

April 30, 2018

Panjini Balaraju
Site Manager
Ecology's Toxics Cleanup Program
Southwest Regional Office
300 Desmond Drive SE
Lacey, Washington 98503

Dear Panjini,

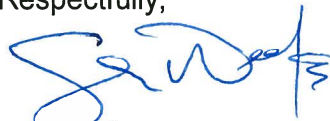
Attached are the results of the February 2018 groundwater sampling event conducted by Anchor QEA, LLC, on behalf of the Port of Tacoma at the Former Wasser & Winters Log Sort Yard Facility located at 1620 Marine View Drive in Tacoma, Washington (Site).

Site groundwater sampling is routinely conducted on a 30-month schedule, as agreed upon in the memorandum of understanding between Ecology and the Port issued on September 12, 2011. The prior groundwater sampling event was conducted in February 2017, with the subsequent event scheduled for August of 2019. This interim event was conducted as requested by Ecology at a September 14, 2017 meeting between the Port and Ecology held at the Port administrative building.

The sample was collected from monitoring well GMW-3 using low-flow sampling techniques. Analysis for dissolved arsenic by EPA Method 200.8 was conducted by Analytical Resources, Inc.

The Port requests a meeting with Ecology to discuss the analytical results.

Respectfully,

A handwritten signature in blue ink, appearing to read 'Sarah Weeks'.

Sarah Weeks
Environmental Project Manager

SW

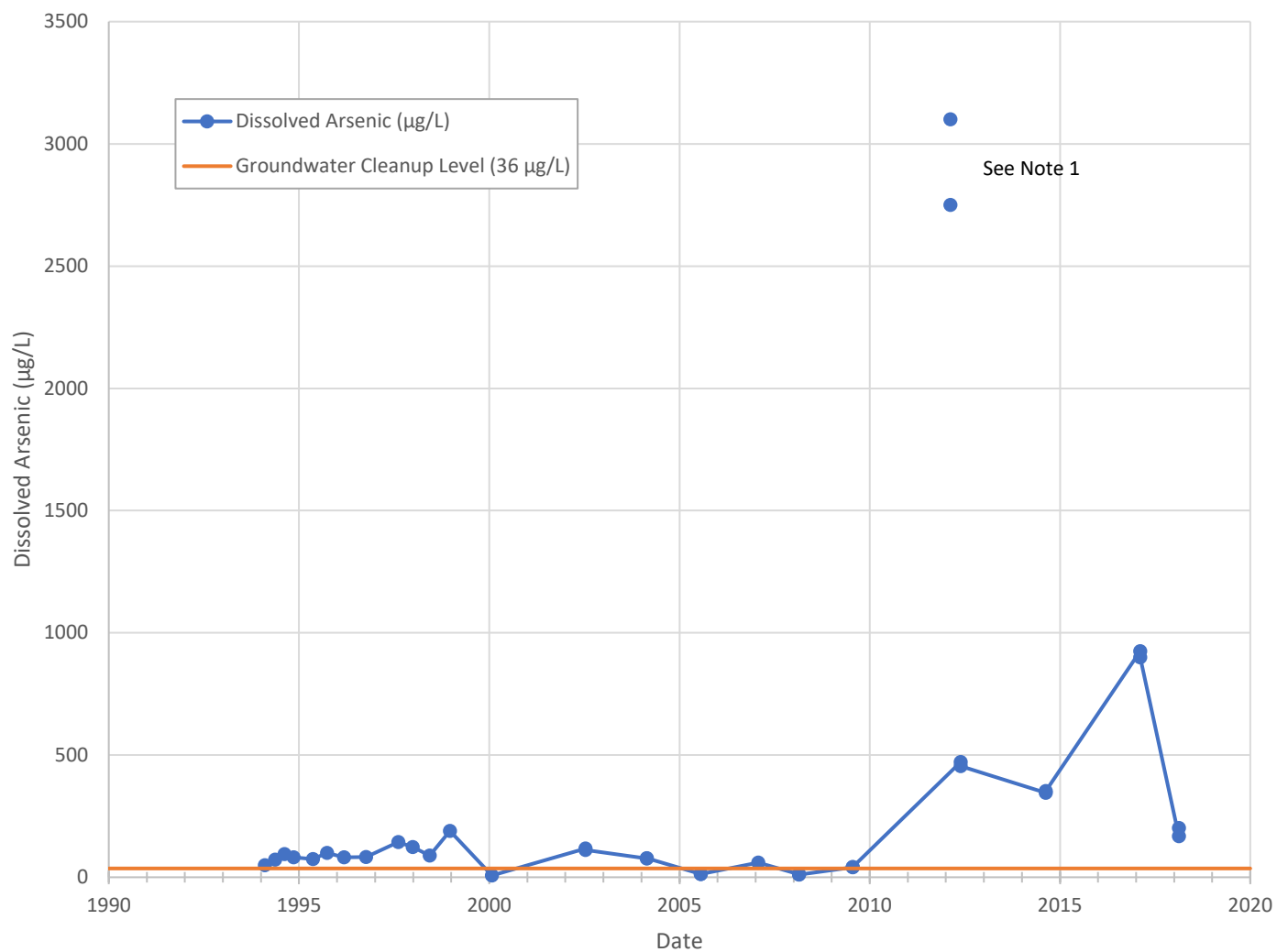
CC: Robert Healy, Port of Tacoma
Andrew Smith, Department of Ecology

Encl: Figure 1: Compliance Groundwater Monitoring Locations
Figure 2: Dissolved Arsenic Concentration Trends
Table 1: Analytical Results
Attachment A: Sample Collection Forms and COC
Attachment B: Laboratory Data Report and Data Validation Report



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Figure 2: Dissolved Arsenic Concentration Trends



Note: As described in Hart Crowser (2014) the groundwater samples collected in February 2012 had higher than typical sample turbidity due to use of inappropriate sampling procedures. Results were considered invalid at the time. Samples were recollected in May 2012.

Former Wasser & Winters Log Sort Yard
Port of Tacoma

Table 1: Analytical Results

		Concentration (µg/L)				
Well ID	Date	Dissolved Arsenic	Dissolved Copper	Dissolved Iron	Dissolved Lead	Dissolved Zinc
Cleanup Criteria Levels		36	2.9		8.5	86
GMW-3	2/7/1994	49	2 U	--	1 U	8
GMW-3	5/17/1994	72	2 U	--	1	7
GMW-3	8/17/1994	95	2 U	--	1 U	5
GMW-3	11/11/1994	82	2 U	--	2	8
GMW-3	5/17/1995	74	2 U	--	1 U	7
GMW-3	9/29/1995	100	2 U	--	1 U	5
GMW-3	3/9/1996	82	2 U	--	1 U	4 U
GMW-3	10/8/1996	83	2 U	--	1 U	4 U
GMW-3	8/14/1997	144	2 U	--	1 U	5
GMW-3	12/30/1997	123	2 U	--	1 U	139
GMW-3	6/11/1998	89	2 U	--	1 U	4 U
GMW-3	12/22/1998	190	2 U	--	1 U	2 U
GMW-3	1/28/2000	7.2	1 U	--	0.5 U	99
GMW-3	7/16/2002	117	1.02	--	0.5 U	3.32
GMW-3 (Duplicate)	7/16/2002	111	0.979	--	0.5 U	4.67
GMW-3	2/23/2004	77.2	1.07	--	0.2 U	3.98
GMW-3 (Duplicate)	2/23/2004	77.5	1.06	--	0.675	4.79
GMW-3	7/26/2005	13.1	2.63	--	2.5 U	5 U
GMW-3 (Duplicate)	7/26/2005	12.9	2.5 U	--	2.0 U	5 U
GMW-3	1/30/2007	60	4.6	--	2.0 U	34
GMW-3	2/26/2008	12	1.2J	--	2.0 U	47
GMW-3 (Duplicate)	2/26/2008	11	0.8J	--	2.0 U	35
GMW-3	7/23/2009	41.3	1.5	--	2.0 U	2.7
GMW-3 (Duplicate)	7/23/2009	41.7	1.4	--	0.2 U	1.4
GMW-3	2/17/2012	2750	--	--	--	--
GMW-3 (Duplicate)	2/17/2012	3100	--	--	--	--
GMW-3	5/25/2012	471	--	--	--	--
GMW-3 (Duplicate)	5/25/2012	455	--	--	--	--
GMW-3	8/22/2014	346	--	--	--	--
GMW-3 (Duplicate)	8/22/2014	353	--	--	--	--
GMW-3	2/13/2017	925	--	15700	--	--
GMW-3 (Duplicate)	2/13/2017	899	--	15000	--	--
GMW-3	2/19/2018	168				
GMW-3 (Duplicate)	2/19/2018	201				

Notes:

Lead, zinc and copper analyses were discontinued in 2011 with Ecology approval dated June 28, 2011 (Ecology 2011a)
Groundwater samples were analyzed for dissolved metals by EPA Method 200.8.

a) Groundwater cleanup levels established from EPA chronic marine criteria (WAC 173-201A)

b) Results from the February 2012 sampling event are considered invalid due to improper sampling procedures, resulting in higher than normal turbidity

Bold = Detected result

-- = Not analyzed

µg/L = micrograms per liter

J = Laboratory analytical result was detected above the method detection limit but below the quantitation limit

U = Compound analyzed, but not detected above detection limit

Attachment A:
Sample Collection Form and COC

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

[illegible]

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

ANCHOR
QEA

PROJECT NAME:	PORT OF TACOMA	WELL ID:	CMW-3
SITE ADDRESS:	PORT OF TACOMA	BLIND ID:	CMW-3 - 021918 1450
PROJECT #		DUP ID:	CMW-300-021918 1450

WATER QUALITY DATA				Purge Start Time: 14 : 17		Method § - [Select A-G]		Pump/Bailer Inlet Depth:				
Time	DITW (ft)	Purged (gal)	pH	E Cond (µS/cm)	°F Temp	°C Temp	DO (mg/l)	ORP	TDS	Salinity	Turbidity	Water Quality
	9.18											MANSAGANI WHITE TUGBO
1417	9.10	250 mL										"
1420	9.32		6.31	0.260	81.39	9.6	0.46 0.30	-58			30.4	"
1423	9.35		6.26	0.263	9.6		0.60	-20.7			24.9	"
1426	9.39		6.36	0.264	9.6		0.45	-10.7			23.4	"
1429	9.45		6.27	0.267	9.5		0.40	-32.9			23.2	"
1432	9.43		6.24	0.267	9.3		0.35	-36.4			20.9	"
1435	9.43		6.24	0.267	9.2		0.29	-40.1			22.3	"
1438	9.43		6.24	0.266	9.3		0.26	-41.2			21.8	"
1441	9.44		6.22	0.263	9.2		0.21	-46.2			22.1	"
1444	9.44		6.22	0.264	9.3		0.19	-49.2			23.1	"
1447	9.44		6.22	0.263	9.2		0.19	-49.2			22.9	"
									SUP	SUP		SUP

[Cumulative Totals]

[Circle units]

[Clarity, Color]

Notes:

TOTAL DEPTH 12.45
250 ml/min

SAMPLER:

S. Potter

(PRINTED NAME)

(SIGNATURE)

Attachment B:

Laboratory Data Report and Data Validation
Report



Analytical Resources, Incorporated
Analytical Chemists and Consultants

05 March 2018

Nik Bacher
Anchor QEA, LLC
1119 Pacific Avenue, Suite 1600
Tacoma, WA 98402

RE: Port of Tacoma- Wasser Winter GW Monitoring

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)
18B0269

Associated SDG ID(s)
N/A

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 enclose 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.

Amanda Volgardsen, Project Manager

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.



Analytical Resources, Incorporated
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Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
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[illegible]

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WORK ORDER

18B0269

Client: Anchor QEA, LLC

Project Manager: Amanda Volgardsen

Project: Port of Tacoma- Wasser Winter GW Monitoring

Project Number: Wasser-Winter

Report To:

Anchor QEA, LLC
Nik Bacher
1119 Pacific Avenue, Suite 1600
Tacoma, WA 98402
Phone: (206) 903-3376
Fax: -

Invoice To:

Anchor QEA, LLC
labdata
720 Olive Way, Suite 1900
Seattle, WA 98101
Phone :206-903-3394
Fax: -

Date Due: 06-Mar-2018 18:00 (10 day TAT)

Received By: Brandon Fisk

Date Received: 20-Feb-2018 09:02

Logged In By: Jacob Walter

Date Logged In: 20-Feb-2018 09:38

Samples Received at: 3°C

Intact, properly signed and dated custody seals attached to outside of cooler(s).....No
Custody papers properly filled out (in, signed, analyses requested, etc).....Yes
Was sufficient ice used (if appropriate).....Yes
All bottles arrived in good condition (unbroken).....Yes
Number of containers listed on COC match number received.....Yes
Correct bottles used for the requested analyses.....Yes
Analyses/bottles require preservation (attach preservation sheet excluding VOC).....Yes
Sample split at ARI.....No

Custody papers included with the cooler..... Yes
Was a temperature blank included in the cooler..... No
All bottles sealed in individual plastic bags..... No
All bottle labels complete and legible..... Yes
Bottle labels and tags agree with COC..... Yes
All VOC vials free of air bubbles..... No
Sufficient amount of sample sent in each bottle..... Yes

18B0269-01 CMW-3-021918 [Water] Sampled 19-Feb-2018 14:50

Met Diss 200.8 - As UCT 03/06/2018 10 8/18/2018

18B0269-02 CMW-300-021918 [Water] Sampled 19-Feb-2018 14:52

Met Diss 200.8 - As UCT 03/06/2018 10 8/18/2018

Preservation Confirmation

Container ID	Container Type	pH	
18B0269-01 A	HDPE NM, 500 mL, 1:1 HNO3	7.2	Pass
18B0269-02 A	HDPE NM, 500 mL, 1:1 HNO3	7.2	Pass

Preservation Confirmed By JBW

Date 02/20/18



Cooler Receipt Form

ARI Client: Anchor QEA
COC No(s): _____ NA
Assigned ARI Job No: 18B0269

Project Name: Part of Tacoma - Wasser Winter GW
Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____
Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO
Were custody papers included with the cooler? YES YES NO
Were custody papers properly filled out (ink, signed, etc.) YES YES NO
Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 3.0
Time: _____
If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 1002565

Cooler Accepted by: BE Date: 2/20/18 Time: 902

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
Were all bottles sealed in individual plastic bags? YES NO
Did all bottles arrive in good condition (unbroken)? YES YES NO
Were all bottle labels complete and legible? YES YES NO
Did the number of containers listed on COC match with the number of containers received? YES YES NO
Did all bottle labels and tags agree with custody papers? YES YES NO
Were all bottles used correct for the requested analyses? YES 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 YES NO
Date VOC Trip Blank was made at ARI: NA
Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: SBW Date: _____ Time: _____

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

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

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

Small Air Bubbles ~2mm	Peabubbles' 2-4 mm	LARGE Air Bubbles > 4 mm

Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)



Anchor QEA, LLC
1119 Pacific Avenue, Suite 1600
Tacoma WA, 98402

Project: Port of Tacoma- Wasser Winter GW Monitoring
Project Number: 170092-01.07
Project Manager: Nik Bacher

Reported:
05-Mar-2018 15:17

Case Narrative

Sample receipt

Samples as listed on the preceding page were received February 20, 2018 under ARI workorder 18B0269. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Dissolved Arsenic - EPA Method 200.8

The samples were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank was clean at the reporting limits.

The LCS percent recoveries were within control limits.

A matrix spike and duplicate were prepared in conjunction with sample CMW-3-021918. The matrix spike percent recovery and duplicate RPD were within QC limits.



Anchor QEA, LLC

1119 Pacific Avenue, Suite 1600

Tacoma, WA 98402

Project: Port of Tacoma- Wasser Winter GW Monitoring

Project Number: 170092-01.07

Project Manager: Nik Bacher

Reported:

03/05/2018 15:17

ANALYTICAL REPORT FOR SAMPLES

Laboratory ID	Sample ID	Matrix	Date Sampled	Date Received
18B0269-01	CMW-3-021918	Water	02/19/18 14:50	02/20/18 09:02
18B0269-02	CMW-300-021918	Water	02/19/18 14:52	02/20/18 09:02

QUALIFIERS AND NOTES

Qualifier	Definition
U	This analyte is not detected above the applicable reporting or detection limit.
J	Estimated concentration value detected below the reporting limit.
D	The reported value is from a dilution
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

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 200.8 UCT-KED
Dissolved Metals

CMW-3-021918

Laboratory: Analytical Resources, Inc.

Client: Anchor QEA, LLC

Project: Port of Tacoma- Wasser Winter GW Monitoring

Matrix:	<u>Water</u>	Laboratory ID:	<u>18B0269-01</u>	SDG:	<u>18B0269</u>
Sampled:	<u>02/19/18 14:50</u>	Prepared:	<u>02/27/18 08:16</u>	File ID:	<u>XDT_m2180302-043</u>
% Solids:	<u>0.00</u>	Preparation:	<u>REN EPA 600/4-79-020 4.1.4 HNO3</u>	Analyzed:	<u>03/02/18 12:41</u>
Batch:	<u>BGB0642</u>	Sequence:	<u>SGC0027</u>	Initial/Final:	<u>25 mL / 25 mL</u>
Instrument:	<u>ICPMS2</u>			Calibration:	<u>BC00006</u>

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic-75a, Dissolved	168	5	0.110	1.00	D



Form I
INORGANIC ANALYSIS DATA SHEET
EPA 200.8 UCT-KED
Dissolved Metals

CMW-300-021918

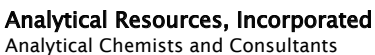
Laboratory: Analytical Resources, Inc.

Client: Anchor QEA, LLC

Project: Port of Tacoma- Wasser Winter GW Monitoring

Matrix:	<u>Water</u>	Laboratory ID:	<u>18B0269-02</u>	SDG:	<u>18B0269</u>
Sampled:	<u>02/19/18 14:52</u>	Prepared:	<u>02/27/18 08:16</u>	File ID:	<u>XDT_m2180302-030</u>
% Solids:	<u>0.00</u>	Preparation:	<u>REN EPA 600/4-79-020 4.1.4 HNO3</u>	Analyzed:	<u>03/02/18 11:40</u>
Batch:	<u>BGB0642</u>	Sequence:	<u>SGC0027</u>	Initial/Final:	<u>25 mL / 25 mL</u>
Instrument:	<u>ICPMS2</u>			Calibration:	<u>BC00006</u>

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic-75a, Dissolved	201	20	0.440	4.00	D



EPA 200.8 UCT-KED

Preparation: REN EPA 600/4-79-020 4.1.4 HNO₃ matrix

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
CMW-3-021918	18B0269-01	XDT_m2180302-043	02/27/18 08:16	
CMW-300-021918	18B0269-02	XDT_m2180302-030	02/27/18 08:16	
Blank	BGB0642-BLK1	XDT_m2180302-026	02/27/18 08:16	
LCS	BGB0642-BS1	XDT_m2180302-035	02/27/18 08:16	
CMW-3-021918	BGB0642-DUP1	XDT_m2180302-042	02/27/18 08:16	
CMW-3-021918	BGB0642-MS1	XDT_m2180302-044	02/27/18 08:16	



Form I
METHOD BLANK DATA SHEET
EPA 200.8 UCT-KED
Dissolved Metals

Blank

Batch: BGB0642

Laboratory ID: BGB0642-BLK1

Prepared: 02/27/18 08:16

Matrix: Water

Preparation: REN EPA 600/4-79-020 4

Analyzed: 03/02/18 11:23

Sequence: SGC0027

Calibration: BC00006

Instrument: ICPMS2

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic-75a	ND	1	0.0220	0.200	U

DUPLICATES
EPA 200.8 UCT-KED

CMW-3-021918

Dissolved Metals

Laboratory: Analytical Resources, Inc.SDG: 18B0269Client: Anchor QEA, LLCProject: Port of Tacoma- Wasser Winter GW MonitoringMatrix: WaterLaboratory ID: BGB0642-DUP1Batch: BGB0642Lab Source ID: 18B0269-01Preparation: REN EPA 600/4-79-020 4.1.4 HNO3 matrixInitial/Final: 25 mL / 25 mLSource Sample Name: CMW-3-021918

% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/L)	C	DUPLICATE CONCENTRATION (ug/L)	C	RPD %	Q
Arsenic-75a (dissolved)	20	168	D	167	D	0.685	

*: 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

INSTRUMENT BLANKS

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.

SDG: 18B0269

Client: Anchor QEA, LLC

Project: Port of Tacoma- Wasser Winter GW M

Instrument ID: ICPMS2

Calibration: BC00006

Sequence: SGC0027

Date Analyzed: 03/02/18 10:13

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SGC0027-IBL1	Arsenic-75a (dissolved)	0.00600	0.022	0.200	ug/L	
SGC0027-ICB1	Arsenic-75a (dissolved)	-0.00100	0.022	0.200	ug/L	
SGC0027-CCB1	Arsenic-75a (dissolved)	0.00600	0.022	0.200	ug/L	
SGC0027-IBL2	Arsenic-75a (dissolved)	0.00400	0.022	0.200	ug/L	
SGC0027-CCB2	Arsenic-75a (dissolved)	0.00	0.022	0.200	ug/L	
SGC0027-CCB3	Arsenic-75a (dissolved)	-0.00300	0.022	0.200	ug/L	
SGC0027-CCB4	Arsenic-75a (dissolved)	-0.00600	0.022	0.200	ug/L	
SGC0027-CCB5	Arsenic-75a (dissolved)	-0.0100	0.022	0.200	ug/L	
SGC0027-CCB6	Arsenic-75a (dissolved)	0.00400	0.022	0.200	ug/L	
SGC0027-CCB7	Arsenic-75a (dissolved)	-0.00400	0.022	0.200	ug/L	
SGC0027-CCB8	Arsenic-75a (dissolved)	-0.00400	0.022	0.200	ug/L	



LCS / LCS DUPLICATE RECOVERY

EPA 200.8 UCT-KED

Dissolved Metals

Laboratory: Analytical Resources, Inc. SDG: 18B0269
Client: Anchor QEA, LLC Project: Port of Tacoma- Wasser Winter GW Monitoring
Matrix: Water Analyzed: 03/02/18 12:02
Batch: BGB0642 Laboratory ID: BGB0642-BS1
Preparation: REN EPA 600/4-79-020 4.1.4 HNO3 matrix Sequence Name: LCS
Initial/Final: 25 mL / 25 mL

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	Q	LCS % REC. #	QC LIMITS REC.
Arsenic-75a (dissolved)	25.0	25.3		101	80 - 120

* Indicates values outside of QC limits



MS / MS DUPLICATE RECOVERY
EPA 200.8 UCT-KED
Dissolved Metals

Laboratory: Analytical Resources, Inc. SDG: 18B0269
Client: Anchor QEA, LLC Project: Port of Tacoma- Wasser Winter GW Monitoring
Matrix: Water Analyzed: 03/02/18 12:46
Batch: BGB0642 Laboratory ID: BGB0642-MS1
Preparation: REN EPA 600/4-79-020 4.1.4 HNO3 matrix Sequence Name: Matrix Spike
Initial/Final: 25 mL / 25 mL Source Sample: CMW-3-021918

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	Q	MS % REC. #	QC LIMITS REC.
Arsenic-75a (dissolved)	25.0	168	194	D	102	75 - 125

* Values outside of QC limits



INITIAL CALIBRATION DATA

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.

SDG: 18B0269

Client: Anchor QEA, LLC

Project: Port of Tacoma- Wasser Winter GW Monitorin

Calibration: BC00006

Instrument: ICPMS2

Calibration Date: 03/02/2018 9:41

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Arsenic-75a, Dissolved	0	0	0.2	225	10	226.3	20	225	50	221.72	100	214.26



INITIAL CALIBRATION DATA

EPA 200.8 UCT-KED

Laboratory:	Analytical Resources, Inc.	SDG:	18B0269
Client:	Anchor QEA, LLC	Project:	Port of Tacoma- Wasser Winter GW Monitorin
Calibration:	BC00006	Instrument:	ICPMS2
Calibration Date:	03/02/2018 9:41		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Arsenic-75a, Dissolved	185.38	49.0	0.9997		0.998	



Analytical Resources,
Incorporated
Analytical Chemists and
Consultants

ICP/MS SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 3-2-18

Analyst: MT

Sequence: SGC0027

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CAL1	G1742		
		-CAL2	G1816		
		-CAL3	G1817		
		-CAL4	G1818		
		-CAL5	G1743		
		-CAL6	G1819		
		-ISL1	—		
		-ICV1	F12024		
		-ICB1	G1742		
		-CCV1	G1743		
		-CCB1	G1742		
		-CRL1	G1816		
		-IFA1	G1820		CSS↑
		-IFB1	G1821		
		-HCV1	G1641		
		-HCV2	G1767		
		-ISL2			
		-CCV2			
		↓ -CCB2			
		BG180642-BLK1	ZEN		
		BG180032-BLK1	↓		
		18C0009-01			
		18C0027-01			
		18B0269-02	↓	20	



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ICP/MS SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 3-2-18 Analyst: YH Sequence: —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		BGIC0032-DUP1	ZEN		
		18C0008-01	↓		
		BGIC0032-MS1	↓		
		↓ -BS1	↓		
		BGIB0642-BS1	↓		
		SEQ-CCV3			
		↓ -CC33			
		18B0352-03	ZEN	50	Mn, Zn only
		↓ -05	↓	↓	Mn only
		↓ -07	↓	↓	↓
		18B0353-01		20	Cu, Mn, Zn only
		BGIB0642-DUP1		5	
		18B0264-01		↓	
		BGIB0642-MS1		↓	As STL
		BGIB0666-DUP2		20	Mn, Cu, Zn only
		18B0352-01	↓	↓	↓
		BGIB0666-MS2	↓	↓	Mn, Cu, Zn STL
		SEQ-CCV4			
		↓ -CC34			
		18B0353-03	ZEN	50	Mn, Zn only
		↓ -05	↓	↓	Mn only
		↓ -07	↓	↓	↓
		↓ -09	↓	20	Mn, Cu, Zn only
		↓ -11	↓	50	Mn, Zn only



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ICP/MS SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 3-2-18

Analyst: YH

Sequence: —

All corrections made by analyst unless otherwise noted. YH 3-2-18

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		1830353-13	ZEN	50	Mn only
		↓ -15	↓	↓	↓
		1830366-03	↓	↓	Mn, Zn only
		↓ -05	↓	↓	Mn only
		↓ -07	↓	↓	↓
		SEQ-CCVS			
		↓ -CCBS			
		18C0002-01	ZEN		
		↓ -02	↓		
		1830369-03		50	Mn, Zn only
		↓ -05		↓	Mn only
		↓ -07		↓	↓
		↓ -09		20	Mn, Zn only
		↓ -11		50	Mn, Zn only
		↓ -13		↓	Mn only
		↓ -15	↓	↓	↓
		1830373-07	↓	100	Zn only
		SEQ-CCV6			
		↓ -CCB6			
		18C0002-03	ZEN		
		↓ -04	↓		
		18C0010-01			
		↓ -02			Zn 70% W Zn
		↓ -04	↓	5	



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ICP/MS SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 3-2-18 Analyst: TLH Sequence: —

All corrections made by analyst unless otherwise noted. TLH 3-2-18

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		18CW10-06	ZEN		
		↓ -07	↓	5	
		-08			Zn 7901.02 No Zn
✓		-09			High salt All Int. STDs low
		↓ -10	↓		Zn 7901.02 No Zn
		SEQ-CCV7			Cr ⁵³ ↑
		↓ -CCB7			Cr ⁵³ ↑ C.O.
		18C0010-11	ZEN		
		18C0013-01	↓		Enter No Zn
		↓ -03	↓		Zn 7901.02 No Zn
		-05			↓ ↓
		↓ -07	↓		
		18B0375-01		10	Zn only
		18B0371-01	↓	5	Cu, Ni, Pb only
		SEQ-CCV8			Cd ^{111,114} ↑ Int. noisy
		↓ -CCB8			Cr ⁵³ ↑ C.O.
		Zn 7901.02			
TLH 3-2-18					

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 3/2/2018 8:57:29 AM

End Time: 3/2/2018 8:59:35 AM

STD Performance Check - [Passed] Optimum value(s): N/A

Obtained Intensity (Be 9): 6341.87

Obtained Intensity (In 115): 55741.14

Obtained Intensity (U 238): 34329.27

Obtained Intensity (Bkgd 220): 0.30

Obtained Formula (Ce++ 70 / Ce 140): 0.028 (=1818.52 / 64819.15)

Obtained Formula (CeO 156 / Ce 140): 0.019 (=1208.98 / 64819.15)

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\wizard\SmartTune\ARIdaily_UCT.swz

Optimization Status

Start Time: 3/2/2018 8:57:29 AM

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 <= 1
Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
Formula Criterion: CeO 156 / Ce 140 <= 0.025

Optimization Results:

Initial Try

Obtained Intensity (Be 9): 6341.87
Obtained Intensity (In 115): 55741.14
Obtained Intensity (U 238): 34329.27
Obtained Intensity (Bkgd 220): 0.30
Obtained Formula (Ce++ 70 / Ce 140): 0.028 (=1818.52 / 64819.15)
Obtained Formula (CeO 156 / Ce 140): 0.019 (=1208.98 / 64819.15)

[Passed] Optimum value(s): N/A

End Time: 3/2/2018 8:59:35 AM

Performance Check Report

Sample ID: STD Performance Check

Sample Date/Time: Friday, March 02, 2018 08:57:31

Sample Description:

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\STD Performance Check.mth

Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\DataSet\Default\STD Performance Check.14402

MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\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		6341.9		6341.874	67.336	1.1	Standard
In	114.9		55741.1		-592236.035	322.266	0.1	Standard
U	238.1		34329.3		34329.266	198.232	0.6	Standard
[CeO	155.9		1209.0		0.019	0.001	3.5	Standard
> Ce	139.9		64819.1		64819.149	1013.682	1.6	Standard
[Ce++	70.0		1818.5		0.028	0.001	2.7	Standard
Bkgd	220.0		0.3		0.300	0.274	91.3	Standard

Current Conditions File Data

Current Value	Description
0.93	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1550.00	Analog Stage Voltage
1050.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-9.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-3.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
0.92	DRC Mode NEB
-10.00	DRC Mode QRO
-3.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-13.00	KED Mode CRO
-12.00	KED Mode QRO
-5.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
0.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 3/2/2018 8:59:46 AM

End Time: 3/2/2018 9:10:17 AM

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.96 mm	0.43 mm	63596.24

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 0.92

Obtained Intensity (In 115): 53374.52

Obtained Formula (CeO 156 / Ce 140): 0.0166 (=975.03 / 58562.79)

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 (0.7/0.706)

Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.699)

Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.690)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 0.989; Intercept = -11.59

KED Mode QID - Optimum value(s): Correlation Coefficient = 1.000; Intercept = -11.10

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\wizard\SmartTune\ARIdaily_UCT.swz

Optimization Status

Start Time: 3/2/2018 8:59:46 AM

Torch Alignment

Optimization Settings:

Method: Torch Alignment.mth.

Intensity Criterion: In 115 Maximum

Optimization Results:

	Vertical	Horizontal	Intensity
[Passed]	0.96 mm	0.43 mm	63596.24

Nebulizer Gas Flow STD/KED [NEB]

Optimization Settings:

Method: Optimize.mth.

Initial Try - Start/End/Step: 0.8/1.2/0.02.

Intensity Criterion: In 115 Maximum

Formula Criterion: CeO 156 / Ce 140 <= 0.025

Optimization Results:

Initial Try

Obtained Intensity (In 115): 53374.52

Obtained Formula (CeO 156 / Ce 140): 0.0166 (=975.03 / 58562.79)

[Passed] Optimum value(s): 0.92

Mass Calibration and Resolution

Optimization Settings:

Method: Tuning.mth.

MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\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 (0.7/0.693)

Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.717)

Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.700)

Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.647) - <Target not achieved>

[Failed]

Retry 1

Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.704)

Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.706)

Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.699)

Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.690)

[Passed] Optimum value(s): N/A

QID STD/DRC

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -16/0/0.5.

Optimization Results:
Initial Try

Optimum value(s): Correlation Coefficient = 0.989; Intercept = -11.59

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	33	-11.5	27286
Mg	24	33	-11.5	35600.3
In	115	33	-7.5	53720.8
Ce	140	33	-7.5	67121.3
Pb	208	33	-6	24184.5
U	238	33	-6	37276.6

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 = 1.000; Intercept = -11.10

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-11	20803.1
Mg	24	41	-10.5	20871.2
In	115	41	-7.5	41728.9
Ce	140	41	-7	40830.3
Pb	208	41	-5.5	15840.8
U	238	41	-3	41913.4

End Time: 3/2/2018 9:10:17 AM

Performance Check Report

Sample ID: STD Performance Check

Sample Date/Time: Friday, March 02, 2018 09:11:25

Sample Description:

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\STD Performance Check.mth

Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\DataSet\Default\STD Performance Check.14410

MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\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		6878.1	6878.122		80.851	1.2	Standard
In	114.9		53764.5	53764.515		88.155	0.2	Standard
U	238.1		38607.3	38607.303		445.580	1.2	Standard
[	CeO	155.9	1206.9	0.018		0.000	2.6	Standard
>	Ce	139.9	66470.0	66470.025		641.965	1.0	Standard
[	Ce++	70.0	1370.4	0.021		0.001	3.1	Standard
	Bkgd	220.0	0.3	0.267		0.253	94.8	Standard

Current Conditions File Data

Current Value	Description
0.92	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1550.00	Analog Stage Voltage
1050.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-9.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-3.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
0.92	DRC Mode NEB
-10.00	DRC Mode QRO
-3.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-13.00	KED Mode CRO
-12.00	KED Mode QRO
-5.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
0.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 3/2/2018 9:10:24 AM

End Time: 3/2/2018 9:13:30 AM

QID STD/DRC - Optimum value(s): Correlation Coefficient = 0.998; Intercept = -11.44

STD Performance Check - [Passed] Optimum value(s): N/A

Obtained Intensity (Be 9): 6878.12

Obtained Intensity (In 115): 53764.52

Obtained Intensity (U 238): 38607.30

Obtained Intensity (Bkgd 220): 0.27

Obtained Formula (Ce++ 70 / Ce 140): 0.021 (=1370.40 / 66470.03)

Obtained Formula (CeO 156 / Ce 140): 0.018 (=1206.92 / 66470.03)

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\wizard\SmartTune\ARIdaily_UCT.swz

Optimization Status

Start Time: 3/2/2018 9:10:24 AM

QID STD/DRC

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -16/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.998; Intercept = -11.44

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	33	-11.5	23094.7
Mg	24	33	-11.5	33170.5
In	115	33	-7.5	54740.7
Ce	140	33	-7	67406.7
Pb	208	33	-6	23611.5
U	238	33	-6	38965.1

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): 6878.12

Obtained Intensity (In 115): 53764.52

Obtained Intensity (U 238): 38607.30

Obtained Intensity (Bkgd 220): 0.27

Obtained Formula (Ce++ 70 / Ce 140): 0.021 (=1370.40 / 66470.03)

Obtained Formula (CeO 156 / Ce 140): 0.018 (=1206.92 / 66470.03)

[Passed] Optimum value(s): N/A

End Time: 3/2/2018 9:13:30 AM

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 09:41:15

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\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				28021	1	Standard
	Cl	37		ug/L				5159981	1	Standard
[>	Sc	45		ug/L				985565	0	Standard
	Cr	52		ug/L				12119	1	Standard
	Cr	53		ug/L				120	10	Standard
	Mn	55		ug/L				3334	1	Standard
[>	Ge-1	72		ug/L				55956	1	KED
	Ni	60		ug/L				133	4	KED
	Ni	62		ug/L				19	36	KED
	Cu	63		ug/L				29	22	KED
	Cu	65		ug/L				11	16	KED
	Zn	66		ug/L				50	5	KED
	Zn	67		ug/L				14	41	KED
	As	75		ug/L				4	19	KED
	Y	89		ug/L				510934	2	Standard
	Kr	83		ug/L				56	1	Standard
[>	In-1	115		ug/L				24217	10	KED
	Cd	111		ug/L				1	86	KED
	Cd	114		ug/L				1	90	KED
[>	Tb	159		ug/L				1029135	3	Standard
	Pb	208		ug/L				172	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL2

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 09:45:39

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\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			28021	27394	1	Standard
	Cl	37			ug/L			5159981	5150917	2	Standard
[>	Sc	45			ug/L			985565	1004544	1	Standard
	Cr	52	0.500		ug/L	0.029	5	12119	20772	0	Standard
	Cr	53	0.500		ug/L	0.003	0	120	1144	1	Standard
	Mn	55	0.500		ug/L	0.021	4	3334	15247	1	Standard
[>	Ge-1	72			ug/L			55956	55491	3	KED
	Ni	60	0.500		ug/L	0.006	1	133	619	3	KED
	Ni	62	0.500		ug/L	0.119	23	19	103	15	KED
	Cu	63	0.500		ug/L	0.036	7	29	1402	4	KED
	Cu	65	0.500		ug/L	0.015	3	11	671	5	KED
	Zn	66	4.000		ug/L	0.265	6	50	1661	2	KED
	Zn	67	4.000		ug/L	0.376	9	14	260	5	KED
	As	75	0.200		ug/L	0.036	17	4	45	14	KED
	Y	89			ug/L			510934	516729	3	Standard
	Kr	83			ug/L			56	50	39	Standard
[>	In-1	115			ug/L			24217	24225	2	KED
	Cd	111	0.100		ug/L	0.029	29	1	33	29	KED
	Cd	114	0.100		ug/L	0.025	24	1	76	23	KED
[>	Tb	159			ug/L			1029135	1048296	2	Standard
	Pb	208	0.100		ug/L	0.006	5	172	3558	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL3

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 09:50:03

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\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			28021	28837	3	Standard
Cl	37			ug/L			5159981	5062342	0	Standard
[> Sc	45			ug/L			985565	1000882	4	Standard
Cr	52	10.000		ug/L	0.502	5	12119	179465	2	Standard
Cr	53	9.999		ug/L	0.606	6	120	19454	1	Standard
Mn	55	10.000		ug/L	0.588	5	3334	238074	1	Standard
[> Ge-1	72			ug/L			55956	56064	1	KED
Ni	60	10.000		ug/L	0.262	2	133	9851	1	KED
Ni	62	9.998		ug/L	0.063	0	19	1620	1	KED
Cu	63	9.999		ug/L	0.157	1	29	26286	1	KED
Cu	65	9.999		ug/L	0.409	4	11	12744	3	KED
Zn	66	9.894		ug/L	0.565	5	50	3830	4	KED
Zn	67	9.990		ug/L	1.324	13	14	633	12	KED
[As	75	10.000		ug/L	0.102	1	4	2263	1	KED
Y	89			ug/L			510934	518206	4	Standard
Kr	83			ug/L			56	50	4	Standard
[> In-1	115			ug/L			24217	24874	1	KED
Cd	111	10.000		ug/L	0.054	0	1	3022	1	KED
[Cd	114	10.000		ug/L	0.401	4	1	7663	2	KED
[> Tb	159			ug/L			1029135	1036517	3	Standard
[Pb	208	10.000		ug/L	0.474	4	172	304037	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL4

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 09:54:41

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\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			28021	27870	4	Standard
	Cl 37		ug/L			5159981	5027048	2	Standard
[>	Sc 45		ug/L			985565	975800	0	Standard
	Cr 52	20.211	ug/L	0.287	1	12119	356189	1	Standard
	Cr 53	20.251	ug/L	0.346	1	120	40379	2	Standard
	Mn 55	20.075	ug/L	0.681	3	3334	470300	2	Standard
[>	Ge-1 72		ug/L			55956	56234	0	KED
	Ni 60	20.057	ug/L	0.084	0	133	19910	0	KED
	Ni 62	19.834	ug/L	1.229	6	19	3102	5	KED
	Cu 63	19.921	ug/L	0.615	3	29	51692	2	KED
	Cu 65	19.984	ug/L	0.511	2	11	25458	2	KED
	Zn 66	19.773	ug/L	0.667	3	50	7347	3	KED
	Zn 67	19.841	ug/L	1.196	6	14	1215	6	KED
	As 75	19.969	ug/L	0.099	0	4	4500	1	KED
	Y 89		ug/L			510934	492072	3	Standard
	Kr 83		ug/L			56	56	23	Standard
[>	In-1 115		ug/L			24217	23489	0	KED
	Cd 111	20.245	ug/L	0.204	1	1	6073	0	KED
	Cd 114	20.316	ug/L	0.091	0	1	15696	0	KED
[>	Tb 159		ug/L			1029135	1012277	4	Standard
	Pb 208	20.246	ug/L	1.193	5	172	631553	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL5

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 09:59:29

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\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			28021	26709	2	Standard
	Cl	37			ug/L			5159981	5107982	0	Standard
[>	Sc	45			ug/L			985565	964148	2	Standard
	Cr	52	49.848		ug/L	2.333	4	12119	837544	2	Standard
	Cr	53	49.606		ug/L	0.964	1	120	93832	0	Standard
	Mn	55	49.864		ug/L	1.014	2	3334	1133809	0	Standard
[>	Ge-1	72			ug/L			55956	54467	1	KED
	Ni	60	49.884		ug/L	0.918	1	133	47220	1	KED
	Ni	62	49.728		ug/L	0.790	1	19	7309	1	KED
	Cu	63	50.128		ug/L	1.535	3	29	127552	1	KED
	Cu	65	49.968		ug/L	0.142	0	11	61447	1	KED
	Zn	66	49.831		ug/L	0.403	0	50	17572	1	KED
	Zn	67	49.781		ug/L	0.685	1	14	2872	0	KED
	As	75	50.134		ug/L	0.380	0	4	11086	0	KED
	Y	89			ug/L			510934	499721	1	Standard
	Kr	83			ug/L			56	58	11	Standard
[>	In-1	115			ug/L			24217	23591	1	KED
	Cd	111	49.846		ug/L	1.182	2	1	14786	0	KED
	Cd	114	49.713		ug/L	0.778	1	1	37495	0	KED
[>	Tb	159			ug/L			1029135	1024617	0	Standard
	Pb	208	49.676		ug/L	0.561	1	172	1521764	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL6

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 10:05:57

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\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			28021	27157	2	Standard
Cl	37			ug/L			5159981	5049896	0	Standard
[> Sc	45			ug/L			985565	939873	2	Standard
Cr	52	98.756		ug/L	3.757	3	12119	1542743	1	Standard
Cr	53	99.632		ug/L	3.182	3	120	181343	1	Standard
Mn	55	99.175		ug/L	2.019	2	3334	2136414	0	Standard
[> Ge-1	72			ug/L			55956	53875	1	KED
Ni	60	99.365		ug/L	3.063	3	133	90975	2	KED
Ni	62	99.865		ug/L	2.521	2	19	14438	3	KED
Cu	63	98.701		ug/L	3.281	3	29	238085	2	KED
Cu	65	99.340		ug/L	1.773	1	11	118211	0	KED
Zn	66	99.335		ug/L	3.161	3	50	33848	2	KED
Zn	67	99.255		ug/L	1.291	1	14	5514	1	KED
[As	75	99.526		ug/L	0.721	0	4	21426	0	KED
Y	89			ug/L			510934	505268	3	Standard
Kr	83			ug/L			56	66	12	Standard
[> In-1	115			ug/L			24217	22806	2	KED
Cd	111	100.135		ug/L	2.429	2	1	28839	0	KED
[Cd	114	100.527		ug/L	2.948	2	1	74581	0	KED
[> Tb	159			ug/L			1029135	1002713	3	Standard
[Pb	208	98.722		ug/L	2.661	2	172	2837363	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL1

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 10:13:05

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\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			28021	24975	3	Standard
	Cl	37			ug/L			5159981	4942718	2	Standard
[>	Sc	45			ug/L			985565	959327	2	Standard
	Cr	52	0.028		ug/L	0.021	75	12119	12238	2	Standard
	Cr	53	0.006		ug/L	0.001	11	120	127	1	Standard
	Mn	55	-0.049		ug/L	0.005	9	3334	2174	2	Standard
[>	Ge-1	72			ug/L			55956	56234	0	KED
	Ni	60	-0.025		ug/L	0.011	42	133	110	9	KED
	Ni	62	-0.047		ug/L	0.038	81	19	12	48	KED
	Cu	63	0.004		ug/L	0.002	46	29	39	12	KED
	Cu	65	0.005		ug/L	0.002	33	11	17	11	KED
	Zn	66	0.053		ug/L	0.018	34	50	69	9	KED
	Zn	67	-0.100		ug/L	0.050	49	14	8	32	KED
	As	75	0.006		ug/L	0.005	94	4	5	21	KED
	Y	89			ug/L			510934	477426	0	Standard
	Kr	83			ug/L			56	75	12	Standard
[>	In-1	115			ug/L			24217	23648	0	KED
	Cd	111	0.004		ug/L	0.004	83	1	2	43	KED
	Cd	114	0.002		ug/L	0.002	91	1	2	48	KED
[>	Tb	159			ug/L			1029135	1001297	2	Standard
	Pb	208	0.000		ug/L	0.001	252	172	174	11	Standard

Sample Information

Sample Date/Time: Friday, March 02, 2018 10:05:57

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT

Mass Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.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	0.9997	0.017	0.50	10	20	50	100
Cr	53	0.9999	0.002	0.50	10	20	50	100
Mn	55	0.9999	0.023	0.50	10	20	50	100
Ge-1	72							
Ni	60	0.9999	0.017	0.50	10	20	50	100
Ni	62	1.0000	0.003	0.50	10	20	50	100
Cu	63	0.9997	0.045	0.50	10	20	50	100
Cu	65	0.9999	0.022	0.50	10	20	50	100
Zn	66	0.9999	0.006	4.00	10	20	50	100
Zn	67	0.9999	0.001	4.00	10	20	50	100
As	75	1.0000	0.004	0.20	10	20	50	100
Y	89							
Kr	83							
In-1	115							
Cd	111	1.0000	0.013	0.10	10	20	50	100
Cd	114	0.9999	0.033	0.10	10	20	50	100
Tb	159							
Pb	208	0.9997	0.029	0.10	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICV1

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 10:20:14

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	28996	0	Standard
	Cl	37			ug/L			5159981	5064573	3	Standard
[>	Sc	45			ug/L			985565	972197	4	Standard
	Cr	52	51.312		ug/L	4.028	7	12119	833578	3	Standard
	Cr	53	51.764		ug/L	1.947	3	120	97455	0	Standard
	Mn	55	52.031		ug/L	2.489	4	3334	1159770	0	Standard
[>	Ge-1	72			ug/L			55956	57085	1	KED
	Ni	60	49.355		ug/L	2.235	4	133	47931	2	KED
	Ni	62	50.263		ug/L	2.634	5	19	7704	3	KED
	Cu	63	50.338		ug/L	0.874	1	29	128692	1	KED
	Cu	65	51.258		ug/L	1.852	3	11	64613	1	KED
	Zn	66	49.211		ug/L	1.971	4	50	17788	2	KED
	Zn	67	49.858		ug/L	1.056	2	14	2941	0	KED
	As	75	48.209		ug/L	2.025	4	4	10994	2	KED
	Y	89			ug/L			510934	523559	4	Standard
	Kr	83			ug/L			56	59	7	Standard
[>	In-1	115			ug/L			24217	23667	1	KED
	Cd	111	51.403		ug/L	0.996	1	1	15368	1	KED
	Cd	114	50.628		ug/L	0.159	0	1	38997	0	KED
[>	Tb	159			ug/L			1029135	1034505	2	Standard
	Pb	208	53.085		ug/L	2.751	5	172	1573328	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICB1

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 10:27:21

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	25025	2	Standard
	Cl	37			ug/L			5159981	4888071	1	Standard
[>	Sc	45			ug/L			985565	961028	1	Standard
	Cr	52	0.021		ug/L	0.026	122	12119	12149	2	Standard
	Cr	53	0.003		ug/L	0.004	109	120	123	6	Standard
	Mn	55	-0.080		ug/L	0.002	1	3334	1491	3	Standard
[>	Ge-1	72			ug/L			55956	56206	0	KED
	Ni	60	-0.070		ug/L	0.018	26	133	67	25	KED
	Ni	62	-0.043		ug/L	0.037	85	19	12	43	KED
	Cu	63	0.001		ug/L	0.006	602	29	31	45	KED
	Cu	65	0.005		ug/L	0.002	34	11	17	11	KED
	Zn	66	0.028		ug/L	0.036	127	50	60	21	KED
	Zn	67	-0.111		ug/L	0.038	34	14	8	26	KED
	As	75	-0.001		ug/L	0.005	328	4	3	27	KED
	Y	89			ug/L			510934	487610	5	Standard
	Kr	83			ug/L			56	55	29	Standard
[>	In-1	115			ug/L			24217	23957	1	KED
	Cd	111	0.006		ug/L	0.002	30	1	3	17	KED
	Cd	114	0.006		ug/L	0.002	43	1	5	33	KED
[>	Tb	159			ug/L			1029135	1016983	2	Standard
	Pb	208	0.000		ug/L	0.001	128	172	184	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV1

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 10:31:39

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	25587	2	Standard
	Cl	37			ug/L			5159981	5056371	0	Standard
[>	Sc	45			ug/L			985565	950637	3	Standard
	Cr	52	50.362		ug/L	1.047	2	12119	801636	1	Standard
	Cr	53	50.995		ug/L	2.200	4	120	93897	1	Standard
	Mn	55	50.849		ug/L	1.665	3	3334	1109353	2	Standard
[>	Ge-1	72			ug/L			55956	55585	2	KED
	Ni	60	50.665		ug/L	1.432	2	133	47914	1	KED
	Ni	62	50.399		ug/L	0.879	1	19	7525	1	KED
	Cu	63	51.036		ug/L	0.596	1	29	127036	1	KED
	Cu	65	50.723		ug/L	1.706	3	11	62254	1	KED
	Zn	66	50.399		ug/L	1.668	3	50	17737	1	KED
	Zn	67	53.594		ug/L	1.357	2	14	3077	0	KED
	As	75	50.683		ug/L	1.399	2	4	11255	0	KED
	Y	89			ug/L			510934	498606	0	Standard
	Kr	83			ug/L			56	56	23	Standard
[>	In-1	115			ug/L			24217	24292	0	KED
	Cd	111	48.427		ug/L	0.302	0	1	14862	0	KED
	Cd	114	47.928		ug/L	0.985	2	1	37891	1	KED
[>	Tb	159			ug/L			1029135	1019941	2	Standard
	Pb	208	51.528		ug/L	1.293	2	172	1506601	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB1

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 10:38:24

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	25837	4	Standard
	Cl	37			ug/L			5159981	4966631	2	Standard
[>	Sc	45			ug/L			985565	955711	1	Standard
	Cr	52	-0.006		ug/L	0.028	503	12119	11661	2	Standard
	Cr	53	-0.002		ug/L	0.005	233	120	113	7	Standard
	Mn	55	-0.061		ug/L	0.004	6	3334	1908	3	Standard
[>	Ge-1	72			ug/L			55956	57699	1	KED
	Ni	60	-0.050		ug/L	0.004	7	133	88	5	KED
	Ni	62	0.016		ug/L	0.055	337	19	22	39	KED
	Cu	63	0.001		ug/L	0.005	416	29	33	36	KED
	Cu	65	0.001		ug/L	0.002	255	11	12	17	KED
	Zn	66	0.013		ug/L	0.024	182	50	56	15	KED
	Zn	67	-0.115		ug/L	0.048	41	14	8	35	KED
	As	75	0.006		ug/L	0.007	129	4	5	30	KED
	Y	89			ug/L			510934	513407	0	Standard
	Kr	83			ug/L			56	43	33	Standard
[>	In-1	115			ug/L			24217	24733	4	KED
	Cd	111	0.003		ug/L	0.007	237	1	2	98	KED
	Cd	114	0.009		ug/L	0.008	92	1	8	75	KED
[>	Tb	159			ug/L			1029135	999983	2	Standard
	Pb	208	0.001		ug/L	0.001	96	172	189	12	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CRL1

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 10:42:47

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	25572	2	Standard
	Cl	37			ug/L			5159981	4891409	1	Standard
[>	Sc	45			ug/L			985565	978483	1	Standard
	Cr	52	0.498		ug/L	0.013	2	12119	20076	0	Standard
	Cr	53	0.504		ug/L	0.016	3	120	1074	2	Standard
	Mn	55	0.446		ug/L	0.011	2	3334	13297	2	Standard
[>	Ge-1	72			ug/L			55956	56994	1	KED
	Ni	60	0.467		ug/L	0.046	9	133	587	6	KED
	Ni	62	0.509		ug/L	0.031	6	19	97	3	KED
	Cu	63	0.540		ug/L	0.025	4	29	1407	5	KED
	Cu	65	0.524		ug/L	0.060	11	11	671	10	KED
	Zn	66	4.398		ug/L	0.219	4	50	1633	3	KED
	Zn	67	3.700		ug/L	0.328	8	14	231	8	KED
	As	75	0.183		ug/L	0.035	19	4	46	16	KED
	Y	89			ug/L			510934	529788	5	Standard
	Kr	83			ug/L			56	62	22	Standard
[>	In-1	115			ug/L			24217	24771	2	KED
	Cd	111	0.100		ug/L	0.027	26	1	32	23	KED
	Cd	114	0.097		ug/L	0.027	28	1	79	28	KED
[>	Tb	159			ug/L			1029135	1045121	2	Standard
	Pb	208	0.113		ug/L	0.004	3	172	3558	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFA1

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 10:47:09

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	112113	4	Standard
	Cl	37			ug/L			5159981	11193939	6	Standard
[>	Sc	45			ug/L			985565	1006037	2	Standard
	Cr	52	0.535		ug/L	0.026	4	12119	21245	2	Standard
	Cr	53	2.672		ug/L	0.135	5	120	5323	2	Standard
	Mn	55	0.039		ug/L	0.010	25	3334	4286	2	Standard
[>	Ge-1	72			ug/L			55956	53600	0	KED
	Ni	60	0.005		ug/L	0.011	220	133	132	7	KED
	Ni	62	0.076		ug/L	0.076	99	19	29	37	KED
	Cu	63	0.061		ug/L	0.002	3	29	175	3	KED
	Cu	65	0.073		ug/L	0.013	17	11	97	16	KED
	Zn	66	0.571		ug/L	0.072	12	50	241	10	KED
	Zn	67	0.472		ug/L	0.249	52	14	40	34	KED
	As	75	0.033		ug/L	0.017	50	4	11	32	KED
	Y	89			ug/L			510934	498227	2	Standard
	Kr	83			ug/L			56	170	12	Standard
[>	In-1	115			ug/L			24217	23345	0	KED
	Cd	111	0.080		ug/L	0.019	23	1	24	21	KED
	Cd	114	0.055		ug/L	0.006	11	1	43	11	KED
[>	Tb	159			ug/L			1029135	1038425	1	Standard
	Pb	208	0.041		ug/L	0.002	4	172	1382	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFB1

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 10:51:33

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	121914	0	Standard
	Cl	37		ug/L			5159981	11520280	2	Standard
[>	Sc	45		ug/L			985565	1003653	2	Standard
	Cr	52	20.419	ug/L	0.693	3	12119	350447	0	Standard
	Cr	53	22.878	ug/L	0.936	4	120	44555	2	Standard
	Mn	55	20.287	ug/L	0.682	3	3334	469287	0	Standard
[>	Ge-1	72		ug/L			55956	53202	0	KED
	Ni	60	19.844	ug/L	0.463	2	133	18045	1	KED
	Ni	62	20.561	ug/L	0.531	2	19	2949	2	KED
	Cu	63	19.087	ug/L	0.158	0	29	45498	1	KED
	Cu	65	18.949	ug/L	0.287	1	11	22276	1	KED
	Zn	66	21.606	ug/L	0.616	2	50	7308	2	KED
	Zn	67	19.063	ug/L	0.362	1	14	1057	2	KED
	As	75	19.792	ug/L	0.260	1	4	4210	0	KED
	Y	89		ug/L			510934	497860	3	Standard
	Kr	83		ug/L			56	160	8	Standard
[>	In-1	115		ug/L			24217	22957	1	KED
	Cd	111	19.636	ug/L	0.311	1	1	5695	0	KED
	Cd	114	19.804	ug/L	0.271	1	1	14798	1	KED
[>	Tb	159		ug/L			1029135	996879	0	Standard
	Pb	208	0.090	ug/L	0.002	2	172	2728	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV1

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 10:55:56

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	28879	1	Standard
	Cl	37			ug/L			5159981	5067349	0	Standard
[>	Sc	45			ug/L			985565	921525	1	Standard
	Cr	52	199.269		ug/L	8.903	4	12119	3041008	2	Standard
	Cr	53	204.968		ug/L	4.942	2	120	365846	3	Standard
	Mn	55	197.853		ug/L	5.492	2	3334	4176366	2	Standard
[>	Ge-1	72			ug/L			55956	50941	2	KED
	Ni	60	200.185		ug/L	7.528	3	133	173135	2	KED
	Ni	62	198.877		ug/L	5.230	2	19	27157	0	KED
	Cu	63	194.818		ug/L	4.527	2	29	444266	0	KED
	Cu	65	194.354		ug/L	1.748	0	11	218666	1	KED
	Zn	66	194.818		ug/L	6.463	3	50	62708	1	KED
	Zn	67	194.440		ug/L	5.803	2	14	10197	0	KED
	As	75	198.179		ug/L	5.350	2	4	40325	1	KED
	Y	89			ug/L			510934	473888	0	Standard
	Kr	83			ug/L			56	125	3	Standard
[>	In-1	115			ug/L			24217	22175	0	KED
	Cd	111	191.621		ug/L	1.156	0	1	53681	0	KED
	Cd	114	191.994		ug/L	1.844	0	1	138565	0	KED
[>	Tb	159			ug/L			1029135	983271	1	Standard
	Pb	208	204.935		ug/L	1.482	0	172	5777657	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV2

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 11:00:20

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	27423	5	Standard
	Cl	37			ug/L			5159981	4960243	1	Standard
[>	Sc	45			ug/L			985565	892596	2	Standard
	Cr	52	293.638		ug/L	6.079	2	12119	4336372	1	Standard
	Cr	53	297.518		ug/L	9.796	3	120	514065	1	Standard
	Mn	55	289.875		ug/L	9.919	3	3334	5923711	1	Standard
[>	Ge-1	72			ug/L			55956	49912	1	KED
	Ni	60	296.658		ug/L	4.725	1	133	251411	0	KED
	Ni	62	305.116		ug/L	1.836	0	19	40829	1	KED
	Cu	63	287.880		ug/L	9.374	3	29	643328	2	KED
	Cu	65	292.007		ug/L	4.264	1	11	321900	0	KED
	Zn	66	290.149		ug/L	4.020	1	50	91517	0	KED
	Zn	67	287.612		ug/L	2.508	0	14	14779	1	KED
	As	75	301.828		ug/L	4.377	1	4	60189	0	KED
	Y	89			ug/L			510934	449426	2	Standard
	Kr	83			ug/L			56	187	5	Standard
[>	In-1	115			ug/L			24217	21594	1	KED
	Cd	111	289.092		ug/L	5.652	1	1	78848	0	KED
	Cd	114	286.889		ug/L	4.729	1	1	201593	0	KED
[>	Tb	159			ug/L			1029135	950502	1	Standard
	Pb	208	294.796		ug/L	12.157	4	172	8031432	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL2

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 11:07:28

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	31397	0	Standard
	Cl	37			ug/L			5159981	5068831	0	Standard
[>	Sc	45			ug/L			985565	973799	2	Standard
	Cr	52	0.033		ug/L	0.021	62	12119	12507	1	Standard
	Cr	53	0.072		ug/L	0.010	13	120	254	7	Standard
	Mn	55	-0.073		ug/L	0.001	1	3334	1656	2	Standard
[>	Ge-1	72			ug/L			55956	56924	2	KED
	Ni	60	-0.056		ug/L	0.012	21	133	82	13	KED
	Ni	62	-0.006		ug/L	0.012	187	19	18	11	KED
	Cu	63	0.026		ug/L	0.006	21	29	94	13	KED
	Cu	65	0.021		ug/L	0.006	27	11	38	17	KED
	Zn	66	0.175		ug/L	0.039	22	50	113	10	KED
	Zn	67	0.095		ug/L	0.139	146	14	20	39	KED
	As	75	0.004		ug/L	0.007	182	4	5	31	KED
	Y	89			ug/L			510934	488634	3	Standard
	Kr	83			ug/L			56	66	10	Standard
[>	In-1	115			ug/L			24217	24389	1	KED
	Cd	111	0.008		ug/L	0.008	101	1	3	66	KED
	Cd	114	0.002		ug/L	0.001	60	1	3	36	KED
[>	Tb	159			ug/L			1029135	1034681	1	Standard
	Pb	208	0.009		ug/L	0.001	8	172	434	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV2

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 11:11:51

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	26433	2	Standard
	Cl	37		ug/L			5159981	5128514	0	Standard
[>	Sc	45		ug/L			985565	973753	1	Standard
	Cr	52	48.729	ug/L	1.236	2	12119	795074	1	Standard
	Cr	53	49.490	ug/L	1.468	2	120	93412	2	Standard
	Mn	55	48.787	ug/L	1.111	2	3334	1090928	2	Standard
[>	Ge-1	72		ug/L			55956	56525	1	KED
	Ni	60	47.857	ug/L	2.183	4	133	46031	3	KED
	Ni	62	47.356	ug/L	1.746	3	19	7190	2	KED
	Cu	63	48.745	ug/L	1.545	3	29	123365	1	KED
	Cu	65	48.803	ug/L	1.218	2	11	60927	1	KED
	Zn	66	49.129	ug/L	1.837	3	50	17585	1	KED
	Zn	67	49.543	ug/L	0.905	1	14	2894	0	KED
	As	75	49.012	ug/L	1.077	2	4	11070	0	KED
	Y	89		ug/L			510934	506213	2	Standard
	Kr	83		ug/L			56	57	5	Standard
[>	In-1	115		ug/L			24217	24020	2	KED
	Cd	111	47.571	ug/L	0.740	1	1	14435	2	KED
	Cd	114	48.079	ug/L	0.993	2	1	37576	0	KED
[>	Tb	159		ug/L			1029135	1051062	1	Standard
	Pb	208	50.064	ug/L	0.490	0	172	1508826	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB2

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 11:19:00

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	24859	2	Standard
	Cl	37			ug/L			5159981	5015580	2	Standard
[>	Sc	45			ug/L			985565	934291	1	Standard
	Cr	52	0.002		ug/L	0.007	438	12119	11512	1	Standard
	Cr	53	0.031		ug/L	0.010	31	120	169	11	Standard
	Mn	55	-0.088		ug/L	0.002	2	3334	1274	3	Standard
[>	Ge-1	72			ug/L			55956	56802	0	KED
	Ni	60	-0.075		ug/L	0.011	14	133	63	17	KED
	Ni	62	-0.065		ug/L	0.025	38	19	9	40	KED
	Cu	63	0.003		ug/L	0.003	105	29	36	18	KED
	Cu	65	0.008		ug/L	0.011	141	11	21	66	KED
	Zn	66	-0.014		ug/L	0.042	291	50	45	33	KED
	Zn	67	-0.156		ug/L	0.032	20	14	5	33	KED
	As	75	0.000		ug/L	0.010	2187	4	4	48	KED
	Y	89			ug/L			510934	491342	1	Standard
	Kr	83			ug/L			56	40	9	Standard
[>	In-1	115			ug/L			24217	23904	2	KED
	Cd	111	0.005		ug/L	0.007	120	1	2	66	KED
	Cd	114	0.003		ug/L	0.003	75	1	3	51	KED
[>	Tb	159			ug/L			1029135	978809	2	Standard
	Pb	208	0.001		ug/L	0.000	27	172	193	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BGB0642-BLK1**

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 11:23:24

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	32371	2	Standard
	Cl	37		ug/L			5159981	4985581	2	Standard
[>	Sc	45		ug/L			985565	977184	1	Standard
	Cr	52	0.009	ug/L	0.022	228	12119	12167	2	Standard
	Cr	53	0.037	ug/L	0.010	26	120	189	9	Standard
	Mn	55	-0.035	ug/L	0.002	4	3334	2521	2	Standard
[>	Ge-1	72		ug/L			55956	56606	0	KED
	Ni	60	-0.058	ug/L	0.006	9	133	79	7	KED
	Ni	62	-0.060	ug/L	0.061	101	19	10	92	KED
	Cu	63	0.051	ug/L	0.006	12	29	158	10	KED
	Cu	65	0.052	ug/L	0.010	19	11	76	17	KED
	Zn	66	0.425	ug/L	0.100	23	50	202	17	KED
	Zn	67	0.281	ug/L	0.183	65	14	31	33	KED
	As	75	-0.002	ug/L	0.003	155	4	3	13	KED
	Y	89		ug/L			510934	505018	4	Standard
	Kr	83		ug/L			56	62	12	Standard
[>	In-1	115		ug/L			24217	24362	8	KED
	Cd	111	0.009	ug/L	0.004	46	1	4	26	KED
	Cd	114	0.003	ug/L	0.002	79	1	3	50	KED
[>	Tb	159		ug/L			1029135	1020954	2	Standard
	Pb	208	0.002	ug/L	0.001	31	172	219	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BGC0032-BLK1**

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 11:27:48

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	30103	3	Standard
	Cl	37		ug/L			5159981	5064875	1	Standard
[>	Sc	45		ug/L			985565	994209	2	Standard
	Cr	52	0.005	ug/L	0.020	376	12119	12308	0	Standard
	Cr	53	0.037	ug/L	0.011	28	120	192	12	Standard
	Mn	55	-0.053	ug/L	0.002	4	3334	2153	0	Standard
[>	Ge-1	72		ug/L			55956	58572	1	KED
	Ni	60	-0.002	ug/L	0.002	88	133	137	0	KED
	Ni	62	0.019	ug/L	0.014	74	19	22	8	KED
	Cu	63	0.063	ug/L	0.004	5	29	195	3	KED
	Cu	65	0.060	ug/L	0.004	6	11	89	5	KED
	Zn	66	0.663	ug/L	0.010	1	50	297	1	KED
	Zn	67	0.515	ug/L	0.093	18	14	46	13	KED
	As	75	-0.002	ug/L	0.004	203	4	3	24	KED
	Y	89		ug/L			510934	501819	1	Standard
	Kr	83		ug/L			56	57	10	Standard
[>	In-1	115		ug/L			24217	25123	2	KED
	Cd	111	0.001	ug/L	0.004	553	1	1	91	KED
	Cd	114	0.002	ug/L	0.005	182	1	3	113	KED
[>	Tb	159		ug/L			1029135	1001189	2	Standard
	Pb	208	0.016	ug/L	0.000	2	172	636	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18C0009-01

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 11:32:10

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			28021	36962	3	Standard
Cl	37		ug/L			5159981	11098990	1	Standard
> Sc	45		ug/L			985565	980973	1	Standard
Cr	52	124.065	ug/L	5.205	4	12119	2020700	4	Standard
Cr	53	130.902	ug/L	3.743	2	120	248674	1	Standard
Mn	55	12.469	ug/L	0.608	4	3334	283197	3	Standard
> Ge-1	72		ug/L			55956	56280	0	KED
Ni	60	12.203	ug/L	0.171	1	133	11791	1	KED
Ni	62	13.265	ug/L	0.529	3	19	2019	3	KED
Cu	63	35.188	ug/L	0.617	1	29	88711	2	KED
Cu	65	34.744	ug/L	0.223	0	11	43203	0	KED
Zn	66	60.623	ug/L	1.442	2	50	21601	1	KED
Zn	67	55.363	ug/L	0.805	1	14	3220	1	KED
As	75	0.273	ug/L	0.021	7	4	65	6	KED
Y	89		ug/L			510934	505144	1	Standard
Kr	83		ug/L			56	176	6	Standard
> In-1	115		ug/L			24217	23565	1	KED
Cd	111	1.815	ug/L	0.056	3	1	541	1	KED
Cd	114	1.812	ug/L	0.034	1	1	1390	1	KED
> Tb	159		ug/L			1029135	1005317	1	Standard
Pb	208	0.986	ug/L	0.060	6	172	28608	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18C0027-01

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 11:36:33

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	42112	1	Standard
	Cl	37		ug/L			5159981	5186830	1	Standard
[>	Sc	45		ug/L			985565	1030386	0	Standard
	Cr	52	1.579	ug/L	0.048	3	12119	39531	2	Standard
	Cr	53	1.780	ug/L	0.079	4	120	3675	3	Standard
	Mn	55	85.815	ug/L	2.020	2	3334	2027951	3	Standard
[>	Ge-1	72		ug/L			55956	57110	1	KED
	Ni	60	1.968	ug/L	0.046	2	133	2044	3	KED
	Ni	62	2.041	ug/L	0.219	10	19	331	8	KED
	Cu	63	8.209	ug/L	0.303	3	29	21016	2	KED
	Cu	65	8.234	ug/L	0.240	2	11	10396	2	KED
	Zn	66	23.966	ug/L	0.323	1	50	8697	1	KED
	Zn	67	23.557	ug/L	1.158	4	14	1399	6	KED
	As	75	3.540	ug/L	0.339	9	4	811	8	KED
	Y	89		ug/L			510934	530624	3	Standard
	Kr	83		ug/L			56	75	3	Standard
[>	In-1	115		ug/L			24217	24589	2	KED
	Cd	111	0.143	ug/L	0.005	3	1	45	2	KED
	Cd	114	0.156	ug/L	0.031	20	1	125	17	KED
[>	Tb	159		ug/L			1029135	1044591	0	Standard
	Pb	208	1.904	ug/L	0.029	1	172	57211	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18B0269-02**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, March 02, 2018 11:40:56**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	26998	2	Standard
	Cl	37		ug/L			5159981	5105248	1	Standard
[>	Sc	45		ug/L			985565	980491	1	Standard
	Cr	52	0.019	ug/L	0.033	173	12119	12354	2	Standard
	Cr	53	0.100	ug/L	0.013	13	120	310	7	Standard
	Mn	55	111.373	ug/L	1.211	1	3334	2502968	1	Standard
[>	Ge-1	72		ug/L			55956	57183	0	KED
	Ni	60	-0.032	ug/L	0.020	62	133	106	17	KED
	Ni	62	-0.023	ug/L	0.051	219	19	15	48	KED
	Cu	63	0.093	ug/L	0.001	1	29	267	0	KED
	Cu	65	0.092	ug/L	0.015	16	11	128	15	KED
	Zn	66	0.380	ug/L	0.065	17	50	188	11	KED
	Zn	67	0.329	ug/L	0.211	64	14	34	36	KED
	As	75	10.034	ug/L	0.161	1	4	2296	0	KED
	Y	89		ug/L			510934	514658	2	Standard
	Kr	83		ug/L			56	44	2	Standard
[>	In-1	115		ug/L			24217	25475	0	KED
	Cd	111	-0.000	ug/L	0.007	3773	1	1	173	KED
	Cd	114	0.004	ug/L	0.006	128	1	4	96	KED
[>	Tb	159		ug/L			1029135	1027042	2	Standard
	Pb	208	0.154	ug/L	0.006	4	172	4694	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BGC0032-DUP1

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 11:45:20

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	34950	1	Standard
	Cl	37		ug/L			5159981	5331548	1	Standard
[>	Sc	45		ug/L			985565	994985	0	Standard
	Cr	52	2.950	ug/L	0.281	9	12119	60663	7	Standard
	Cr	53	3.086	ug/L	0.534	17	120	6067	17	Standard
	Mn	55	32.325	ug/L	0.698	2	3334	739626	1	Standard
[>	Ge-1	72		ug/L			55956	58687	1	KED
	Ni	60	1.520	ug/L	0.320	21	133	1656	20	KED
	Ni	62	1.541	ug/L	0.362	23	19	262	21	KED
	Cu	63	8.858	ug/L	0.263	2	29	23313	4	KED
	Cu	65	8.798	ug/L	0.263	2	11	11414	1	KED
	Zn	66	11.986	ug/L	0.121	1	50	4495	1	KED
	Zn	67	11.082	ug/L	0.475	4	14	684	4	KED
	As	75	0.112	ug/L	0.022	19	4	30	16	KED
	Y	89		ug/L			510934	510616	0	Standard
	Kr	83		ug/L			56	60	25	Standard
[>	In-1	115		ug/L			24217	24835	1	KED
	Cd	111	0.004	ug/L	0.004	91	1	2	43	KED
	Cd	114	0.007	ug/L	0.001	19	1	6	15	KED
[>	Tb	159		ug/L			1029135	1044129	1	Standard
	Pb	208	0.081	ug/L	0.001	0	172	2611	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18C0008-01**

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 11:49:43

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	34482	2	Standard
	Cl	37		ug/L			5159981	5356627	1	Standard
[>	Sc	45		ug/L			985565	990970	1	Standard
	Cr	52	2.671	ug/L	0.343	12	12119	55811	8	Standard
	Cr	53	2.917	ug/L	0.208	7	120	5717	6	Standard
	Mn	55	31.298	ug/L	0.825	2	3334	713160	0	Standard
[>	Ge-1	72		ug/L			55956	59892	2	KED
	Ni	60	1.288	ug/L	0.019	1	133	1452	1	KED
	Ni	62	1.303	ug/L	0.138	10	19	229	11	KED
	Cu	63	8.402	ug/L	0.510	6	29	22556	5	KED
	Cu	65	8.023	ug/L	0.201	2	11	10621	1	KED
	Zn	66	11.425	ug/L	0.327	2	50	4374	0	KED
	Zn	67	11.050	ug/L	1.577	14	14	694	11	KED
	As	75	0.106	ug/L	0.012	10	4	30	11	KED
	Y	89		ug/L			510934	533058	2	Standard
	Kr	83		ug/L			56	52	48	Standard
[>	In-1	115		ug/L			24217	24706	1	KED
	Cd	111	0.008	ug/L	0.009	113	1	3	75	KED
	Cd	114	0.013	ug/L	0.003	25	1	11	24	KED
[>	Tb	159		ug/L			1029135	1032177	2	Standard
	Pb	208	0.087	ug/L	0.001	1	172	2761	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BGC0032-MS1**

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 11:54:07

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	33964	1	Standard
	Cl	37		ug/L			5159981	5382857	3	Standard
[>	Sc	45		ug/L			985565	1013223	1	Standard
	Cr	52	28.327	ug/L	0.695	2	12119	486105	1	Standard
	Cr	53	28.914	ug/L	1.231	4	120	56818	2	Standard
	Mn	55	55.444	ug/L	2.025	3	3334	1288927	1	Standard
[>	Ge-1	72		ug/L			55956	59103	0	KED
	Ni	60	26.666	ug/L	0.977	3	133	26890	3	KED
	Ni	62	27.394	ug/L	0.713	2	19	4359	2	KED
	Cu	63	34.486	ug/L	0.219	0	29	91297	0	KED
	Cu	65	34.035	ug/L	0.174	0	11	44443	0	KED
	Zn	66	92.300	ug/L	0.318	0	50	34513	0	KED
	Zn	67	86.126	ug/L	2.954	3	14	5251	3	KED
	As	75	25.735	ug/L	0.388	1	4	6081	1	KED
	Y	89		ug/L			510934	540370	1	Standard
	Kr	83		ug/L			56	64	12	Standard
[>	In-1	115		ug/L			24217	25081	2	KED
	Cd	111	24.877	ug/L	0.599	2	1	7882	2	KED
	Cd	114	24.639	ug/L	0.503	2	1	20120	4	KED
[>	Tb	159		ug/L			1029135	1039737	1	Standard
	Pb	208	27.649	ug/L	0.803	2	172	824291	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BGC0032-BS1**

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 11:58:30

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	31114	4	Standard
	Cl	37			ug/L			5159981	5240484	0	Standard
[>	Sc	45			ug/L			985565	968691	3	Standard
	Cr	52		26.285	ug/L	0.811	3	12119	431924	0	Standard
	Cr	53		25.943	ug/L	0.854	3	120	48741	0	Standard
	Mn	55		26.567	ug/L	0.819	3	3334	592031	0	Standard
[>	Ge-1	72			ug/L			55956	58629	1	KED
	Ni	60		25.961	ug/L	1.027	3	133	25976	4	KED
	Ni	62		25.898	ug/L	0.411	1	19	4088	1	KED
	Cu	63		27.034	ug/L	0.550	2	29	70988	0	KED
	Cu	65		27.224	ug/L	0.656	2	11	35259	1	KED
	Zn	66		83.972	ug/L	1.046	1	50	31147	0	KED
	Zn	67		82.744	ug/L	2.611	3	14	5004	1	KED
	As	75		26.072	ug/L	0.689	2	4	6110	1	KED
	Y	89			ug/L			510934	513189	1	Standard
	Kr	83			ug/L			56	54	2	Standard
[>	In-1	115			ug/L			24217	25673	0	KED
	Cd	111		25.122	ug/L	0.510	2	1	8148	1	KED
	Cd	114		24.692	ug/L	0.461	1	1	20633	2	KED
[>	Tb	159			ug/L			1029135	1035479	0	Standard
	Pb	208		26.900	ug/L	0.692	2	172	798921	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BGB0642-BS1**

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 12:02:54

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	33887	0	Standard
	Cl	37			ug/L			5159981	5192053	2	Standard
[>	Sc	45			ug/L			985565	965838	2	Standard
	Cr	52	27.474		ug/L	1.331	4	12119	449532	2	Standard
	Cr	53	26.178		ug/L	0.720	2	120	49048	0	Standard
	Mn	55	27.265		ug/L	1.248	4	3334	605600	1	Standard
[>	Ge-1	72			ug/L			55956	59456	2	KED
	Ni	60	25.475		ug/L	0.757	2	133	25841	0	KED
	Ni	62	26.038		ug/L	1.321	5	19	4166	2	KED
	Cu	63	26.541		ug/L	0.075	0	29	70690	1	KED
	Cu	65	26.580		ug/L	0.419	1	11	34916	2	KED
	Zn	66	85.931		ug/L	4.424	5	50	32305	3	KED
	Zn	67	80.298		ug/L	2.975	3	14	4924	2	KED
	As	75	25.272		ug/L	0.480	1	4	6006	0	KED
	Y	89			ug/L			510934	501989	0	Standard
	Kr	83			ug/L			56	49	29	Standard
[>	In-1	115			ug/L			24217	25155	1	KED
	Cd	111	24.919		ug/L	0.743	2	1	7917	1	KED
	Cd	114	24.863		ug/L	0.632	2	1	20349	0	KED
[>	Tb	159			ug/L			1029135	1017391	3	Standard
	Pb	208	28.157		ug/L	0.844	2	172	821211	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV3

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 12:08:22

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	25225	3	Standard
	Cl	37			ug/L			5159981	5205377	2	Standard
[>	Sc	45			ug/L			985565	958464	1	Standard
	Cr	52	50.182		ug/L	1.848	3	12119	805436	2	Standard
	Cr	53	50.250		ug/L	0.967	1	120	93357	1	Standard
	Mn	55	49.451		ug/L	1.469	2	3334	1088013	1	Standard
[>	Ge-1	72			ug/L			55956	58538	1	KED
	Ni	60	49.252		ug/L	2.151	4	133	49061	3	KED
	Ni	62	48.924		ug/L	1.768	3	19	7692	2	KED
	Cu	63	49.518		ug/L	0.779	1	29	129818	1	KED
	Cu	65	49.656		ug/L	1.308	2	11	64201	1	KED
	Zn	66	50.192		ug/L	0.590	1	50	18610	0	KED
	Zn	67	49.110		ug/L	1.013	2	14	2973	3	KED
	As	75	49.776		ug/L	1.091	2	4	11644	1	KED
	Y	89			ug/L			510934	499994	1	Standard
	Kr	83			ug/L			56	59	28	Standard
[>	In-1	115			ug/L			24217	24643	1	KED
	Cd	111	49.003		ug/L	0.714	1	1	15254	0	KED
	Cd	114	48.232		ug/L	1.655	3	1	38669	1	KED
[>	Tb	159			ug/L			1029135	1015142	1	Standard
	Pb	208	50.388		ug/L	0.342	0	172	1466788	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB3

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 12:15:30

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	24971	3	Standard
	Cl	37			ug/L			5159981	5021033	1	Standard
[>	Sc	45			ug/L			985565	892130	7	Standard
	Cr	52	0.041		ug/L	0.058	142	12119	11523	0	Standard
	Cr	53	0.029		ug/L	0.012	41	120	158	5	Standard
	Mn	55	-0.086		ug/L	0.012	14	3334	1240	11	Standard
[>	Ge-1	72			ug/L			55956	58368	0	KED
	Ni	60	-0.101		ug/L	0.010	10	133	40	24	KED
	Ni	62	-0.070		ug/L	0.025	35	19	8	44	KED
	Cu	63	-0.001		ug/L	0.000	49	29	27	3	KED
	Cu	65	0.004		ug/L	0.006	159	11	17	48	KED
	Zn	66	0.023		ug/L	0.001	4	50	60	0	KED
	Zn	67	-0.148		ug/L	0.049	32	14	6	45	KED
	As	75	-0.003		ug/L	0.007	261	4	3	45	KED
	Y	89			ug/L			510934	481628	5	Standard
	Kr	83			ug/L			56	50	31	Standard
[>	In-1	115			ug/L			24217	24877	1	KED
	Cd	111	0.011		ug/L	0.008	74	1	4	52	KED
	Cd	114	0.006		ug/L	0.003	41	1	6	33	KED
[>	Tb	159			ug/L			1029135	956309	7	Standard
	Pb	208	0.001		ug/L	0.001	61	172	194	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18B0352-03

Sample Dil Factor: 50

Comments:

Sample Date/Time: Friday, March 02, 2018 12:19:55

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	25667	0	Standard
	Cl	37		ug/L			5159981	5230657	0	Standard
[>	Sc	45		ug/L			985565	985115	1	Standard
	Cr	52	0.029	ug/L	0.021	73	12119	12584	1	Standard
	Cr	53	0.045	ug/L	0.007	14	120	206	4	Standard
	Mn	55	37.417	ug/L	1.137	3	3334	846858	1	Standard
[>	Ge-1	72		ug/L			55956	57669	1	KED
	Ni	60	-0.076	ug/L	0.009	11	133	64	14	KED
	Ni	62	-0.033	ug/L	0.046	139	19	14	49	KED
	Cu	63	0.285	ug/L	0.010	3	29	765	3	KED
	Cu	65	0.318	ug/L	0.042	13	11	416	11	KED
	Zn	66	72.213	ug/L	1.670	2	50	26351	0	KED
	Zn	67	63.938	ug/L	0.955	1	14	3808	2	KED
	As	75	-0.004	ug/L	0.005	126	4	3	34	KED
	Y	89		ug/L			510934	508757	0	Standard
	Kr	83		ug/L			56	61	8	Standard
[>	In-1	115		ug/L			24217	24679	1	KED
	Cd	111	0.050	ug/L	0.015	29	1	16	26	KED
	Cd	114	0.038	ug/L	0.011	29	1	31	27	KED
[>	Tb	159		ug/L			1029135	1028767	0	Standard
	Pb	208	0.155	ug/L	0.002	1	172	4736	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18B0352-05**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: Friday, March 02, 2018 12:24:18

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	25589	2	Standard
	Cl	37		ug/L			5159981	5177434	2	Standard
[>	Sc	45		ug/L			985565	984551	1	Standard
	Cr	52	0.102	ug/L	0.019	18	12119	13764	0	Standard
	Cr	53	0.035	ug/L	0.006	17	120	187	6	Standard
	Mn	55	23.483	ug/L	0.257	1	3334	532585	0	Standard
[>	Ge-1	72		ug/L			55956	58246	0	KED
	Ni	60	0.027	ug/L	0.023	86	133	166	14	KED
	Ni	62	0.076	ug/L	0.027	34	19	31	12	KED
	Cu	63	0.061	ug/L	0.004	7	29	189	6	KED
	Cu	65	0.050	ug/L	0.003	6	11	76	5	KED
	Zn	66	2.135	ug/L	0.175	8	50	837	7	KED
	Zn	67	1.824	ug/L	0.348	19	14	124	16	KED
	As	75	-0.008	ug/L	0.003	40	4	2	26	KED
	Y	89		ug/L			510934	522803	1	Standard
	Kr	83		ug/L			56	50	7	Standard
[>	In-1	115		ug/L			24217	24511	0	KED
	Cd	111	0.004	ug/L	0.005	116	1	2	57	KED
	Cd	114	0.007	ug/L	0.007	103	1	6	86	KED
[>	Tb	159		ug/L			1029135	1030981	0	Standard
	Pb	208	0.141	ug/L	0.000	0	172	4343	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18B0352-07

Sample Dil Factor: 50

Comments:

Sample Date/Time: Friday, March 02, 2018 12:28:41

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13			ug/L			28021	26111	4	Standard
Cl	37			ug/L			5159981	5342828	0	Standard
[> Sc	45			ug/L			985565	987055	2	Standard
Cr	52	0.117		ug/L	0.006	5	12119	14037	1	Standard
Cr	53	0.046		ug/L	0.009	19	120	208	6	Standard
Mn	55	23.281		ug/L	0.615	2	3334	529205	0	Standard
[> Ge-1	72			ug/L			55956	58598	2	KED
Ni	60	0.017		ug/L	0.016	92	133	156	8	KED
Ni	62	0.054		ug/L	0.059	108	19	28	34	KED
Cu	63	0.042		ug/L	0.004	9	29	140	7	KED
Cu	65	0.058		ug/L	0.010	17	11	87	16	KED
Zn	66	2.268		ug/L	0.092	4	50	891	1	KED
Zn	67	2.304		ug/L	0.175	7	14	154	8	KED
As	75	-0.006		ug/L	0.001	25	4	3	8	KED
Y	89			ug/L			510934	521610	2	Standard
Kr	83			ug/L			56	57	16	Standard
[> In-1	115			ug/L			24217	25326	2	KED
Cd	111	0.012		ug/L	0.005	40	1	5	28	KED
Cd	114	0.008		ug/L	0.006	81	1	7	66	KED
[> Tb	159			ug/L			1029135	1063687	1	Standard
Pb	208	0.136		ug/L	0.005	3	172	4330	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18B0353-01

Sample Dil Factor: 20

Comments:

Sample Date/Time: Friday, March 02, 2018 12:33:04

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			28021	26494	2	Standard
Cl	37		ug/L			5159981	5122313	1	Standard
[> Sc	45		ug/L			985565	953133	3	Standard
Cr	52	-0.027	ug/L	0.019	71	12119	11283	1	Standard
Cr	53	0.053	ug/L	0.009	17	120	213	4	Standard
Mn	55	84.771	ug/L	2.974	3	3334	1851422	1	Standard
[> Ge-1	72		ug/L			55956	56517	0	KED
Ni	60	1.171	ug/L	0.027	2	133	1258	1	KED
Ni	62	1.115	ug/L	0.196	17	19	187	14	KED
Cu	63	21.549	ug/L	0.291	1	29	54569	2	KED
Cu	65	21.327	ug/L	0.137	0	11	26633	0	KED
Zn	66	185.510	ug/L	2.154	1	50	66276	0	KED
Zn	67	173.327	ug/L	8.820	5	14	10089	4	KED
As	75	0.010	ug/L	0.007	71	4	6	25	KED
Y	89		ug/L			510934	505593	3	Standard
Kr	83		ug/L			56	53	16	Standard
[> In-1	115		ug/L			24217	24327	1	KED
Cd	111	0.953	ug/L	0.095	9	1	293	9	KED
Cd	114	0.974	ug/L	0.066	6	1	772	6	KED
[> Tb	159		ug/L			1029135	1006378	1	Standard
Pb	208	0.169	ug/L	0.002	1	172	5039	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BGB0642-DUP1**

Sample Dil Factor: **5**

Comments:

Sample Date/Time: **Friday, March 02, 2018 12:37:27**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	29252	4	Standard
	Cl	37			ug/L			5159981	5180111	1	Standard
[>	Sc	45			ug/L			985565	1006471	0	Standard
	Cr	52		0.014	ug/L	0.011	80	12119	12613	2	Standard
	Cr	53		0.126	ug/L	0.014	11	120	368	6	Standard
	Mn	55		401.808	ug/L	4.367	1	3334	9261557	1	Standard
[>	Ge-1	72			ug/L			55956	56497	1	KED
	Ni	60		-0.017	ug/L	0.012	70	133	118	9	KED
	Ni	62		0.020	ug/L	0.012	63	19	22	9	KED
	Cu	63		0.184	ug/L	0.019	10	29	493	10	KED
	Cu	65		0.184	ug/L	0.030	16	11	241	17	KED
	Zn	66		0.351	ug/L	0.057	16	50	175	10	KED
	Zn	67		0.434	ug/L	0.080	18	14	40	12	KED
	As	75		33.455	ug/L	0.196	0	4	7556	1	KED
	Y	89			ug/L			510934	531766	3	Standard
	Kr	83			ug/L			56	62	13	Standard
[>	In-1	115			ug/L			24217	23520	4	KED
	Cd	111		0.005	ug/L	0.007	156	1	2	78	KED
	Cd	114		0.006	ug/L	0.002	38	1	5	35	KED
[>	Tb	159			ug/L			1029135	1034845	1	Standard
	Pb	208		0.224	ug/L	0.010	4	172	6812	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18B0269-01

Sample Dil Factor: 5

Comments:

Sample Date/Time: Friday, March 02, 2018 12:41:51

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	28844	3	Standard
	Cl	37		ug/L			5159981	5001839	2	Standard
[>	Sc	45		ug/L			985565	977776	3	Standard
	Cr	52	0.023	ug/L	0.034	146	12119	12388	1	Standard
	Cr	53	0.119	ug/L	0.009	7	120	344	2	Standard
	Mn	55	411.747	ug/L	23.155	5	3334	9212117	4	Standard
[>	Ge-1	72		ug/L			55956	58077	1	KED
	Ni	60	-0.029	ug/L	0.019	63	133	109	15	KED
	Ni	62	-0.058	ug/L	0.036	62	19	10	53	KED
	Cu	63	0.169	ug/L	0.008	4	29	470	4	KED
	Cu	65	0.152	ug/L	0.016	10	11	206	8	KED
	Zn	66	0.303	ug/L	0.049	16	50	163	9	KED
	Zn	67	0.513	ug/L	0.152	29	14	45	18	KED
	As	75	33.685	ug/L	0.463	1	4	7819	0	KED
	Y	89		ug/L			510934	498339	2	Standard
	Kr	83		ug/L			56	57	12	Standard
[>	In-1	115		ug/L			24217	24596	1	KED
	Cd	111	0.005	ug/L	0.003	57	1	2	33	KED
	Cd	114	0.005	ug/L	0.001	28	1	4	22	KED
[>	Tb	159		ug/L			1029135	1022569	1	Standard
	Pb	208	0.157	ug/L	0.005	2	172	4786	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BGB0642-MS1

Sample Dil Factor: 5

Comments:

Sample Date/Time: Friday, March 02, 2018 12:46:14

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13			ug/L			28021	28712	3	Standard
Cl	37			ug/L			5159981	5017177	1	Standard
[> Sc	45			ug/L			985565	994355	1	Standard
Cr	52	5.262		ug/L	0.236	4	12119	98570	3	Standard
Cr	53	5.289		ug/L	0.113	2	120	10301	0	Standard
Mn	55	424.346		ug/L	6.362	1	3334	9662203	1	Standard
[> Ge-1	72			ug/L			55956	59030	0	KED
Ni	60	5.055		ug/L	0.068	1	133	5206	1	KED
Ni	62	5.223		ug/L	0.089	1	19	846	1	KED
Cu	63	5.389		ug/L	0.177	3	29	14272	2	KED
Cu	65	5.331		ug/L	0.085	1	11	6962	1	KED
Zn	66	17.156		ug/L	0.506	2	50	6449	1	KED
Zn	67	16.292		ug/L	0.805	4	14	1004	4	KED
As	75	38.794		ug/L	0.914	2	4	9153	1	KED
Y	89			ug/L			510934	530001	3	Standard
Kr	83			ug/L			56	46	18	Standard
[> In-1	115			ug/L			24217	25402	1	KED
Cd	111	5.029		ug/L	0.221	4	1	1614	2	KED
Cd	114	5.072		ug/L	0.107	2	1	4193	0	KED
[> Tb	159			ug/L			1029135	1017692	1	Standard
Pb	208	5.883		ug/L	0.213	3	172	171775	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BGB0666-DUP2**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, March 02, 2018 12:50:37**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	27181	1	Standard
	Cl	37		ug/L			5159981	5088601	1	Standard
[>	Sc	45		ug/L			985565	1014723	3	Standard
	Cr	52	-0.041	ug/L	0.039	94	12119	11773	2	Standard
	Cr	53	0.052	ug/L	0.003	5	120	226	3	Standard
	Mn	55	85.580	ug/L	5.553	6	3334	1988657	3	Standard
[>	Ge-1	72		ug/L			55956	59516	1	KED
	Ni	60	1.163	ug/L	0.034	2	133	1317	1	KED
	Ni	62	1.183	ug/L	0.062	5	19	208	3	KED
	Cu	63	20.381	ug/L	0.090	0	29	54347	1	KED
	Cu	65	19.984	ug/L	0.371	1	11	26278	0	KED
	Zn	66	188.668	ug/L	7.313	3	50	70972	3	KED
	Zn	67	174.526	ug/L	6.298	3	14	10697	2	KED
	As	75	0.014	ug/L	0.013	88	4	7	36	KED
	Y	89		ug/L			510934	541886	4	Standard
	Kr	83		ug/L			56	56	21	Standard
[>	In-1	115		ug/L			24217	25578	2	KED
	Cd	111	0.956	ug/L	0.055	5	1	310	5	KED
	Cd	114	0.978	ug/L	0.095	9	1	813	7	KED
[>	Tb	159		ug/L			1029135	1076895	1	Standard
	Pb	208	0.169	ug/L	0.011	6	172	5382	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18B0352-01

Sample Dil Factor: 20

Comments:

Sample Date/Time: Friday, March 02, 2018 12:55:01

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			28021	26592	1	Standard
Cl	37		ug/L			5159981	5120601	0	Standard
[> Sc	45		ug/L			985565	1023568	0	Standard
Cr	52	-0.046	ug/L	0.016	35	12119	11804	2	Standard
Cr	53	0.046	ug/L	0.005	11	120	216	4	Standard
Mn	55	84.156	ug/L	1.096	1	3334	1975484	1	Standard
[> Ge-1	72		ug/L			55956	59166	1	KED
Ni	60	1.124	ug/L	0.081	7	133	1269	5	KED
Ni	62	1.146	ug/L	0.102	8	19	201	8	KED
Cu	63	20.110	ug/L	0.554	2	29	53319	3	KED
Cu	65	19.874	ug/L	0.542	2	11	25979	2	KED
Zn	66	183.598	ug/L	4.261	2	50	68661	1	KED
Zn	67	171.010	ug/L	3.800	2	14	10422	1	KED
As	75	0.016	ug/L	0.013	77	4	8	36	KED
Y	89		ug/L			510934	533099	3	Standard
Kr	83		ug/L			56	52	21	Standard
[> In-1	115		ug/L			24217	25104	0	KED
Cd	111	0.938	ug/L	0.024	2	1	298	3	KED
Cd	114	0.978	ug/L	0.085	8	1	800	8	KED
[> Tb	159		ug/L			1029135	1067506	2	Standard
Pb	208	0.175	ug/L	0.010	5	172	5526	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BGB0666-MS2

Sample Dil Factor: 20

Comments:

Sample Date/Time: Friday, March 02, 2018 12:59:24

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13			ug/L			28021	27068	5	Standard
Cl	37			ug/L			5159981	5085565	1	Standard
[> Sc	45			ug/L			985565	1005076	0	Standard
Cr	52	1.305		ug/L	0.051	3	12119	34014	2	Standard
Cr	53	1.418		ug/L	0.012	0	120	2881	0	Standard
Mn	55	88.657		ug/L STL	1.060	1	3334	2043292	0	Standard
[> Ge-1	72			ug/L			55956	57701	0	KED
Ni	60	2.548		ug/L	0.019	0	133	2633	0	KED
Ni	62	2.530		ug/L	0.147	5	19	410	4	KED
Cu	63	21.257		ug/L STL	0.283	1	29	54958	2	KED
Cu	65	22.594		ug/L	0.285	1	11	28807	1	KED
Zn	66	194.130		ug/L	3.298	1	50	70806	1	KED
Zn	67	174.602		ug/L STL	4.779	2	14	10377	1	KED
As	75	1.316		ug/L	0.054	4	4	307	4	KED
Y	89			ug/L			510934	553288	3	Standard
Kr	83			ug/L			56	58	15	Standard
[> In-1	115			ug/L			24217	25119	1	KED
Cd	111	2.309		ug/L	0.053	2	1	734	4	KED
Cd	114	2.304		ug/L	0.092	3	1	1883	2	KED
[> Tb	159			ug/L			1029135	1037900	2	Standard
Pb	208	1.721		ug/L	0.042	2	172	51389	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV4

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 13:04:53

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	25408	0	Standard
	Cl	37		ug/L			5159981	5112198	0	Standard
[>	Sc	45		ug/L			985565	977270	2	Standard
	Cr	52	51.936	ug/L	0.846	1	12119	849693	1	Standard
	Cr	53	50.961	ug/L	1.622	3	120	96509	1	Standard
	Mn	55	50.352	ug/L	1.251	2	3334	1129440	0	Standard
[>	Ge-1	72		ug/L			55956	57414	0	KED
	Ni	60	50.495	ug/L	1.189	2	133	49341	1	KED
	Ni	62	49.578	ug/L	0.596	1	19	7647	0	KED
	Cu	63	50.101	ug/L	0.178	0	29	128834	0	KED
	Cu	65	51.123	ug/L	0.368	0	11	64845	1	KED
	Zn	66	50.081	ug/L	0.663	1	50	18214	1	KED
	Zn	67	49.681	ug/L	1.361	2	14	2948	2	KED
	As	75	51.100	ug/L	0.510	0	4	11726	0	KED
	Y	89		ug/L			510934	512672	2	Standard
	Kr	83		ug/L			56	55	15	Standard
[>	In-1	115		ug/L			24217	24013	1	KED
	Cd	111	50.773	ug/L	0.471	0	1	15403	0	KED
	Cd	114	50.647	ug/L	1.565	3	1	39576	2	KED
[>	Tb	159		ug/L			1029135	1049719	1	Standard
	Pb	208	52.234	ug/L	1.316	2	172	1572443	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB4

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 13:12:01

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	24447	2	Standard
	Cl	37			ug/L			5159981	4986070	1	Standard
[>	Sc	45			ug/L			985565	957432	1	Standard
	Cr	52	-0.004		ug/L	0.011	282	12119	11710	0	Standard
	Cr	53	0.012		ug/L	0.004	34	120	139	5	Standard
	Mn	55	-0.102		ug/L	0.001	1	3334	1000	1	Standard
[>	Ge-1	72			ug/L			55956	58353	1	KED
	Ni	60	-0.115		ug/L	0.010	9	133	25	41	KED
	Ni	62	-0.070		ug/L	0.015	21	19	8	24	KED
	Cu	63	-0.003		ug/L	0.003	95	29	22	34	KED
	Cu	65	-0.003		ug/L	0.002	61	11	8	26	KED
	Zn	66	0.016		ug/L	0.041	246	50	58	26	KED
	Zn	67	-0.127		ug/L	0.084	66	14	7	66	KED
	As	75	-0.006		ug/L	0.009	164	4	3	69	KED
	Y	89			ug/L			510934	505203	3	Standard
	Kr	83			ug/L			56	60	6	Standard
[>	In-1	115			ug/L			24217	24679	1	KED
	Cd	111	0.001		ug/L	0.005	489	1	1	91	KED
	Cd	114	0.002		ug/L	0.003	109	1	3	68	KED
[>	Tb	159			ug/L			1029135	1000839	1	Standard
	Pb	208	-0.001		ug/L	0.001	52	172	133	14	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18B0353-03

Sample Dil Factor: 50

Comments:

Sample Date/Time: Friday, March 02, 2018 13:18:24

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			28021	25591	2	Standard
Cl	37		ug/L			5159981	5206024	1	Standard
[> Sc	45		ug/L			985565	982787	2	Standard
Cr	52	0.061	ug/L	0.033	55	12119	13060	2	Standard
Cr	53	0.019	ug/L	0.005	24	120	157	7	Standard
Mn	55	39.304	ug/L	1.776	4	3334	887024	2	Standard
[> Ge-1	72		ug/L			55956	58011	0	KED
Ni	60	-0.073	ug/L	0.008	10	133	67	11	KED
Ni	62	-0.070	ug/L	0.028	40	19	8	49	KED
Cu	63	0.297	ug/L	0.016	5	29	801	4	KED
Cu	65	0.289	ug/L	0.014	4	11	382	4	KED
Zn	66	71.580	ug/L	1.487	2	50	26284	2	KED
Zn	67	66.864	ug/L	2.385	3	14	4005	3	KED
As	75	0.003	ug/L	0.004	105	4	5	15	KED
Y	89		ug/L			510934	529817	2	Standard
Kr	83		ug/L			56	57	18	Standard
[> In-1	115		ug/L			24217	24125	2	KED
Cd	111	0.055	ug/L	0.004	6	1	18	5	KED
Cd	114	0.045	ug/L	0.012	25	1	36	23	KED
[> Tb	159		ug/L			1029135	1034837	0	Standard
Pb	208	0.157	ug/L	0.002	1	172	4833	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18B0353-05

Sample Dil Factor: 50

Comments:

Sample Date/Time: Friday, March 02, 2018 13:22:48

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	25990	2	Standard
	Cl	37			ug/L			5159981	5305951	1	Standard
[>	Sc	45			ug/L			985565	974509	2	Standard
	Cr	52	0.060		ug/L	0.031	51	12119	12943	1	Standard
	Cr	53	0.037		ug/L	0.011	29	120	188	9	Standard
	Mn	55	26.229		ug/L	1.009	3	3334	588091	1	Standard
[>	Ge-1	72			ug/L			55956	57818	0	KED
	Ni	60	0.028		ug/L	0.004	12	133	165	1	KED
	Ni	62	0.037		ug/L	0.061	166	19	25	37	KED
	Cu	63	0.136		ug/L	0.006	4	29	381	3	KED
	Cu	65	0.141		ug/L	0.012	8	11	192	8	KED
	Zn	66	4.112		ug/L	0.097	2	50	1553	2	KED
	Zn	67	3.716		ug/L	0.391	10	14	236	10	KED
	As	75	-0.007		ug/L	0.002	32	4	2	20	KED
	Y	89			ug/L			510934	521576	2	Standard
	Kr	83			ug/L			56	55	23	Standard
[>	In-1	115			ug/L			24217	25161	1	KED
	Cd	111	0.028		ug/L	0.006	21	1	10	19	KED
	Cd	114	0.016		ug/L	0.004	21	1	14	19	KED
[>	Tb	159			ug/L			1029135	1034234	3	Standard
	Pb	208	0.142		ug/L	0.003	2	172	4374	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18B0353-07**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: Friday, March 02, 2018 13:27:11

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	25487	4	Standard
	Cl	37		ug/L			5159981	5279102	0	Standard
[>	Sc	45		ug/L			985565	978806	1	Standard
	Cr	52	0.113	ug/L	0.010	9	12119	13869	2	Standard
	Cr	53	0.030	ug/L	0.006	21	120	175	8	Standard
	Mn	55	25.340	ug/L	0.203	0	3334	571089	0	Standard
[>	Ge-1	72		ug/L			55956	54213	10	KED
	Ni	60	0.032	ug/L	0.040	123	133	157	14	KED
	Ni	62	0.056	ug/L	0.039	69	19	26	25	KED
	Cu	63	0.077	ug/L	0.013	16	29	213	7	KED
	Cu	65	0.081	ug/L	0.011	13	11	106	4	KED
	Zn	66	3.685	ug/L	0.412	11	50	1301	0	KED
	Zn	67	3.309	ug/L	0.779	23	14	196	13	KED
	As	75	-0.008	ug/L	0.008	107	4	2	78	KED
	Y	89		ug/L			510934	522693	4	Standard
	Kr	83		ug/L			56	57	8	Standard
[>	In-1	115		ug/L			24217	25021	1	KED
	Cd	111	0.022	ug/L	0.002	9	1	8	6	KED
	Cd	114	0.027	ug/L	0.006	20	1	23	20	KED
[>	Tb	159		ug/L			1029135	1017787	3	Standard
	Pb	208	0.150	ug/L	0.011	7	172	4552	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18B0353-09

Sample Dil Factor: 20

Comments:

Sample Date/Time: Friday, March 02, 2018 13:33:58

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	26305	1	Standard
	Cl	37		ug/L			5159981	5107176	1	Standard
[>	Sc	45		ug/L			985565	971239	1	Standard
	Cr	52	-0.049	ug/L	0.013	25	12119	11153	0	Standard
	Cr	53	0.045	ug/L	0.006	13	120	202	4	Standard
	Mn	55	90.634	ug/L	2.532	2	3334	2018740	3	Standard
[>	Ge-1	72		ug/L			55956	57307	0	KED
	Ni	60	1.193	ug/L	0.094	7	133	1297	6	KED
	Ni	62	1.382	ug/L	0.118	8	19	231	8	KED
	Cu	63	21.478	ug/L	0.162	0	29	55144	0	KED
	Cu	65	20.935	ug/L	0.280	1	11	26510	1	KED
	Zn	66	194.960	ug/L	0.208	0	50	70628	0	KED
	Zn	67	182.120	ug/L	5.736	3	14	10750	3	KED
	As	75	0.002	ug/L	0.008	339	4	4	36	KED
	Y	89		ug/L			510934	521705	2	Standard
	Kr	83		ug/L			56	47	45	Standard
[>	In-1	115		ug/L			24217	24100	0	KED
	Cd	111	1.008	ug/L	0.045	4	1	308	4	KED
	Cd	114	1.037	ug/L	0.051	4	1	814	4	KED
[>	Tb	159		ug/L			1029135	1025870	1	Standard
	Pb	208	0.170	ug/L	0.011	6	172	5161	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18B0353-11

Sample Dil Factor: 50

Comments:

Sample Date/Time: Friday, March 02, 2018 13:38:21

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	26386	4	Standard
	Cl	37			ug/L			5159981	5279217	2	Standard
[>	Sc	45			ug/L			985565	963475	4	Standard
	Cr	52	0.038		ug/L	0.041	107	12119	12430	1	Standard
	Cr	53	0.024		ug/L	0.005	22	120	161	2	Standard
	Mn	55	36.533		ug/L	1.557	4	3334	808213	1	Standard
[>	Ge-1	72			ug/L			55956	57889	1	KED
	Ni	60	-0.093		ug/L	0.014	15	133	47	28	KED
	Ni	62	-0.062		ug/L	0.019	30	19	10	28	KED
	Cu	63	0.268		ug/L	0.013	4	29	725	6	KED
	Cu	65	0.272		ug/L	0.029	10	11	358	8	KED
	Zn	66	68.398		ug/L	1.966	2	50	25056	1	KED
	Zn	67	64.175		ug/L	2.406	3	14	3837	4	KED
	As	75	-0.003		ug/L	0.002	73	4	3	15	KED
	Y	89			ug/L			510934	510060	0	Standard
	Kr	83			ug/L			56	57	18	Standard
[>	In-1	115			ug/L			24217	24048	2	KED
	Cd	111	0.038		ug/L	0.019	50	1	12	45	KED
	Cd	114	0.047		ug/L	0.010	21	1	37	22	KED
[>	Tb	159			ug/L			1029135	1022134	2	Standard
	Pb	208	0.159		ug/L	0.008	4	172	4840	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18B0353-13

Sample Dil Factor: 50

Comments:

Sample Date/Time: Friday, March 02, 2018 13:42:45

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	27120	1	Standard
	Cl	37			ug/L			5159981	5265146	0	Standard
[>	Sc	45			ug/L			985565	964481	3	Standard
	Cr	52	0.112		ug/L	0.026	23	12119	13625	0	Standard
	Cr	53	0.039		ug/L	0.010	24	120	189	6	Standard
	Mn	55	27.262		ug/L	1.315	4	3334	604695	3	Standard
[>	Ge-1	72			ug/L			55956	57338	0	KED
	Ni	60	0.041		ug/L	0.022	52	133	177	12	KED
	Ni	62	0.047		ug/L	0.012	26	19	26	7	KED
	Cu	63	0.085		ug/L	0.006	7	29	247	6	KED
	Cu	65	0.086		ug/L	0.024	27	11	120	24	KED
	Zn	66	4.286		ug/L	0.134	3	50	1603	2	KED
	Zn	67	3.827		ug/L	0.533	13	14	240	12	KED
	As	75	-0.003		ug/L	0.005	149	4	3	30	KED
	Y	89			ug/L			510934	515173	1	Standard
	Kr	83			ug/L			56	60	28	Standard
[>	In-1	115			ug/L			24217	23706	1	KED
	Cd	111	0.024		ug/L	0.006	26	1	8	22	KED
	Cd	114	0.018		ug/L	0.003	14	1	15	12	KED
[>	Tb	159			ug/L			1029135	1004209	1	Standard
	Pb	208	0.150		ug/L	0.004	2	172	4489	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18B0353-15

Sample Dil Factor: 50

Comments:

Sample Date/Time: Friday, March 02, 2018 13:47:08

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			28021	26363	1	Standard
Cl	37		ug/L			5159981	5343030	0	Standard
[> Sc	45		ug/L			985565	960748	2	Standard
Cr	52	0.122	ug/L	0.007	5	12119	13743	2	Standard
Cr	53	0.029	ug/L	0.008	28	120	171	6	Standard
Mn	55	26.699	ug/L	0.961	3	3334	590163	1	Standard
[> Ge-1	72		ug/L			55956	57609	2	KED
Ni	60	0.023	ug/L	0.017	75	133	160	9	KED
Ni	62	0.046	ug/L	0.046	99	19	26	24	KED
Cu	63	0.063	ug/L	0.009	14	29	191	10	KED
Cu	65	0.058	ug/L	0.015	25	11	85	21	KED
Zn	66	4.086	ug/L	0.170	4	50	1537	1	KED
Zn	67	3.336	ug/L	0.087	2	14	212	2	KED
As	75	-0.010	ug/L	0.002	22	4	2	24	KED
Y	89		ug/L			510934	504497	1	Standard
Kr	83		ug/L			56	51	20	Standard
[> In-1	115		ug/L			24217	24843	1	KED
Cd	111	0.020	ug/L	0.019	94	1	7	78	KED
Cd	114	0.022	ug/L	0.006	27	1	18	26	KED
[> Tb	159		ug/L			1029135	1003106	2	Standard
Pb	208	0.147	ug/L	0.004	3	172	4405	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18B0366-03**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: **Friday, March 02, 2018 13:51:31**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	26686	0	Standard
	Cl	37		ug/L			5159981	5230614	0	Standard
[>	Sc	45		ug/L			985565	965885	4	Standard
	Cr	52	0.035	ug/L	0.039	110	12119	12416	0	Standard
	Cr	53	0.036	ug/L	0.005	12	120	185	2	Standard
	Mn	55	36.291	ug/L	2.152	5	3334	804381	1	Standard
[>	Ge-1	72		ug/L			55956	57463	0	KED
	Ni	60	-0.079	ug/L	0.010	12	133	60	16	KED
	Ni	62	-0.078	ug/L	0.021	27	19	7	43	KED
	Cu	63	0.256	ug/L	0.010	3	29	689	4	KED
	Cu	65	0.248	ug/L	0.021	8	11	326	8	KED
	Zn	66	71.740	ug/L	1.363	1	50	26091	1	KED
	Zn	67	65.462	ug/L	1.076	1	14	3884	1	KED
	As	75	-0.006	ug/L	0.002	40	4	3	18	KED
	Y	89		ug/L			510934	529028	3	Standard
	Kr	83		ug/L			56	48	21	Standard
[>	In-1	115		ug/L			24217	24170	0	KED
	Cd	111	0.039	ug/L	0.010	26	1	13	23	KED
	Cd	114	0.040	ug/L	0.004	10	1	32	10	KED
[>	Tb	159		ug/L			1029135	1020707	1	Standard
	Pb	208	0.163	ug/L	0.005	2	172	4943	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18B0366-05**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: Friday, March 02, 2018 13:55:55

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	25268	1	Standard
	Cl	37		ug/L			5159981	5265376	1	Standard
[>	Sc	45		ug/L			985565	977249	4	Standard
	Cr	52	0.116	ug/L	0.060	51	12119	13860	2	Standard
	Cr	53	0.037	ug/L	0.009	23	120	189	10	Standard
	Mn	55	20.224	ug/L	1.288	6	3334	454835	1	Standard
[>	Ge-1	72		ug/L			55956	58369	1	KED
	Ni	60	-0.031	ug/L	0.011	36	133	109	10	KED
	Ni	62	0.035	ug/L	0.060	171	19	25	37	KED
	Cu	63	0.054	ug/L	0.007	13	29	172	11	KED
	Cu	65	0.050	ug/L	0.008	16	11	76	13	KED
	Zn	66	0.565	ug/L	0.064	11	50	260	8	KED
	Zn	67	0.413	ug/L	0.152	36	14	40	21	KED
	As	75	-0.004	ug/L	0.006	178	4	3	39	KED
	Y	89		ug/L			510934	503020	2	Standard
	Kr	83		ug/L			56	52	9	Standard
[>	In-1	115		ug/L			24217	24888	1	KED
	Cd	111	0.010	ug/L	0.003	34	1	4	24	KED
	Cd	114	0.005	ug/L	0.002	32	1	4	24	KED
[>	Tb	159		ug/L			1029135	1025513	1	Standard
	Pb	208	0.144	ug/L	0.008	5	172	4411	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18B0366-07

Sample Dil Factor: 50

Comments:

Sample Date/Time: Friday, March 02, 2018 14:00:18

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	26220	3	Standard
	Cl	37			ug/L			5159981	5280915	0	Standard
[>	Sc	45			ug/L			985565	969524	0	Standard
	Cr	52	0.106		ug/L	0.023	21	12119	13623	2	Standard
	Cr	53	0.028		ug/L	0.002	6	120	170	1	Standard
	Mn	55	20.788		ug/L	0.199	0	3334	464673	0	Standard
[>	Ge-1	72			ug/L			55956	56644	1	KED
	Ni	60	-0.017		ug/L	0.026	146	133	118	20	KED
	Ni	62	0.011		ug/L	0.044	406	19	20	32	KED
	Cu	63	0.028		ug/L	0.011	39	29	100	27	KED
	Cu	65	0.033		ug/L	0.007	20	11	52	17	KED
	Zn	66	0.346		ug/L	0.016	4	50	174	2	KED
	Zn	67	0.280		ug/L	0.076	27	14	31	15	KED
	As	75	-0.004		ug/L	0.011	254	4	3	75	KED
	Y	89			ug/L			510934	505457	5	Standard
	Kr	83			ug/L			56	59	5	Standard
[>	In-1	115			ug/L			24217	23265	5	KED
	Cd	111	0.009		ug/L	0.008	92	1	3	66	KED
	Cd	114	0.001		ug/L	0.003	266	1	1	105	KED
[>	Tb	159			ug/L			1029135	1018842	2	Standard
	Pb	208	0.146		ug/L	0.009	5	172	4441	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV5

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 14:05:47

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	25261	0	Standard
	Cl	37			ug/L			5159981	5058788	1	Standard
[>	Sc	45			ug/L			985565	952083	1	Standard
	Cr	52	50.292		ug/L	0.365	0	12119	802063	1	Standard
	Cr	53	49.858		ug/L	0.604	1	120	92020	0	Standard
	Mn	55	49.298		ug/L	0.601	1	3334	1077641	0	Standard
[>	Ge-1	72			ug/L			55956	56739	0	KED
	Ni	60	49.546		ug/L	0.138	0	133	47850	0	KED
	Ni	62	48.668		ug/L	1.168	2	19	7420	2	KED
	Cu	63	50.340		ug/L	0.319	0	29	127927	1	KED
	Cu	65	49.551		ug/L	0.844	1	11	62109	1	KED
	Zn	66	50.648		ug/L	0.937	1	50	18202	1	KED
	Zn	67	52.006		ug/L	2.013	3	14	3049	3	KED
	As	75	50.347		ug/L	0.832	1	4	11417	1	KED
	Y	89			ug/L			510934	507774	3	Standard
	Kr	83			ug/L			56	52	11	Standard
[>	In-1	115			ug/L			24217	24321	1	KED
	Cd	111	49.165		ug/L	1.124	2	1	15104	1	KED
	Cd	114	47.837		ug/L	1.297	2	1	37860	1	KED
[>	Tb	159			ug/L			1029135	1019737	1	Standard
	Pb	208	52.645		ug/L	1.953	3	172	1539064	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB5

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 14:12:55

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	24101	4	Standard
	Cl	37			ug/L			5159981	5052774	1	Standard
[>	Sc	45			ug/L			985565	945064	1	Standard
	Cr	52	-0.025		ug/L	0.015	58	12119	11226	1	Standard
	Cr	53	0.002		ug/L	0.006	336	120	118	10	Standard
	Mn	55	-0.112		ug/L	0.002	1	3334	782	5	Standard
[>	Ge-1	72			ug/L			55956	58007	2	KED
	Ni	60	-0.115		ug/L	0.017	14	133	25	63	KED
	Ni	62	-0.094		ug/L	0.018	19	19	5	57	KED
	Cu	63	-0.003		ug/L	0.003	104	29	22	36	KED
	Cu	65	0.004		ug/L	0.001	17	11	16	6	KED
	Zn	66	-0.028		ug/L	0.011	40	50	41	12	KED
	Zn	67	-0.169		ug/L	0.018	10	14	5	21	KED
	As	75	-0.010		ug/L	0.006	61	4	2	65	KED
	Y	89			ug/L			510934	504705	4	Standard
	Kr	83			ug/L			56	38	44	Standard
[>	In-1	115			ug/L			24217	24972	1	KED
	Cd	111	0.003		ug/L	0.005	159	1	2	65	KED
	Cd	114	0.002		ug/L	0.004	150	1	3	93	KED
[>	Tb	159			ug/L			1029135	1007594	2	Standard
	Pb	208	0.000		ug/L	0.002	28317	172	167	29	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18C0002-01**

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 14:17:19

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	53218	2	Standard
	Cl	37			ug/L			5159981	5234499	2	Standard
[>	Sc	45			ug/L			985565	989480	2	Standard
	Cr	52	0.630		ug/L	0.012	1	12119	22460	2	Standard
	Cr	53	0.885		ug/L	0.024	2	120	1815	1	Standard
	Mn	55	10.778		ug/L	0.302	2	3334	247397	0	Standard
[>	Ge-1	72			ug/L			55956	58107	2	KED
	Ni	60	1.248		ug/L	0.031	2	133	1370	4	KED
	Ni	62	1.444		ug/L	0.205	14	19	244	12	KED
	Cu	63	22.430		ug/L	0.524	2	29	58370	0	KED
	Cu	65	22.322		ug/L	0.225	1	11	28657	1	KED
	Zn	66	56.919		ug/L	0.974	1	50	20940	1	KED
	Zn	67	55.148		ug/L	2.437	4	14	3310	3	KED
	As	75	0.384		ug/L	0.040	10	4	93	8	KED
	Y	89			ug/L			510934	514314	2	Standard
	Kr	83			ug/L			56	51	3	Standard
[>	In-1	115			ug/L			24217	24266	6	KED
	Cd	111	0.184		ug/L	0.023	12	1	57	8	KED
	Cd	114	0.211		ug/L	0.032	15	1	167	14	KED
[>	Tb	159			ug/L			1029135	1053250	2	Standard
	Pb	208	1.334		ug/L	0.046	3	172	40435	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18C0002-02

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 14:21:42

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13			ug/L			28021	49428	1	Standard
Cl	37			ug/L			5159981	5317145	0	Standard
[> Sc	45			ug/L			985565	1024243	0	Standard
Cr	52	1.543		ug/L	0.051	3	12119	38689	2	Standard
Cr	53	1.871		ug/L	0.012	0	120	3836	0	Standard
Mn	55	33.603		ug/L	0.976	2	3334	791362	2	Standard
[> Ge-1	72			ug/L			55956	59127	0	KED
Ni	60	2.362		ug/L	0.096	4	133	2511	4	KED
Ni	62	2.509		ug/L	0.051	2	19	417	2	KED
Cu	63	35.492		ug/L	0.556	1	29	93994	1	KED
Cu	65	35.383		ug/L	0.412	1	11	46220	0	KED
Zn	66	116.144		ug/L	0.865	0	50	43432	0	KED
Zn	67	110.857		ug/L	1.635	1	14	6757	1	KED
As	75	0.801		ug/L	0.025	3	4	193	3	KED
Y	89			ug/L			510934	645406	1	Standard
Kr	83			ug/L			56	48	39	Standard
[> In-1	115			ug/L			24217	25971	1	KED
Cd	111	0.298		ug/L	0.019	6	1	99	7	KED
Cd	114	0.290		ug/L	0.028	9	1	246	10	KED
[> Tb	159			ug/L			1029135	1057029	1	Standard
Pb	208	10.101		ug/L	0.400	3	172	306219	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18B0369-03

Sample Dil Factor: 50

Comments:

Sample Date/Time: Friday, March 02, 2018 14:26:06

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			28021	26222	1	Standard
Cl	37		ug/L			5159981	5154485	1	Standard
[> Sc	45		ug/L			985565	960282	1	Standard
Cr	52	0.056	ug/L	0.039	68	12119	12691	3	Standard
Cr	53	0.026	ug/L	0.004	16	120	165	2	Standard
Mn	55	36.347	ug/L	0.431	1	3334	802184	1	Standard
[> Ge-1	72		ug/L			55956	57215	1	KED
Ni	60	-0.074	ug/L	0.005	6	133	64	5	KED
Ni	62	-0.052	ug/L	0.033	62	19	11	44	KED
Cu	63	0.288	ug/L	0.026	9	29	766	7	KED
Cu	65	0.297	ug/L	0.012	4	11	387	5	KED
Zn	66	70.887	ug/L	2.175	3	50	25664	1	KED
Zn	67	67.532	ug/L	2.018	2	14	3988	1	KED
As	75	-0.005	ug/L	0.006	120	4	3	45	KED
Y	89		ug/L			510934	520960	2	Standard
Kr	83		ug/L			56	53	27	Standard
[> In-1	115		ug/L			24217	24299	0	KED
Cd	111	0.038	ug/L	0.008	20	1	13	18	KED
Cd	114	0.051	ug/L	0.013	25	1	41	25	KED
[> Tb	159		ug/L			1029135	1019078	2	Standard
Pb	208	0.161	ug/L	0.007	4	172	4860	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18B0369-05**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: Friday, March 02, 2018 14:30:29

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	26058	1	Standard
	Cl	37			ug/L			5159981	5279405	0	Standard
[>	Sc	45			ug/L			985565	963043	1	Standard
	Cr	52	0.122		ug/L	0.005	4	12119	13788	0	Standard
	Cr	53	0.029		ug/L	0.007	24	120	172	8	Standard
	Mn	55	22.331		ug/L	0.589	2	3334	495599	2	Standard
[>	Ge-1	72			ug/L			55956	58529	2	KED
	Ni	60	-0.016		ug/L	0.026	163	133	123	18	KED
	Ni	62	0.027		ug/L	0.039	141	19	24	22	KED
	Cu	63	0.043		ug/L	0.007	15	29	142	12	KED
	Cu	65	0.045		ug/L	0.004	8	11	69	8	KED
	Zn	66	0.727		ug/L	0.032	4	50	321	3	KED
	Zn	67	0.568		ug/L	0.165	29	14	49	21	KED
	As	75	-0.008		ug/L	0.004	53	4	2	39	KED
	Y	89			ug/L			510934	499858	0	Standard
	Kr	83			ug/L			56	64	26	Standard
[>	In-1	115			ug/L			24217	24181	1	KED
	Cd	111	0.008		ug/L	0.000	1	1	3	0	KED
	Cd	114	0.004		ug/L	0.002	39	1	4	28	KED
[>	Tb	159			ug/L			1029135	1013836	1	Standard
	Pb	208	0.149		ug/L	0.003	2	172	4504	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18B0369-07

Sample Dil Factor: 50

Comments:

Sample Date/Time: Friday, March 02, 2018 14:34:52

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			28021	25319	1	Standard
Cl	37		ug/L			5159981	5396007	1	Standard
[> Sc	45		ug/L			985565	990881	0	Standard
Cr	52	0.115	ug/L	0.025	21	12119	14067	2	Standard
Cr	53	0.020	ug/L	0.005	22	120	159	5	Standard
Mn	55	21.296	ug/L	0.606	2	3334	486417	2	Standard
[> Ge-1	72		ug/L			55956	56575	1	KED
Ni	60	-0.013	ug/L	0.011	81	133	123	9	KED
Ni	62	0.045	ug/L	0.029	64	19	26	16	KED
Cu	63	0.030	ug/L	0.002	7	29	106	5	KED
Cu	65	0.034	ug/L	0.002	5	11	54	4	KED
Zn	66	0.573	ug/L	0.043	7	50	255	4	KED
Zn	67	0.456	ug/L	0.056	12	14	41	7	KED
As	75	-0.005	ug/L	0.010	188	4	3	67	KED
Y	89		ug/L			510934	527260	0	Standard
Kr	83		ug/L			56	53	9	Standard
[> In-1	115		ug/L			24217	25106	1	KED
Cd	111	0.004	ug/L	0.008	194	1	2	94	KED
Cd	114	0.003	ug/L	0.002	74	1	3	49	KED
[> Tb	159		ug/L			1029135	1026006	1	Standard
Pb	208	0.148	ug/L	0.005	3	172	4509	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18B0369-09**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, March 02, 2018 14:39:15**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	25475	5	Standard
	Cl	37		ug/L			5159981	5055436	0	Standard
[>	Sc	45		ug/L			985565	978370	4	Standard
	Cr	52	-0.040	ug/L	0.018	45	12119	11371	1	Standard
	Cr	53	0.041	ug/L	0.008	19	120	197	7	Standard
	Mn	55	96.638	ug/L	4.991	5	3334	2164820	1	Standard
[>	Ge-1	72		ug/L			55956	57394	0	KED
	Ni	60	1.184	ug/L	0.106	8	133	1290	8	KED
	Ni	62	1.231	ug/L	0.146	11	19	208	11	KED
	Cu	63	17.018	ug/L	0.286	1	29	43766	1	KED
	Cu	65	17.096	ug/L	0.501	2	11	21683	2	KED
	Zn	66	193.758	ug/L	2.154	1	50	70298	0	KED
	Zn	67	181.801	ug/L	3.111	1	14	10748	1	KED
	As	75	0.003	ug/L	0.006	202	4	5	27	KED
	Y	89		ug/L			510934	528750	2	Standard
	Kr	83		ug/L			56	64	23	Standard
[>	In-1	115		ug/L			24217	24889	3	KED
	Cd	111	0.927	ug/L	0.024	2	1	292	0	KED
	Cd	114	0.874	ug/L	0.039	4	1	708	3	KED
[>	Tb	159		ug/L			1029135	1033003	0	Standard
	Pb	208	0.168	ug/L	0.004	2	172	5157	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18B0369-11

Sample Dil Factor: 50

Comments:

Sample Date/Time: Friday, March 02, 2018 14:43:38

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	25902	1	Standard
	Cl	37			ug/L			5159981	5115737	2	Standard
[>	Sc	45			ug/L			985565	947588	1	Standard
	Cr	52	0.068		ug/L	0.031	45	12119	12714	2	Standard
	Cr	53	0.027		ug/L	0.003	9	120	166	2	Standard
	Mn	55	37.966		ug/L	0.270	0	3334	826766	1	Standard
[>	Ge-1	72			ug/L			55956	55703	0	KED
	Ni	60	-0.076		ug/L	0.011	14	133	61	17	KED
	Ni	62	-0.038		ug/L	0.034	90	19	13	37	KED
	Cu	63	0.258		ug/L	0.014	5	29	673	5	KED
	Cu	65	0.294		ug/L	0.025	8	11	373	7	KED
	Zn	66	75.063		ug/L	0.390	0	50	26462	0	KED
	Zn	67	70.907		ug/L	2.558	3	14	4078	4	KED
	As	75	-0.003		ug/L	0.003	114	4	3	19	KED
	Y	89			ug/L			510934	500717	1	Standard
	Kr	83			ug/L			56	55	28	Standard
[>	In-1	115			ug/L			24217	23576	4	KED
	Cd	111	0.053		ug/L	0.015	28	1	16	21	KED
	Cd	114	0.047		ug/L	0.013	26	1	36	23	KED
[>	Tb	159			ug/L			1029135	1017638	2	Standard
	Pb	208	0.181		ug/L	0.010	5	172	5459	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18B0369-13

Sample Dil Factor: 50

Comments:

Sample Date/Time: Friday, March 02, 2018 14:48:02

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			28021	24592	0	Standard
Cl	37		ug/L			5159981	5316857	0	Standard
[> Sc	45		ug/L			985565	962053	0	Standard
Cr	52	0.080	ug/L	0.024	29	12119	13097	2	Standard
Cr	53	0.031	ug/L	0.009	29	120	174	9	Standard
Mn	55	24.494	ug/L	0.842	3	3334	542717	3	Standard
[> Ge-1	72		ug/L			55956	57922	1	KED
Ni	60	-0.007	ug/L	0.004	50	133	131	3	KED
Ni	62	0.053	ug/L	0.040	74	19	27	21	KED
Cu	63	0.045	ug/L	0.005	9	29	147	7	KED
Cu	65	0.059	ug/L	0.009	14	11	87	13	KED
Zn	66	0.679	ug/L	0.021	3	50	300	1	KED
Zn	67	0.738	ug/L	0.168	22	14	59	16	KED
As	75	-0.004	ug/L	0.003	74	4	3	20	KED
Y	89		ug/L			510934	512420	2	Standard
Kr	83		ug/L			56	45	2	Standard
[> In-1	115		ug/L			24217	24008	1	KED
Cd	111	0.002	ug/L	0.000	4	1	1		KED
Cd	114	0.002	ug/L	0.001	80	1	2	44	KED
[> Tb	159		ug/L			1029135	1006524	2	Standard
Pb	208	0.149	ug/L	0.009	5	172	4463	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18B0369-15

Sample Dil Factor: 50

Comments:

Sample Date/Time: Friday, March 02, 2018 14:52:25

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	26357	1	Standard
	Cl	37		ug/L			5159981	5300699	0	Standard
[>	Sc	45		ug/L			985565	944917	1	Standard
	Cr	52	0.124	ug/L	0.050	40	12119	13562	6	Standard
	Cr	53	0.030	ug/L	0.002	6	120	169	1	Standard
	Mn	55	24.797	ug/L	0.374	1	3334	539558	1	Standard
[>	Ge-1	72		ug/L			55956	58211	1	KED
	Ni	60	0.007	ug/L	0.016	216	133	146	11	KED
	Ni	62	0.020	ug/L	0.045	228	19	22	30	KED
	Cu	63	0.031	ug/L	0.004	12	29	111	10	KED
	Cu	65	0.033	ug/L	0.008	24	11	53	19	KED
	Zn	66	0.360	ug/L	0.035	9	50	184	8	KED
	Zn	67	0.225	ug/L	0.122	54	14	28	24	KED
	As	75	-0.002	ug/L	0.007	326	4	3	38	KED
	Y	89		ug/L			510934	513234	2	Standard
	Kr	83		ug/L			56	62	15	Standard
[>	In-1	115		ug/L			24217	24626	1	KED
	Cd	111	0.006	ug/L	0.002	27	1	3	17	KED
	Cd	114	0.006	ug/L	0.006	94	1	6	76	KED
[>	Tb	159		ug/L			1029135	1027522	1	Standard
	Pb	208	0.148	ug/L	0.006	3	172	4523	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18B0373-07**

Sample Dil Factor: **100**

Comments:

Sample Date/Time: Friday, March 02, 2018 14:56:49

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	25435	1	Standard
	Cl	37			ug/L			5159981	5276584	1	Standard
[>	Sc	45			ug/L			985565	910691	1	Standard
	Cr	52	0.073		ug/L	0.006	7	12119	12291	2	Standard
	Cr	53	0.037		ug/L	0.004	10	120	176	2	Standard
	Mn	55	0.317		ug/L	0.021	6	3334	9675	2	Standard
[>	Ge-1	72			ug/L			55956	56558	1	KED
	Ni	60	-0.075		ug/L	0.013	16	133	62	18	KED
	Ni	62	-0.022		ug/L	0.019	83	19	15	18	KED
	Cu	63	0.077		ug/L	0.009	11	29	225	9	KED
	Cu	65	0.083		ug/L	0.014	16	11	115	16	KED
	Zn	66	57.880		ug/L	2.153	3	50	20722	2	KED
	Zn	67	51.670		ug/L	0.503	0	14	3020	0	KED
	As	75	0.015		ug/L	0.011	71	4	7	30	KED
	Y	89			ug/L			510934	487313	0	Standard
	Kr	83			ug/L			56	69	8	Standard
[>	In-1	115			ug/L			24217	23807	1	KED
	Cd	111	0.013		ug/L	0.010	75	1	5	57	KED
	Cd	114	0.010		ug/L	0.003	30	1	8	25	KED
[>	Tb	159			ug/L			1029135	987902	1	Standard
	Pb	208	0.155		ug/L	0.003	2	172	4546	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV6

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 15:02:17

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	24648	4	Standard
	Cl	37		ug/L			5159981	5147090	0	Standard
[>	Sc	45		ug/L			985565	929631	1	Standard
	Cr	52	51.288	ug/L	0.659	1	12119	798362	0	Standard
	Cr	53	52.052	ug/L	1.124	2	120	93783	0	Standard
	Mn	55	50.830	ug/L	1.045	2	3334	1084753	1	Standard
[>	Ge-1	72		ug/L			55956	56846	2	KED
	Ni	60	48.506	ug/L	0.896	1	133	46923	0	KED
	Ni	62	50.611	ug/L	1.599	3	19	7725	1	KED
	Cu	63	51.351	ug/L	1.233	2	29	130691	0	KED
	Cu	65	50.445	ug/L	1.647	3	11	63317	0	KED
	Zn	66	49.561	ug/L	0.479	0	50	17846	2	KED
	Zn	67	50.787	ug/L	0.929	1	14	2983	0	KED
	As	75	50.378	ug/L	1.177	2	4	11442	0	KED
	Y	89		ug/L			510934	512589	1	Standard
	Kr	83		ug/L			56	66	2	Standard
[>	In-1	115		ug/L			24217	24098	0	KED
	Cd	111	49.295	ug/L	0.221	0	1	15008	0	KED
	Cd	114	49.664	ug/L	0.657	1	1	38953	1	KED
[>	Tb	159		ug/L			1029135	1019687	1	Standard
	Pb	208	52.157	ug/L	0.605	1	172	1525015	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB6

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 15:09:25

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	24160	1	Standard
	Cl	37			ug/L			5159981	5018271	2	Standard
[>	Sc	45			ug/L			985565	942843	2	Standard
	Cr	52	-0.003		ug/L	0.004	123	12119	11545	2	Standard
	Cr	53	0.004		ug/L	0.002	58	120	122	2	Standard
	Mn	55	-0.100		ug/L	0.002	2	3334	1020	1	Standard
[>	Ge-1	72			ug/L			55956	56723	1	KED
	Ni	60	-0.102		ug/L	0.009	8	133	37	24	KED
	Ni	62	-0.069		ug/L	0.019	27	19	8	32	KED
	Cu	63	-0.003		ug/L	0.002	67	29	22	21	KED
	Cu	65	0.002		ug/L	0.004	198	11	13	34	KED
	Zn	66	0.003		ug/L	0.025	723	50	52	16	KED
	Zn	67	-0.080		ug/L	0.018	22	14	10	10	KED
	As	75	0.004		ug/L	0.006	143	4	5	24	KED
	Y	89			ug/L			510934	499990	1	Standard
	Kr	83			ug/L			56	65	16	Standard
[>	In-1	115			ug/L			24217	24504	1	KED
	Cd	111	0.006		ug/L	0.005	77	1	3	45	KED
	Cd	114	0.005		ug/L	0.007	139	1	4	107	KED
[>	Tb	159			ug/L			1029135	977643	2	Standard
	Pb	208	-0.001		ug/L	0.000	44	172	133	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18C0002-03**

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 15:13:49

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	46475	0	Standard
	Cl	37			ug/L			5159981	5069896	0	Standard
[>	Sc	45			ug/L			985565	957799	1	Standard
	Cr	52	3.166		ug/L	0.042	1	12119	61838	2	Standard
	Cr	53	3.484		ug/L	0.066	1	120	6576	1	Standard
	Mn	55	19.250		ug/L	0.185	0	3334	425318	1	Standard
[>	Ge-1	72			ug/L			55956	56795	0	KED
	Ni	60	2.672		ug/L	0.133	4	133	2712	5	KED
	Ni	62	2.664		ug/L	0.222	8	19	424	7	KED
	Cu	63	29.214		ug/L	0.301	1	29	74322	0	KED
	Cu	65	29.630		ug/L	0.520	1	11	37179	1	KED
	Zn	66	77.905		ug/L	2.198	2	50	27998	2	KED
	Zn	67	74.100		ug/L	1.497	2	14	4344	2	KED
	As	75	0.624		ug/L	0.032	5	4	145	4	KED
	Y	89			ug/L			510934	628422	5	Standard
	Kr	83			ug/L			56	62	15	Standard
[>	In-1	115			ug/L			24217	24045	2	KED
	Cd	111	0.342		ug/L	0.046	13	1	105	12	KED
	Cd	114	0.289		ug/L	0.022	7	1	226	4	KED
[>	Tb	159			ug/L			1029135	1004460	1	Standard
	Pb	208	14.675		ug/L	0.307	2	172	422728	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18C0002-04**

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 15:18:13

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	50852	3	Standard
	Cl	37			ug/L			5159981	5049738	0	Standard
[>	Sc	45			ug/L			985565	1020227	1	Standard
	Cr	52	6.619		ug/L	0.151	2	12119	123993	0	Standard
	Cr	53	6.968		ug/L	0.253	3	120	13885	2	Standard
	Mn	55	23.131		ug/L	0.344	1	3334	543668	1	Standard
[>	Ge-1	72			ug/L			55956	58696	2	KED
	Ni	60	4.569		ug/L	0.013	0	133	4692	1	KED
	Ni	62	4.692		ug/L	0.052	1	19	758	2	KED
	Cu	63	47.634		ug/L	0.918	1	29	125209	1	KED
	Cu	65	47.789		ug/L	1.332	2	11	61946	0	KED
	Zn	66	104.125		ug/L	3.893	3	50	38643	2	KED
	Zn	67	98.282		ug/L	0.767	0	14	5949	1	KED
	As	75	1.026		ug/L	0.410	39	4	244	37	KED
	Y	89			ug/L			510934	606622	3	Standard
	Kr	83			ug/L			56	47	6	Standard
[>	In-1	115			ug/L			24217	24603	0	KED
	Cd	111	0.401		ug/L	0.067	16	1	125	15	KED
	Cd	114	0.383		ug/L	0.049	12	1	307	12	KED
[>	Tb	159			ug/L			1029135	1066114	2	Standard
	Pb	208	21.183		ug/L	0.564	2	172	647485	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18C0010-01**

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 15:22:36

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	37681	2	Standard
	Cl	37		ug/L			5159981	5070126	0	Standard
[>	Sc	45		ug/L			985565	961567	3	Standard
	Cr	52	1.383	ug/L	0.069	4	12119	33764	1	Standard
	Cr	53	1.698	ug/L	0.021	1	120	3280	4	Standard
	Mn	55	23.423	ug/L	1.202	5	3334	518342	2	Standard
[>	Ge-1	72		ug/L			55956	60011	0	KED
	Ni	60	1.394	ug/L	0.031	2	133	1563	1	KED
	Ni	62	1.413	ug/L	0.170	12	19	247	10	KED
	Cu	63	10.317	ug/L	0.409	3	29	27753	3	KED
	Cu	65	10.599	ug/L	0.368	3	11	14058	2	KED
	Zn	66	155.125	ug/L	1.427	0	50	58856	0	KED
	Zn	67	142.826	ug/L	3.755	2	14	8833	3	KED
	As	75	0.452	ug/L	0.003	0	4	112	1	KED
	Y	89		ug/L			510934	516993	3	Standard
	Kr	83		ug/L			56	50	14	Standard
[>	In-1	115		ug/L			24217	24788	2	KED
	Cd	111	0.090	ug/L	0.006	6	1	29	5	KED
	Cd	114	0.101	ug/L	0.017	16	1	82	14	KED
[>	Tb	159		ug/L			1029135	1038197	0	Standard
	Pb	208	2.748	ug/L	0.035	1	172	81984	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18C0010-02**

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 15:26:59

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	37945	2	Standard
	Cl	37		ug/L			5159981	6725805	2	Standard
[>	Sc	45		ug/L			985565	964785	3	Standard
	Cr	52	3.027	ug/L	0.096	3	12119	60041	1	Standard
	Cr	53	3.903	ug/L	0.250	6	120	7398	3	Standard
	Mn	55	55.428	ug/L	0.896	1	3334	1227119	2	Standard
[>	Ge-1	72		ug/L			55956	58561	1	KED
	Ni	60	2.234	ug/L	0.025	1	133	2360	2	KED
	Ni	62	2.290	ug/L	0.142	6	19	379	4	KED
	Cu	63	14.254	ug/L	0.267	1	29	37400	0	KED
	Cu	65	14.438	ug/L	0.442	3	11	18685	3	KED
	Zn	66	337.823	ug/L	6.237	1	50	124997	0	KED
	Zn	67	310.179	ug/L	9.109	2	14	18694	1	KED
	As	75	0.556	ug/L	0.047	8	4	134	8	KED
	Y	89		ug/L			510934	524084	1	Standard
	Kr	83		ug/L			56	69	20	Standard
[>	In-1	115		ug/L			24217	24900	1	KED
	Cd	111	0.168	ug/L	0.030	17	1	53	16	KED
	Cd	114	0.155	ug/L	0.019	11	1	127	12	KED
[>	Tb	159		ug/L			1029135	1027527	4	Standard
	Pb	208	6.465	ug/L	0.290	4	172	190354	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18C0010-04**

Sample Dil Factor: **5**

Comments:

Sample Date/Time: **Friday, March 02, 2018 15:31:23**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	28151	1	Standard
	Cl	37			ug/L			5159981	5067493	0	Standard
[>	Sc	45			ug/L			985565	953652	3	Standard
	Cr	52	1.676		ug/L	0.104	6	12119	38068	0	Standard
	Cr	53	1.903		ug/L	0.093	4	120	3626	1	Standard
	Mn	55	24.374		ug/L	0.731	2	3334	535047	1	Standard
[>	Ge-1	72			ug/L			55956	59644	1	KED
	Ni	60	1.039		ug/L	0.079	7	133	1193	4	KED
	Ni	62	1.127		ug/L	0.304	26	19	200	23	KED
	Cu	63	4.663		ug/L	0.273	5	29	12488	6	KED
	Cu	65	4.741		ug/L	0.037	0	11	6257	1	KED
	Zn	66	100.502		ug/L	2.494	2	50	37908	1	KED
	Zn	67	94.485		ug/L	4.132	4	14	5809	2	KED
	As	75	0.218		ug/L	0.030	13	4	56	14	KED
	Y	89			ug/L			510934	510909	3	Standard
	Kr	83			ug/L			56	51	3	Standard
[>	In-1	115			ug/L			24217	23257	7	KED
	Cd	111	0.058		ug/L	0.030	52	1	17	43	KED
	Cd	114	0.078		ug/L	0.015	19	1	59	14	KED
[>	Tb	159			ug/L			1029135	1021496	2	Standard
	Pb	208	2.537		ug/L	0.117	4	172	74408	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18C0010-06

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 15:35:46

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			28021	37291	4	Standard
Cl	37		ug/L			5159981	9190682	1	Standard
[> Sc	45		ug/L			985565	952758	0	Standard
Cr	52	1.906	ug/L	0.030	1	12119	41687	1	Standard
Cr	53	4.711	ug/L	0.037	0	120	8807	0	Standard
Mn	55	23.030	ug/L	0.590	2	3334	505452	1	Standard
[> Ge-1	72		ug/L			55956	56420	0	KED
Ni	60	1.064	ug/L	0.050	4	133	1153	3	KED
Ni	62	1.217	ug/L	0.060	4	19	203	3	KED
Cu	63	7.097	ug/L	0.098	1	29	17957	0	KED
Cu	65	6.990	ug/L	0.036	0	11	8722	0	KED
Zn	66	104.714	ug/L	1.603	1	50	37368	0	KED
Zn	67	100.371	ug/L	2.814	2	14	5840	3	KED
As	75	0.453	ug/L	0.015	3	4	106	2	KED
Y	89		ug/L			510934	517975	2	Standard
Kr	83		ug/L			56	66	8	Standard
[> In-1	115		ug/L			24217	24158	0	KED
Cd	111	0.158	ug/L	0.021	13	1	49	12	KED
Cd	114	0.175	ug/L	0.009	4	1	138	5	KED
[> Tb	159		ug/L			1029135	1033420	0	Standard
Pb	208	2.863	ug/L	0.077	2	172	85017	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18C0010-07**

Sample Dil Factor: **5**

Comments:

Sample Date/Time: **Friday, March 02, 2018 15:40:09**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	27863	1	Standard
	Cl	37			ug/L			5159981	6943227	2	Standard
[>	Sc	45			ug/L			985565	958040	0	Standard
	Cr	52	2.117		ug/L	0.026	1	12119	45259	0	Standard
	Cr	53	3.534		ug/L	0.033	0	120	6672	0	Standard
	Mn	55	26.754		ug/L	0.051	0	3334	590019	0	Standard
[>	Ge-1	72			ug/L			55956	59382	0	KED
	Ni	60	1.399		ug/L	0.041	2	133	1551	2	KED
	Ni	62	1.548		ug/L	0.230	14	19	266	13	KED
	Cu	63	5.814		ug/L	0.116	1	29	15490	2	KED
	Cu	65	5.859		ug/L	0.016	0	11	7696	0	KED
	Zn	66	112.908		ug/L	0.936	0	50	42405	0	KED
	Zn	67	109.269		ug/L	2.731	2	14	6691	3	KED
	As	75	0.270		ug/L	0.020	7	4	68	6	KED
	Y	89			ug/L			510934	529306	2	Standard
	Kr	83			ug/L			56	50	5	Standard
[>	In-1	115			ug/L			24217	24662	0	KED
	Cd	111	0.050		ug/L	0.006	12	1	16	11	KED
	Cd	114	0.062		ug/L	0.004	5	1	50	4	KED
[>	Tb	159			ug/L			1029135	1020659	0	Standard
	Pb	208	3.120		ug/L	0.075	2	172	91482	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18C0010-08

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 15:44:32

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	42609	4	Standard
	Cl	37		ug/L			5159981	19510660	3	Standard
[>	Sc	45		ug/L			985565	945234	0	Standard
	Cr	52	3.363	ug/L	0.090	2	12119	64096	1	Standard
	Cr	53	17.478	ug/L	0.134	0	120	32102	0	Standard
	Mn	55	57.982	ug/L	1.974	3	3334	1257767	2	Standard
[>	Ge-1	72		ug/L			55956	54470	0	KED
	Ni	60	2.676	ug/L	0.077	2	133	2604	2	KED
	Ni	62	3.170	ug/L	0.262	8	19	481	7	KED
	Cu	63	12.771	ug/L	0.203	1	29	31176	1	KED
	Cu	65	12.726	ug/L	0.344	2	11	15321	2	KED
	Zn	66	302.803	ug/L	0.870	0	50	104239	0	KED
	Zn	67	283.359	ug/L	1.459	0	14	15891	0	KED
	As	75	0.619	ug/L	0.019	3	4	138	2	KED
	Y	89		ug/L			510934	490400	1	Standard
	Kr	83		ug/L			56	232	5	Standard
[>	In-1	115		ug/L			24217	23290	2	KED
	Cd	111	0.122	ug/L	0.022	18	1	37	17	KED
	Cd	114	0.115	ug/L	0.009	8	1	87	5	KED
[>	Tb	159		ug/L			1029135	964477	3	Standard
	Pb	208	6.243	ug/L	0.173	2	172	172731	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18C0010-09

Sample Dil Factor: DEL

Comments:

Sample Date/Time: Friday, March 02, 2018 15:48:56

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			28021	38125	1	Standard
Cl	37		ug/L			5159981	197568994	0	Standard
[> Sc	45		ug/L			985565	491400	3	Standard
Cr	52	4.453	ug/L	0.155	3	12119	42138	1	Standard
Cr	53	149.559	ug/L	4.350	2	120	142273	1	Standard
Mn	55	43.052	ug/L	1.835	4	3334	485551	1	Standard
[> Ge-1	72		ug/L			55956	22619	0	KED
Ni	60	1.541	ug/L	0.071	4	133	645	4	KED
Ni	62	12.212	ug/L	0.216	1	19	747	1	KED
Cu	63	9.097	ug/L	0.138	1	29	9225	1	KED
Cu	65	6.228	ug/L	0.259	4	11	3115	3	KED
Zn	66	114.055	ug/L	0.954	0	50	16316	0	KED
Zn	67	107.518	ug/L	3.919	3	14	2507	3	KED
[As	75	1.791	ug/L	0.172	9	4	163	9	KED
Y	89		ug/L			510934	260692	1	Standard
Kr	83		ug/L			56	125042	1	Standard
[> In-1	115		ug/L			24217	10591	0	KED
Cd	111	0.136	ug/L	0.042	30	1	18	28	KED
[Cd	114	0.097	ug/L	0.034	35	1	33	35	KED
[> Tb	159		ug/L			1029135	394329	4	Standard
[Pb	208	2.875	ug/L	0.125	4	172	32526	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18C0010-10

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 15:53:19

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			28021	35431	3	Standard
Cl	37		ug/L			5159981	8063904	0	Standard
[> Sc	45		ug/L			985565	941980	0	Standard
Cr	52	2.634	ug/L	0.021	0	12119	52540	0	Standard
Cr	53	13.680	ug/L	0.277	2	120	25063	1	Standard
Mn	55	45.719	ug/L	0.470	1	3334	989089	0	Standard
[> Ge-1	72		ug/L			55956	63117	2	KED
Ni	60	1.730	ug/L	0.082	4	133	2003	3	KED
Ni	62	2.695	ug/L	0.233	8	19	477	9	KED
Cu	63	12.707	ug/L	0.436	3	29	35927	1	KED
Cu	65	12.624	ug/L	0.265	2	11	17607	1	KED
Zn	66	292.466	ug/L	5.077	1	50	116636	0	KED
Zn	67	279.505	ug/L	8.548	3	14	18160	2	KED
As	75	0.612	ug/L	0.060	9	4	159	7	KED
Y	89		ug/L			510934	547570	2	Standard
Kr	83		ug/L			56	212	32	Standard
[> In-1	115		ug/L			24217	26992	3	KED
Cd	111	0.123	ug/L	0.016	13	1	43	11	KED
Cd	114	0.124	ug/L	0.013	10	1	110	8	KED
[> Tb	159		ug/L			1029135	973406	1	Standard
Pb	208	5.384	ug/L	0.111	2	172	150414	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV7

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 15:58:48

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	19928	1	Standard
	Cl	37		ug/L			5159981	4686750	0	Standard
[>	Sc	45		ug/L			985565	892386	3	Standard
	Cr	52	51.333	ug/L	1.979	3	12119	766496	0	Standard
	Cr	53	55.583	ug/L	1.697	3	120	96084	0	Standard
	Mn	55	52.184	ug/L	3.574	6	3334	1067516	3	Standard
[>	Ge-1	72		ug/L			55956	65292	2	KED
	Ni	60	48.464	ug/L	0.755	1	133	53856	1	KED
	Ni	62	49.231	ug/L	0.768	1	19	8634	1	KED
	Cu	63	48.451	ug/L	1.020	2	29	141649	1	KED
	Cu	65	49.127	ug/L	1.918	3	11	70826	2	KED
	Zn	66	48.805	ug/L	2.445	5	50	20172	2	KED
	Zn	67	50.017	ug/L	2.066	4	14	3374	1	KED
	As	75	49.828	ug/L	1.327	2	4	12999	1	KED
	Y	89		ug/L			510934	512048	0	Standard
	Kr	83		ug/L			56	94	28	Standard
[>	In-1	115		ug/L			24217	26973	1	KED
	Cd	111	47.771	ug/L	0.974	2	1	16275	0	KED
	Cd	114	47.209	ug/L	0.749	1	1	41440	1	KED
[>	Tb	159		ug/L			1029135	974097	1	Standard
	Pb	208	49.206	ug/L	0.517	1	172	1374436	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB7

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 16:05:56

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	19398	5	Standard
	Cl	37		ug/L			5159981	4468781	2	Standard
[>	Sc	45		ug/L			985565	852417	1	Standard
	Cr	52	0.037	ug/L	0.017	45	12119	11007	1	Standard
	Cr	53	2.580	ug/L	0.050	1	120	4362	1	Standard
	Mn	55	-0.110	ug/L	0.001	0	3334	738	1	Standard
[>	Ge-1	72		ug/L			55956	64571	2	KED
	Ni	60	-0.131	ug/L	0.001	0	133	10	10	KED
	Ni	62	-0.014	ug/L	0.022	162	19	19	22	KED
	Cu	63	0.003	ug/L	0.002	76	29	41	14	KED
	Cu	65	0.000	ug/L	0.003	5594	11	13	37	KED
	Zn	66	-0.022	ug/L	0.015	68	50	48	11	KED
	Zn	67	-0.100	ug/L	0.037	36	14	10	21	KED
	As	75	-0.004	ug/L	0.009	210	4	3	62	KED
	Y	89		ug/L			510934	513522	6	Standard
	Kr	83		ug/L			56	56	7	Standard
[>	In-1	115		ug/L			24217	26694	1	KED
	Cd	111	0.001	ug/L	0.003	185	1	1	50	KED
	Cd	114	0.002	ug/L	0.001	62	1	3	35	KED
[>	Tb	159		ug/L			1029135	973962	0	Standard
	Pb	208	0.001	ug/L	0.001	112	172	181	12	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18C0010-11**

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 16:10:20

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	37944	4	Standard
	Cl	37			ug/L			5159981	12275422	3	Standard
[>	Sc	45			ug/L			985565	945706	2	Standard
	Cr	52	3.079		ug/L	0.081	2	12119	59678	0	Standard
	Cr	53	19.790		ug/L	0.199	1	120	36350	1	Standard
	Mn	55	35.628		ug/L	0.667	1	3334	774354	0	Standard
[>	Ge-1	72			ug/L			55956	60783	0	KED
	Ni	60	1.171		ug/L	0.007	0	133	1353	0	KED
	Ni	62	1.506		ug/L	0.085	5	19	266	5	KED
	Cu	63	9.460		ug/L	0.262	2	29	25776	1	KED
	Cu	65	9.196		ug/L	0.109	1	11	12358	0	KED
	Zn	66	104.805		ug/L	1.234	1	50	40298	2	KED
	Zn	67	101.292		ug/L	1.760	1	14	6348	1	KED
	As	75	2.018		ug/L	0.017	0	4	494	0	KED
	Y	89			ug/L			510934	522337	2	Standard
	Kr	83			ug/L			56	103	16	Standard
[>	In-1	115			ug/L			24217	25590	2	KED
	Cd	111	0.086		ug/L	0.023	26	1	29	27	KED
	Cd	114	0.079		ug/L	0.028	35	1	66	35	KED
[>	Tb	159			ug/L			1029135	975513	0	Standard
	Pb	208	2.978		ug/L	0.084	2	172	83450	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18C0013-01**

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 16:14:43

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			28021	32972	2	Standard
Cl	37		ug/L			5159981	5056745	0	Standard
[> Sc	45		ug/L			985565	919043	1	Standard
Cr	52	2.297	ug/L	0.073	3	12119	46139	1	Standard
Cr	53	4.469	ug/L	0.080	1	120	8063	0	Standard
Mn	55	40.164	ug/L	0.945	2	3334	848053	1	Standard
[> Ge-1	72		ug/L			55956	64730	1	KED
Ni	60	1.765	ug/L	0.093	5	133	2093	3	KED
Ni	62	1.888	ug/L	0.252	13	19	349	11	KED
Cu	63	16.616	ug/L	0.653	3	29	48181	2	KED
Cu	65	16.396	ug/L	0.124	0	11	23455	1	KED
Zn	66	244.388	ug/L	1.583	0	50	99984	0	KED
Zn	67	227.674	ug/L	7.577	3	14	15174	2	KED
As	75	0.937	ug/L	0.025	2	4	247	2	KED
Y	89		ug/L			510934	533595	3	Standard
Kr	83		ug/L			56	73	12	Standard
[> In-1	115		ug/L			24217	27528	2	KED
Cd	111	0.219	ug/L	0.035	15	1	77	14	KED
Cd	114	0.200	ug/L	0.026	12	1	180	10	KED
[> Tb	159		ug/L			1029135	1006038	1	Standard
Pb	208	4.363	ug/L	0.111	2	172	126001	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18C0013-03**

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 16:19:07

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	37269	2	Standard
	Cl	37		ug/L			5159981	7705318	0	Standard
[>	Sc	45		ug/L			985565	922318	2	Standard
	Cr	52	4.960	ug/L	0.237	4	12119	86802	1	Standard
	Cr	53	10.101	ug/L	0.267	2	120	18142	0	Standard
	Mn	55	100.376	ug/L	1.916	1	3334	2121910	0	Standard
[>	Ge-1	72		ug/L			55956	61007	3	KED
	Ni	60	3.825	ug/L	0.085	2	133	4104	1	KED
	Ni	62	4.062	ug/L	0.092	2	19	685	4	KED
	Cu	63	23.574	ug/L	1.337	5	29	64351	2	KED
	Cu	65	24.306	ug/L	0.519	2	11	32750	1	KED
	Zn	66	516.490	ug/L	21.782	4	50	198910	0	KED
	Zn	67	480.174	ug/L	10.033	2	14	30135	1	KED
	As	75	0.761	ug/L	0.042	5	4	190	2	KED
	Y	89		ug/L			510934	535559	0	Standard
	Kr	83		ug/L			56	74	2	Standard
[>	In-1	115		ug/L			24217	26939	3	KED
	Cd	111	0.235	ug/L	0.037	15	1	81	15	KED
	Cd	114	0.226	ug/L	0.021	9	1	199	10	KED
[>	Tb	159		ug/L			1029135	970787	2	Standard
	Pb	208	13.477	ug/L	0.337	2	172	375190	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18C0013-05**

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 16:23:30

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	32799	1	Standard
	Cl	37		ug/L			5159981	6449232	2	Standard
[>	Sc	45		ug/L			985565	897920	1	Standard
	Cr	52	2.991	ug/L	0.110	3	12119	55353	1	Standard
	Cr	53	6.426	ug/L	0.104	1	120	11279	0	Standard
	Mn	55	57.979	ug/L	1.144	1	3334	1194656	0	Standard
[>	Ge-1	72		ug/L			55956	62180	1	KED
	Ni	60	2.091	ug/L	0.021	1	133	2355	0	KED
	Ni	62	2.238	ug/L	0.292	13	19	393	10	KED
	Cu	63	13.278	ug/L	0.138	1	29	36998	1	KED
	Cu	65	13.914	ug/L	0.120	0	11	19120	1	KED
	Zn	66	322.650	ug/L	6.837	2	50	126757	0	KED
	Zn	67	301.799	ug/L	11.171	3	14	19313	2	KED
	As	75	0.640	ug/L	0.029	4	4	163	5	KED
	Y	89		ug/L			510934	504216	2	Standard
	Kr	83		ug/L			56	60	4	Standard
[>	In-1	115		ug/L			24217	26721	2	KED
	Cd	111	0.158	ug/L	0.011	6	1	54	5	KED
	Cd	114	0.150	ug/L	0.017	11	1	131	9	KED
[>	Tb	159		ug/L			1029135	971400	1	Standard
	Pb	208	6.334	ug/L	0.011	0	172	176581	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18C0013-07**

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 16:27:53

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	51293	4	Standard
	Cl	37			ug/L			5159981	26388205	5	Standard
[>	Sc	45			ug/L			985565	1016981	2	Standard
	Cr	52	0.971		ug/L	0.068	6	12119	28797	2	Standard
	Cr	53	29.843		ug/L	0.817	2	120	58858	0	Standard
	Mn	55	161.780		ug/L	3.777	2	3334	3768606	1	Standard
[>	Ge-1	72			ug/L			55956	54130	0	KED
	Ni	60	1.637		ug/L	0.056	3	133	1633	2	KED
	Ni	62	2.054		ug/L	0.292	14	19	316	12	KED
	Cu	63	4.393		ug/L	0.054	1	29	10675	1	KED
	Cu	65	4.350		ug/L	0.085	1	11	5211	1	KED
	Zn	66	162.549		ug/L	3.831	2	50	55622	1	KED
	Zn	67	156.293		ug/L	4.534	2	14	8715	2	KED
	As	75	0.861		ug/L	0.079	9	4	190	8	KED
	Y	89			ug/L			510934	491321	0	Standard
	Kr	83			ug/L			56	213	4	Standard
[>	In-1	115			ug/L			24217	22936	1	KED
	Cd	111	0.052		ug/L	0.007	13	1	16	11	KED
	Cd	114	0.060		ug/L	0.011	17	1	46	18	KED
[>	Tb	159			ug/L			1029135	934095	1	Standard
	Pb	208	0.364		ug/L	0.004	1	172	9912	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: **18B0375-01**

Sample Dil Factor: **10**

Comments:

Sample Date/Time: Friday, March 02, 2018 16:32:17

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	25042	5	Standard
	Cl	37		ug/L			5159981	4978099	1	Standard
[>	Sc	45		ug/L			985565	897173	3	Standard
	Cr	52	0.268	ug/L	0.065	24	12119	14975	3	Standard
	Cr	53	1.692	ug/L	0.083	4	120	3044	1	Standard
	Mn	55	23.496	ug/L	1.271	5	3334	485010	2	Standard
[>	Ge-1	72		ug/L			55956	62914	0	KED
	Ni	60	0.085	ug/L	0.014	15	133	241	5	KED
	Ni	62	0.197	ug/L	0.025	12	19	54	8	KED
	Cu	63	1.645	ug/L	0.066	4	29	4668	4	KED
	Cu	65	1.636	ug/L	0.047	2	11	2286	2	KED
	Zn	66	52.516	ug/L	0.648	1	50	20927	0	KED
	Zn	67	49.118	ug/L	1.265	2	14	3195	2	KED
	As	75	0.079	ug/L	0.018	23	4	24	18	KED
	Y	89		ug/L			510934	487472	2	Standard
	Kr	83		ug/L			56	60	7	Standard
[>	In-1	115		ug/L			24217	25861	5	KED
	Cd	111	0.037	ug/L	0.003	7	1	13	7	KED
	Cd	114	0.024	ug/L	0.006	26	1	21	27	KED
[>	Tb	159		ug/L			1029135	961261	3	Standard
	Pb	208	0.352	ug/L	0.026	7	172	9848	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 18B0371-01

Sample Dil Factor: 5

Comments:

Sample Date/Time: Friday, March 02, 2018 16:36:40

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			28021	128593	2	Standard
Cl	37		ug/L			5159981	5201362	0	Standard
[> Sc	45		ug/L			985565	915635	2	Standard
Cr	52	1025.791	ug/L	38.989	3	12119	15509254	2	Standard
Cr	53	1010.562	ug/L	41.455	4	120	1790719	2	Standard
Mn	55	226.481	ug/L	4.838	2	3334	4750879	3	Standard
[> Ge-1	72		ug/L			55956	59029	0	KED
Ni	60	9.125	ug/L	0.209	2	133	9283	1	KED
Ni	62	9.196	ug/L	0.201	2	19	1474	3	KED
Cu	63	19.071	ug/L	0.349	1	29	50435	1	KED
Cu	65	18.837	ug/L	0.407	2	11	24574	2	KED
Zn	66	816.580	ug/L	12.096	1	50	304518	0	KED
Zn	67	769.071	ug/L	13.314	1	14	46718	2	KED
[As	75	0.387	ug/L	0.008	2	4	95	2	KED
Y	89		ug/L			510934	494703	3	Standard
Kr	83		ug/L			56	66	7	Standard
[> In-1	115		ug/L			24217	24927	0	KED
Cd	111	3.163	ug/L	0.117	3	1	997	3	KED
[Cd	114	3.150	ug/L	0.077	2	1	2557	2	KED
[> Tb	159		ug/L			1029135	962289	2	Standard
[Pb	208	0.752	ug/L	0.037	4	172	20882	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV8

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 16:43:48

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			28021	22282	1	Standard
Cl	37		ug/L			5159981	5049810	0	Standard
[> Sc	45		ug/L			985565	885406	1	Standard
Cr	52	53.008	ug/L	0.827	1	12119	785483	0	Standard
Cr	53	53.940	ug/L	0.918	1	120	92576	2	Standard
Mn	55	52.139	ug/L	0.724	1	3334	1059680	0	Standard
[> Ge-1	72		ug/L			55956	61045	2	KED
Ni	60	48.781	ug/L	2.511	5	133	50657	3	KED
Ni	62	48.322	ug/L	1.456	3	19	7922	1	KED
Cu	63	49.763	ug/L	2.418	4	29	135941	2	KED
Cu	65	49.272	ug/L	2.125	4	11	66398	1	KED
Zn	66	50.565	ug/L	1.883	3	50	19544	2	KED
Zn	67	50.310	ug/L	1.432	2	14	3174	2	KED
As	75	50.506	ug/L	1.727	3	4	12316	1	KED
Y	89		ug/L			510934	494547	1	Standard
Kr	83		ug/L			56	62	37	Standard
[> In-1	115		ug/L			24217	22548	15	KED
Cd	111	56.301	ug/L	7.648	13	1	15817	1	KED
Cd	114	56.560	ug/L	8.654	15	1	40862	1	KED
[> Tb	159		ug/L			1029135	980179	3	Standard
Pb	208	51.306	ug/L	1.704	3	172	1441120	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB8

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 16:50:56

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	21443	2	Standard
	Cl	37		ug/L			5159981	5048314	0	Standard
[>	Sc	45		ug/L			985565	907197	1	Standard
	Cr	52	0.008	ug/L	0.025	334	12119	11265	2	Standard
	Cr	53	0.824	ug/L	0.013	1	120	1557	2	Standard
	Mn	55	-0.118	ug/L	0.001	0	3334	613	3	Standard
[>	Ge-1	72		ug/L			55956	61465	0	KED
	Ni	60	-0.134	ug/L	0.001	0	133	6	15	KED
	Ni	62	-0.042	ug/L	0.036	84	19	13	41	KED
	Cu	63	0.004	ug/L	0.004	122	29	41	28	KED
	Cu	65	0.007	ug/L	0.002	23	11	21	10	KED
	Zn	66	0.032	ug/L	0.042	132	50	67	23	KED
	Zn	67	-0.083	ug/L	0.035	42	14	10	20	KED
	As	75	-0.004	ug/L	0.009	203	4	3	60	KED
	Y	89		ug/L			510934	488054	2	Standard
	Kr	83		ug/L			56	57	15	Standard
[>	In-1	115		ug/L			24217	26509	0	KED
	Cd	111	0.003	ug/L	0.002	49	1	2	21	KED
	Cd	114	0.001	ug/L	0.003	231	1	2	115	KED
[>	Tb	159		ug/L			1029135	989888	3	Standard
	Pb	208	0.000	ug/L	0.000	143	172	170	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 16:55:20

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28021	26211	1	Standard
	Cl	37		ug/L			5159981	5077018	1	Standard
[>	Sc	45		ug/L			985565	1021858	1	Standard
	Cr	52	0.039	ug/L	0.024	61	12119	13213	2	Standard
	Cr	53	0.650	ug/L	0.015	2	120	1409	1	Standard
	Mn	55	-0.096	ug/L	0.003	3	3334	1209	6	Standard
[>	Ge-1	72		ug/L			55956	65342	1	KED
	Ni	60	-0.130	ug/L	0.006	4	133	12	48	KED
	Ni	62	-0.062	ug/L	0.018	29	19	11	28	KED
	Cu	63	0.006	ug/L	0.003	43	29	52	16	KED
	Cu	65	0.003	ug/L	0.003	76	11	18	21	KED
	Zn	66	-0.026	ug/L	0.026	98	50	47	21	KED
	Zn	67	-0.055	ug/L	0.059	107	14	13	28	KED
	As	75	0.002	ug/L	0.006	302	4	5	30	KED
	Y	89		ug/L			510934	564093	8	Standard
	Kr	83		ug/L			56	45	12	Standard
[>	In-1	115		ug/L			24217	28447	2	KED
	Cd	111	0.005	ug/L	0.004	89	1	3	45	KED
	Cd	114	0.001	ug/L	0.002	209	1	2	92	KED
[>	Tb	159		ug/L			1029135	1080611	0	Standard
	Pb	208	0.004	ug/L	0.001	20	172	304	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 16:59:44

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	25417	5	Standard
	Cl	37			ug/L			5159981	5031436	2	Standard
[>	Sc	45			ug/L			985565	1001095	2	Standard
	Cr	52	0.060		ug/L	0.034	56	12119	13299	1	Standard
	Cr	53	0.608		ug/L	0.010	1	120	1301	3	Standard
	Mn	55	-0.097		ug/L	0.002	1	3334	1160	1	Standard
[>	Ge-1	72			ug/L			55956	65726	0	KED
	Ni	60	-0.127		ug/L	0.007	5	133	15	48	KED
	Ni	62	-0.077		ug/L	0.006	8	19	8	12	KED
	Cu	63	0.007		ug/L	0.001	20	29	53	7	KED
	Cu	65	0.008		ug/L	0.005	61	11	24	27	KED
	Zn	66	-0.009		ug/L	0.020	218	50	55	15	KED
	Zn	67	-0.141		ug/L	0.028	19	14	7	25	KED
	As	75	-0.010		ug/L	0.004	35	4	2	40	KED
	Y	89			ug/L			510934	554768	3	Standard
	Kr	83			ug/L			56	48	15	Standard
[>	In-1	115			ug/L			24217	28664	1	KED
	Cd	111	-0.001		ug/L	0.003	506	1	1	86	KED
	Cd	114	0.001		ug/L	0.001	122	1	2	49	KED
[>	Tb	159			ug/L			1029135	1051094	1	Standard
	Pb	208	0.004		ug/L	0.001	14	172	284	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 17:04:08

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	26198	2	Standard
	Cl	37			ug/L			5159981	5080328	0	Standard
[>	Sc	45			ug/L			985565	1029603	0	Standard
	Cr	52	0.003		ug/L	0.026	840	12119	12710	2	Standard
	Cr	53	0.551		ug/L	0.004	0	120	1223	1	Standard
	Mn	55	-0.098		ug/L	0.000	0	3334	1169	1	Standard
[>	Ge-1	72			ug/L			55956	66200	1	KED
	Ni	60	-0.125		ug/L	0.003	2	133	18	15	KED
	Ni	62	-0.066		ug/L	0.007	9	19	10	10	KED
	Cu	63	0.004		ug/L	0.004	105	29	45	24	KED
	Cu	65	0.009		ug/L	0.002	23	11	27	10	KED
	Zn	66	-0.024		ug/L	0.035	148	50	49	30	KED
	Zn	67	-0.123		ug/L	0.017	13	14	8	12	KED
	As	75	-0.004		ug/L	0.005	132	4	4	29	KED
	Y	89			ug/L			510934	574445	3	Standard
	Kr	83			ug/L			56	48	21	Standard
[>	In-1	115			ug/L			24217	29077	2	KED
	Cd	111	0.004		ug/L	0.003	71	1	2	33	KED
	Cd	114	0.002		ug/L	0.002	81	1	3	51	KED
[>	Tb	159			ug/L			1029135	1053127	0	Standard
	Pb	208	0.003		ug/L	0.000	3	172	275	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 17:08:31

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	23185	2	Standard
	Cl	37			ug/L			5159981	4957768	0	Standard
[>	Sc	45			ug/L			985565	844057	2	Standard
	Cr	52	0.038		ug/L	0.025	66	12119	10899	3	Standard
	Cr	53	0.603		ug/L	0.026	4	120	1087	1	Standard
	Mn	55	-0.126		ug/L	0.001	1	3334	412	5	Standard
[>	Ge-1	72			ug/L			55956	60596	1	KED
	Ni	60	-0.133		ug/L	0.005	3	133	8	58	KED
	Ni	62	-0.057		ug/L	0.012	22	19	11	16	KED
	Cu	63	-0.001		ug/L	0.002	173	29	27	21	KED
	Cu	65	-0.002		ug/L	0.002	102	11	10	21	KED
	Zn	66	0.037		ug/L	0.011	28	50	68	4	KED
	Zn	67	-0.029		ug/L	0.093	317	14	13	41	KED
	As	75	-0.003		ug/L	0.008	297	4	3	48	KED
	Y	89			ug/L			510934	463513	2	Standard
	Kr	83			ug/L			56	52	36	Standard
[>	In-1	115			ug/L			24217	25479	1	KED
	Cd	111	0.003		ug/L	0.006	220	1	2	89	KED
	Cd	114	-0.001		ug/L	0.001	164	1	0	206	KED
[>	Tb	159			ug/L			1029135	926390	0	Standard
	Pb	208	-0.002		ug/L	0.000	13	172	104	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 17:12:55

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	23751	3	Standard
	Cl	37			ug/L			5159981	4964473	1	Standard
[>	Sc	45			ug/L			985565	850349	0	Standard
	Cr	52	0.049		ug/L	0.011	22	12119	11140	1	Standard
	Cr	53	0.559		ug/L	0.005	0	120	1023	1	Standard
	Mn	55	-0.128		ug/L	0.001	1	3334	379	7	Standard
[>	Ge-1	72			ug/L			55956	59908	1	KED
	Ni	60	-0.130		ug/L	0.006	4	133	10	53	KED
	Ni	62	-0.083		ug/L	0.026	30	19	6	56	KED
	Cu	63	-0.005		ug/L	0.002	35	29	17	26	KED
	Cu	65	0.003		ug/L	0.001	25	11	15	6	KED
	Zn	66	-0.016		ug/L	0.021	130	50	47	17	KED
	Zn	67	-0.182		ug/L	0.017	9	14	4	24	KED
	As	75	-0.003		ug/L	0.005	151	4	3	33	KED
	Y	89			ug/L			510934	458400	2	Standard
	Kr	83			ug/L			56	55	17	Standard
[>	In-1	115			ug/L			24217	24602	1	KED
	Cd	111	-0.000		ug/L	0.002	4138	1	1	43	KED
	Cd	114	0.002		ug/L	0.001	93	1	2	47	KED
[>	Tb	159			ug/L			1029135	939420	1	Standard
	Pb	208	-0.002		ug/L	0.000	8	172	93	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, March 02, 2018 17:17:19

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort(2)Element.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030218.cal

	Analyte	Mass	Conc.	Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13			ug/L			28021	24031	2	Standard
	Cl	37			ug/L			5159981	5010962	1	Standard
[>	Sc	45			ug/L			985565	855984	3	Standard
	Cr	52	0.059		ug/L	0.026	43	12119	11353	0	Standard
	Cr	53	0.519		ug/L	0.032	6	120	962	1	Standard
	Mn	55	-0.128		ug/L	0.001	0	3334	383	0	Standard
[>	Ge-1	72			ug/L			55956	58832	0	KED
	Ni	60	-0.128		ug/L	0.007	5	133	12	52	KED
	Ni	62	-0.079		ug/L	0.032	40	19	7	66	KED
	Cu	63	-0.001		ug/L	0.002	191	29	27	24	KED
	Cu	65	0.001		ug/L	0.001	139	11	13	14	KED
	Zn	66	-0.002		ug/L	0.011	613	50	52	7	KED
	Zn	67	-0.118		ug/L	0.065	55	14	8	48	KED
	As	75	0.001		ug/L	0.005	489	4	4	26	KED
	Y	89			ug/L			510934	480306	3	Standard
	Kr	83			ug/L			56	55	18	Standard
[>	In-1	115			ug/L			24217	24512	3	KED
	Cd	111	0.003		ug/L	0.003	114	1	2	49	KED
	Cd	114	0.003		ug/L	0.004	129	1	3	87	KED
[>	Tb	159			ug/L			1029135	954302	1	Standard
	Pb	208	-0.003		ug/L	0.001	19	172	90	13	Standard

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.

SDG: 18B0269

Client: Anchor QEA, LLC

Project: Port of Tacoma- Wasser Winter GW Monitoring

Instrument ID: ICPMS2

Calibration: BC00006

Control Limit: +/- 10.00%

Sequence: SGC0027

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SGC0027-ICV1	Arsenic-75a (dissolved)	50.000	48.2	96.4	ug/L	EPA 200.8 UCT-KEI
SGC0027-CCV1	Arsenic-75a (dissolved)	50.000	50.7	101	ug/L	EPA 200.8 UCT-KEI
SGC0027-CCV2	Arsenic-75a (dissolved)	50.000	49.0	98.0	ug/L	EPA 200.8 UCT-KEI
SGC0027-CCV3	Arsenic-75a (dissolved)	50.000	49.8	99.6	ug/L	EPA 200.8 UCT-KEI
SGC0027-CCV4	Arsenic-75a (dissolved)	50.000	51.1	102	ug/L	EPA 200.8 UCT-KEI
SGC0027-CCV5	Arsenic-75a (dissolved)	50.000	50.3	101	ug/L	EPA 200.8 UCT-KEI
SGC0027-CCV6	Arsenic-75a (dissolved)	50.000	50.4	101	ug/L	EPA 200.8 UCT-KEI
SGC0027-CCV7	Arsenic-75a (dissolved)	50.000	49.8	99.7	ug/L	EPA 200.8 UCT-KEI
SGC0027-CCV8	Arsenic-75a (dissolved)	50.000	50.5	101	ug/L	EPA 200.8 UCT-KEI

* Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.

SDG: 18B0269

Client: Anchor QEA, LLC

Project: Port of Tacoma- Wasser Winter GW Monitoring

Sequence: SGC0027

Instrument: ICPMS2

Calibration: BC00006

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SGC0027-CAL1	XDT_m2180302-006	NA	03/02/18 09:41
CAL 1 - LOW CHECK	SGC0027-CAL2	XDT_m2180302-007	NA	03/02/18 09:45
CAL 2	SGC0027-CAL3	XDT_m2180302-008	NA	03/02/18 09:50
CAL 3	SGC0027-CAL4	XDT_m2180302-009	NA	03/02/18 09:54
CAL 4	SGC0027-CAL5	XDT_m2180302-010	NA	03/02/18 09:59
CAL 5	SGC0027-CAL6	XDT_m2180302-011	NA	03/02/18 10:05
RINSE	SGC0027-IBL1	XDT_m2180302-012	NA	03/02/18 10:13
Initial Cal Check	SGC0027-ICV1	XDT_m2180302-014	NA	03/02/18 10:20
Initial Cal Blank	SGC0027-ICB1	XDT_m2180302-015	NA	03/02/18 10:27
Calibration Check	SGC0027-CCV1	XDT_m2180302-016	NA	03/02/18 10:31
Calibration Blank	SGC0027-CCB1	XDT_m2180302-017	NA	03/02/18 10:38
Instrument RL Check	SGC0027-CRL1	XDT_m2180302-018	NA	03/02/18 10:42
Interference Check A	SGC0027-IFA1	XDT_m2180302-019	NA	03/02/18 10:47
Interference Check B	SGC0027-IFB1	XDT_m2180302-020	NA	03/02/18 10:51
LR200	SGC0027-HCV1	XDT_m2180302-021	NA	03/02/18 10:55
LR300	SGC0027-HCV2	XDT_m2180302-022	NA	03/02/18 11:00
Instrument Blank	SGC0027-IBL2	XDT_m2180302-023	NA	03/02/18 11:07
Calibration Check	SGC0027-CCV2	XDT_m2180302-024	NA	03/02/18 11:11
Calibration Blank	SGC0027-CCB2	XDT_m2180302-025	NA	03/02/18 11:19
Blank	BGB0642-BLK1	XDT_m2180302-026	Water	03/02/18 11:23
ZZZZZ	18C0009-01	XDT_m2180302PRE-028	Water	03/02/18 11:32
ZZZZZ	18C0009-01	XDT_m2180302PRE-028	Water	03/02/18 11:32
ZZZZZ	18C0009-01	XDT_m2180302PRE-028	Water	03/02/18 11:32
ZZZZZ	18C0009-01	XDT_m2180302PRE-028	Water	03/02/18 11:32
ZZZZZ	18C0027-01	XDT_m2180302PRE-029	Water	03/02/18 11:36
ZZZZZ	18C0027-01	XDT_m2180302PRE-029	Water	03/02/18 11:36
CMW-300-021918	18B0269-02	XDT_m2180302-030	Water	03/02/18 11:40
ZZZZZ	18C0008-01	XDT_m2180302-032	Water	03/02/18 11:49
ZZZZZ	18C0008-01	XDT_m2180302-032	Water	03/02/18 11:49
ZZZZZ	18C0008-01	XDT_m2180302-032	Water	03/02/18 11:49
ZZZZZ	18C0008-01	XDT_m2180302-032	Water	03/02/18 11:49

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 200.8 UCT-KED

Laboratory:	<u>Analytical Resources, Inc.</u>	SDG:	<u>18B0269</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Port of Tacoma- Wasser Winter GW Monitoring</u>
Sequence:	<u>SGC0027</u>	Instrument:	<u>ICPMS2</u>
		Calibration:	<u>BC00006</u>

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LCS	BGB0642-BS1	XDT_m2180302-035	Water	03/02/18 12:02
Calibration Check	SGC0027-CCV3	XDT_m2180302-036	NA	03/02/18 12:08
Calibration Blank	SGC0027-CCB3	XDT_m2180302-037	NA	03/02/18 12:15
CMW-3-021918	BGB0642-DUP1	XDT_m2180302-042	Water	03/02/18 12:37
CMW-3-021918	18B0269-01	XDT_m2180302-043	Water	03/02/18 12:41
CMW-3-021918	BGB0642-MS1	XDT_m2180302-044	Water	03/02/18 12:46
Calibration Check	SGC0027-CCV4	XDT_m2180302-048	NA	03/02/18 13:04
Calibration Blank	SGC0027-CCB4	XDT_m2180302-049	NA	03/02/18 13:12
Calibration Check	SGC0027-CCV5	XDT_m2180302-060	NA	03/02/18 14:05
Calibration Blank	SGC0027-CCB5	XDT_m2180302-061	NA	03/02/18 14:12
ZZZZZ	18C0002-01	XDT_m2180302-062	Water	03/02/18 14:17
ZZZZZ	18C0002-01	XDT_m2180302-062	Water	03/02/18 14:17
ZZZZZ	18C0002-02	XDT_m2180302-063	Water	03/02/18 14:21
ZZZZZ	18C0002-02	XDT_m2180302-063	Water	03/02/18 14:21
ZZZZZ	18B0373-07	XDT_m2180302-071	Water	03/02/18 14:56
Calibration Check	SGC0027-CCV6	XDT_m2180302-072	NA	03/02/18 15:02
Calibration Blank	SGC0027-CCB6	XDT_m2180302-073	NA	03/02/18 15:09
ZZZZZ	18C0002-03	XDT_m2180302-074	Water	03/02/18 15:13
ZZZZZ	18C0002-03	XDT_m2180302-074	Water	03/02/18 15:13
ZZZZZ	18C0002-04	XDT_m2180302-075	Water	03/02/18 15:18
ZZZZZ	18C0002-04	XDT_m2180302-075	Water	03/02/18 15:18
ZZZZZ	18C0010-01	XDT_m2180302-076	Water	03/02/18 15:22
ZZZZZ	18C0010-01	XDT_m2180302-076	Water	03/02/18 15:22
ZZZZZ	18C0010-02	XDT_m2180302-077	Water	03/02/18 15:26
ZZZZZ	18C0010-04	XDT_m2180302-078	Water	03/02/18 15:31
ZZZZZ	18C0010-04	XDT_m2180302-078	Water	03/02/18 15:31
ZZZZZ	18C0010-06	XDT_m2180302-079	Water	03/02/18 15:35
ZZZZZ	18C0010-06	XDT_m2180302-079	Water	03/02/18 15:35
ZZZZZ	18C0010-07	XDT_m2180302-080	Water	03/02/18 15:40
ZZZZZ	18C0010-07	XDT_m2180302-080	Water	03/02/18 15:40
ZZZZZ	18C0010-08	XDT_m2180302-081	Water	03/02/18 15:44



ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.

SDG: 18B0269

Client: Anchor QEA, LLC

Project: Port of Tacoma- Wasser Winter GW Monitoring

Sequence: SGC0027

Instrument: ICPMS2

Calibration: BC00006

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	18C0010-10	XDT_m2180302-083	Water	03/02/18 15:53
Calibration Check	SGC0027-CCV7	XDT_m2180302-084	NA	03/02/18 15:58
Calibration Blank	SGC0027-CCB7	XDT_m2180302-085	NA	03/02/18 16:05
ZZZZZ	18C0010-11	XDT_m2180302-086	Water	03/02/18 16:10
ZZZZZ	18C0010-11	XDT_m2180302-086	Water	03/02/18 16:10
ZZZZZ	18C0013-01	XDT_m2180302-087	Water	03/02/18 16:14
ZZZZZ	18C0013-01	XDT_m2180302-087	Water	03/02/18 16:14
ZZZZZ	18C0013-03	XDT_m2180302-088	Water	03/02/18 16:19
ZZZZZ	18C0013-05	XDT_m2180302-089	Water	03/02/18 16:23
ZZZZZ	18C0013-07	XDT_m2180302-090	Water	03/02/18 16:27
ZZZZZ	18C0013-07	XDT_m2180302-090	Water	03/02/18 16:27
ZZZZZ	18B0375-01	XDT_m2180302-091	Water	03/02/18 16:32
ZZZZZ	18B0371-01	XDT_m2180302-092	Water	03/02/18 16:36
ZZZZZ	18B0371-01	XDT_m2180302-092	Water	03/02/18 16:36
Calibration Check	SGC0027-CCV8	XDT_m2180302-093	NA	03/02/18 16:43
Calibration Blank	SGC0027-CCB8	XDT_m2180302-094	NA	03/02/18 16:50



ICP INTERFERENCE CHECK SAMPLE

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.

SDG: 18B0269

Client: Anchor QEA, LLC

Project: Port of Tacoma- Wasser Winter GW Monitorin

Instrument ID: ICPMS2

Calibration: BC00006

Sequence: SGC0027

Standard ID: G001820

Lab Sample ID	Analyte	True	Found	%R	Units
SGC0027-IFA1	Arsenic-75a (dissolved)	0	0.0330		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.



ICP INTERFERENCE CHECK SAMPLE

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.

SDG: 18B0269

Client: Anchor QEA, LLC

Project: Port of Tacoma- Wasser Winter GW Monitorin

Instrument ID: ICPMS2

Calibration: BC00006

Sequence: SGC0027

Standard ID: G001820

Lab Sample ID	Analyte	True	Found	%R	Units
SGC0027-IFB1	Arsenic-75a (dissolved)	20.000	19.792	99.0	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.

DETECTION LEVEL STANDARD**EPA 200.8 UCT-KED**Laboratory: Analytical Resources, Inc.SDG: 18B0269Client: Anchor QEA, LLCProject: Port of Tacoma- Wasser Winter GW MonitoriInstrument ID: ICPMS2Calibration: BC00006Sequence: SGC0027Lab Sample ID: SGC0027-CRL1

Analyte	True	Found	%R	Units	QC Limts
Arsenic-75a (dissolved)	0.20000	0.183	91.5	ug/L	50 - 150

* Values outside of QC limits



HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.

SDG: 18B0269

Client: Anchor QEA, LLC

Project: Port of Tacoma- Wasser Winter GW Monitor

Calibration: BC00006

Laboratory ID: SGC0027-HCV1

Sequence: SGC0027

Standard ID: G001641

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a (dissolved)	200.00	198	-0.9	10.00

* Values outside of QC limits



Analytical
Resources,
Incorporated

**HIGH-CONCENTRATION
CALIBRATION VERIFICATION**

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.

SDG: 18B0269

Client: Anchor QEA, LLC

Project: Port of Tacoma- Wasser Winter GW Monitor

Calibration: BC00006

Laboratory ID: SGC0027-HCV2

Sequence: SGC0027

Standard ID: G001767

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a (dissolved)	300.00	302	0.6	10.00

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.

SDG: 18B0269

Client: Anchor QEA, LLC

Project: Port of Tacoma- Wasser Winter GW Monitoring

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
CMW-3-021918 18B0269-01	02/19/18 14:50	02/20/18 09:02	02/27/18 08:16	7	180	03/02/18 12:41	11	180	
CMW-300-021918 18B0269-02	02/19/18 14:52	02/20/18 09:02	02/27/18 08:16	7	180	03/02/18 11:40	11	180	
Duplicate BGB0642-DUP1	02/19/18 14:50	02/20/18 09:02	02/27/18 08:16	7	180	03/02/18 12:37	11	180	
Matrix Spike BGB0642-MS1	02/19/18 14:50	02/20/18 09:02	02/27/18 08:16	7	180	03/02/18 12:46	11	180	

* Indicates hold time exceedance.



METHOD DETECTION AND REPORTING LIMITS

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.

SDG: 18B0269

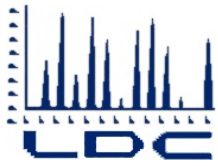
Client: Anchor QEA, LLC

Project: Port of Tacoma- Wasser Winter GW Moni

Matrix: Water

Instrument: ICPMS2

Analyte	MDL	RL	Units
Arsenic-75a (dissolved)	0.0220	0.200	ug/L



LABORATORY DATA CONSULTANTS, INC.

2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

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

March 23, 2018

SUBJECT: Port of Tacoma, Wasser and Winters, Data Validation

Dear Ms. Peterson,

Enclosed is the final validation report for the fraction listed below. This SDG was received on March 7, 2018. Attachment 1 is a summary of the samples that were reviewed for analysis.

LDC Project #41476:

<u>SDG #</u>	<u>Fraction</u>
18B0269	Dissolved Arsenic

The data validation was performed under Stage 2B guidelines. The analyses were validated using the following documents, as applicable to each method:

- Engineering and Design Report Wasser & Winters Log Sort Yard Site Final (Revised), Tacoma, Washington, October 1993
- USEPA, National Functional Guidelines Inorganic Superfund Methods Data Review, January 2017

Please feel free to contact us if you have any questions.

Sincerely,

Christina Rink

Christina Rink
Project Manager/Chemist

EDD Stage 2B LDC #41476 (Anchor Environmental-Seattle WA / Port of Tacoma, Wasser and Winters)

[illegible]

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name: Port of Tacoma, Wasser and Winters

LDC Report Date: March 21, 2018

Parameters: Dissolved Arsenic

Validation Level: Stage 2B

Laboratory: Analytical Resources, Inc.

Sample Delivery Group (SDG): 18B0269

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
CMW-3-021918	18B0269-01	Water	02/19/18
CMW-300-021918	18B0269-02	Water	02/19/18
CMW-3-021918MS	18B0269-01MS	Water	02/19/18
CMW-3-021918DUP	18B0269-01DUP	Water	02/19/18

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Engineering and Design Report Wasser & Winters Log Sort Yard Site Final (Revised), Tacoma, Washington (October 1993) and a modified outline of the USEPA National Functional Guidelines (NFG) for Inorganic Superfund Methods Data Review (January 2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Dissolved Arsenic by Environmental Protection Agency (EPA) Method 200.8

All sample results were subjected to Stage 2B data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

- J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.
- U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).
- UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.
- R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.
- NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition.

All technical holding time requirements were met.

II. ICPMS Tune

The mass calibration was within 0.1 AMU and the percent relative standard deviation (%RSD) was less than or equal to 5%.

III. Instrument Calibration

Initial and continuing calibrations were performed as required by the method.

The initial calibration verification (ICV) and continuing calibration verification (CCV) standards were within QC limits.

IV. ICP Interference Check Sample Analysis

The frequency of interference check sample (ICS) analysis was met. All criteria were within QC limits.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VIII. Duplicate Sample Analysis

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

IX. Serial Dilution

Serial dilution was not performed for this SDG.

X. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

XI. Field Duplicates

Samples CMW-3-021918 and CMW-300-021918 were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Analyte	Concentration (ug/L)		RPD
	CMW-3-021918	CMW-300-021918	
Arsenic, dissolved	168	201	18

XII. Internal Standards (ICP-MS)

Internal standards were not reviewed for Stage 2B validation.

XIII. Sample Result Verification

Raw data were not reviewed for Stage 2B validation.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

The quality control criteria reviewed were met and are considered acceptable. Based upon the data validation all results are considered valid and usable for all purposes.

**Port of Tacoma, Wasser and Winters
Dissolved Arsenic - Data Qualification Summary - SDG 18B0269**

No Sample Data Qualified in this SDG

**Port of Tacoma, Wasser and Winters
Dissolved Arsenic - Laboratory Blank Data Qualification Summary - SDG 18B0269**

No Sample Data Qualified in this SDG

LDC #: 41476A4a

VALIDATION COMPLETENESS WORKSHEET

Date: 3/19/18

SDG #: 18B0269

Stage 2B

Page: 1 of 1

Laboratory: Analytical Resources, Inc.

Reviewer: AS2nd Reviewer: [Signature]**METHOD:** Dissolved Arsenic (EPA Method 200.8)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	ICP/MS Tune	A	
III.	Instrument Calibration	A	
IV.	ICP Interference Check Sample (ICS) Analysis	A	
V.	Laboratory Blanks	A	
VI.	Field Blanks	N	
VII.	Matrix Spike/Matrix Spike Duplicates	A	3
VIII.	Duplicate sample analysis	A	4
IX.	Serial Dilution	N	Not performed
X.	Laboratory control samples	A	LCS
XI.	Field Duplicates	SW	(1,2)
XII.	Internal Standard (ICP-MS)	N	Not Reviewed for level 3
XIII.	Sample Result Verification	N	
XIV.	Overall Assessment of Data	A	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet

ND = No compounds detected
R = Rinsate
FB = Field blank

D = Duplicate
TB = Trip blank
EB = Equipment blank

SB=Source blank
OTHER:

	Client ID	Lab ID	Matrix	Date
1	CMW-3-021918	18B0269-01	Water	02/19/18
2	CMW-300-021918	18B0269-02	Water	02/19/18
3	CMW-3-021918MS	18B0269-01MS	Water	02/19/18
4	CMW-3-021918DUP	18B0269-01DUP	Water	02/19/18
5				
6				
7				
8				
9				
10				
11				
12				

Notes: _____

LDC#: 41476A4a

VALIDATION FINDINGS WORKSHEET

Field Duplicates

Page: 1 of 1

Reviewer: LB

2nd Reviewer: [Signature]

METHOD: Metals (EPA Method 200.8)

Y N NA Were field duplicate pairs identified in this SDG?

Y N NA Were target analytes detected in the field duplicate pairs?

Analyte	Concentration (ug/L)		RPD	
	1	2		
Arsenic, Dissolved	168	201	18	

V:\FIELD DUPLICATES\field

Duplicates\FD_inorganic\2018\41476A4a.wpd

LDC #: 41476

EDD POPULATION COMPLETENESS WORKSHEET

Anchor

Date: 3/22Page: 1 of 12nd Reviewer: CBThe LDC job number listed above was entered by BA

	EDD Process	Y/N	Initial	Comments/Action
I.	EDD Completeness	-		
Ia.	- All methods present?	Y	BA	
Ib.	- All samples present/match report?	Y		
Ic.	- All reported analytes present?	Y		
Id.	10% or 100% verification of EDD?	Y		
II.	EDD Preparation/Entry	-		
IIa.	- QC Level applied? (EPASStage2B or EPASStage4)	Y		
IIb.	- Laboratory EMPC qualified results qualified (J with reason code 23)?	N/A		
III.	Reasonableness Checks	-		
IIIa.	- Do all qualified ND results have ND qualifier (e.g. UJ)?	N/A		NO VALIDATION QUALIFIERS
IIIb.	- Do all qualified detect results have detect qualifier (e.g. J)?			
IIIc.	- If reason codes are used, do all qualified results have reason code field populated, and vice versa?			
IIId.	- Do blank concentrations in report match EDD, where data was qualified due to blank?			
IIIe.	- Is the detect flag set to "N" for all "U" qualified blank results?			
IIIf.	- Were there multiple results due to dilutions/reanalysis? If so, were results qualified appropriately?			
IIIg.	-Are all results marked reportable "Yes" unless rejected for overall assessment in the data validation report?	Y		
IIIh.	-Are there any lab "R" qualified data? / Are the entry columns blank for these results?	N/A		
IIIi.	-Are there any discrepancies between the data packet and the EDD?	N		

Notes: *see discrepancy sheet