic Carbon	0.008099	3494172	0.014998	1188959	0.020398	1099618	0.029697	1187292	0.046495	1174126	0.059394	1229653
Total Carbon	0.008099	3494172	0.014998	1188959	0.020398	1099618	0.029697	1187292	0.046495	1174126	0.059394	1229653
Total Inorganic Carbon	0.008099	3494172	0.014998	1188959	0.020398	1099618	0.029697	1187292	0.046495	1174126	0.059394	1229653
% Soot	0.008099	3494172	0.014998	1188959	0.020398	1099618	0.029697	1187292	0.046495	1174126	0.059394	1229653

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EG00035	Instrument:	TOC Cube
Calibration Date:	07/13/2021 13:33		

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RF		RF		RF		RF		RF		RF
Total Organic Carbon	0.077092	1237755	0.089991	1249592	0.12209	1287313	0.15028	1247924	0.246	1235898	0.306	1262232
Total Carbon	0.077092	1237755	0.089991	1249592	0.12209	1287313	0.15028	1247924	0.246	1235898	0.306	1262232
Total Inorganic Carbon	0.077092	1237755	0.089991	1249592	0.12209	1287313	0.15028	1247924	0.246	1235898	0.306	1262232
% Soot	0.077092	1237755	0.089991	1249592	0.12209	1287313	0.15028	1247924	0.246	1235898	0.306	1262232

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EG00035	Instrument:	TOC Cube
Calibration Date:	07/13/2021 13:33		

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
		RF		RF		RF		RF		RF		RF
Total Organic Carbon	0.438	1275541	0.654	1281457	0.87	1298709	1.194	1285245	1.494	1287334	1.836	1284402
Total Carbon	0.438	1275541	0.654	1281457	0.87	1298709	1.194	1285245	1.494	1287334	1.836	1284402
Total Inorganic Carbon	0.438	1275541	0.654	1281457	0.87	1298709	1.194	1285245	1.494	1287334	1.836	1284402
% Soot	0.438	1275541	0.654	1281457	0.87	1298709	1.194	1285245	1.494	1287334	1.836	1284402

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EG00035	Instrument:	TOC Cube
Calibration Date:	07/13/2021 13:33		

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
		RF		RF		RF		RF		RF		RF
Total Organic Carbon	2.514	1283888	3.006	1284229	4.2	1290010	4.848	1289540	5.382	1283899	7.422	1272406
Total Carbon	2.514	1283888	3.006	1284229	4.2	1290010	4.848	1289540	5.382	1283899	7.422	1272406
Total Inorganic Carbon	2.514	1283888	3.006	1284229	4.2	1290010	4.848	1289540	5.382	1283899	7.422	1272406
% Soot	2.514	1283888	3.006	1284229	4.2	1290010	4.848	1289540	5.382	1283899	7.422	1272406

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 9060A m

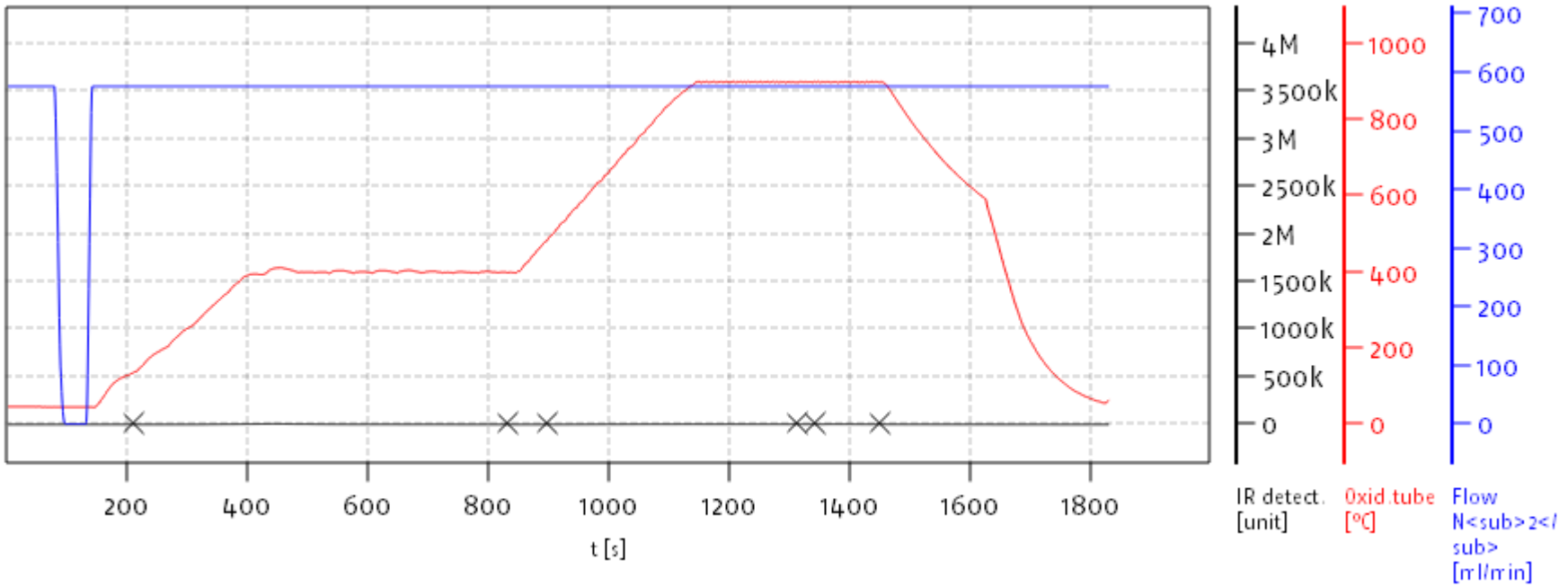
Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EG00035	Instrument:	TOC Cube
Calibration Date:	07/13/2021 13:33		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Total Organic Carbon	1346300	34.2	0.9999			
Total Carbon	1346300	34.2	0.9999			
Total Inorganic Carbon	1346300	34.2	0.9999			
% Soot	1346300	34.2	0.9999			

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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	7/13/2021 2:06 PM	0.000	0.000	0.000	bl	41 637	34 438	10 598	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Wed Jul 14 09:43:57 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

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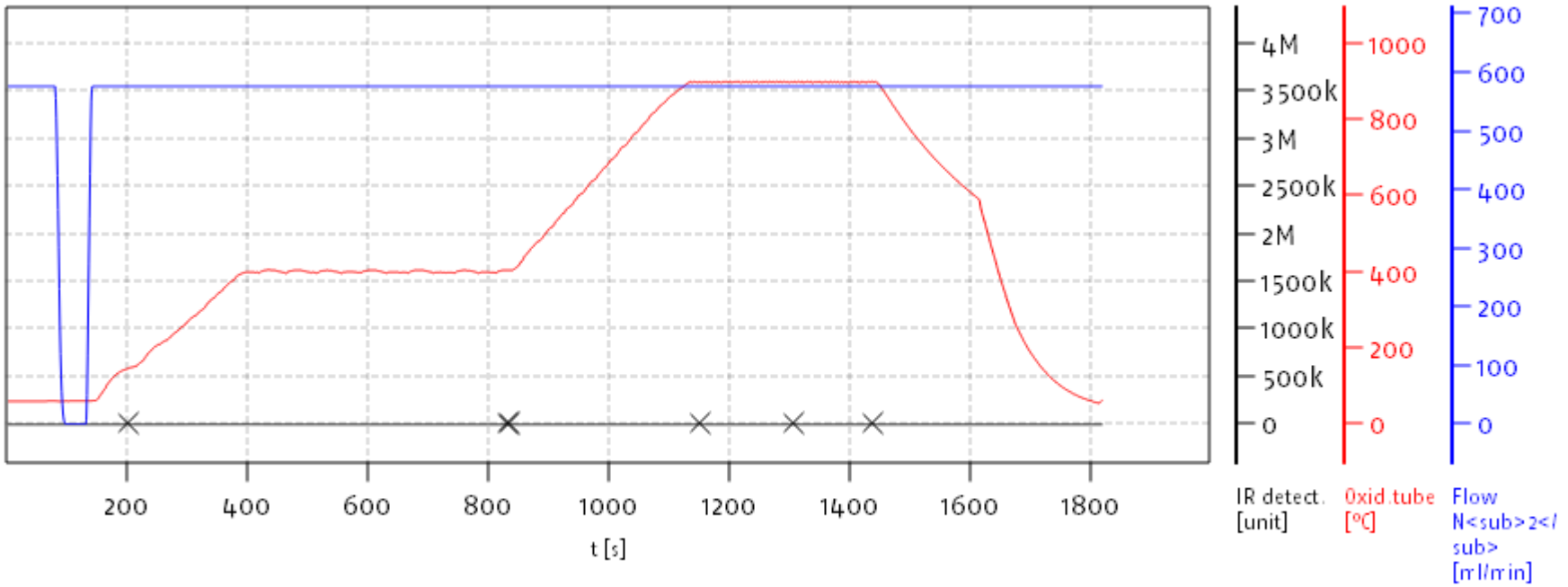
EXCELLENCE IN ELEMENTS

Document: TOC Calibration EG00035 071321BF from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
2	2	BLANK	1.00		1.00	CARBON	7/13/2021 2:37 PM	0.000	0.000	0.000	bl	4 874	0	164	1.0000	1.0000



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Date: Wed Jul 14 09:43:57 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

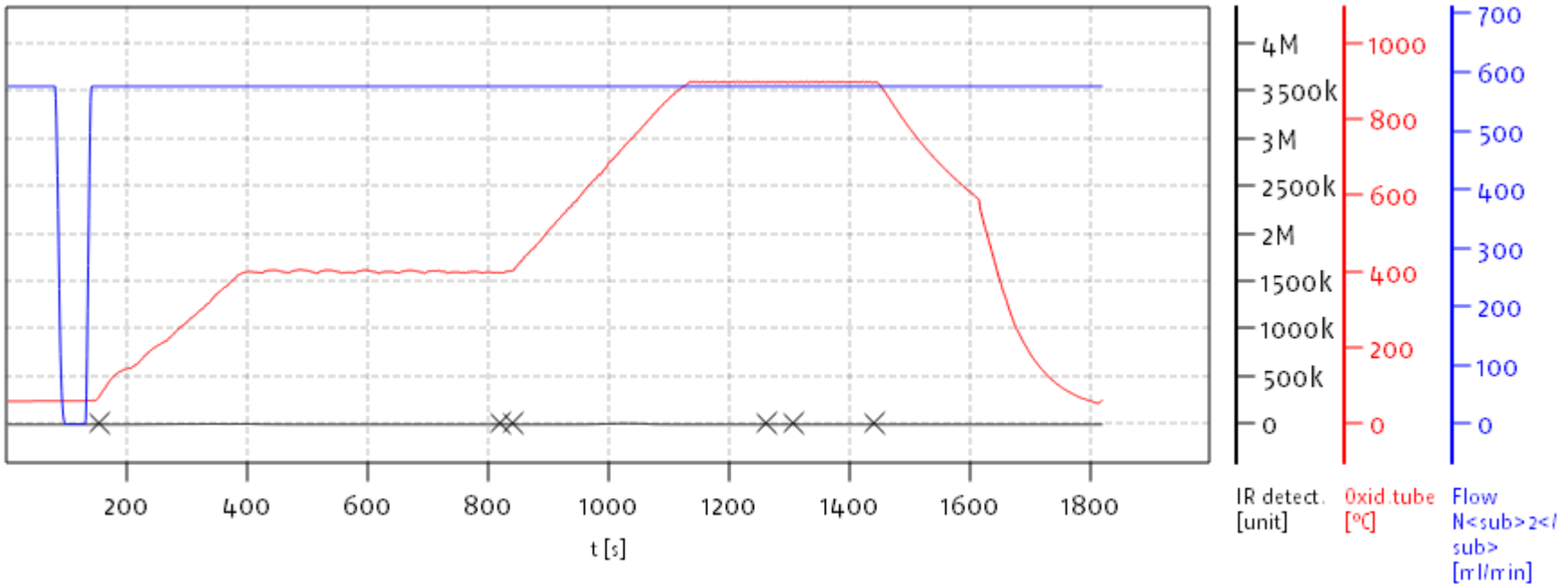
elementar
EXCELLENCE IN ELEMENTS

Document: TOC Calibration EG00035 071321BF from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
3	3	SEQ-CAL1	200.00	0.0027	1.00	CARBON	7/13/2021 3:07 PM	0.029	0.008	0.037	bl,C2u	31 040	28 300	256	1.0000	0.3447



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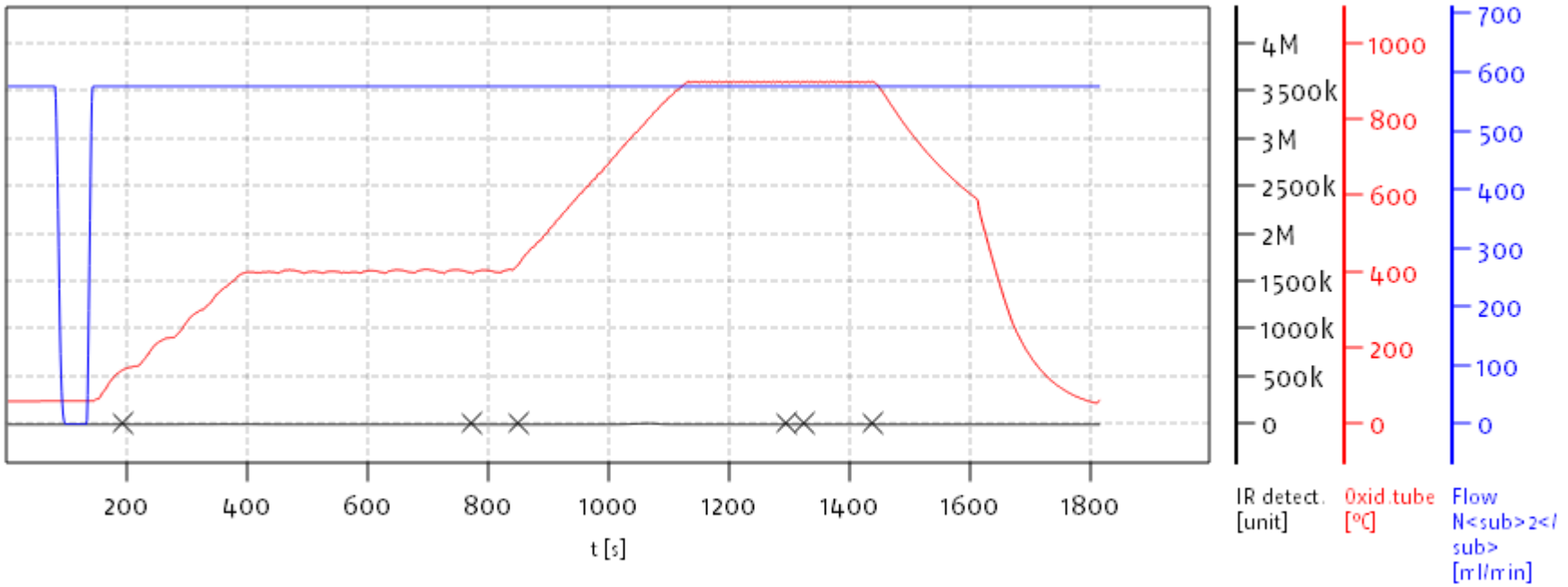
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
4	4	SEQ-CAL2	200.00	0.0050	1.00	CARBON	7/13/2021 3:38 PM	0.013	0.015	0.028	bl,C2u	10 883	17 832	143	1.0000	0.9493



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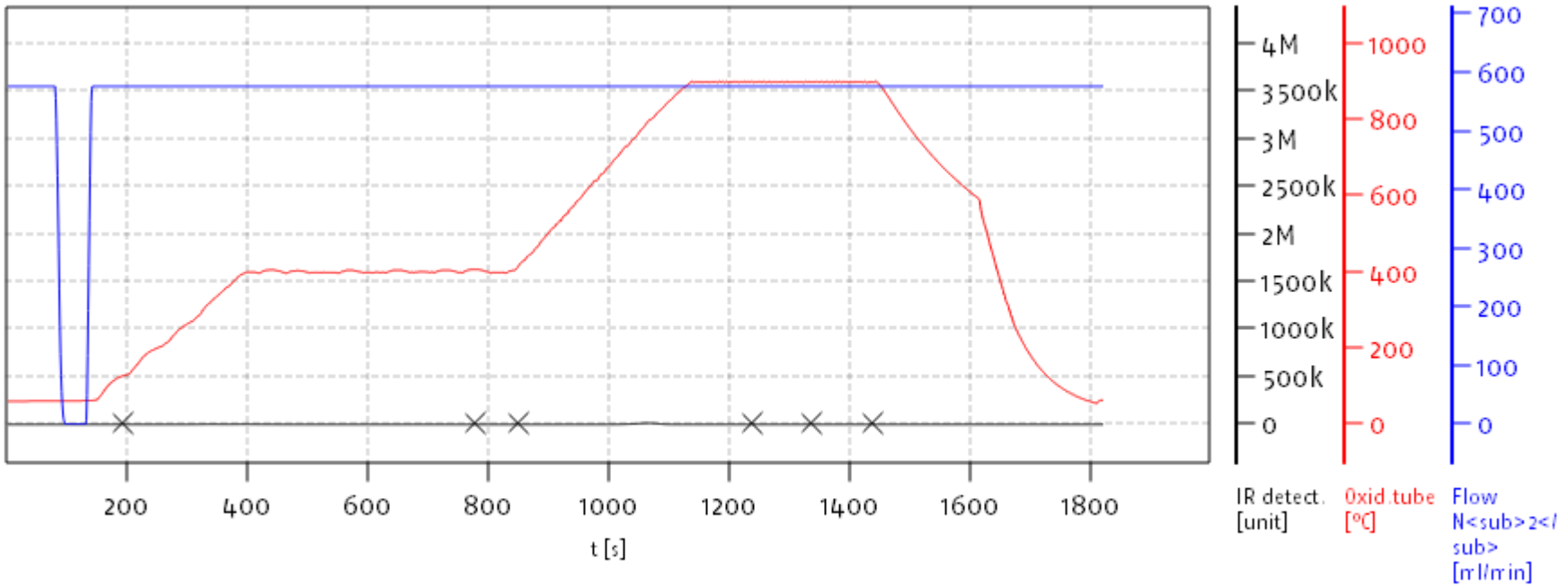
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
5	5	SEQ-CAL3	200.00	0.0068	1.00	CARBON	7/13/2021 4:09 PM	0.012	0.022	0.034	bl,C2u	9 870	22 430	107	1.0000	1.1246



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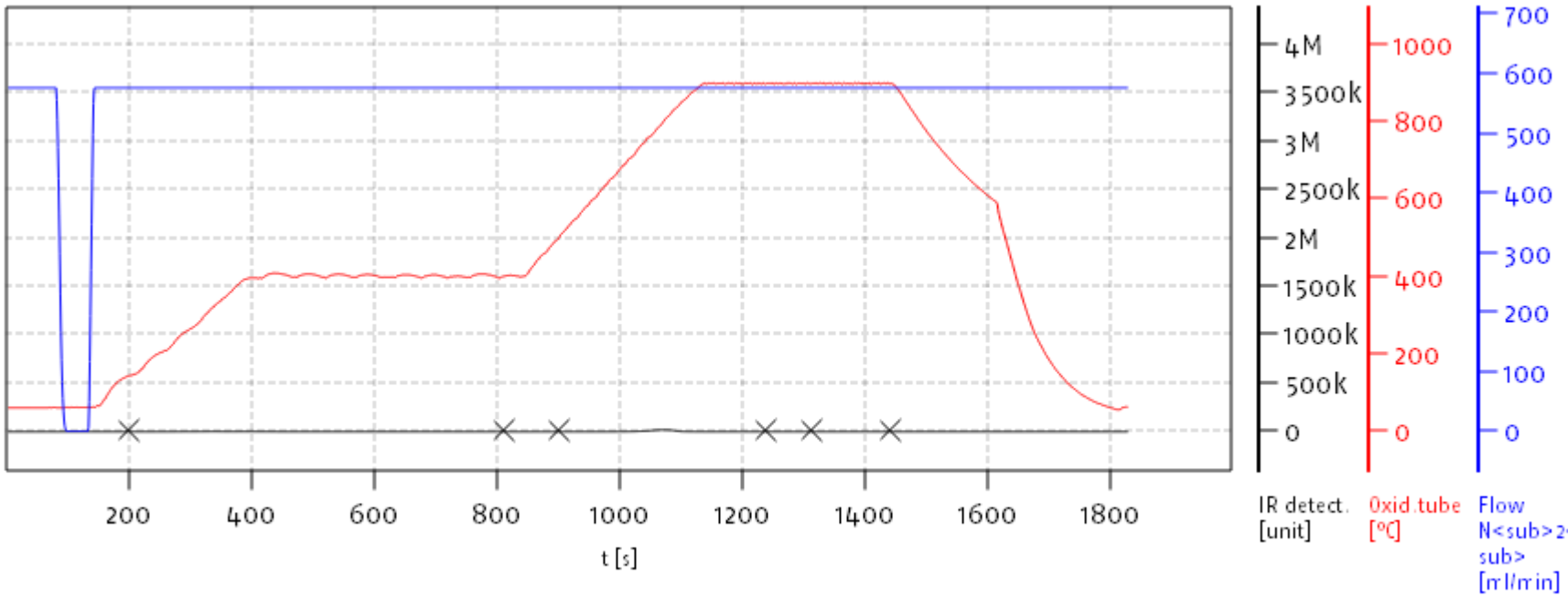
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
6	6	SEQ-CAL4	200.00	0.0099	1.00	CARBON	7/13/2021 4:40 PM	0.012	0.030	0.042	bl,C2u	9 549	35 259	82	1.0000	1.0150



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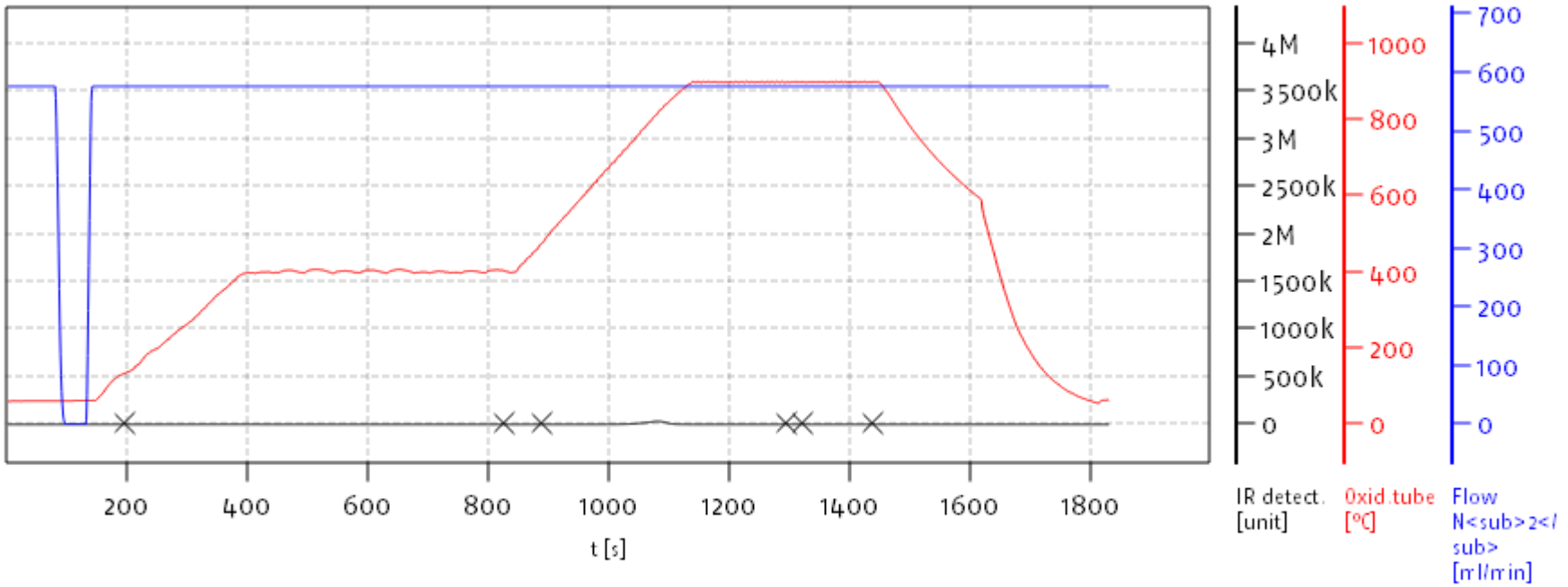
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
7	7	SEQ-CAL5	200.00	0.0155	1.00	CARBON	7/13/2021 5:11 PM	0.008	0.045	0.053	bl,C1u,C2u	4 269	54 591	65	1.0000	0.9980



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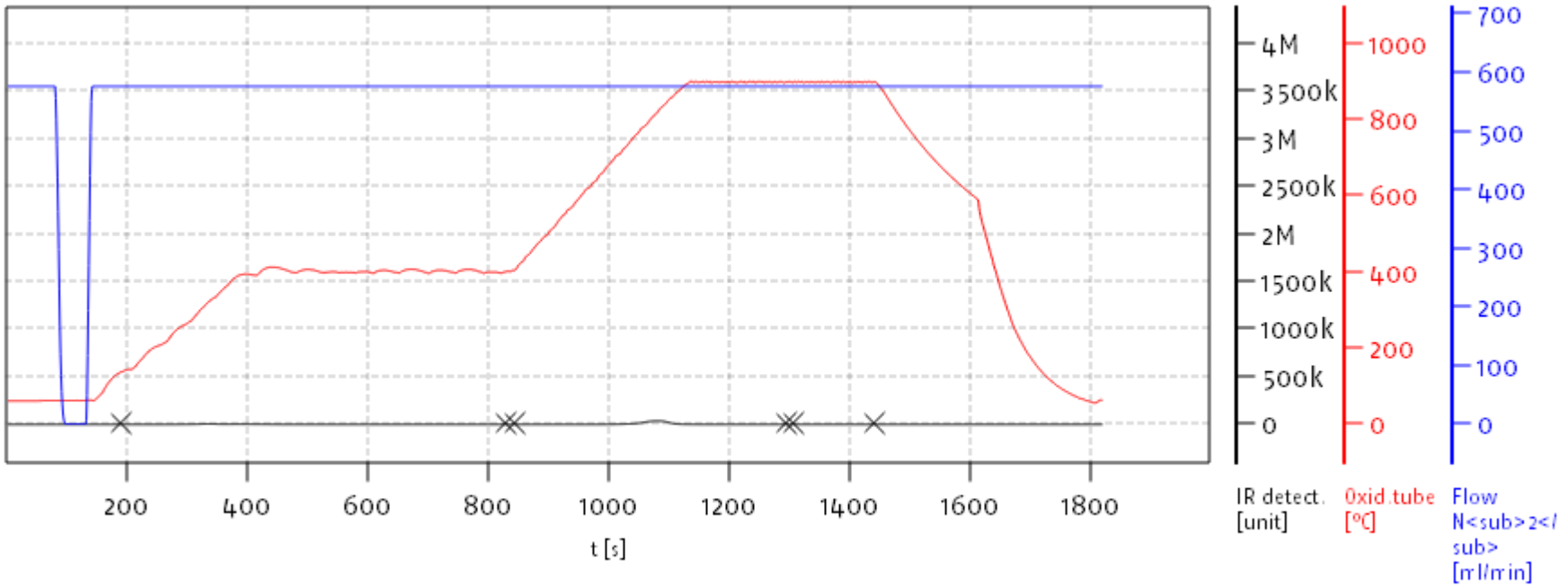
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
8	8	SEQ-CAL6	200.00	0.0198	1.00	CARBON	7/13/2021 5:41 PM	0.019	0.061	0.080	bl,C2u	18 512	73 034	79	1.0000	1.0264



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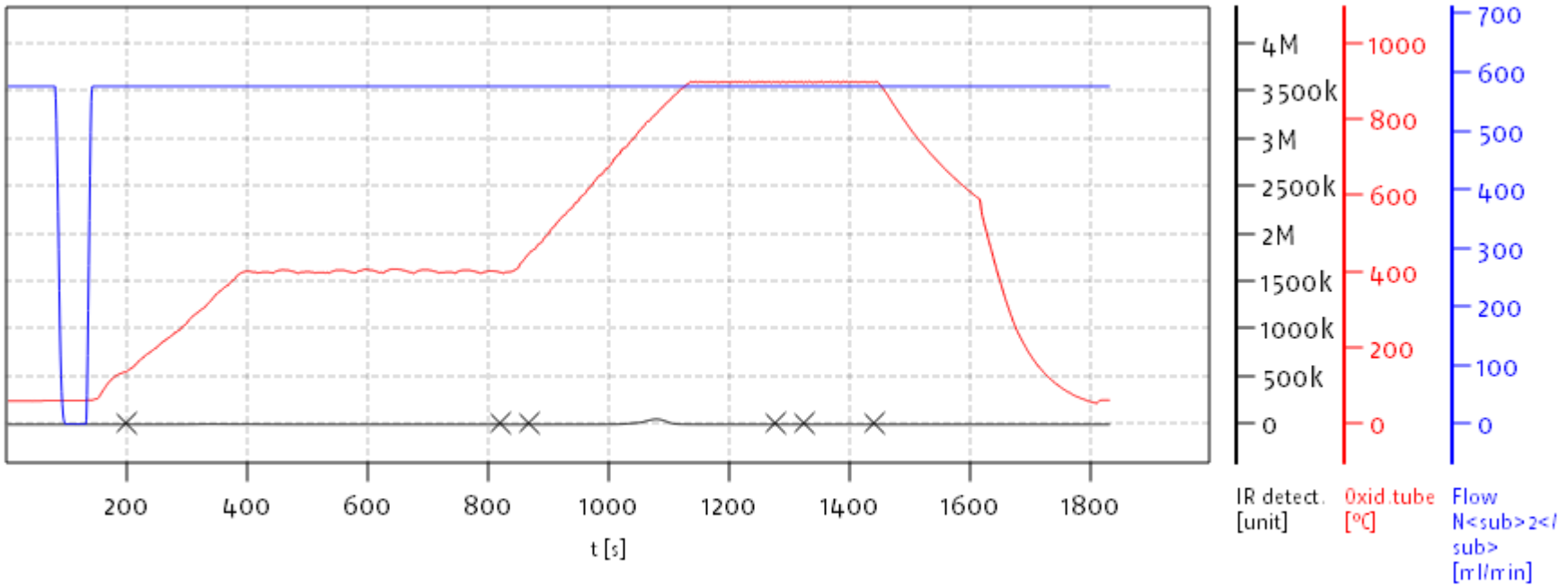
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
9	9	SEQ-CAL7	200.00	0.0257	1.00	CARBON	7/13/2021 6:12 PM	0.014	0.075	0.089	bl,C2u	12 682	95 421	29	1.0000	0.9745



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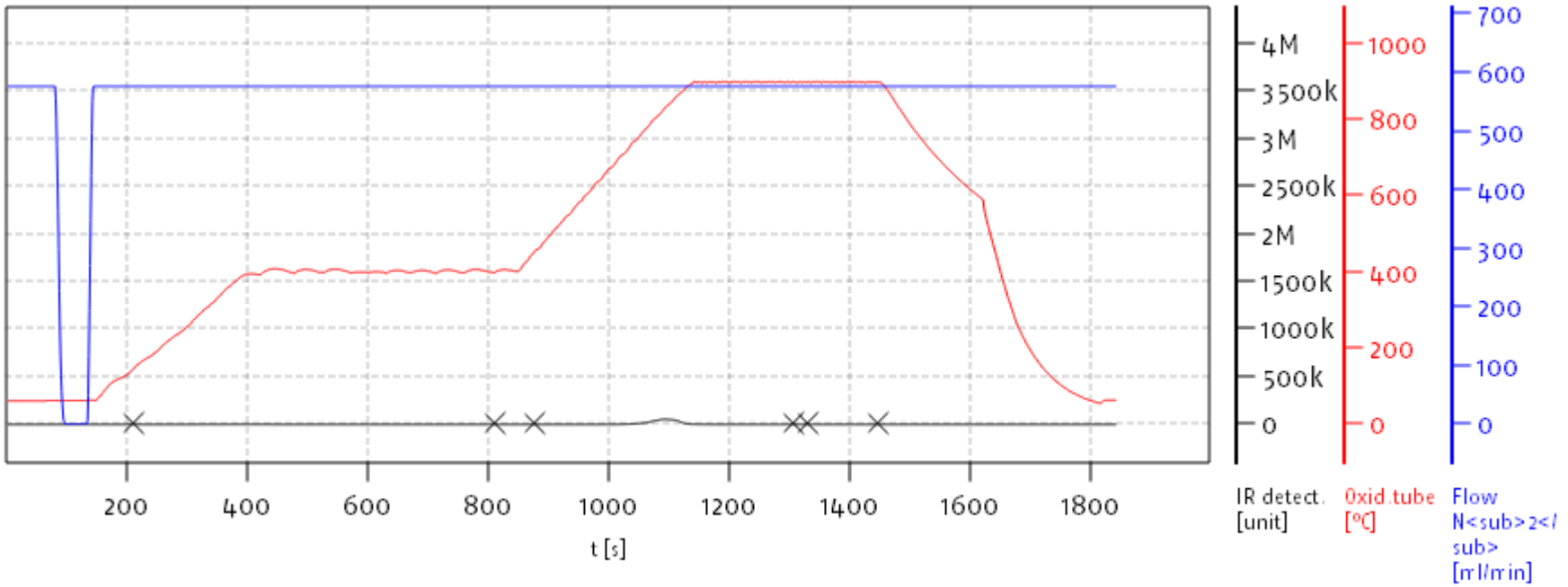
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
10	10	SEQ-CAL8	200.00	0.0300	1.00	CARBON	7/13/2021 6:43 PM	0.008	0.091	0.098	bl,C1u,C2u	4 663	112 452	86	1.0000	0.9989



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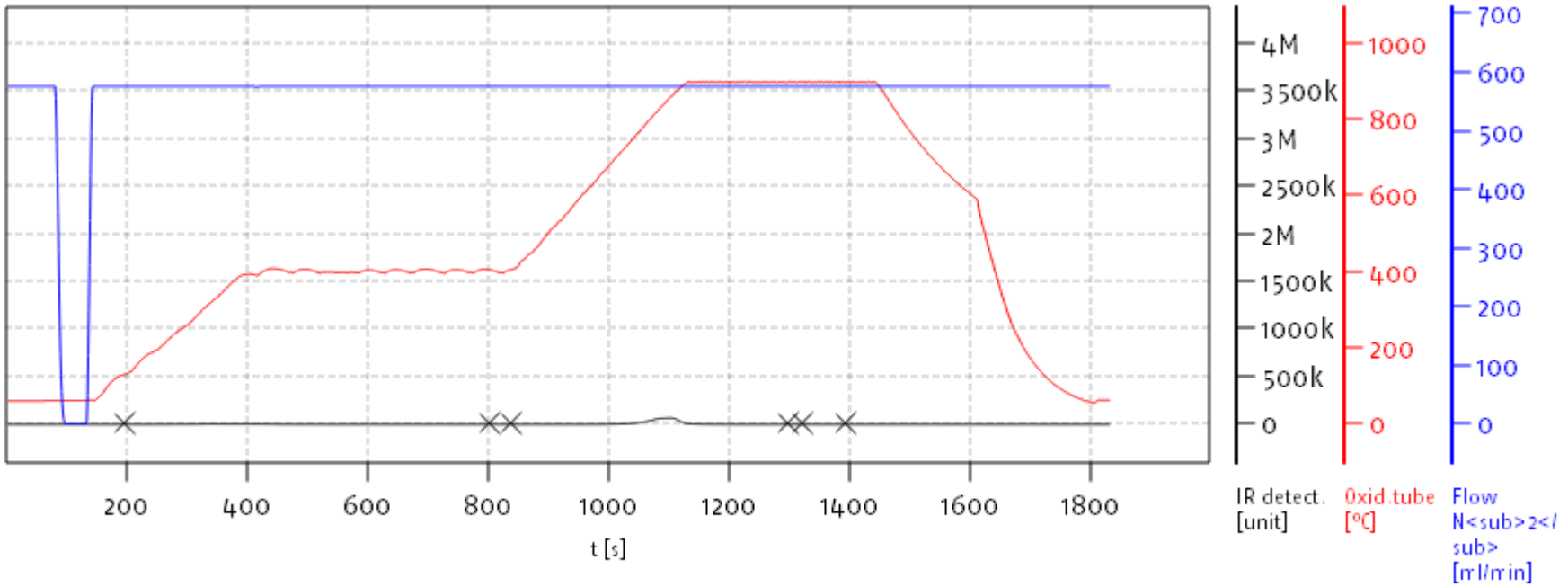
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
11	11	SEQ-CAL9	200.00	0.0407	1.00	CARBON	7/13/2021 7:14 PM	0.021	0.120	0.141	bl,C2u	21 063	157 168	339	1.0000	0.9528



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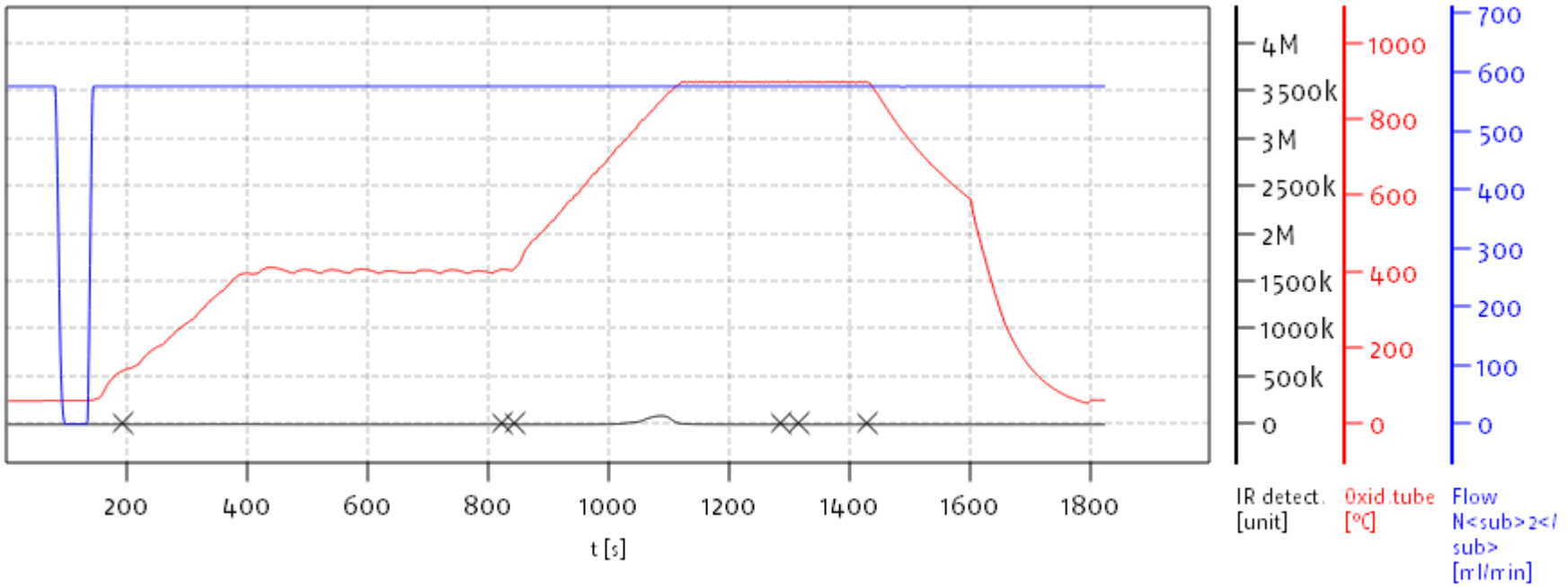
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
12	12	SEQ-CALA	200.00	0.0501	1.00	CARBON	7/13/2021 7:45 PM	0.013	0.151	0.164	bl,C2u	11 050	187 538	95	1.0000	1.0068



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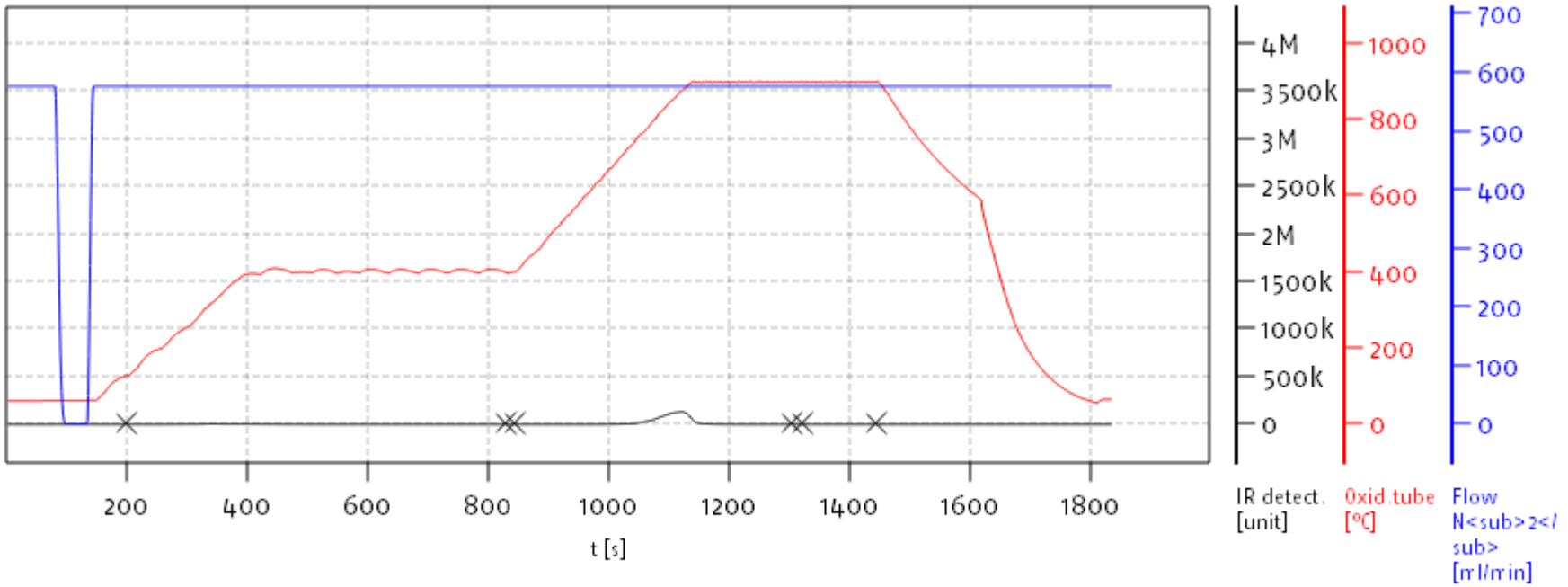
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
13	13	SEQ-CALB	200.00	0.0041	1.00	CARBON	7/13/2021 8:16 PM	0.021	0.258	0.279	bl,C2u	21 325	304 031	81	1.0000	1.0675



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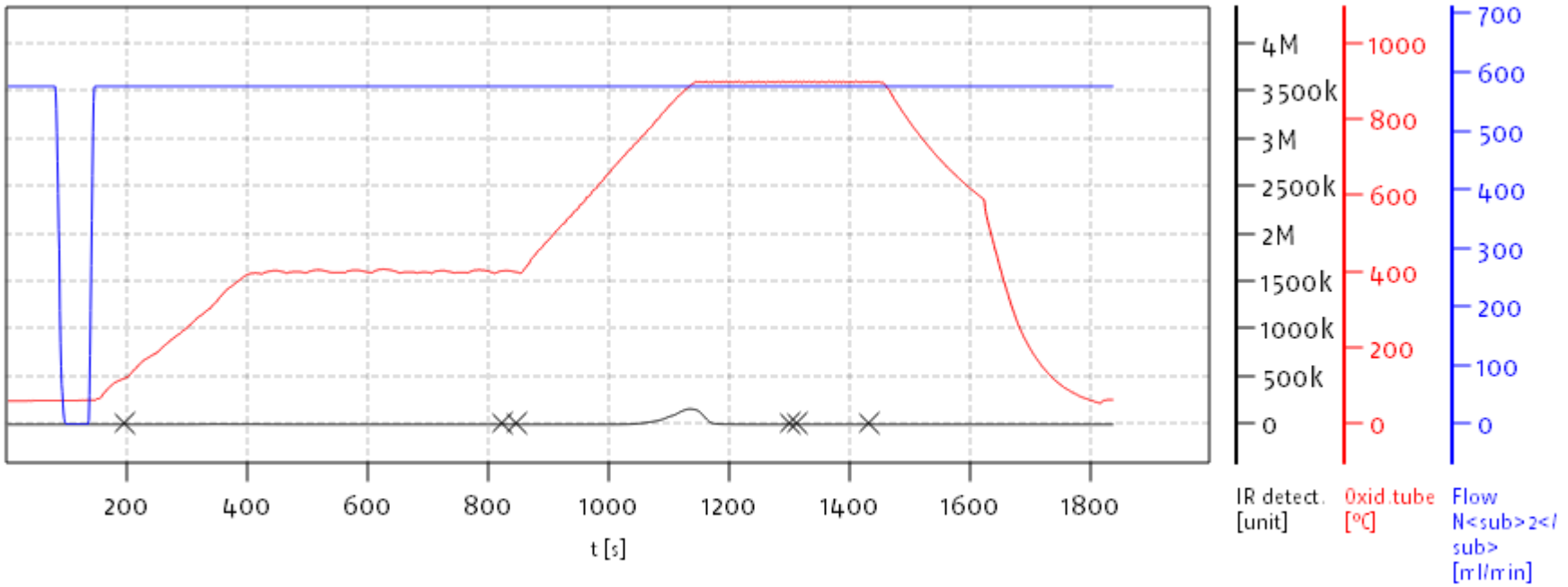
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
14	14	SEQ-CALC	200.00	0.0051	1.00	CARBON	7/13/2021 8:47 PM	0.013	0.324	0.337	bl,C2u	11 360	386 243	161	1.0000	1.0571



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	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
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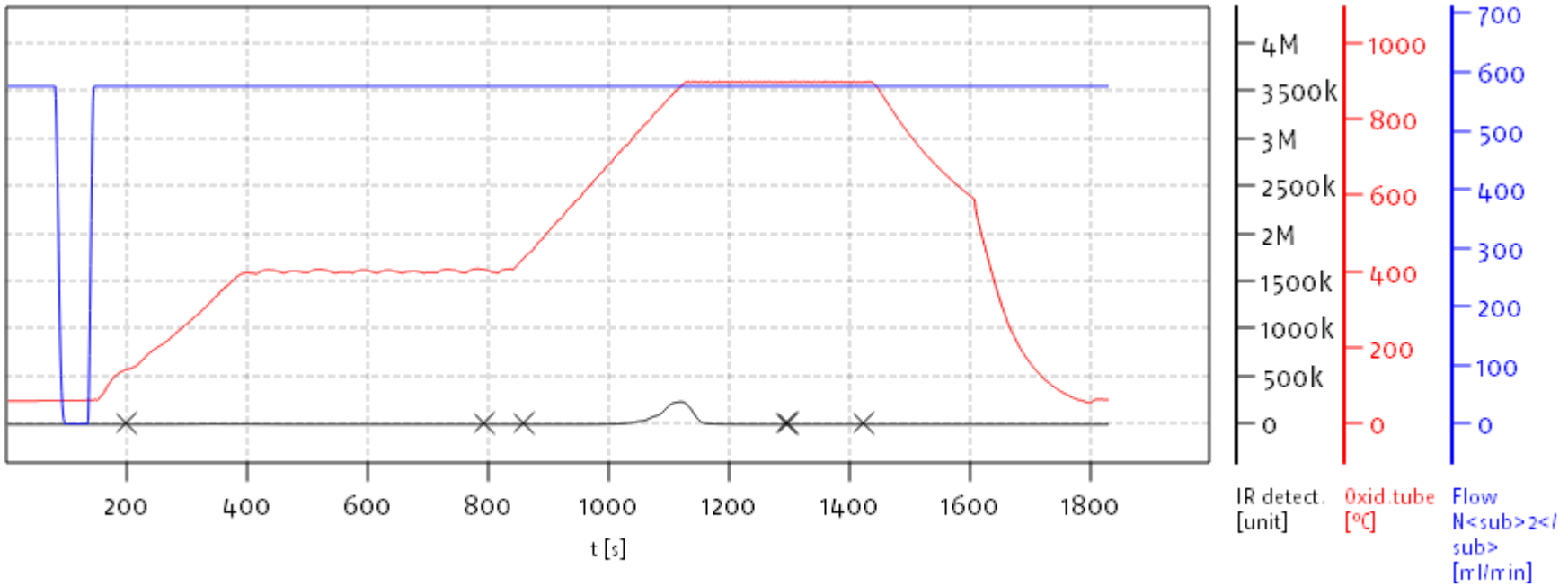

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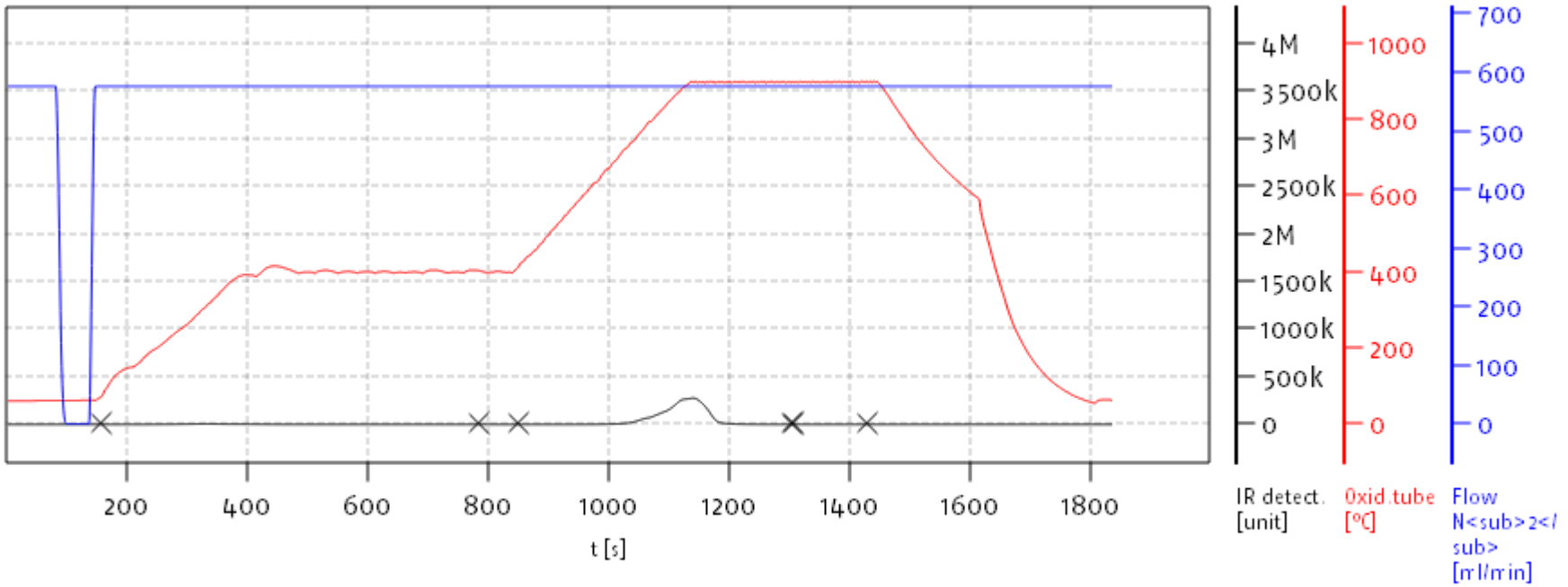
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
16	16	SEQ-CALE	200.00	0.0109	1.00	CARBON	7/13/2021 9:49 PM	0.024	0.600	0.624	bl,C2u	25 032	838 073	291	1.0000	0.9055



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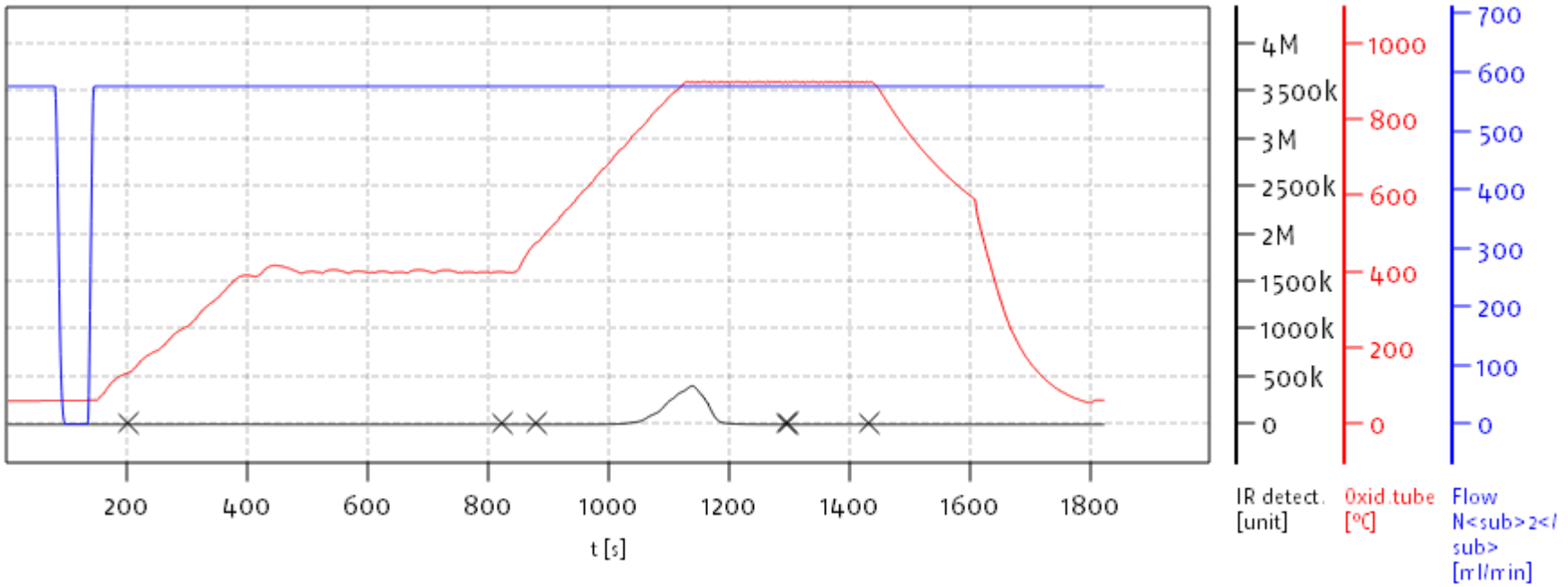
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
17	17	SEQ-CALF	200.00	0.0145	1.00	CARBON	7/13/2021 10:20 PM	0.011	0.906	0.917	bl,C1u,C2u	7 705	1 129 877	389	1.0000	1.0150



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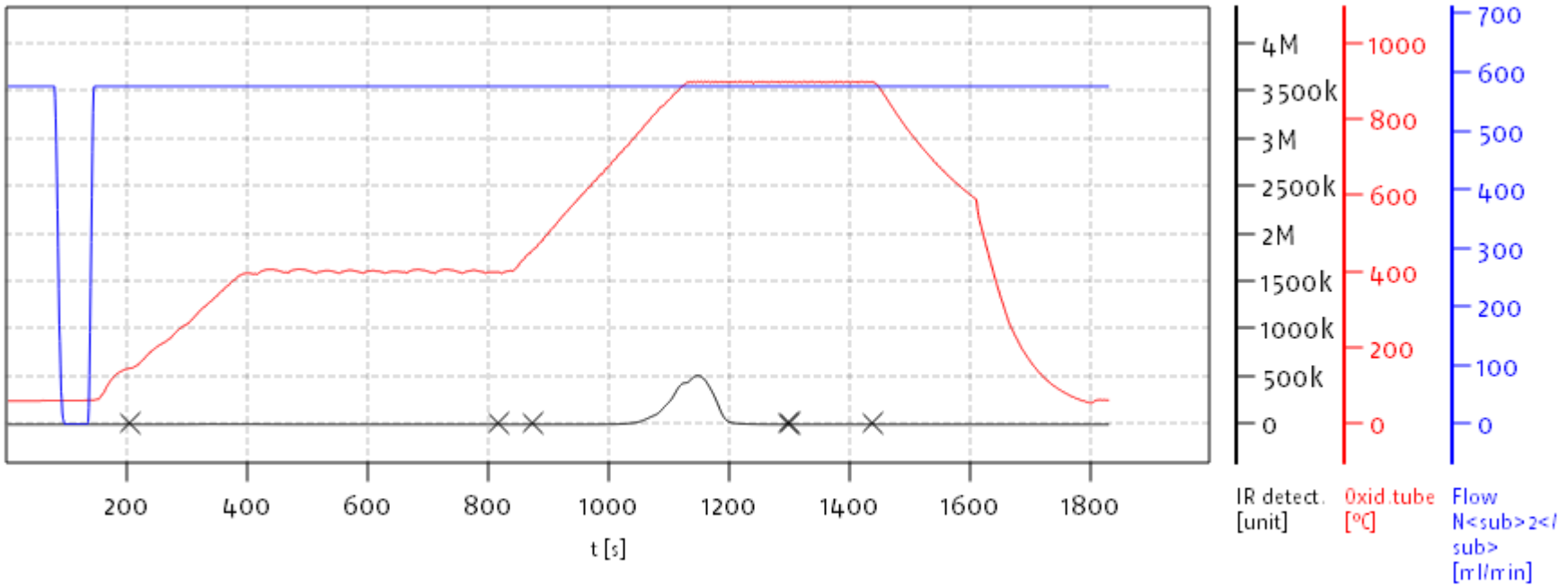
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
18	18	SEQ-CALG	200.00	0.0199	1.00	CARBON	7/13/2021 10:50 PM	0.015	1.206	1.221	bl,C2u	12 993	1 534 582	594	1.0000	0.9954



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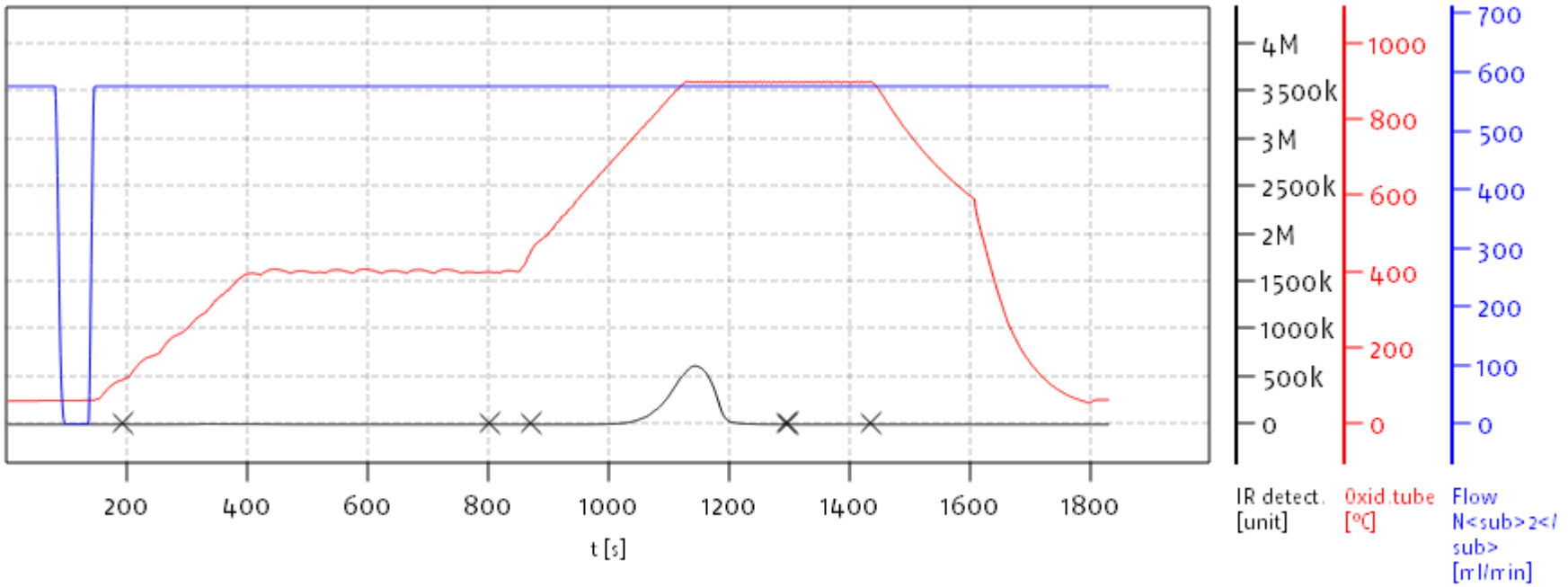
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
19	19	SEQ-CALH	200.00	0.0249	1.00	CARBON	7/13/2021 11:21 PM	0.021	1.524	1.545	bl,C2u	20 201	1 923 277	918	1.0000	1.0040



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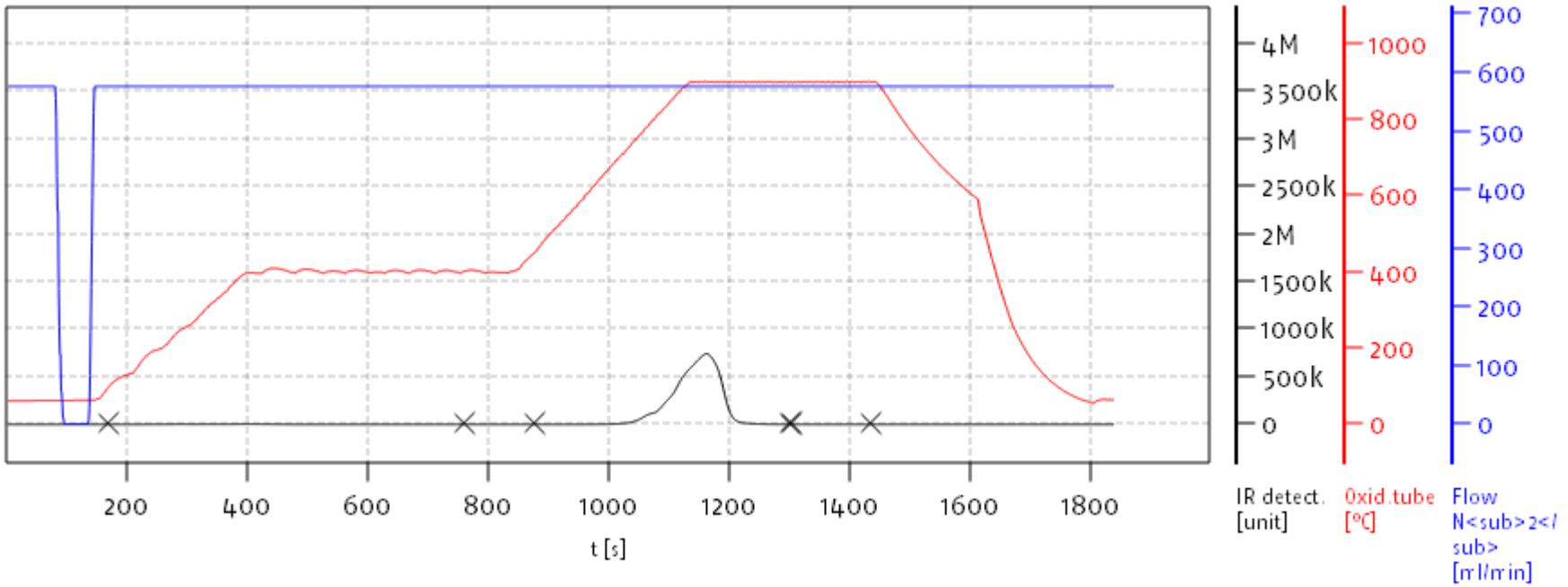
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
20	20	SEQ-CALI	200.00	0.0306	1.00	CARBON	7/13/2021 11:52 PM	0.021	1.800	1.821	bl,C2u	20 790	2 358 162	940	1.0000	0.9674



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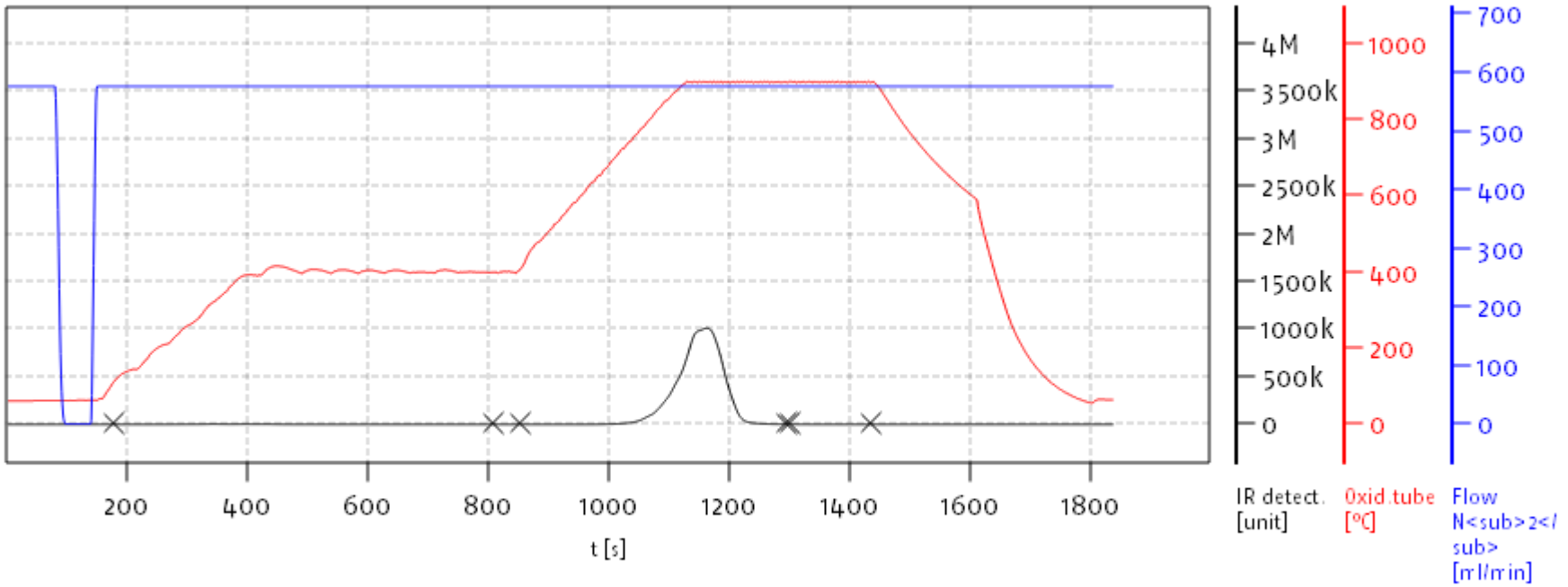
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
21	21	SEQ-CALJ	200.00	0.0419	1.00	CARBON	7/14/2021 12:23 AM	0.020	2.400	2.420	bl,C2u	17 643	3 227 695	2 142	1.0000	0.9426



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Access: soliTOC superuser

Date: Wed Jul 14 09:43:57 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

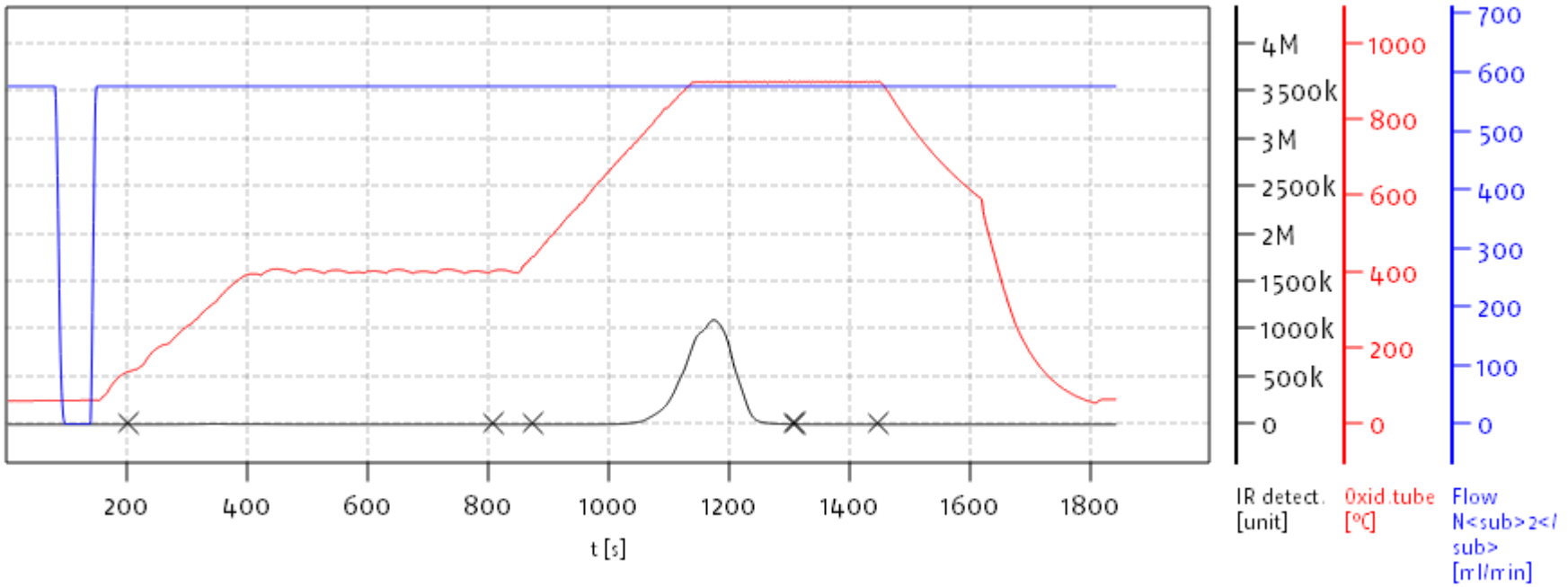
elementar
EXCELLENCE IN ELEMENTS

Document: TOC Calibration EG00035 071321BF from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
22	22	SEQ-CALK	200.00	0.0501	1.00	CARBON	7/14/2021 12:55 AM	0.023	3.012	3.035	bl,C2u	21 378	3 860 392	2 936	1.0000	0.9892



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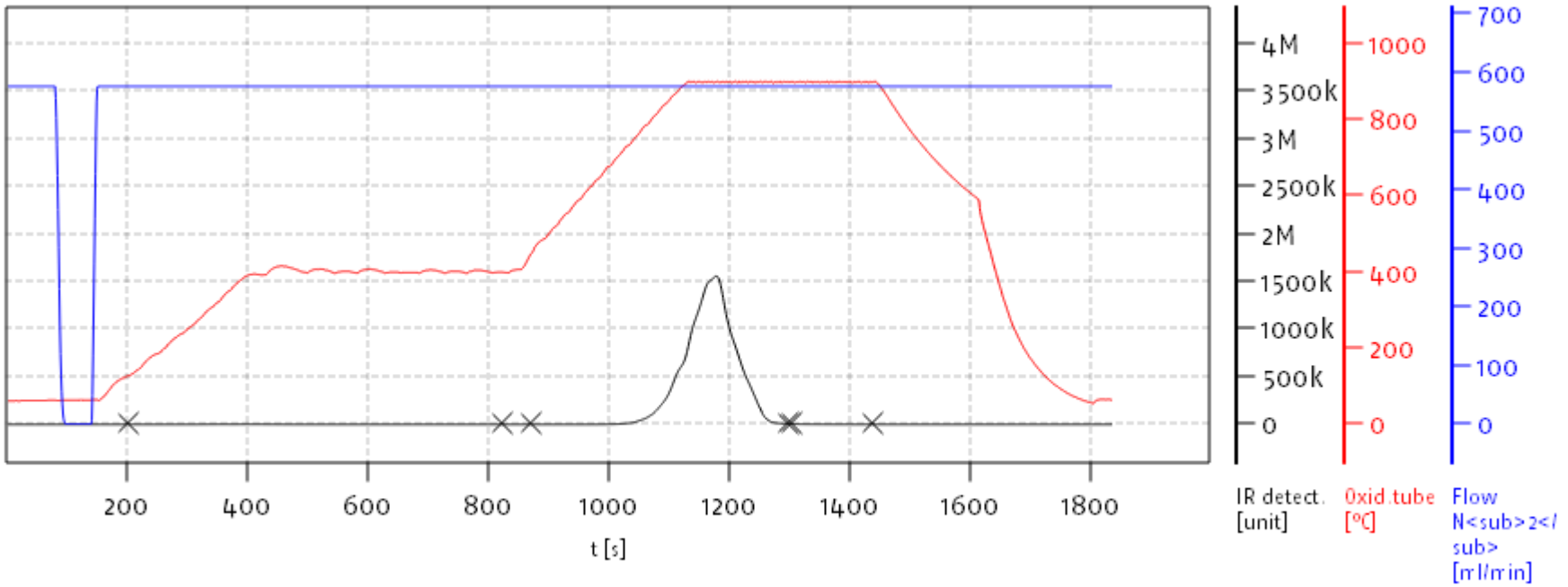
Analytical Chemists and Consultants

	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	0.0700	1.00	CARBON	7/14/2021 1:26 AM	0.016	4.206	4.222	bl,C1u,C2u	8 341	5 418 041	6 511	1.0000	0.9844



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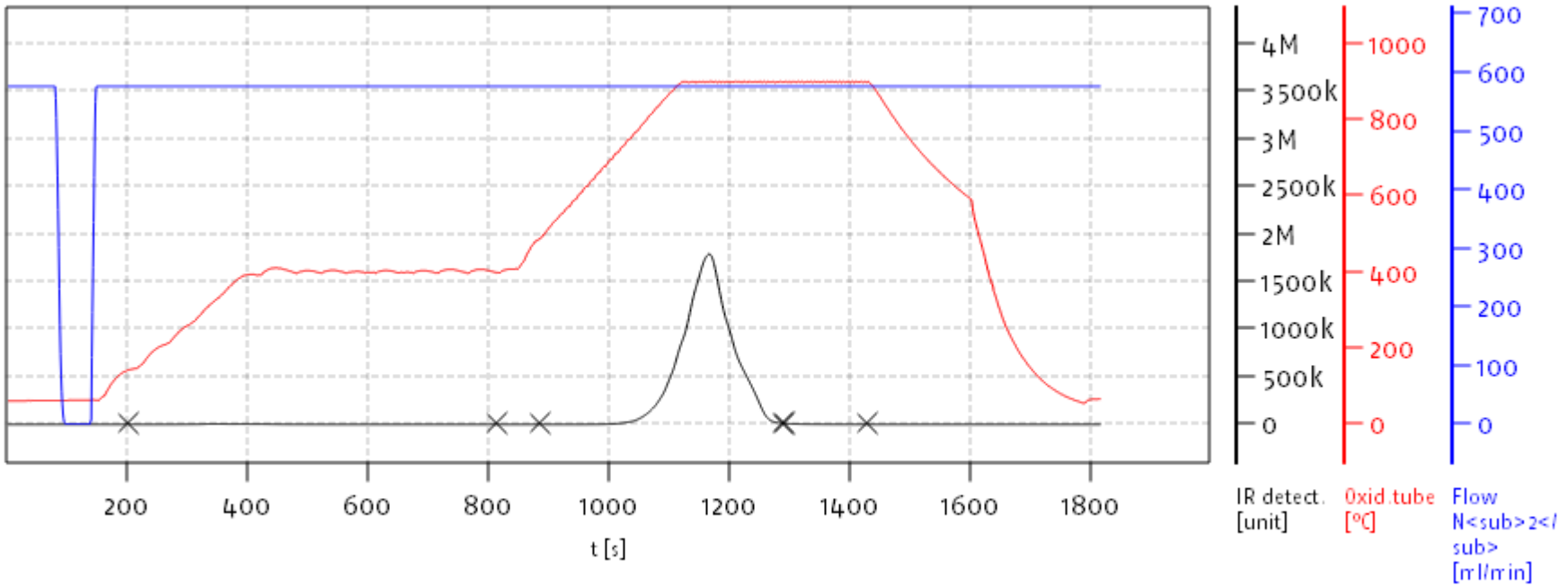
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
24	24	SEQ-CALM	200.00	0.0808	1.00	CARBON	7/14/2021 1:56 AM	0.032	4.812	4.844	bl	24 602	6 251 692	10 888	1.0000	0.9761



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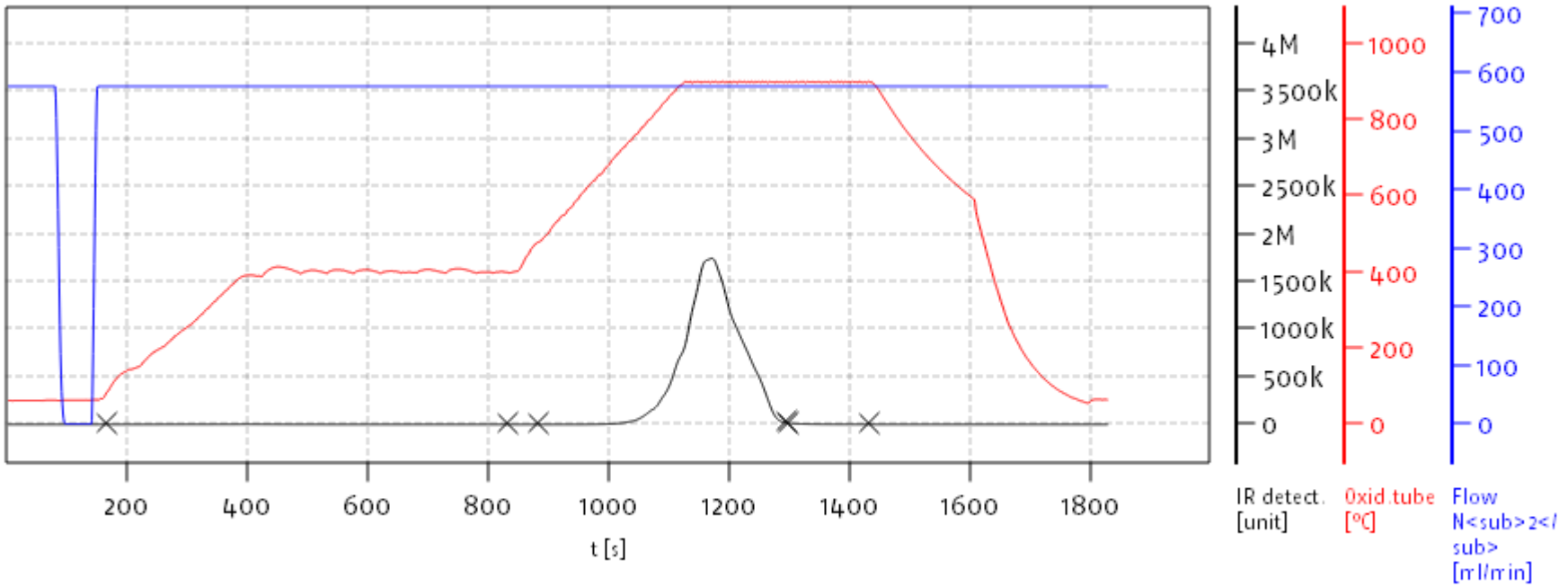
Analytical Chemists and Consultants

	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	0.0897	1.00	CARBON	7/14/2021 2:27 AM	0.025	5.406	5.431	bl	11 970	6 909 943	14 720	1.0000	0.9922



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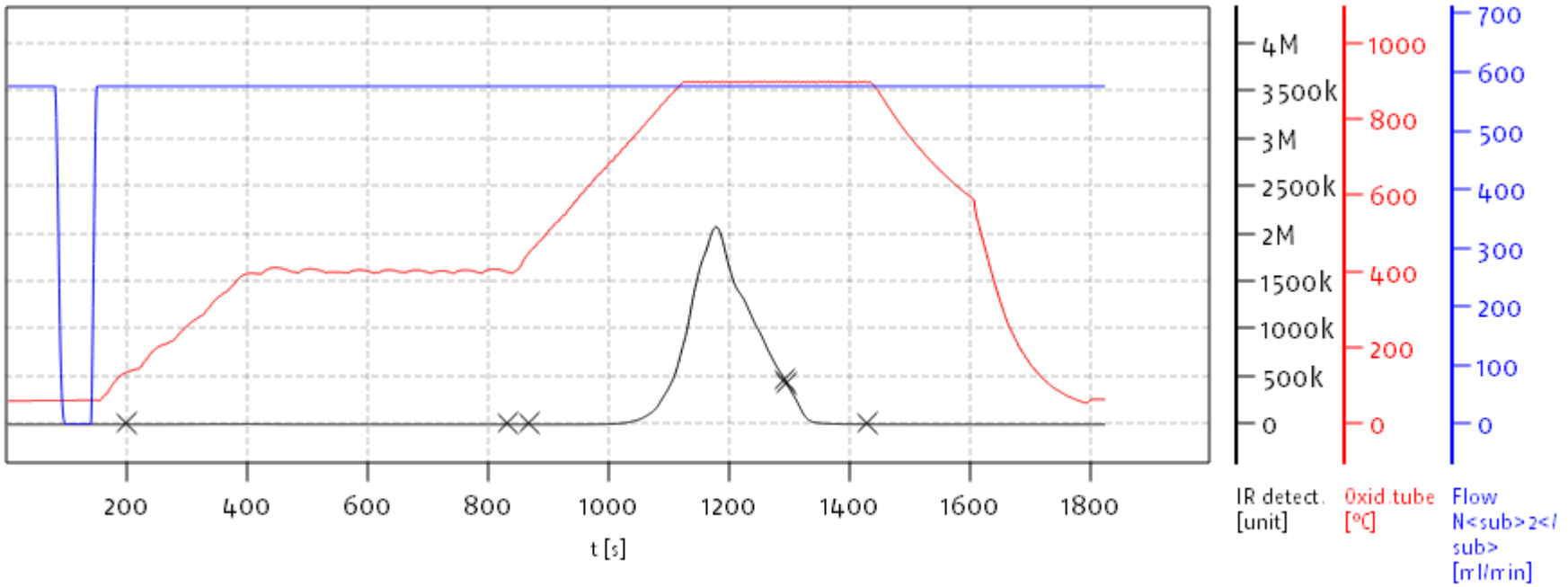
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
26	26	SEQ-CALO	200.00	0.1237	1.00	CARBON	7/14/2021 2:58 AM	0.271	7.218	7.489	bl,C3o	14 303	9 169 261	324 811	1.0000	0.9985



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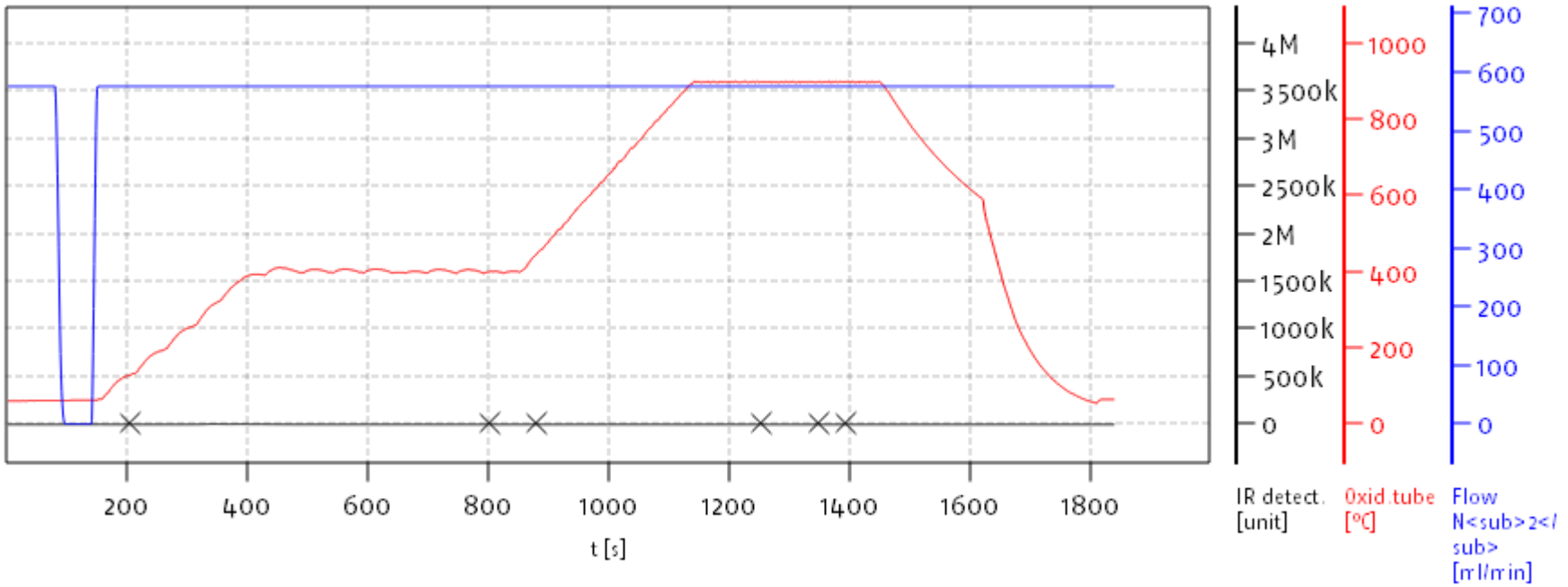
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
27	27	BLANK	1.00		1.00	CARBON	7/14/2021 3:29 AM	0.000	0.000	0.000	bl	15 377	4	0	1.0000	0.9704



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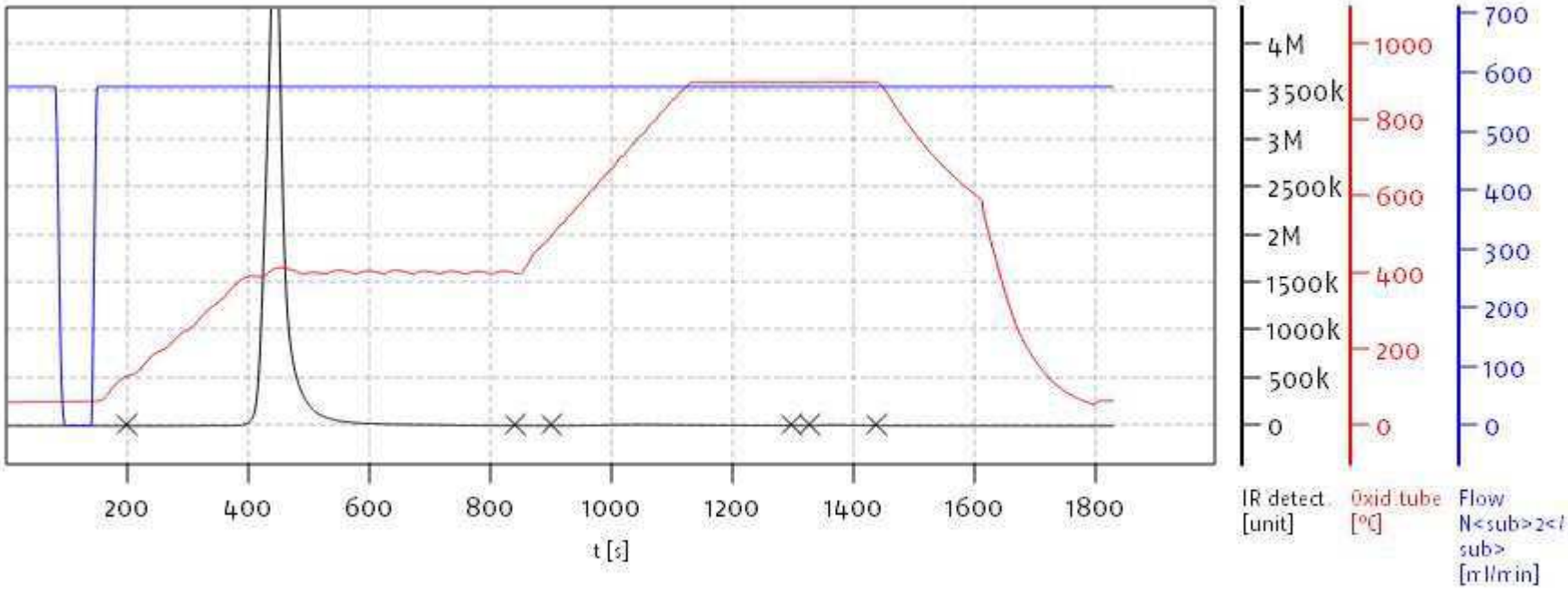
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
28	28	Dfactor	24.90		1.00	CARBON	7/14/2021 4:00 AM	44.620	0.675	45.295	bl	6 675 069	104 070	24 945	1.0513	1.0000



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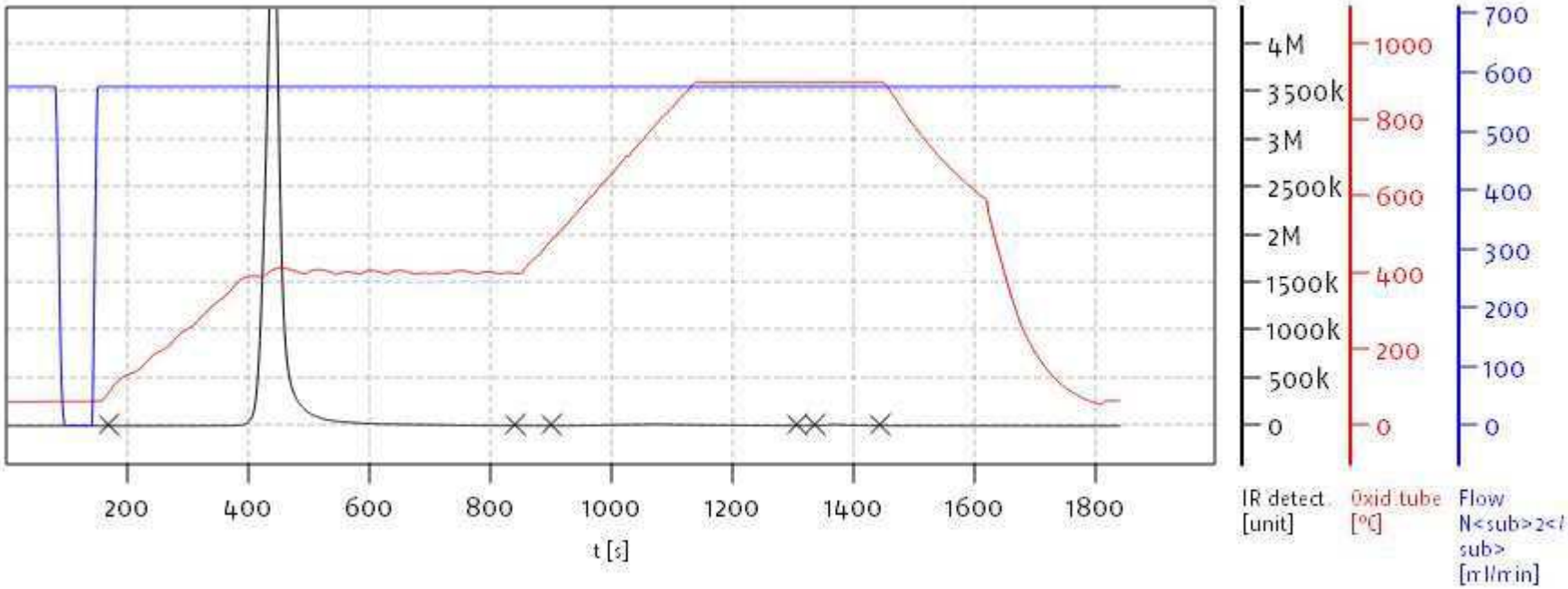
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
29	29	Dfactor	22.60		1.00	CARBON	7/14/2021 4:31 AM	44.643	0.810	45.453	bl	6 011 996	113 561	25 659	1.0594	1.0000



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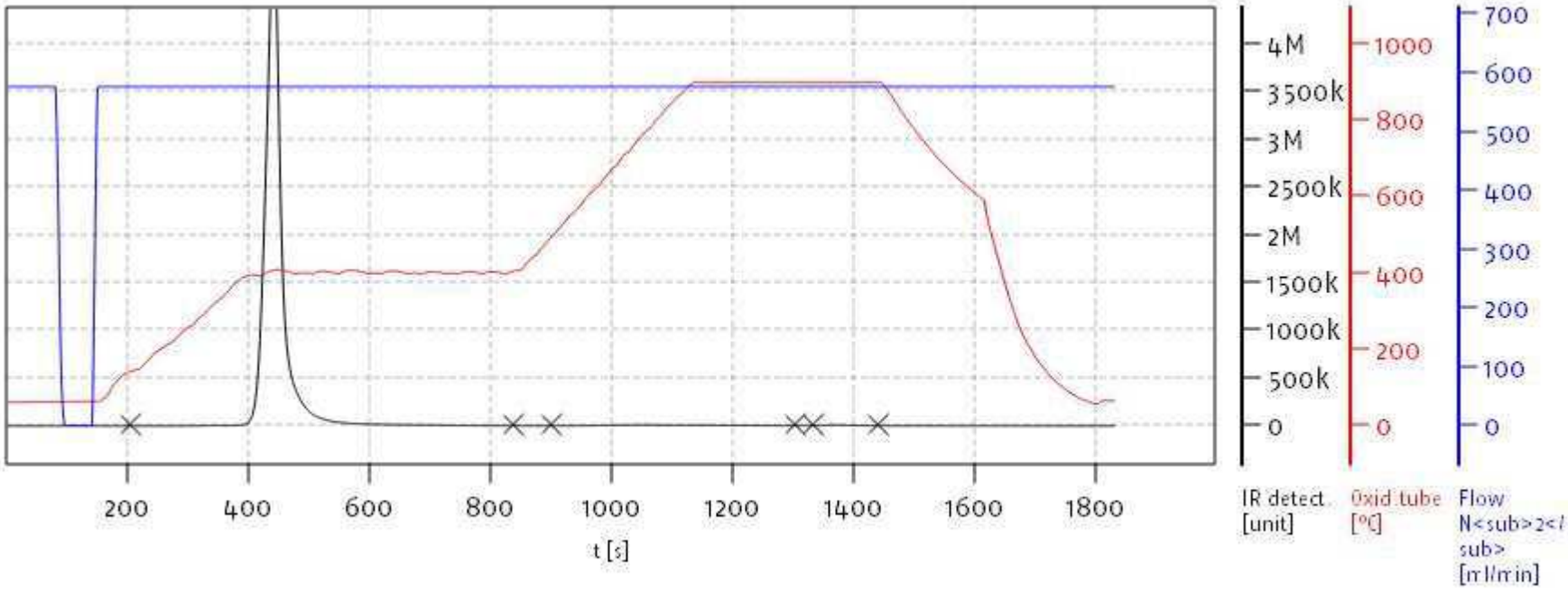
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
30	30	SEQ-ICV1	22.00		1.00	CARBON	7/14/2021 5:02 AM	44.870	0.594	45.465	bl	5 908 965	82 878	20 547	1.0554	0.9704



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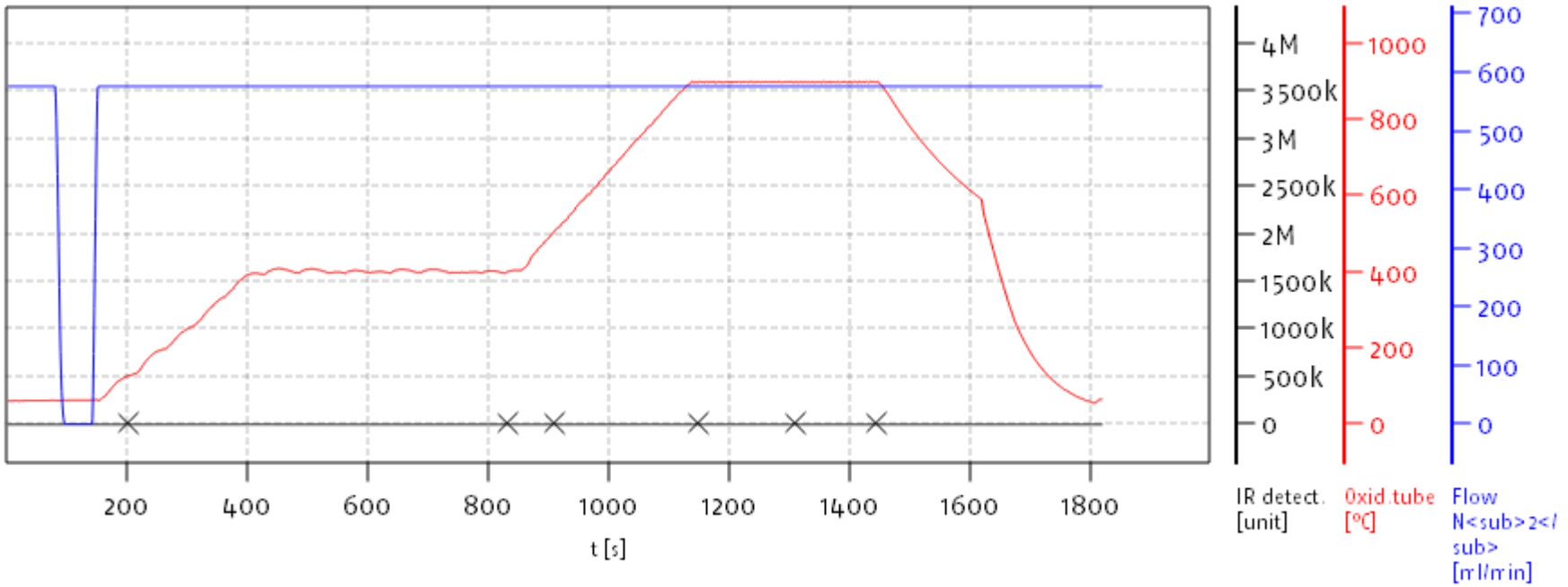
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
31	31	SEQ-ICB1	618.10		1.00	CARBON	7/14/2021 5:33 AM	0.002	0.001	0.003	bl,C1u,C3u,C2u	2 837	1 593	526	1.0554	0.9704



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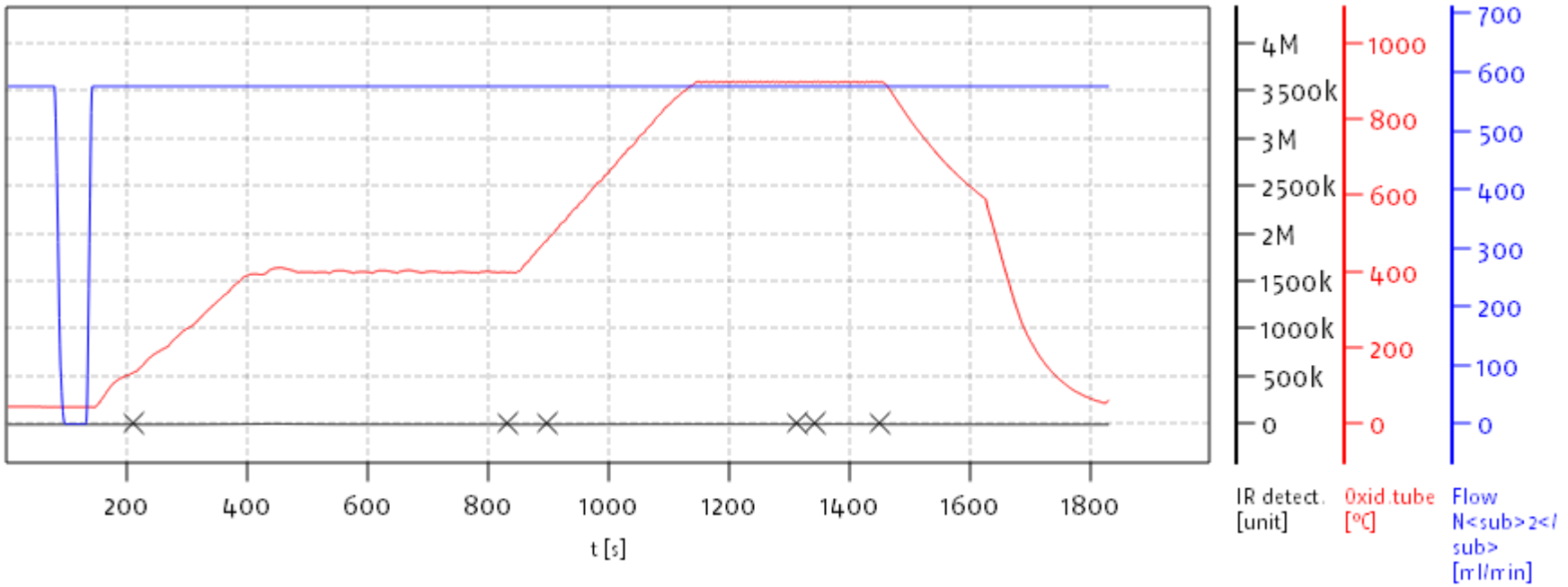
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
1	1	BLANK	1.00		1.00	CARBON	7/13/2021 2:06 PM	0.000	0.000	0.000	bl	41 637	34 438	10 598	1.0000	1.0000



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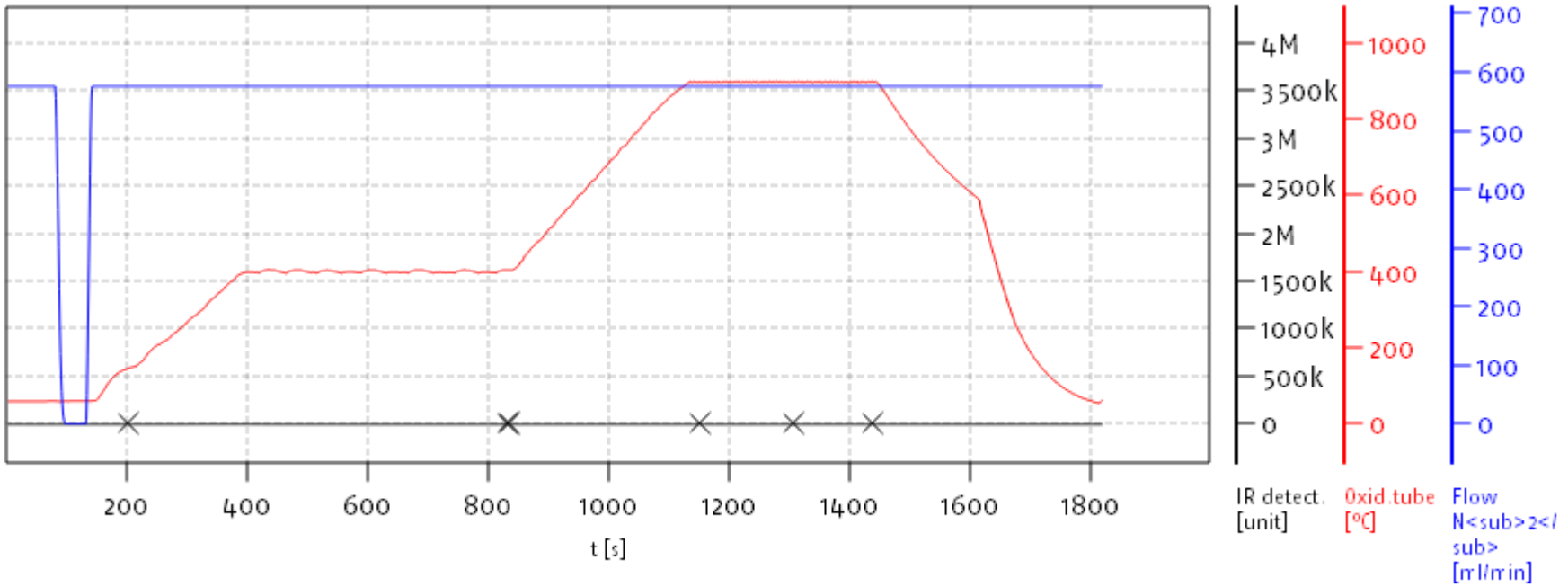
elementar
EXCELLENCE IN ELEMENTS

Document: TOC Calibration EG00035 071321BF from: 7/14/2021 10:24 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
2	2	BLANK	1.00		1.00	CARBON	7/13/2021 2:37 PM	0.000	0.000	0.000	bl	4 874	0	164	1.0000	1.0000



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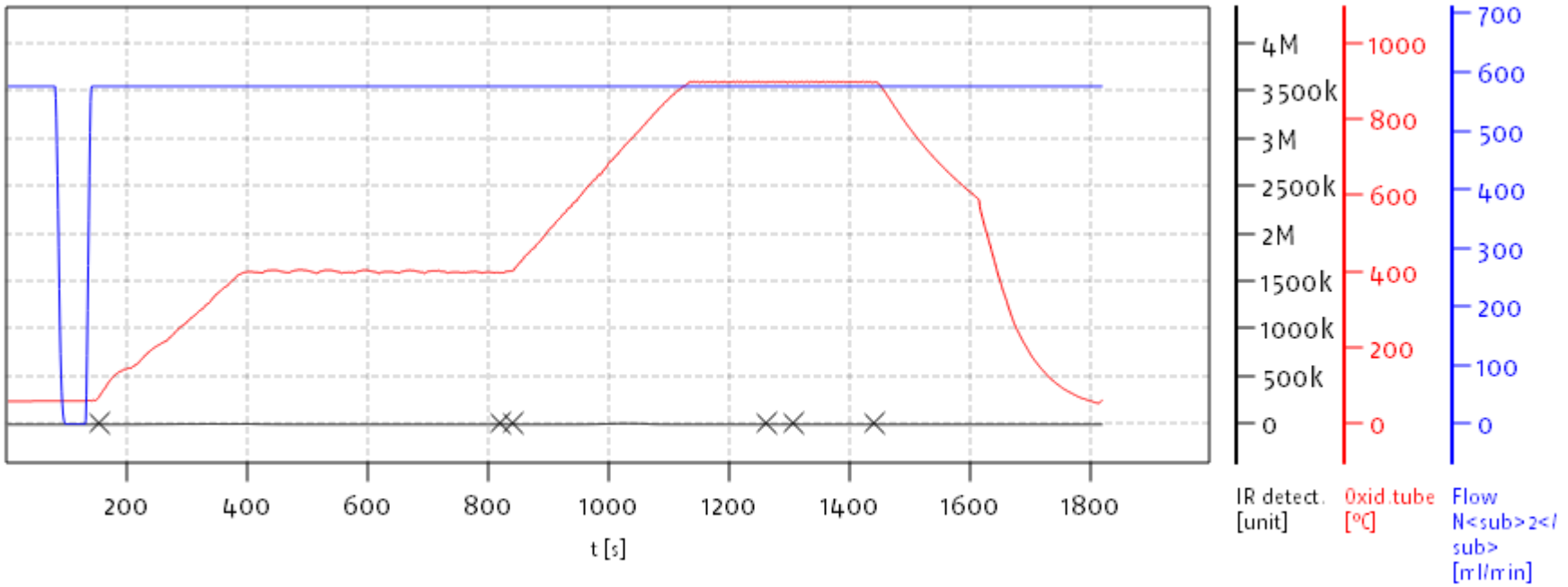
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
3	3	SEQ-CAL1	200.00	0.0027	1.00	CARBON	7/13/2021 3:07 PM	0.029	0.008	0.037	bl,C2u	31 040	28 300	256	1.0000	0.3447



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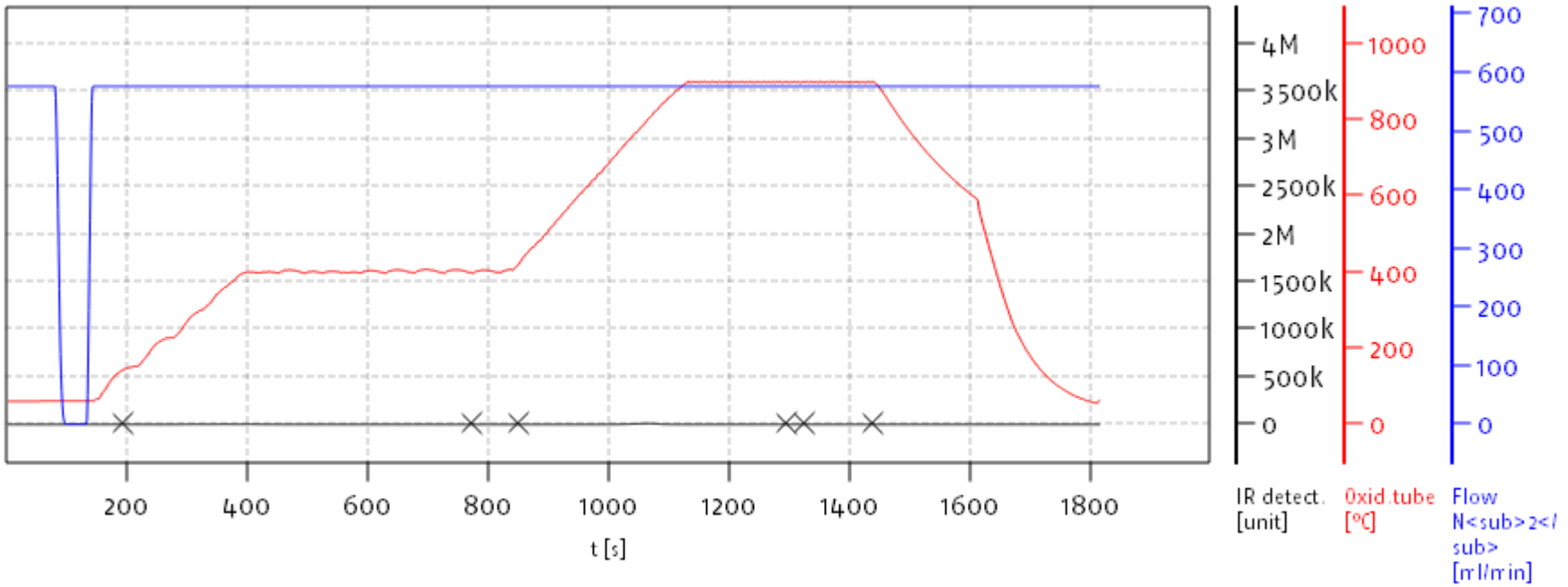
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
4	4	SEQ-CAL2	200.00	0.0050	1.00	CARBON	7/13/2021 3:38 PM	0.013	0.015	0.028	bl,C2u	10 883	17 832	143	1.0000	0.9493



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Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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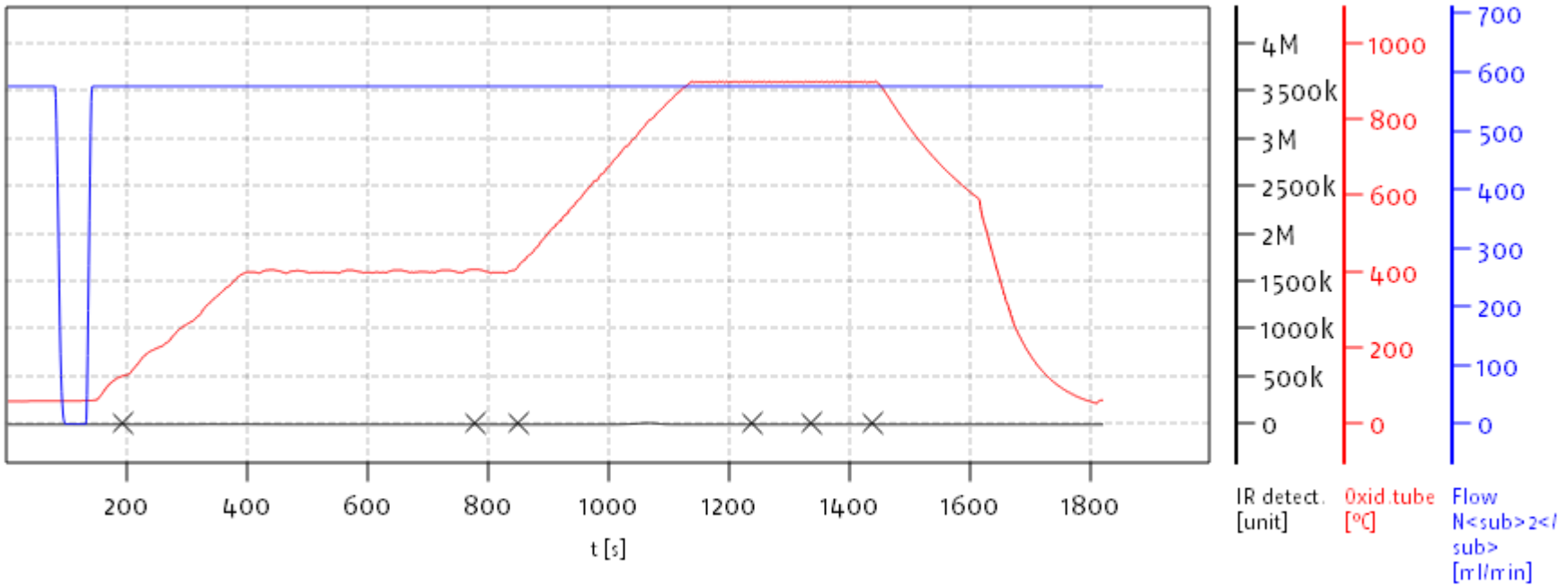
Analytical Chemists and Consultants

	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	0.0068	1.00	CARBON	7/13/2021 4:09 PM	0.012	0.022	0.034	bl,C2u	9 870	22 430	107	1.0000	1.1246



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Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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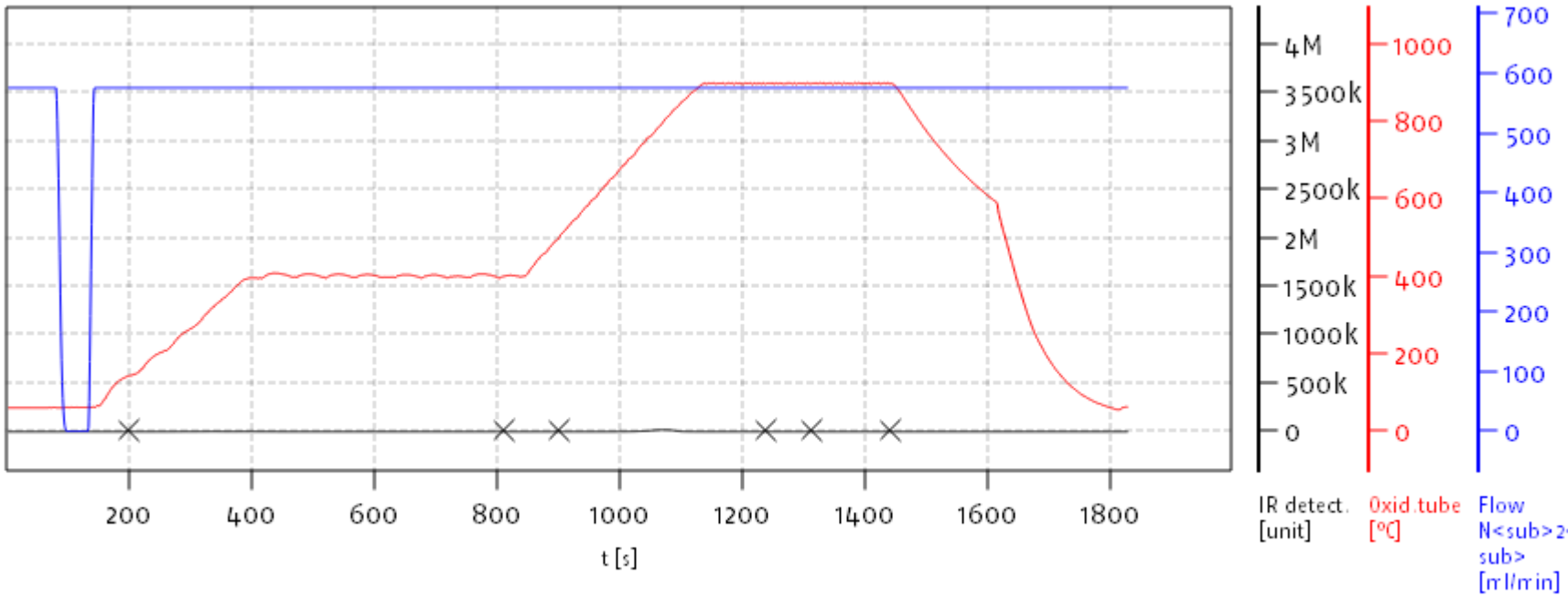
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
6	6	SEQ-CAL4	200.00	0.0099	1.00	CARBON	7/13/2021 4:40 PM	0.012	0.030	0.042	bl,C2u	9 549	35 259	82	1.0000	1.0150



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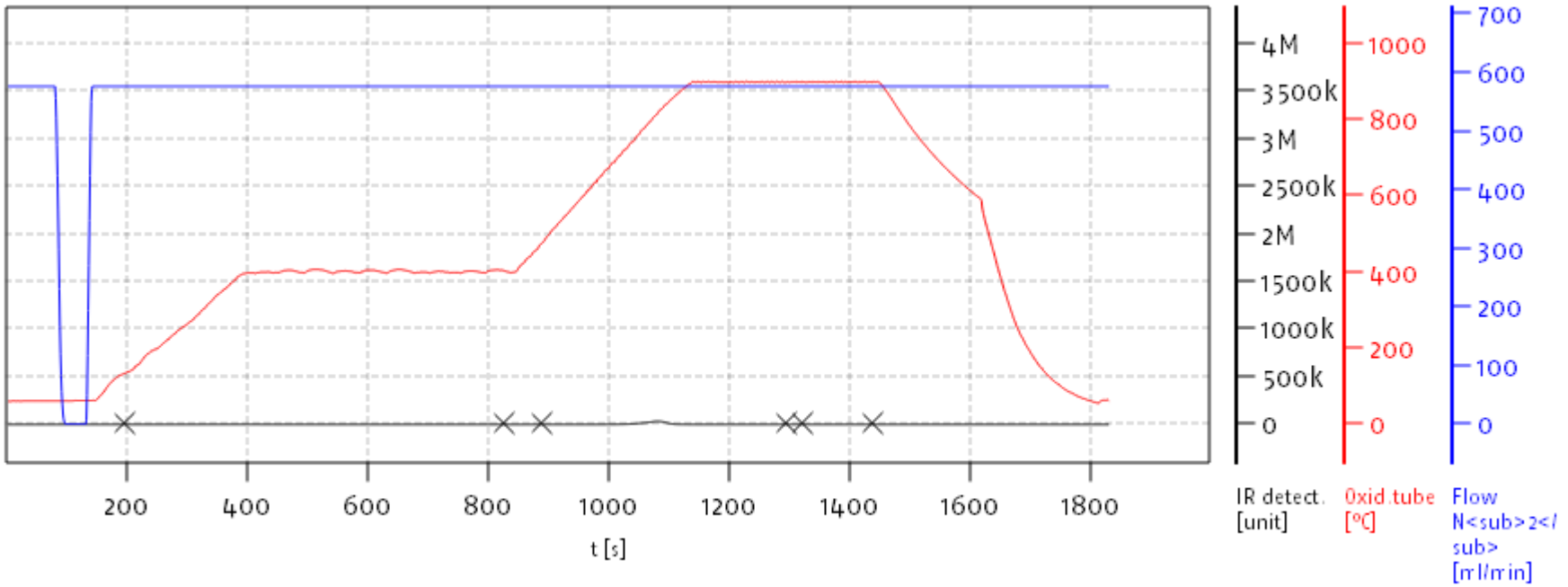
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
7	7	SEQ-CAL5	200.00	0.0155	1.00	CARBON	7/13/2021 5:11 PM	0.008	0.045	0.053	bl,C1u,C2u	4 269	54 591	65	1.0000	0.9980



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Analyst: BF

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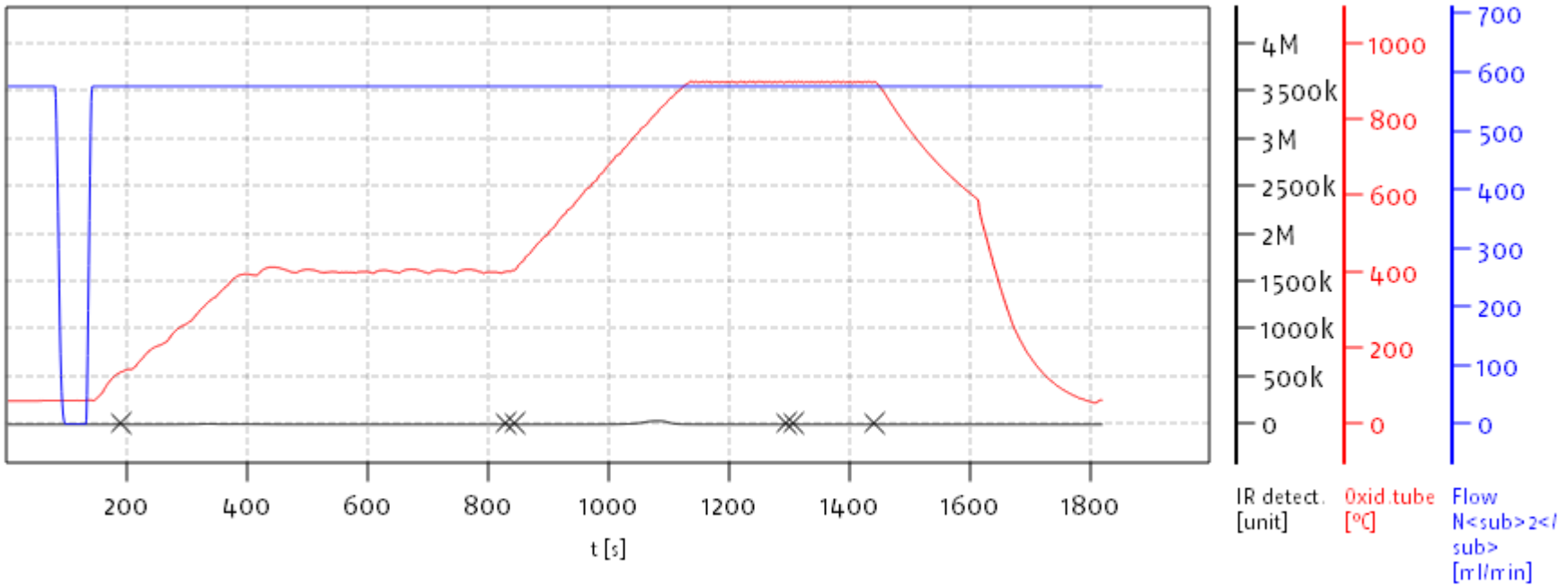
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
8	8	SEQ-CAL6	200.00	0.0198	1.00	CARBON	7/13/2021 5:41 PM	0.019	0.061	0.080	bl,C2u	18 512	73 034	79	1.0000	1.0264



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Soli TOC Cube, Carbon
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Analyst: BF

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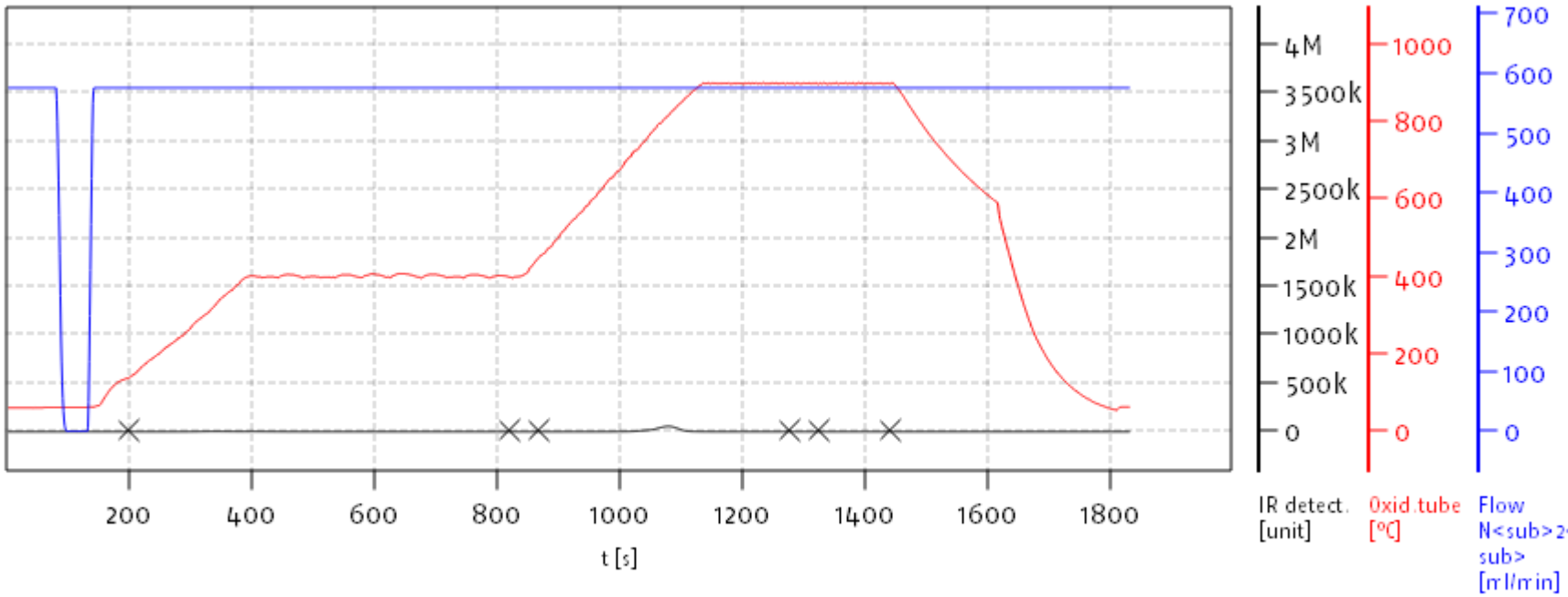
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
9	9	SEQ-CAL7	200.00	0.0257	1.00	CARBON	7/13/2021 6:12 PM	0.014	0.075	0.089	bl,C2u	12 682	95 421	29	1.0000	0.9745



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Date: Wed Jul 14 10:35:53 2021

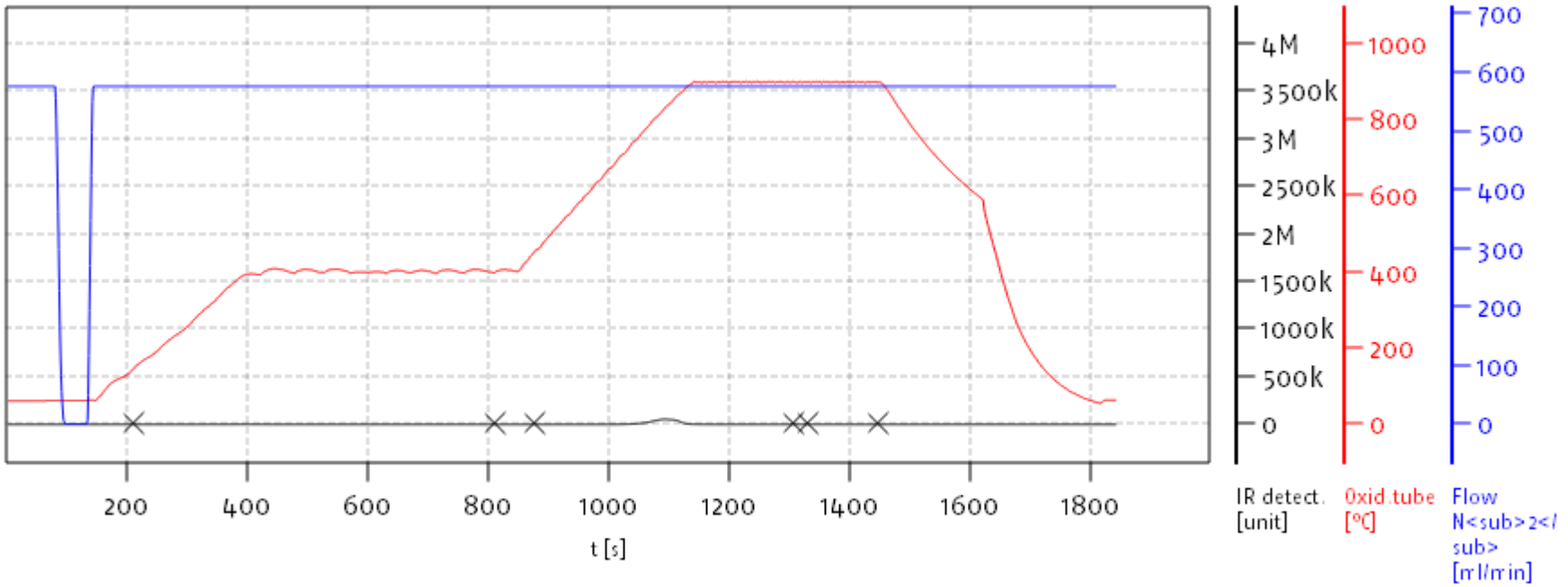
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
10	10	SEQ-CAL8	200.00	0.0300	1.00	CARBON	7/13/2021 6:43 PM	0.008	0.091	0.098	bl,C1u,C2u	4 663	112 452	86	1.0000	0.9989



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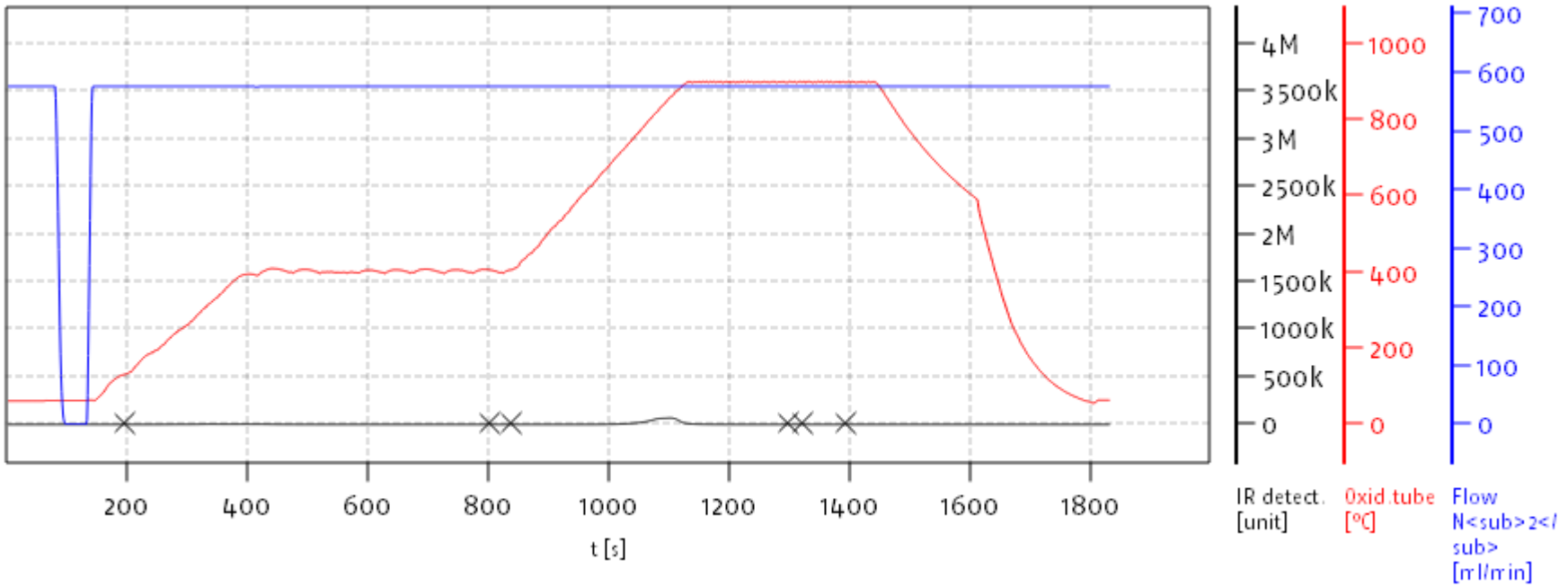
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
11	11	SEQ-CAL9	200.00	0.0407	1.00	CARBON	7/13/2021 7:14 PM	0.021	0.120	0.141	bl,C2u	21 063	157 168	339	1.0000	0.9528



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Soli TOC Cube, Carbon
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Analyst: BF

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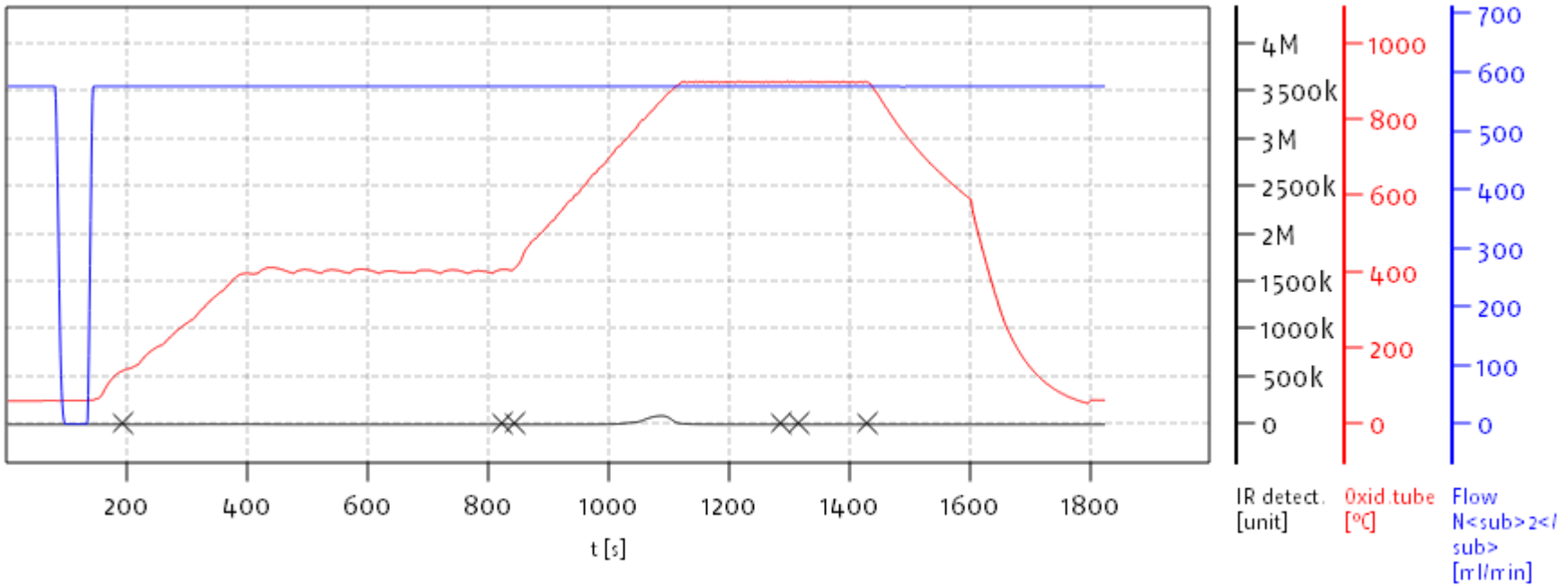
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
12	12	SEQ-CALA	200.00	0.0501	1.00	CARBON	7/13/2021 7:45 PM	0.013	0.151	0.164	bl,C2u	11 050	187 538	95	1.0000	1.0068



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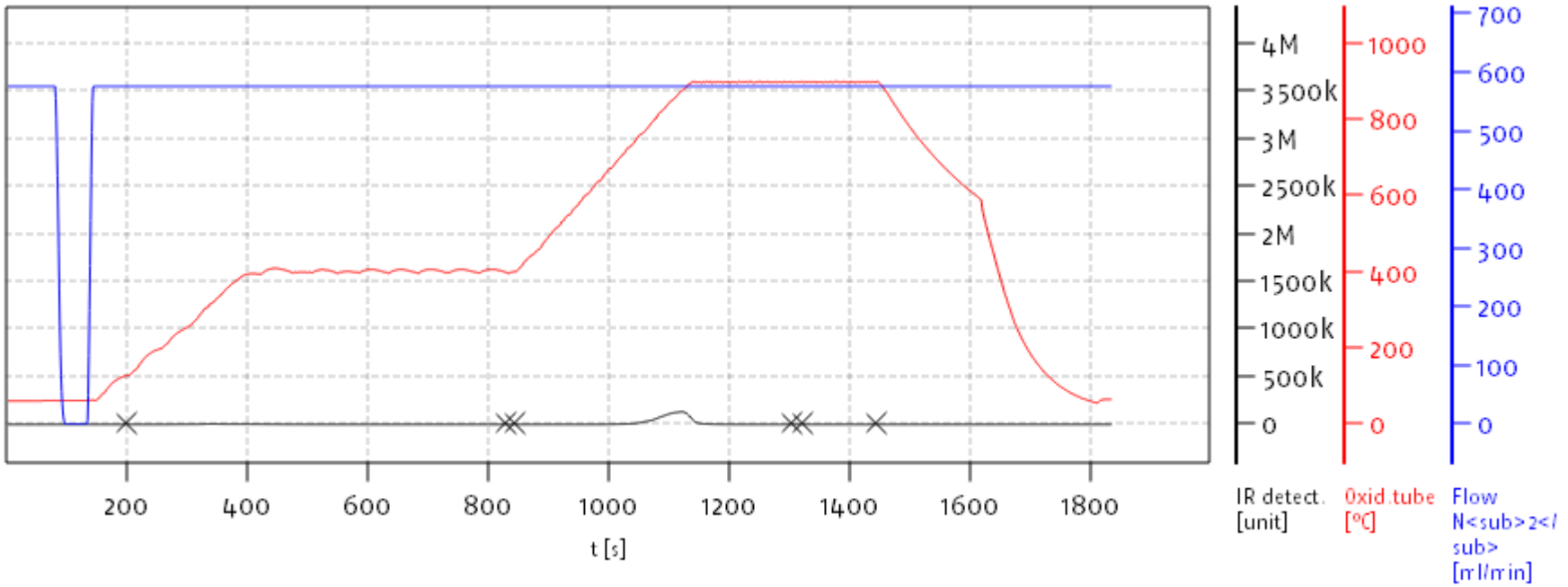
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
13	13	SEQ-CALB	200.00	0.0041	1.00	CARBON	7/13/2021 8:16 PM	0.021	0.258	0.279	bl,C2u	21 325	304 031	81	1.0000	1.0675



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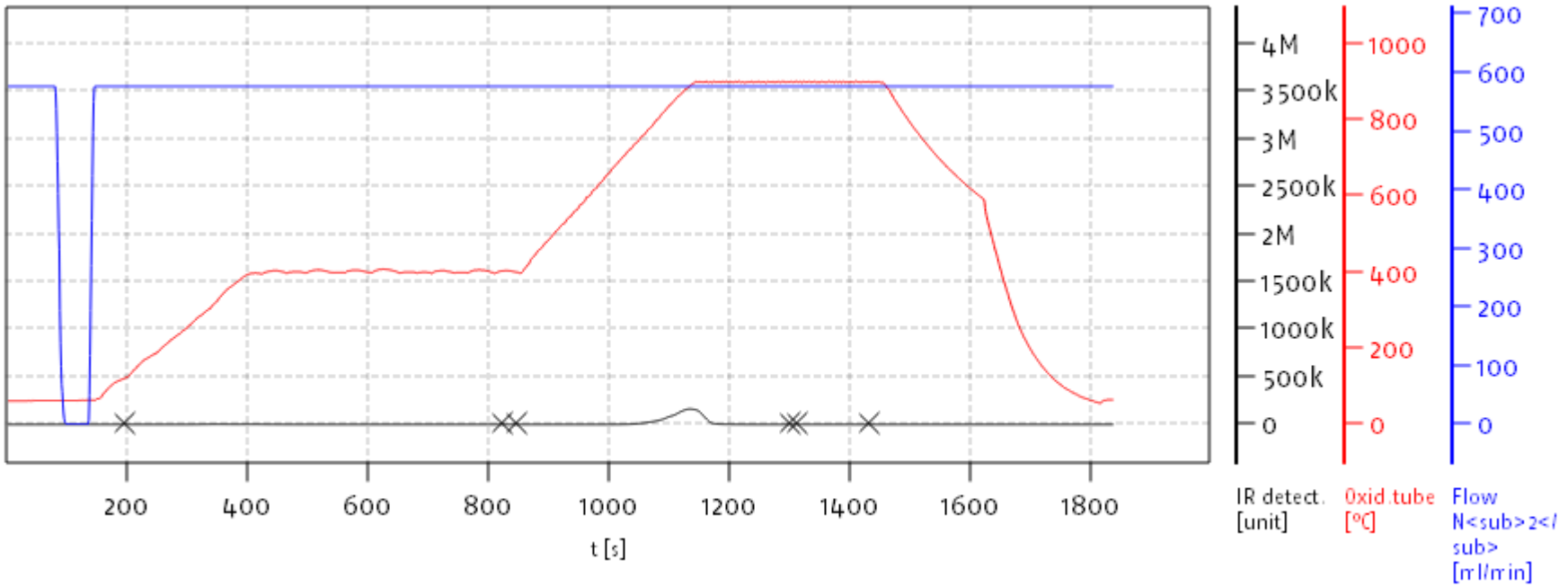
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
14	14	SEQ-CALC	200.00	0.0051	1.00	CARBON	7/13/2021 8:47 PM	0.013	0.324	0.337	bl,C2u	11 360	386 243	161	1.0000	1.0571



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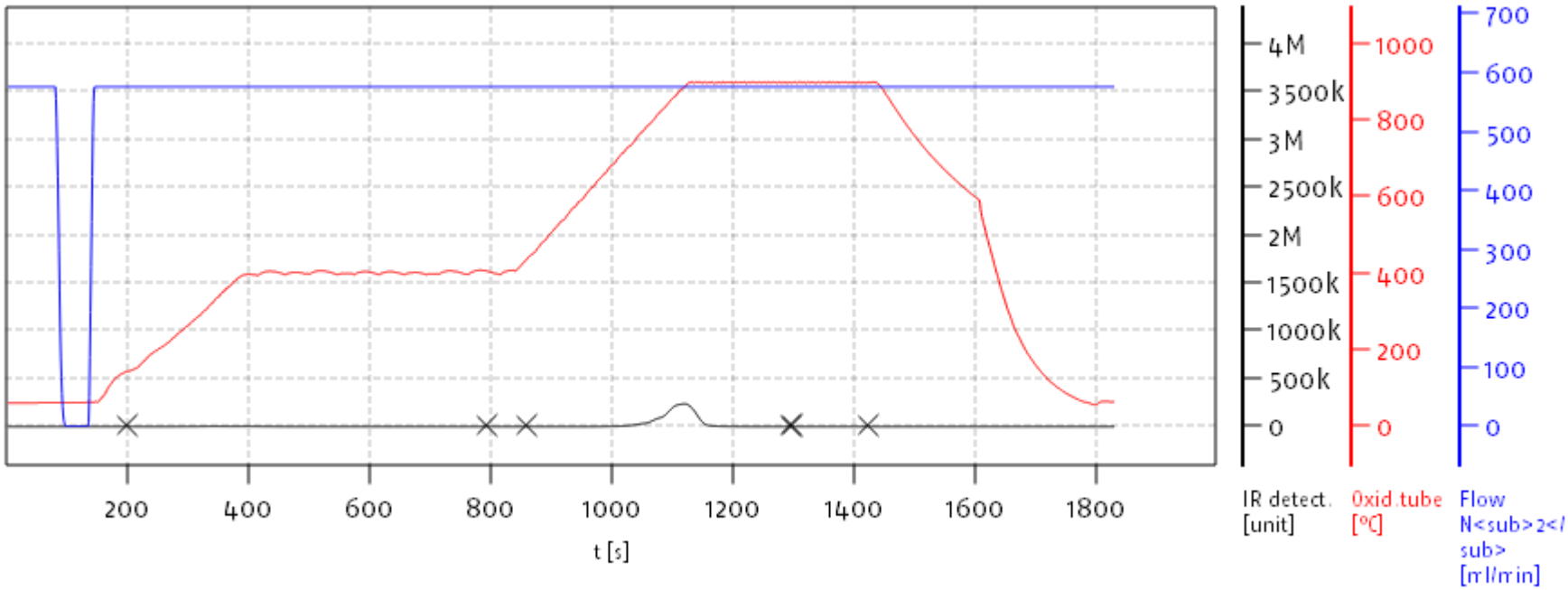
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
15	15	SEQ-CALD	200.00	0.0073	1.00	CARBON	7/13/2021 9:18 PM	0.017	0.444	0.461	bl,C2u	15 984	558 687	174	1.0000	1.0036



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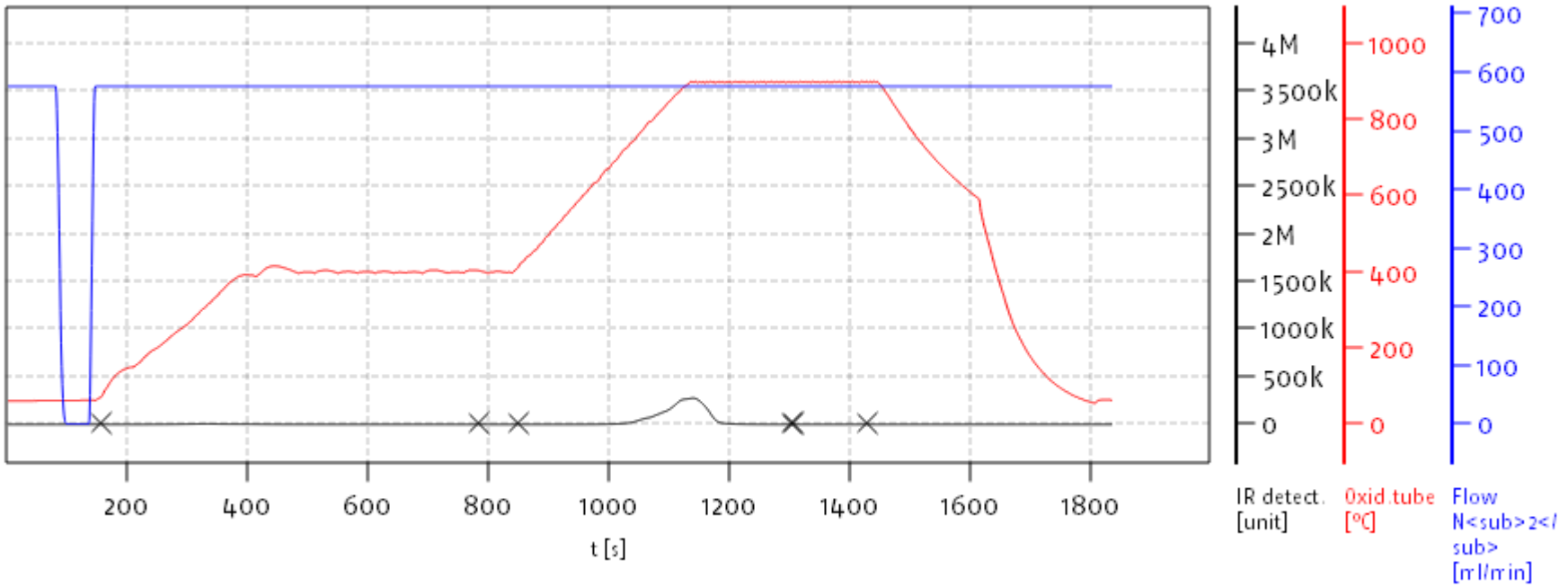
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
16	16	SEQ-CALE	200.00	0.0109	1.00	CARBON	7/13/2021 9:49 PM	0.024	0.600	0.624	bl,C2u	25 032	838 073	291	1.0000	0.9055



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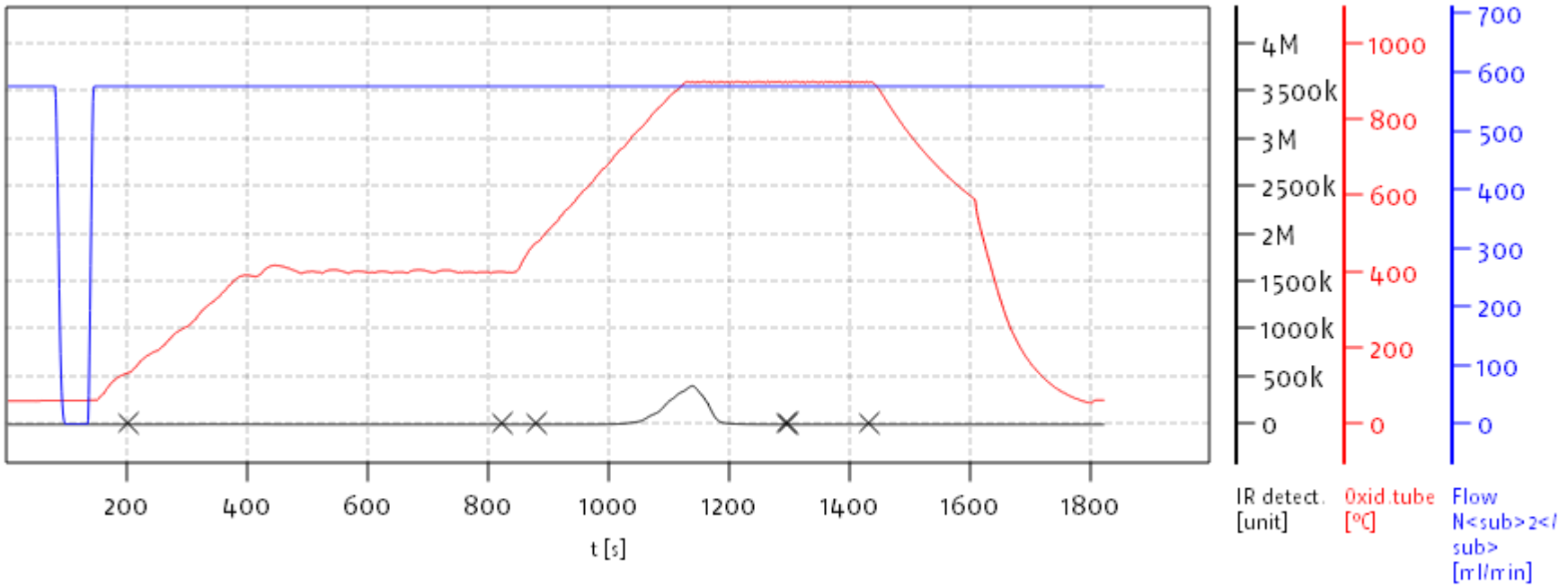
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
17	17	SEQ-CALF	200.00	0.0145	1.00	CARBON	7/13/2021 10:20 PM	0.011	0.906	0.917	bl,C1u,C2u	7 705	1 129 877	389	1.0000	1.0150



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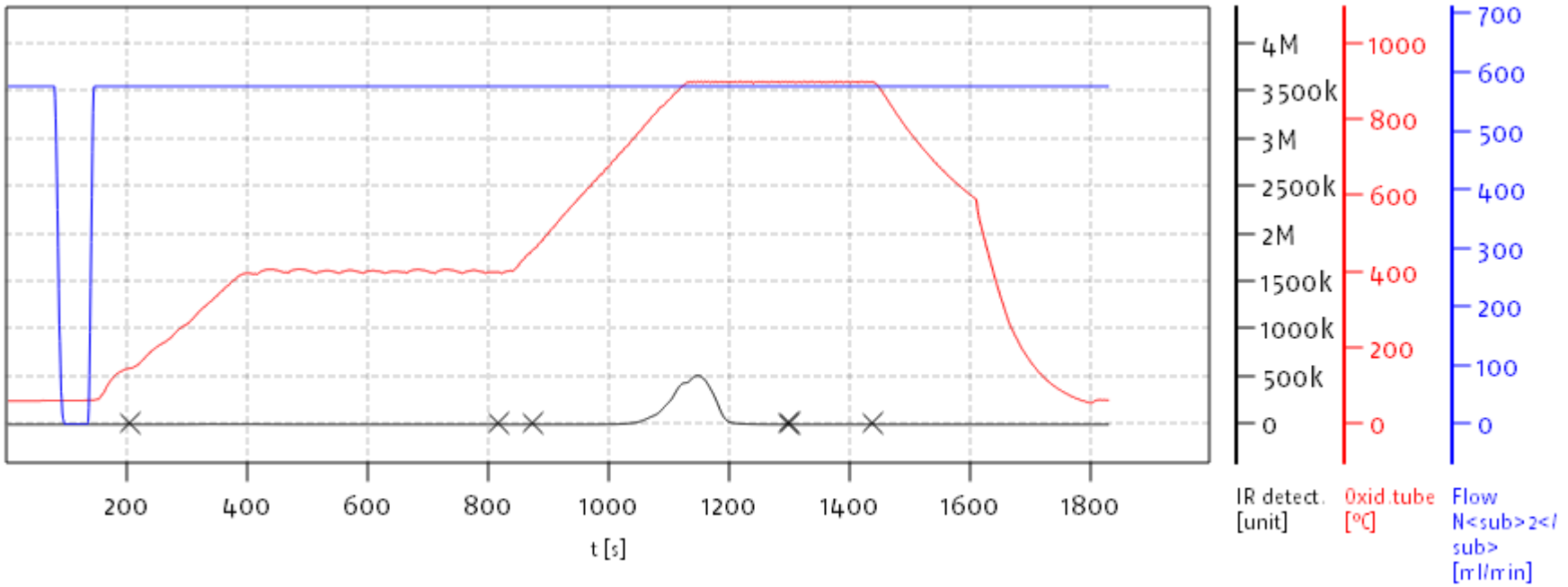
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
18	18	SEQ-CALG	200.00	0.0199	1.00	CARBON	7/13/2021 10:50 PM	0.015	1.206	1.221	bl,C2u	12 993	1 534 582	594	1.0000	0.9954



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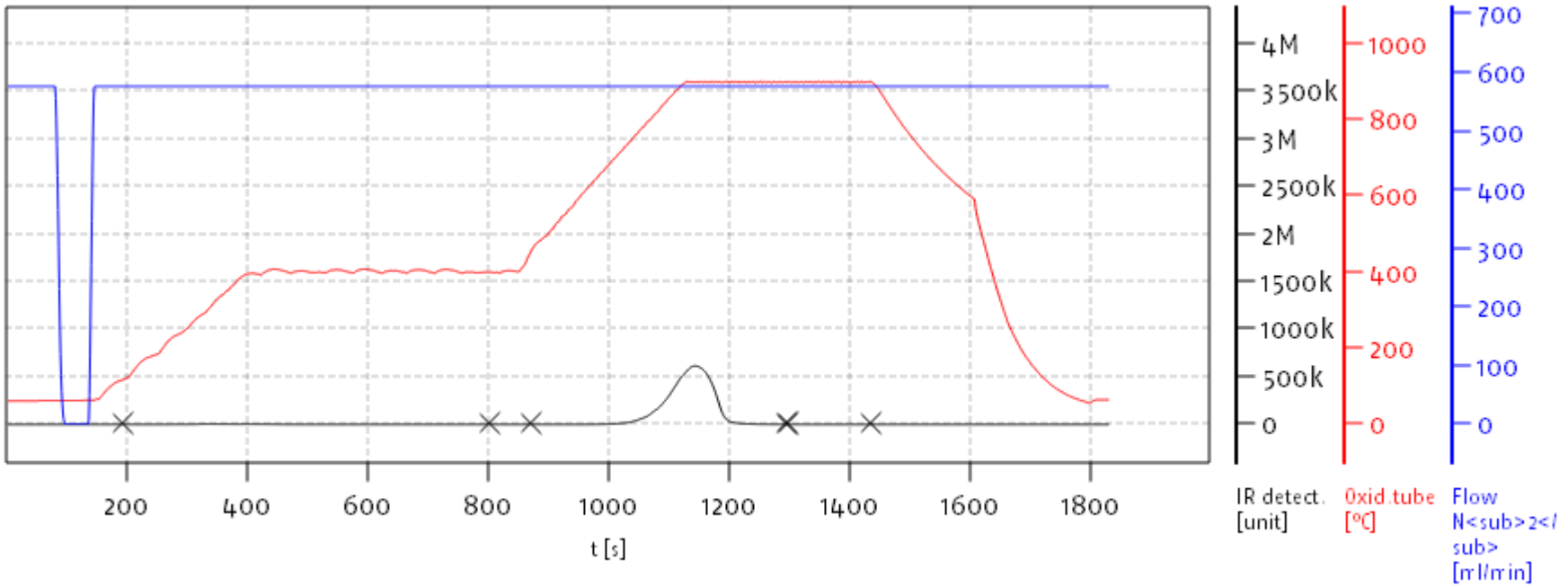
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
19	19	SEQ-CALH	200.00	0.0249	1.00	CARBON	7/13/2021 11:21 PM	0.021	1.524	1.545	bl,C2u	20 201	1 923 277	918	1.0000	1.0040



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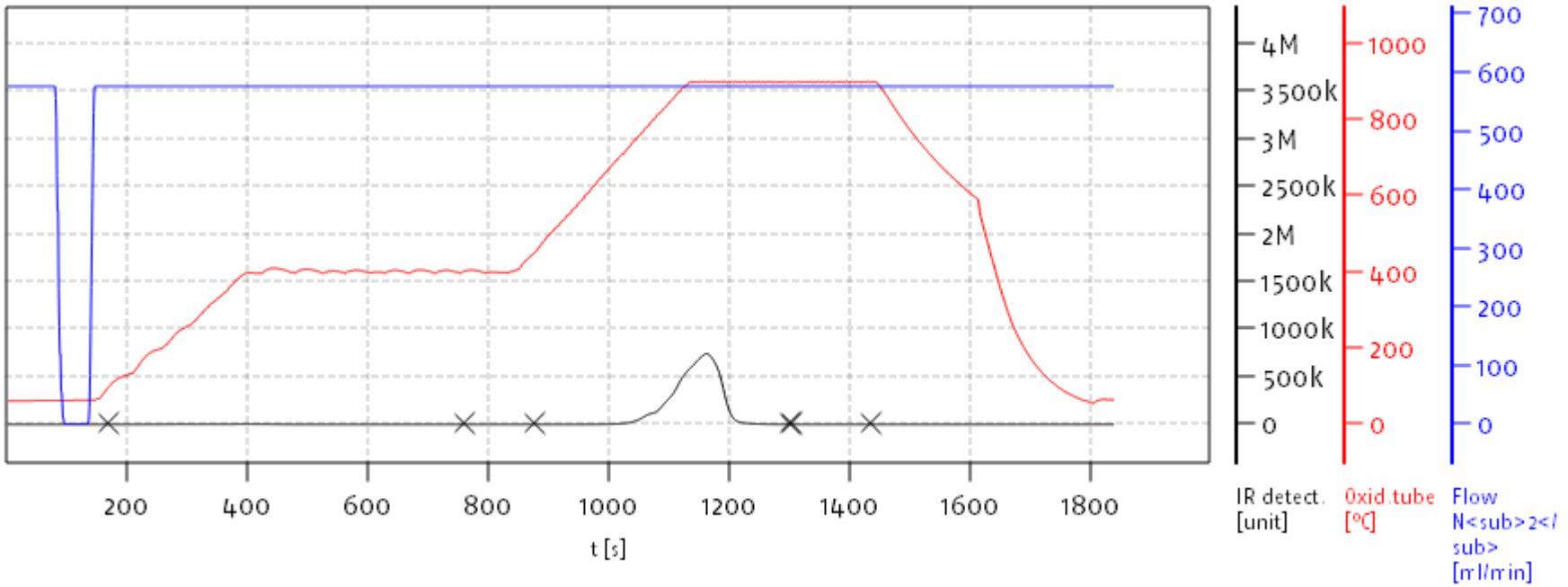
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
20	20	SEQ-CALI	200.00	0.0306	1.00	CARBON	7/13/2021 11:52 PM	0.021	1.800	1.821	bl,C2u	20 790	2 358 162	940	1.0000	0.9674



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Balance: BAL3
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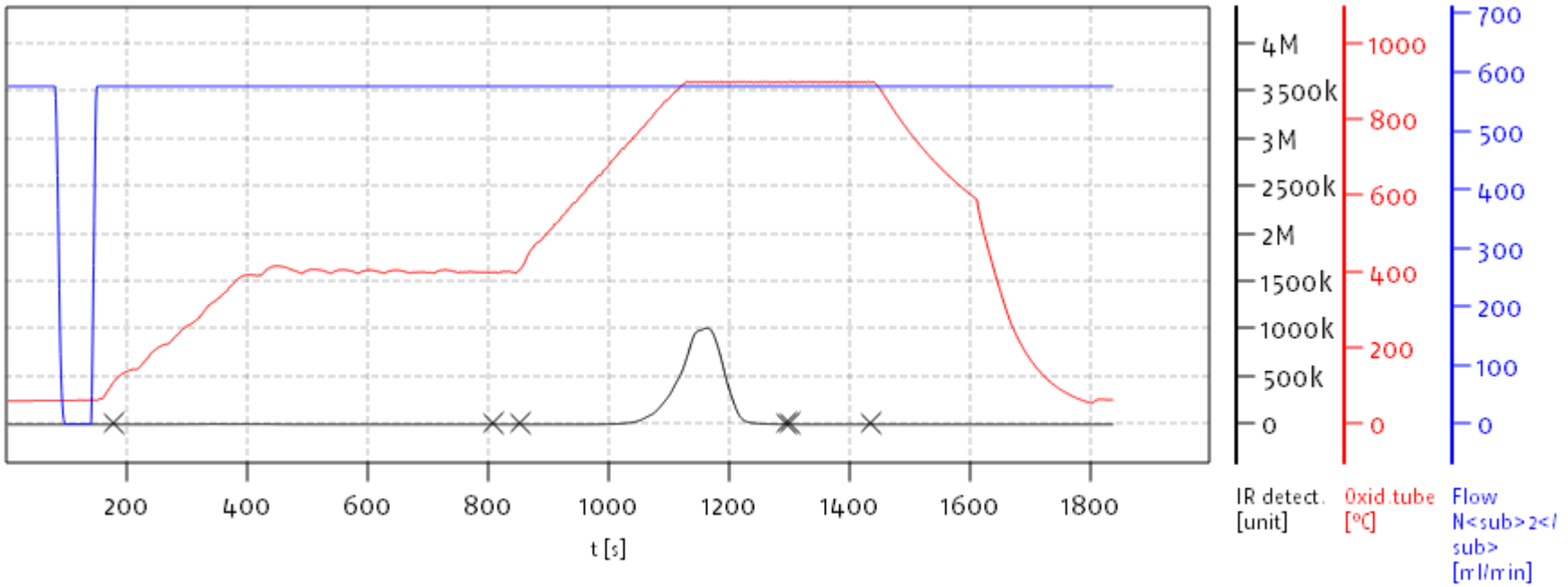
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
21	21	SEQ-CALJ	200.00	0.0419	1.00	CARBON	7/14/2021 12:23 AM	0.020	2.400	2.420	bl,C2u	17 643	3 227 695	2 142	1.0000	0.9426



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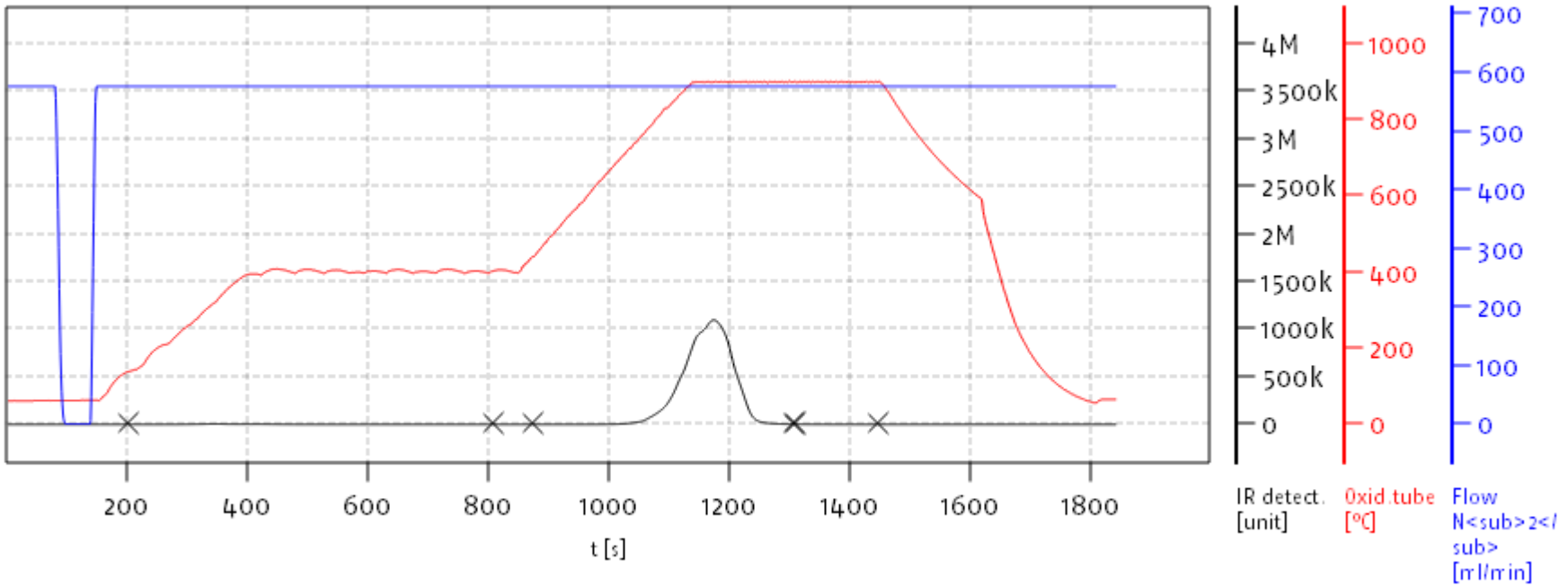
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
22	22	SEQ-CALK	200.00	0.0501	1.00	CARBON	7/14/2021 12:55 AM	0.023	3.012	3.035	bl,C2u	21 378	3 860 392	2 936	1.0000	0.9892



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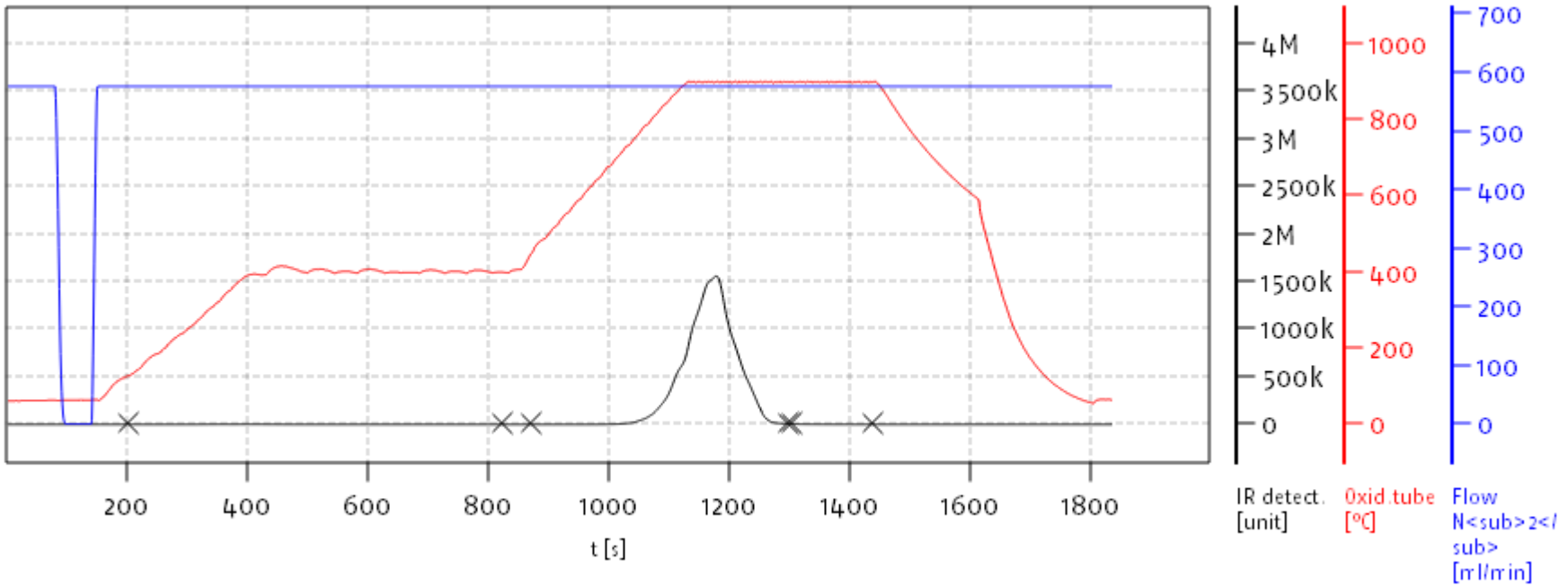
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
23	23	SEQ-CALL	200.00	0.0700	1.00	CARBON	7/14/2021 1:26 AM	0.016	4.206	4.222	bl,C1u,C2u	8 341	5 418 041	6 511	1.0000	0.9844



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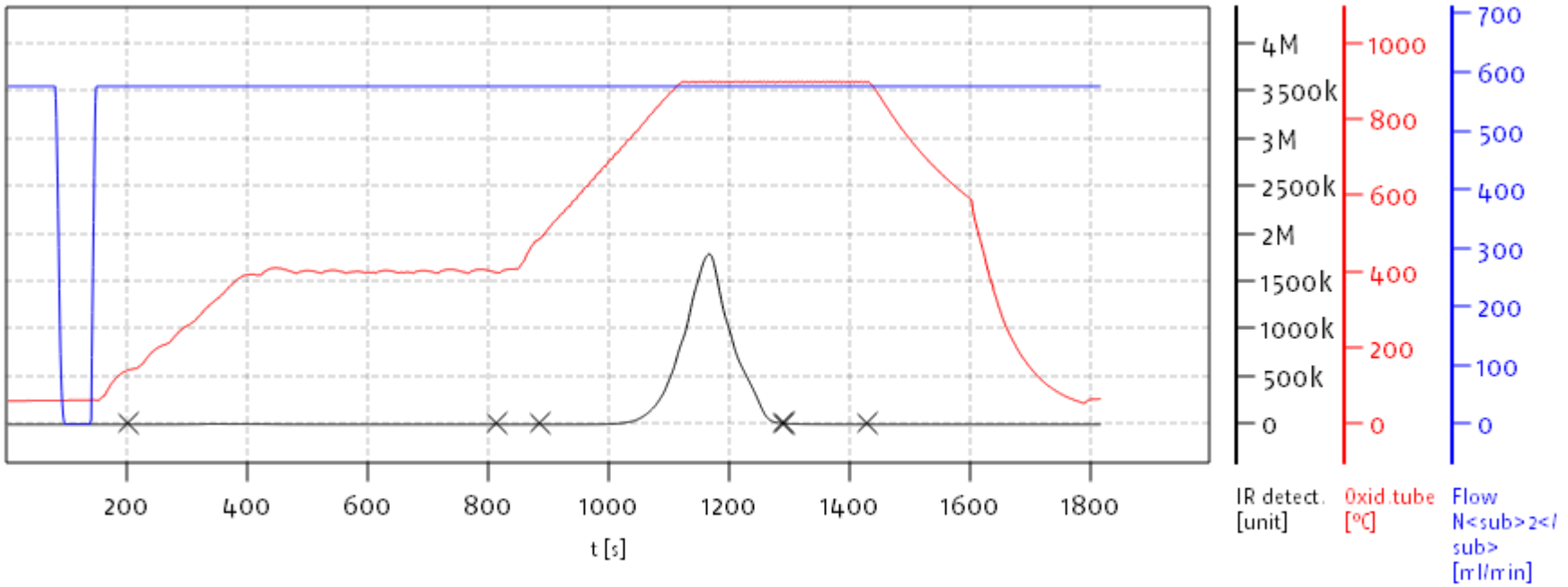
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
24	24	SEQ-CALM	200.00	0.0808	1.00	CARBON	7/14/2021 1:56 AM	0.032	4.812	4.844	bl	24 602	6 251 692	10 888	1.0000	0.9761



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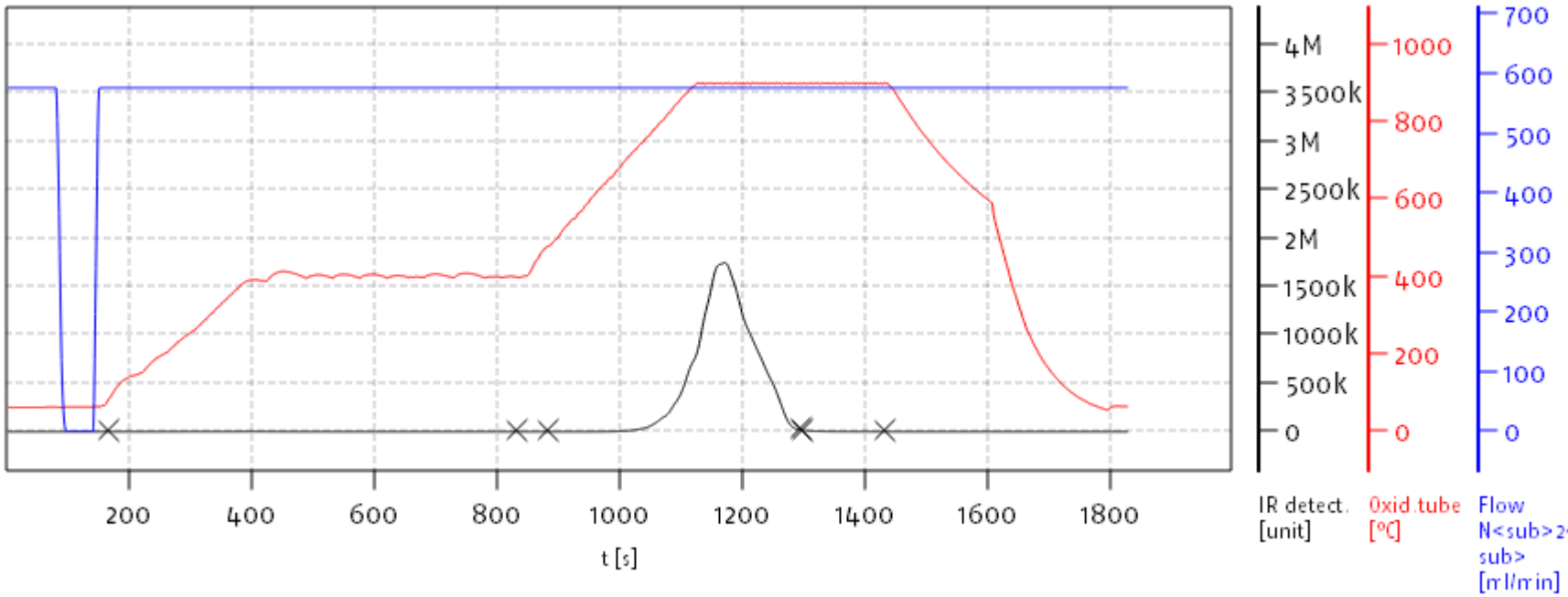
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
25	25	SEQ-CALN	200.00	0.0897	1.00	CARBON	7/14/2021 2:27 AM	0.025	5.406	5.431	bl	11 970	**6 909 943**	**14 720**	1.0000	0.9922



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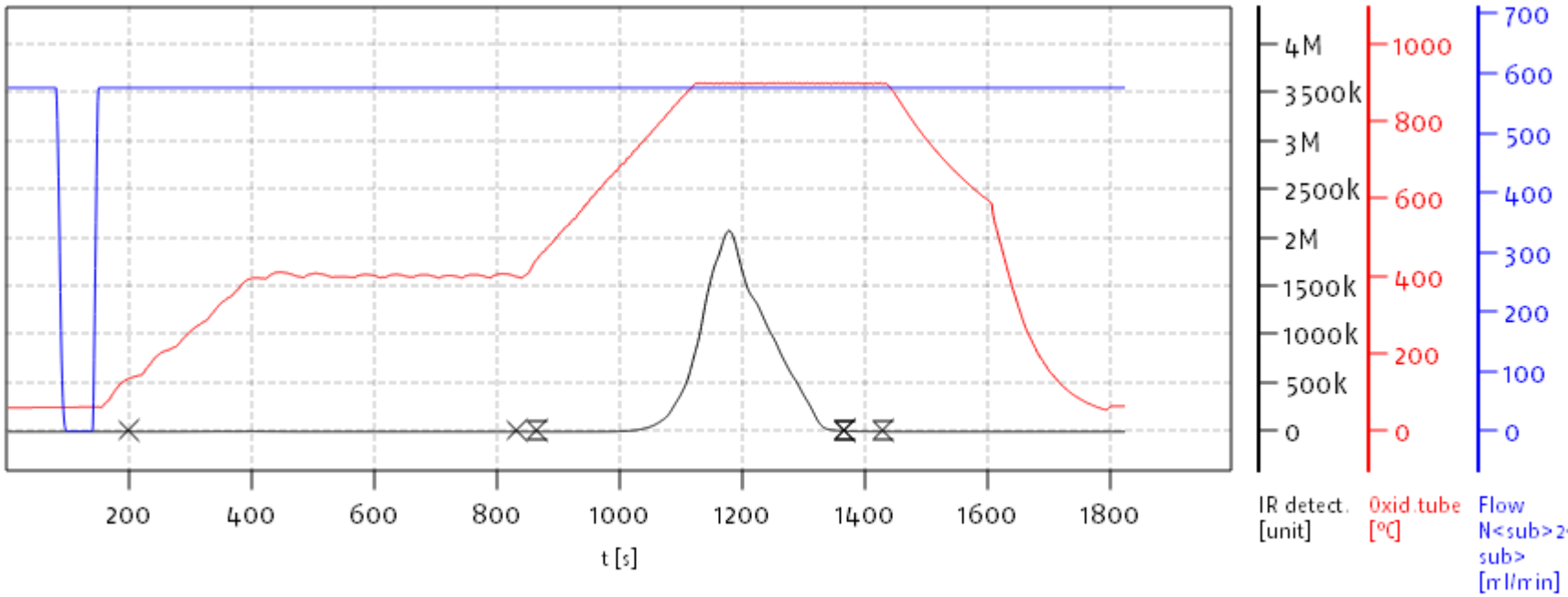
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
26	26	SEQ-CALO	200.00	0.1237	1.00	CARBON	7/14/2021 10:22 AM	0.013	7.434	7.447	bl,C3o	14 303	9 443 796	0	1.0000	0.9985



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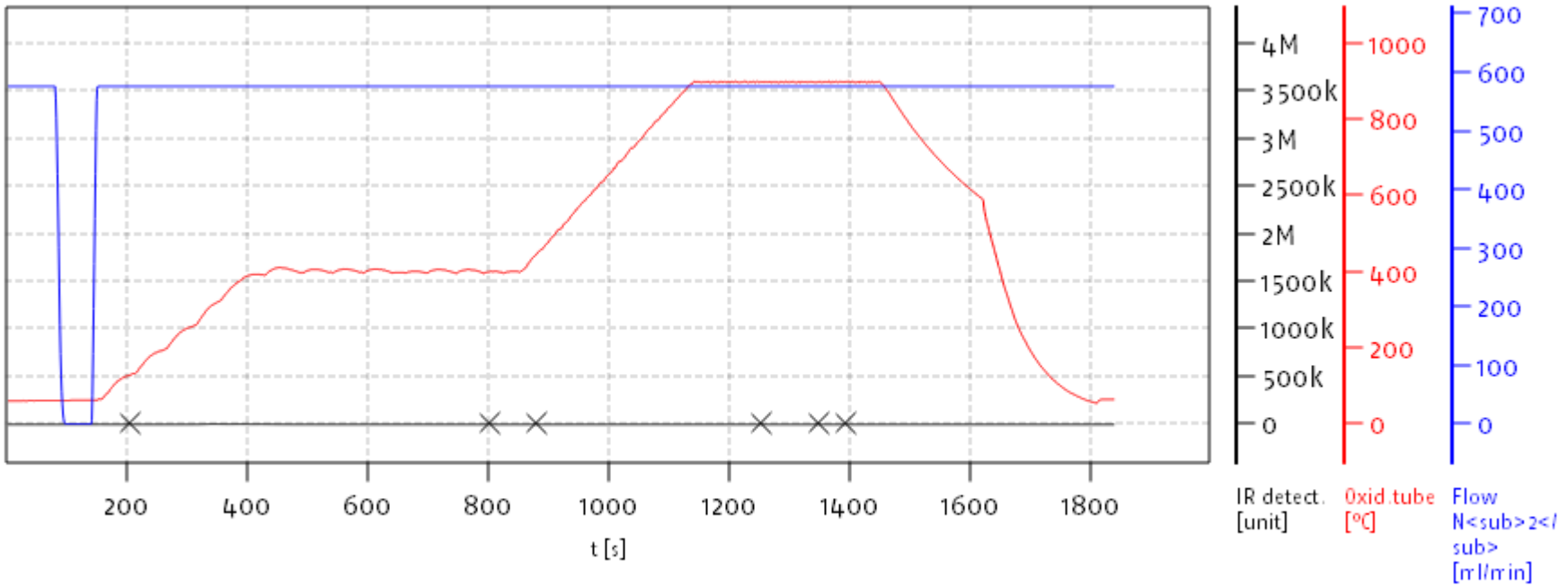
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
27	27	BLANK	1.00		1.00	CARBON	7/14/2021 3:29 AM	0.000	0.000	0.000	bl	15 377	4	0	1.0000	0.9704



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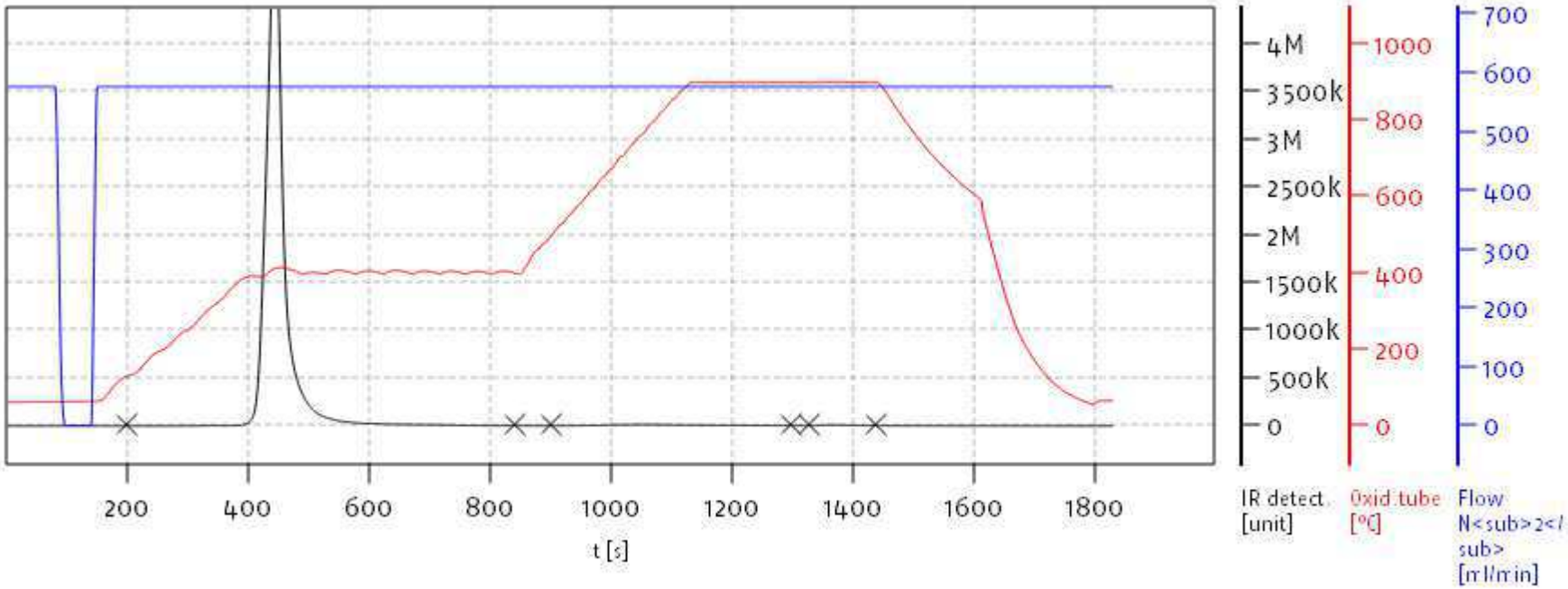
Analytical Chemists and Consultants

	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	24.90		1.00	CARBON	7/14/2021 4:00 AM	44.620	0.675	45.295	bl	6 675 069	104 070	24 945	1.0513	1.0000



Name:

Access: soliTOC superuser

Date: Wed Jul 14 10:35:53 2021

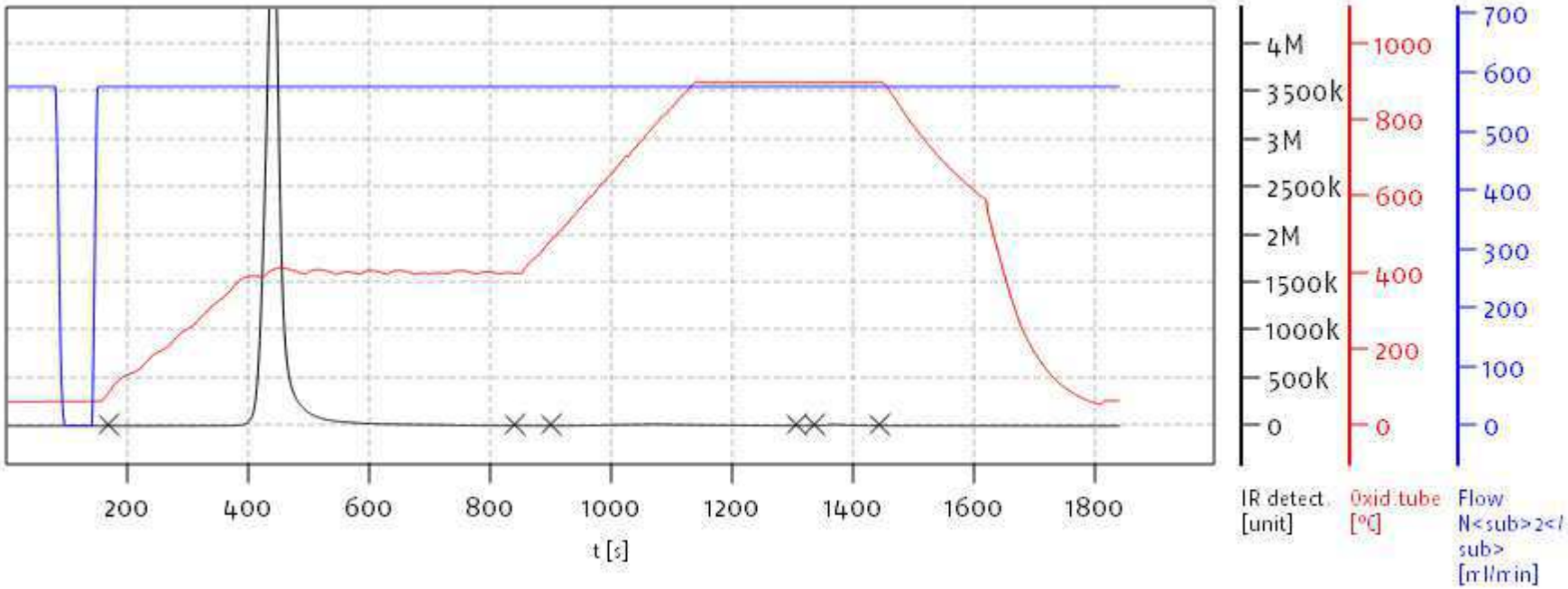
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
29	29	Dfactor	22.60		1.00	CARBON	7/14/2021 4:31 AM	44.643	0.810	45.453	bl	6 011 996	113 561	25 659	1.0594	1.0000



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Date: Wed Jul 14 10:35:53 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

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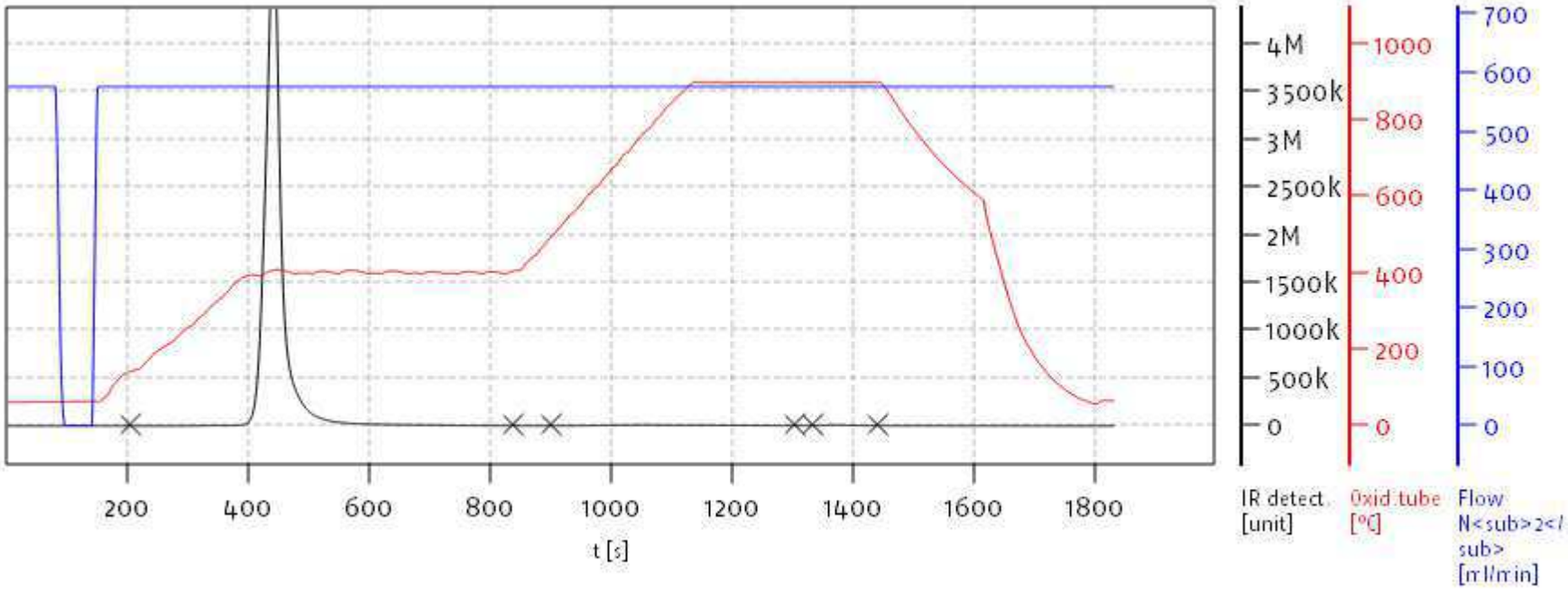
EXCELLENCE IN ELEMENTS

Document: TOC Calibration EG00035 071321BF from: 7/14/2021 10:24 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
30	30	SEQ-ICV1	22.00		1.00	CARBON	7/14/2021 5:02 AM	44.870	0.594	45.465	bl	5 908 965	82 878	20 547	1.0554	0.9704



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Mode CCC

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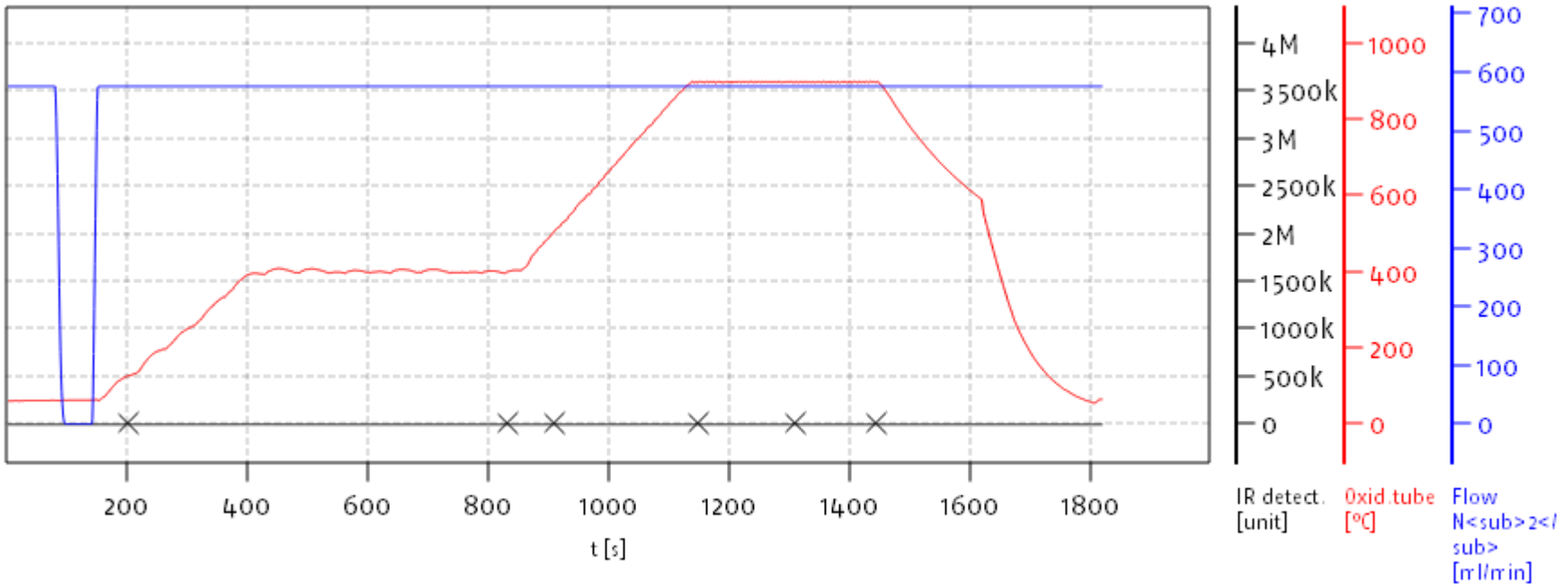
Document: TOC Calibration EG00035 071321BF from: 7/14/2021 10:24 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
31	31	SEQ-ICB1	618.10		1.00	CARBON	7/14/2021 5:33 AM	0.002	0.001	0.003	bl,C1u,C3u,C2u	2 837	1 593	526	1.0554	0.9704



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EXCELLENCE IN ELEMENTS

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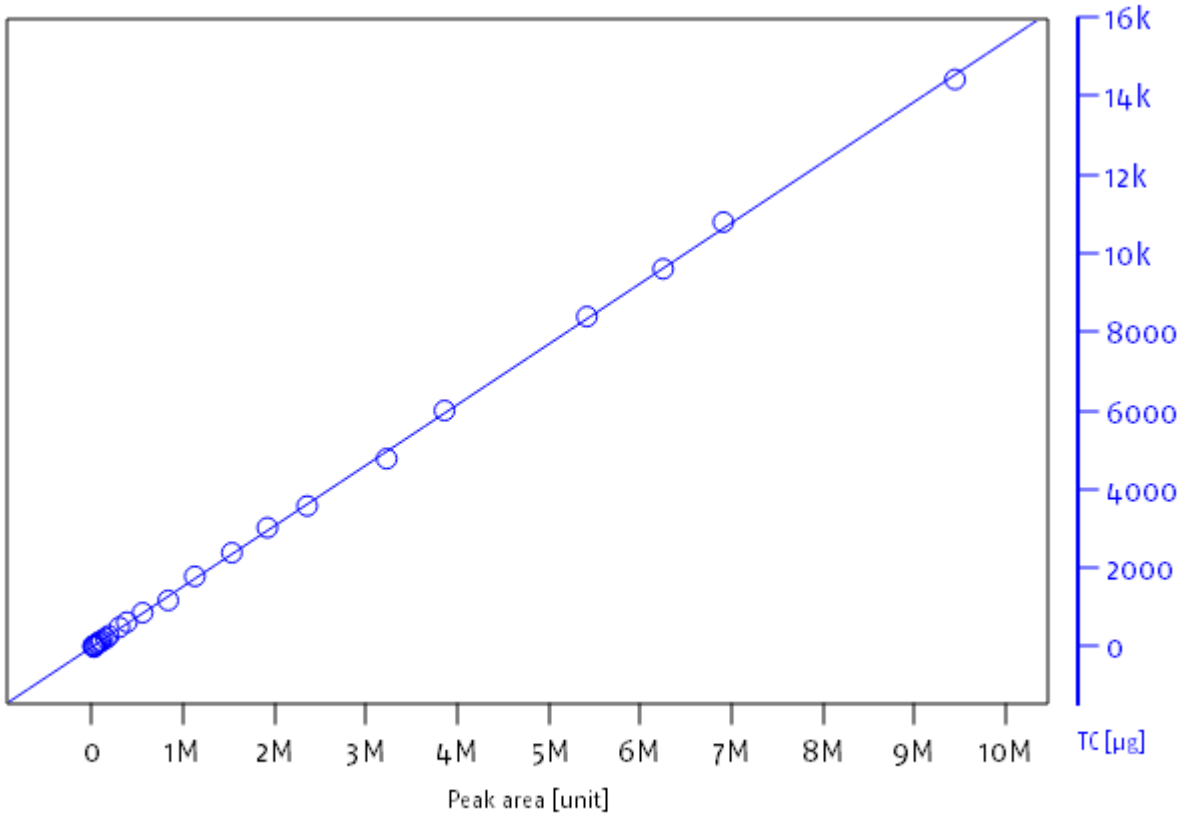
Calibration parameters TC, Whole range

a	+2.974966e-02
b	+1.539795e-06
c	+0.000000e+00
d	+0.000000e+00
e	+0.000000e+00
r	0.999715
r_old	0.999715
Proc.-SD	68.758935 µg

Calibration graph TC, Whole range



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Access: soliTOC superuser

Date: Wed Jul 14 10:43:26 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EH00065	Instrument:	TOC Cube
Calibration Date:	08/24/2021 17:16		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Total Organic Carbon	0.005112	1267041	0.01624	1156589	0.020451	1208352	0.030375	1027852	0.045412	1355038	0.060149	1226039
Total Carbon	0.005112	1267041	0.01624	1156589	0.020451	1208352	0.030375	1027852	0.045412	1355038	0.060149	1226039
Total Inorganic Carbon	0.005112	1267041	0.01624	1156589	0.020451	1208352	0.030375	1027852	0.045412	1355038	0.060149	1226039
% Soot	0.005112	1267041	0.01624	1156589	0.020451	1208352	0.030375	1027852	0.045412	1355038	0.060149	1226039

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EH00065	Instrument:	TOC Cube
Calibration Date:	08/24/2021 17:16		

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RF		RF		RF		RF		RF		RF
Total Organic Carbon	0.076991	1301360	0.091126	1300200	0.1191	1370840	0.14977	1231288	0.252	1210857	0.336	1231923
Total Carbon	0.076991	1301360	0.091126	1300200	0.1191	1370840	0.14977	1231288	0.252	1210857	0.336	1231923
Total Inorganic Carbon	0.076991	1301360	0.091126	1300200	0.1191	1370840	0.14977	1231288	0.252	1210857	0.336	1231923
% Soot	0.076991	1301360	0.091126	1300200	0.1191	1370840	0.14977	1231288	0.252	1210857	0.336	1231923

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EH00065	Instrument:	TOC Cube
Calibration Date:	08/24/2021 17:16		

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
		RF		RF		RF		RF		RF		RF
Total Organic Carbon	0.414	1268309	0.582	1278292	0.882	1265125	1.194	1264020	1.518	1271667	1.812	1261887
Total Carbon	0.414	1268309	0.582	1278292	0.882	1265125	1.194	1264020	1.518	1271667	1.812	1261887
Total Inorganic Carbon	0.414	1268309	0.582	1278292	0.882	1265125	1.194	1264020	1.518	1271667	1.812	1261887
% Soot	0.414	1268309	0.582	1278292	0.882	1265125	1.194	1264020	1.518	1271667	1.812	1261887

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EH00065	Instrument:	TOC Cube
Calibration Date:	08/24/2021 17:16		

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
		RF		RF		RF		RF		RF		RF
Total Organic Carbon	2.4	1255529	2.988	1141805	4.194	1173122	4.818	1173843	5.412	1191617	7.224	1189552
Total Carbon	2.4	1255529	2.988	1141805	4.194	1173122	4.818	1173843	5.412	1191617	7.224	892723
Total Inorganic Carbon	2.4	1255529	2.988	1141805	4.194	1173122	4.818	1173843	5.412	1191617	7.224	892723
% Soot	2.4	1255529	2.988	1141805	4.194	1173122	4.818	1173843	5.412	1191617	7.224	892723

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 9060A m

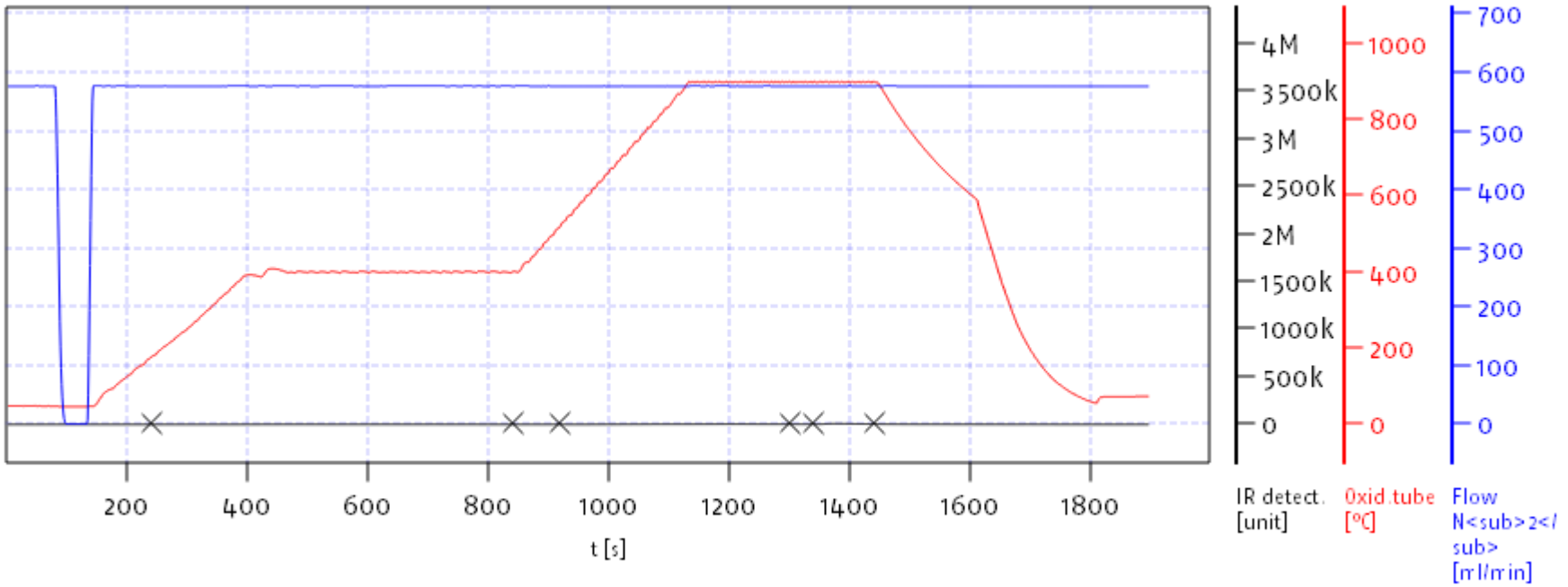
Laboratory:	Analytical Resources, Inc.	SDG:	21G0212
Client:	Anchor QEA, LLC	Project:	Lower Duwamish AOC4
Calibration:	EH00065	Instrument:	TOC Cube
Calibration Date:	08/24/2021 17:16		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Total Organic Carbon	1234256	5.9	0.9993			
Total Carbon	1221888	8.2	0.9742			
Total Inorganic Carbon	1221888	8.2	0.9742			
% Soot	1221888	8.2	0.9742			

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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	9	BLANK	1.00		1.00	CARBON	8/24/2021 6:00 PM	0.000	0.000	0.000	bl	13 861	33 454	21 567	1.0000	1.0000



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Access: soliTOC superuser

Date: Wed Aug 25 11:48:01 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

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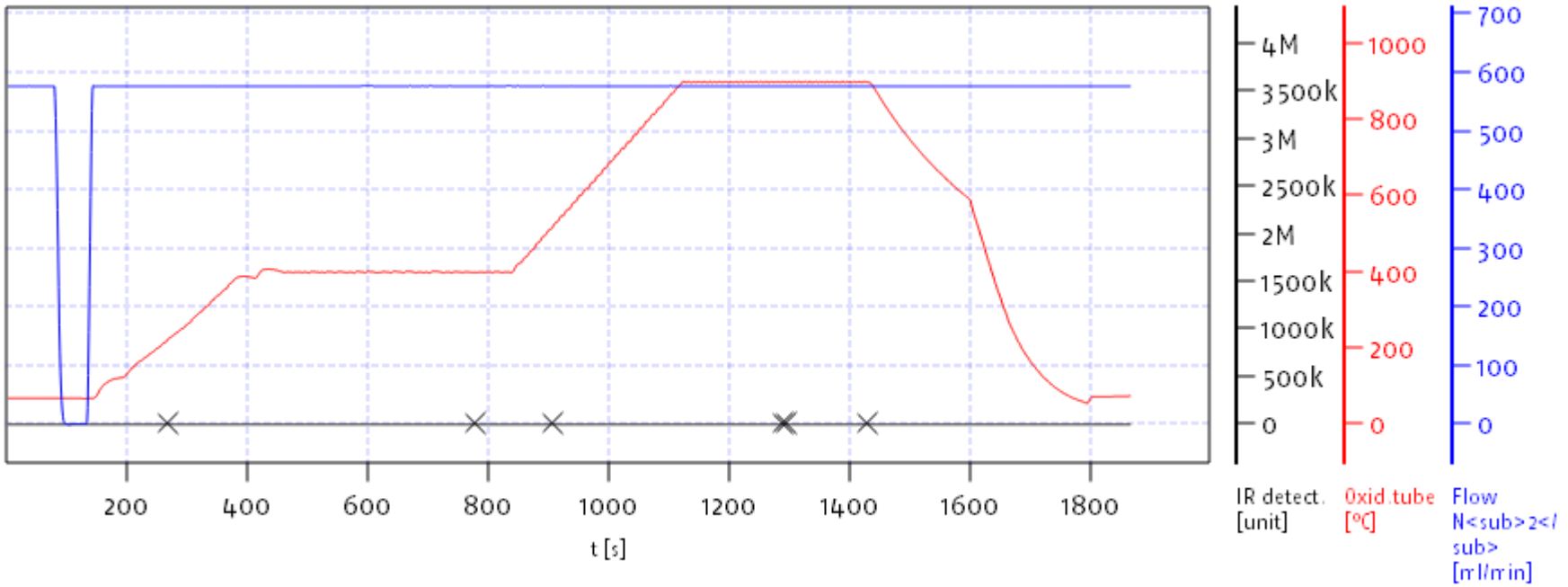
EXCELLENCE IN ELEMENTS

Document: TOC Calibration EH00065 082421BFb from: 8/25/2021 11:47 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
2	10	BLANK	1.00		1.00	CARBON	8/24/2021 6:31 PM	0.000	0.000	0.000	bl	1 643	8	245	1.0000	1.0000



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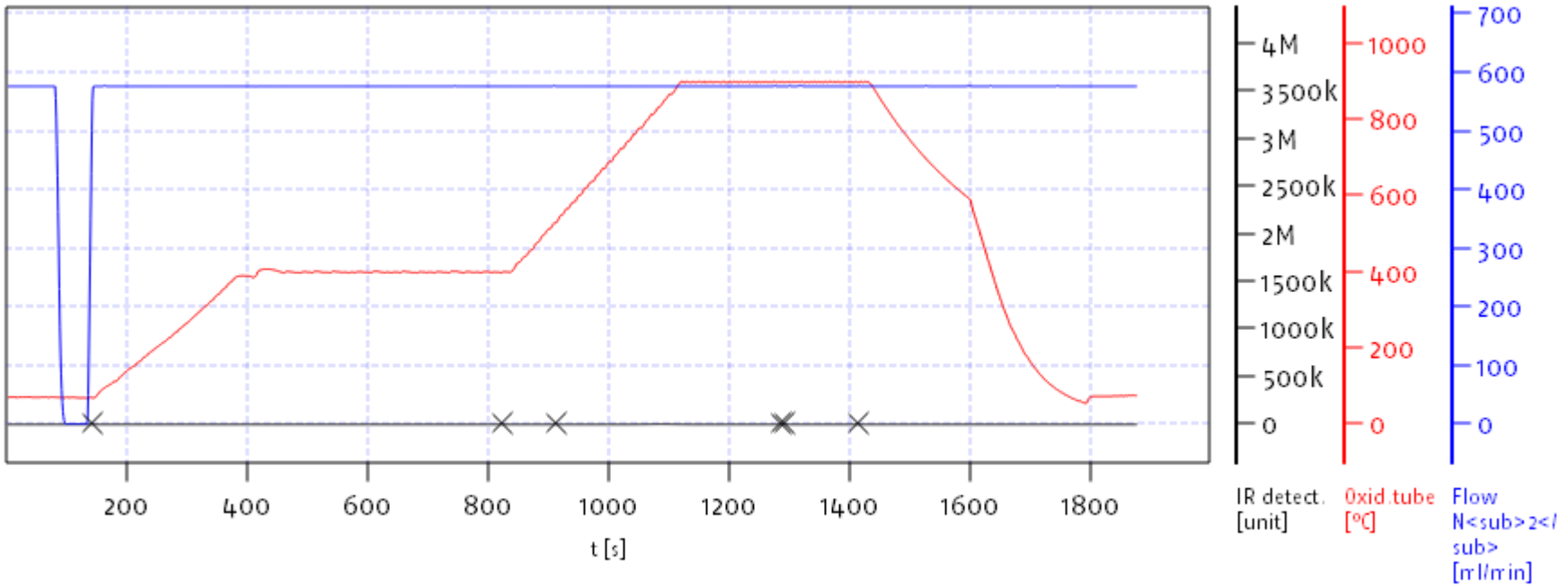
Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
3	11	SEQ-CAL1	200.00	0.0017	1.00	CARBON	8/24/2021 7:03 PM	0.000	0.008	0.008	bl,C1u,C3u,C2u	1 070	6 478	141	1.0000	1.1719



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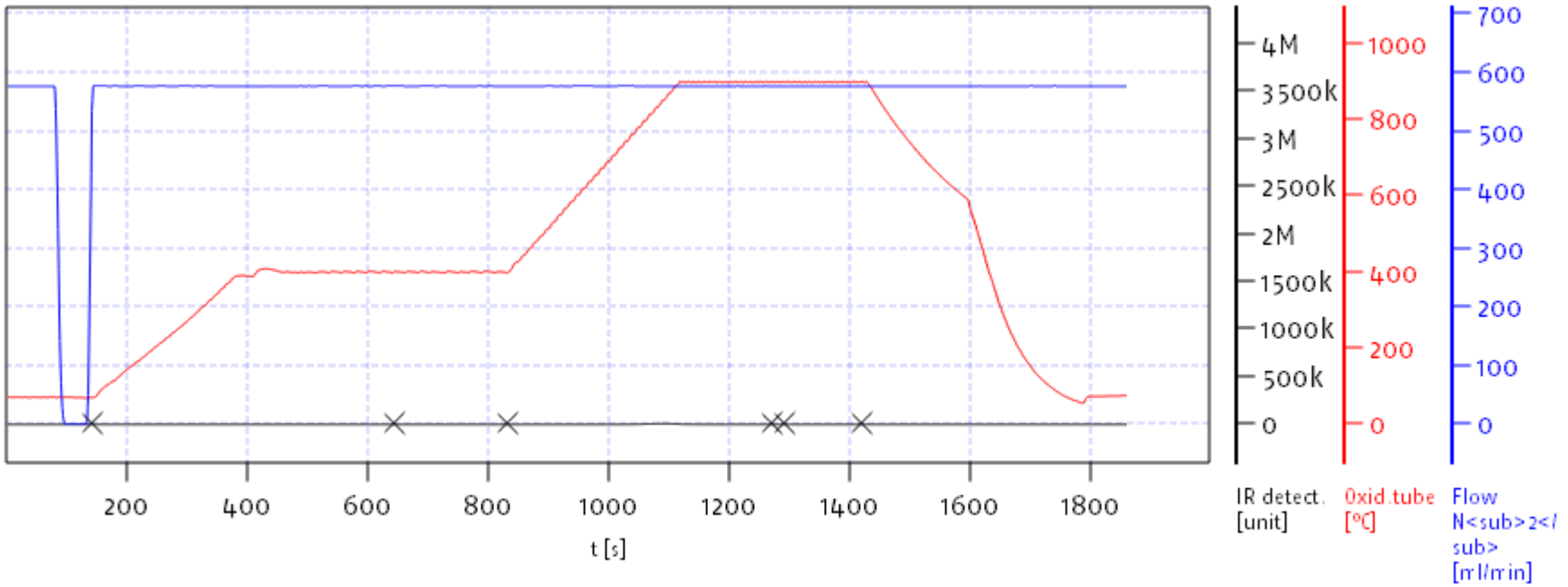
Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
4	12	SEQ-CAL2	200.00	0.0054	1.00	CARBON	8/24/2021 7:34 PM	0.000	0.015	0.015	bl,C1u,C2u	660	18 783	85	1.0000	0.9072



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Soli TOC Cube, Carbon
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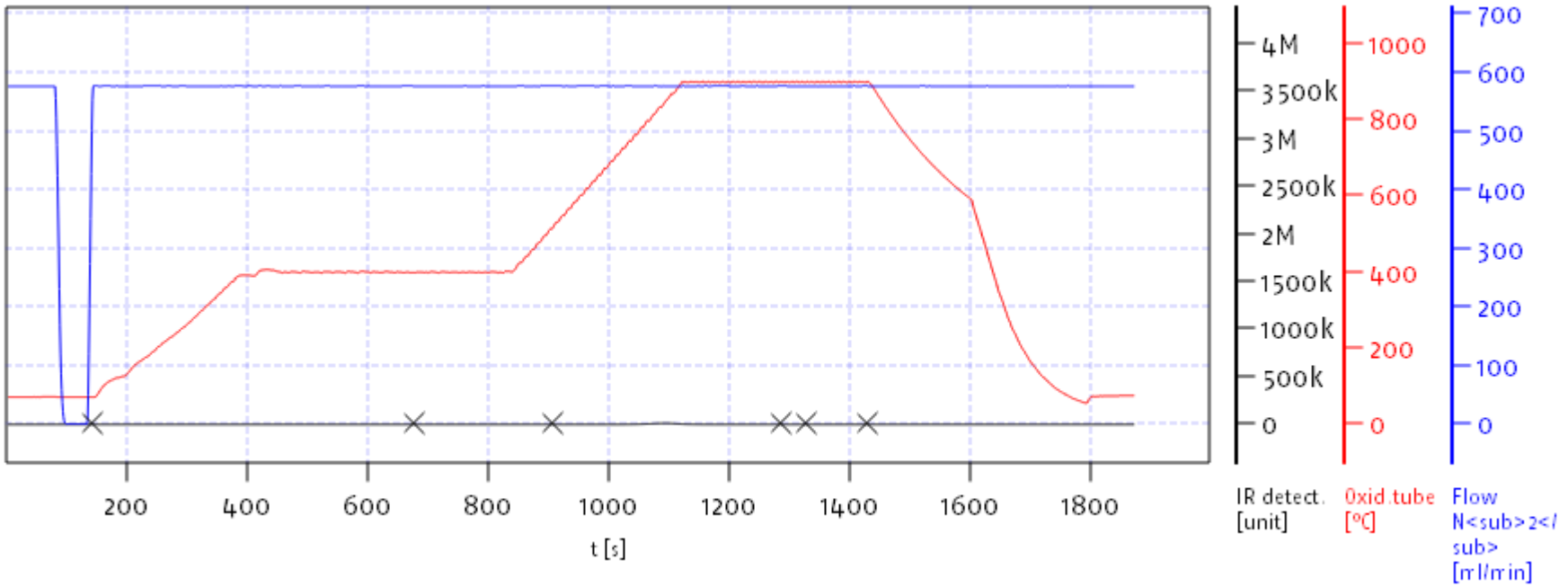
Analytical Resources, Incorporated
Analytical Chemists and Consultants

	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	13	SEQ-CAL3	200.00	0.0068	1.00	CARBON	8/24/2021 8:06 PM	0.000	0.022	0.022	bl,C1u,C2u	889	24 712	60	1.0000	1.0307



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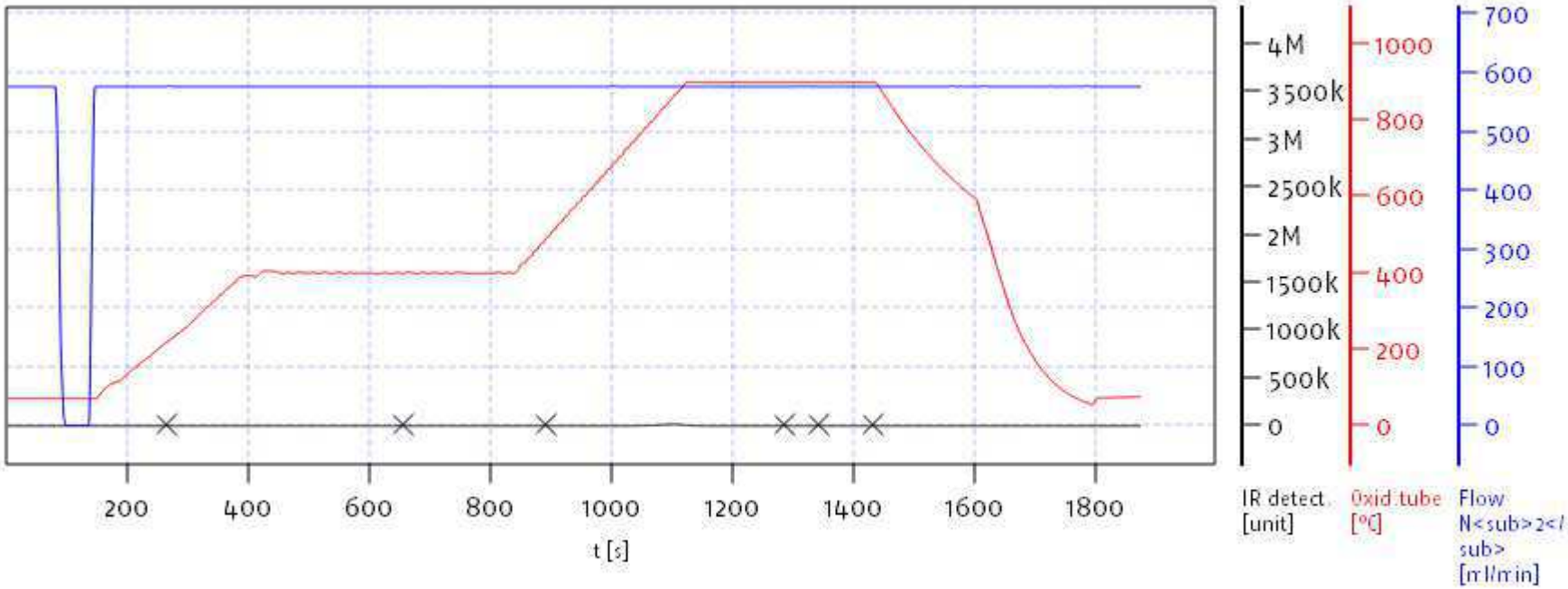
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
6	14	SEQ-CAL4	200.00	0.0101	1.00	CARBON	8/24/2021 8:38 PM	0.000	0.030	0.030	bl,C1u,C2u	1 503	31 221	84	1.0000	1.1361



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Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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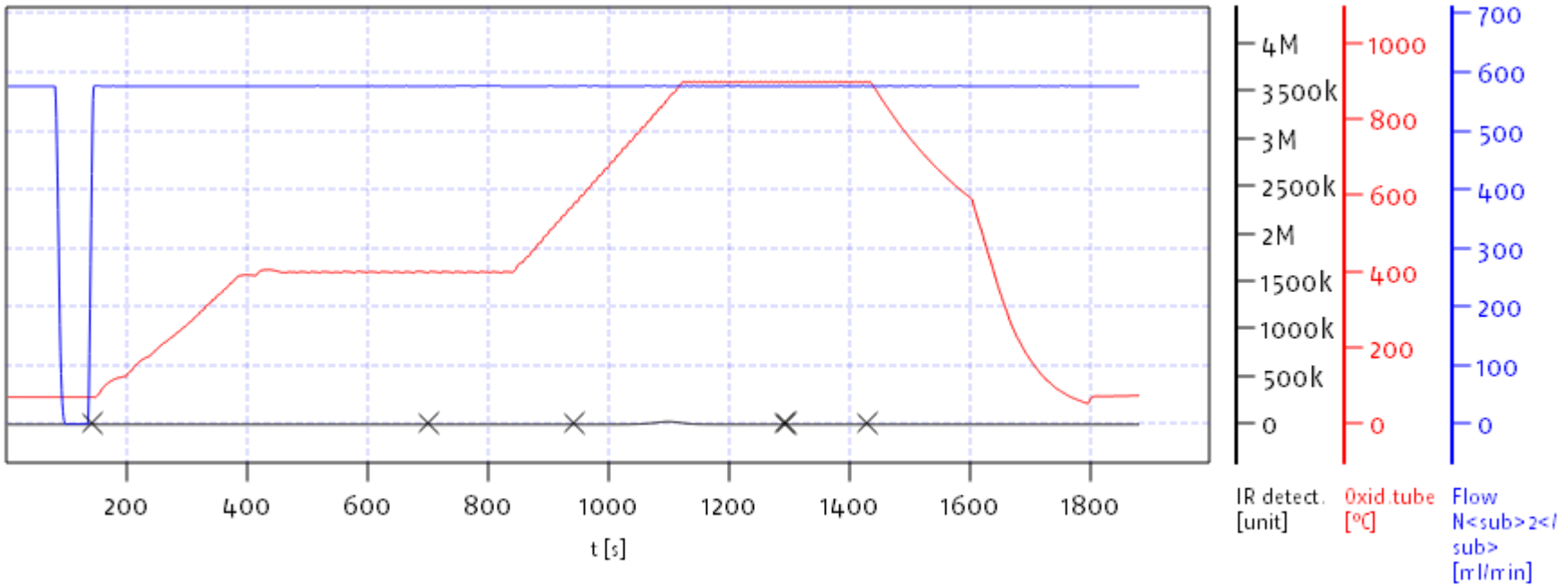
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
7	15	SEQ-CAL5	200.00	0.0151	1.00	CARBON	8/24/2021 9:10 PM	0.000	0.045	0.045	bl,C1u,C2u	776	61 535	62	1.0000	0.8900



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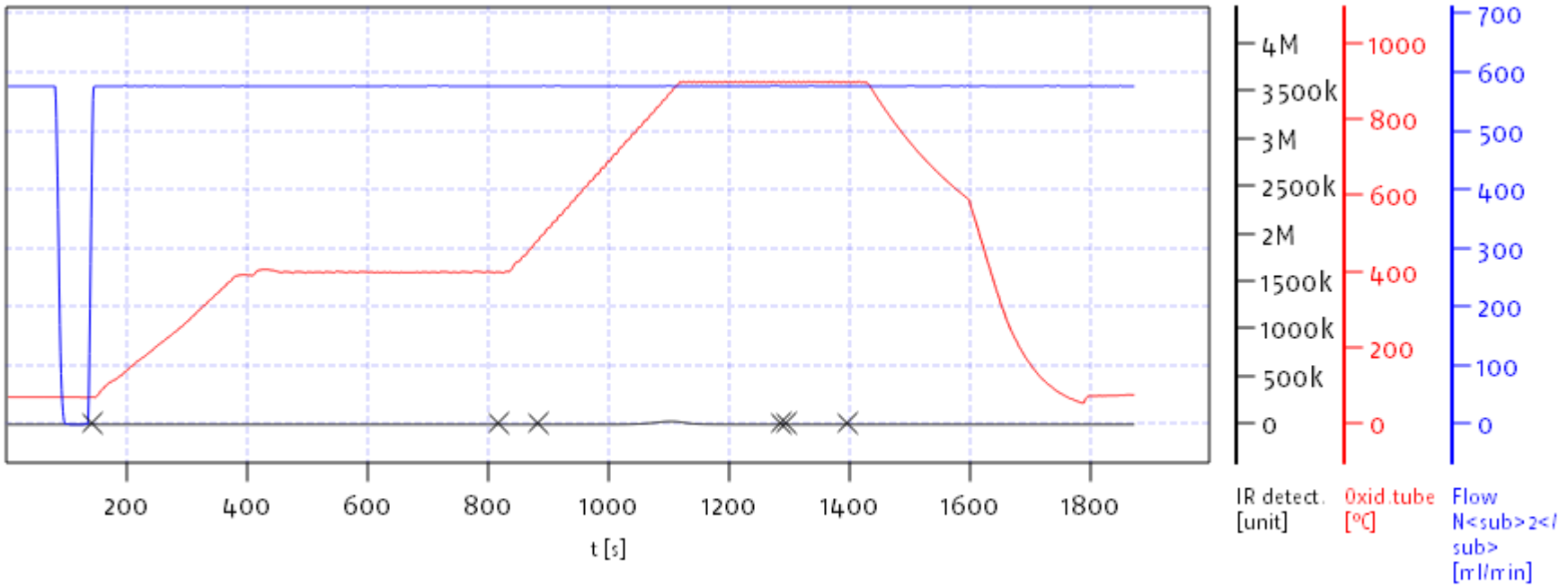
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
8	16	SEQ-CAL6	200.00	0.0200	1.00	CARBON	8/24/2021 9:41 PM	0.000	0.061	0.061	bl,C1u,C2u	1 086	73 745	55	1.0000	1.0168



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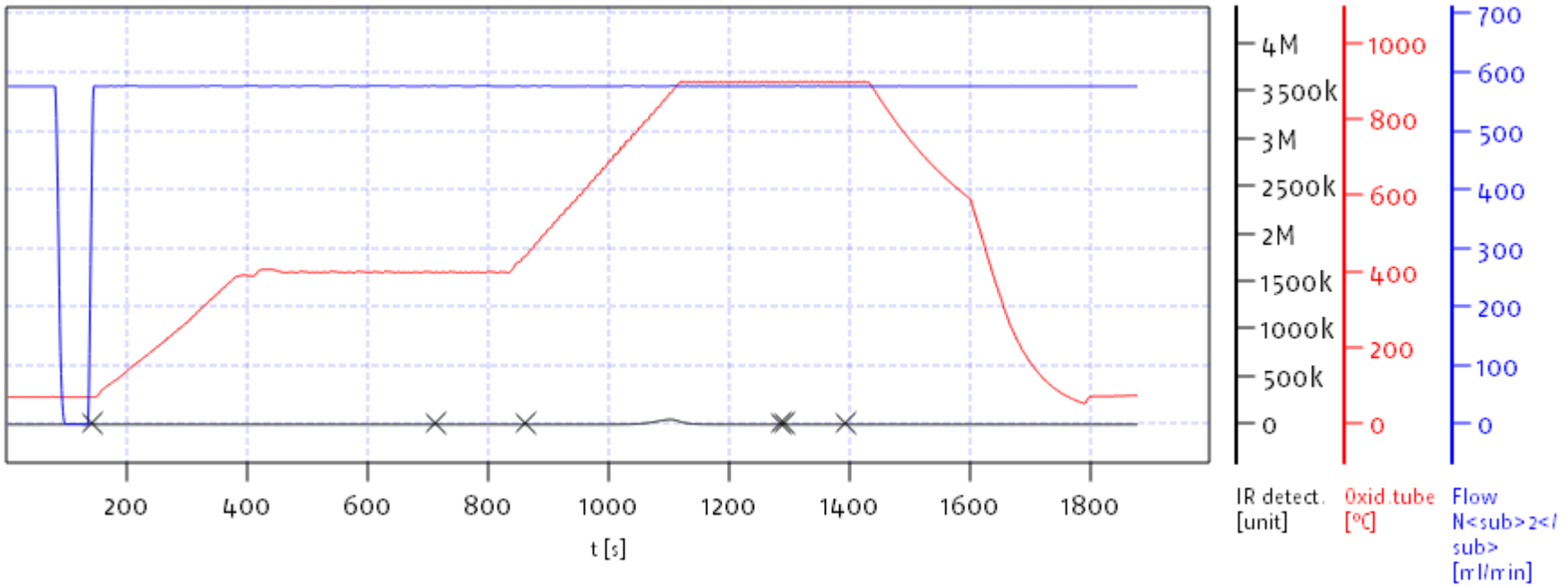
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
9	17	SEQ-CAL7	200.00	0.0256	1.00	CARBON	8/24/2021 10:13 PM	0.000	0.075	0.075	bl,C1u,C2u	1 149	100 193	99	1.0000	0.9293



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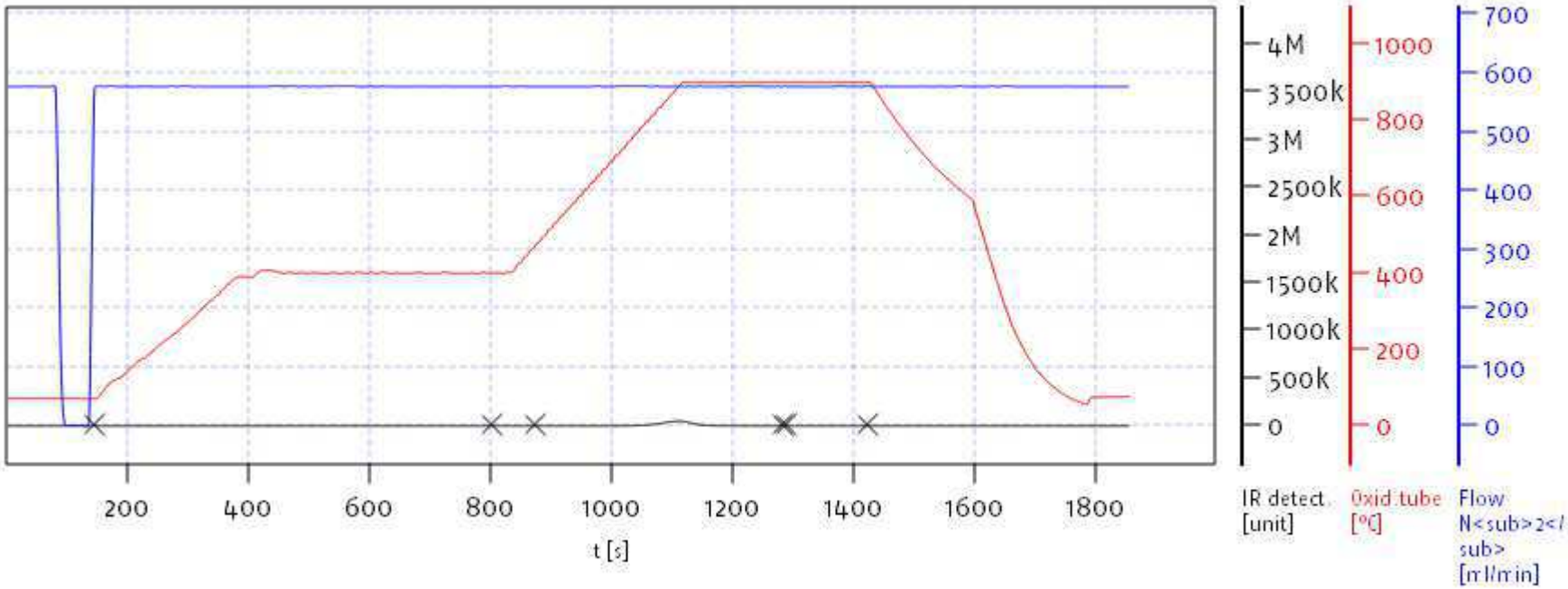
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
10	18	SEQ-CAL8	200.00	0.0303	1.00	CARBON	8/24/2021 10:44 PM	0.000	0.091	0.091	bl,C1u,C2u	779	118 482	109	1.0000	0.9492



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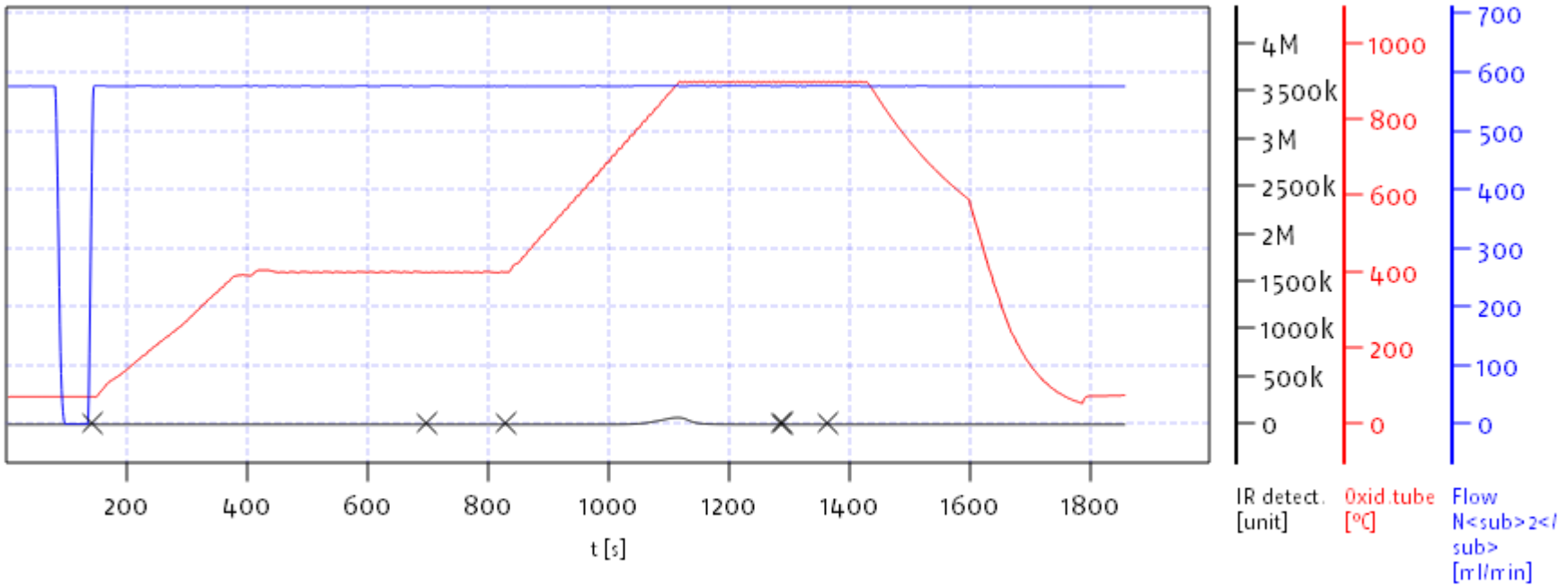
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
11	19	SEQ-CAL9	200.00	0.0396	1.00	CARBON	8/24/2021 11:16 PM	0.000	0.120	0.120	bl,C1u,C2u	848	163 267	93	1.0000	0.9178



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soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

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Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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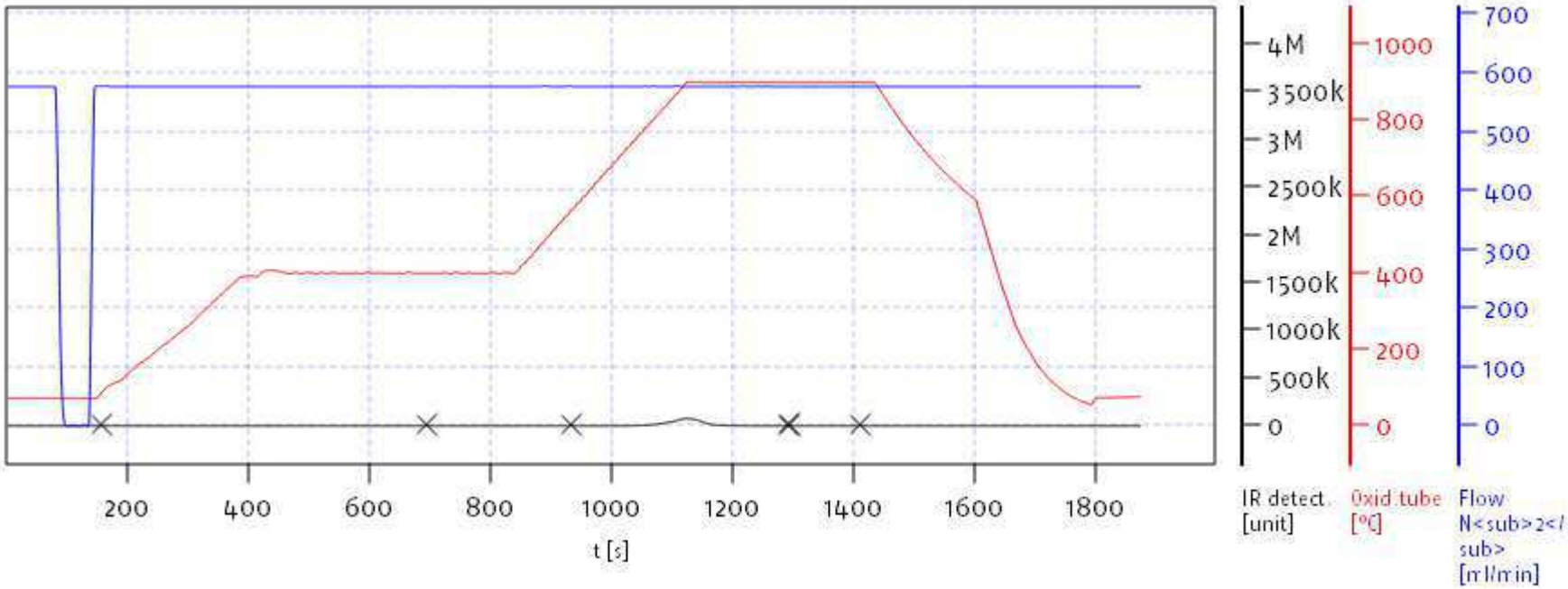
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
12	20	SEQ-CALA	200.00	0.0498	1.00	CARBON	8/24/2021 11:48 PM	0.000	0.151	0.151	bl,C1u,C2u	1 818	184 410	146	1.0000	1.0237



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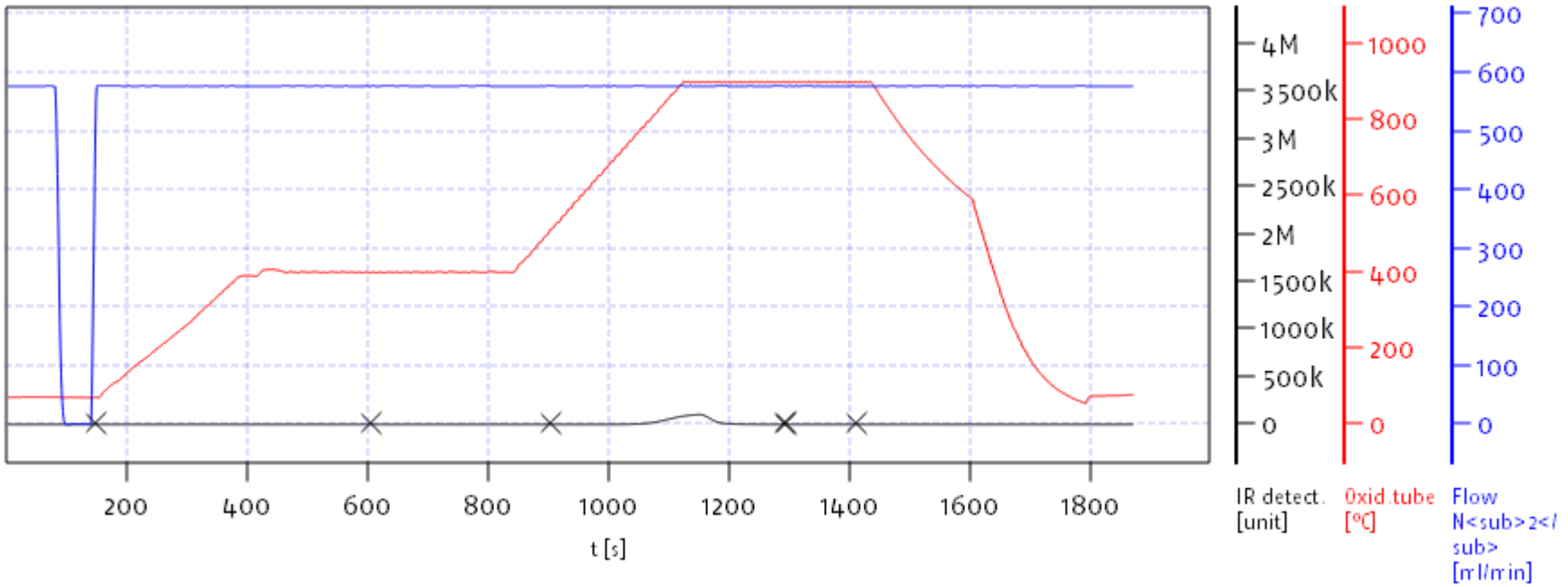
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
13	21	SEQ-CALB	200.00	0.0042	1.00	CARBON	8/25/2021 12:19 AM	0.000	0.258	0.258	bl,C1u,C2u	972	305 136	284	1.0000	1.0636



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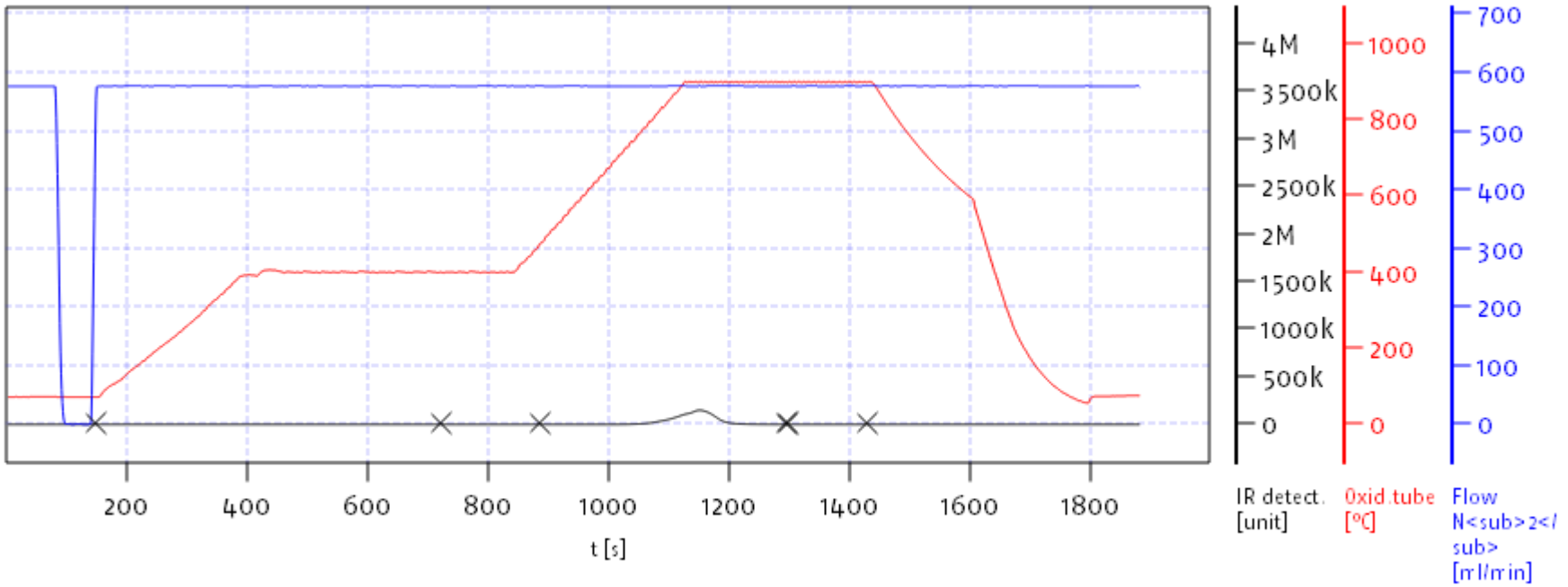
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
14	22	SEQ-CALC	200.00	0.0056	1.00	CARBON	8/25/2021 12:51 AM	0.000	0.324	0.324	bl,C1u,C2u	925	413 926	393	1.0000	0.9869



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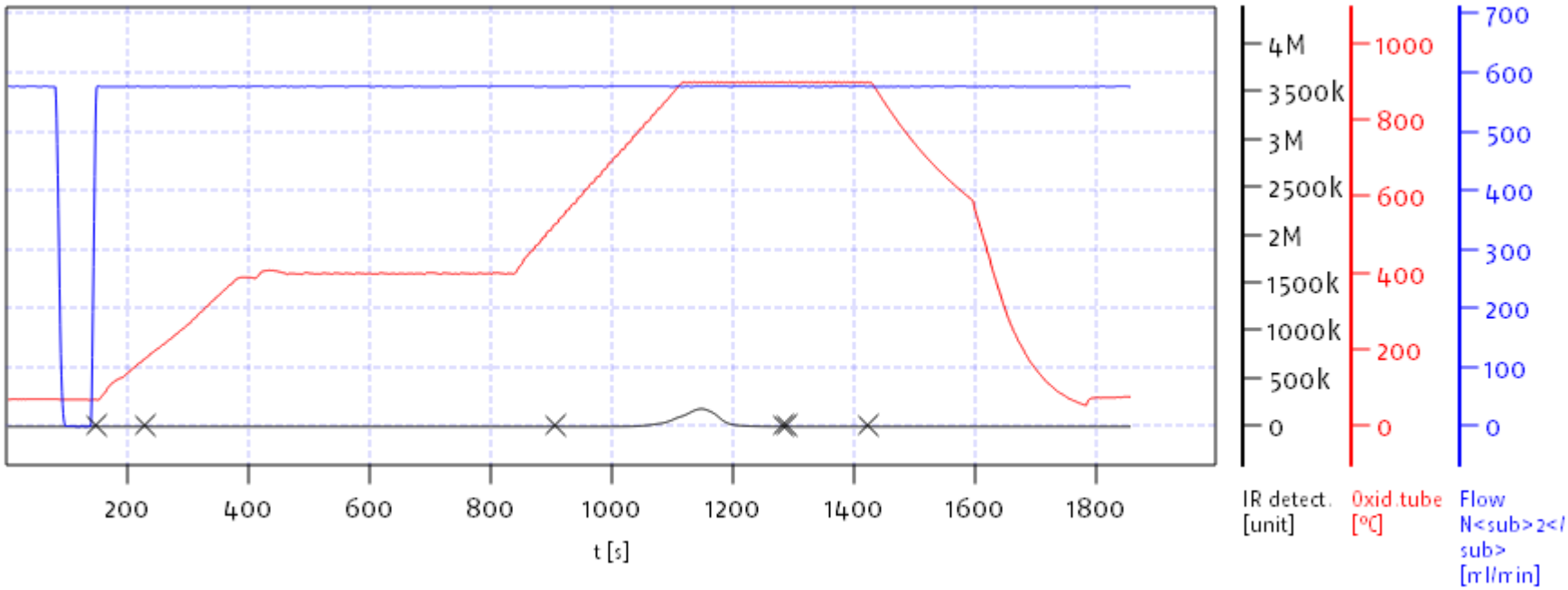
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
15	23	SEQ-CALD	200.00	0.0069	1.00	CARBON	8/25/2021 1:22 AM	0.000	0.444	0.444	bl,C1u,C2u	172	525 080	677	1.0000	1.0675



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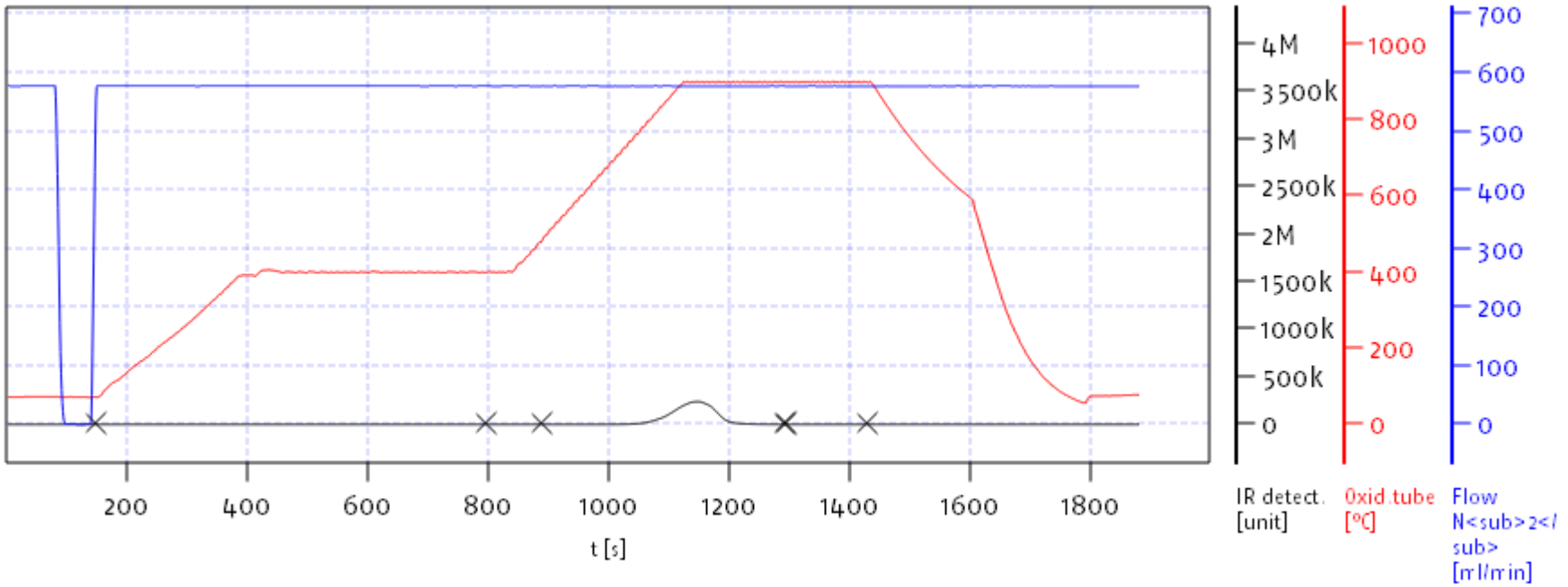
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
16	24	SEQ-CALE	200.00	0.0097	1.00	CARBON	8/25/2021 1:54 AM	0.000	0.600	0.600	bl,C1u,C2u	989	743 966	687	1.0000	1.0196



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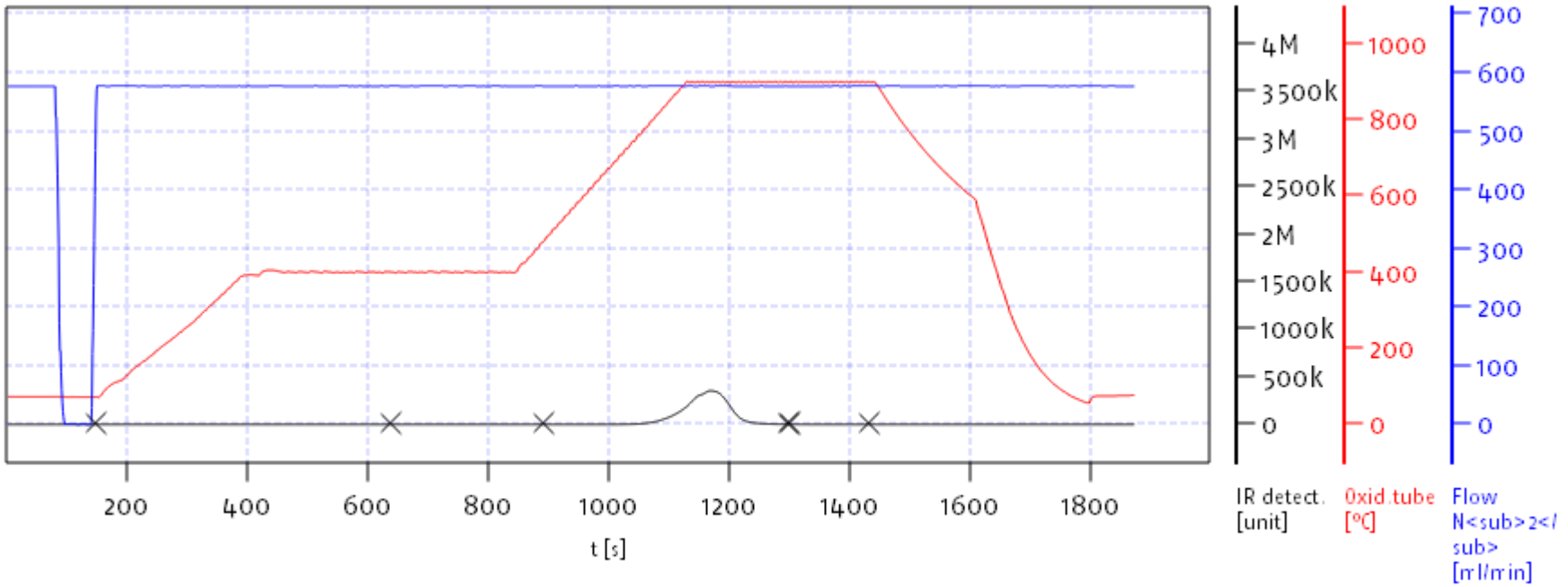
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
17	25	SEQ-CALF	200.00	0.0147	1.00	CARBON	8/25/2021 2:26 AM	0.000	0.906	0.906	bl,C1u,C2u	925	1 115 840	1 898	1.0000	1.0277



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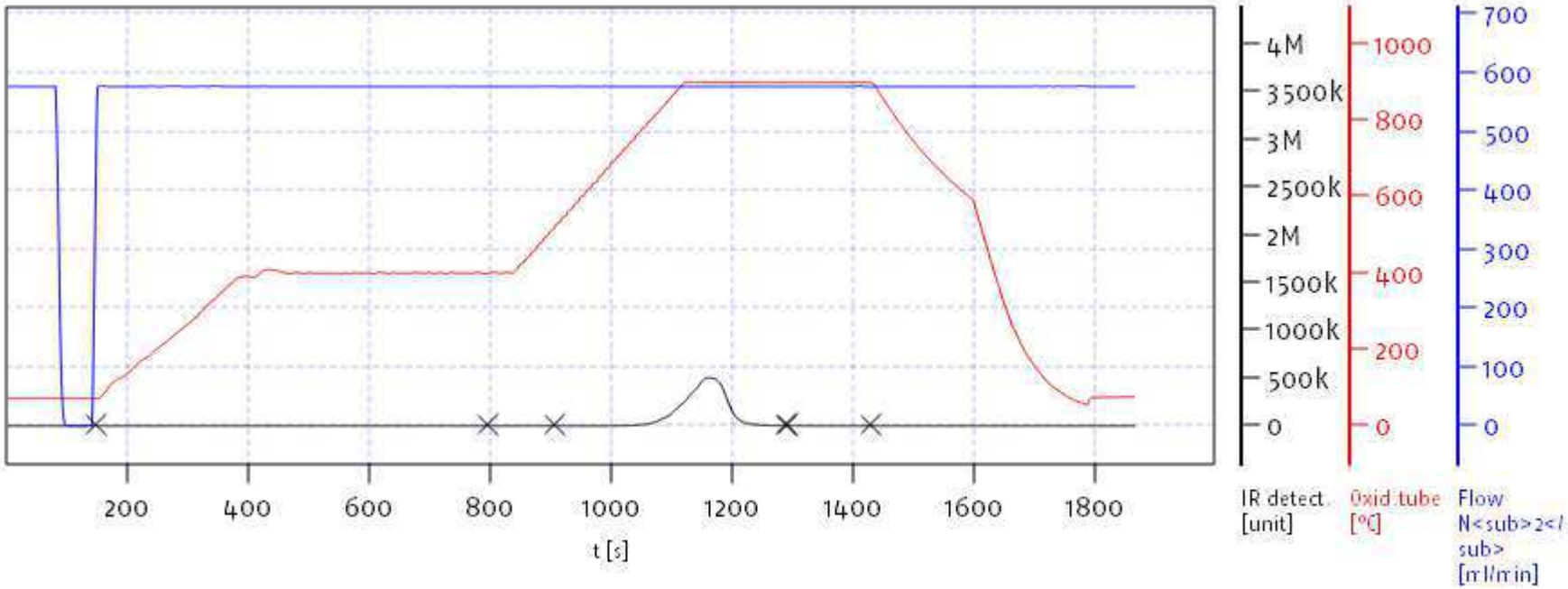
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
18	26	SEQ-CALG	200.00	0.0199	1.00	CARBON	8/25/2021 2:58 AM	0.000	1.206	1.206	bl,C1u,C2u	1 253	1 509 240	2 258	1.0000	1.0121



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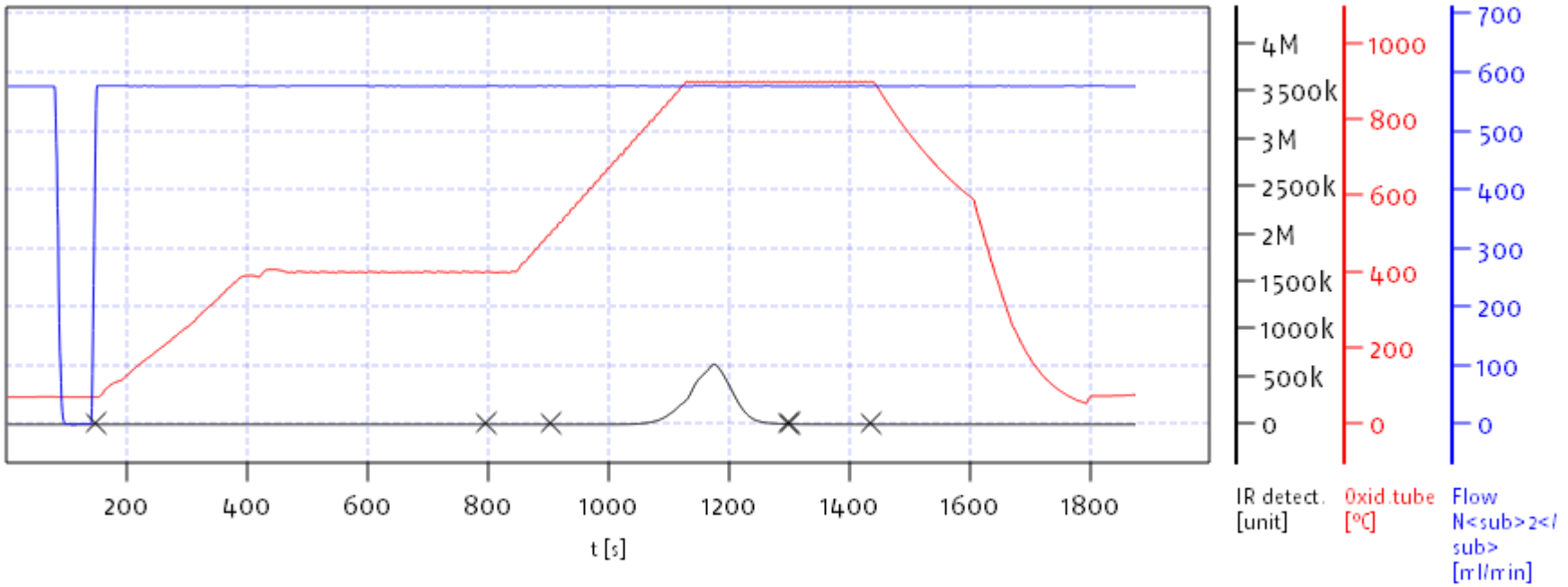
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
19	27	SEQ-CALH	200.00	0.0253	1.00	CARBON	8/25/2021 3:29 AM	0.000	1.524	1.524	bl,C1u,C2u	1 233	1 930 390	4 311	1.0000	1.0003



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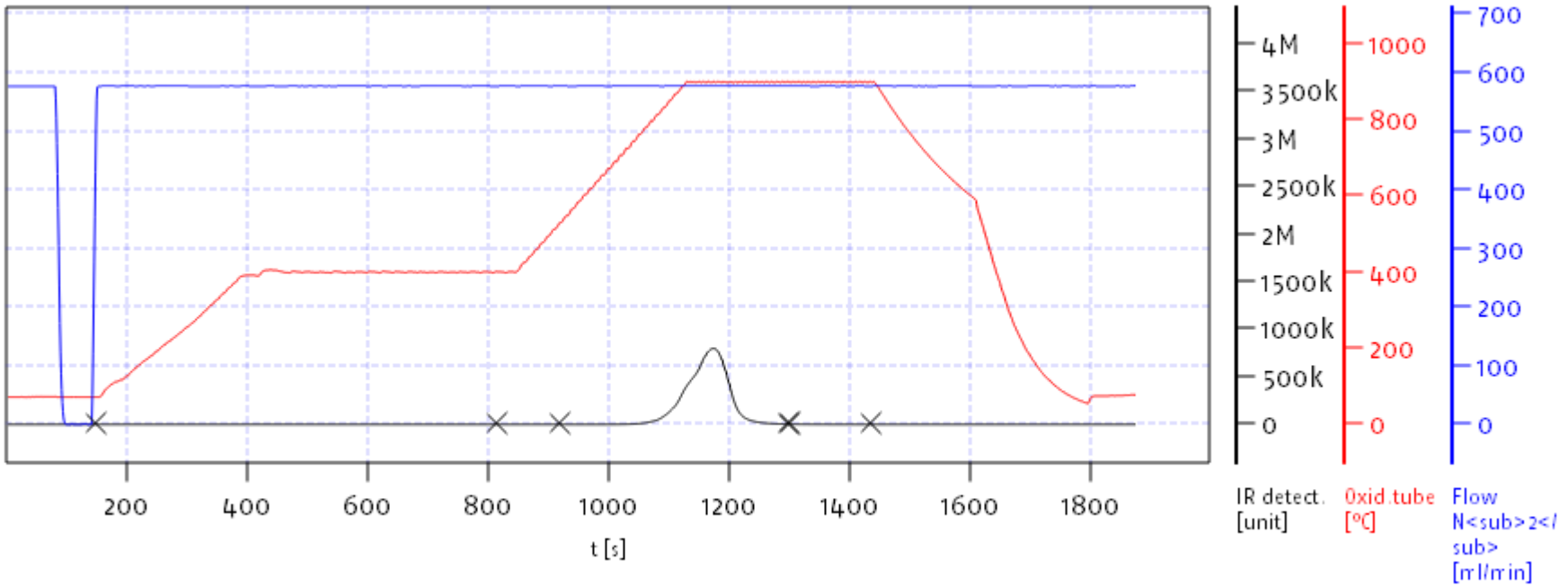
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
20	28	SEQ-CALI	200.00	0.0302	1.00	CARBON	8/25/2021 4:01 AM	0.000	1.800	1.800	bl,C1u,C2u	1 600	2 286 540	3 907	1.0000	0.9976



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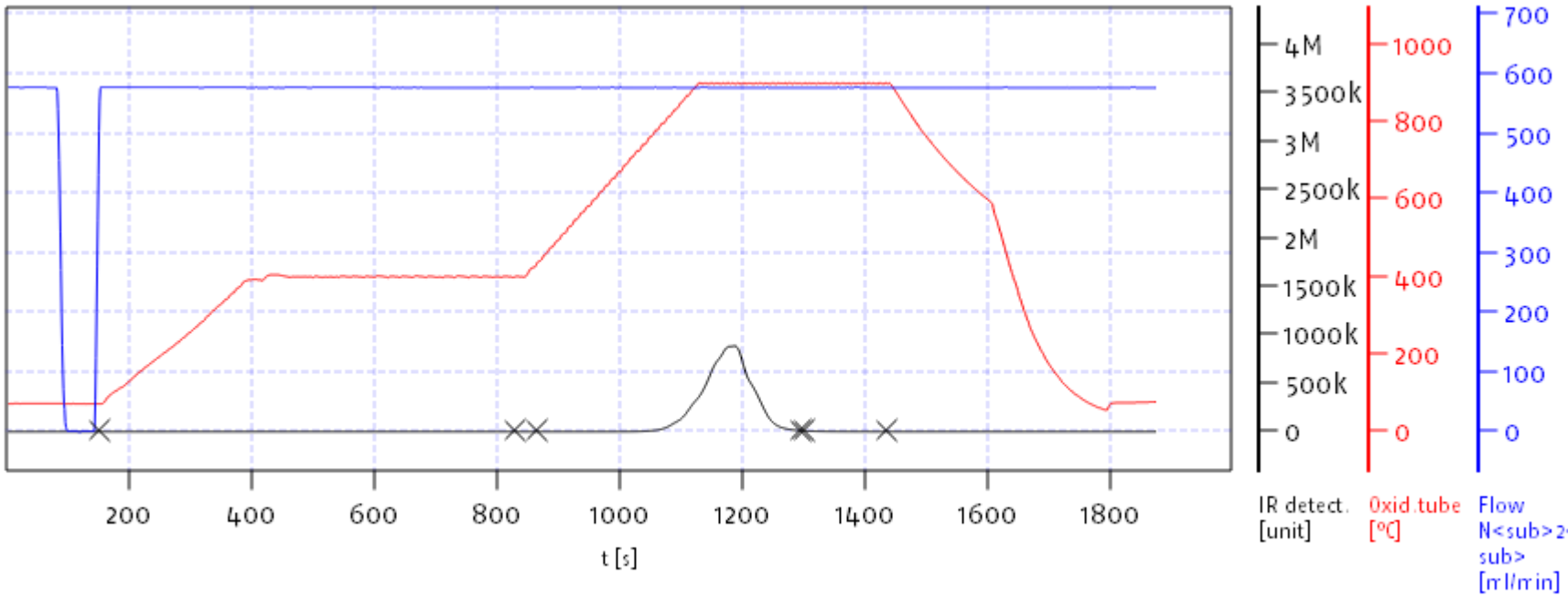
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
21	29	SEQ-CALJ	200.00	0.0400	1.00	CARBON	8/25/2021 4:33 AM	0.000	2.400	2.400	bl,C1u	1 589	**3 013 270**	**9 826**	1.0000	1.0096



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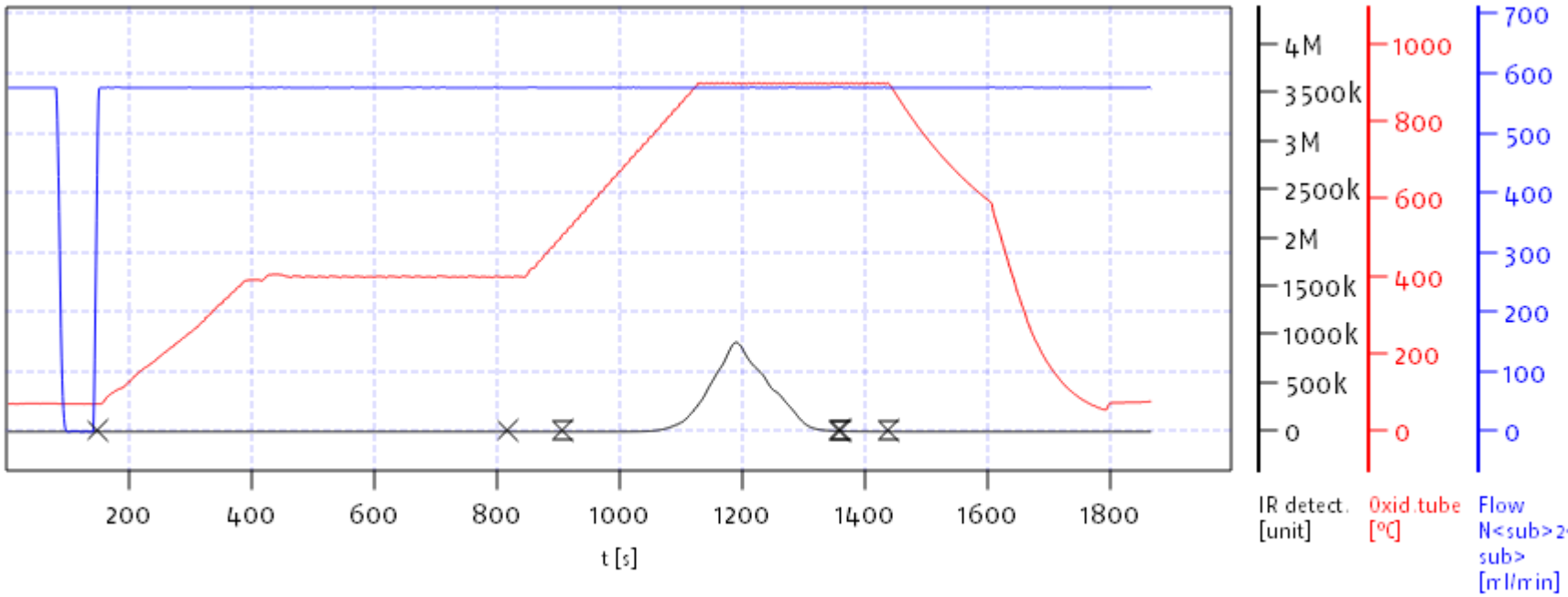
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
22	30	SEQ-CALK	200.00	0.0498	1.00	CARBON	8/25/2021 11:41 AM	0.000	3.012	3.012	bl,C1u	2 117	**3 411 713**	**0**	1.0000	1.0310



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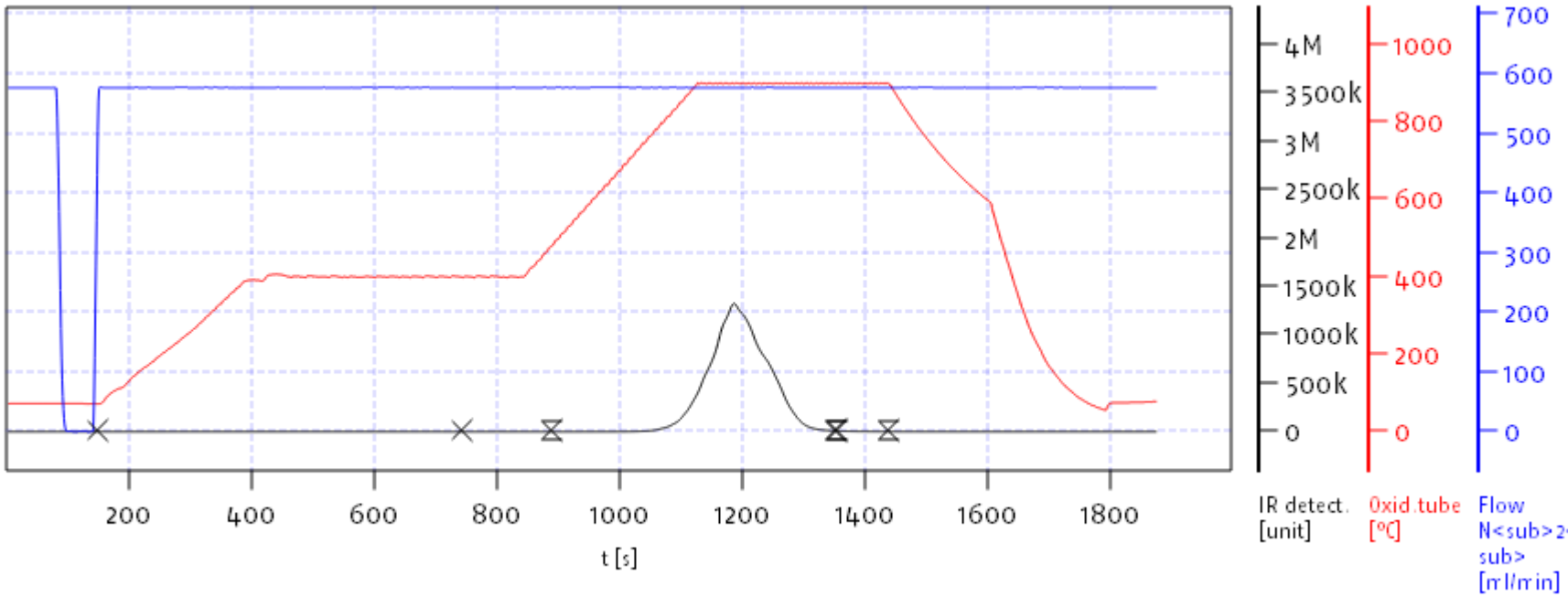
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
23	31	SEQ-CALL	200.00	0.0699	1.00	CARBON	8/25/2021 11:42 AM	0.000	4.206	4.206	bl,C1u	1 285	**4 920 073**	**0**	1.0000	1.0206



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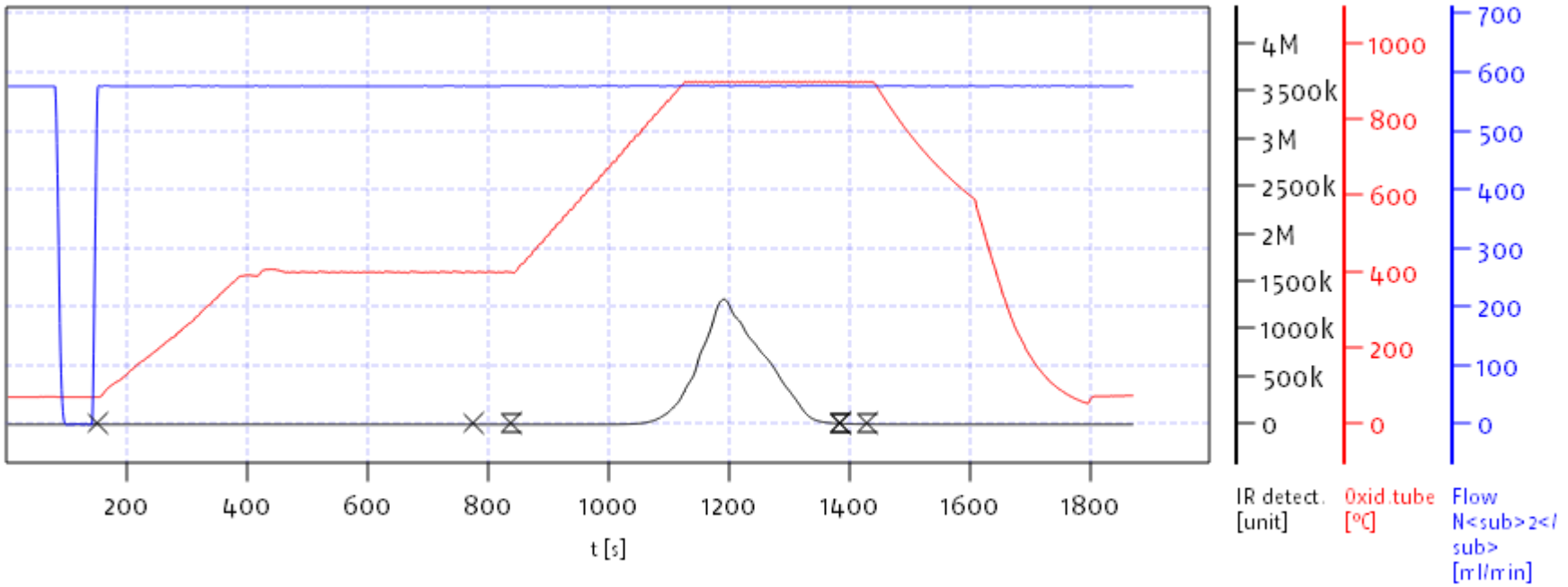
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
24	32	SEQ-CALM	200.00	0.0803	1.00	CARBON	8/25/2021 11:43 AM	0.000	4.812	4.812	bl,C1u	1 537	**5 655 573**	**0**	1.0000	1.0683



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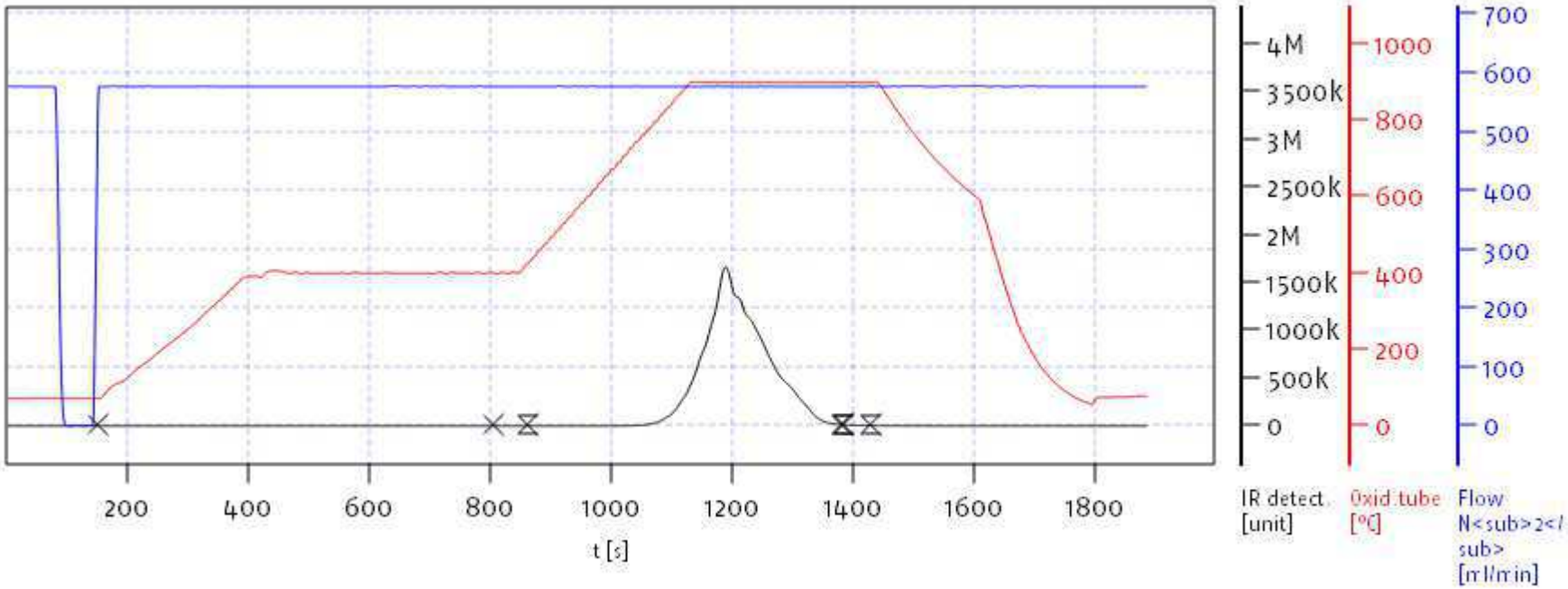
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
25	33	SEQ-CALN	200.00	0.0902	1.00	CARBON	8/25/2021 11:45 AM	0.000	5.406	5.406	bl,C1u	1 694	**6 449 031**	**0**	1.0000	1.0610



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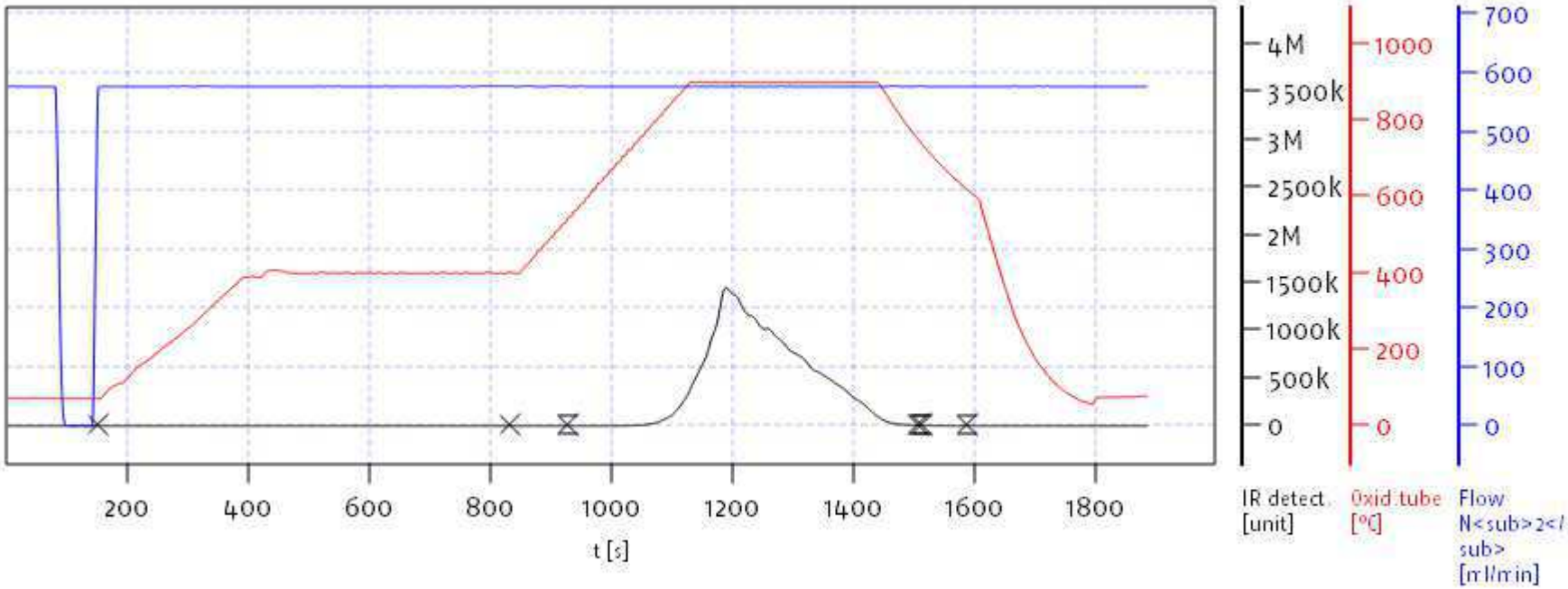
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
26	34	SEQ-CALO	200.00	0.1204	1.00	CARBON	8/25/2021 11:46 AM	0.000	7.218	7.218	bl,C1u,C3o	1 658	8 593 324	0	1.0000	1.3657



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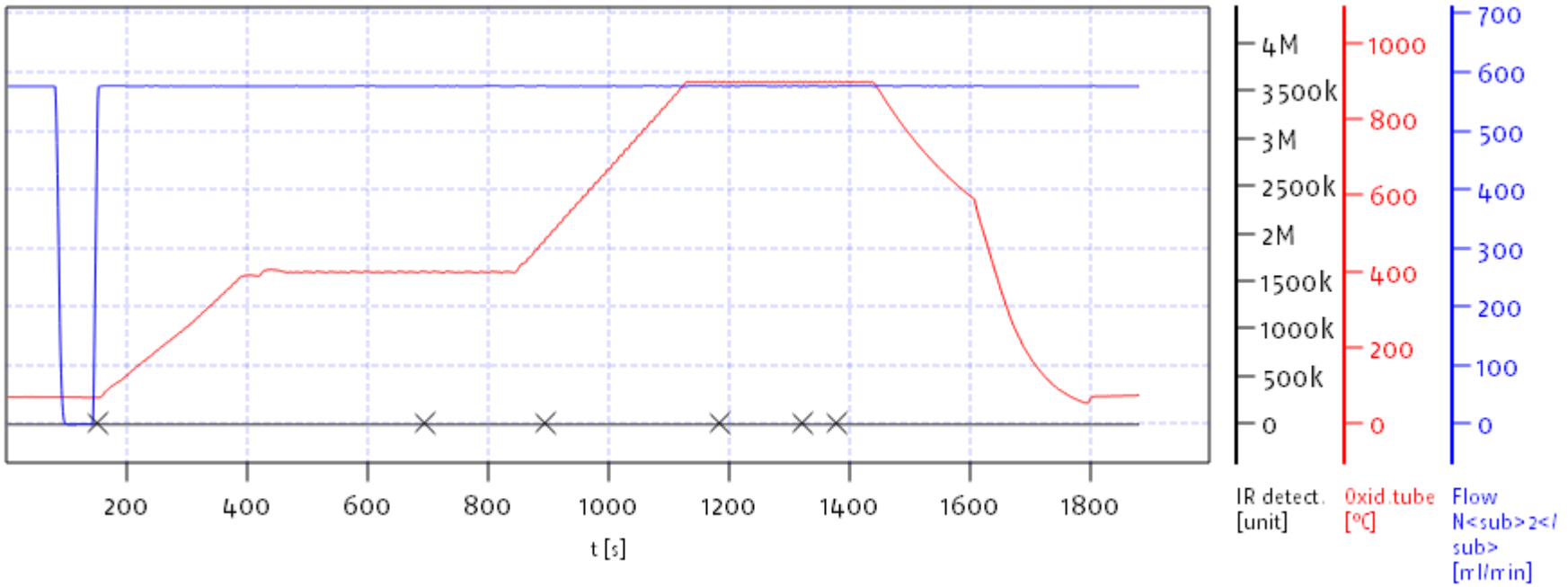
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
27	35	BLANK	1.00		1.00	CARBON	8/25/2021 7:43 AM	0.000	0.000	0.000	bl	708	0	0	1.0000	1.0293



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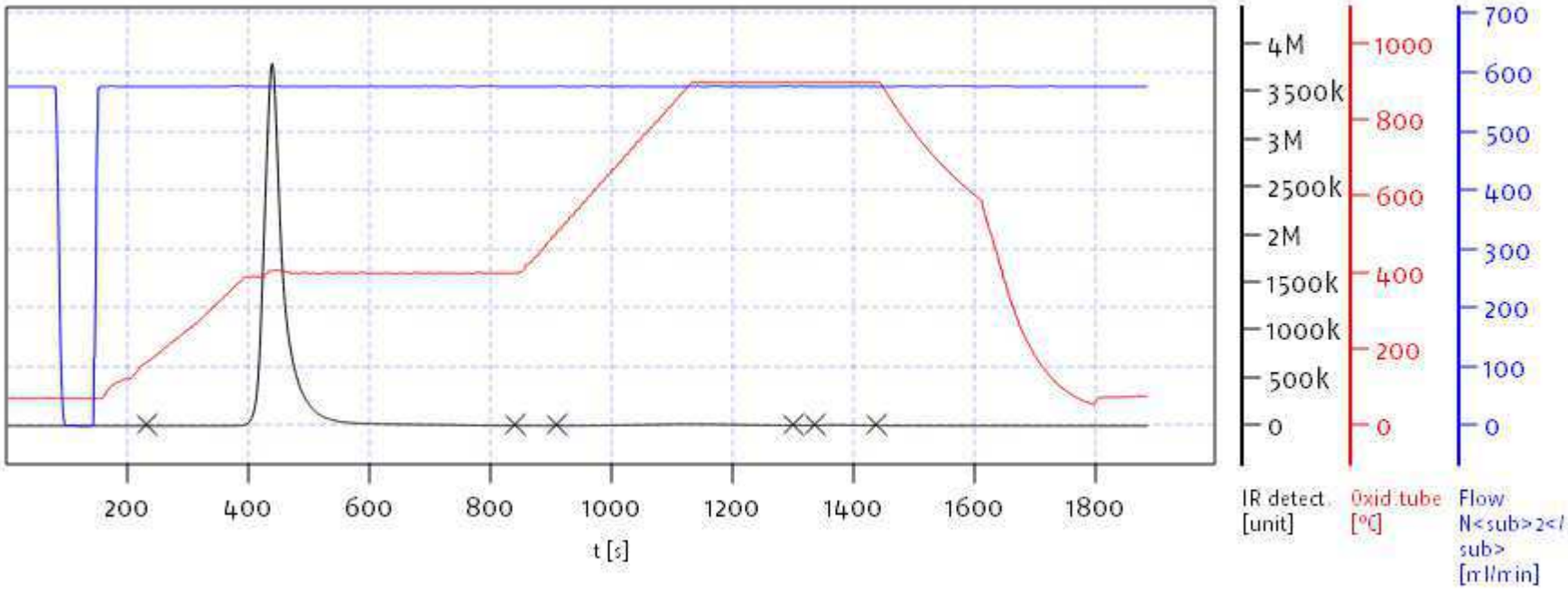
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
28	36	Dfactor	20.30		1.00	CARBON	8/25/2021 8:15 AM	44.446	0.000	44.446	bl	5 319 150	136 410	24 452	1.0755	1.0000



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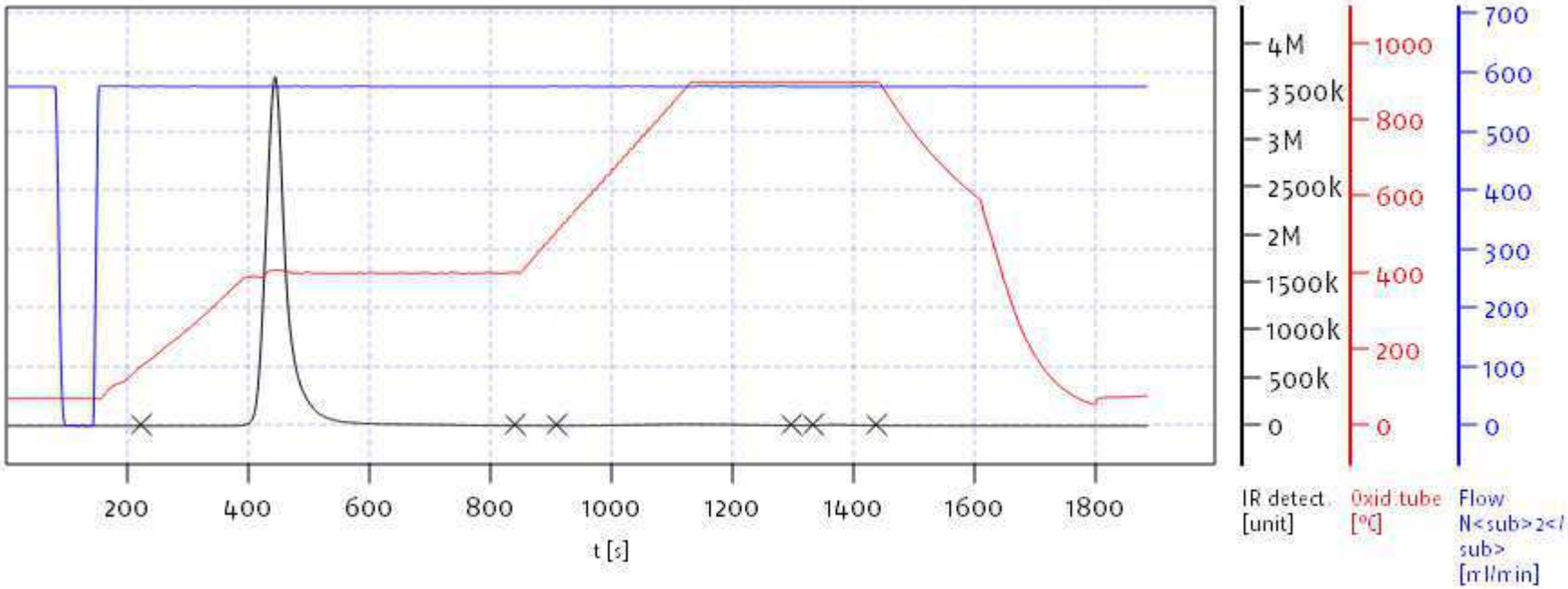
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
29	37	Dfactor	21.00		1.00	CARBON	8/25/2021 8:47 AM	44.446	0.000	44.446	bl	5 524 800	134 598	27 280	1.0712	1.0000



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Mode CCC

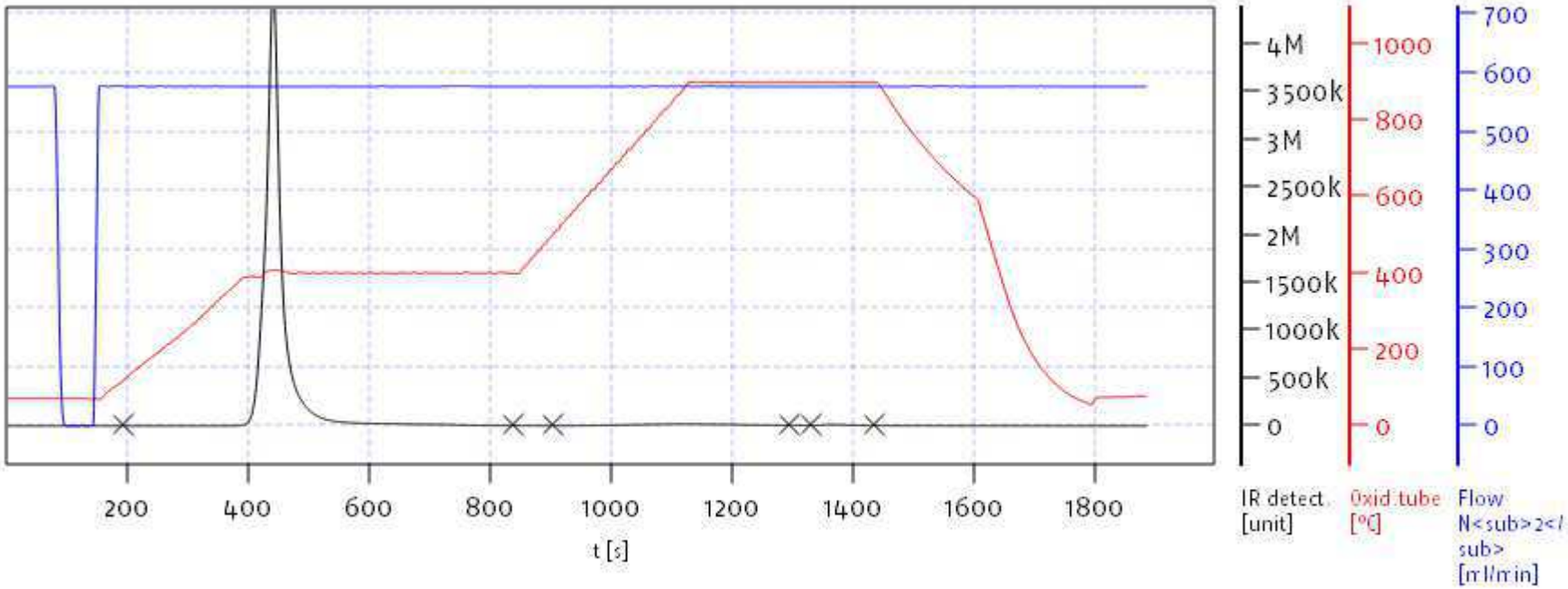
elementar
EXCELLENCE IN ELEMENTS

Document: TOC Calibration EH00065 082421BFb from: 8/25/2021 11:47 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
30	38	SEQ-ICV1	20.50		1.00	CARBON	8/25/2021 9:19 AM	47.154	1.091	48.245	bl	5 328 380	151 538	28 760	1.0733	1.0293



Name:

Access: soliTOC superuser

Date: Wed Aug 25 11:48:01 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

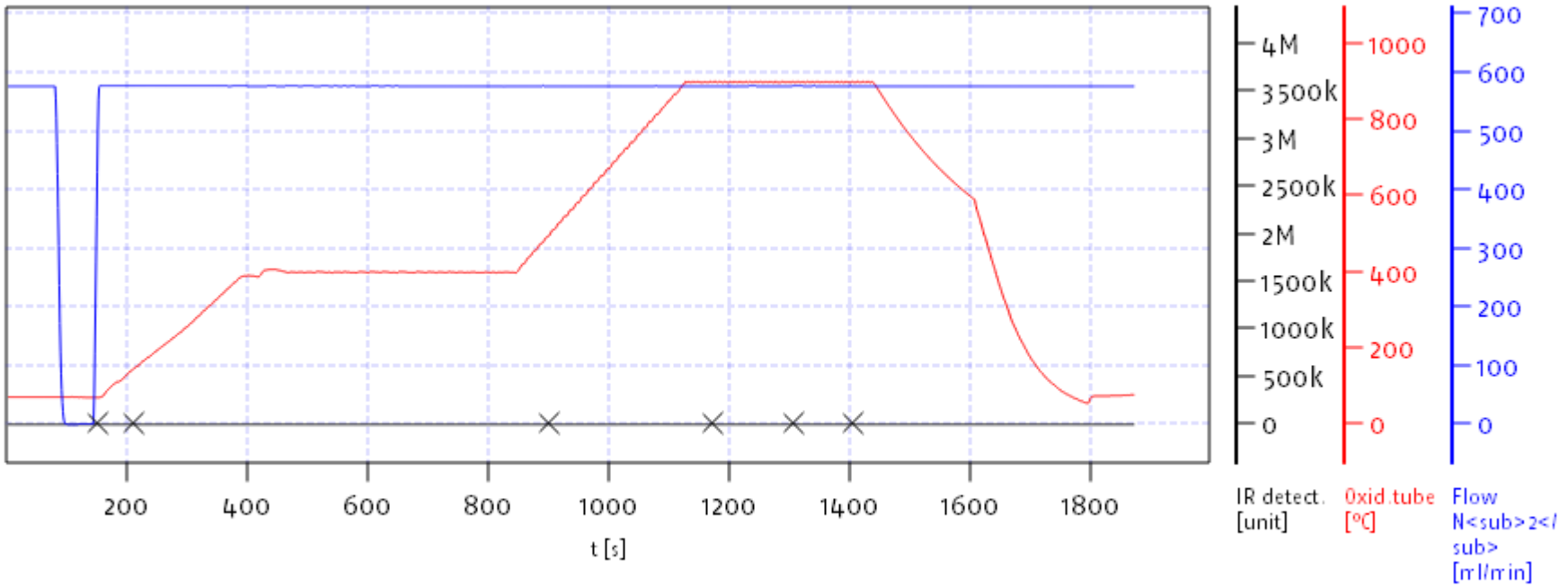
elementar
EXCELLENCE IN ELEMENTS

Document: TOC Calibration EH00065 082421BFb from: 8/25/2021 11:47 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: BF

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
31	39	SEQ-ICB1	599.20		1.00	CARBON	8/25/2021 9:51 AM	0.000	0.000	0.000	bl,C1u,C3u,C2u	172	1 307	338	1.0733	1.0293



Name:

Access: soliTOC superuser

Date: Wed Aug 25 11:48:01 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

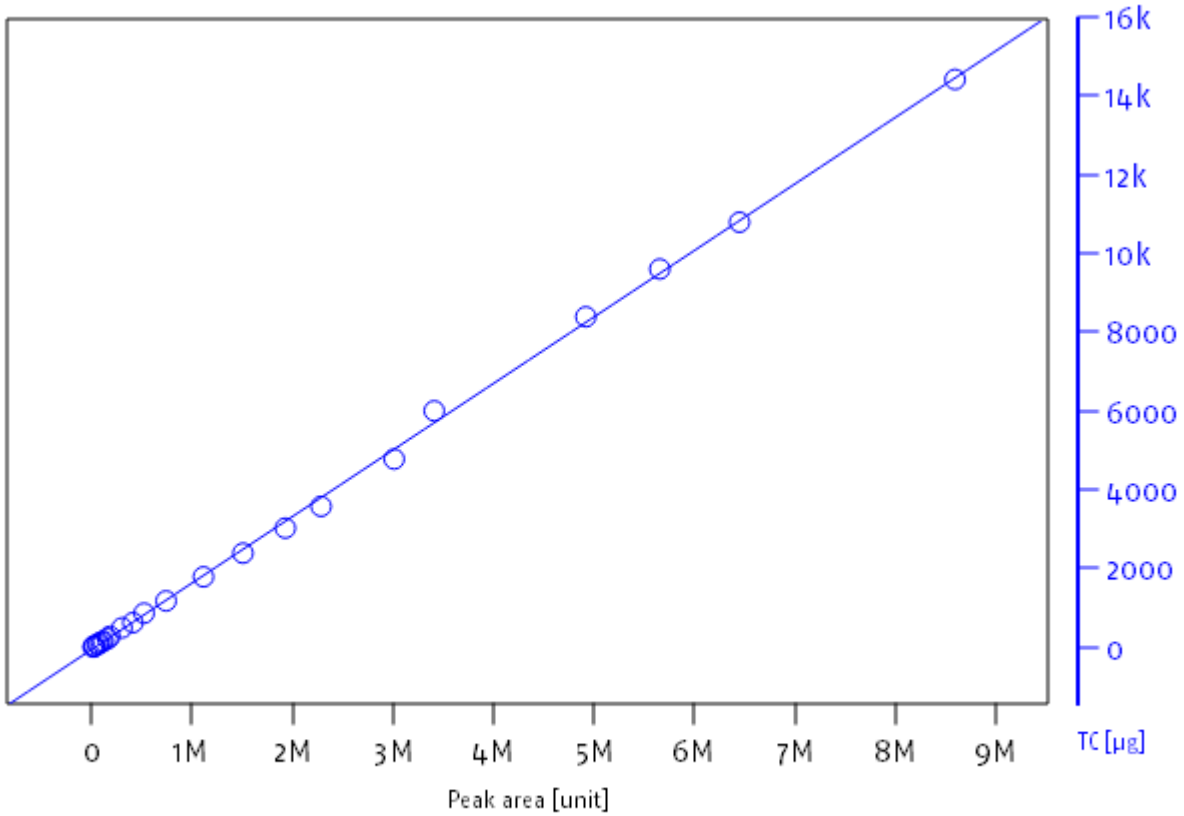
elementar
EXCELLENCE IN ELEMENTS

Document: TOC Calibration EH00065 082421BFb from: 8/25/2021 11:47 AM

Calibration parameters TC, Whole range

a	-1.970923e-02
b	+1.688862e-06
c	+0.000000e+00
d	+0.000000e+00
e	+0.000000e+00
r	0.999218
r_old	0.999218
Proc.-SD	115.145985 µg

Calibration graph TC, Whole range



Name:

Access: soliTOC superuser

Date: Wed Aug 25 11:48:57 2021

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INSTRUMENT BLANKS
EPA 9060A m

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Instrument ID: TOC Cube
Calibration: EG00035
Sequence: SJG0169
Date Analyzed: 07/14/21 05:33

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SJG0169-ICB1	Total Organic Carbon	0.002	0.02	0.02	%	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INSTRUMENT BLANKS
EPA 9060A m

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Instrument ID: TOC Cube
Calibration: EG00035
Sequence: SJH0006
Date Analyzed: 08/02/21 18:47

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SJH0006-ICB1	Total Organic Carbon	0.02	0.02	0.02	%	
SJH0006-CCB1	Total Organic Carbon	0.02	0.02	0.02	%	
SJH0006-CCB2	Total Organic Carbon	0.02	0.02	0.02	%	
SJH0006-CCB3	Total Organic Carbon	0.02	0.02	0.02	%	
SJH0006-CCB4	Total Organic Carbon	0.02	0.02	0.02	%	
SJH0006-CCB5	Total Organic Carbon	0.02	0.02	0.02	%	
SJH0006-CCB6	Total Organic Carbon	0.02	0.02	0.02	%	
SJH0006-CCB7	Total Organic Carbon	0.02	0.02	0.02	%	
SJH0006-CCB8	Total Organic Carbon	0.02	0.02	0.02	%	
SJH0006-CCB9	Total Organic Carbon	0.02	0.02	0.02	%	
SJH0006-CCBA	Total Organic Carbon	0.02	0.02	0.02	%	
SJH0006-CCBB	Total Organic Carbon	0.02	0.02	0.02	%	
SJH0006-CCBC	Total Organic Carbon	0.02	0.02	0.02	%	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INSTRUMENT BLANKS
EPA 9060A m

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Instrument ID: TOC Cube
Calibration: EH00065
Sequence: SJH0323
Date Analyzed: 08/25/21 09:51

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SJH0323-ICB1	Total Organic Carbon	0.00	0.02	0.02	%	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INSTRUMENT BLANKS
EPA 9060A m

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Instrument ID: TOC Cube
Calibration: EH00065
Sequence: SJH0417
Date Analyzed: 09/01/21 13:17

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SJH0417-ICB1	Total Organic Carbon	0.005	0.02	0.02	%	
SJH0417-CCB1	Total Organic Carbon	0.01	0.02	0.02	%	
SJH0417-CCB2	Total Organic Carbon	0.004	0.02	0.02	%	
SJH0417-CCB3	Total Organic Carbon	0.007	0.02	0.02	%	
SJH0417-CCB4	Total Organic Carbon	0.007	0.02	0.02	%	
SJH0417-CCB5	Total Organic Carbon	0.007	0.02	0.02	%	
SJH0417-CCB6	Total Organic Carbon	0.005	0.02	0.02	%	
SJH0417-CCB7	Total Organic Carbon	0.00	0.02	0.02	%	
SJH0417-CCB8	Total Organic Carbon	0.00	0.02	0.02	%	
SJH0417-CCB9	Total Organic Carbon	0.004	0.02	0.02	%	
SJH0417-CCBA	Total Organic Carbon	0.009	0.02	0.02	%	
SJH0417-CCBB	Total Organic Carbon	0.00	0.02	0.02	%	
SJH0417-CCBC	Total Organic Carbon	0.002	0.02	0.02	%	
SJH0417-CCBD	Total Organic Carbon	0.008	0.02	0.02	%	
SJH0417-CCBE	Total Organic Carbon	0.00	0.02	0.02	%	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060A m

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Instrument ID: TOC Cube
Calibration: EG00035
Control Limt: +/- 10.00%
Sequence: SJG0169

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SJG0169-ICV1	Total Organic Carbon	44.446	44.9	101	%	EPA 9060A m
	Total Carbon	44.446	45.5	102	%	EPA 9060A m
	Total Inorganic Carbon	0.0000	0.59		%	EPA 9060A m
	% Soot	0.0000	0.17		%	EPA 9060A m

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060A m

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Instrument ID: TOC Cube
Calibration: EG00035
Control Limt: +/- 10.00%
Sequence: SJH0006

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SJH0006-ICV1	Total Organic Carbon	44.446	45.2	102	%	EPA 9060A m
SJH0006-CCV1	Total Organic Carbon	44.446	44.7	101	%	EPA 9060A m
SJH0006-CCV2	Total Organic Carbon	44.446	44.8	101	%	EPA 9060A m
SJH0006-CCV3	Total Organic Carbon	44.446	44.8	101	%	EPA 9060A m
SJH0006-CCV4	Total Organic Carbon	44.446	43.3	97.5	%	EPA 9060A m
SJH0006-CCV5	Total Organic Carbon	44.446	43.4	97.6	%	EPA 9060A m
SJH0006-CCV6	Total Organic Carbon	44.446	42.4	95.4	%	EPA 9060A m
SJH0006-CCV7	Total Organic Carbon	44.446	44.7	101	%	EPA 9060A m
SJH0006-CCV8	Total Organic Carbon	44.446	44.7	100	%	EPA 9060A m
SJH0006-CCV9	Total Organic Carbon	44.446	44.0	98.9	%	EPA 9060A m
SJH0006-CCVA	Total Organic Carbon	44.446	43.4	97.7	%	EPA 9060A m
SJH0006-CCVB	Total Organic Carbon	44.446	43.5	97.9	%	EPA 9060A m
SJH0006-CCVC	Total Organic Carbon	44.446	47.6	107	%	EPA 9060A m

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060A m

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Instrument ID: TOC Cube
Calibration: EH00065
Control Limt: +/- 10.00%
Sequence: SJH0323

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SJH0323-ICV1	Total Organic Carbon	44.446	47.2	106	%	EPA 9060A m
	Total Carbon	44.446	48.2	109	%	EPA 9060A m
	Total Inorganic Carbon	0.0000	1.09		%	EPA 9060A m
	% Soot	0.0000	0.14		%	EPA 9060A m

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060A m

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Instrument ID: TOC Cube
Calibration: EH00065
Control Limt: +/- 10.00%
Sequence: SJH0417

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SJH0417-ICV1	Total Organic Carbon	44.446	45.0	101	%	EPA 9060A m
SJH0417-CCV1	Total Organic Carbon	44.446	45.0	101	%	EPA 9060A m
SJH0417-CCV2	Total Organic Carbon	44.446	45.0	101	%	EPA 9060A m
SJH0417-CCV3	Total Organic Carbon	44.446	45.0	101	%	EPA 9060A m
SJH0417-CCV4	Total Organic Carbon	44.446	44.1	99.3	%	EPA 9060A m
SJH0417-CCV5	Total Organic Carbon	44.446	44.8	101	%	EPA 9060A m
SJH0417-CCV6	Total Organic Carbon	44.446	43.7	98.3	%	EPA 9060A m
SJH0417-CCV7	Total Organic Carbon	44.446	43.5	97.8	%	EPA 9060A m
SJH0417-CCV8	Total Organic Carbon	44.446	44.9	101	%	EPA 9060A m
SJH0417-CCV9	Total Organic Carbon	44.446	44.9	101	%	EPA 9060A m
SJH0417-CCVA	Total Organic Carbon	44.446	45.0	101	%	EPA 9060A m
SJH0417-CCVB	Total Organic Carbon	44.446	44.3	99.6	%	EPA 9060A m
SJH0417-CCVC	Total Organic Carbon	44.446	45.2	102	%	EPA 9060A m
SJH0417-CCVD	Total Organic Carbon	44.446	44.6	100	%	EPA 9060A m
SJH0417-CCVE	Total Organic Carbon	44.446	44.0	99.0	%	EPA 9060A m

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 9060A m

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Matrix: Solid
Laboratory ID: BJG0719-SRM1
Batch: BJG0719
Initial/Final: 0.0386 g / 0.0386 mL
Preparation: PSEP 1986 (modified)
Analyzed: 08/03/2021 6:22
Standard ID: H003424
Expires: 12/31/2079
Standard Lot#: 1941b
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	2.82	0.02	0.02		94.3	80 - 120

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HOLDING TIME SUMMARY

Analysis: EPA 9060A m

Laboratory: Analytical Resources, Inc. SDG: 21G0212

Client: Anchor QEA, LLC Project: Lower Duwamish AOC4

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
LDW21-SC524 21G0212-01	07/15/21 14:55	07/16/21 17:39	07/29/21 17:15	14	14	08/03/21 11:05			
LDW21-SC528 21G0212-02	07/15/21 15:20	07/16/21 17:39	07/29/21 17:15	14	14	08/03/21 14:15			
LDW21-SC538B 21G0212-03	07/15/21 16:21	07/16/21 17:39	07/29/21 17:15	14	14	08/03/21 14:47			
LDW21-SC538C 21G0212-04	07/15/21 16:21	07/16/21 17:39	07/29/21 17:15	14	14	08/03/21 15:19			
LDW21-SC538E 21G0212-05	07/15/21 16:21	07/16/21 17:39	07/29/21 17:15	14	14	08/03/21 15:51			
LDW21-IT582B 21G0212-06	07/16/21 08:16	07/16/21 17:39	07/29/21 17:15	13	14	08/03/21 16:23			
LDW21-IT582C 21G0212-07	07/16/21 08:16	07/16/21 17:39	07/29/21 17:15	13	14	08/03/21 16:54			
LDW21-IT582E 21G0212-08	07/16/21 08:16	07/16/21 17:39	07/29/21 17:15	13	14	08/03/21 17:26			
LDW21-IT579B 21G0212-09	07/16/21 11:23	07/16/21 17:39	07/29/21 17:15	13	14	08/03/21 17:58			
LDW21-IT597B 21G0212-10	07/16/21 14:07	07/16/21 17:39	07/29/21 17:15	13	14	08/03/21 18:29			
LDW21-IT597C 21G0212-11	07/16/21 14:07	07/16/21 17:39	07/29/21 17:15	13	14	08/03/21 19:00			
LDW21-IT597E 21G0212-12	07/16/21 14:07	07/16/21 17:39	07/29/21 17:15	13	14	08/03/21 20:35			
LDW21-SC539A 21G0212-13RE1	07/16/21 15:45	07/16/21 17:39	07/29/21 17:15	13	14	09/04/21 16:54			
LDW21-SC539B 21G0212-14	07/16/21 15:45	07/16/21 17:39	07/29/21 17:15	13	14	08/03/21 21:39			
LDW21-SC539C 21G0212-15	07/16/21 15:45	07/16/21 17:39	07/29/21 17:15	13	14	08/03/21 22:11			
LDW21-SC539E 21G0212-16	07/16/21 15:45	07/16/21 17:39	07/29/21 17:15	13	14	08/03/21 22:42			

* Indicates hold time exceedance.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

METHOD DETECTION AND REPORTING LIMITS

EPA 9060A m

Laboratory: Analytical Resources, Inc.
SDG: 21G0212
Client: Anchor QEA, LLC
Project: Lower Duwamish AOC4
Matrix: Solid
Instrument: TOC Cube

Analyte	MDL	RL	Units
Total Organic Carbon	0.02	0.02	%

H001822

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: $(C_6H_{10}O_5)n$
CAS #: 9004-34-6
Physical Description: White Powder

Formula Weight: N/A
Storage: 15 - 30°C

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

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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mailto:biotech@mpbio.com
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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

Robert L. Watters, Jr., Director
Office of Reference Materials

Gaithersburg, MD 20899
Certificate Issue Date: 16 January 2015

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 experimental procedure. Such identification does not imply recommendation or endorsement by the National Institute of Standards

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

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.

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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.

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