

DATA PACKAGE METALS

PROJECT NAME : RAYMARK SUPERFUND SITE

NOBIS GROUP

585 Middlesex Street

Lowell, MA - 01851

Phone No: 978-683-0891

ORDER ID : Q2879

ATTENTION : Adam Roy



Laboratory Certification ID # 20012



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Cover Page

Order ID : Q2879

Project ID : Raymark Superfund Site

Client : Nobis Group

Lab Sample Number

Q2879-01
Q2879-02
Q2879-03
Q2879-04
Q2879-05
Q2879-06
Q2879-07
Q2879-08
Q2879-09
Q2879-10
Q2879-11
Q2879-12
Q2879-13
Q2879-14
Q2879-15
Q2879-16
Q2879-17
Q2879-18

Client Sample Number

OU4-TS-GRILLO-TSCP03-081425
OU4-TS-GRILLO-TSCP03-081425
OU4-TS-GRILLO-TSCP04-081425
OU4-TS-GRILLO-TSCP04-081425
OU4-TS-GRILLO-TSCP05-081425
OU4-TS-GRILLO-TSCP05-081425
OU4-TS-GRILLO-TSCP06-081425
OU4-TS-GRILLO-TSCP06-081425
OU4-TS-GRILLO-TSCP07-081425
OU4-TS-GRILLO-TSCP07-081425
OU4-TS-GRILLO-TSCP08-081425
OU4-TS-GRILLO-TSCP08-081425
OU4-TS-GRILLO-TSCP09-081425
OU4-TS-GRILLO-TSCP09-081425
OU4-TS-GRILLO-TSCP10-081425
OU4-TS-GRILLO-TSCP10-081425
OU4-TS-GRILLO-TSCP11-081425
OU4-TS-GRILLO-TSCP11-081425

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature :

APPROVED

By Nimisha Pandya, QA/QC Supervisor at 1:43 pm, Aug 28, 2025

Date: 8/25/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012



284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CASE NARRATIVE

Nobis Group

Project Name: Raymark Superfund Site

Project # N/A

Order ID # Q2879

Test Name: SPLP Mercury,SPLP MetalGroup3

A. Number of Samples and Date of Receipt:

18 Solid samples were received on 08/15/2025.

B. Parameters:

According to the Chain of Custody document, the following analyses were requested: Cyanide, Herbicide Group1, Mercury, Metals ICP-TAL, METALS-TAL, PCB, Pesticide-TCL, SPLP Extraction, SPLP Mercury, SPLP MetalGroup3, SVOCMS Group3 and VOCMS Group3. This data package contains results for SPLP Mercury,SPLP MetalGroup3.

C. Analytical Techniques:

The analysis of SPLP MetalGroup3 was based on method 6020B, digestion based on method 3010 (water). The analysis of SPLP Mercury was based on method 7470A and digestion was based on method 7470 (water).

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Blank Spike met requirements for all compounds.

The Duplicate analysis met criteria for all compounds.

The Matrix Spike (OU4-TS-GRILLO-TSCP11-081425MS) analysis met criteria for all compounds except for Arsenic, Barium and Silver due to Chemical Interference during Digestion Process.

The Matrix Spike Duplicate (OU4-TS-GRILLO-TSCP11-081425MSD) analysis met criteria for all compounds except for Arsenic and Silver due to Chemical interference during Digestion process.

The Blank analysis did not indicate the presence of lab contamination.

The Calibration met the requirements.

The Serial Dilution met the acceptable requirements.

E. Additional Comments:

The Post Digest Spike (OU4-TS-GRILLO-TSCP11-081425A) analysis met criteria for all compounds except for Arsenic, Barium and Silver due to unknown chemical interference of matrix with the addition of spike amount after digestion and before analysis; matrix has suppression effect during addition of spike.



Q2879 SPLP All samples analyzed with dilution because of SPLP fluid which has concentrated mix of acids can cause problem to the detector if analyzed straight.

Collision cell is being used to remove potential interferences. The analytes Na, Mg, Al, K, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As are being analyzed with collision cell and analytes Be, B, Ca, Ti, Se, Sr, Zr, Mo, Ag, Cd, Sn, Sb, Ba, Tl, Pb, U are being analyzed with Non-Collision Cell. Helium gas is used for the Collision Cell analysis.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

APPROVED

By Nimisha Pandya, QA/QC Supervisor at 1:44 pm, Aug 28, 2025

Signature_____

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following “ Results Qualifiers” are used:

J	Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
U	Indicates the analyte was analyzed for, but not detected.
ND	Indicates the analyte was analyzed for, but not detected
E	Indicates the reported value is estimated because of the presence of interference
M	Indicates Duplicate injection precision not met.
N	Indicates the spiked sample recovery is not within control limits.
S	Indicates the reported value was determined by the Method of Standard Addition (MSA).
*	Indicates that the duplicate analysis is not within control limits.
+	Indicates the correlation coefficient for the MSA is less than 0.995.
D	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
M	Method qualifiers “P” for ICP instrument “PM” for ICP when Microwave Digestion is used “CV” for Manual Cold Vapor AA “AV” for automated Cold Vapor AA “CA” for MIDI-Distillation Spectrophotometric “AS” for Semi -Automated Spectrophotometric “C” for Manual Spectrophotometric “T” for Titrimetric “NR” for analyte not required to be analyzed
OR	Indicates the analyte’s concentration exceeds the calibrated range of the instrument for that specific analysis.
Q	Indicates the LCS did not meet the control limits requirements
H	Sample Analysis Out Of Hold Time

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY

ORDER ID: Q2879

MATRIX: Water

METHOD: 6020B,7470A

	NA	NO	YES
1. Calibration Summary met criteria.			✓
2. ICP Interference Check Sample Results Summary Submitted.			✓
3. Serial Dilution Summary (if applicable) Submitted.			✓
4. Laboratory Control Sample Summary (if applicable) Submitted.			✓
5. Blank Contamination - If yes, list compounds and concentrations in each blank:		✓	
6. Matrix Spike/Matrix Spike Duplicate Recoveries Met Criteria		✓	
If not met, list those compounds and their recoveries which fall outside the acceptable range.			
The Matrix Spike (OU4-TS-GRILLO-TSCP11-081425MS) analysis met criteria for all compounds except for Arsenic, Barium and Silver due to Chemical Interference during Digestion Process. The Matrix Spike Duplicate (OU4-TS-GRILLO-TSCP11-081425MSD) analysis met criteria for all compounds except for Arsenic and Silver due to Chemical interference during Digestion process.			
7. Sample Duplicate Analysis Met QC Criteria			✓
If not met, list those compounds and their recoveries which fall outside the acceptable range.			
8. Digestion Holding Time Met			✓
If not met, list number of days exceeded for each sample:			
9. Analysis Holding Time Met			✓
If not met, list those compounds and their recoveries which fall outside the acceptable range.			

ADDITIONAL COMMENTS:

The Post Digest Spike (OU4-TS-GRILLO-TSCP11-081425ADL) analysis met criteria for all compounds except for Arsenic, Barium and Silver due to unknown chemical interference of matrix with the addition of spike amount after digestion and before analysis; matrix has suppression effect during addition of spike.

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY (CONTINUED)

NA NO YES

Q2879 SPLP All samples analyzed with dilution because of SPLP fluid which has concentrated mix of acids can cause problem to the detector if analyzed straight.

Collision cell is being used to remove potential interferences. The analytes Na, Mg, Al, K, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As are being analyzed with collision cell and analytes Be, B, Ca, Ti, Se, Sr, Zr, Mo, Ag, Cd, Sn, Sb, Ba, Tl, Pb, U are being analyzed with Non-Collision Cell. Helium gas is used for the Collision Cell analysis.

QA REVIEW

REVIEWED

Sohil Jodhani, QA/QC Director , 8/28/2025, 12:09:41 PM

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q2879

Completed

For thorough review, the report must have the following:

GENERAL:

Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)

✓

Check chain-of-custody for proper relinquish/return of samples

✓

Is the chain of custody signed and complete

✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts

✓

Collect information for each project id from server. Were all requirements followed

✓

COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page

✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody

✓

CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results

✓

Do requested analyses on Chain of Custody agree with the log-in page

✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Custody

✓

Were the samples received within hold time

✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: SOHIL JODHANI

Date: 08/25/2025

LAB CHRONICLE

OrderID:	Q2879	OrderDate:	8/15/2025 9:15:00 AM
Client:	Nobis Group	Project:	Raymark Superfund Site
Contact:	Adam Roy	Location:	J23,VOA Lab

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2879-01	OU4-TS-GRILLO-TSCP 03-081425	SOIL			08/14/25			08/15/25
			Mercury	7471B		08/18/25	08/18/25	
			Metals ICP-TAL	6010D		08/18/25	08/19/25	
Q2879-02	OU4-TS-GRILLO-TSCP 03-081425	Water			08/14/25			08/15/25
			SPLP Mercury	7470A		08/19/25	08/19/25	
			SPLP MetalGroup3	6020B		08/18/25	08/20/25	
Q2879-03	OU4-TS-GRILLO-TSCP 04-081425	SOIL			08/14/25			08/15/25
			Mercury	7471B		08/18/25	08/18/25	
			Metals ICP-TAL	6010D		08/18/25	08/19/25	
Q2879-04	OU4-TS-GRILLO-TSCP 04-081425	Water			08/14/25			08/15/25
			SPLP Mercury	7470A		08/19/25	08/19/25	
			SPLP MetalGroup3	6020B		08/18/25	08/20/25	
Q2879-05	OU4-TS-GRILLO-TSCP 05-081425	SOIL			08/14/25			08/15/25
			Mercury	7471B		08/18/25	08/18/25	
			Metals ICP-TAL	6010D		08/18/25	08/19/25	
Q2879-06	OU4-TS-GRILLO-TSCP 05-081425	Water			08/14/25			08/15/25
			SPLP Mercury	7470A		08/19/25	08/19/25	
			SPLP MetalGroup3	6020B		08/18/25	08/20/25	
Q2879-07	OU4-TS-GRILLO-TSCP 06-081425	SOIL			08/14/25			08/15/25
			Mercury	7471B		08/18/25	08/18/25	
			Metals ICP-TAL	6010D		08/18/25	08/19/25	

LAB CHRONICLE

Q2879-08	OU4-TS-GRILLO-TSCP 06-081425	Water			08/14/25		08/15/25
			SPLP Mercury	7470A	08/19/25	08/19/25	
			SPLP MetalGroup3	6020B	08/18/25	08/20/25	
Q2879-09	OU4-TS-GRILLO-TSCP 07-081425	SOIL			08/14/25		08/15/25
			Mercury	7471B	08/18/25	08/18/25	
			Metals ICP-TAL	6010D	08/18/25	08/19/25	
Q2879-10	OU4-TS-GRILLO-TSCP 07-081425	Water			08/14/25		08/15/25
			SPLP Mercury	7470A	08/19/25	08/19/25	
			SPLP MetalGroup3	6020B	08/18/25	08/20/25	
Q2879-11	OU4-TS-GRILLO-TSCP 08-081425	SOIL			08/14/25		08/15/25
			Mercury	7471B	08/18/25	08/18/25	
			Metals ICP-TAL	6010D	08/18/25	08/19/25	
Q2879-12	OU4-TS-GRILLO-TSCP 08-081425	Water			08/14/25		08/15/25
			SPLP Mercury	7470A	08/19/25	08/19/25	
			SPLP MetalGroup3	6020B	08/18/25	08/20/25	
Q2879-13	OU4-TS-GRILLO-TSCP 09-081425	SOIL			08/14/25		08/15/25
			Mercury	7471B	08/18/25	08/18/25	
			Metals ICP-TAL	6010D	08/18/25	08/19/25	
Q2879-14	OU4-TS-GRILLO-TSCP 09-081425	Water			08/14/25		08/15/25
			SPLP Mercury	7470A	08/19/25	08/19/25	
			SPLP MetalGroup3	6020B	08/18/25	08/20/25	
Q2879-15	OU4-TS-GRILLO-TSCP 10-081425	SOIL			08/14/25		08/15/25
			Mercury	7471B	08/18/25	08/18/25	
			Metals ICP-TAL	6010D	08/18/25	08/19/25	
Q2879-16	OU4-TS-GRILLO-TSCP 10-081425	Water			08/14/25		08/15/25

LAB CHRONICLE

Q2879-17	OU4-TS-GRILLO-TSCP 11-081425	SOIL	SPLP Mercury	7470A	08/19/25	08/19/25	08/14/25	08/15/25
			SPLP MetalGroup3	6020B	08/18/25	08/20/25		
Q2879-18	OU4-TS-GRILLO-TSCP 11-081425	Water	Mercury	7471B	08/18/25	08/18/25	08/14/25	08/15/25
			Metals ICP-TAL	6010D	08/18/25	08/19/25		
			SPLP Mercury	7470A	08/19/25	08/19/25		
			SPLP MetalGroup3	6020B	08/18/25	08/20/25		

Hit Summary Sheet SW-846

SDG No.: Q2879 **Order ID:** Q2879
Client: Nobis Group **Project ID:** Raymark Superfund Site

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : OU4-TS-GRILLO-TSCP03-081425									
Q2879-02	OU4-TS-GRILLO-TSCP03-0814	Water	Antimony	1.05	JD	0.55	1.25	10.0	ug/L
Q2879-02	OU4-TS-GRILLO-TSCP03-0814	Water	Arsenic	30.2	D	0.45	1.25	5.00	ug/L
Q2879-02	OU4-TS-GRILLO-TSCP03-0814	Water	Barium	112	D	1.05	6.25	50.0	ug/L
Q2879-02	OU4-TS-GRILLO-TSCP03-0814	Water	Beryllium	14.4	D	1.60	3.75	5.00	ug/L
Q2879-02	OU4-TS-GRILLO-TSCP03-0814	Water	Cadmium	11.1	D	1.70	2.50	5.00	ug/L
Q2879-02	OU4-TS-GRILLO-TSCP03-0814	Water	Chromium	53.3	D	1.05	3.75	10.0	ug/L
Q2879-02	OU4-TS-GRILLO-TSCP03-0814	Water	Copper	194	D	1.50	7.50	10.0	ug/L
Q2879-02	OU4-TS-GRILLO-TSCP03-0814	Water	Lead	203	D	1.05	3.75	5.00	ug/L
Q2879-02	OU4-TS-GRILLO-TSCP03-0814	Water	Nickel	103	D	1.35	3.75	5.00	ug/L
Q2879-02	OU4-TS-GRILLO-TSCP03-0814	Water	Silver	0.30	JD	0.30	2.50	5.00	ug/L
Q2879-02	OU4-TS-GRILLO-TSCP03-0814	Water	Thallium	0.65	JD	0.30	2.50	5.00	ug/L
Q2879-02	OU4-TS-GRILLO-TSCP03-0814	Water	Vanadium	264	D	0.39	1.25	25.0	ug/L
Q2879-02	OU4-TS-GRILLO-TSCP03-0814	Water	Zinc	2440	D	6.25	7.50	25.0	ug/L
Client ID : OU4-TS-GRILLO-TSCP04-081425									
Q2879-04	OU4-TS-GRILLO-TSCP04-0814	Water	Antimony	0.90	JD	0.55	1.25	10.0	ug/L
Q2879-04	OU4-TS-GRILLO-TSCP04-0814	Water	Arsenic	38.2	D	0.45	1.25	5.00	ug/L
Q2879-04	OU4-TS-GRILLO-TSCP04-0814	Water	Barium	136	D	1.05	6.25	50.0	ug/L
Q2879-04	OU4-TS-GRILLO-TSCP04-0814	Water	Beryllium	13.8	D	1.60	3.75	5.00	ug/L
Q2879-04	OU4-TS-GRILLO-TSCP04-0814	Water	Cadmium	11.1	D	1.70	2.50	5.00	ug/L
Q2879-04	OU4-TS-GRILLO-TSCP04-0814	Water	Chromium	52.7	D	1.05	3.75	10.0	ug/L
Q2879-04	OU4-TS-GRILLO-TSCP04-0814	Water	Copper	190	D	1.50	7.50	10.0	ug/L
Q2879-04	OU4-TS-GRILLO-TSCP04-0814	Water	Lead	179	D	1.05	3.75	5.00	ug/L
Q2879-04	OU4-TS-GRILLO-TSCP04-0814	Water	Nickel	103	D	1.35	3.75	5.00	ug/L
Q2879-04	OU4-TS-GRILLO-TSCP04-0814	Water	Thallium	0.65	JD	0.30	2.50	5.00	ug/L
Q2879-04	OU4-TS-GRILLO-TSCP04-0814	Water	Vanadium	261	D	0.39	1.25	25.0	ug/L
Q2879-04	OU4-TS-GRILLO-TSCP04-0814	Water	Zinc	2010	D	6.25	7.50	25.0	ug/L
Client ID : OU4-TS-GRILLO-TSCP05-081425									
Q2879-06	OU4-TS-GRILLO-TSCP05-0814	Water	Antimony	0.95	JD	0.55	1.25	10.0	ug/L
Q2879-06	OU4-TS-GRILLO-TSCP05-0814	Water	Arsenic	29.6	D	0.45	1.25	5.00	ug/L
Q2879-06	OU4-TS-GRILLO-TSCP05-0814	Water	Barium	133	D	1.05	6.25	50.0	ug/L
Q2879-06	OU4-TS-GRILLO-TSCP05-0814	Water	Beryllium	14.3	D	1.60	3.75	5.00	ug/L
Q2879-06	OU4-TS-GRILLO-TSCP05-0814	Water	Cadmium	11.4	D	1.70	2.50	5.00	ug/L
Q2879-06	OU4-TS-GRILLO-TSCP05-0814	Water	Chromium	57.2	D	1.05	3.75	10.0	ug/L
Q2879-06	OU4-TS-GRILLO-TSCP05-0814	Water	Copper	230	D	1.50	7.50	10.0	ug/L
Q2879-06	OU4-TS-GRILLO-TSCP05-0814	Water	Lead	268	D	1.05	3.75	5.00	ug/L
Q2879-06	OU4-TS-GRILLO-TSCP05-0814	Water	Nickel	97.0	D	1.35	3.75	5.00	ug/L

Hit Summary Sheet
SW-846

SDG No.: Q2879 **Order ID:** Q2879
Client: Nobis Group **Project ID:** Raymark Superfund Site

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Q2879-06	OU4-TS-GRILLO-TSCP05-0814	Water	Thallium	0.70	JD	0.30	2.50	5.00	ug/L
Q2879-06	OU4-TS-GRILLO-TSCP05-0814	Water	Vanadium	284	D	0.39	1.25	25.0	ug/L
Q2879-06	OU4-TS-GRILLO-TSCP05-0814	Water	Zinc	1810	D	6.25	7.50	25.0	ug/L
Client ID : OU4-TS-GRILLO-TSCP06-081425									
Q2879-08	OU4-TS-GRILLO-TSCP06-0814	Water	Antimony	0.90	JD	0.55	1.25	10.0	ug/L
Q2879-08	OU4-TS-GRILLO-TSCP06-0814	Water	Arsenic	33.8	D	0.45	1.25	5.00	ug/L
Q2879-08	OU4-TS-GRILLO-TSCP06-0814	Water	Barium	124	D	1.05	6.25	50.0	ug/L
Q2879-08	OU4-TS-GRILLO-TSCP06-0814	Water	Beryllium	14.3	D	1.60	3.75	5.00	ug/L
Q2879-08	OU4-TS-GRILLO-TSCP06-0814	Water	Cadmium	11.6	D	1.70	2.50	5.00	ug/L
Q2879-08	OU4-TS-GRILLO-TSCP06-0814	Water	Chromium	60.5	D	1.05	3.75	10.0	ug/L
Q2879-08	OU4-TS-GRILLO-TSCP06-0814	Water	Copper	216	D	1.50	7.50	10.0	ug/L
Q2879-08	OU4-TS-GRILLO-TSCP06-0814	Water	Lead	210	D	1.05	3.75	5.00	ug/L
Q2879-08	OU4-TS-GRILLO-TSCP06-0814	Water	Nickel	109	D	1.35	3.75	5.00	ug/L
Q2879-08	OU4-TS-GRILLO-TSCP06-0814	Water	Mercury	0.20	J	0.076	0.16	0.20	ug/L
Q2879-08	OU4-TS-GRILLO-TSCP06-0814	Water	Thallium	0.75	JD	0.30	2.50	5.00	ug/L
Q2879-08	OU4-TS-GRILLO-TSCP06-0814	Water	Vanadium	282	D	0.39	1.25	25.0	ug/L
Q2879-08	OU4-TS-GRILLO-TSCP06-0814	Water	Zinc	2000	D	6.25	7.50	25.0	ug/L
Client ID : OU4-TS-GRILLO-TSCP07-081425									
Q2879-10	OU4-TS-GRILLO-TSCP07-0814	Water	Antimony	0.75	JD	0.55	1.25	10.0	ug/L
Q2879-10	OU4-TS-GRILLO-TSCP07-0814	Water	Arsenic	10.2	D	0.45	1.25	5.00	ug/L
Q2879-10	OU4-TS-GRILLO-TSCP07-0814	Water	Barium	104	D	1.05	6.25	50.0	ug/L
Q2879-10	OU4-TS-GRILLO-TSCP07-0814	Water	Beryllium	4.80	JD	1.60	3.75	5.00	ug/L
Q2879-10	OU4-TS-GRILLO-TSCP07-0814	Water	Cadmium	7.35	D	1.70	2.50	5.00	ug/L
Q2879-10	OU4-TS-GRILLO-TSCP07-0814	Water	Chromium	9.95	JD	1.05	3.75	10.0	ug/L
Q2879-10	OU4-TS-GRILLO-TSCP07-0814	Water	Copper	26.4	D	1.50	7.50	10.0	ug/L
Q2879-10	OU4-TS-GRILLO-TSCP07-0814	Water	Lead	25.2	D	1.05	3.75	5.00	ug/L
Q2879-10	OU4-TS-GRILLO-TSCP07-0814	Water	Nickel	59.7	D	1.35	3.75	5.00	ug/L
Q2879-10	OU4-TS-GRILLO-TSCP07-0814	Water	Mercury	0.20		0.076	0.16	0.20	ug/L
Q2879-10	OU4-TS-GRILLO-TSCP07-0814	Water	Thallium	0.40	JD	0.30	2.50	5.00	ug/L
Q2879-10	OU4-TS-GRILLO-TSCP07-0814	Water	Vanadium	15.8	JD	0.39	1.25	25.0	ug/L
Q2879-10	OU4-TS-GRILLO-TSCP07-0814	Water	Zinc	1610	D	6.25	7.50	25.0	ug/L
Client ID : OU4-TS-GRILLO-TSCP08-081425									
Q2879-12	OU4-TS-GRILLO-TSCP08-0814	Water	Antimony	0.75	JD	0.55	1.25	10.0	ug/L
Q2879-12	OU4-TS-GRILLO-TSCP08-0814	Water	Arsenic	31.1	D	0.45	1.25	5.00	ug/L
Q2879-12	OU4-TS-GRILLO-TSCP08-0814	Water	Barium	120	D	1.05	6.25	50.0	ug/L
Q2879-12	OU4-TS-GRILLO-TSCP08-0814	Water	Beryllium	13.2	D	1.60	3.75	5.00	ug/L
Q2879-12	OU4-TS-GRILLO-TSCP08-0814	Water	Cadmium	10.6	D	1.70	2.50	5.00	ug/L
Q2879-12	OU4-TS-GRILLO-TSCP08-0814	Water	Chromium	47.8	D	1.05	3.75	10.0	ug/L

Hit Summary Sheet
SW-846

SDG No.: Q2879 **Order ID:** Q2879
Client: Nobis Group **Project ID:** Raymark Superfund Site

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Q2879-12	OU4-TS-GRILLO-TSCP08-0814	Water	Copper	168	D	1.50	7.50	10.0	ug/L
Q2879-12	OU4-TS-GRILLO-TSCP08-0814	Water	Lead	175	D	1.05	3.75	5.00	ug/L
Q2879-12	OU4-TS-GRILLO-TSCP08-0814	Water	Nickel	95.1	D	1.35	3.75	5.00	ug/L
Q2879-12	OU4-TS-GRILLO-TSCP08-0814	Water	Mercury	0.41		0.076	0.16	0.20	ug/L
Q2879-12	OU4-TS-GRILLO-TSCP08-0814	Water	Thallium	0.70	JD	0.30	2.50	5.00	ug/L
Q2879-12	OU4-TS-GRILLO-TSCP08-0814	Water	Vanadium	264	D	0.39	1.25	25.0	ug/L
Q2879-12	OU4-TS-GRILLO-TSCP08-0814	Water	Zinc	1850	D	6.25	7.50	25.0	ug/L

Client ID : OU4-TS-GRILLO-TSCP09-081425

Q2879-14	OU4-TS-GRILLO-TSCP09-0814	Water	Antimony	0.90	JD	0.55	1.25	10.0	ug/L
Q2879-14	OU4-TS-GRILLO-TSCP09-0814	Water	Arsenic	27.0	D	0.45	1.25	5.00	ug/L
Q2879-14	OU4-TS-GRILLO-TSCP09-0814	Water	Barium	122	D	1.05	6.25	50.0	ug/L
Q2879-14	OU4-TS-GRILLO-TSCP09-0814	Water	Beryllium	12.9	D	1.60	3.75	5.00	ug/L
Q2879-14	OU4-TS-GRILLO-TSCP09-0814	Water	Cadmium	11.3	D	1.70	2.50	5.00	ug/L
Q2879-14	OU4-TS-GRILLO-TSCP09-0814	Water	Chromium	46.5	D	1.05	3.75	10.0	ug/L
Q2879-14	OU4-TS-GRILLO-TSCP09-0814	Water	Copper	144	D	1.50	7.50	10.0	ug/L
Q2879-14	OU4-TS-GRILLO-TSCP09-0814	Water	Lead	179	D	1.05	3.75	5.00	ug/L
Q2879-14	OU4-TS-GRILLO-TSCP09-0814	Water	Nickel	101	D	1.35	3.75	5.00	ug/L
Q2879-14	OU4-TS-GRILLO-TSCP09-0814	Water	Mercury	0.26		0.076	0.16	0.20	ug/L
Q2879-14	OU4-TS-GRILLO-TSCP09-0814	Water	Thallium	0.55	JD	0.30	2.50	5.00	ug/L
Q2879-14	OU4-TS-GRILLO-TSCP09-0814	Water	Vanadium	213	D	0.39	1.25	25.0	ug/L
Q2879-14	OU4-TS-GRILLO-TSCP09-0814	Water	Zinc	2010	D	6.25	7.50	25.0	ug/L

Client ID : OU4-TS-GRILLO-TSCP10-081425

Q2879-16	OU4-TS-GRILLO-TSCP10-0814	Water	Antimony	0.90	JD	0.55	1.25	10.0	ug/L
Q2879-16	OU4-TS-GRILLO-TSCP10-0814	Water	Arsenic	30.4	D	0.45	1.25	5.00	ug/L
Q2879-16	OU4-TS-GRILLO-TSCP10-0814	Water	Barium	115	D	1.05	6.25	50.0	ug/L
Q2879-16	OU4-TS-GRILLO-TSCP10-0814	Water	Beryllium	14.5	D	1.60	3.75	5.00	ug/L
Q2879-16	OU4-TS-GRILLO-TSCP10-0814	Water	Cadmium	11.6	D	1.70	2.50	5.00	ug/L
Q2879-16	OU4-TS-GRILLO-TSCP10-0814	Water	Chromium	56.9	D	1.05	3.75	10.0	ug/L
Q2879-16	OU4-TS-GRILLO-TSCP10-0814	Water	Copper	204	D	1.50	7.50	10.0	ug/L
Q2879-16	OU4-TS-GRILLO-TSCP10-0814	Water	Lead	263	D	1.05	3.75	5.00	ug/L
Q2879-16	OU4-TS-GRILLO-TSCP10-0814	Water	Nickel	107	D	1.35	3.75	5.00	ug/L
Q2879-16	OU4-TS-GRILLO-TSCP10-0814	Water	Mercury	0.21		0.076	0.16	0.20	ug/L
Q2879-16	OU4-TS-GRILLO-TSCP10-0814	Water	Thallium	0.60	JD	0.30	2.50	5.00	ug/L
Q2879-16	OU4-TS-GRILLO-TSCP10-0814	Water	Vanadium	288	D	0.39	1.25	25.0	ug/L
Q2879-16	OU4-TS-GRILLO-TSCP10-0814	Water	Zinc	2060	D	6.25	7.50	25.0	ug/L

Client ID : OU4-TS-GRILLO-TSCP11-081425

Q2879-18	OU4-TS-GRILLO-TSCP11-0814	Water	Antimony	0.75	JD	0.55	1.25	10.0	ug/L
Q2879-18	OU4-TS-GRILLO-TSCP11-0814	Water	Arsenic	31.9	D	0.45	1.25	5.00	ug/L

Hit Summary Sheet
SW-846

SDG No.: Q2879 **Order ID:** Q2879
Client: Nobis Group **Project ID:** Raymark Superfund Site

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Q2879-18	OU4-TS-GRILLO-TSCP11-0814	Water	Barium	132	D	1.05	6.25	50.0	ug/L
Q2879-18	OU4-TS-GRILLO-TSCP11-0814	Water	Beryllium	12.2	D	1.60	3.75	5.00	ug/L
Q2879-18	OU4-TS-GRILLO-TSCP11-0814	Water	Cadmium	9.70	D	1.70	2.50	5.00	ug/L
Q2879-18	OU4-TS-GRILLO-TSCP11-0814	Water	Chromium	64.5	D	1.05	3.75	10.0	ug/L
Q2879-18	OU4-TS-GRILLO-TSCP11-0814	Water	Copper	248	D	1.50	7.50	10.0	ug/L
Q2879-18	OU4-TS-GRILLO-TSCP11-0814	Water	Lead	280	D	1.05	3.75	5.00	ug/L
Q2879-18	OU4-TS-GRILLO-TSCP11-0814	Water	Nickel	100	D	1.35	3.75	5.00	ug/L
Q2879-18	OU4-TS-GRILLO-TSCP11-0814	Water	Thallium	0.65	JD	0.30	2.50	5.00	ug/L
Q2879-18	OU4-TS-GRILLO-TSCP11-0814	Water	Vanadium	302	D	0.39	1.25	25.0	ug/L
Q2879-18	OU4-TS-GRILLO-TSCP11-0814	Water	Zinc	1750	D	6.25	7.50	25.0	ug/L



SAMPLE DATA

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Report of Analysis

Client:	Nobis Group	Date Collected:	08/14/25
Project:	Raymark Superfund Site	Date Received:	08/15/25
Client Sample ID:	OU4-TS-GRILLO-TSCP03-081425	SDG No.:	Q2879
Lab Sample ID:	Q2879-02	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-36-0	Antimony	1.05	JD	5	0.55	1.25	10.0	ug/L	08/18/25 12:30	08/20/25 12:28	6020B	3010A
7440-38-2	Arsenic	30.2	DN	5	0.45	1.25	5.00	ug/L	08/18/25 12:30	08/20/25 12:28	6020B	3010A
7440-39-3	Barium	112	DN	5	1.05	6.25	50.0	ug/L	08/18/25 12:30	08/20/25 12:28	6020B	3010A
7440-41-7	Beryllium	14.4	D	5	1.60	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:28	6020B	3010A
7440-43-9	Cadmium	11.1	D	5	1.70	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:28	6020B	3010A
7440-47-3	Chromium	53.3	D	5	1.05	3.75	10.0	ug/L	08/18/25 12:30	08/20/25 12:28	6020B	3010A
7440-50-8	Copper	194	D	5	1.50	7.50	10.0	ug/L	08/18/25 12:30	08/20/25 12:28	6020B	3010A
7439-92-1	Lead	203	D	5	1.05	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:28	6020B	3010A
7439-97-6	Mercury	0.16	U	1	0.076	0.16	0.20	ug/L	08/19/25 11:30	08/19/25 14:38	7470A	
7440-02-0	Nickel	103	D	5	1.35	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:28	6020B	3010A
7782-49-2	Selenium	22.5	UD	5	14.5	22.5	25.0	ug/L	08/18/25 12:30	08/20/25 12:28	6020B	3010A
7440-22-4	Silver	0.30	JDN	5	0.30	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:28	6020B	3010A
7440-28-0	Thallium	0.65	JD	5	0.30	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:28	6020B	3010A
7440-62-2	Vanadium	264	D	5	0.39	1.25	25.0	ug/L	08/18/25 12:30	08/20/25 12:28	6020B	3010A
7440-66-6	Zinc	2440	D	5	6.25	7.50	25.0	ug/L	08/18/25 12:30	08/20/25 12:28	6020B	3010A

Color Before:	Light Yellow	Clarity Before:	Clear	Texture:
Color After:	Light Yellow	Clarity After:	Clear	Artifacts:
Comments:	SPLP Mercury			

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N = Spiked sample recovery not within control limits

Report of Analysis

Client:	Nobis Group	Date Collected:	08/14/25
Project:	Raymark Superfund Site	Date Received:	08/15/25
Client Sample ID:	OU4-TS-GRILLO-TSCP04-081425	SDG No.:	Q2879
Lab Sample ID:	Q2879-04	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-36-0	Antimony	0.90	JD	5	0.55	1.25	10.0	ug/L	08/18/25 12:30	08/20/25 12:32	6020B	3010A
7440-38-2	Arsenic	38.2	DN	5	0.45	1.25	5.00	ug/L	08/18/25 12:30	08/20/25 12:32	6020B	3010A
7440-39-3	Barium	136	DN	5	1.05	6.25	50.0	ug/L	08/18/25 12:30	08/20/25 12:32	6020B	3010A
7440-41-7	Beryllium	13.8	D	5	1.60	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:32	6020B	3010A
7440-43-9	Cadmium	11.1	D	5	1.70	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:32	6020B	3010A
7440-47-3	Chromium	52.7	D	5	1.05	3.75	10.0	ug/L	08/18/25 12:30	08/20/25 12:32	6020B	3010A
7440-50-8	Copper	190	D	5	1.50	7.50	10.0	ug/L	08/18/25 12:30	08/20/25 12:32	6020B	3010A
7439-92-1	Lead	179	D	5	1.05	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:32	6020B	3010A
7439-97-6	Mercury	0.16	U	1	0.076	0.16	0.20	ug/L	08/19/25 11:30	08/19/25 14:40	7470A	
7440-02-0	Nickel	103	D	5	1.35	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:32	6020B	3010A
7782-49-2	Selenium	22.5	UD	5	14.5	22.5	25.0	ug/L	08/18/25 12:30	08/20/25 12:32	6020B	3010A
7440-22-4	Silver	2.50	UDN5		0.30	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:32	6020B	3010A
7440-28-0	Thallium	0.65	JD	5	0.30	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:32	6020B	3010A
7440-62-2	Vanadium	261	D	5	0.39	1.25	25.0	ug/L	08/18/25 12:30	08/20/25 12:32	6020B	3010A
7440-66-6	Zinc	2010	D	5	6.25	7.50	25.0	ug/L	08/18/25 12:30	08/20/25 12:32	6020B	3010A

Color Before:	Light Yellow	Clarity Before:	Clear	Texture:
Color After:	Light Yellow	Clarity After:	Clear	Artifacts:
Comments:	SPLP Mercury			

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N = Spiked sample recovery not within control limits

Report of Analysis

Client:	Nobis Group	Date Collected:	08/14/25
Project:	Raymark Superfund Site	Date Received:	08/15/25
Client Sample ID:	OU4-TS-GRILLO-TSCP05-081425	SDG No.:	Q2879
Lab Sample ID:	Q2879-06	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-36-0	Antimony	0.95	JD	5	0.55	1.25	10.0	ug/L	08/18/25 12:30	08/20/25 12:35	6020B	3010A
7440-38-2	Arsenic	29.6	DN	5	0.45	1.25	5.00	ug/L	08/18/25 12:30	08/20/25 12:35	6020B	3010A
7440-39-3	Barium	133	DN	5	1.05	6.25	50.0	ug/L	08/18/25 12:30	08/20/25 12:35	6020B	3010A
7440-41-7	Beryllium	14.3	D	5	1.60	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:35	6020B	3010A
7440-43-9	Cadmium	11.4	D	5	1.70	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:35	6020B	3010A
7440-47-3	Chromium	57.2	D	5	1.05	3.75	10.0	ug/L	08/18/25 12:30	08/20/25 12:35	6020B	3010A
7440-50-8	Copper	230	D	5	1.50	7.50	10.0	ug/L	08/18/25 12:30	08/20/25 12:35	6020B	3010A
7439-92-1	Lead	268	D	5	1.05	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:35	6020B	3010A
7439-97-6	Mercury	0.16	U	1	0.076	0.16	0.20	ug/L	08/19/25 11:30	08/19/25 14:43	7470A	
7440-02-0	Nickel	97.0	D	5	1.35	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:35	6020B	3010A
7782-49-2	Selenium	22.5	UD	5	14.5	22.5	25.0	ug/L	08/18/25 12:30	08/20/25 12:35	6020B	3010A
7440-22-4	Silver	2.50	UDN5		0.30	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:35	6020B	3010A
7440-28-0	Thallium	0.70	JD	5	0.30	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:35	6020B	3010A
7440-62-2	Vanadium	284	D	5	0.39	1.25	25.0	ug/L	08/18/25 12:30	08/20/25 12:35	6020B	3010A
7440-66-6	Zinc	1810	D	5	6.25	7.50	25.0	ug/L	08/18/25 12:30	08/20/25 12:35	6020B	3010A

Color Before:	Light Yellow	Clarity Before:	Clear	Texture:
Color After:	Light Yellow	Clarity After:	Clear	Artifacts:
Comments:	SPLP Mercury			

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OR = Over Range
N = Spiked sample recovery not within control limits

Report of Analysis

Client:	Nobis Group	Date Collected:	08/14/25
Project:	Raymark Superfund Site	Date Received:	08/15/25
Client Sample ID:	OU4-TS-GRILLO-TSCP06-081425	SDG No.:	Q2879
Lab Sample ID:	Q2879-08	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-36-0	Antimony	0.90	JD	5	0.55	1.25	10.0	ug/L	08/18/25 12:30	08/20/25 12:38	6020B	3010A
7440-38-2	Arsenic	33.8	DN	5	0.45	1.25	5.00	ug/L	08/18/25 12:30	08/20/25 12:38	6020B	3010A
7440-39-3	Barium	124	DN	5	1.05	6.25	50.0	ug/L	08/18/25 12:30	08/20/25 12:38	6020B	3010A
7440-41-7	Beryllium	14.3	D	5	1.60	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:38	6020B	3010A
7440-43-9	Cadmium	11.6	D	5	1.70	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:38	6020B	3010A
7440-47-3	Chromium	60.5	D	5	1.05	3.75	10.0	ug/L	08/18/25 12:30	08/20/25 12:38	6020B	3010A
7440-50-8	Copper	216	D	5	1.50	7.50	10.0	ug/L	08/18/25 12:30	08/20/25 12:38	6020B	3010A
7439-92-1	Lead	210	D	5	1.05	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:38	6020B	3010A
7439-97-6	Mercury	0.20	J	1	0.076	0.16	0.20	ug/L	08/19/25 11:30	08/19/25 14:50	7470A	
7440-02-0	Nickel	109	D	5	1.35	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:38	6020B	3010A
7782-49-2	Selenium	22.5	UD	5	14.5	22.5	25.0	ug/L	08/18/25 12:30	08/20/25 12:38	6020B	3010A
7440-22-4	Silver	2.50	UDN5		0.30	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:38	6020B	3010A
7440-28-0	Thallium	0.75	JD	5	0.30	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:38	6020B	3010A
7440-62-2	Vanadium	282	D	5	0.39	1.25	25.0	ug/L	08/18/25 12:30	08/20/25 12:38	6020B	3010A
7440-66-6	Zinc	2000	D	5	6.25	7.50	25.0	ug/L	08/18/25 12:30	08/20/25 12:38	6020B	3010A

Color Before:	Light Yellow	Clarity Before:	Clear	Texture:
Color After:	Light Yellow	Clarity After:	Clear	Artifacts:
Comments:	SPLP Mercury			

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N = Spiked sample recovery not within control limits

Report of Analysis

Client:	Nobis Group	Date Collected:	08/14/25
Project:	Raymark Superfund Site	Date Received:	08/15/25
Client Sample ID:	OU4-TS-GRILLO-TSCP07-081425	SDG No.:	Q2879
Lab Sample ID:	Q2879-10	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-36-0	Antimony	0.75	JD	5	0.55	1.25	10.0	ug/L	08/18/25 12:30	08/20/25 12:41	6020B	3010A
7440-38-2	Arsenic	10.2	DN	5	0.45	1.25	5.00	ug/L	08/18/25 12:30	08/20/25 12:41	6020B	3010A
7440-39-3	Barium	104	DN	5	1.05	6.25	50.0	ug/L	08/18/25 12:30	08/20/25 12:41	6020B	3010A
7440-41-7	Beryllium	4.80	JD	5	1.60	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:41	6020B	3010A
7440-43-9	Cadmium	7.35	D	5	1.70	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:41	6020B	3010A
7440-47-3	Chromium	9.95	JD	5	1.05	3.75	10.0	ug/L	08/18/25 12:30	08/20/25 12:41	6020B	3010A
7440-50-8	Copper	26.4	D	5	1.50	7.50	10.0	ug/L	08/18/25 12:30	08/20/25 12:41	6020B	3010A
7439-92-1	Lead	25.2	D	5	1.05	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:41	6020B	3010A
7439-97-6	Mercury	0.20		1	0.076	0.16	0.20	ug/L	08/19/25 11:30	08/19/25 14:52	7470A	
7440-02-0	Nickel	59.7	D	5	1.35	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:41	6020B	3010A
7782-49-2	Selenium	22.5	UD	5	14.5	22.5	25.0	ug/L	08/18/25 12:30	08/20/25 12:41	6020B	3010A
7440-22-4	Silver	2.50	UDN5		0.30	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:41	6020B	3010A
7440-28-0	Thallium	0.40	JD	5	0.30	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:41	6020B	3010A
7440-62-2	Vanadium	15.8	JD	5	0.39	1.25	25.0	ug/L	08/18/25 12:30	08/20/25 12:41	6020B	3010A
7440-66-6	Zinc	1610	D	5	6.25	7.50	25.0	ug/L	08/18/25 12:30	08/20/25 12:41	6020B	3010A

Color Before:	Light Yellow	Clarity Before:	Clear	Texture:
Color After:	Light Yellow	Clarity After:	Clear	Artifacts:
Comments:	SPLP Mercury			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

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OR = Over Range

N =Spiked sample recovery not within control limits

Report of Analysis

Client:	Nobis Group	Date Collected:	08/14/25
Project:	Raymark Superfund Site	Date Received:	08/15/25
Client Sample ID:	OU4-TS-GRILLO-TSCP08-081425	SDG No.:	Q2879
Lab Sample ID:	Q2879-12	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-36-0	Antimony	0.75	JD	5	0.55	1.25	10.0	ug/L	08/18/25 12:30	08/20/25 12:44	6020B	3010A
7440-38-2	Arsenic	31.1	DN	5	0.45	1.25	5.00	ug/L	08/18/25 12:30	08/20/25 12:44	6020B	3010A
7440-39-3	Barium	120	DN	5	1.05	6.25	50.0	ug/L	08/18/25 12:30	08/20/25 12:44	6020B	3010A
7440-41-7	Beryllium	13.2	D	5	1.60	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:44	6020B	3010A
7440-43-9	Cadmium	10.6	D	5	1.70	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:44	6020B	3010A
7440-47-3	Chromium	47.8	D	5	1.05	3.75	10.0	ug/L	08/18/25 12:30	08/20/25 12:44	6020B	3010A
7440-50-8	Copper	168	D	5	1.50	7.50	10.0	ug/L	08/18/25 12:30	08/20/25 12:44	6020B	3010A
7439-92-1	Lead	175	D	5	1.05	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:44	6020B	3010A
7439-97-6	Mercury	0.41		1	0.076	0.16	0.20	ug/L	08/19/25 11:30	08/19/25 14:54	7470A	
7440-02-0	Nickel	95.1	D	5	1.35	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:44	6020B	3010A
7782-49-2	Selenium	22.5	UD	5	14.5	22.5	25.0	ug/L	08/18/25 12:30	08/20/25 12:44	6020B	3010A
7440-22-4	Silver	2.50	UDN5		0.30	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:44	6020B	3010A
7440-28-0	Thallium	0.70	JD	5	0.30	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:44	6020B	3010A
7440-62-2	Vanadium	264	D	5	0.39	1.25	25.0	ug/L	08/18/25 12:30	08/20/25 12:44	6020B	3010A
7440-66-6	Zinc	1850	D	5	6.25	7.50	25.0	ug/L	08/18/25 12:30	08/20/25 12:44	6020B	3010A

Color Before:	Light Yellow	Clarity Before:	Clear	Texture:
Color After:	Light Yellow	Clarity After:	Clear	Artifacts:
Comments:	SPLP Mercury			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

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N = Spiked sample recovery not within control limits

Report of Analysis

Client:	Nobis Group	Date Collected:	08/14/25
Project:	Raymark Superfund Site	Date Received:	08/15/25
Client Sample ID:	OU4-TS-GRILLO-TSCP09-081425	SDG No.:	Q2879
Lab Sample ID:	Q2879-14	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-36-0	Antimony	0.90	JD	5	0.55	1.25	10.0	ug/L	08/18/25 12:30	08/20/25 12:56	6020B	3010A
7440-38-2	Arsenic	27.0	DN	5	0.45	1.25	5.00	ug/L	08/18/25 12:30	08/20/25 12:56	6020B	3010A
7440-39-3	Barium	122	DN	5	1.05	6.25	50.0	ug/L	08/18/25 12:30	08/20/25 12:56	6020B	3010A
7440-41-7	Beryllium	12.9	D	5	1.60	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:56	6020B	3010A
7440-43-9	Cadmium	11.3	D	5	1.70	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:56	6020B	3010A
7440-47-3	Chromium	46.5	D	5	1.05	3.75	10.0	ug/L	08/18/25 12:30	08/20/25 12:56	6020B	3010A
7440-50-8	Copper	144	D	5	1.50	7.50	10.0	ug/L	08/18/25 12:30	08/20/25 12:56	6020B	3010A
7439-92-1	Lead	179	D	5	1.05	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:56	6020B	3010A
7439-97-6	Mercury	0.26		1	0.076	0.16	0.20	ug/L	08/19/25 11:30	08/19/25 14:57	7470A	
7440-02-0	Nickel	101	D	5	1.35	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:56	6020B	3010A
7782-49-2	Selenium	22.5	UD	5	14.5	22.5	25.0	ug/L	08/18/25 12:30	08/20/25 12:56	6020B	3010A
7440-22-4	Silver	2.50	UDN5		0.30	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:56	6020B	3010A
7440-28-0	Thallium	0.55	JD	5	0.30	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:56	6020B	3010A
7440-62-2	Vanadium	213	D	5	0.39	1.25	25.0	ug/L	08/18/25 12:30	08/20/25 12:56	6020B	3010A
7440-66-6	Zinc	2010	D	5	6.25	7.50	25.0	ug/L	08/18/25 12:30	08/20/25 12:56	6020B	3010A

Color Before:	Light Yellow	Clarity Before:	Clear	Texture:
Color After:	Light Yellow	Clarity After:	Clear	Artifacts:
Comments:	SPLP Mercury			

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Report of Analysis

Client:	Nobis Group	Date Collected:	08/14/25
Project:	Raymark Superfund Site	Date Received:	08/15/25
Client Sample ID:	OU4-TS-GRILLO-TSCP10-081425	SDG No.:	Q2879
Lab Sample ID:	Q2879-16	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-36-0	Antimony	0.90	JD	5	0.55	1.25	10.0	ug/L	08/18/25 12:30	08/20/25 12:59	6020B	3010A
7440-38-2	Arsenic	30.4	DN	5	0.45	1.25	5.00	ug/L	08/18/25 12:30	08/20/25 12:59	6020B	3010A
7440-39-3	Barium	115	DN	5	1.05	6.25	50.0	ug/L	08/18/25 12:30	08/20/25 12:59	6020B	3010A
7440-41-7	Beryllium	14.5	D	5	1.60	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:59	6020B	3010A
7440-43-9	Cadmium	11.6	D	5	1.70	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:59	6020B	3010A
7440-47-3	Chromium	56.9	D	5	1.05	3.75	10.0	ug/L	08/18/25 12:30	08/20/25 12:59	6020B	3010A
7440-50-8	Copper	204	D	5	1.50	7.50	10.0	ug/L	08/18/25 12:30	08/20/25 12:59	6020B	3010A
7439-92-1	Lead	263	D	5	1.05	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:59	6020B	3010A
7439-97-6	Mercury	0.21		1	0.076	0.16	0.20	ug/L	08/19/25 11:30	08/19/25 14:59	7470A	
7440-02-0	Nickel	107	D	5	1.35	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 12:59	6020B	3010A
7782-49-2	Selenium	22.5	UD	5	14.5	22.5	25.0	ug/L	08/18/25 12:30	08/20/25 12:59	6020B	3010A
7440-22-4	Silver	2.50	UDN5		0.30	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:59	6020B	3010A
7440-28-0	Thallium	0.60	JD	5	0.30	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 12:59	6020B	3010A
7440-62-2	Vanadium	288	D	5	0.39	1.25	25.0	ug/L	08/18/25 12:30	08/20/25 12:59	6020B	3010A
7440-66-6	Zinc	2060	D	5	6.25	7.50	25.0	ug/L	08/18/25 12:30	08/20/25 12:59	6020B	3010A

Color Before:	Light Yellow	Clarity Before:	Clear	Texture:
Color After:	Light Yellow	Clarity After:	Clear	Artifacts:
Comments:	SPLP Mercury			

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Report of Analysis

Client:	Nobis Group	Date Collected:	08/14/25
Project:	Raymark Superfund Site	Date Received:	08/15/25
Client Sample ID:	OU4-TS-GRILLO-TSCP11-081425	SDG No.:	Q2879
Lab Sample ID:	Q2879-18	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-36-0	Antimony	0.75	JD	5	0.55	1.25	10.0	ug/L	08/18/25 12:30	08/20/25 13:02	6020B	3010A
7440-38-2	Arsenic	31.9	DN	5	0.45	1.25	5.00	ug/L	08/18/25 12:30	08/20/25 13:02	6020B	3010A
7440-39-3	Barium	132	DN	5	1.05	6.25	50.0	ug/L	08/18/25 12:30	08/20/25 13:02	6020B	3010A
7440-41-7	Beryllium	12.2	D	5	1.60	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 13:02	6020B	3010A
7440-43-9	Cadmium	9.70	D	5	1.70	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 13:02	6020B	3010A
7440-47-3	Chromium	64.5	D	5	1.05	3.75	10.0	ug/L	08/18/25 12:30	08/20/25 13:02	6020B	3010A
7440-50-8	Copper	248	D	5	1.50	7.50	10.0	ug/L	08/18/25 12:30	08/20/25 13:02	6020B	3010A
7439-92-1	Lead	280	D	5	1.05	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 13:02	6020B	3010A
7439-97-6	Mercury	0.16	U	1	0.076	0.16	0.20	ug/L	08/19/25 11:30	08/19/25 15:01	7470A	
7440-02-0	Nickel	100	D	5	1.35	3.75	5.00	ug/L	08/18/25 12:30	08/20/25 13:02	6020B	3010A
7782-49-2	Selenium	22.5	UD	5	14.5	22.5	25.0	ug/L	08/18/25 12:30	08/20/25 13:02	6020B	3010A
7440-22-4	Silver	2.50	UDN5		0.30	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 13:02	6020B	3010A
7440-28-0	Thallium	0.65	JD	5	0.30	2.50	5.00	ug/L	08/18/25 12:30	08/20/25 13:02	6020B	3010A
7440-62-2	Vanadium	302	D	5	0.39	1.25	25.0	ug/L	08/18/25 12:30	08/20/25 13:02	6020B	3010A
7440-66-6	Zinc	1750	D	5	6.25	7.50	25.0	ug/L	08/18/25 12:30	08/20/25 13:02	6020B	3010A

Color Before:	Light Yellow	Clarity Before:	Clear	Texture:
Color After:	Light Yellow	Clarity After:	Clear	Artifacts:
Comments:	SPLP Mercury			

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METAL CALIBRATION DATA

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group

SDG No.: Q2879

Contract: NOBI03

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV23	Mercury	4.11	4.0	103	90 - 110	CV	08/19/2025	14:07	LB136879

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group

SDG No.: Q2879

Contract: NOBI03

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV71	Mercury	4.71	5.0	94	90 - 110	CV	08/19/2025	14:11	LB136879
CCV72	Mercury	4.70	5.0	94	90 - 110	CV	08/19/2025	14:45	LB136879
CCV73	Mercury	4.75	5.0	95	90 - 110	CV	08/19/2025	15:14	LB136879
CCV74	Mercury	5.24	5.0	105	90 - 110	CV	08/19/2025	15:37	LB136879

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group

SDG No.: Q2879

Contract: NOBI03

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV01	Antimony	408	400	102	90 - 110	P	08/20/2025	11:35	LB136893
	Arsenic	398	400	100	90 - 110	P	08/20/2025	11:35	LB136893
	Barium	1610	1600	101	90 - 110	P	08/20/2025	11:35	LB136893
	Beryllium	39.7	40.0	99	90 - 110	P	08/20/2025	11:35	LB136893
	Cadmium	206	200	103	90 - 110	P	08/20/2025	11:35	LB136893
	Chromium	162	160	102	90 - 110	P	08/20/2025	11:35	LB136893
	Copper	189	200	94	90 - 110	P	08/20/2025	11:35	LB136893
	Lead	382	400	96	90 - 110	P	08/20/2025	11:35	LB136893
	Nickel	409	400	102	90 - 110	P	08/20/2025	11:35	LB136893
	Selenium	412	400	103	90 - 110	P	08/20/2025	11:35	LB136893
	Silver	213	200	106	90 - 110	P	08/20/2025	11:35	LB136893
	Thallium	382	400	96	90 - 110	P	08/20/2025	11:35	LB136893
	Vanadium	404	400	101	90 - 110	P	08/20/2025	11:35	LB136893
	Zinc	380	400	95	90 - 110	P	08/20/2025	11:35	LB136893

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group

SDG No.: Q2879

Contract: NOBI03

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV01	Antimony	2.14	2.0	107	80 - 120	P	08/20/2025	11:50	LB136893
	Arsenic	0.99	1.0	99	80 - 120	P	08/20/2025	11:50	LB136893
	Barium	10.1	10.0	101	80 - 120	P	08/20/2025	11:50	LB136893
	Beryllium	1.11	1.0	111	80 - 120	P	08/20/2025	11:50	LB136893
	Cadmium	0.94	1.0	94	80 - 120	P	08/20/2025	11:50	LB136893
	Chromium	2.08	2.0	104	80 - 120	P	08/20/2025	11:50	LB136893
	Copper	2.00	2.0	100	80 - 120	P	08/20/2025	11:50	LB136893
	Lead	0.91	1.0	91	80 - 120	P	08/20/2025	11:50	LB136893
	Nickel	0.92	1.0	92	80 - 120	P	08/20/2025	11:50	LB136893
	Selenium	5.07	5.0	101	80 - 120	P	08/20/2025	11:50	LB136893
	Silver	1.14	1.0	114	80 - 120	P	08/20/2025	11:50	LB136893
	Thallium	1.00	1.0	100	80 - 120	P	08/20/2025	11:50	LB136893
	Vanadium	5.25	5.0	105	80 - 120	P	08/20/2025	11:50	LB136893
	Zinc	4.04	5.0	81	80 - 120	P	08/20/2025	11:50	LB136893

Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group

Contract: NOBI03

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

SDG No.: Q2879

Lab Code: ACE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV01	Antimony	514	500	103	90 - 110	P	08/20/2025	12:06	LB136893
	Arsenic	500	500	100	90 - 110	P	08/20/2025	12:06	LB136893
	Barium	2590	2500	104	90 - 110	P	08/20/2025	12:06	LB136893
	Beryllium	523	500	105	90 - 110	P	08/20/2025	12:06	LB136893
	Cadmium	506	500	101	90 - 110	P	08/20/2025	12:06	LB136893
	Chromium	508	500	102	90 - 110	P	08/20/2025	12:06	LB136893
	Copper	5050	5000	101	90 - 110	P	08/20/2025	12:06	LB136893
	Lead	2570	2500	103	90 - 110	P	08/20/2025	12:06	LB136893
	Nickel	502	500	100	90 - 110	P	08/20/2025	12:06	LB136893
	Selenium	489	500	98	90 - 110	P	08/20/2025	12:06	LB136893
	Silver	506	500	101	90 - 110	P	08/20/2025	12:06	LB136893
	Thallium	519	500	104	90 - 110	P	08/20/2025	12:06	LB136893
	Vanadium	515	500	103	90 - 110	P	08/20/2025	12:06	LB136893
	Zinc	4960	5000	99	90 - 110	P	08/20/2025	12:06	LB136893
CCV02	Antimony	529	500	106	90 - 110	P	08/20/2025	12:47	LB136893
	Arsenic	500	500	100	90 - 110	P	08/20/2025	12:47	LB136893
	Barium	2670	2500	107	90 - 110	P	08/20/2025	12:47	LB136893
	Beryllium	531	500	106	90 - 110	P	08/20/2025	12:47	LB136893
	Cadmium	523	500	105	90 - 110	P	08/20/2025	12:47	LB136893
	Chromium	515	500	103	90 - 110	P	08/20/2025	12:47	LB136893
	Copper	5060	5000	101	90 - 110	P	08/20/2025	12:47	LB136893
	Lead	2570	2500	103	90 - 110	P	08/20/2025	12:47	LB136893
	Nickel	503	500	101	90 - 110	P	08/20/2025	12:47	LB136893
	Selenium	494	500	99	90 - 110	P	08/20/2025	12:47	LB136893
	Silver	531	500	106	90 - 110	P	08/20/2025	12:47	LB136893
	Thallium	522	500	104	90 - 110	P	08/20/2025	12:47	LB136893
	Vanadium	515	500	103	90 - 110	P	08/20/2025	12:47	LB136893
	Zinc	5010	5000	100	90 - 110	P	08/20/2025	12:47	LB136893
CCV03	Antimony	529	500	106	90 - 110	P	08/20/2025	13:27	LB136893
	Arsenic	494	500	99	90 - 110	P	08/20/2025	13:27	LB136893
	Barium	2680	2500	107	90 - 110	P	08/20/2025	13:27	LB136893
	Beryllium	539	500	108	90 - 110	P	08/20/2025	13:27	LB136893
	Cadmium	517	500	103	90 - 110	P	08/20/2025	13:27	LB136893
	Chromium	524	500	105	90 - 110	P	08/20/2025	13:27	LB136893

Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group

SDG No.: Q2879

Contract: NOBI03

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV03	Copper	5140	5000	103	90 - 110	P	08/20/2025	13:27	LB136893
	Lead	2610	2500	104	90 - 110	P	08/20/2025	13:27	LB136893
	Nickel	516	500	103	90 - 110	P	08/20/2025	13:27	LB136893
	Selenium	484	500	97	90 - 110	P	08/20/2025	13:27	LB136893
	Silver	519	500	104	90 - 110	P	08/20/2025	13:27	LB136893
	Thallium	524	500	105	90 - 110	P	08/20/2025	13:27	LB136893
	Vanadium	525	500	105	90 - 110	P	08/20/2025	13:27	LB136893
	Zinc	5110	5000	102	90 - 110	P	08/20/2025	13:27	LB136893

Metals
- 2b -
CRDL STANDARD FOR AA & ICP

Client: Nobis Group **SDG No.:** Q2879
Contract: NOBI03 **Lab Code:** ACE
Initial Calibration Source: _____
Continuing Calibration Source: _____

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CRA	Mercury	0.21	0.2	103	70 - 130	CV	08/19/2025	14:16	LB136879
CRI	Antimony	2.19	2.0	110	70 - 130	P	08/20/2025	12:15	LB136893
	Arsenic	1.04	1.0	104	70 - 130	P	08/20/2025	12:15	LB136893
	Barium	10.6	10.0	106	70 - 130	P	08/20/2025	12:15	LB136893
	Beryllium	1.19	1.0	119	70 - 130	P	08/20/2025	12:15	LB136893
	Cadmium	0.71	1.0	71	70 - 130	P	08/20/2025	12:15	LB136893
	Chromium	2.15	2.0	108	70 - 130	P	08/20/2025	12:15	LB136893
	Copper	2.09	2.0	104	70 - 130	P	08/20/2025	12:15	LB136893
	Lead	0.92	1.0	92	70 - 130	P	08/20/2025	12:15	LB136893
	Nickel	1.02	1.0	102	70 - 130	P	08/20/2025	12:15	LB136893
	Selenium	4.95	5.0	99	70 - 130	P	08/20/2025	12:15	LB136893
	Silver	1.19	1.0	119	70 - 130	P	08/20/2025	12:15	LB136893
	Thallium	1.03	1.0	103	70 - 130	P	08/20/2025	12:15	LB136893
	Vanadium	5.41	5.0	108	70 - 130	P	08/20/2025	12:15	LB136893
	Zinc	4.29	5.0	86	50 - 150	P	08/20/2025	12:15	LB136893



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2879
Contract: NOBI03 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB23	Mercury	0.076	+/-0.2	U	0.16	0.20	CV	08/19/2025	14:09	LB136879

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group

SDG No.: Q2879

Contract: NOBI03

Lab Code: ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB71	Mercury	0.076	+/-0.2	U	0.16	0.20	CV	08/19/2025	14:14	LB136879
CCB72	Mercury	0.076	+/-0.2	U	0.16	0.20	CV	08/19/2025	14:47	LB136879
CCB73	Mercury	0.076	+/-0.2	U	0.16	0.20	CV	08/19/2025	15:16	LB136879
CCB74	Mercury	0.076	+/-0.2	U	0.16	0.20	CV	08/19/2025	15:39	LB136879

Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group

SDG No.: Q2879

Contract: NOBI03

Lab Code: ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Antimony	0.11	+/-1	U	0.25	2.00	P	08/20/2025	11:56	LB136893
	Arsenic	0.089	+/-0.5	U	0.25	1.00	P	08/20/2025	11:56	LB136893
	Barium	0.21	+/-5	U	1.25	10.0	P	08/20/2025	11:56	LB136893
	Beryllium	0.32	+/-0.5	U	0.75	1.00	P	08/20/2025	11:56	LB136893
	Cadmium	0.34	+/-0.5	U	0.50	1.00	P	08/20/2025	11:56	LB136893
	Chromium	0.21	+/-1	U	0.75	2.00	P	08/20/2025	11:56	LB136893
	Copper	0.30	+/-1	U	1.50	2.00	P	08/20/2025	11:56	LB136893
	Lead	0.21	+/-0.5	U	0.75	1.00	P	08/20/2025	11:56	LB136893
	Nickel	0.27	+/-0.5	U	0.75	1.00	P	08/20/2025	11:56	LB136893
	Selenium	2.90	+/-2.5	U	4.50	5.00	P	08/20/2025	11:56	LB136893
	Silver	0.060	+/-0.5	U	0.50	1.00	P	08/20/2025	11:56	LB136893
	Thallium	0.060	+/-0.5	U	0.50	1.00	P	08/20/2025	11:56	LB136893
	Vanadium	0.077	+/-2.5	U	0.25	5.00	P	08/20/2025	11:56	LB136893
	Zinc	1.25	+/-2.5	U	1.50	5.00	P	08/20/2025	11:56	LB136893

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group SDG No.: Q2879
Contract: NOBI03 Lab Code: ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Antimony	0.11	+/-1	J	0.25	2.00	P	08/20/2025	12:09	LB136893
	Arsenic	0.089	+/-0.5	U	0.25	1.00	P	08/20/2025	12:09	LB136893
	Barium	0.21	+/-5	U	1.25	10.0	P	08/20/2025	12:09	LB136893
	Beryllium	0.32	+/-0.5	U	0.75	1.00	P	08/20/2025	12:09	LB136893
	Cadmium	0.34	+/-0.5	U	0.50	1.00	P	08/20/2025	12:09	LB136893
	Chromium	0.21	+/-1	U	0.75	2.00	P	08/20/2025	12:09	LB136893
	Copper	0.30	+/-1	U	1.50	2.00	P	08/20/2025	12:09	LB136893
	Lead	0.21	+/-0.5	U	0.75	1.00	P	08/20/2025	12:09	LB136893
	Nickel	0.27	+/-0.5	U	0.75	1.00	P	08/20/2025	12:09	LB136893
	Selenium	2.90	+/-2.5	U	4.50	5.00	P	08/20/2025	12:09	LB136893
	Silver	0.060	+/-0.5	U	0.50	1.00	P	08/20/2025	12:09	LB136893
	Thallium	0.060	+/-0.5	U	0.50	1.00	P	08/20/2025	12:09	LB136893
	Vanadium	0.077	+/-2.5	U	0.25	5.00	P	08/20/2025	12:09	LB136893
	Zinc	1.25	+/-2.5	U	1.50	5.00	P	08/20/2025	12:09	LB136893
CCB02	Antimony	0.11	+/-1	U	0.25	2.00	P	08/20/2025	12:52	LB136893
	Arsenic	0.089	+/-0.5	U	0.25	1.00	P	08/20/2025	12:52	LB136893
	Barium	0.21	+/-5	U	1.25	10.0	P	08/20/2025	12:52	LB136893
	Beryllium	0.32	+/-0.5	U	0.75	1.00	P	08/20/2025	12:52	LB136893
	Cadmium	0.34	+/-0.5	U	0.50	1.00	P	08/20/2025	12:52	LB136893
	Chromium	0.21	+/-1	U	0.75	2.00	P	08/20/2025	12:52	LB136893
	Copper	0.30	+/-1	U	1.50	2.00	P	08/20/2025	12:52	LB136893
	Lead	0.21	+/-0.5	U	0.75	1.00	P	08/20/2025	12:52	LB136893
	Nickel	0.27	+/-0.5	U	0.75	1.00	P	08/20/2025	12:52	LB136893
	Selenium	2.90	+/-2.5	U	4.50	5.00	P	08/20/2025	12:52	LB136893
	Silver	0.060	+/-0.5	U	0.50	1.00	P	08/20/2025	12:52	LB136893
	Thallium	0.060	+/-0.5	U	0.50	1.00	P	08/20/2025	12:52	LB136893
	Vanadium	0.077	+/-2.5	U	0.25	5.00	P	08/20/2025	12:52	LB136893
	Zinc	1.25	+/-2.5	U	1.50	5.00	P	08/20/2025	12:52	LB136893
CCB03	Antimony	0.14	+/-1	J	0.25	2.00	P	08/20/2025	13:30	LB136893
	Arsenic	0.089	+/-0.5	U	0.25	1.00	P	08/20/2025	13:30	LB136893
	Barium	0.21	+/-5	U	1.25	10.0	P	08/20/2025	13:30	LB136893
	Beryllium	0.32	+/-0.5	U	0.75	1.00	P	08/20/2025	13:30	LB136893
	Cadmium	0.34	+/-0.5	U	0.50	1.00	P	08/20/2025	13:30	LB136893
	Chromium	0.21	+/-1	U	0.75	2.00	P	08/20/2025	13:30	LB136893
	Copper	0.30	+/-1	U	1.50	2.00	P	08/20/2025	13:30	LB136893
	Lead	0.21	+/-0.5	U	0.75	1.00	P	08/20/2025	13:30	LB136893
	Nickel	0.27	+/-0.5	U	0.75	1.00	P	08/20/2025	13:30	LB136893
	Selenium	2.90	+/-2.5	U	4.50	5.00	P	08/20/2025	13:30	LB136893
	Silver	0.060	+/-0.5	U	0.50	1.00	P	08/20/2025	13:30	LB136893

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2879
Contract: NOBI03 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB03	Thallium	0.060	+/-0.5	U	0.50	1.00	P	08/20/2025	13:30	LB136893
	Vanadium	0.077	+/-2.5	U	0.25	5.00	P	08/20/2025	13:30	LB136893
	Zinc	1.25	+/-2.5	U	1.50	5.00	P	08/20/2025	13:30	LB136893

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Nobis Group

SDG No.: Q2879

Instrument: CV1

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB169293BL		WATER		Batch Number:		PB169293		Prep Date:	08/19/2025	
	Mercury	0.076	<0.2	U	0.16	0.20	CV	08/19/2025	14:25	LB136879
Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB169293TB		WATER		Batch Number:		PB169293		Prep Date:	08/19/2025	
	Mercury	0.076	<0.2	U	0.16	0.20	CV	08/19/2025	15:26	LB136879

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Nobis Group

SDG No.: Q2879

Instrument: P7

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB169300BL		WATER		Batch Number:		PB169300		Prep Date:	08/18/2025	
	Antimony	0.11	<1	U	0.25	2.00	P	08/20/2025	12:19	LB136893
	Arsenic	0.089	<0.5	U	0.25	1.00	P	08/20/2025	12:19	LB136893
	Barium	0.21	<5	U	1.25	10.0	P	08/20/2025	12:19	LB136893
	Beryllium	0.32	<0.5	U	0.75	1.00	P	08/20/2025	12:19	LB136893
	Cadmium	0.34	<0.5	U	0.50	1.00	P	08/20/2025	12:19	LB136893
	Chromium	0.21	<1	U	0.75	2.00	P	08/20/2025	12:19	LB136893
	Copper	0.30	<1	U	1.50	2.00	P	08/20/2025	12:19	LB136893
	Lead	0.21	<0.5	U	0.75	1.00	P	08/20/2025	12:19	LB136893
	Nickel	0.27	<0.5	U	0.75	1.00	P	08/20/2025	12:19	LB136893
	Selenium	2.90	<2.5	U	4.50	5.00	P	08/20/2025	12:19	LB136893
	Silver	0.060	<0.5	U	0.50	1.00	P	08/20/2025	12:19	LB136893
	Thallium	0.060	<0.5	U	0.50	1.00	P	08/20/2025	12:19	LB136893
	Vanadium	0.077	<2.5	U	0.25	5.00	P	08/20/2025	12:19	LB136893
	Zinc	1.25	<2.5	U	1.50	5.00	P	08/20/2025	12:19	LB136893
Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB169300TB		WATER		Batch Number:		PB169300		Prep Date:	08/18/2025	
	Antimony	0.13	<1	J	0.25	2.00	P	08/20/2025	12:25	LB136893
	Arsenic	0.089	<0.5	U	0.25	1.00	P	08/20/2025	12:25	LB136893
	Barium	0.21	<5	U	1.25	10.0	P	08/20/2025	12:25	LB136893
	Beryllium	0.32	<0.5	U	0.75	1.00	P	08/20/2025	12:25	LB136893
	Cadmium	0.34	<0.5	U	0.50	1.00	P	08/20/2025	12:25	LB136893
	Chromium	0.21	<1	U	0.75	2.00	P	08/20/2025	12:25	LB136893
	Copper	0.30	<1	U	1.50	2.00	P	08/20/2025	12:25	LB136893
	Lead	0.21	<0.5	U	0.75	1.00	P	08/20/2025	12:25	LB136893
	Nickel	0.27	<0.5	U	0.75	1.00	P	08/20/2025	12:25	LB136893
	Selenium	2.90	<2.5	U	4.50	5.00	P	08/20/2025	12:25	LB136893
	Silver	0.060	<0.5	U	0.50	1.00	P	08/20/2025	12:25	LB136893
	Thallium	0.060	<0.5	U	0.50	1.00	P	08/20/2025	12:25	LB136893
	Vanadium	0.077	<2.5	U	0.25	5.00	P	08/20/2025	12:25	LB136893
	Zinc	1.25	<2.5	U	1.50	5.00	P	08/20/2025	12:25	LB136893

Metals
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INTERFERENCE CHECK SAMPLE

Client: <u>Nobis Group</u>	SDG No.: <u>Q2879</u>
Contract: <u>NOBI03</u>	Lab Code: <u>ACE</u>
ICS Source: <u>EPA</u>	Instrument ID: <u>P7</u>

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSA01	Antimony	1.14	1.5	76	-2.5	5.5	08/20/2025	12:00	LB136893
	Arsenic	0.32	0.1	320	-1.9	2.1	08/20/2025	12:00	LB136893
	Barium	1.40	1.2	117	-18.8	21.2	08/20/2025	12:00	LB136893
	Beryllium	0.29			-2	2	08/20/2025	12:00	LB136893
	Cadmium	0	0.7		-1.3	2.7	08/20/2025	12:00	LB136893
	Chromium	20.2	21.0	96	17	25	08/20/2025	12:00	LB136893
	Copper	7.55	8.0	94	4	12	08/20/2025	12:00	LB136893
	Lead	4.16	4.0	104	2	6	08/20/2025	12:00	LB136893
	Nickel	5.30	6.0	88	4	8	08/20/2025	12:00	LB136893
	Selenium	0.34	0.3	113	-9.7	10	08/20/2025	12:00	LB136893
	Silver	0.040			-2	2	08/20/2025	12:00	LB136893
	Thallium	0.010			-2	2	08/20/2025	12:00	LB136893
	Vanadium	0.20	0.5	40	-9.5	10.5	08/20/2025	12:00	LB136893
	Zinc	9.07	11.0	82	1	21	08/20/2025	12:00	LB136893
ICSAB01	Antimony	21.3	22.0	97	18	26	08/20/2025	12:03	LB136893
	Arsenic	19.3	19.0	102	16.2	21.9	08/20/2025	12:03	LB136893
	Barium	21.7	22.0	99	2	42	08/20/2025	12:03	LB136893
	Beryllium	20.4	19.0	107	16.2	21.9	08/20/2025	12:03	LB136893
	Cadmium	20.3	20.0	102	17	23	08/20/2025	12:03	LB136893
	Chromium	40.4	40.0	101	34	46	08/20/2025	12:03	LB136893
	Copper	26.0	25.0	104	21	29	08/20/2025	12:03	LB136893
	Lead	24.9	25.0	100	21.3	28.8	08/20/2025	12:03	LB136893
	Nickel	25.4	24.0	106	20.4	27.6	08/20/2025	12:03	LB136893
	Selenium	19.4	19.0	102	9	29	08/20/2025	12:03	LB136893
	Silver	20.0	18.0	111	15.3	20.7	08/20/2025	12:03	LB136893
	Thallium	22.1	21.0	105	17.9	24.2	08/20/2025	12:03	LB136893
	Vanadium	20.1	19.0	106	9	29	08/20/2025	12:03	LB136893
	Zinc	28.3	29.0	98	19	39	08/20/2025	12:03	LB136893



METAL QC DATA

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metals
- 5a -
MATRIX SPIKE SUMMARY

client: Nobis Group **level:** low **sdg no.:** Q2879
contract: NOBI03 **lab code:** ACE
matrix: Water **sample id:** Q2879-18 **client id:** OU4-TS-GRILLO-TSCP11-081425MS
Percent Solids for Sample: NA **Spiked ID:** Q2879-18MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	ug/L	85 - 117	474	D	0.75	JD	500	95		P
Arsenic	ug/L	84 - 116	693	D	31.9	D	500	132	N	P
Barium	ug/L	86 - 114	2260	D	132	D	2500	85	N	P
Beryllium	ug/L	83 - 121	476	D	12.2	D	500	93		P
Cadmium	ug/L	87 - 115	488	D	9.70	D	500	96		P
Chromium	ug/L	85 - 116	518	D	64.5	D	500	91		P
Copper	ug/L	85 - 118	4730	D	248	D	5000	90		P
Lead	ug/L	88 - 115	2560	D	280	D	2500	91		P
Nickel	ug/L	85 - 117	569	D	100	D	500	94		P
Mercury	ug/L	82 - 119	4.03		0.20	U	4.0	101		CV
Selenium	ug/L	80 - 120	442	D	25.0	UD	500	88		P
Silver	ug/L	85 - 116	79.4	D	5.00	UD	500	16	N	P
Thallium	ug/L	82 - 116	424	D	0.65	JD	500	85		P
Vanadium	ug/L	86 - 115	749	D	302	D	500	89		P
Zinc	ug/L	83 - 119	6210	D	1750	D	5000	89		P

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: <u>Nobis Group</u>	level: <u>low</u>	sdg no.: <u>Q2879</u>
contract: <u>NOBI03</u>		lab code: <u>ACE</u>
matrix: <u>Water</u>	sample id: <u>Q2879-18</u>	client id: <u>OU4-TS-GRILLO-TSCP11-081425MSD</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>Q2879-18MSD</u>	Percent Solids for Spike Sample: <u>NA</u>

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	ug/L	85 - 117	484	D	0.75	JD	500	97		P
Arsenic	ug/L	84 - 116	711	D	31.9	D	500	136	N	P
Barium	ug/L	86 - 114	2310	D	132	D	2500	87		P
Beryllium	ug/L	83 - 121	483	D	12.2	D	500	94		P
Cadmium	ug/L	87 - 115	495	D	9.70	D	500	97		P
Chromium	ug/L	85 - 116	527	D	64.5	D	500	93		P
Copper	ug/L	85 - 118	4820	D	248	D	5000	92		P
Lead	ug/L	88 - 115	2660	D	280	D	2500	95		P
Nickel	ug/L	85 - 117	580	D	100	D	500	96		P
Mercury	ug/L	82 - 119	4.00		0.20	U	4.0	100		CV
Selenium	ug/L	80 - 120	455	D	25.0	UD	500	91		P
Silver	ug/L	85 - 116	80.4	D	5.00	UD	500	16	N	P
Thallium	ug/L	82 - 116	434	D	0.65	JD	500	87		P
Vanadium	ug/L	86 - 115	765	D	302	D	500	93		P
Zinc	ug/L	83 - 119	6340	D	1750	D	5000	92		P

Metals
- 5b -
POST DIGEST SPIKE SUMMARY

Client:	<u>Nobis Group</u>	SDG No.:	<u>Q2879</u>
Contract:	<u>NOBI03</u>	Lab Code:	<u>ACE</u>
Matrix:	<u>Water</u>	Level:	<u>LOW</u>
Sample ID:	<u>Q2879-18</u>	Client ID:	<u>OU4-TS-GRILLO-TSCP11-081425A</u>
	Spiked ID:	<u>Q2879-18A</u>	

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	84 - 116	728	D	31.9	D	500	139	N	P
Barium	ug/L	86 - 114	2260	D	132	D	2500	85	N	P
Silver	ug/L	85 - 116	79.3	D	5.00	UD	500	16	N	P

Metals

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DUPLICATE SAMPLE SUMMARY

Client: Nobis Group **Level:** LOW **SDG No.:** Q2879
Contract: NOBI03 **Lab Code:** ACE
Matrix: Water **Sample ID:** Q2879-18 **Client ID:** OU4-TS-GRILLO-TSCP11-081425DUP
Percent Solids for Sample: NA **Duplicate ID** Q2879-18DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Antimony	ug/L	20	0.75	JD	0.80	JD	6		P
Arsenic	ug/L	20	31.9	D	32.5	D	2		P
Barium	ug/L	20	132	D	129	D	2		P
Beryllium	ug/L	20	12.2	D	12.9	D	6		P
Cadmium	ug/L	20	9.70	D	9.40	D	3		P
Chromium	ug/L	20	64.5	D	65.3	D	1		P
Copper	ug/L	20	248	D	252	D	2		P
Lead	ug/L	20	280	D	288	D	3		P
Nickel	ug/L	20	100	D	103	D	3		P
Mercury	ug/L	20	0.20	U	0.20	U			CV
Selenium	ug/L	20	25.0	UD	25.0	UD			P
Silver	ug/L	20	5.00	UD	5.00	UD			P
Thallium	ug/L	20	0.65	JD	0.65	JD	0		P
Vanadium	ug/L	20	302	D	307	D	2		P
Zinc	ug/L	20	1750	D	1780	D	2		P

“A control limit of $\pm 20\%$ RPD for each matrix applies for sample values greater than 10 times Detection Limit”

Metals

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DUPLICATE SAMPLE SUMMARY

Client: Nobis Group **Level:** LOW **SDG No.:** Q2879
Contract: NOBI03 **Lab Code:** ACE
Matrix: Water **Sample ID:** Q2879-18MS **Client ID:** OU4-TS-GRILLO-TSCP11-081425MSD
Percent Solids for Sample: NA **Duplicate ID** Q2879-18MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Antimony	ug/L	20	474	D	484	D	2		P
Arsenic	ug/L	20	693	D	711	D	3		P
Barium	ug/L	20	2260	D	2310	D	2		P
Beryllium	ug/L	20	476	D	483	D	1		P
Cadmium	ug/L	20	488	D	495	D	1		P
Chromium	ug/L	20	518	D	527	D	2		P
Copper	ug/L	20	4730	D	4820	D	2		P
Lead	ug/L	20	2560	D	2660	D	4		P
Nickel	ug/L	20	569	D	580	D	2		P
Mercury	ug/L	20	4.03		4.00		1		CV
Selenium	ug/L	20	442	D	455	D	3		P
Silver	ug/L	20	79.4	D	80.4	D	1		P
Thallium	ug/L	20	424	D	434	D	2		P
Vanadium	ug/L	20	749	D	765	D	2		P
Zinc	ug/L	20	6210	D	6340	D	2		P

“A control limit of $\pm 20\%$ RPD for each matrix applies for sample values greater than 10 times Detection Limit”

Metals

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: Nobis Group

SDG No.: Q2879

Contract: NOBI03

Lab Code: ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB169293BS Mercury	ug/L	4.0	4.15		104	82 - 119	CV

Metals

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LABORATORY CONTROL SAMPLE SUMMARY

Client:	<u>Nobis Group</u>	SDG No.:	<u>Q2879</u>
Contract:	<u>NOBI03</u>	Lab Code:	<u>ACE</u>

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB169300BS							
Antimony	ug/L	500	515		103	85 - 117	P
Arsenic	ug/L	500	501		100	84 - 116	P
Barium	ug/L	2500	2540		102	86 - 114	P
Beryllium	ug/L	500	515		103	83 - 121	P
Cadmium	ug/L	500	517		103	87 - 115	P
Chromium	ug/L	500	514		103	85 - 116	P
Copper	ug/L	5000	5140		103	85 - 118	P
Lead	ug/L	2500	2480		99	88 - 115	P
Nickel	ug/L	500	513		103	85 - 117	P
Selenium	ug/L	500	499		100	80 - 120	P
Silver	ug/L	500	516		103	85 - 116	P
Thallium	ug/L	500	502		100	82 - 116	P
Vanadium	ug/L	500	514		103	86 - 115	P
Zinc	ug/L	5000	5230		105	83 - 119	P

FORM 8A

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Nobis Group

Contract: NOBI03

Lab Code: ACE

SDG No.: Q2879

Instrument ID: P7

Start Date : 08/20/2025

Run Number: LB136893

End Date : 08/20/2025

Lab SampleID	Client SampleID	Time	Internal Standard %RI For: Non-Collision Cell									
			Element 6Li	Q	Element 45Sc	Q	Element 89Y	Q	Element 103Rh	Q	Element 159Tb	Q
S0	S0	1049	100		100		100		100		100	
S2	S2	1056	102		99		99		99		100	
S3	S3	1059	103		98		98		97		98	
S4	S4	1102	105		99		100		99		101	
S5	S5	1105	104		97		98		98		99	
S6	S6	1108	106		99		100		99		103	
S7	S7	1111	107		103		105		102		106	
S8	S8	1114	104		103		102		96		102	
ICV01	ICV01	1135	95		101		102		102		100	
LLICV01	LLICV01	1150	96		99		101		100		99	
ICB01	ICB01	1156	95		99		100		100		97	
ICSA01	ICSA01	1200	97		98		101		98		100	
ICSAB01	ICSAB01	1203	95		103		107		104		106	
CCV01	CCV01	1206	98		106		110		105		109	
CCB01	CCB01	1209	92		102		106		105		102	
CRI	CRI	1215	93		102		104		104		101	
PB169300BL	PB169300BL	1219	91		101		103		102		99	
PB169300BS	PB169300BS	1222	95		102		106		103		104	
PB169300TB	PB169300TB	1225	91		99		102		101		99	
Q2879-02	OU4-TS-GRIL	1228	93		104		115		105		104	
Q2879-04	OU4-TS-GRIL	1232	89		103		113		105		103	
Q2879-06	OU4-TS-GRIL	1235	87		102		113		106		103	
Q2879-08	OU4-TS-GRIL	1238	87		103		115		106		103	
Q2879-10	OU4-TS-GRIL	1241	87		103		111		107		104	
Q2879-12	OU4-TS-GRIL	1244	87		104		117		109		107	
CCV02	CCV02	1247	92		106		110		105		106	
CCB02	CCB02	1252	90		100		103		104		101	
Q2879-14	OU4-TS-GRIL	1256	92		103		114		106		105	
Q2879-16	OU4-TS-GRIL	1259	89		104		117		107		105	
Q2879-18	OU4-TS-GRIL	1302	88		104		117		106		103	
Q2879-18DUP	OU4-TS-GRIL	1305	88		103		116		106		105	
Q2879-18L	OU4-TS-GRIL	1308	87		104		109		106		103	
Q2879-18MS	OU4-TS-GRIL	1311	89		105		117		109		106	
Q2879-18MSD	OU4-TS-GRIL	1314	88		103		114		106		106	
Q2879-18A	OU4-TS-GRIL	1317	88		106		117		108		105	
CCV03	CCV03	1327	91		108		112		106		107	

Internal Standard %RI Limit: 30 - 120

FORM 8A

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Nobis Group

Contract: NOBI03

Lab Code: ACE

SDG No.: Q2879

Instrument ID: P7

Start Date : 08/20/2025

Run Number: LB136893

End Date : 08/20/2025

Lab SampleID	Client SampleID	Time	Internal Standard %RI For: Non-Collision Cell									
			Element 6Li	Q	Element 45Sc	Q	Element 89Y	Q	Element 103Rh	Q	Element 159Tb	Q
CCB03	CCB03	1330	88		100		105		105		102	

FORM 8A

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Nobis Group

Contract: NOBI03

Lab Code: ACE

SDG No.: Q2879

Instrument ID: P7

Start Date : 08/20/2025

Run Number: LB136893

End Date : 08/20/2025

Lab SampleID	Client SampleID	Time	Internal Standard %RI For: Collision Cell									
			Element 45Sc	Q	Element 89Y	Q	Element 103Rh	Q	Element 159Tb	Q	Element 165Ho	Q
S0	S0	1049	100		100		100		100		100	
S2	S2	1056	101		99		99		100		102	
S3	S3	1059	98		97		98		98		101	
S4	S4	1102	100		99		98		99		101	
S5	S5	1105	99		97		98		99		103	
S6	S6	1108	100		98		99		101		105	
S7	S7	1111	104		103		102		105		108	
S8	S8	1114	105		105		97		103		107	
ICV01	ICV01	1135	102		102		103		101		103	
LLICV01	LLICV01	1150	98		99		99		99		101	
ICB01	ICB01	1156	97		98		98		97		100	
ICSA01	ICSA01	1200	100		100		99		100		106	
ICSAB01	ICSAB01	1203	104		105		102		104		108	
CCV01	CCV01	1206	107		108		103		107		111	
CCB01	CCB01	1209	100		103		103		102		105	
CRI	CRI	1215	102		103		103		101		106	
PB169300BL	PB169300BL	1219	101		103		103		100		104	
PB169300BS	PB169300BS	1222	103		104		103		104		108	
PB169300TB	PB169300TB	1225	100		102		101		100		104	
Q2879-02	OU4-TS-GRIL	1228	105		113		106		106		110	
Q2879-04	OU4-TS-GRIL	1232	102		111		104		103		106	
Q2879-06	OU4-TS-GRIL	1235	103		113		107		105		108	
Q2879-08	OU4-TS-GRIL	1238	105		114		107		107		111	
Q2879-10	OU4-TS-GRIL	1241	105		111		107		106		111	
Q2879-12	OU4-TS-GRIL	1244	106		115		108		108		112	
CCV02	CCV02	1247	107		108		104		108		112	
CCB02	CCB02	1252	99		102		102		101		104	
Q2879-14	OU4-TS-GRIL	1256	104		112		107		106		111	
Q2879-16	OU4-TS-GRIL	1259	104		115		108		106		111	
Q2879-18	OU4-TS-GRIL	1302	103		115		108		107		111	
Q2879-18DUP	OU4-TS-GRIL	1305	102		114		107		107		110	
Q2879-18L	OU4-TS-GRIL	1308	102		107		106		105		109	
Q2879-18MS	OU4-TS-GRIL	1311	105		114		107		107		112	
Q2879-18MSD	OU4-TS-GRIL	1314	104		113		107		106		110	
Q2879-18A	OU4-TS-GRIL	1317	104		114		110		108		112	
CCV03	CCV03	1327	106		109		104		109		114	

Internal Standard %RI Limit: 30 - 120

FORM 8A

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Nobis Group

Contract: NOBI03

Lab Code: ACE

SDG No.: Q2879

Instrument ID: P7

Start Date : 08/20/2025

Run Number: LB136893

End Date : 08/20/2025

Lab SampleID	Client SampleID	Time	Internal Standard %RI For: Collision Cell									
			Element 45Sc	Q	Element 89Y	Q	Element 103Rh	Q	Element 159Tb	Q	Element 165Ho	Q
CCB03	CCB03	1330	99		103		103		103		106	

FORM 8B

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Nobis Group

Contract: NOBI03

Lab Code: ACE

SDG No.: Q2879

Instrument ID: P7

Start Date : 08/20/2025

Run Number: LB136893

End Date : 08/20/2025

Lab SampleID	Client SampleID	Time	Internal Standard %RI For: Non-Collision Cell									
			Element 165Ho	Q	Element 209Bi	Q	Element	Q	Element	Q	Element	Q
S0	S0	1049	100		100							
S2	S2	1056	100		102							
S3	S3	1059	98		100							
S4	S4	1102	101		102							
S5	S5	1105	100		100							
S6	S6	1108	104		104							
S7	S7	1111	106		106							
S8	S8	1114	104		97							
ICV01	ICV01	1135	100		100							
LLICV01	LLICV01	1150	99		98							
ICB01	ICB01	1156	99		98							
ICSA01	ICSA01	1200	103		99							
ICSAB01	ICSAB01	1203	106		102							
CCV01	CCV01	1206	111		103							
CCB01	CCB01	1209	103		101							
CRI	CRI	1215	103		101							
PB169300BL	PB169300BL	1219	101		99							
PB169300BS	PB169300BS	1222	105		102							
PB169300TB	PB169300TB	1225	102		100							
Q2879-02	OU4-TS-GRILI	1228	106		101							
Q2879-04	OU4-TS-GRILI	1232	104		99							
Q2879-06	OU4-TS-GRILI	1235	105		100							
Q2879-08	OU4-TS-GRILI	1238	105		101							
Q2879-10	OU4-TS-GRILI	1241	104		100							
Q2879-12	OU4-TS-GRILI	1244	106		101							
CCV02	CCV02	1247	108		101							
CCB02	CCB02	1252	102		99							
Q2879-14	OU4-TS-GRILI	1256	107		102							
Q2879-16	OU4-TS-GRILI	1259	109		103							
Q2879-18	OU4-TS-GRILI	1302	107		101							
Q2879-18DUP	OU4-TS-GRILI	1305	105		99							
Q2879-18L	OU4-TS-GRILI	1308	104		100							
Q2879-18MS	OU4-TS-GRILI	1311	108		102							
Q2879-18MSD	OU4-TS-GRILI	1314	107		101							

Internal Standard %RI Limit: 30 -120

FORM 8B

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Nobis Group
Lab Code: ACE
Instrument ID: P7
Run Number: LB136893

Contract: NOBI03
SDG No.: Q2879
Start Date : 08/20/2025
End Date : 08/20/2025

Lab SampleID	Client SampleID	Time	Internal Standard %RI For: Non-Collision Cell									
			Element 165Ho	Q	Element 209Bi	Q	Element	Q	Element	Q	Element	Q
Q2879-18A	OU4-TS-GRILI	1317	106		103							
CCV03	CCV03	1327	110		99							
CCB03	CCB03	1330	103		99							

FORM 8B

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Nobis Group
Lab Code: ACE
Instrument ID: P7
Run Number: LB136893

Contract: NOBI03
SDG No.: Q2879
Start Date : 08/20/2025
End Date : 08/20/2025

Lab SampleID	Client SampleID	Time	Internal Standard %RI For: Collision Cell									
			Element 209Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	S0	1049	100									
S2	S2	1056	101									
S3	S3	1059	100									
S4	S4	1102	100									
S5	S5	1105	101									
S6	S6	1108	101									
S7	S7	1111	103									
S8	S8	1114	96									
ICV01	ICV01	1135	102									
LLICV01	LLICV01	1150	100									
ICB01	ICB01	1156	98									
ICSA01	ICSA01	1200	98									
ICSAB01	ICSAB01	1203	102									
CCV01	CCV01	1206	102									
CCB01	CCB01	1209	101									
CRI	CRI	1215	102									
PB169300BL	PB169300BL	1219	101									
PB169300BS	PB169300BS	1222	103									
PB169300TB	PB169300TB	1225	101									
Q2879-02	OU4-TS-GRILI	1228	104									
Q2879-04	OU4-TS-GRILI	1232	101									
Q2879-06	OU4-TS-GRILI	1235	103									
Q2879-08	OU4-TS-GRILI	1238	106									
Q2879-10	OU4-TS-GRILI	1241	106									
Q2879-12	OU4-TS-GRILI	1244	106									
CCV02	CCV02	1247	102									
CCB02	CCB02	1252	100									
Q2879-14	OU4-TS-GRILI	1256	106									
Q2879-16	OU4-TS-GRILI	1259	105									
Q2879-18	OU4-TS-GRILI	1302	104									
Q2879-18DUP	OU4-TS-GRILI	1305	104									
Q2879-18L	OU4-TS-GRILI	1308	103									
Q2879-18MS	OU4-TS-GRILI	1311	105									
Q2879-18MSD	OU4-TS-GRILI	1314	103									

Internal Standard %RI Limit: 30 -120

FORM 8B

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Nobis Group
Lab Code: ACE
Instrument ID: P7
Run Number: LB136893

Contract: NOBI03
SDG No.: Q2879
Start Date : 08/20/2025
End Date : 08/20/2025

Lab SampleID	Client SampleID	Time	Internal Standard %RI For: Collision Cell									
			Element 209Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
Q2879-18A	OU4-TS-GRILI	1317	104									
CCV03	CCV03	1327	102									
CCB03	CCB03	1330	102									

Metals
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ICP SERIAL DILUTIONS

SAMPLE NO.

OU4-TS-GRILLO-TSCP11-081425L

Lab Name: Alliance **Contract:** NOBI03
Lab Code: ACE **Lb No.:** lb136893 **Lab Sample ID :** Q2879-18L **SDG No.:** Q2879
Matrix (soil/water): Water **Level (low/med):** LOW
Concentration Units: ug/L

Analyte	Initial Sample Result (I)		Serial Dilution Result (S)		% Differ- ence	Q	M
		C		C			
Antimony	0.75	JD	50.0	UD	67		P
Arsenic	31.9	D	35.5	D	11		P
Barium	132	D	130	JD	2		P
Beryllium	12.2	D	13.0	JD	7		P
Cadmium	9.70	D	25.0	UD	82		P
Chromium	64.5	D	63.3	D	2		P
Copper	248	D	257	D	3		P
Lead	280	D	278	D	1		P
Nickel	100	D	104	D	4		P
Mercury	0.20	U	1.00	U			CV
Selenium	25.0	UD	125	UD			P
Silver	5.00	UD	25.0	UD			P
Thallium	0.65	JD	25.0	UD	62		P
Vanadium	302	D	312	D	3		P
Zinc	1750	D	1810	D	3		P



METAL PREPARATION & INSTRUMENT DATA

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METAL PREPARATION & ANALYICAL SUMMARY

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Metals
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SAMPLE PREPARATION SUMMARY

Client: Nobis Group **SDG No.:** Q2879
Contract: NOBI03 **Lab Code:** ACE **Method:** _____

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number: PB169293							
PB169293BL	PB169293BL	MB	WATER	08/19/2025	30.0	30.0	
PB169293BS	PB169293BS	LCS	WATER	08/19/2025	30.0	30.0	
PB169293TB	PB169293TB	MB	WATER	08/19/2025	30.0	30.0	
Q2879-02	OU4-TS-GRILLO-TSCP03-081425	SAM	WATER	08/19/2025	30.0	30.0	
Q2879-04	OU4-TS-GRILLO-TSCP04-081425	SAM	WATER	08/19/2025	30.0	30.0	
Q2879-06	OU4-TS-GRILLO-TSCP05-081425	SAM	WATER	08/19/2025	30.0	30.0	
Q2879-08	OU4-TS-GRILLO-TSCP06-081425	SAM	WATER	08/19/2025	30.0	30.0	
Q2879-10	OU4-TS-GRILLO-TSCP07-081425	SAM	WATER	08/19/2025	30.0	30.0	
Q2879-12	OU4-TS-GRILLO-TSCP08-081425	SAM	WATER	08/19/2025	30.0	30.0	
Q2879-14	OU4-TS-GRILLO-TSCP09-081425	SAM	WATER	08/19/2025	30.0	30.0	
Q2879-16	OU4-TS-GRILLO-TSCP10-081425	SAM	WATER	08/19/2025	30.0	30.0	
Q2879-18	OU4-TS-GRILLO-TSCP11-081425	SAM	WATER	08/19/2025	30.0	30.0	
Q2879-18DUP	OU4-TS-GRILLO-TSCP11-081425DUP	DUP	WATER	08/19/2025	30.0	30.0	
Q2879-18MS	OU4-TS-GRILLO-TSCP11-081425MS	MS	WATER	08/19/2025	30.0	30.0	
Q2879-18MSD	OU4-TS-GRILLO-TSCP11-081425MSD	MSD	WATER	08/19/2025	30.0	30.0	

Metals
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SAMPLE PREPARATION SUMMARY

Client: Nobis Group **SDG No.:** Q2879
Contract: NOBI03 **Lab Code:** ACE **Method:**

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number: PB169300							
PB169300BL	PB169300BL	MB	WATER	08/18/2025	50.0	50.0	
PB169300BS	PB169300BS	LCS	WATER	08/18/2025	50.0	50.0	
PB169300TB	PB169300TB	MB	WATER	08/18/2025	50.0	50.0	
Q2879-02	OU4-TS-GRILLO-TSCP03-081425	SAM	WATER	08/18/2025	50.0	50.0	
Q2879-04	OU4-TS-GRILLO-TSCP04-081425	SAM	WATER	08/18/2025	50.0	50.0	
Q2879-06	OU4-TS-GRILLO-TSCP05-081425	SAM	WATER	08/18/2025	50.0	50.0	
Q2879-08	OU4-TS-GRILLO-TSCP06-081425	SAM	WATER	08/18/2025	50.0	50.0	
Q2879-10	OU4-TS-GRILLO-TSCP07-081425	SAM	WATER	08/18/2025	50.0	50.0	
Q2879-12	OU4-TS-GRILLO-TSCP08-081425	SAM	WATER	08/18/2025	50.0	50.0	
Q2879-14	OU4-TS-GRILLO-TSCP09-081425	SAM	WATER	08/18/2025	50.0	50.0	
Q2879-16	OU4-TS-GRILLO-TSCP10-081425	SAM	WATER	08/18/2025	50.0	50.0	
Q2879-18	OU4-TS-GRILLO-TSCP11-081425	SAM	WATER	08/18/2025	50.0	50.0	
Q2879-18DUP	OU4-TS-GRILLO-TSCP11-081425DUP	DUP	WATER	08/18/2025	50.0	50.0	
Q2879-18MS	OU4-TS-GRILLO-TSCP11-081425MS	MS	WATER	08/18/2025	50.0	50.0	
Q2879-18MSD	OU4-TS-GRILLO-TSCP11-081425MSD	MSD	WATER	08/18/2025	50.0	50.0	

metals
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ANALYSIS RUN LOG

Client: Nobis Group

Contract: NOBI03

Lab code: ACE

Sdg no.: Q2879

Instrument id number: _____

Method: _____

Run number: LB136879

Start date: 08/19/2025

End date: 08/19/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1352	HG
S0.2	S0.2	1	1355	HG
S2.5	S2.5	1	1357	HG
S5	S5	1	1359	HG
S7.5	S7.5	1	1401	HG
S10	S10	1	1404	HG
ICV23	ICV23	1	1407	HG
ICB23	ICB23	1	1409	HG
CCV71	CCV71	1	1411	HG
CCB71	CCB71	1	1414	HG
CRA	CRA	1	1416	HG
PB169293BL	PB169293BL	1	1425	HG
PB169293BS	PB169293BS	1	1431	HG
Q2879-02	OU4-TS-GRILLO-TSCP03-0814	1	1438	HG
Q2879-04	OU4-TS-GRILLO-TSCP04-0814	1	1440	HG
Q2879-06	OU4-TS-GRILLO-TSCP05-0814	1	1443	HG
CCV72	CCV72	1	1445	HG
CCB72	CCB72	1	1447	HG
Q2879-08	OU4-TS-GRILLO-TSCP06-0814	1	1450	HG
Q2879-10	OU4-TS-GRILLO-TSCP07-0814	1	1452	HG
Q2879-12	OU4-TS-GRILLO-TSCP08-0814	1	1454	HG
Q2879-14	OU4-TS-GRILLO-TSCP09-0814	1	1457	HG
Q2879-16	OU4-TS-GRILLO-TSCP10-0814	1	1459	HG
Q2879-18	OU4-TS-GRILLO-TSCP11-0814	1	1501	HG
Q2879-18DUP	OU4-TS-GRILLO-TSCP11-0814	1	1503	HG
Q2879-18MS	OU4-TS-GRILLO-TSCP11-0814	1	1509	HG
Q2879-18MSD	OU4-TS-GRILLO-TSCP11-0814	1	1512	HG
CCV73	CCV73	1	1514	HG
CCB73	CCB73	1	1516	HG
PB169293TB	PB169293TB	1	1526	HG
Q2879-18L	OU4-TS-GRILLO-TSCP11-0814	5	1529	HG
CCV74	CCV74	1	1537	HG
CCB74	CCB74	1	1539	HG

metals
- 14 -
ANALYSIS RUN LOG

Client: Nobis Group

Contract: NOBI03

Lab code: ACE

Sdg no.: Q2879

Instrument id number: _____

Method: _____

Run number: LB136893

Start date: 08/20/2025

End date: 08/20/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1049	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
S2	S2	1	1056	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
S3	S3	1	1059	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
S4	S4	1	1102	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
S5	S5	1	1105	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
S6	S6	1	1108	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
S7	S7	1	1111	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
S8	S8	1	1114	,
ICV01	ICV01	1	1135	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
LLICV01	LLICV01	1	1150	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
ICB01	ICB01	1	1156	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
ICSA01	ICSA01	1	1200	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
ICSAB01	ICSAB01	1	1203	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
CCV01	CCV01	1	1206	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
CCB01	CCB01	1	1209	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
CRI	CRI	1	1215	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
PB169300BL	PB169300BL	1	1219	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
PB169300BS	PB169300BS	1	1222	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
PB169300TB	PB169300TB	1	1225	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-02	OU4-TS-GRILLO-TSCP03-0814	5	1228	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-04	OU4-TS-GRILLO-TSCP04-0814	5	1232	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-06	OU4-TS-GRILLO-TSCP05-0814	5	1235	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-08	OU4-TS-GRILLO-TSCP06-0814	5	1238	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-10	OU4-TS-GRILLO-TSCP07-0814	5	1241	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-12	OU4-TS-GRILLO-TSCP08-0814	5	1244	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
CCV02	CCV02	1	1247	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
CCB02	CCB02	1	1252	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-14	OU4-TS-GRILLO-TSCP09-0814	5	1256	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-16	OU4-TS-GRILLO-TSCP10-0814	5	1259	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-18	OU4-TS-GRILLO-TSCP11-0814	5	1302	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-18DUP	OU4-TS-GRILLO-TSCP11-0814	5	1305	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-18L	OU4-TS-GRILLO-TSCP11-0814	25	1308	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-18MS	OU4-TS-GRILLO-TSCP11-0814	5	1311	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-18MSD	OU4-TS-GRILLO-TSCP11-0814	5	1314	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-18A	OU4-TS-GRILLO-TSCP11-0814	5	1317	Ag,As,Ba
CCV03	CCV03	1	1327	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn
CCB03	CCB03	1	1330	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn



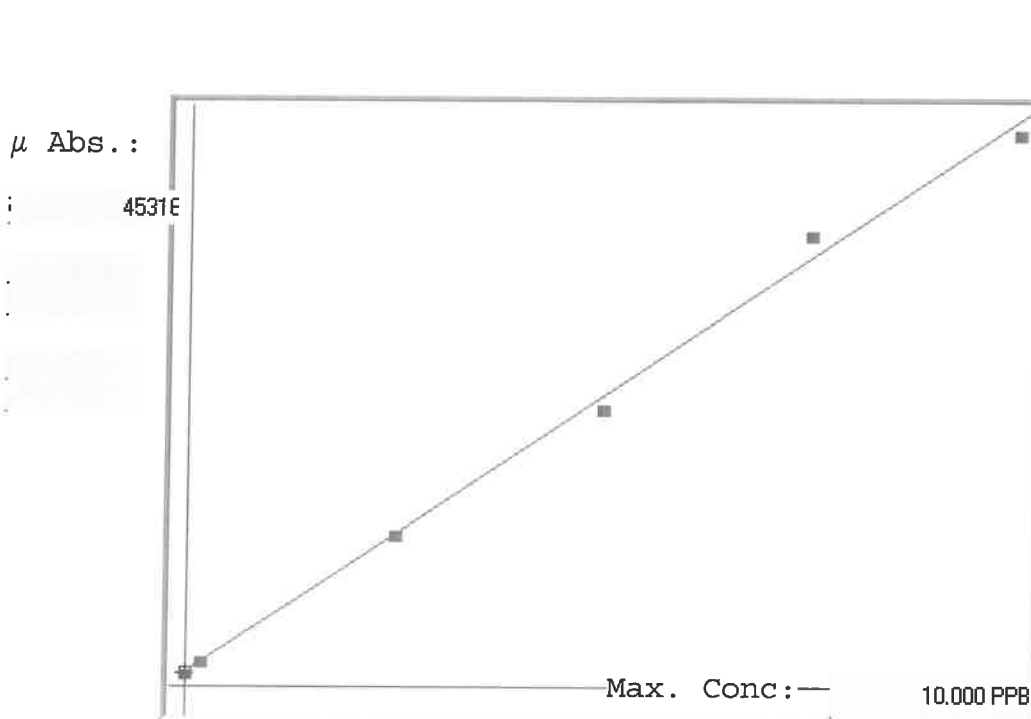
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LB136879

7470A

INSTRUMENT ID: CV1



Linear

A= 0.0000e+000

B= 2.2076e-004

C= -2.5716e-001

Rho= 0.9981194

Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	0/01
0.0	0.000	0.012	0.012	1220	0.000	1220	0				-
0.2	0.200	0.212	0.012	2127	0.0 %	2127					6
2.5	2.500	2.508	0.008	12528	0.0 %	12528	0				0
5.0	5.000	4.780	-0.220	22817	0.0 %	22817					-4
7.5	7.500	7.940	0.440	37134	0.0 %	37134					6
10.0	10.000	9.747	-0.253	45316	0.0 %	45316					-3

LB136879 INSTRUMENT ID : CV1

Method: 7470A

Operator: Admin

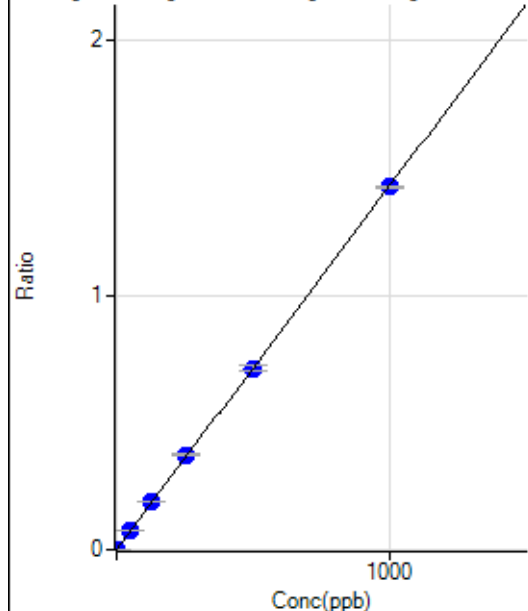
Date of Analysis: 19 Aug 2025 13:43:23

Type	Sample ID	Extended ID	Conc	µ Abs	Units	Type	Std Conc	Method	Date
S	0.0 - 1	50	-	1220	PPB	Std	0.0000	7470A	19 Aug 2025 13:52:47
S	0.2 - 1	50.2	-	2127	PPB	Std	0.2000	7470A	19 Aug 2025 13:55:05
S	2.5 - 1	52.5	-	12528	PPB	Std	2.5000	7470A	19 Aug 2025 13:57:22
S	5.0 - 1	55	-	22817	PPB	Std	5.0000	7470A	19 Aug 2025 13:59:39
S	7.5 - 1	57.5	-	37134	PPB	Std	7.5000	7470A	19 Aug 2025 14:01:56
S	10.0 - 1	57.5	-	45316	PPB	Std	10.0000	7470A	19 Aug 2025 14:04:13
U	ICV23 - 1	ICV23	4.1057	19763	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:07:25
U	ICB23 - 1	ICB23	-0.0238	1057	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:09:40
U	CCV71 - 1	CCV71	4.7092	22497	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:11:56
U	CCB71 - 1	CCB71	-0.0238	1057	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:14:12
U	CRA - 1	CRA	0.2053	2095	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:16:28
U	HighStd - 1	HighStd	9.7491	45327	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:18:44
U	ChkStd - 1	ChkStd	6.5837	30988	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:20:59
U	PB169293BL - 1	PBW	-0.0055	1140	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:25:54
U	PB169293BS - 1	LCSW	4.1500	19964	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:31:42
U	Q2818-04 - 1	B-2-5-1	0.5250	3543	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:33:57
U	Q2818-05 - 1	B-3-5-2	0.7603	4609	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:36:14
U	Q2879-02 - 1	OU4-TS-GRILLO-TSCP03-081425	-0.0878	767	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:38:36
U	Q2879-04 - 1	OU4-TS-GRILLO-TSCP04-081425	-0.1187	627	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:40:55
U	Q2879-06 - 1	OU4-TS-GRILLO-TSCP05-081425	-0.1245	601	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:43:12
U	CCV72 - 1	CCV72	4.7033	22470	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:45:30
U	CCB72 - 1	CCB72	-0.0333	1014	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:47:47
U	Q2879-08 - 1	OU4-TS-GRILLO-TSCP06-081425	0.1994	2068	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:50:12
U	Q2879-10 - 1	OU4-TS-GRILLO-TSCP07-081425	0.2016	2078	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:52:27
U	Q2879-12 - 1	OU4-TS-GRILLO-TSCP08-081425	0.4071	3009	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:54:44
U	Q2879-14 - 1	OU4-TS-GRILLO-TSCP09-081425	0.2636	2358	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:57:00
U	Q2879-16 - 1	OU4-TS-GRILLO-TSCP10-081425	0.2115	2123	PPB	SMPL	-7470A	-7470A	19 Aug 2025 14:59:18
U	Q2879-18 - 1	OU4-TS-GRILLO-TSCP11-081425	-0.1018	704	PPB	SMPL	-7470A	-7470A	19 Aug 2025 15:01:36
U	Q2879-18DUP - 1	OU4-TS-GRILLO-TSCP11-081425DUP	-0.0759	821	PPB	SMPL	-7470A	-7470A	19 Aug 2025 15:03:54
U	Q2879-18MS - 1	OU4-TS-GRILLO-TSCP11-081425MS	4.0253	19399	PPB	SMPL	-7470A	-7470A	19 Aug 2025 15:09:51
U	Q2879-18MSD - 1	OU4-TS-GRILLO-TSCP11-081425MSD	3.9995	19282	PPB	SMPL	-7470A	-7470A	19 Aug 2025 15:12:08
U	CCV73 - 1	CCV73	4.7501	22682	PPB	SMPL	-7470A	-7470A	19 Aug 2025 15:14:24
U	CCB73 - 1	CCB73	-0.0280	1038	PPB	SMPL	-7470A	-7470A	19 Aug 2025 15:16:40
U	PB169293TB - 1	PB169276TB	-0.1132	652	PPB	SMPL	-7470A	-7470A	19 Aug 2025 15:22:24
U	PB169293TB - 1	PB169294TB	-0.1123	656	PPB	SMPL	-7470A	-7470A	19 Aug 2025 15:26:46
U	Q2879-18LX5 - 1		-0.2154	189	PPB	SMPL	-7470A	-7470A	19 Aug 2025 15:29:01
U	Q2879-18A - 1		4.0260	19402	PPB	SMPL	-7470A	-7470A	19 Aug 2025 15:31:17
U	CCV74 - 1	CCV74	5.2370	24888	PPB	SMPL	-7470A	-7470A	19 Aug 2025 15:37:18
U	CCB73 - 1	CCB73	-0.0289	1043	PPB	SMPL	-7470A	-7470A	19 Aug 2025 15:39:33

Batch Folder: D:\Agilent\ICPMH\1\DATA\P7082025-MS.b\
Analysis File: P7082025-MS.batch.bin
DA Date-Time: 2025-08-20 13:33:04
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	004CALB.d	S00	2025-08-20 10:49:41
2	006CALS.d	S02	2025-08-20 10:56:16
3	007CALS.d	S03	2025-08-20 10:59:31
4	008CALS.d	S04	2025-08-20 11:02:40
5	009CALS.d	S05	2025-08-20 11:05:38
6	010CALS.d	S06	2025-08-20 11:08:36
7	011CALS.d	S07	2025-08-20 11:11:20
8	012CALS.d	S08	2025-08-20 11:14:08

9 Be [No Gas] ISTD:6 Li [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	9.15	0.0000	P	17.9
2	☐	1.000	1.102	746.78	0.0016	P	13.7
3	☐	50.000	52.634	35640.38	0.0752	P	1.4
4	☐	125.000	131.022	90533.94	0.1872	P	1.3
5	☐	250.000	260.005	177498.40	0.3716	P	1.8
6	☐	500.000	498.018	347737.31	0.7117	P	3.1
7	☐	1000.000	997.605	700466.70	1.4255	P	0.6
8	☐			96.20	0.0002	P	27.4

$y = 0.0014 * x + 1.9902E-005$

R = 0.9999

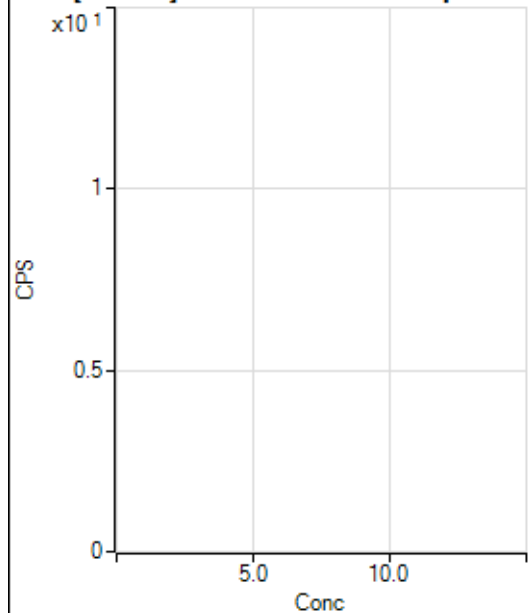
DL = 0.007461

BEC = 0.01393

Weight: <None>

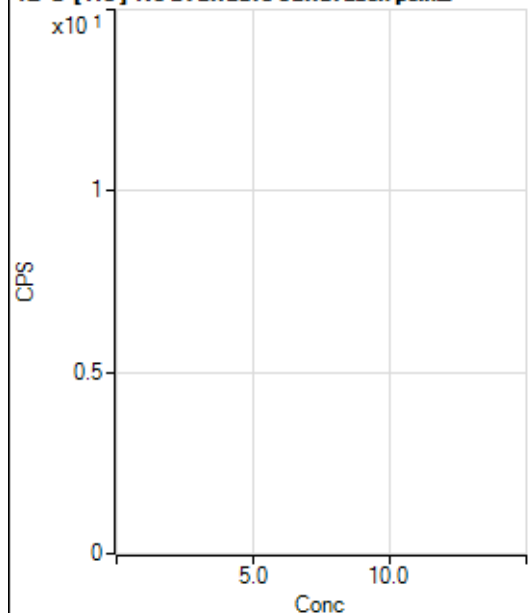
Min Conc: <None>

12 C [No Gas] No available calibration points



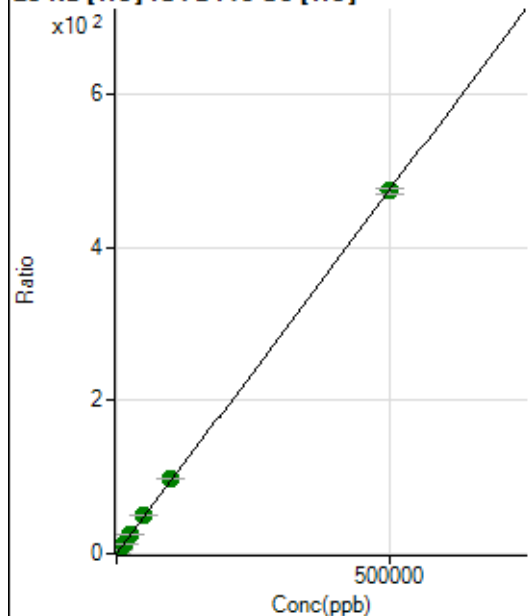
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐						
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
7	☐						
8	☐						

12 C [He] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐						
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
7	☐						
8	☐						

23 Na [He] ISTD:45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	32812.77	0.0793	P	0.9
2	☐	500.000	540.219	246758.66	0.5915	P	1.7
3	☐	5000.000	5382.768	2110730.44	5.1830	A	0.7
4	☐	12500.000	13251.479	5254211.17	12.6437	A	1.1
5	☐	25000.000	26564.351	10367527.07	25.2663	A	2.1
6	☐	50000.000	52693.428	20658632.33	50.0406	A	2.1
7	☐	100000.00	103167.05	42115517.43	97.8971	A	1.2
8	☐	500000.00	498996.37	205652992.4	473.2022	A	1.3

$$y = 9.4815E-004 * x + 0.0793$$

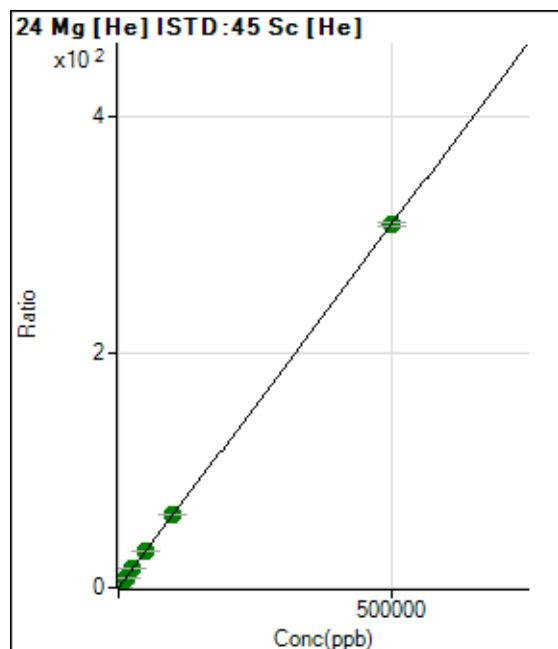
$$R = 1.0000$$

$$DL = 2.164$$

$$BEC = 83.67$$

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	410.01	0.0010	P	13.1
2	☐	500.000	530.404	136931.72	0.3283	P	1.9
3	☐	5000.000	5272.312	1325276.09	3.2542	A	1.2
4	☐	12500.000	12938.745	3317972.24	7.9845	A	1.3
5	☐	25000.000	26132.113	6618212.26	16.1252	A	0.6
6	☐	50000.000	51328.016	13075887.31	31.6718	A	0.8
7	☐	100000.00	101029.80	26817921.82	62.3391	A	1.3
8	☐	500000.00	499590.91	133954822.4	308.2622	A	1.0

$$y = 6.1703E-004 * x + 9.9132E-004$$

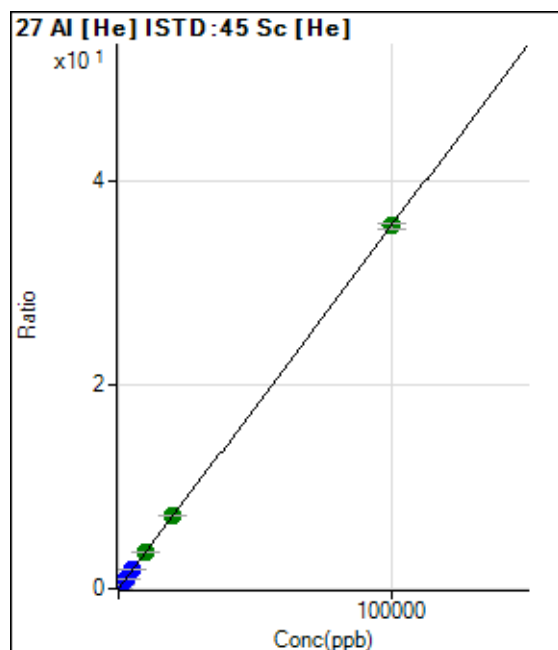
R = 1.0000

DL = 0.6326

BEC = 1.607

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1507.86	0.0036	P	2.5
2	☐	20.000	21.305	4682.98	0.0112	P	3.7
3	☐	1000.000	1054.773	154350.49	0.3790	P	0.6
4	☐	2500.000	2582.874	383475.89	0.9228	P	1.1
5	☐	5000.000	5125.457	750006.05	1.8277	P	1.4
6	☐	10000.000	10050.179	1478181.87	3.5803	A	1.6
7	☐	20000.000	20119.487	3082084.67	7.1637	A	0.6
8	☐	100000.00	99962.192	15460211.16	35.5779	A	1.4

$$y = 3.5588E-004 * x + 0.0036$$

R = 1.0000

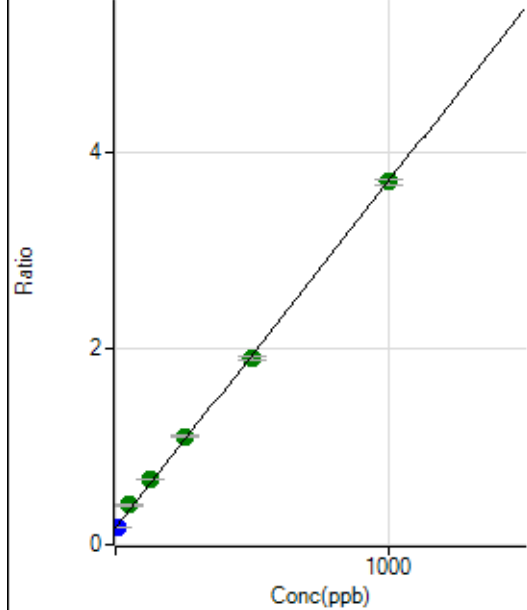
DL = 0.7823

BEC = 10.24

Weight: <None>

Min Conc: <None>

28 Si [No Gas] ISTD : 45 Sc [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	695628.46	0.1713	P	1.4
2	☐	10.000	0.951	700341.08	0.1747	P	1.0
3	☐	50.000	66.152	1612428.88	0.4055	A	2.4
4	☐	125.000	139.278	2667551.00	0.6643	A	1.8
5	☐	250.000	264.004	4350693.72	1.1058	A	2.2
6	☐	500.000	491.721	7667926.34	1.9119	A	2.2
7	☐	1000.000	998.137	15497743.38	3.7045	A	1.8
8	☐			755136.03	0.1799	P	1.3

$$y = 0.0035 * x + 0.1713$$

$$R = 0.9996$$

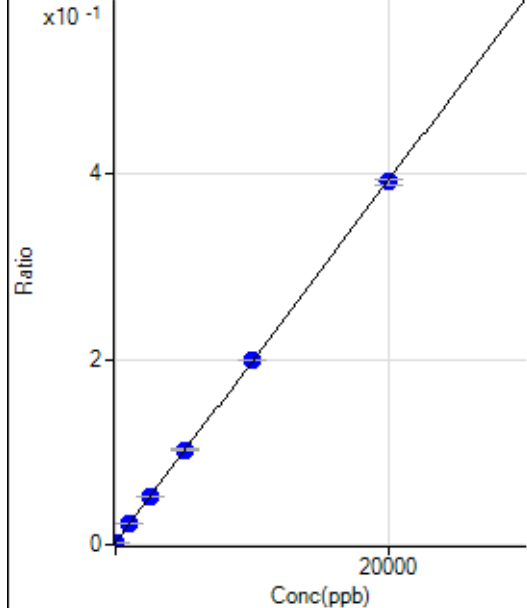
$$DL = 2.041$$

$$BEC = 48.4$$

Weight: <None>

Min Conc: <None>

31 P [He] ISTD : 45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-11.735	883.37	0.0021	P	4.6
2	☐	0.000	11.735	1082.27	0.0026	P	3.7
3	☐	1000.000	1039.863	9238.44	0.0227	P	2.6
4	☐	2500.000	2566.693	21827.96	0.0525	P	0.5
5	☐	5000.000	5131.452	42123.74	0.1027	P	1.6
6	☐	10000.000	10098.315	82458.88	0.1997	P	0.2
7	☐	20000.000	19907.650	168390.35	0.3914	P	1.4
8	☐			910.04	0.0021	P	4.4

$$y = 1.9544E-005 * x + 0.0024$$

$$R = 1.0000$$

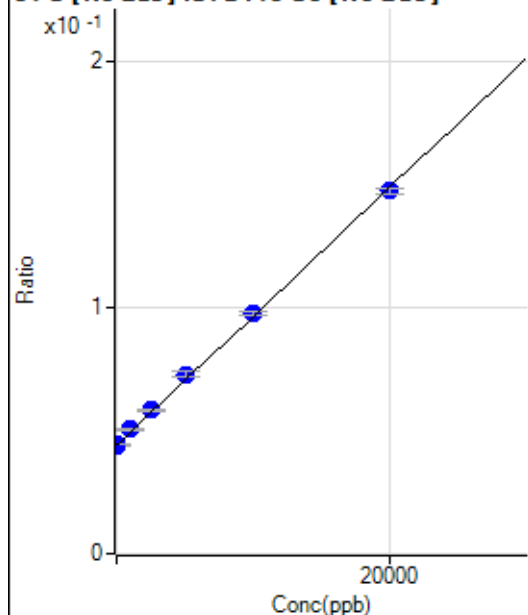
$$DL = 15.02$$

$$BEC = 121$$

Weight: <None>

Min Conc: <None>

34 S [No Gas] ISTD:45 Sc [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-85.174	177669.40	0.0438	P	0.2
2	☐	0.000	85.174	179015.01	0.0446	P	0.5
3	☐	1000.000	1239.142	201600.03	0.0507	P	2.0
4	☐	2500.000	2685.959	234004.34	0.0583	P	0.7
5	☐	5000.000	5506.054	287329.29	0.0731	P	3.3
6	☐	10000.000	10227.888	392202.50	0.0978	P	2.1
7	☐	20000.000	19724.341	617278.80	0.1475	P	1.3
8	☐			170151.89	0.0405	P	1.0

$y = 5.2396E-006 * x + 0.0442$

R = 0.9995

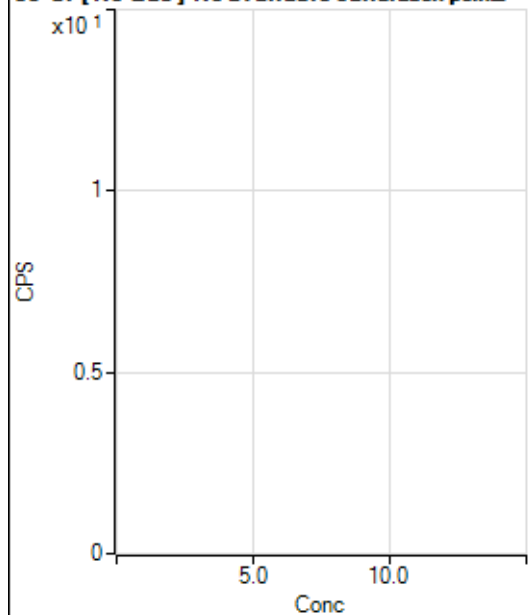
DL = 90.65

BEC = 8436

Weight: <None>

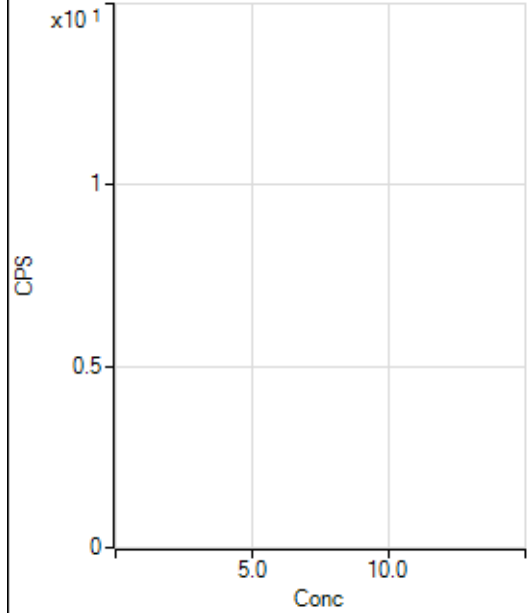
Min Conc: <None>

35 Cl [No Gas] No available calibration points



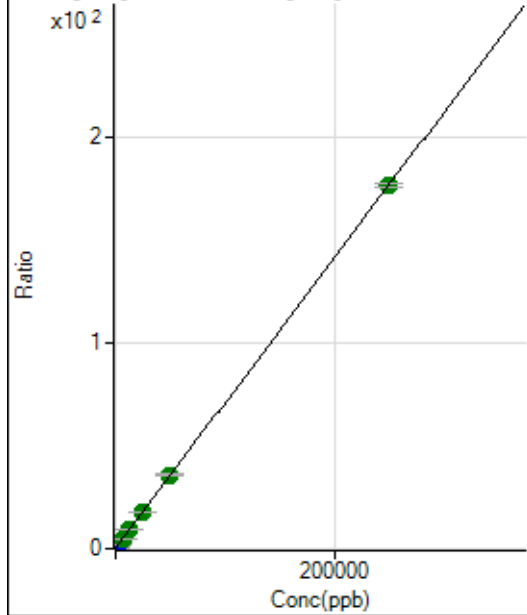
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐						
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
7	☐						
8	☐						

35 Cl [He] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐						
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
7	☐						
8	☐						

39 K [He] ISTD:45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	67979.72	0.1644	P	0.7
2	☐	500.000	557.586	232842.61	0.5582	P	1.4
3	☐	2500.000	2775.781	865303.42	2.1249	P	1.2
4	☐	6250.000	6427.975	1954963.97	4.7044	A	1.4
5	☐	12500.000	12897.324	3805218.14	9.2736	A	2.5
6	☐	25000.000	25395.242	7473216.83	18.1008	A	1.1
7	☐	50000.000	50734.607	15483852.83	35.9978	A	2.8
8	☐	250000.00	249786.36	76738636.08	176.5867	A	1.1

$$y = 7.0629E-004 * x + 0.1644$$

$$R = 1.0000$$

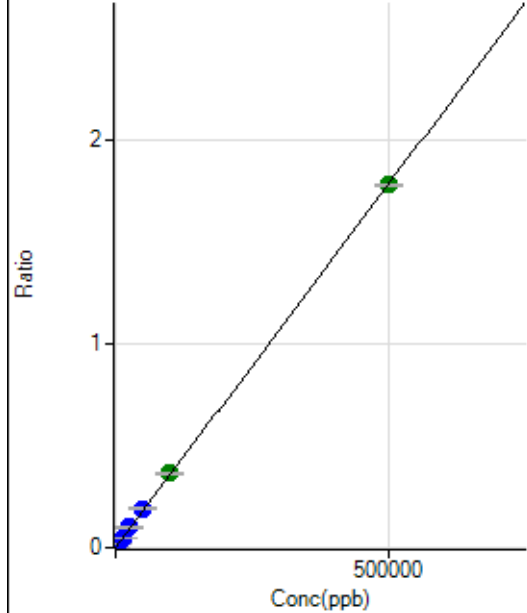
$$DL = 5.187$$

$$BEC = 232.7$$

Weight: <None>

Min Conc: <None>

43 Ca [No Gas] ISTD:45 Sc [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	384.45	0.0001	P	11.4
2	☐	500.000	575.530	8594.74	0.0021	P	1.6
3	☐	5000.000	5578.107	79348.95	0.0200	P	1.7
4	☐	12500.000	13788.706	197495.18	0.0492	P	1.2
5	☐	25000.000	27945.639	391666.28	0.0996	P	3.4
6	☐	50000.000	54088.278	772595.06	0.1926	P	2.6
7	☐	100000.00	102008.92	1519702.81	0.3632	A	0.6
8	☐	500000.00	499004.03	7457942.39	1.7766	A	0.4

$$y = 3.5600E-006 * x + 9.4675E-005$$

$$R = 1.0000$$

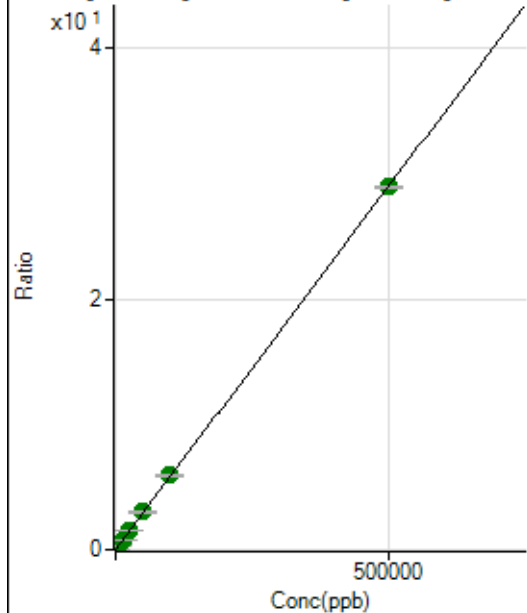
$$DL = 9.062$$

$$BEC = 26.59$$

Weight: <None>

Min Conc: <None>

44 Ca [No Gas] ISTD:45 Sc [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26645.95	0.0066	P	0.8
2	☐	500.000	569.658	158584.40	0.0396	P	1.4
3	☐	5000.000	5262.206	1238124.97	0.3113	A	1.8
4	☐	12500.000	13075.544	3067283.98	0.7639	A	0.6
5	☐	25000.000	26806.547	6132856.92	1.5591	A	3.0
6	☐	50000.000	52090.558	12125284.82	3.0235	A	2.6
7	☐	100000.00	101905.91	24719067.96	5.9086	A	1.3
8	☐	500000.00	499302.35	121422291.5	28.9246	A	0.5

$$y = 5.7917E-005 * x + 0.0066$$

$$R = 1.0000$$

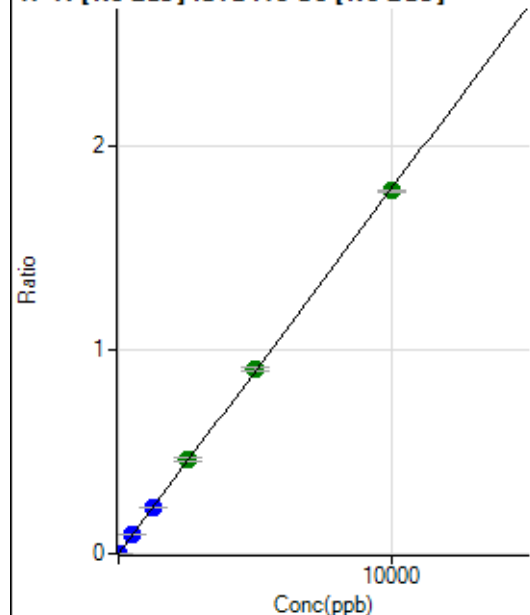
$$DL = 2.694$$

$$BEC = 113.3$$

Weight: <None>

Min Conc: <None>

47 Ti [No Gas] ISTD:45 Sc [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0000	P	21.1
2	☐	5.000	5.020	3691.60	0.0009	P	1.9
3	☐	500.000	513.570	366309.36	0.0921	P	2.2
4	☐	1250.000	1268.281	913355.34	0.2275	P	0.6
5	☐	2500.000	2594.091	1829657.49	0.4652	A	3.5
6	☐	5000.000	5068.425	3645034.35	0.9089	A	2.6
7	☐	10000.000	9939.301	7456741.07	1.7824	A	0.5
8	☐			696.69	0.0002	P	8.7

$$y = 1.7932E-004 * x + 2.0522E-005$$

R = 0.9999

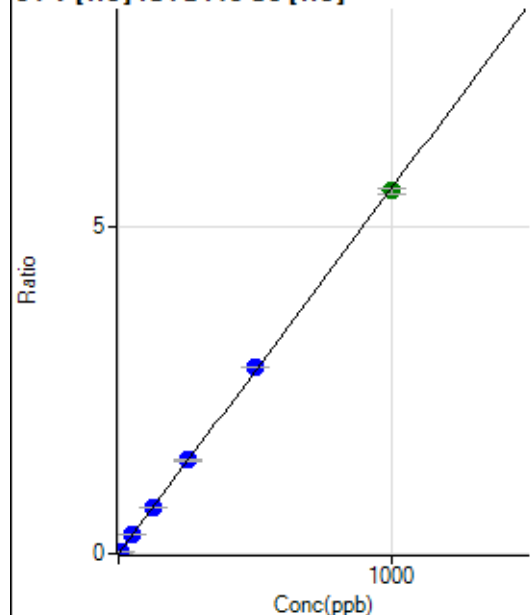
DL = 0.0725

BEC = 0.1144

Weight: <None>

Min Conc: <None>

51 V [He] ISTD:45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28.89	0.0001	P	67.5
2	☐	5.000	5.440	12707.69	0.0305	P	1.8
3	☐	50.000	52.500	119474.13	0.2934	P	1.0
4	☐	125.000	128.050	297295.50	0.7154	P	1.1
5	☐	250.000	255.423	585613.20	1.4270	P	1.2
6	☐	500.000	510.142	1176705.41	2.8501	P	0.1
7	☐	1000.000	993.065	2386669.15	5.5481	A	1.6
8	☐			1015.60	0.0023	P	3.4

$$y = 0.0056 * x + 6.9765E-005$$

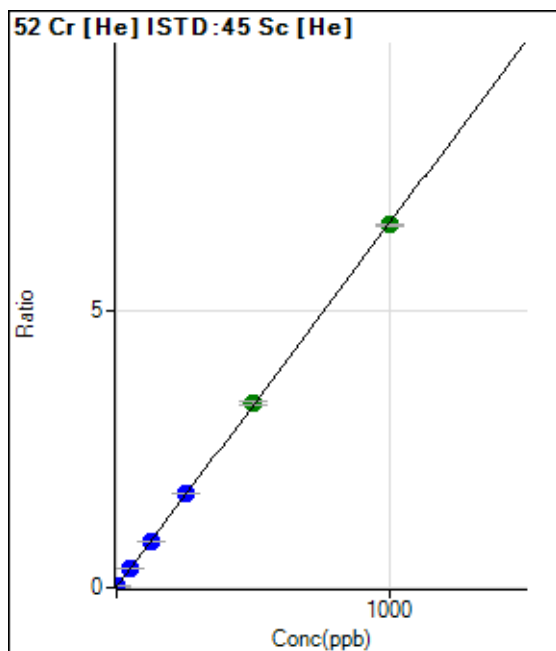
R = 0.9999

DL = 0.0253

BEC = 0.01249

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	2530.24	0.0061	P	3.8
2	☐	2.000	2.111	8349.03	0.0200	P	2.9
3	☐	50.000	52.817	144079.25	0.3538	P	1.3
4	☐	125.000	127.388	350984.14	0.8446	P	0.7
5	☐	250.000	257.158	697146.12	1.6988	P	1.3
6	☐	500.000	505.196	1375460.57	3.3315	A	1.5
7	☐	1000.000	995.173	2820780.31	6.5567	A	0.9
8	☐			14864.10	0.0342	P	1.7

$$y = 0.0066 * x + 0.0061$$

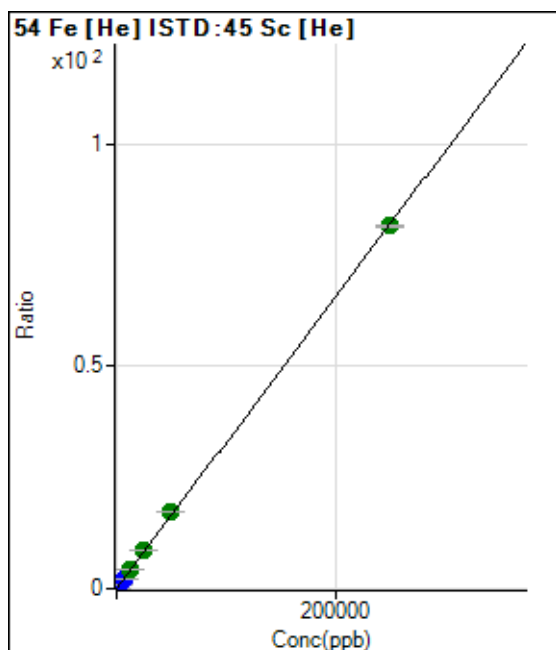
R = 1.0000

DL = 0.1065

BEC = 0.9294

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	2584.70	0.0062	P	1.3
2	☐	50.000	59.957	10798.40	0.0259	P	3.3
3	☐	2500.000	2890.793	388099.78	0.9530	P	1.1
4	☐	6250.000	7030.570	959398.80	2.3088	P	1.2
5	☐	12500.000	13461.720	1811771.93	4.4151	A	1.4
6	☐	25000.000	26781.353	3624015.40	8.7774	A	0.9
7	☐	50000.000	52506.019	7400668.01	17.2025	A	1.1
8	☐	250000.00	249249.15	35476485.86	81.6380	A	0.6

$$y = 3.2751E-004 * x + 0.0062$$

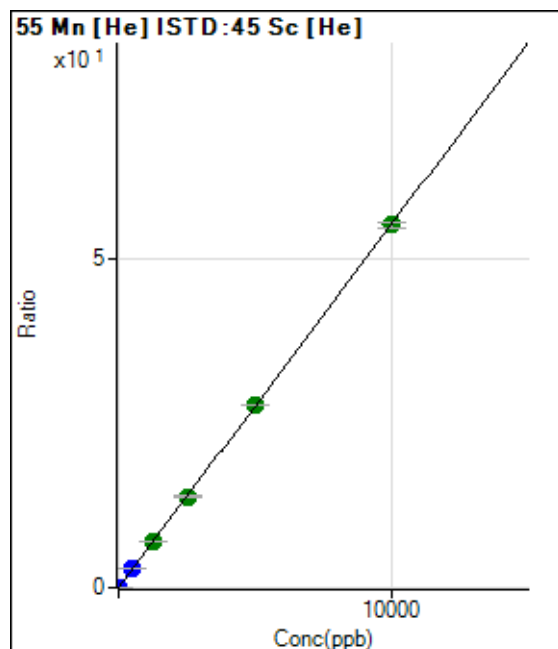
R = 0.9999

DL = 0.7232

BEC = 19.08

Weight: <None>

Min Conc: <None>



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	822.25	0.0020	P	9.1
2	☐	1.000	0.961	3039.22	0.0073	P	2.4
3	☐	500.000	525.745	1181088.68	2.9002	P	0.7
4	☐	1250.000	1262.727	2893306.45	6.9629	A	2.3
5	☐	2500.000	2506.510	5670788.18	13.8194	A	1.7
6	☐	5000.000	5028.046	11444694.41	27.7196	A	0.6
7	☐	10000.000	9981.471	23670842.98	55.0259	A	1.8
8	☐			10839.55	0.0249	P	0.9

$$y = 0.0055 * x + 0.0020$$

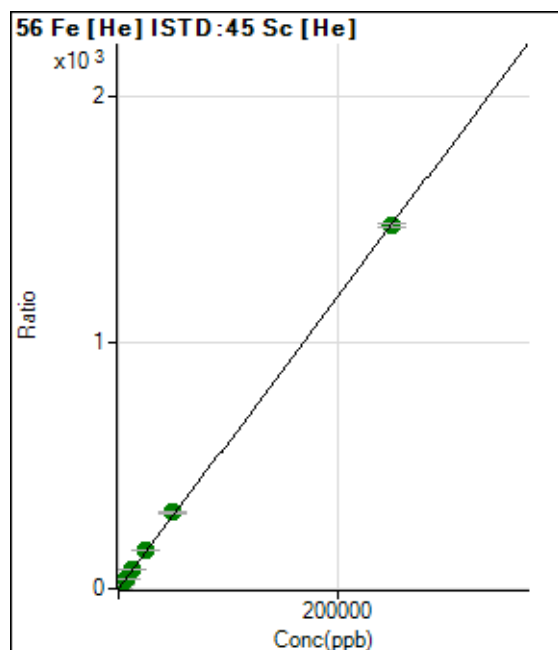
$$R = 1.0000$$

$$DL = 0.09887$$

$$BEC = 0.3606$$

Weight: <None>

Min Conc: <None>



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21271.81	0.0514	P	2.1
2	☐	50.000	56.432	160883.24	0.3856	P	1.0
3	☐	2500.000	2712.645	6563708.38	16.1174	A	1.0
4	☐	6250.000	6660.635	16413589.90	39.4998	A	1.8
5	☐	12500.000	13312.403	32376926.46	78.8956	A	1.0
6	☐	25000.000	26820.196	65604136.25	158.8970	A	0.5
7	☐	50000.000	52430.880	133611431.3	310.5792	A	1.1
8	☐	250000.00	249278.79	641579323.7	1,476.432	A	1.1

$$y = 0.0059 * x + 0.0514$$

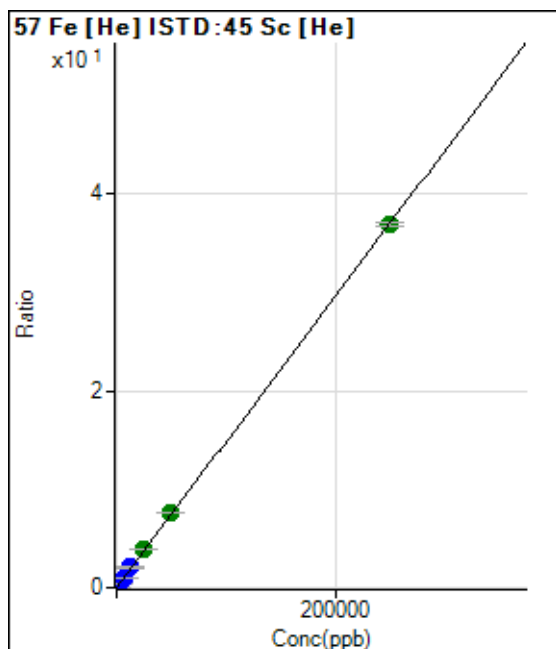
$$R = 0.9999$$

$$DL = 0.5392$$

$$BEC = 8.683$$

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1498.98	0.0036	P	4.1
2	☐	50.000	58.221	5104.25	0.0122	P	3.2
3	☐	2500.000	2871.664	174481.83	0.4284	P	0.8
4	☐	6250.000	6948.693	428643.32	1.0316	P	1.0
5	☐	12500.000	13882.798	844324.33	2.0573	P	0.7
6	☐	25000.000	26628.554	1627895.20	3.9428	A	0.8
7	☐	50000.000	51810.455	3299099.85	7.6680	A	0.6
8	☐	250000.00	249384.72	16033807.96	36.8954	A	1.1

$$y = 1.4793E-004 * x + 0.0036$$

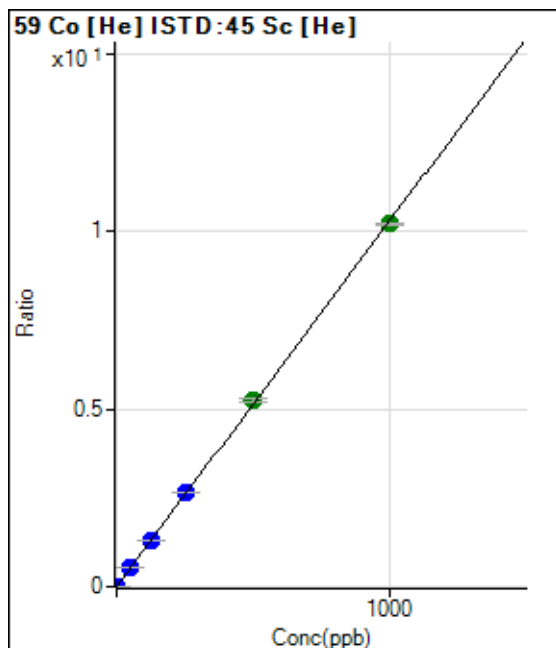
R = 1.0000

DL = 3.015

BEC = 24.5

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116.67	0.0003	P	18.5
2	☐	1.000	1.132	4976.43	0.0119	P	2.3
3	☐	50.000	52.974	221994.05	0.5451	P	1.1
4	☐	125.000	127.361	544465.56	1.3102	P	1.0
5	☐	250.000	256.750	1083820.94	2.6410	P	1.1
6	☐	500.000	510.896	2169712.61	5.2550	A	1.8
7	☐	1000.000	992.421	4391481.01	10.2077	A	0.9
8	☐			8058.91	0.0185	P	0.2

$$y = 0.0103 * x + 2.8198E-004$$

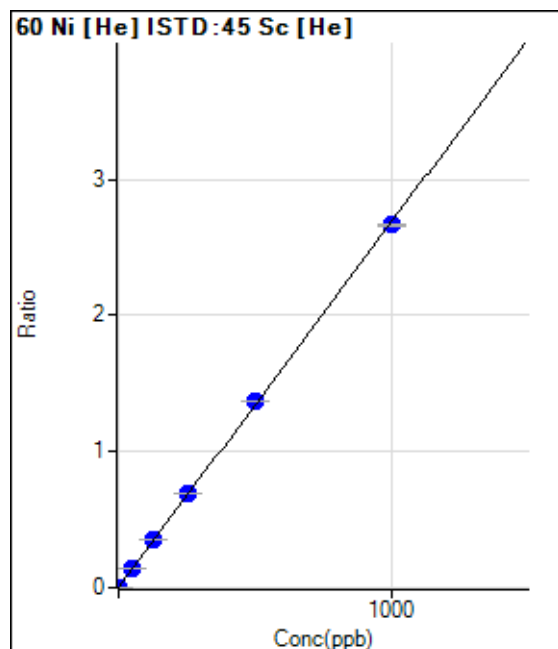
R = 0.9999

DL = 0.01524

BEC = 0.02742

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	610.02	0.0015	P	2.5
2	☐	1.000	1.116	1864.58	0.0045	P	1.6
3	☐	50.000	52.901	58440.31	0.1435	P	0.1
4	☐	125.000	129.986	145621.36	0.3504	P	1.9
5	☐	250.000	258.175	285048.35	0.6946	P	1.0
6	☐	500.000	510.363	566296.74	1.3717	P	0.7
7	☐	1000.000	992.006	1146399.19	2.6647	P	0.8
8	☐			4538.52	0.0104	P	0.5

$$y = 0.0027 * x + 0.0015$$

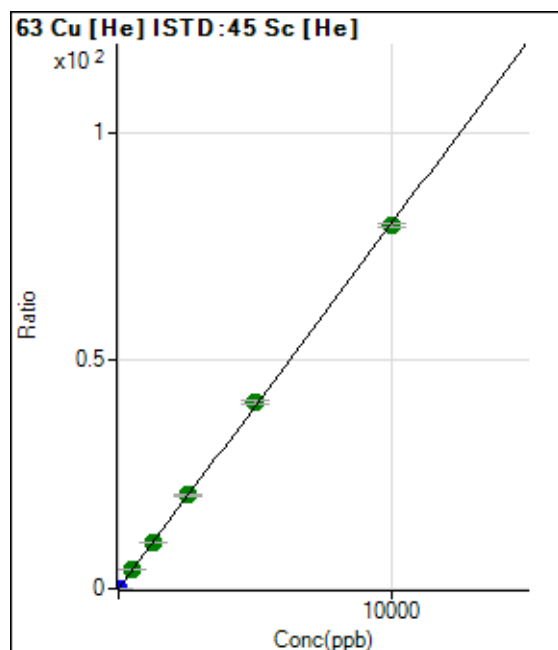
R = 0.9999

DL = 0.04111

BEC = 0.5493

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1298.96	0.0031	P	5.6
2	☐	2.000	2.073	8236.78	0.0197	P	1.3
3	☐	500.000	524.044	1710430.81	4.2001	A	0.6
4	☐	1250.000	1271.866	4234043.55	10.1891	A	0.2
5	☐	2500.000	2555.478	8399965.15	20.4692	A	1.1
6	☐	5000.000	5096.117	16851940.86	40.8164	A	2.1
7	☐	10000.000	9934.136	34231128.10	79.5627	A	1.0
8	☐			4427.37	0.0102	P	0.4

$$y = 0.0080 * x + 0.0031$$

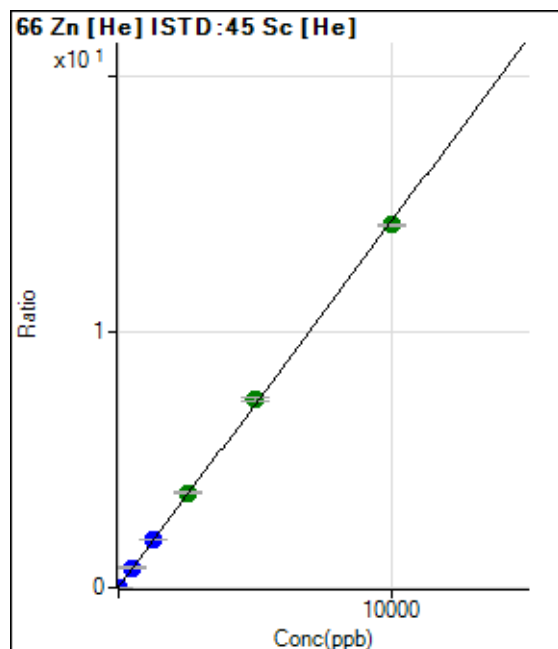
R = 0.9999

DL = 0.06539

BEC = 0.3921

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4609.64	0.0111	P	2.3
2	☐	5.000	5.019	7647.60	0.0183	P	3.1
3	☐	500.000	542.192	320685.29	0.7875	P	1.0
4	☐	1250.000	1292.907	773892.17	1.8624	P	0.9
5	☐	2500.000	2590.524	1526576.92	3.7203	A	2.1
6	☐	5000.000	5136.982	3041265.79	7.3664	A	1.5
7	☐	10000.000	9901.405	6104145.47	14.1883	A	0.7
8	☐			7806.56	0.0180	P	2.8

$$y = 0.0014 * x + 0.0111$$

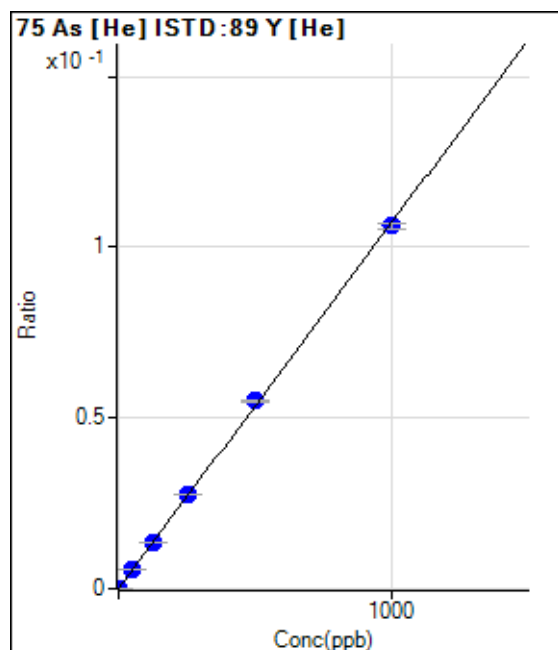
R = 0.9998

DL = 0.5374

BEC = 7.784

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8.89	0.0000	P	77.4
2	☐	1.000	1.238	447.79	0.0001	P	14.0
3	☐	50.000	52.212	18227.97	0.0056	P	3.0
4	☐	125.000	128.092	45211.13	0.0137	P	1.0
5	☐	250.000	256.583	89578.05	0.0275	P	1.0
6	☐	500.000	512.487	179995.36	0.0549	P	0.8
7	☐	1000.000	991.613	367581.40	0.1062	P	1.9
8	☐			442.23	0.0001	P	13.7

$$y = 1.0712E-004 * x + 2.6458E-006$$

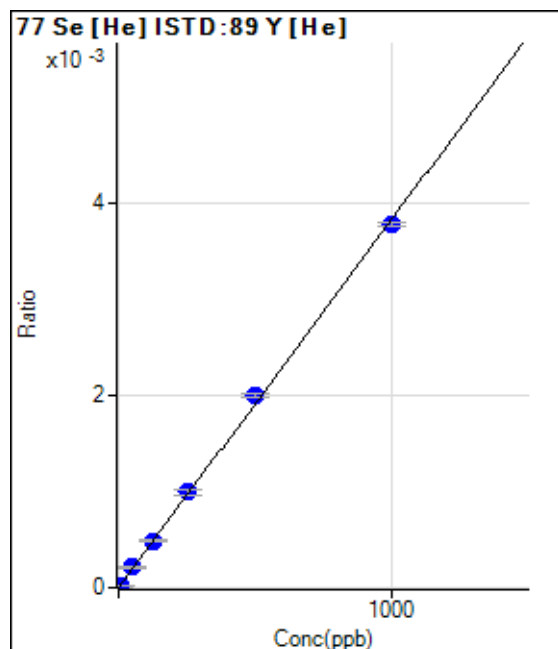
R = 0.9999

DL = 0.05734

BEC = 0.0247

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1.11	0.0000	P	173.
2	☐	5.000	5.419	70.00	0.0000	P	28.6
3	☐	50.000	55.001	687.80	0.0002	P	5.4
4	☐	125.000	127.279	1606.77	0.0005	P	5.3
5	☐	250.000	259.003	3232.61	0.0010	P	6.1
6	☐	500.000	522.157	6558.18	0.0020	P	2.5
7	☐	1000.000	986.134	13073.66	0.0038	P	1.2
8	☐			18.89	0.0000	P	38.8

$$y = 3.8303E-006 * x + 3.2897E-007$$

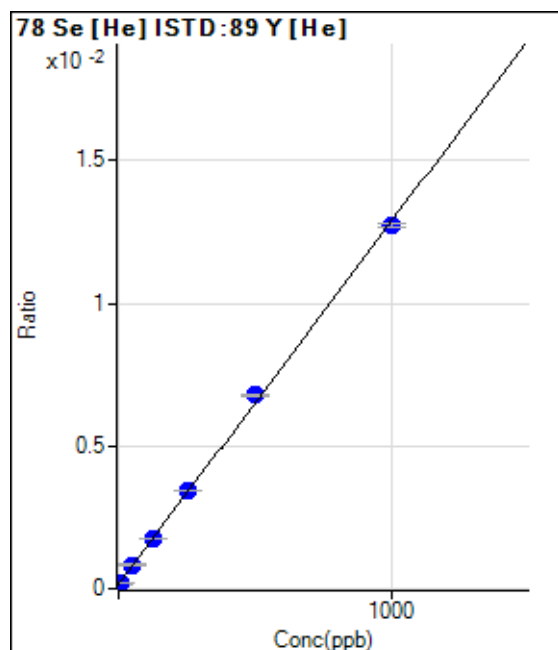
R = 0.9996

DL = 0.4463

BEC = 0.08589

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	516.68	0.0002	P	3.8
2	☐	5.000	4.931	720.03	0.0002	P	11.3
3	☐	50.000	53.929	2738.06	0.0008	P	1.0
4	☐	125.000	124.620	5730.05	0.0017	P	1.7
5	☐	250.000	257.907	11192.12	0.0034	P	1.5
6	☐	500.000	521.381	22248.01	0.0068	P	1.2
7	☐	1000.000	987.185	43985.59	0.0127	P	1.1
8	☐			550.02	0.0002	P	5.6

$$y = 1.2717E-005 * x + 1.5447E-004$$

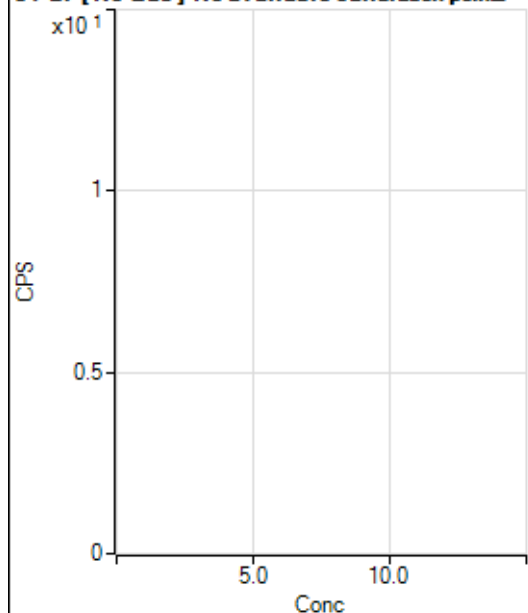
R = 0.9996

DL = 1.388

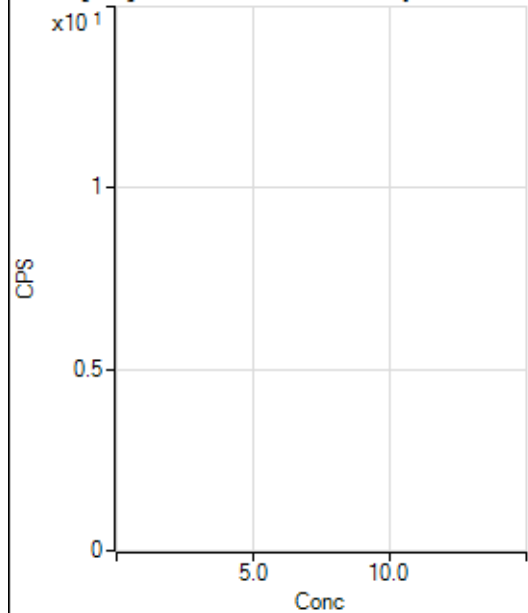
BEC = 12.15

Weight: <None>

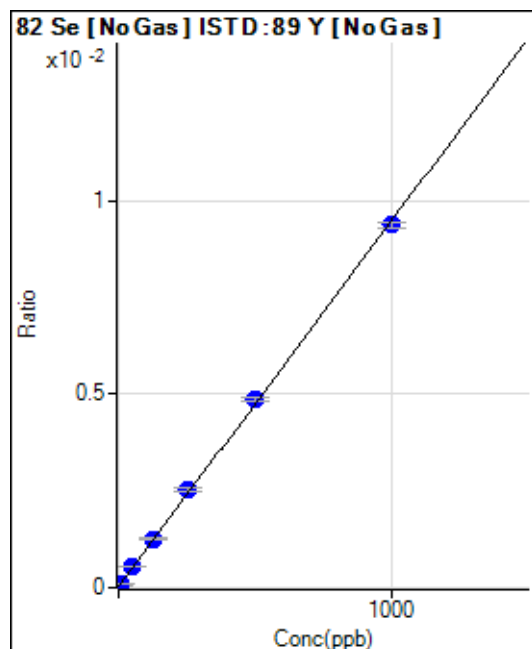
Min Conc: <None>

81 Br [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			9545.41		P	1.9
2	☐			9580.98		P	1.7
3	☐			9099.58		P	2.1
4	☐			9091.79		P	1.0
5	☐			9121.78		P	1.1
6	☐			8931.69		P	2.6
7	☐			9394.19		P	1.7
8	☐			9821.14		P	2.5

81 Br [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			195.56		P	8.1
2	☐			162.22		P	9.7
3	☐			120.00		P	5.6
4	☐			123.33		P	4.7
5	☐			131.12		P	10.3
6	☐			127.78		P	15.7
7	☐			148.89		P	6.5
8	☐			197.78		P	14.3



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	321.25	0.0000	P	8.0
2	☐	5.000	5.655	927.43	0.0001	P	2.5
3	☐	50.000	53.428	6021.69	0.0005	P	1.0
4	☐	125.000	130.986	14503.76	0.0013	P	1.1
5	☐	250.000	263.603	28260.44	0.0025	P	3.5
6	☐	500.000	513.205	55806.12	0.0049	P	1.4
7	☐	1000.000	989.074	112970.51	0.0094	P	1.6
8	☐			527.06	0.0000	P	15.3

$$y = 9.4607E-006 * x + 2.8035E-005$$

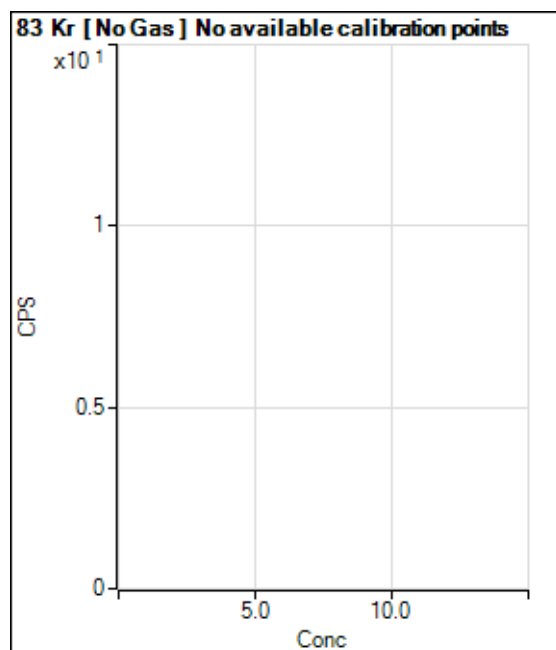
R = 0.9998

DL = 0.7128

BEC = 2.963

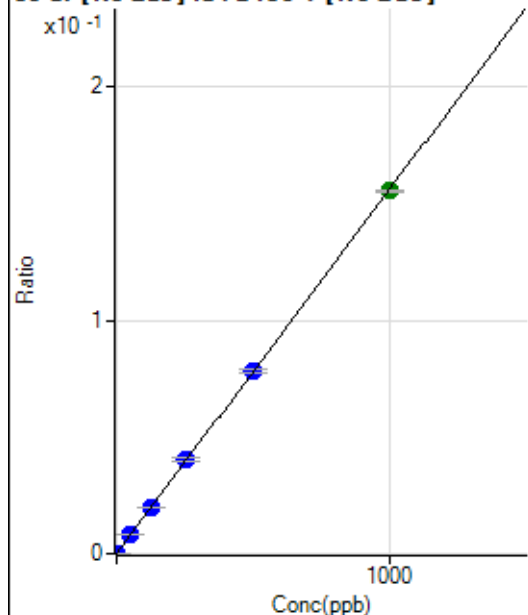
Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			502.24		P	4.7
2	☐			438.90		P	6.4
3	☐			493.35		P	8.4
4	☐			465.57		P	3.3
5	☐			441.12		P	6.9
6	☐			496.68		P	16.3
7	☐			478.90		P	10.3
8	☐			443.34		P	11.4

86 Sr [No Gas] ISTD: 89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	795.58	0.0001	P	6.4
2	☐	1.000	1.024	2604.71	0.0002	P	1.8
3	☐	50.000	50.945	90395.05	0.0080	P	1.1
4	☐	125.000	126.156	225808.30	0.0197	P	1.7
5	☐	250.000	258.799	452788.07	0.0404	P	3.2
6	☐	500.000	502.661	896008.24	0.0784	P	1.6
7	☐	1000.000	996.278	1869868.38	0.1553	A	0.9
8	☐			23691.41	0.0020	P	1.1

$$y = 1.5585E-004 * x + 6.9350E-005$$

R = 1.0000

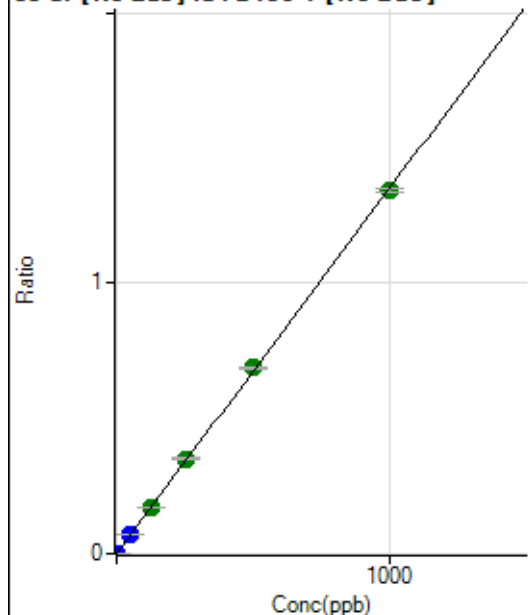
DL = 0.08497

BEC = 0.445

Weight: <None>

Min Conc: <None>

88 Sr [No Gas] ISTD: 89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	323.34	0.0000	P	5.3
2	☐	1.000	1.051	16473.77	0.0014	P	1.5
3	☐	50.000	51.526	786173.84	0.0697	P	0.9
4	☐	125.000	126.653	1958850.09	0.1712	A	2.1
5	☐	250.000	259.408	3929096.33	0.3505	A	2.9
6	☐	500.000	508.402	7850850.92	0.6870	A	1.4
7	☐	1000.000	993.164	16154391.84	1.3420	A	1.0
8	☐			203093.85	0.0174	P	0.5

$$y = 0.0014 * x + 2.8189E-005$$

R = 0.9999

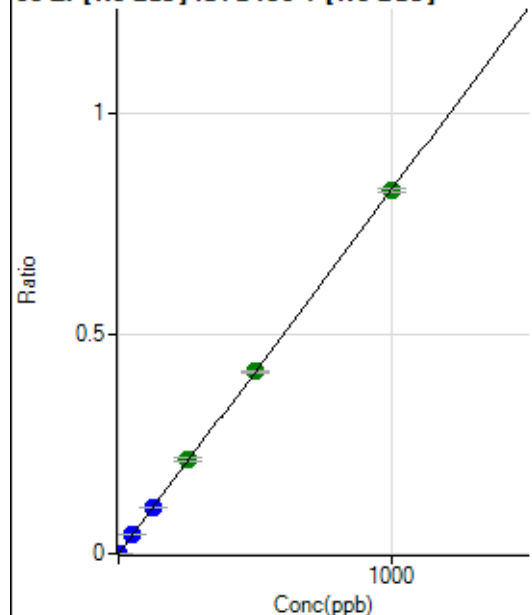
DL = 0.003339

BEC = 0.02086

Weight: <None>

Min Conc: <None>

90 Zr [No Gas] ISTD: 89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	508.91	0.0000	P	3.8
2	☐	1.000	1.031	10211.44	0.0009	P	1.6
3	☐	50.000	50.790	474770.69	0.0421	P	0.9
4	☐	125.000	126.314	1196502.04	0.1045	P	1.3
5	☐	250.000	259.425	2404869.77	0.2147	A	4.5
6	☐	500.000	499.813	4725977.50	0.4135	A	0.6
7	☐	1000.000	997.533	9934186.73	0.8253	A	1.1
8	☐			8730.44	0.0007	P	1.7

$$y = 8.2729E-004 * x + 4.4398E-005$$

$$R = 1.0000$$

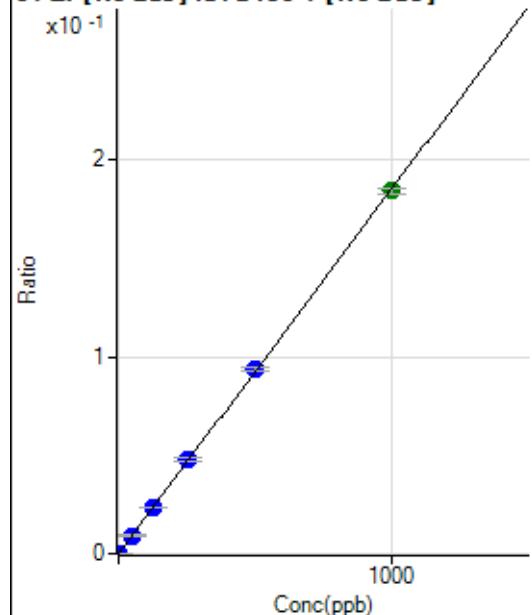
$$DL = 0.006086$$

$$BEC = 0.05367$$

Weight: <None>

Min Conc: <None>

91 Zr [No Gas] ISTD: 89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116.67	0.0000	P	1.3
2	☐	1.000	1.016	2252.42	0.0002	P	4.8
3	☐	50.000	50.040	104567.98	0.0093	P	0.5
4	☐	125.000	125.971	266741.15	0.0233	P	1.2
5	☐	250.000	257.454	533632.60	0.0476	P	3.6
6	☐	500.000	505.152	1067683.52	0.0934	P	1.6
7	☐	1000.000	995.437	2215954.86	0.1841	A	1.8
8	☐			1937.93	0.0002	P	0.6

$$y = 1.8493E-004 * x + 1.0176E-005$$

$$R = 0.9999$$

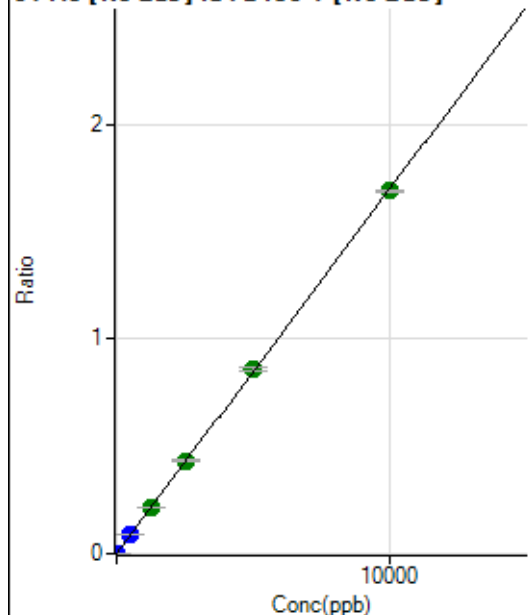
$$DL = 0.002216$$

$$BEC = 0.05503$$

Weight: <None>

Min Conc: <None>

94 Mo [No Gas] ISTD: 89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	336.67	0.0000	P	13.0
2	☐	5.000	6.169	12254.11	0.0011	P	1.9
3	☐	500.000	508.946	976292.90	0.0865	P	1.0
4	☐	1250.000	1254.314	2439482.62	0.2131	A	1.4
5	☐	2500.000	2553.110	4862478.78	0.4338	A	2.6
6	☐	5000.000	5056.365	9816774.78	0.8591	A	2.1
7	☐	10000.000	9957.553	20364717.47	1.6917	A	0.2
8	☐			6234.73	0.0005	P	2.4

$$y = 1.6989E-004 * x + 2.9337E-005$$

R = 1.0000

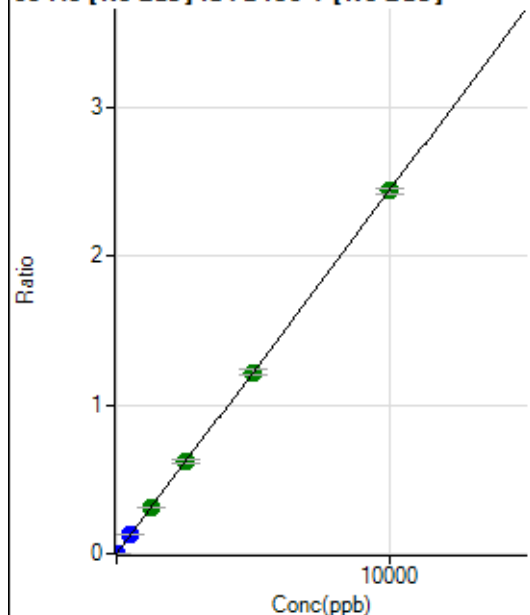
DL = 0.06743

BEC = 0.1727

Weight: <None>

Min Conc: <None>

95 Mo [No Gas] ISTD: 89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	295.56	0.0000	P	13.4
2	☐	5.000	5.187	14676.37	0.0013	P	0.2
3	☐	500.000	505.512	1391226.23	0.1233	P	0.9
4	☐	1250.000	1253.386	3497434.74	0.3056	A	0.8
5	☐	2500.000	2530.545	6913755.45	0.6169	A	3.2
6	☐	5000.000	5003.328	13937924.65	1.2197	A	2.9
7	☐	10000.000	9990.001	29314137.62	2.4354	A	1.6
8	☐			5055.38	0.0004	P	6.1

$$y = 2.4378E-004 * x + 2.5779E-005$$

R = 1.0000

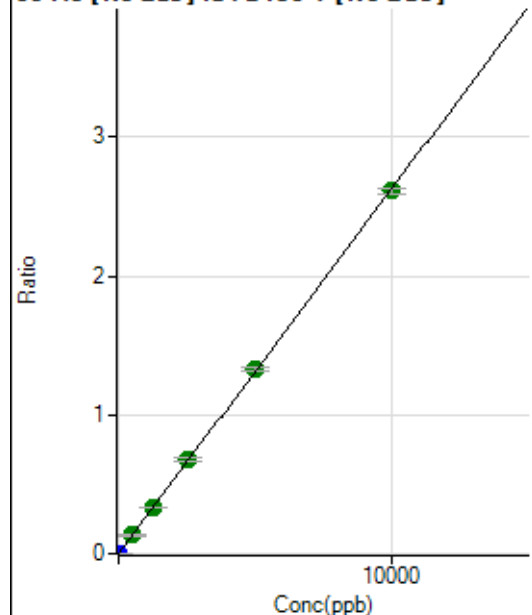
DL = 0.04252

BEC = 0.1057

Weight: <None>

Min Conc: <None>

96 Mo [No Gas] ISTD: 89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	351.12	0.0000	P	21.1
2	☐	5.000	5.420	16546.15	0.0015	P	1.4
3	☐	500.000	501.854	1488623.05	0.1319	A	0.5
4	☐	1250.000	1270.635	3820828.41	0.3339	A	2.1
5	☐	2500.000	2576.423	7586977.53	0.6769	A	2.9
6	☐	5000.000	5056.158	15181291.30	1.3284	A	1.4
7	☐	10000.000	9950.143	31467836.20	2.6143	A	1.6
8	☐			9812.26	0.0008	P	3.6

$$y = 2.6273E-004 * x + 3.0596E-005$$

R = 0.9999

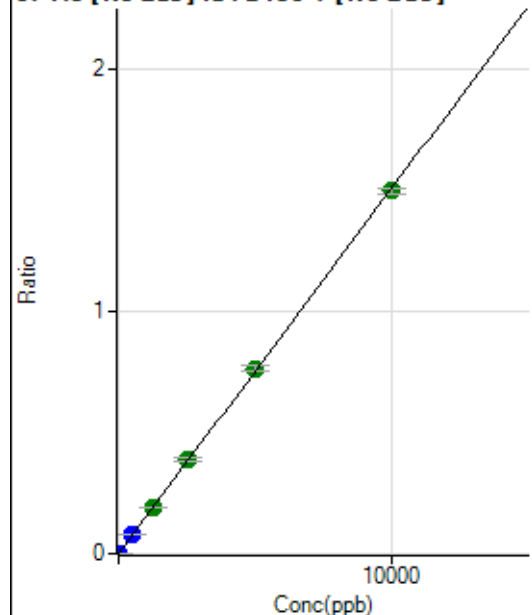
DL = 0.07386

BEC = 0.1165

Weight: <None>

Min Conc: <None>

97 Mo [No Gas] ISTD: 89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	176.67	0.0000	P	8.9
2	☐	5.000	5.439	9487.58	0.0008	P	1.2
3	☐	500.000	514.697	874718.35	0.0775	P	0.4
4	☐	1250.000	1257.849	2167505.26	0.1894	A	0.1
5	☐	2500.000	2591.255	4370767.19	0.3901	A	4.0
6	☐	5000.000	5076.146	8732119.46	0.7642	A	2.4
7	☐	10000.000	9937.397	18006874.04	1.4959	A	1.3
8	☐			3329.30	0.0003	P	5.9

$$y = 1.5053E-004 * x + 1.5399E-005$$

R = 0.9999

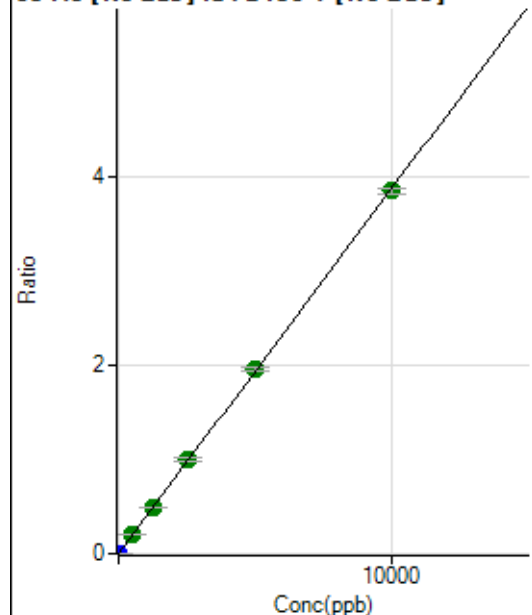
DL = 0.0273

BEC = 0.1023

Weight: <None>

Min Conc: <None>

98 Mo [No Gas] ISTD: 89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	450.01	0.0000	P	8.7
2	☐	5.000	5.252	23631.48	0.0021	P	1.0
3	☐	500.000	502.728	2203005.03	0.1952	A	0.2
4	☐	1250.000	1263.249	5612550.61	0.4904	A	0.4
5	☐	2500.000	2585.203	11243792.19	1.0035	A	3.9
6	☐	5000.000	5072.787	22500484.94	1.9690	A	1.9
7	☐	10000.000	9940.513	46443258.20	3.8583	A	1.6
8	☐			7937.79	0.0007	P	6.6

$$y = 3.8814E-004 * x + 3.9236E-005$$

R = 0.9999

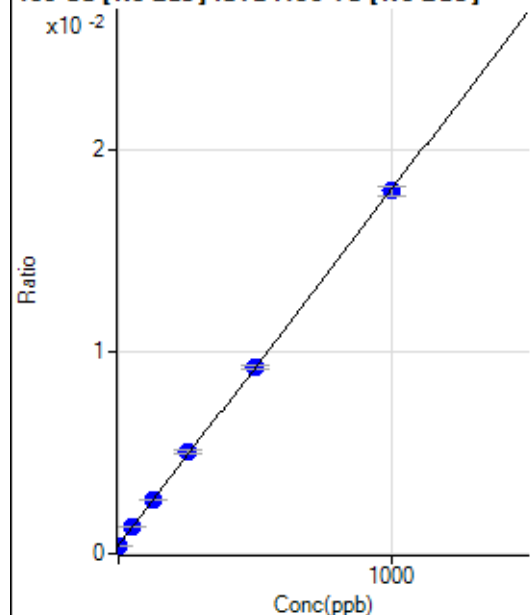
DL = 0.02627

BEC = 0.1011

Weight: <None>

Min Conc: <None>

106 Cd [No Gas] ISTD: 159 Tb [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	3277.07	0.0004	P	2.6
2	☐	1.000	0.009	3265.96	0.0004	P	2.5
3	☐	50.000	52.113	10328.20	0.0013	P	1.5
4	☐	125.000	127.395	21387.01	0.0027	P	0.7
5	☐	250.000	264.042	39839.24	0.0051	P	4.4
6	☐	500.000	499.405	75074.68	0.0092	P	1.9
7	☐	1000.000	996.383	151077.29	0.0179	P	2.5
8	☐			3254.84	0.0004	P	1.4

$$y = 1.7585E-005 * x + 4.1208E-004$$

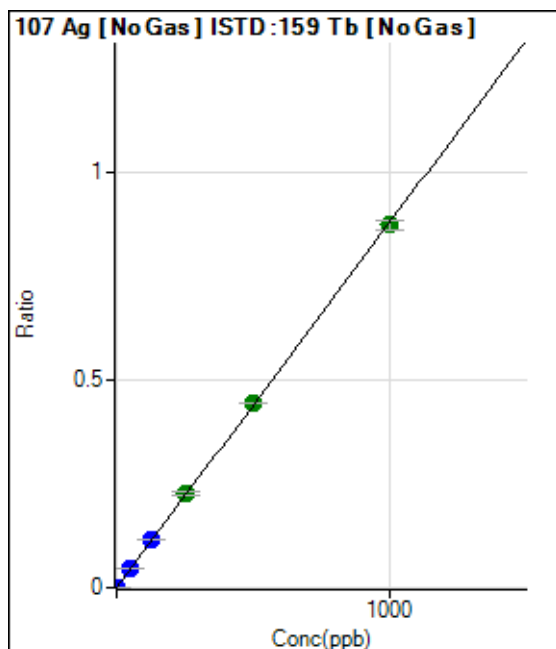
R = 0.9999

DL = 1.804

BEC = 23.43

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0000	P	12.3
2	☐	1.000	1.078	7577.59	0.0010	P	3.1
3	☐	50.000	53.427	364965.98	0.0469	P	0.6
4	☐	125.000	129.540	917682.50	0.1138	P	0.6
5	☐	250.000	259.746	1798512.42	0.2282	A	3.7
6	☐	500.000	506.059	3630216.27	0.4446	A	0.8
7	☐	1000.000	993.795	7354535.17	0.8730	A	2.6
8	☐			1956.85	0.0002	P	44.4

$$y = 8.7844\text{E-}004 * x + 1.0058\text{E-}005$$

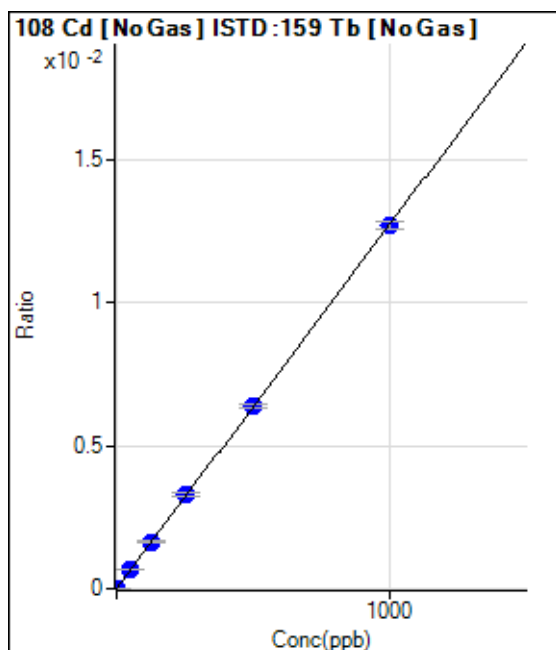
R = 0.9999

DL = 0.00424

BEC = 0.01145

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11.11	0.0000	P	62.2
2	☐	1.000	1.159	127.78	0.0000	P	2.9
3	☐	50.000	53.238	5274.35	0.0007	P	2.0
4	☐	125.000	129.066	13245.07	0.0016	P	3.0
5	☐	250.000	258.844	25948.92	0.0033	P	4.2
6	☐	500.000	500.697	52002.08	0.0064	P	2.0
7	☐	1000.000	996.770	106795.64	0.0127	P	2.3
8	☐			105.56	0.0000	P	5.1

$$y = 1.2716\text{E-}005 * x + 1.3954\text{E-}006$$

R = 1.0000

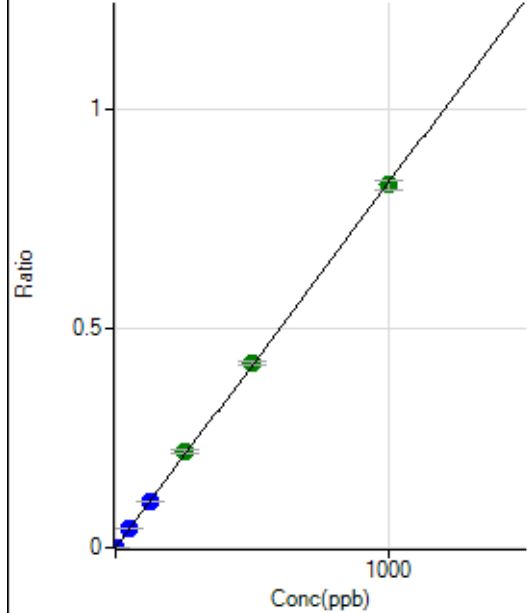
DL = 0.2048

BEC = 0.1097

Weight: <None>

Min Conc: <None>

109 Ag [No Gas] ISTD : 159 Tb [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	64.44	0.0000	P	33.9
2	☐	1.000	1.056	7039.56	0.0009	P	2.1
3	☐	50.000	52.951	343285.46	0.0442	P	0.3
4	☐	125.000	127.876	859764.83	0.1066	P	0.8
5	☐	250.000	262.926	1727800.09	0.2192	A	3.5
6	☐	500.000	503.501	3427787.38	0.4198	A	2.1
7	☐	1000.000	994.511	6985359.83	0.8291	A	2.6
8	☐			1784.59	0.0002	P	46.8

$$y = 8.3372E-004 * x + 8.0923E-006$$

$$R = 0.9999$$

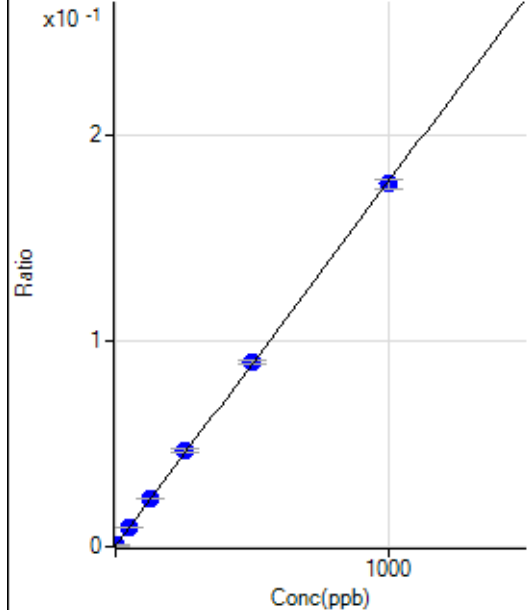
$$DL = 0.009875$$

$$BEC = 0.009706$$

Weight: <None>

Min Conc: <None>

111 Cd [No Gas] ISTD : 159 Tb [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2319.50	0.0003	P	2.4
2	☐	1.000	1.012	3730.16	0.0005	P	2.0
3	☐	50.000	53.200	75511.82	0.0097	P	1.6
4	☐	125.000	128.979	186538.38	0.0231	P	1.3
5	☐	250.000	263.123	369575.28	0.0469	P	3.3
6	☐	500.000	505.095	732799.27	0.0897	P	1.5
7	☐	1000.000	993.514	1484683.37	0.1762	P	2.6
8	☐			2914.52	0.0004	P	1.0

$$y = 1.7709E-004 * x + 2.9167E-004$$

$$R = 0.9999$$

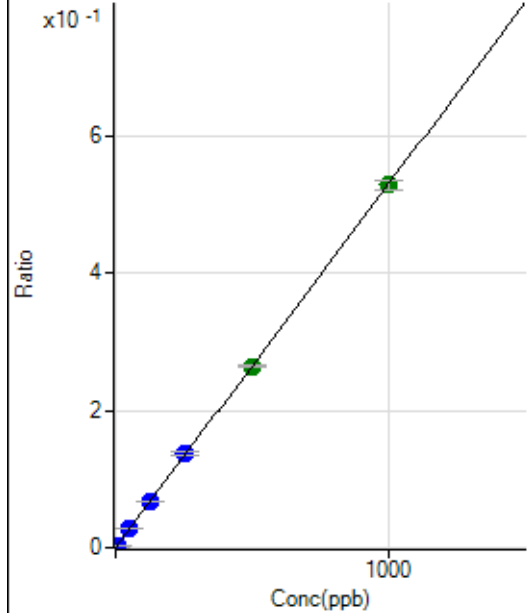
$$DL = 0.118$$

$$BEC = 1.647$$

Weight: <None>

Min Conc: <None>

118 Sn [No Gas] ISTD:159 Tb [No Gas]



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	975.60	0.0001	P	2.4
2	☐	5.000	5.346	23408.06	0.0030	P	1.9
3	☐	50.000	52.841	218636.91	0.0281	P	0.6
4	☐	125.000	127.738	546791.98	0.0678	P	1.0
5	☐	250.000	259.898	1086233.52	0.1378	P	4.0
6	☐	500.000	498.451	2157797.64	0.2642	A	0.8
7	☐	1000.000	997.814	4454989.52	0.5288	A	2.9
8	☐			1903.48	0.0002	P	3.0

$$y = 5.2987E-004 * x + 1.2269E-004$$

$$R = 0.9999$$

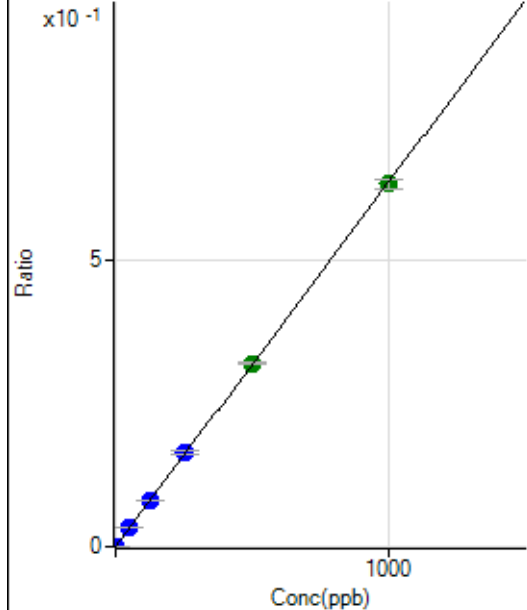
$$DL = 0.01637$$

$$BEC = 0.2315$$

Weight: <None>

Min Conc: <None>

121 Sb [No Gas] ISTD:159 Tb [No Gas]



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	36.7
2	☐	2.000	2.117	10710.74	0.0014	P	1.7
3	☐	50.000	52.140	258106.41	0.0332	P	0.6
4	☐	125.000	125.949	646633.04	0.0802	P	0.6
5	☐	250.000	259.155	1300319.73	0.1650	P	3.8
6	☐	500.000	503.319	2616704.08	0.3204	A	0.9
7	☐	1000.000	995.826	5341137.52	0.6340	A	2.4
8	☐			4429.61	0.0005	P	4.3

$$y = 6.3664E-004 * x + 4.6155E-006$$

$$R = 0.9999$$

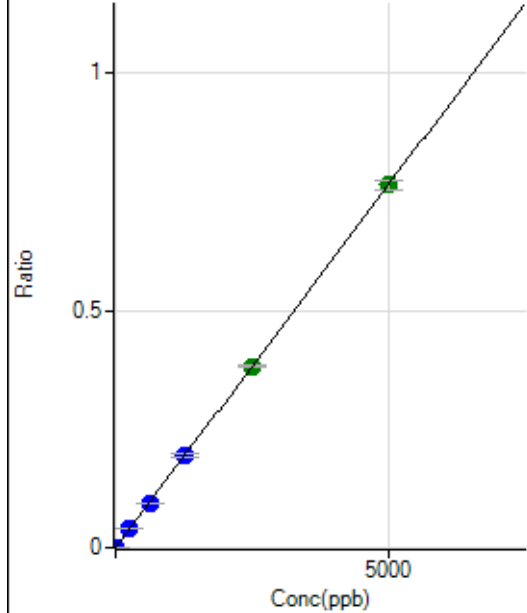
$$DL = 0.007973$$

$$BEC = 0.00725$$

Weight: <None>

Min Conc: <None>

135 Ba [No Gas] ISTD : 159 Tb [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	54.44	0.0000	P	27.9
2	☐	10.000	10.568	12870.39	0.0016	P	1.6
3	☐	250.000	254.157	302555.04	0.0389	P	0.9
4	☐	625.000	618.918	764106.94	0.0948	P	0.5
5	☐	1250.000	1266.462	1528209.01	0.1939	P	3.4
6	☐	2500.000	2495.567	3119806.93	0.3821	A	1.3
7	☐	5000.000	4998.652	6447011.78	0.7653	A	2.4
8	☐			3928.36	0.0005	P	2.2

$$y = 1.5309E-004 * x + 6.8511E-006$$

$$R = 1.0000$$

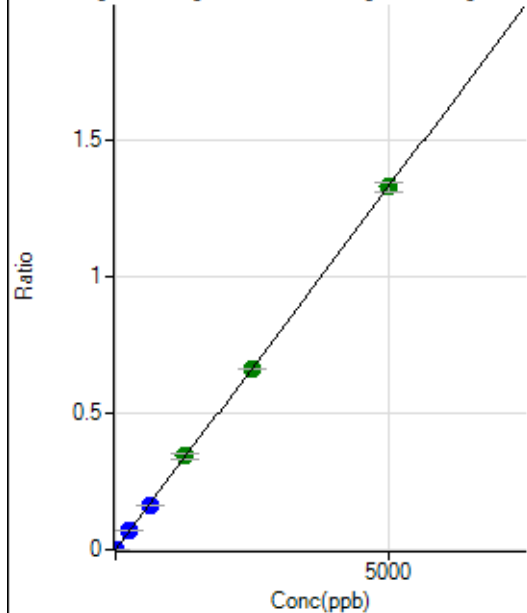
$$DL = 0.03748$$

$$BEC = 0.04475$$

Weight: <None>

Min Conc: <None>

137 Ba [No Gas] ISTD : 159 Tb [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	122.22	0.0000	P	28.6
2	☐	10.000	10.430	22082.85	0.0028	P	3.7
3	☐	250.000	255.135	527525.89	0.0679	P	0.4
4	☐	625.000	618.919	1327116.61	0.1646	P	0.6
5	☐	1250.000	1287.338	2697069.86	0.3423	A	4.7
6	☐	2500.000	2486.584	5399145.27	0.6612	A	0.7
7	☐	5000.000	4997.876	11194790.25	1.3289	A	2.8
8	☐			6723.87	0.0008	P	2.0

$$y = 2.6589E-004 * x + 1.5386E-005$$

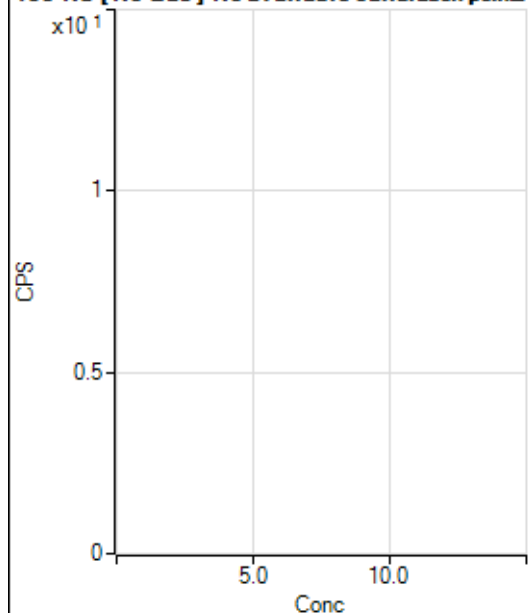
$$R = 1.0000$$

$$DL = 0.04963$$

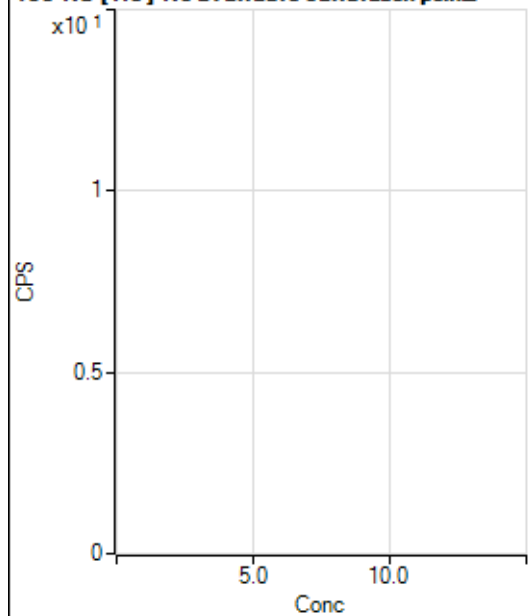
$$BEC = 0.05787$$

Weight: <None>

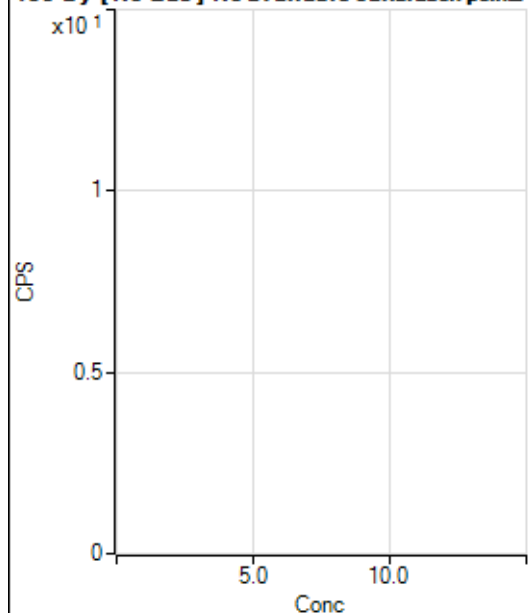
Min Conc: <None>

150 Nd [No Gas] No available calibration points

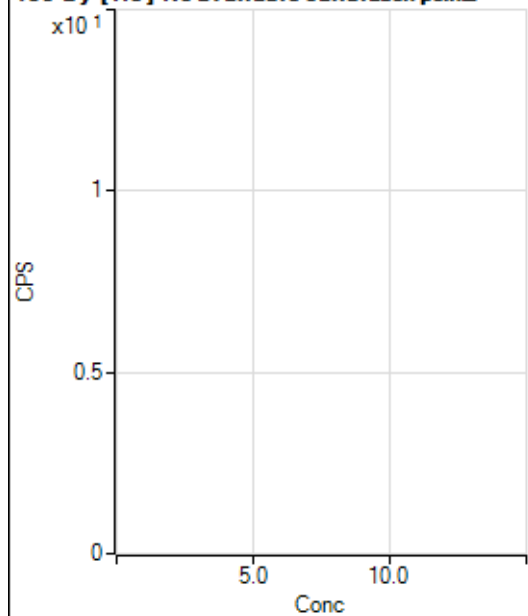
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			11.11		P	75.5
2	☐			3.33		P	0.0
3	☐			16.67		P	52.9
4	☐			26.67		P	12.5
5	☐			58.89		P	29.0
6	☐			105.56		P	17.4
7	☐			224.45		P	12.6
8	☐			121.11		P	20.3

150 Nd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			7.78		P	65.5
2	☐			3.33		P	100.
3	☐			14.44		P	35.3
4	☐			7.78		P	49.5
5	☐			23.33		P	57.2
6	☐			27.78		P	27.7
7	☐			66.67		P	10.0
8	☐			83.33		P	24.3

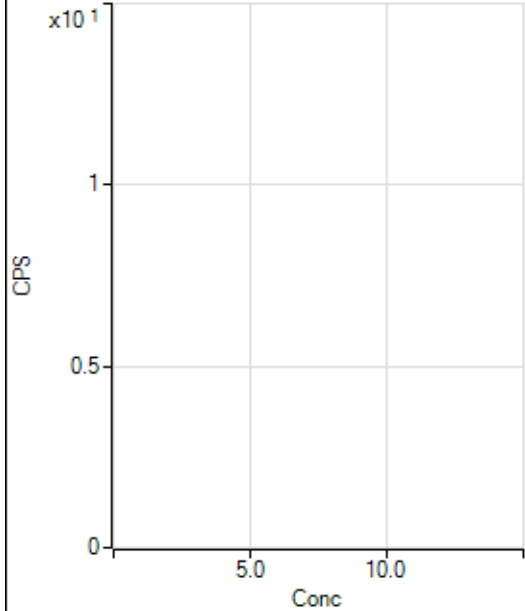
156 Dy [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			5.55		P	124.
2	☐			6.67		P	50.0
3	☐			10.00		P	57.7
4	☐			31.11		P	43.3
5	☐			36.67		P	32.8
6	☐			75.55		P	9.2
7	☐			114.44		P	11.0
8	☐			265.56		P	21.4

156 Dy [He] No available calibration points

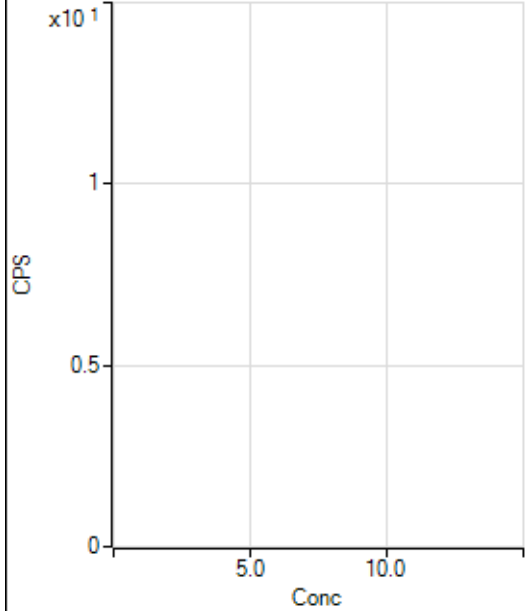
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			4.44		P	173.
2	☐			7.78		P	99.0
3	☐			21.11		P	24.1
4	☐			53.33		P	6.3
5	☐			80.00		P	11.0
6	☐			175.56		P	11.4
7	☐			343.34		P	12.7
8	☐			246.67		P	3.6

160 Gd [No Gas] Noavailable calibration poin...

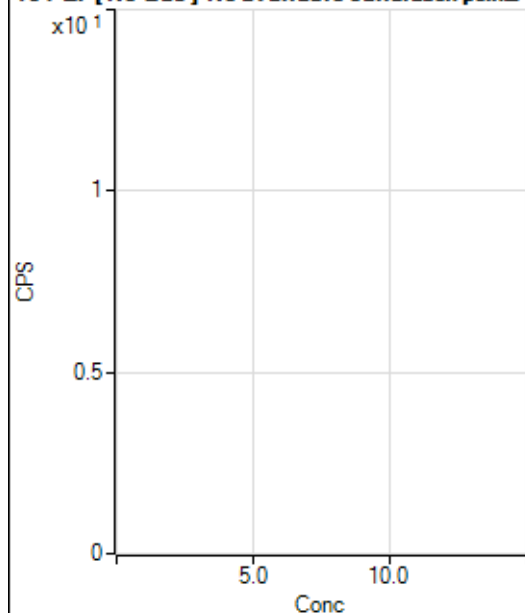


	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			60.00		P	16.7
2	☐			53.33		P	6.3
3	☐			51.11		P	21.0
4	☐			57.78		P	21.8
5	☐			71.11		P	31.2
6	☐			88.89		P	15.6
7	☐			145.56		P	8.0
8	☐			375.56		P	11.3

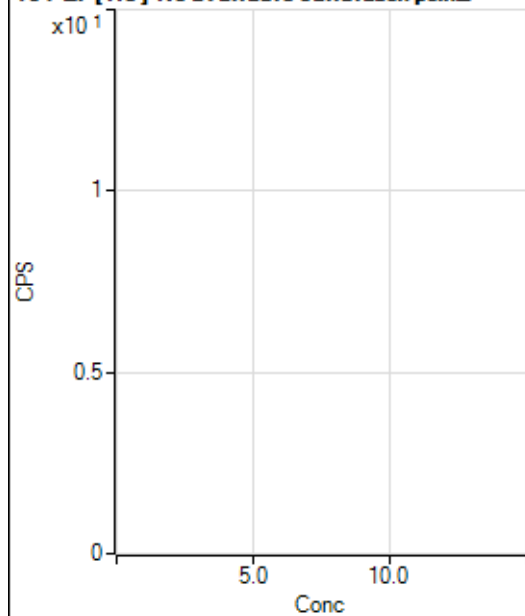
160 Gd [He] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			351.12		P	4.8
2	☐			372.23		P	7.5
3	☐			371.12		P	7.3
4	☐			361.12		P	12.5
5	☐			338.90		P	19.7
6	☐			370.01		P	7.2
7	☐			386.68		P	11.3
8	☐			560.02		P	11.3

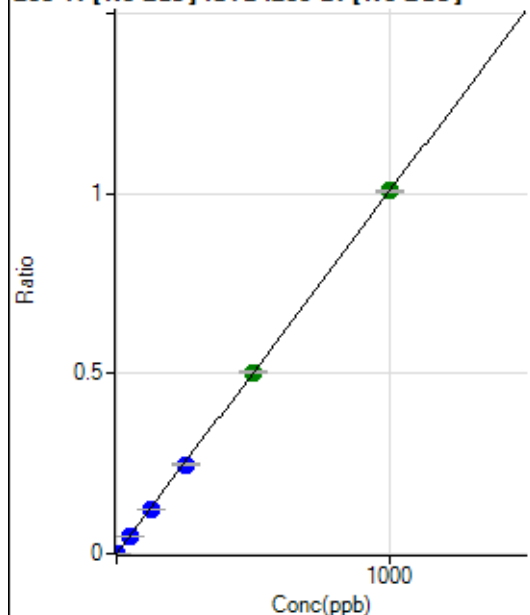
164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			55.55		P	28.4
2	☐			75.55		P	17.8
3	☐			55.56		P	22.7
4	☐			78.89		P	21.3
5	☐			102.22		P	21.0
6	☐			131.11		P	10.3
7	☐			200.00		P	12.0
8	☐			618.91		P	11.0

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			36.67		P	32.8
2	☐			55.56		P	17.3
3	☐			53.33		P	22.5
4	☐			65.56		P	17.9
5	☐			67.78		P	14.2
6	☐			87.78		P	19.1
7	☐			147.78		P	13.0
8	☐			477.79		P	4.7

203 Tl [No Gas] ISTD : 209 Bi [No Gas]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	362.23	0.0001	P	6.9
2	☐	1.000	0.982	5229.96	0.0011	P	3.2
3	☐	50.000	48.647	235871.46	0.0490	P	0.3
4	☐	125.000	120.887	596549.79	0.1217	P	0.7
5	☐	250.000	245.601	1189897.52	0.2472	P	3.0
6	☐	500.000	500.891	2510454.70	0.5041	A	1.3
7	☐	1000.000	1001.236	5140025.65	1.0076	A	0.7
8	☐			7011.88	0.0015	P	2.0

$$y = 0.0010 * x + 7.5334E-005$$

$$R = 1.0000$$

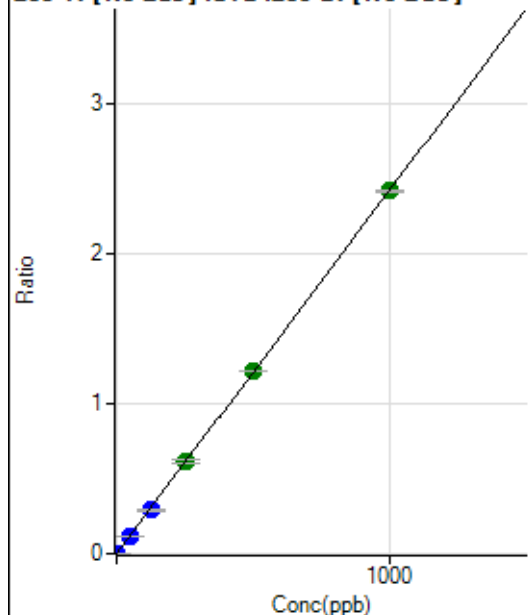
$$DL = 0.01556$$

$$BEC = 0.07486$$

Weight: <None>

Min Conc: <None>

205 Tl [No Gas] ISTD : 209 Bi [No Gas]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	884.48	0.0002	P	1.7
2	☐	1.000	0.975	12504.79	0.0025	P	1.0
3	☐	50.000	48.179	561729.61	0.1168	P	0.2
4	☐	125.000	119.743	1420856.89	0.2899	P	1.6
5	☐	250.000	253.547	2953575.89	0.6137	A	3.2
6	☐	500.000	502.237	6052746.93	1.2154	A	0.3
7	☐	1000.000	998.743	12328566.62	2.4168	A	0.8
8	☐			17076.46	0.0036	P	3.0

$$y = 0.0024 * x + 1.8389E-004$$

$$R = 1.0000$$

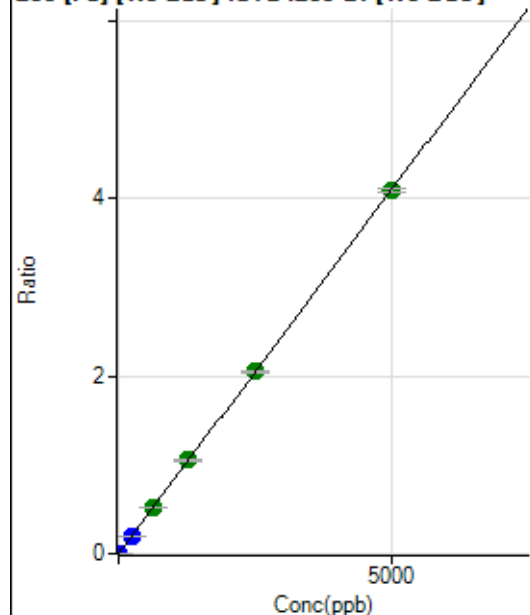
$$DL = 0.003795$$

$$BEC = 0.076$$

Weight: <None>

Min Conc: <None>

206 [Pb] [No Gas] ISTD : 209 Bi [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	427.79	0.0001	P	10.7
2	☐	1.000	1.002	4468.55	0.0009	P	0.8
3	☐	250.000	244.102	961837.30	0.1999	P	0.6
4	☐	625.000	632.074	2536490.90	0.5175	A	1.4
5	☐	1250.000	1291.516	5090781.49	1.0574	A	1.9
6	☐	2500.000	2507.134	10221836.93	2.0526	A	1.0
7	☐	5000.000	4985.464	20821632.74	4.0815	A	1.0
8	☐			5433.35	0.0012	P	0.9

$$y = 8.1866E-004 * x + 8.8906E-005$$

R = 1.0000

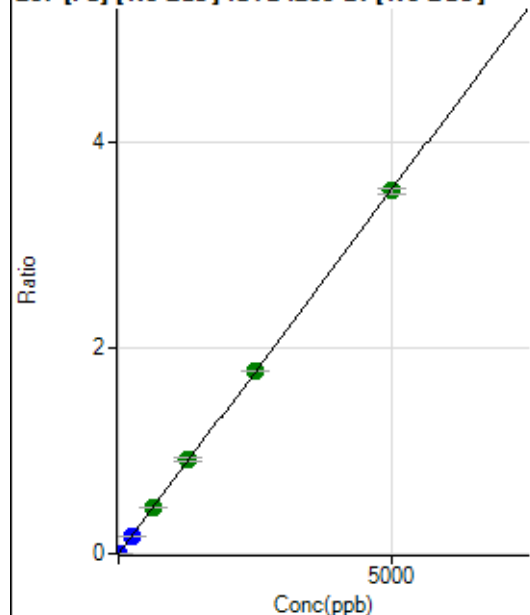
DL = 0.03478

BEC = 0.1086

Weight: <None>

Min Conc: <None>

207 [Pb] [No Gas] ISTD : 209 Bi [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	333.34	0.0001	P	9.4
2	☐	1.000	1.008	3845.02	0.0008	P	3.1
3	☐	250.000	241.877	823278.83	0.1711	P	0.4
4	☐	625.000	625.160	2167101.27	0.4422	A	0.9
5	☐	1250.000	1295.239	4409739.66	0.9161	A	2.4
6	☐	2500.000	2505.793	8825362.86	1.7722	A	0.5
7	☐	5000.000	4986.180	17987884.18	3.5263	A	1.7
8	☐			4583.04	0.0010	P	2.7

$$y = 7.0720E-004 * x + 6.9264E-005$$

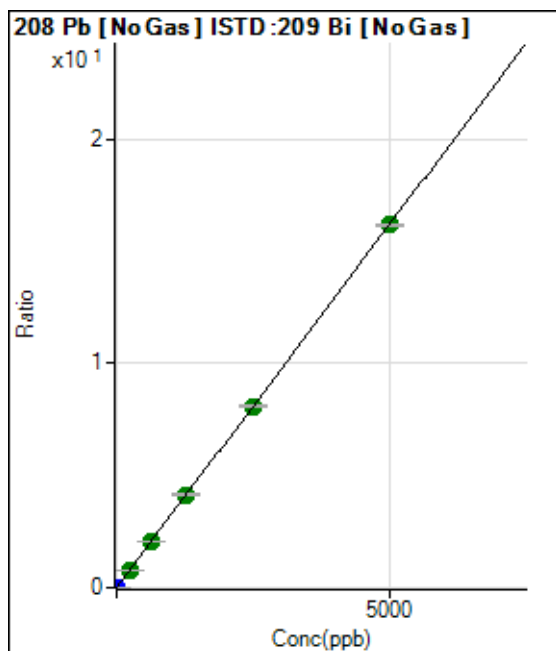
R = 0.9999

DL = 0.02757

BEC = 0.09794

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1585.61	0.0003	P	7.1
2	☐	1.000	1.002	17556.82	0.0036	P	3.1
3	☐	250.000	245.667	3826467.04	0.7953	A	0.9
4	☐	625.000	627.988	9961729.32	2.0326	A	0.4
5	☐	1250.000	1275.710	19873323.00	4.1287	A	2.7
6	☐	2500.000	2496.778	40239758.36	8.0803	A	1.3
7	☐	5000.000	4995.027	82464507.94	16.1650	A	0.2
8	☐			21397.96	0.0046	P	1.4

$$y = 0.0032 * x + 3.2947E-004$$

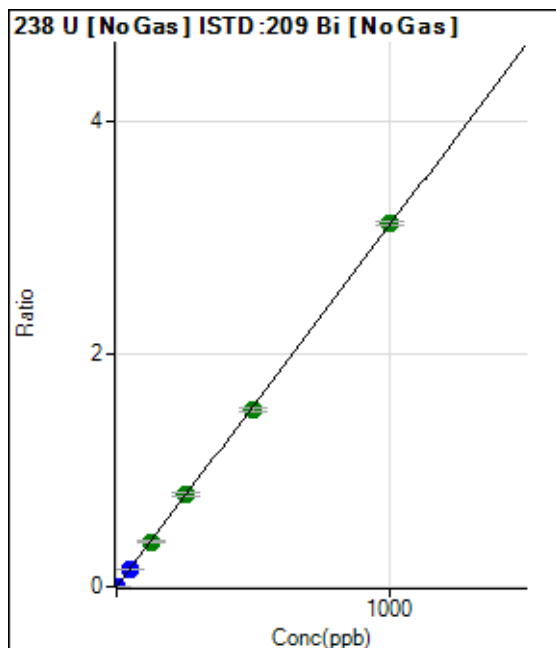
R = 1.0000

DL = 0.02155

BEC = 0.1018

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	87.78	0.0000	P	99.7
2	☐	1.000	0.989	15213.33	0.0031	P	2.9
3	☐	50.000	47.263	707624.35	0.1471	P	0.7
4	☐	125.000	124.923	1905160.35	0.3887	A	1.3
5	☐	250.000	254.808	3816613.87	0.7929	A	2.6
6	☐	500.000	490.404	7599380.72	1.5260	A	2.2
7	☐	1000.000	1003.743	15932751.98	3.1233	A	0.9
8	☐			585.58	0.0001	P	37.5

$$y = 0.0031 * x + 1.8098E-005$$

R = 0.9999

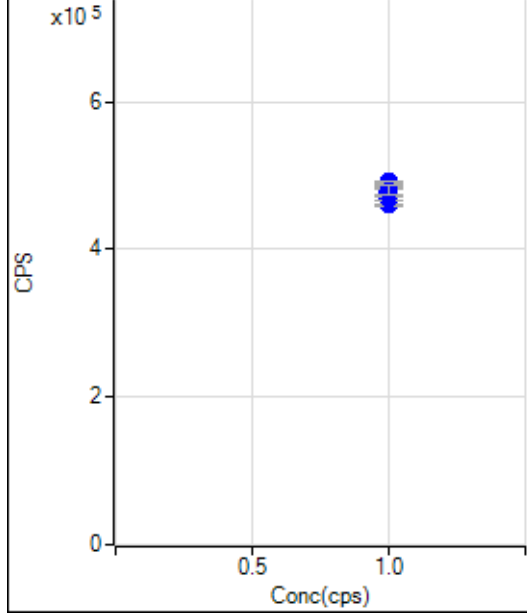
DL = 0.0174

BEC = 0.005816

Weight: <None>

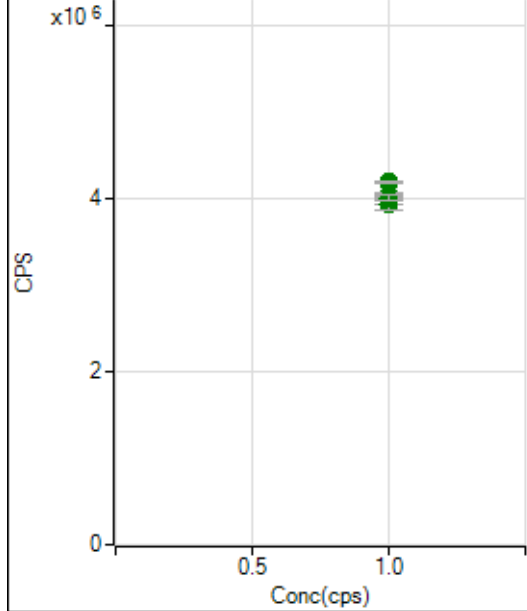
Min Conc: <None>

6 Li (ISTD) [No Gas]



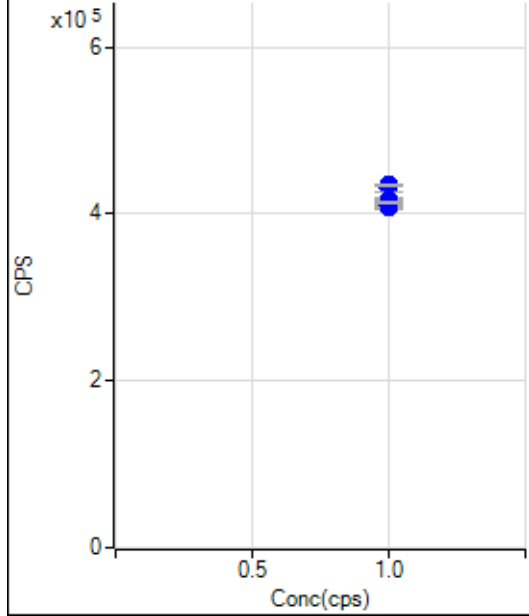
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		459758.41		P	0.4
2	☐	1.000		468440.95		P	0.9
3	☐	1.000		473758.51		P	0.3
4	☐	1.000		483497.54		P	0.3
5	☐	1.000		477857.11		P	2.6
6	☐	1.000		488787.03		P	1.6
7	☐	1.000		491378.38		P	0.6
8	☐	1.000		479936.03		P	2.5

45 Sc (ISTD) [No Gas]



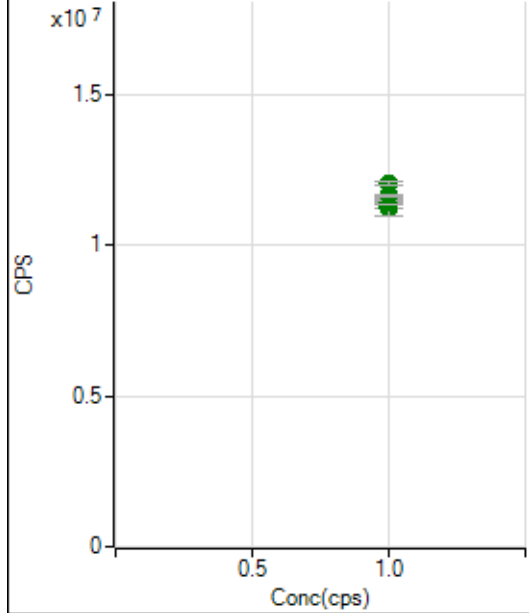
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4060500.36		A	0.3
2	☐	1.000		4009419.38		A	0.7
3	☐	1.000		3977458.07		A	1.4
4	☐	1.000		4015599.52		A	0.5
5	☐	1.000		3936186.85		A	3.4
6	☐	1.000		4011628.93		A	1.8
7	☐	1.000		4183664.80		A	0.4
8	☐	1.000		4197893.65		A	0.8

45 Sc (ISTD) [He]

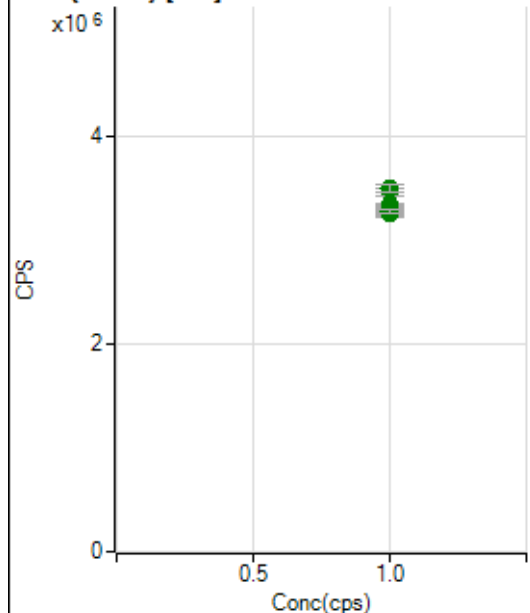


	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		413621.78		P	0.3
2	☐	1.000		417183.68		P	0.9
3	☐	1.000		407251.91		P	0.8
4	☐	1.000		415546.01		P	0.5
5	☐	1.000		410419.26		P	1.6
6	☐	1.000		412866.69		P	0.5
7	☐	1.000		430242.42		P	1.4
8	☐	1.000		434569.47		P	0.8

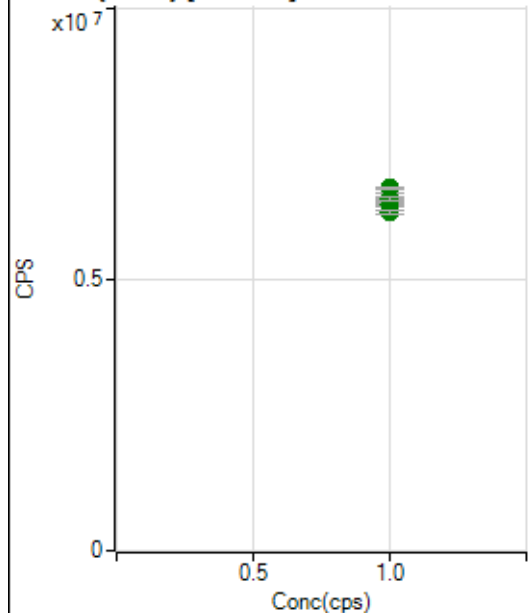
89 Y (ISTD) [No Gas]



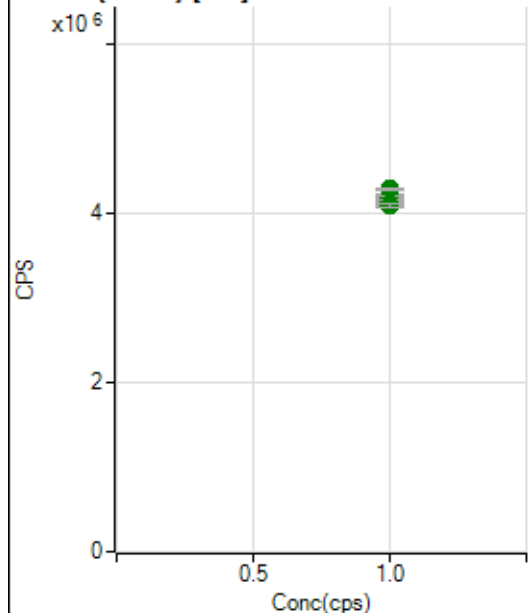
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		11466093.02		A	1.3
2	☐	1.000		11374416.22		A	0.3
3	☐	1.000		11287640.39		A	1.0
4	☐	1.000		11446150.39		A	1.2
5	☐	1.000		11216406.50		A	4.0
6	☐	1.000		11428500.80		A	0.7
7	☐	1.000		12037972.74		A	0.9
8	☐	1.000		11652435.80		A	0.4

89 Y (ISTD) [He]

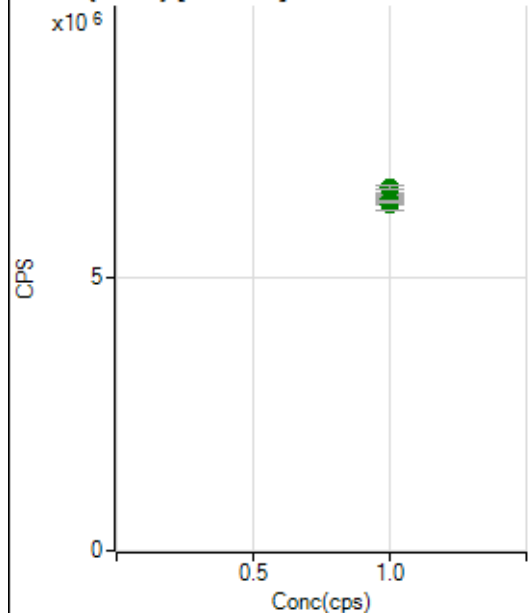
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3344855.16		A	1.0
2	☐	1.000		3312267.45		A	1.3
3	☐	1.000		3258117.69		A	1.4
4	☐	1.000		3294688.49		A	1.1
5	☐	1.000		3259264.29		A	1.5
6	☐	1.000		3278940.79		A	1.3
7	☐	1.000		3461495.95		A	2.2
8	☐	1.000		3497474.53		A	2.0

103 Rh (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6532401.08		A	1.7
2	☐	1.000		6496422.12		A	0.7
3	☐	1.000		6367624.35		A	0.7
4	☐	1.000		6471677.89		A	1.8
5	☐	1.000		6388999.91		A	3.2
6	☐	1.000		6490655.67		A	0.7
7	☐	1.000		6690411.43		A	0.5
8	☐	1.000		6256424.07		A	1.2

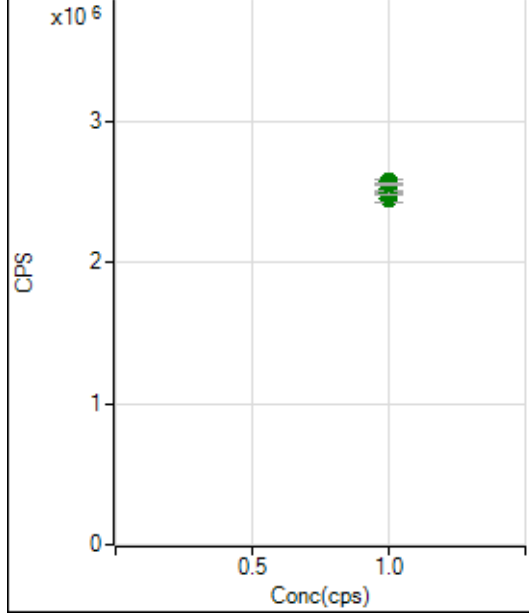
103 Rh (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4217689.31		A	0.4
2	☐	1.000		4185804.21		A	0.9
3	☐	1.000		4112284.76		A	1.0
4	☐	1.000		4115091.99		A	1.8
5	☐	1.000		4123946.36		A	2.0
6	☐	1.000		4169352.79		A	1.0
7	☐	1.000		4282307.47		A	0.7
8	☐	1.000		4093295.25		A	1.1

115 In (ISTD) [No Gas]

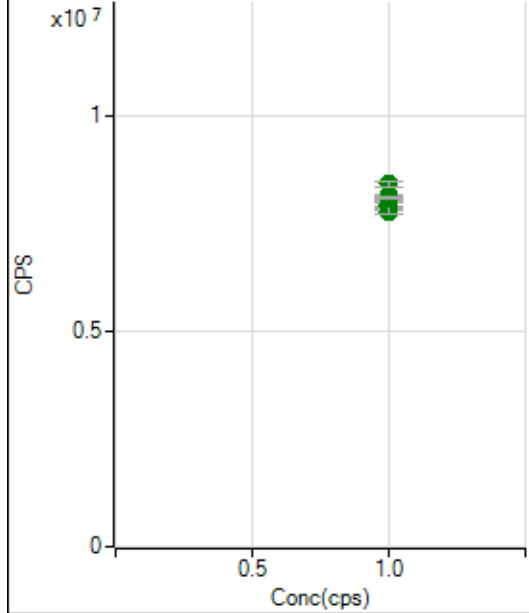
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6512662.33		A	0.4
2	☐	1.000		6520399.39		A	1.5
3	☐	1.000		6347632.68		A	0.4
4	☐	1.000		6478655.31		A	1.8
5	☐	1.000		6364682.53		A	4.2
6	☐	1.000		6458919.95		A	2.0
7	☐	1.000		6652778.12		A	1.2
8	☐	1.000		6401282.23		A	0.8

115 In (ISTD) [He]

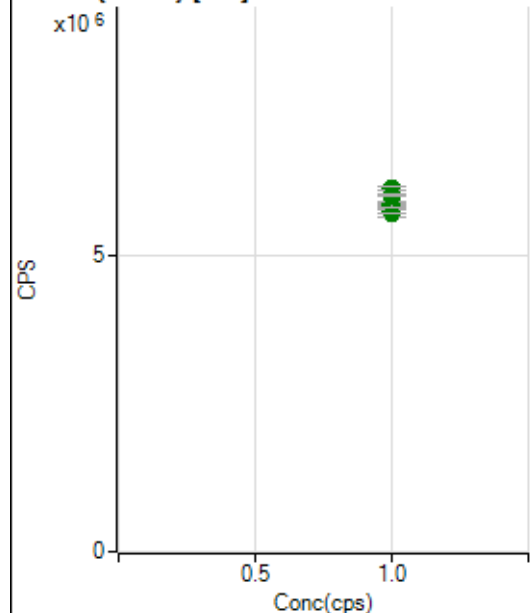


	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2574981.09		A	0.9
2	☐	1.000		2525845.24		A	1.8
3	☐	1.000		2507121.96		A	0.1
4	☐	1.000		2455218.95		A	2.3
5	☐	1.000		2482372.34		A	0.4
6	☐	1.000		2502054.96		A	1.2
7	☐	1.000		2569016.17		A	1.5
8	☐	1.000		2559476.76		A	1.0

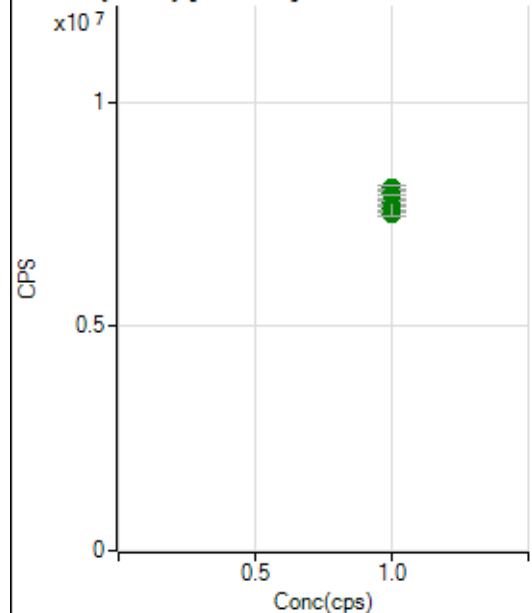
159 Tb (ISTD) [No Gas]



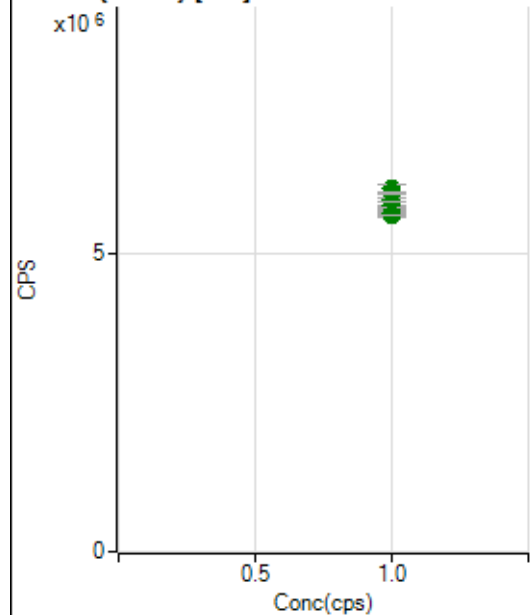
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7952722.87		A	0.7
2	☐	1.000		7922441.83		A	1.8
3	☐	1.000		7774748.22		A	0.7
4	☐	1.000		8063763.63		A	0.2
5	☐	1.000		7888586.90		A	3.8
6	☐	1.000		8166286.20		A	0.6
7	☐	1.000		8426885.92		A	1.7
8	☐	1.000		8093719.32		A	0.7

159 Tb (ISTD) [He]

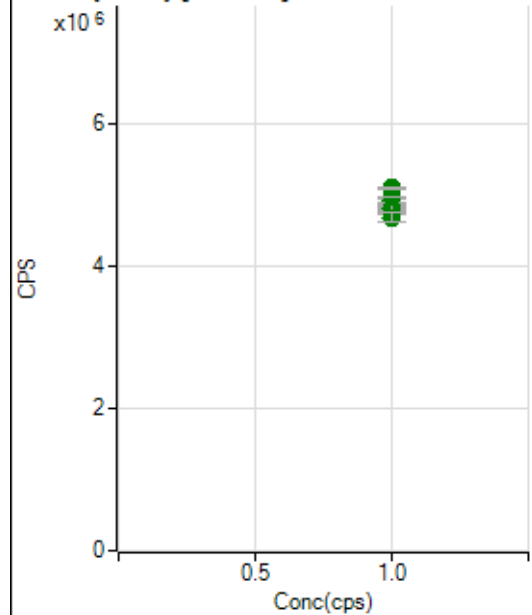
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5818372.55		A	0.5
2	☐	1.000		5841117.76		A	1.1
3	☐	1.000		5710811.72		A	1.8
4	☐	1.000		5760401.58		A	1.1
5	☐	1.000		5743884.22		A	0.8
6	☐	1.000		5862892.76		A	1.3
7	☐	1.000		6124750.53		A	0.9
8	☐	1.000		6013853.66		A	0.6

165 Ho (ISTD) [No Gas]

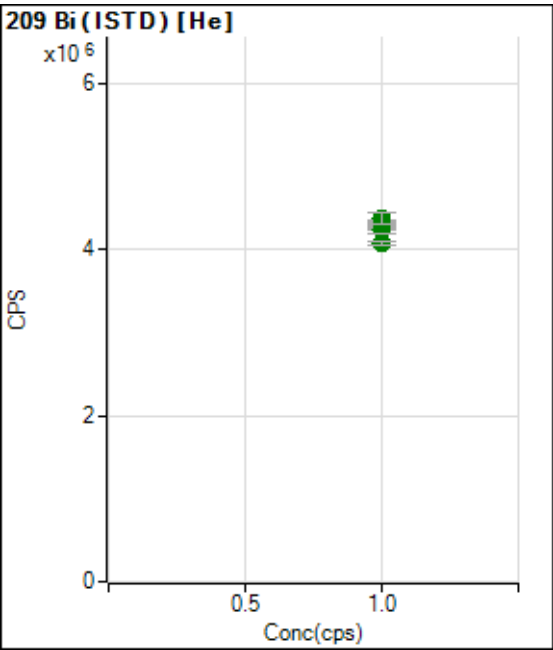
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7655077.94		A	1.3
2	☐	1.000		7631103.01		A	1.0
3	☐	1.000		7501220.58		A	0.7
4	☐	1.000		7767765.72		A	0.8
5	☐	1.000		7648075.51		A	4.8
6	☐	1.000		7956508.49		A	1.1
7	☐	1.000		8090610.37		A	1.2
8	☐	1.000		7942516.27		A	0.3

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5652922.90		A	1.3
2	☐	1.000		5749845.47		A	1.4
3	☐	1.000		5716796.65		A	0.6
4	☐	1.000		5689079.08		A	1.6
5	☐	1.000		5821331.72		A	2.1
6	☐	1.000		5911887.34		A	0.9
7	☐	1.000		6086402.76		A	2.3
8	☐	1.000		6024835.67		A	0.7

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4809320.17		A	1.5
2	☐	1.000		4916446.46		A	1.7
3	☐	1.000		4810971.25		A	0.3
4	☐	1.000		4901010.86		A	0.3
5	☐	1.000		4816396.21		A	3.4
6	☐	1.000		4979999.33		A	0.0
7	☐	1.000		5101395.72		A	0.6
8	☐	1.000		4686092.29		A	2.8



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1		1.000		4262040.80		A	1.2
2		1.000		4304393.34		A	1.4
3		1.000		4245502.26		A	0.7
4		1.000		4248263.27		A	2.3
5		1.000		4320349.10		A	1.8
6		1.000		4322527.43		A	0.3
7		1.000		4372552.61		A	3.1
8		1.000		4085659.14		A	1.0

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US EPA Tune Check Report

Operator Name Jaswal

Acq/Data Batch D:\Agilent\ICPMH\1\DATA\IP7082025-MS.b

Acq. Date-Time 2025-08-20 10:16:14

Report Comment ---

Instrument Name G8403A JP14410463

[No Gas]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9		5781	57808.05			1.378	5.000
24		150208	1502079.39			1.419	5.000
25		19252	192524.77			1.384	5.000
26		22573	225732.91			0.881	5.000
59		90005	900045.87			0.888	5.000
113		11407	114072.06			0.526	5.000
115		132587	1325868.32			1.012	5.000
206		26803	268025.72			1.609	5.000
207		23545	235451.91			1.230	5.000
208		55705	557048.49			1.375	5.000
220		0	2.30			45.079	

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
113	
115	
206	
207	
208	
220	

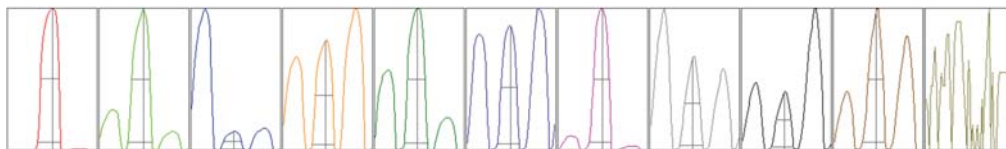
Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	5729	5676	5800	5881	5818
24	147357	148743	150893	152667	151379
25	18874	19083	19392	19389	19524
26	22284	22459	22645	22767	22712
59	89066	89558	89726	90910	90763
113	11342	11346	11426	11464	11459
115	132552	130282	133552	133193	133355
206	26514	26432	26592	27463	27011
207	23231	23265	23767	23872	23591
208	54972	54838	55875	56363	56477

US EPA Tune Check Report

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
220	0	0	0	0	0

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	9730.97	9.05	8.90 - 9.10	
24	262715.07	24.00	23.90 - 24.10	
25	33784.97	24.95	24.90 - 25.10	
26	40117.06	25.95	25.90 - 26.10	
59	157389.14	58.95	58.90 - 59.10	
113	22381.50	113.00	112.90 - 113.10	
115	255344.93	115.00	114.90 - 115.10	
206	54457.83	205.95	205.90 - 206.10	
207	47983.39	206.95	206.90 - 207.10	
208	115258.27	207.95	207.90 - 208.10	
220			-	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.62	0.768	0.900	
24	0.61	0.815	0.900	
25	0.60	0.757	0.900	
26	0.60	0.742	0.900	
59	0.60	0.779	0.900	
113	0.52	0.733	0.900	
115	0.52	0.742	0.900	
206	0.51	0.777	0.900	
207	0.50	0.738	0.900	
208	0.50	0.775	0.900	
220				

Integration Time [sec] 0.1

Acquisition Time [sec] 256.770000000002

Y Axis Linear

Tune Parameters

Plasma Parameters

Plasma Mode --- Nebulizer Gas 0.87 L/min Dilution Gas 0.40 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	9.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	7.3 V	Deflect	16.4 V
Extract 2	-150.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-70 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	138	Axis Gain	0.9973	QP Bias	-3.0 V
Mass Offset	130	Axis Offset	0.13		

Hardware Settings

Torch

Torch H	-1.8 mm	Torch V	0.2 mm
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EM

Discriminator	4.7 mV	Analog HV	2291 V	Pulse HV	1190 V
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[He]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
59		34247	342469.20			0.701	
89		89995	899945.49			0.920	
205		32032	320315.06			0.716	

Mass	RSD% (Flag)
59	
89	
205	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	34517	34470	34173	34121	33953
89	90579	89855	90219	90686	88633
205	32226	32063	31824	31769	32276

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.87 L/min	Dilution Gas	0.40 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	9.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.4 V	Deflect	3.8 V
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US EPA Tune Check Report

Extract 2	-190.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-90 V	Cell Exit	-60 V		
Cell Parameters					
Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	3.9 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	200 V		
QP Parameters					
Mass Gain	138	Axis Gain	0.9973	QP Bias	-13.0 V
Mass Offset	130	Axis Offset	0.13		
Hardware Settings					
Torch					
Torch H	-1.8 mm	Torch V	0.2 mm		
EM					
Discriminator	4.7 mV	Analog HV	2291 V	Pulse HV	1190 V

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P7
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 10:49:41 DataFile Name : 004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.02	0.25	-0.27	0.00	N/A	ppb
Antimony	121-1	0.00	0.00	0.00	0.00	N/A	ppb
Arsenic	75-2	0.02	-0.01	-0.02	0.00	N/A	ppb
Barium	135-1	0.00	0.01	-0.01	0.00	N/A	ppb
Barium	137-1	0.02	0.00	-0.01	0.00	N/A	ppb
Beryllium	9-1	0.00	0.00	0.00	0.00	N/A	ppb
Bismuth	209-1				100		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.02	-0.08	0.05	0.00	N/A	ppb
Cadmium	106-1	0.59	-0.61	0.02	0.00	N/A	ppb
Cadmium	111-1	0.04	-0.04	0.00	0.00	N/A	ppb
Calcium	43-1	-3.31	2.62	0.69	0.00	N/A	ppb
Calcium	44-1	0.79	0.18	-0.98	0.00	N/A	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.04	0.02	0.02	0.00	N/A	ppb
Cobalt	59-2	0.00	-0.01	0.00	0.00	N/A	ppb
Copper	63-2	0.02	-0.02	0.01	0.00	N/A	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				100		%
Indium	115-1				100		%
Indium	115-2				100		%
Iron	56-2	0.20	-0.14	-0.06	0.00	N/A	ppb
Iron	57-2	-0.79	1.13	-0.34	0.00	N/A	ppb
Iron	54-2	0.23	0.03	-0.25	0.00	N/A	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P7
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 10:49:41 DataFile Name : 004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.00	-0.01	0.01	0.00	N/A	ppb
Lead	207-1	0.00	-0.01	0.01	0.00	N/A	ppb
Lead	208-1	0.01	-0.01	0.00	0.00	N/A	ppb
Lithium	6-1				100		%
Magnesium	24-2	-0.22	0.03	0.19	0.00	N/A	ppb
Manganese	55-2	0.03	-0.03	0.00	0.00	N/A	ppb
Molybdenum	94-1	0.02	0.00	-0.02	0.00	N/A	ppb
Molybdenum	95-1	0.02	-0.01	0.00	0.00	N/A	ppb
Molybdenum	96-1	0.03	-0.01	-0.02	0.00	N/A	ppb
Molybdenum	97-1	0.00	0.01	-0.01	0.00	N/A	ppb
Molybdenum	98-1	0.01	0.00	-0.01	0.00	N/A	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.01	0.00	0.01	0.00	N/A	ppb
Phosphorus	31-2	-15.65	-6.03	-13.53	-11.74		ppb
Potassium	39-2	-2.00	0.93	1.06	0.00	N/A	ppb
Rhodium	103-1				100		%
Rhodium	103-2				100		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	82-1	-0.17	-0.10	0.27	0.00	N/A	ppb
Selenium	77-2	0.17	-0.09	-0.09	0.00	N/A	ppb
Selenium	78-2	-0.34	0.53	-0.19	0.00	N/A	ppb
Silicon	28-1	0.77	-0.50	-0.27	0.00	N/A	ppb
Silver	107-1	0.00	0.00	0.00	0.00	N/A	ppb
Silver	109-1	0.00	0.00	0.00	0.00	N/A	ppb
Sodium	23-2	-0.07	0.75	-0.69	0.00	N/A	ppb
Strontium	86-1	0.02	0.01	-0.03	0.00	N/A	ppb
Strontium	88-1	0.00	0.00	0.00	0.00	N/A	ppb
Sulfur	34-1	-105.45	-83.96	-66.11	-85.17		ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	0.00	0.00	0.01	0.00	N/A	ppb
Thallium	205-1	0.00	0.00	0.00	0.00	N/A	ppb
Tin	118-1	0.01	0.00	-0.01	0.00	N/A	ppb
Titanium	47-1	-0.03	0.02	0.01	0.00	N/A	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P7
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 10:49:41 DataFile Name : 004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.01	0.00	0.00	0.00	N/A	ppb
Vanadium	51-2	0.00	-0.01	0.01	0.00	N/A	ppb
Yttrium	89-1				100		%
Yttrium	89-2				100		%
Zinc	66-2	-0.11	0.21	-0.09	0.00	N/A	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00	N/A	ppb
Zirconium	91-1	0.00	0.00	0.00	0.00	N/A	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S2 Instrumnet Name : P7
Client Sample ID : S2 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 10:56:16 DataFile Name : 006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	20.17	22.48	21.26	21.30	5.43	ppb
Antimony	121-1	2.08	2.13	2.15	2.12	1.72	ppb
Arsenic	75-2	1.34	1.34	1.03	1.24	14.31	ppb
Barium	135-1	10.47	10.76	10.48	10.57	1.56	ppb
Barium	137-1	9.99	10.61	10.69	10.43	3.69	ppb
Beryllium	9-1	1.20	1.17	0.93	1.10	13.85	ppb
Bismuth	209-1				102		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.12	1.20	1.16	1.16	3.17	ppb
Cadmium	106-1	-0.04	-0.54	0.61	0.01	6235.28	ppb
Cadmium	111-1	0.96	1.02	1.06	1.01	5.27	ppb
Calcium	43-1	564.37	580.53	581.70	575.53	1.68	ppb
Calcium	44-1	567.50	580.00	561.47	569.66	1.66	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.11	2.20	2.02	2.11	4.25	ppb
Cobalt	59-2	1.16	1.14	1.10	1.13	2.35	ppb
Copper	63-2	2.05	2.11	2.06	2.07	1.57	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				102		%
Indium	115-1				100		%
Indium	115-2				98		%
Iron	56-2	56.26	57.15	55.89	56.43	1.14	ppb
Iron	57-2	55.41	58.58	60.68	58.22	4.56	ppb
Iron	54-2	59.64	62.69	57.54	59.96	4.32	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S2 Instrumnet Name : P7
Client Sample ID : S2 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 10:56:16 DataFile Name : 006CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1.01	0.99	1.01	1.00	0.84	ppb
Lead	207-1	1.02	0.97	1.04	1.01	3.44	ppb
Lead	208-1	1.02	0.96	1.02	1.00	3.46	ppb
Lithium	6-1				102		%
Magnesium	24-2	519.20	538.53	533.48	530.40	1.89	ppb
Manganese	55-2	0.98	0.97	0.92	0.96	3.35	ppb
Molybdenum	94-1	6.03	6.26	6.22	6.17	2.00	ppb
Molybdenum	95-1	5.19	5.20	5.18	5.19	0.19	ppb
Molybdenum	96-1	5.40	5.51	5.35	5.42	1.46	ppb
Molybdenum	97-1	5.44	5.51	5.37	5.44	1.27	ppb
Molybdenum	98-1	5.19	5.29	5.27	5.25	1.04	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.10	1.15	1.10	1.12	2.40	ppb
Phosphorus	31-2	7.70	10.24	17.27	11.74	42.22	ppb
Potassium	39-2	546.52	568.34	557.91	557.59	1.96	ppb
Rhodium	103-1				99		%
Rhodium	103-2				99		%
Scandium	45-1				99		%
Scandium	45-2				101		%
Selenium	82-1	5.83	5.72	5.42	5.65	3.74	ppb
Selenium	77-2	7.19	4.18	4.89	5.42	29.05	ppb
Selenium	78-2	6.01	2.71	6.07	4.93	39.03	ppb
Silicon	28-1	1.31	1.17	0.37	0.95	53.29	ppb
Silver	107-1	1.04	1.11	1.08	1.08	3.14	ppb
Silver	109-1	1.04	1.08	1.05	1.06	2.10	ppb
Sodium	23-2	530.26	550.85	539.54	540.22	1.91	ppb
Strontium	86-1	1.05	1.03	1.00	1.02	2.52	ppb
Strontium	88-1	1.05	1.03	1.07	1.05	1.53	ppb
Sulfur	34-1	38.22	106.14	111.16	85.17	47.83	ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	1.02	0.97	0.95	0.98	3.50	ppb
Thallium	205-1	0.97	0.97	0.99	0.98	1.05	ppb
Tin	118-1	5.24	5.45	5.35	5.35	1.97	ppb
Titanium	47-1	5.03	4.92	5.11	5.02	1.96	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S2 Instrumnet Name : P7
Client Sample ID : S2 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 10:56:16 DataFile Name : 006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.02	0.96	0.99	0.99	2.88	ppb
Vanadium	51-2	5.33	5.51	5.49	5.44	1.85	ppb
Yttrium	89-1				99		%
Yttrium	89-2				99		%
Zinc	66-2	4.89	4.70	5.47	5.02	7.94	ppb
Zirconium	90-1	1.03	1.05	1.01	1.03	1.74	ppb
Zirconium	91-1	0.96	1.03	1.06	1.02	5.04	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S3 Instrumnet Name : P7
Client Sample ID : S3 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 10:59:31 DataFile Name : 007CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1053.23	1049.58	1061.51	1054.77	0.58	ppb
Antimony	121-1	52.33	52.32	51.77	52.14	0.62	ppb
Arsenic	75-2	54.00	51.57	51.07	52.21	3.00	ppb
Barium	135-1	254.00	256.53	251.95	254.16	0.90	ppb
Barium	137-1	256.30	254.65	254.46	255.13	0.40	ppb
Beryllium	9-1	51.78	53.18	52.94	52.63	1.42	ppb
Bismuth	209-1				100		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	52.18	54.28	53.26	53.24	1.97	ppb
Cadmium	106-1	53.35	51.11	51.88	52.11	2.19	ppb
Cadmium	111-1	53.24	54.07	52.28	53.20	1.68	ppb
Calcium	43-1	5480.44	5667.05	5586.83	5578.11	1.68	ppb
Calcium	44-1	5186.67	5370.92	5229.03	5262.21	1.83	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	53.50	52.11	52.84	52.82	1.32	ppb
Cobalt	59-2	52.52	52.76	53.64	52.97	1.12	ppb
Copper	63-2	523.47	521.26	527.40	524.04	0.59	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				98		%
Holmium	165-2				101		%
Indium	115-1				97		%
Indium	115-2				97		%
Iron	56-2	2680.79	2734.86	2722.29	2712.65	1.04	ppb
Iron	57-2	2896.74	2851.81	2866.44	2871.66	0.80	ppb
Iron	54-2	2895.30	2856.98	2920.11	2890.79	1.10	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S3 Instrumnet Name : P7
Client Sample ID : S3 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 10:59:31 DataFile Name : 007CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	242.85	245.53	243.92	244.10	0.55	ppb
Lead	207-1	240.76	242.28	242.59	241.88	0.40	ppb
Lead	208-1	244.23	244.57	248.20	245.67	0.90	ppb
Lithium	6-1				103		%
Magnesium	24-2	5341.15	5214.65	5261.14	5272.31	1.21	ppb
Manganese	55-2	526.99	521.69	528.56	525.74	0.68	ppb
Molybdenum	94-1	505.80	506.31	514.73	508.95	0.99	ppb
Molybdenum	95-1	507.45	500.57	508.52	505.51	0.85	ppb
Molybdenum	96-1	501.80	499.49	504.27	501.85	0.48	ppb
Molybdenum	97-1	514.44	512.54	517.12	514.70	0.45	ppb
Molybdenum	98-1	502.85	503.74	501.59	502.73	0.22	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	52.90	52.95	52.85	52.90	0.10	ppb
Phosphorus	31-2	1017.90	1026.67	1075.02	1039.86	2.96	ppb
Potassium	39-2	2762.45	2748.24	2816.65	2775.78	1.30	ppb
Rhodium	103-1				97		%
Rhodium	103-2				98		%
Scandium	45-1				98		%
Scandium	45-2				98		%
Selenium	82-1	53.37	52.90	54.01	53.43	1.04	ppb
Selenium	77-2	52.00	58.00	55.00	55.00	5.45	ppb
Selenium	78-2	53.70	54.67	53.42	53.93	1.22	ppb
Silicon	28-1	63.11	68.34	67.01	66.15	4.10	ppb
Silver	107-1	53.13	53.76	53.39	53.43	0.60	ppb
Silver	109-1	53.11	52.84	52.90	52.95	0.26	ppb
Sodium	23-2	5390.38	5342.35	5415.58	5382.77	0.69	ppb
Strontium	86-1	51.19	50.29	51.35	50.94	1.12	ppb
Strontium	88-1	51.54	51.04	52.00	51.53	0.94	ppb
Sulfur	34-1	1017.32	1351.23	1348.88	1239.14	15.50	ppb
Terbium	159-1				98		%
Terbium	159-2				98		%
Thallium	203-1	48.59	48.55	48.80	48.65	0.28	ppb
Thallium	205-1	48.13	48.28	48.13	48.18	0.18	ppb
Tin	118-1	53.19	52.53	52.80	52.84	0.62	ppb
Titanium	47-1	501.62	524.51	514.58	513.57	2.23	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S3 Instrumnet Name : P7
Client Sample ID : S3 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 10:59:31 DataFile Name : 007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	46.90	47.53	47.36	47.26	0.69	ppb
Vanadium	51-2	52.82	51.87	52.82	52.50	1.05	ppb
Yttrium	89-1				98		%
Yttrium	89-2				97		%
Zinc	66-2	536.75	542.32	547.50	542.19	0.99	ppb
Zirconium	90-1	50.70	50.37	51.31	50.79	0.94	ppb
Zirconium	91-1	50.27	49.76	50.09	50.04	0.51	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S4 Instrumnet Name : P7
Client Sample ID : S4 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:02:40 DataFile Name : 008CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2604.19	2594.78	2549.66	2582.87	1.13	ppb
Antimony	121-1	125.09	126.54	126.21	125.95	0.60	ppb
Arsenic	75-2	128.92	128.75	126.61	128.09	1.00	ppb
Barium	135-1	617.04	622.71	617.00	618.92	0.53	ppb
Barium	137-1	616.61	623.08	617.06	618.92	0.58	ppb
Beryllium	9-1	130.86	132.85	129.35	131.02	1.34	ppb
Bismuth	209-1				102		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	133.57	126.29	127.34	129.07	3.05	ppb
Cadmium	106-1	128.59	126.48	127.11	127.39	0.85	ppb
Cadmium	111-1	128.35	130.87	127.71	128.98	1.30	ppb
Calcium	43-1	13613.16	13928.59	13824.37	13788.71	1.17	ppb
Calcium	44-1	13043.04	13018.57	13165.02	13075.54	0.60	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	126.46	127.46	128.24	127.39	0.70	ppb
Cobalt	59-2	126.17	127.18	128.74	127.36	1.02	ppb
Copper	63-2	1269.37	1272.67	1273.56	1271.87	0.17	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				101		%
Holmium	165-2				101		%
Indium	115-1				99		%
Indium	115-2				95		%
Iron	56-2	6730.79	6731.41	6519.71	6660.64	1.83	ppb
Iron	57-2	6897.42	7028.95	6919.71	6948.69	1.01	ppb
Iron	54-2	7036.05	7111.24	6944.42	7030.57	1.19	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S4 Instrumnet Name : P7
Client Sample ID : S4 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:02:40 DataFile Name : 008CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	632.67	640.66	622.89	632.07	1.41	ppb
Lead	207-1	618.68	629.05	627.75	625.16	0.90	ppb
Lead	208-1	626.25	631.12	626.60	627.99	0.43	ppb
Lithium	6-1				105		%
Magnesium	24-2	13117.73	12929.02	12769.48	12938.75	1.35	ppb
Manganese	55-2	1277.36	1281.71	1229.11	1262.73	2.31	ppb
Molybdenum	94-1	1240.62	1274.36	1247.96	1254.31	1.41	ppb
Molybdenum	95-1	1248.76	1246.77	1264.63	1253.39	0.78	ppb
Molybdenum	96-1	1252.40	1257.58	1301.93	1270.63	2.14	ppb
Molybdenum	97-1	1259.52	1255.91	1258.11	1257.85	0.14	ppb
Molybdenum	98-1	1257.36	1265.98	1266.40	1263.25	0.40	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	130.31	132.23	127.42	129.99	1.87	ppb
Phosphorus	31-2	2581.11	2558.88	2560.09	2566.69	0.49	ppb
Potassium	39-2	6437.76	6331.29	6514.87	6427.98	1.43	ppb
Rhodium	103-1				99		%
Rhodium	103-2				98		%
Scandium	45-1				99		%
Scandium	45-2				100		%
Selenium	82-1	129.73	130.56	132.66	130.99	1.15	ppb
Selenium	77-2	135.06	123.32	123.46	127.28	5.29	ppb
Selenium	78-2	127.20	122.54	124.12	124.62	1.90	ppb
Silicon	28-1	135.74	139.60	142.50	139.28	2.44	ppb
Silver	107-1	129.24	130.45	128.92	129.54	0.62	ppb
Silver	109-1	127.50	128.98	127.15	127.88	0.76	ppb
Sodium	23-2	13392.15	13108.12	13254.16	13251.48	1.07	ppb
Strontium	86-1	123.69	126.95	127.82	126.16	1.72	ppb
Strontium	88-1	124.71	125.60	129.65	126.65	2.08	ppb
Sulfur	34-1	2606.96	2679.91	2771.01	2685.96	3.06	ppb
Terbium	159-1				101		%
Terbium	159-2				99		%
Thallium	203-1	120.21	121.81	120.64	120.89	0.68	ppb
Thallium	205-1	118.17	121.89	119.16	119.74	1.61	ppb
Tin	118-1	126.25	128.70	128.26	127.74	1.02	ppb
Titanium	47-1	1260.74	1274.61	1269.49	1268.28	0.55	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S4 Instrumnet Name : P7
Client Sample ID : S4 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:02:40 DataFile Name : 008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	123.40	126.71	124.65	124.92	1.34	ppb
Vanadium	51-2	128.48	129.21	126.46	128.05	1.11	ppb
Yttrium	89-1				100		%
Yttrium	89-2				99		%
Zinc	66-2	1279.75	1296.41	1302.56	1292.91	0.91	ppb
Zirconium	90-1	124.53	126.73	127.68	126.31	1.28	ppb
Zirconium	91-1	124.54	125.76	127.61	125.97	1.23	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S5 Instrumnet Name : P7
Client Sample ID : S5 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:05:38 DataFile Name : 009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	5050.87	5192.53	5132.97	5125.46	1.39	ppb
Antimony	121-1	266.11	247.92	263.44	259.16	3.79	ppb
Arsenic	75-2	253.61	258.21	257.93	256.58	1.01	ppb
Barium	135-1	1298.66	1217.64	1283.08	1266.46	3.39	ppb
Barium	137-1	1326.92	1217.86	1317.23	1287.34	4.69	ppb
Beryllium	9-1	263.31	254.51	262.19	260.00	1.84	ppb
Bismuth	209-1				100		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	267.76	246.88	261.89	258.84	4.16	ppb
Cadmium	106-1	266.82	250.29	275.01	264.04	4.77	ppb
Cadmium	111-1	268.75	252.94	267.68	263.12	3.36	ppb
Calcium	43-1	28881.94	26988.28	27966.70	27945.64	3.39	ppb
Calcium	44-1	27657.62	26081.87	26680.15	26806.55	2.97	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	254.45	260.87	256.15	257.16	1.29	ppb
Cobalt	59-2	254.43	259.86	255.96	256.75	1.09	ppb
Copper	63-2	2527.91	2586.15	2552.38	2555.48	1.14	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				103		%
Indium	115-1				98		%
Indium	115-2				96		%
Iron	56-2	13183.15	13449.56	13304.50	13312.40	1.00	ppb
Iron	57-2	13783.49	13892.28	13972.62	13882.80	0.68	ppb
Iron	54-2	13264.92	13651.51	13468.73	13461.72	1.44	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S5 Instrumnet Name : P7
Client Sample ID : S5 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:05:38 DataFile Name : 009CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1318.91	1283.81	1271.82	1291.52	1.89	ppb
Lead	207-1	1330.75	1275.91	1279.06	1295.24	2.38	ppb
Lead	208-1	1316.04	1257.89	1253.20	1275.71	2.74	ppb
Lithium	6-1				104		%
Magnesium	24-2	26251.66	26206.02	25938.66	26132.11	0.65	ppb
Manganese	55-2	2469.74	2552.31	2497.47	2506.51	1.68	ppb
Molybdenum	94-1	2599.85	2477.75	2581.72	2553.11	2.58	ppb
Molybdenum	95-1	2612.32	2450.81	2528.51	2530.54	3.19	ppb
Molybdenum	96-1	2655.06	2505.74	2568.47	2576.42	2.91	ppb
Molybdenum	97-1	2697.32	2490.82	2585.64	2591.26	3.99	ppb
Molybdenum	98-1	2677.08	2475.63	2602.90	2585.20	3.94	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	255.08	259.86	259.59	258.18	1.04	ppb
Phosphorus	31-2	5043.54	5206.29	5144.52	5131.45	1.60	ppb
Potassium	39-2	12673.33	13275.44	12743.20	12897.32	2.55	ppb
Rhodium	103-1				98		%
Rhodium	103-2				98		%
Scandium	45-1				97		%
Scandium	45-2				99		%
Selenium	82-1	272.65	253.88	264.28	263.60	3.57	ppb
Selenium	77-2	245.15	276.07	255.79	259.00	6.06	ppb
Selenium	78-2	253.37	260.03	260.32	257.91	1.53	ppb
Silicon	28-1	269.16	256.23	266.62	264.00	2.60	ppb
Silver	107-1	262.65	249.11	267.48	259.75	3.67	ppb
Silver	109-1	268.02	252.43	268.33	262.93	3.46	ppb
Sodium	23-2	25918.98	26978.06	26796.02	26564.35	2.13	ppb
Strontium	86-1	266.61	250.18	259.61	258.80	3.19	ppb
Strontium	88-1	265.62	251.23	261.38	259.41	2.85	ppb
Sulfur	34-1	5974.65	5067.51	5476.00	5506.05	8.25	ppb
Terbium	159-1				99		%
Terbium	159-2				99		%
Thallium	203-1	254.02	241.28	241.50	245.60	2.97	ppb
Thallium	205-1	262.80	247.90	249.94	253.55	3.19	ppb
Tin	118-1	268.08	248.26	263.35	259.90	3.98	ppb
Titanium	47-1	2673.87	2494.37	2614.03	2594.09	3.52	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S5 Instrumnet Name : P7
Client Sample ID : S5 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:05:38 DataFile Name : 009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	262.50	250.10	251.83	254.81	2.64	ppb
Vanadium	51-2	252.07	258.13	256.06	255.42	1.21	ppb
Yttrium	89-1				98		%
Yttrium	89-2				97		%
Zinc	66-2	2530.09	2631.38	2610.10	2590.52	2.06	ppb
Zirconium	90-1	271.42	247.90	258.95	259.43	4.54	ppb
Zirconium	91-1	267.25	248.65	256.46	257.45	3.63	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S6 Instrumnet Name : P7
Client Sample ID : S6 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:08:36 DataFile Name : 010CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9876.64	10087.73	10186.17	10050.18	1.57	ppb
Antimony	121-1	499.29	502.58	508.09	503.32	0.88	ppb
Arsenic	75-2	517.35	510.38	509.72	512.49	0.82	ppb
Barium	135-1	2459.31	2502.67	2524.72	2495.57	1.33	ppb
Barium	137-1	2482.15	2472.67	2504.93	2486.58	0.67	ppb
Beryllium	9-1	483.44	513.76	496.86	498.02	3.05	ppb
Bismuth	209-1				104		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	489.65	508.38	504.06	500.70	1.96	ppb
Cadmium	106-1	488.17	504.67	505.37	499.40	1.95	ppb
Cadmium	111-1	496.67	507.83	510.78	505.10	1.47	ppb
Calcium	43-1	52476.53	54806.69	54981.61	54088.28	2.59	ppb
Calcium	44-1	50521.27	52873.54	52876.86	52090.56	2.61	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	496.66	509.15	509.77	505.20	1.46	ppb
Cobalt	59-2	520.56	502.39	509.73	510.90	1.79	ppb
Copper	63-2	4985.93	5107.54	5194.89	5096.12	2.06	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				105		%
Indium	115-1				99		%
Indium	115-2				97		%
Iron	56-2	26931.61	26687.05	26841.93	26820.20	0.46	ppb
Iron	57-2	26577.16	26457.14	26851.36	26628.55	0.76	ppb
Iron	54-2	26888.78	26511.50	26943.78	26781.35	0.88	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S6 Instrumnet Name : P7
Client Sample ID : S6 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:08:36 DataFile Name : 010CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2477.58	2522.46	2521.36	2507.13	1.02	ppb
Lead	207-1	2491.80	2507.79	2517.80	2505.79	0.52	ppb
Lead	208-1	2461.69	2505.83	2522.81	2496.78	1.26	ppb
Lithium	6-1				106		%
Magnesium	24-2	51448.72	51687.13	50848.19	51328.02	0.84	ppb
Manganese	55-2	5014.84	5006.80	5062.50	5028.05	0.60	ppb
Molybdenum	94-1	4933.28	5105.61	5130.20	5056.37	2.12	ppb
Molybdenum	95-1	4834.31	5085.05	5090.62	5003.33	2.93	ppb
Molybdenum	96-1	4974.63	5098.52	5095.33	5056.16	1.40	ppb
Molybdenum	97-1	4945.56	5103.31	5179.57	5076.15	2.35	ppb
Molybdenum	98-1	4984.22	5056.14	5178.00	5072.79	1.93	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	510.96	513.66	506.47	510.36	0.71	ppb
Phosphorus	31-2	10077.61	10115.91	10101.42	10098.32	0.19	ppb
Potassium	39-2	25720.11	25320.26	25145.36	25395.24	1.16	ppb
Rhodium	103-1				99		%
Rhodium	103-2				99		%
Scandium	45-1				99		%
Scandium	45-2				100		%
Selenium	82-1	505.22	519.17	515.23	513.21	1.40	ppb
Selenium	77-2	527.94	531.56	506.98	522.16	2.54	ppb
Selenium	78-2	523.37	514.22	526.55	521.38	1.23	ppb
Silicon	28-1	478.33	499.45	497.39	491.72	2.37	ppb
Silver	107-1	501.18	507.92	509.08	506.06	0.84	ppb
Silver	109-1	491.38	507.63	511.49	503.50	2.12	ppb
Sodium	23-2	51981.11	53989.23	52109.94	52693.43	2.13	ppb
Strontium	86-1	493.32	506.91	507.75	502.66	1.61	ppb
Strontium	88-1	502.53	506.21	516.46	508.40	1.42	ppb
Sulfur	34-1	9773.55	10406.16	10503.95	10227.89	3.88	ppb
Terbium	159-1				103		%
Terbium	159-2				101		%
Thallium	203-1	493.32	506.07	503.28	500.89	1.34	ppb
Thallium	205-1	502.52	500.36	503.83	502.24	0.35	ppb
Tin	118-1	496.95	495.66	502.74	498.45	0.76	ppb
Titanium	47-1	4914.06	5143.29	5147.93	5068.43	2.64	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S6 Instrumnet Name : P7
Client Sample ID : S6 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:08:36 DataFile Name : 010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	478.32	498.48	494.41	490.40	2.17	ppb
Vanadium	51-2	509.53	510.65	510.25	510.14	0.11	ppb
Yttrium	89-1				100		%
Yttrium	89-2				98		%
Zinc	66-2	5192.97	5168.87	5049.11	5136.98	1.50	ppb
Zirconium	90-1	496.46	501.94	501.04	499.81	0.59	ppb
Zirconium	91-1	495.80	509.30	510.36	505.15	1.61	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S7 Instrumnet Name : P7
Client Sample ID : S7 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:11:20 DataFile Name : 011CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19985.79	20240.19	20132.48	20119.49	0.63	ppb
Antimony	121-1	969.31	1017.32	1000.85	995.83	2.45	ppb
Arsenic	75-2	972.24	993.73	1008.87	991.61	1.86	ppb
Barium	135-1	4865.31	5092.92	5037.73	4998.65	2.38	ppb
Barium	137-1	4840.02	5099.99	5053.62	4997.88	2.77	ppb
Beryllium	9-1	994.34	994.11	1004.36	997.61	0.59	ppb
Bismuth	209-1				106		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	971.51	1014.80	1004.01	996.77	2.26	ppb
Cadmium	106-1	967.74	1016.18	1005.23	996.38	2.55	ppb
Cadmium	111-1	964.58	1012.35	1003.60	993.51	2.56	ppb
Calcium	43-1	101342.49	102278.42	102405.86	102008.92	0.57	ppb
Calcium	44-1	100684.97	103322.97	101709.81	101905.92	1.31	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	986.59	995.28	1003.65	995.17	0.86	ppb
Cobalt	59-2	983.08	994.30	999.88	992.42	0.86	ppb
Copper	63-2	10015.74	9827.43	9959.24	9934.14	0.97	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				108		%
Indium	115-1				102		%
Indium	115-2				100		%
Iron	56-2	52174.44	52025.84	53092.36	52430.88	1.10	ppb
Iron	57-2	52084.45	51466.00	51880.92	51810.46	0.61	ppb
Iron	54-2	51837.54	52745.64	52934.88	52506.02	1.12	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S7 Instrumnet Name : P7
Client Sample ID : S7 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:11:20 DataFile Name : 011CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	4931.19	4990.13	5035.08	4985.46	1.05	ppb
Lead	207-1	5079.13	4919.58	4959.83	4986.18	1.66	ppb
Lead	208-1	4983.94	4999.07	5002.07	4995.03	0.19	ppb
Lithium	6-1				107		%
Magnesium	24-2	99681.35	101091.26	102316.80	101029.80	1.31	ppb
Manganese	55-2	9800.64	9988.88	10154.89	9981.47	1.78	ppb
Molybdenum	94-1	9938.89	9983.10	9950.67	9957.55	0.23	ppb
Molybdenum	95-1	9810.98	10042.85	10116.18	9990.00	1.59	ppb
Molybdenum	96-1	9773.84	10080.47	9996.11	9950.14	1.59	ppb
Molybdenum	97-1	9791.27	10054.33	9966.59	9937.40	1.35	ppb
Molybdenum	98-1	9773.02	10090.41	9958.11	9940.51	1.60	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	988.08	987.17	1000.76	992.01	0.77	ppb
Phosphorus	31-2	19756.78	19734.50	20231.67	19907.65	1.41	ppb
Potassium	39-2	49692.46	50179.51	52331.86	50734.61	2.77	ppb
Rhodium	103-1				102		%
Rhodium	103-2				102		%
Scandium	45-1				103		%
Scandium	45-2				104		%
Selenium	82-1	970.78	1000.75	995.69	989.07	1.62	ppb
Selenium	77-2	973.93	987.34	997.13	986.13	1.18	ppb
Selenium	78-2	974.45	993.84	993.27	987.18	1.12	ppb
Silicon	28-1	993.36	1018.61	982.44	998.14	1.86	ppb
Silver	107-1	965.14	1016.84	999.40	993.80	2.65	ppb
Silver	109-1	968.87	995.04	1019.63	994.51	2.55	ppb
Sodium	23-2	101729.64	103579.61	104191.91	103167.06	1.24	ppb
Strontium	86-1	989.19	1005.83	993.82	996.28	0.86	ppb
Strontium	88-1	981.60	1000.82	997.07	993.16	1.03	ppb
Sulfur	34-1	19378.04	20129.86	19665.12	19724.34	1.92	ppb
Terbium	159-1				106		%
Terbium	159-2				105		%
Thallium	203-1	1008.78	997.03	997.89	1001.24	0.65	ppb
Thallium	205-1	1007.41	992.92	995.90	998.74	0.77	ppb
Tin	118-1	964.67	1012.29	1016.48	997.81	2.88	ppb
Titanium	47-1	9941.48	9985.34	9891.08	9939.30	0.47	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S7 Instrumnet Name : P7
Client Sample ID : S7 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:11:20 DataFile Name : 011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1006.22	993.51	1011.50	1003.74	0.92	ppb
Vanadium	51-2	979.43	989.91	1009.85	993.07	1.56	ppb
Yttrium	89-1				105		%
Yttrium	89-2				103		%
Zinc	66-2	9823.73	9937.72	9942.77	9901.41	0.68	ppb
Zirconium	90-1	985.28	999.46	1007.86	997.53	1.14	ppb
Zirconium	91-1	975.03	1005.22	1006.07	995.44	1.78	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S8 Instrumnet Name : P7
Client Sample ID : S8 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:14:08 DataFile Name : 012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	98607.49	99958.57	101320.52	99962.19	1.36	ppb
Antimony	121-1	0.89	0.85	0.82	0.85	4.37	ppb
Arsenic	75-2	1.14	1.01	1.33	1.16	14.01	ppb
Barium	135-1	3.05	3.14	3.19	3.13	2.25	ppb
Barium	137-1	3.10	2.99	3.10	3.07	2.06	ppb
Beryllium	9-1	0.12	0.09	0.17	0.13	30.43	ppb
Bismuth	209-1				97		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.86	0.96	0.93	0.92	5.71	ppb
Cadmium	106-1	-0.67	-0.22	-0.82	-0.57		ppb
Cadmium	111-1	0.39	0.41	0.36	0.39	5.49	ppb
Calcium	43-1	496986.05	499179.38	500846.67	499004.03	0.39	ppb
Calcium	44-1	500600.90	496182.56	501123.60	499302.35	0.54	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4.28	4.17	4.35	4.27	2.05	ppb
Cobalt	59-2	1.78	1.77	1.78	1.78	0.25	ppb
Copper	63-2	0.88	0.88	0.88	0.88	0.51	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				107		%
Indium	115-1				98		%
Indium	115-2				99		%
Iron	56-2	247036.20	248538.91	252261.27	249278.79	1.08	ppb
Iron	57-2	252512.50	247386.57	248255.11	249384.73	1.10	ppb
Iron	54-2	249537.76	247741.82	250467.87	249249.15	0.56	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S8 Instrumnet Name : P7
Client Sample ID : S8 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:14:08 DataFile Name : 012CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1.32	1.30	1.30	1.31	1.01	ppb
Lead	207-1	1.26	1.27	1.33	1.29	2.88	ppb
Lead	208-1	1.33	1.29	1.31	1.31	1.47	ppb
Lithium	6-1				104		%
Magnesium	24-2	495372.80	498215.39	505184.54	499590.91	1.01	ppb
Manganese	55-2	4.13	4.16	4.21	4.16	0.94	ppb
Molybdenum	94-1	3.06	2.91	2.96	2.98	2.54	ppb
Molybdenum	95-1	1.78	1.68	1.56	1.67	6.48	ppb
Molybdenum	96-1	3.18	3.13	2.96	3.09	3.77	ppb
Molybdenum	97-1	1.90	1.81	1.68	1.80	6.27	ppb
Molybdenum	98-1	1.78	1.63	1.55	1.65	6.99	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	3.35	3.35	3.32	3.34	0.60	ppb
Phosphorus	31-2	-17.36	-15.65	-8.53	-13.85		ppb
Potassium	39-2	252493.50	247162.01	249703.59	249786.37	1.07	ppb
Rhodium	103-1				96		%
Rhodium	103-2				97		%
Scandium	45-1				103		%
Scandium	45-2				105		%
Selenium	82-1	0.98	2.19	2.28	1.82	40.18	ppb
Selenium	77-2	1.16	0.89	1.95	1.33	41.27	ppb
Selenium	78-2	0.19	-0.44	0.94	0.23	303.14	ppb
Silicon	28-1	3.20	2.07	2.01	2.42	27.64	ppb
Silver	107-1	0.40	0.22	0.17	0.26	46.34	ppb
Silver	109-1	0.40	0.20	0.17	0.25	48.61	ppb
Sodium	23-2	502874.45	502494.21	491620.46	498996.37	1.28	ppb
Strontium	86-1	12.44	12.68	12.68	12.60	1.13	ppb
Strontium	88-1	12.89	12.81	12.93	12.88	0.47	ppb
Sulfur	34-1	-686.79	-632.59	-780.84	-700.07		ppb
Terbium	159-1				102		%
Terbium	159-2				103		%
Thallium	203-1	1.40	1.40	1.45	1.41	2.06	ppb
Thallium	205-1	1.46	1.38	1.45	1.43	3.14	ppb
Tin	118-1	0.20	0.23	0.21	0.21	6.34	ppb
Titanium	47-1	0.90	0.77	0.76	0.81	9.95	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S8 Instrumnet Name : P7
Client Sample ID : S8 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:14:08 DataFile Name : 012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.05	0.02	0.03	0.03	43.93	ppb
Vanadium	51-2	0.39	0.41	0.42	0.41	3.53	ppb
Yttrium	89-1				102		%
Yttrium	89-2				105		%
Zinc	66-2	5.10	4.40	4.79	4.76	7.39	ppb
Zirconium	90-1	0.86	0.86	0.84	0.85	1.79	ppb
Zirconium	91-1	0.85	0.84	0.84	0.84	0.63	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICV01 Instrumnet Name : P7
Client Sample ID : ICV01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:35:30 DataFile Name : 014ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1509.34	1501.00	1518.07	1509.47	0.57	ppb
Antimony	121-1	405.80	408.52	411.01	408.44	0.64	ppb
Arsenic	75-2	396.31	396.54	401.67	398.17	0.76	ppb
Barium	135-1	1614.09	1614.39	1641.21	1623.23	0.96	ppb
Barium	137-1	1616.32	1617.23	1603.56	1612.37	0.47	ppb
Beryllium	9-1	39.19	39.99	39.95	39.71	1.13	ppb
Bismuth	209-1				100		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	186.74	185.89	194.04	188.89	2.37	ppb
Cadmium	106-1	181.98	183.71	186.65	184.12	1.28	ppb
Cadmium	111-1	206.88	205.75	206.38	206.33	0.27	ppb
Calcium	43-1	4194.33	4136.02	4263.55	4197.97	1.52	ppb
Calcium	44-1	4176.00	4218.88	4248.28	4214.39	0.86	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	164.82	161.03	161.44	162.43	1.28	ppb
Cobalt	59-2	409.37	402.85	414.28	408.84	1.40	ppb
Copper	63-2	189.07	188.40	189.54	189.00	0.30	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				103		%
Indium	115-1				101		%
Indium	115-2				102		%
Iron	56-2	825.11	810.69	812.38	816.06	0.97	ppb
Iron	57-2	875.82	853.63	870.31	866.59	1.33	ppb
Iron	54-2	960.01	955.55	954.71	956.76	0.30	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICV01 Instrumnet Name : P7
Client Sample ID : ICV01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:35:30 DataFile Name : 014ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	367.96	380.30	373.75	374.00	1.65	ppb
Lead	207-1	365.63	375.74	371.29	370.89	1.37	ppb
Lead	208-1	378.81	386.61	380.07	381.83	1.10	ppb
Lithium	6-1				95		%
Magnesium	24-2	3659.78	3657.43	3672.57	3663.26	0.22	ppb
Manganese	55-2	363.38	362.12	360.21	361.90	0.44	ppb
Molybdenum	94-1	0.17	0.21	0.19	0.19	11.26	ppb
Molybdenum	95-1	0.16	0.18	0.18	0.17	6.98	ppb
Molybdenum	96-1	0.26	0.21	0.21	0.23	12.56	ppb
Molybdenum	97-1	0.22	0.25	0.24	0.23	6.68	ppb
Molybdenum	98-1	0.17	0.20	0.18	0.18	9.05	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	410.15	407.35	410.46	409.32	0.42	ppb
Phosphorus	31-2	-19.93	-16.50	-11.55	-15.99		ppb
Potassium	39-2	3993.87	3933.07	3992.87	3973.27	0.88	ppb
Rhodium	103-1				102		%
Rhodium	103-2				103		%
Scandium	45-1				101		%
Scandium	45-2				102		%
Selenium	82-1	403.91	408.24	425.18	412.44	2.73	ppb
Selenium	77-2	408.65	413.88	424.78	415.77	1.98	ppb
Selenium	78-2	406.48	414.60	413.95	411.68	1.10	ppb
Silicon	28-1	0.46	-0.28	0.98	0.39	163.37	ppb
Silver	107-1	211.79	211.84	214.62	212.75	0.76	ppb
Silver	109-1	211.52	208.99	211.39	210.63	0.68	ppb
Sodium	23-2	4041.69	4006.11	4064.97	4037.59	0.73	ppb
Strontium	86-1	0.04	0.01	0.10	0.05	87.55	ppb
Strontium	88-1	0.04	0.05	0.05	0.05	6.63	ppb
Sulfur	34-1	-677.49	-629.59	-523.86	-610.31		ppb
Terbium	159-1				100		%
Terbium	159-2				101		%
Thallium	203-1	376.23	379.59	363.61	373.14	2.26	ppb
Thallium	205-1	380.93	386.35	378.41	381.90	1.06	ppb
Tin	118-1	0.18	0.20	0.17	0.18	10.21	ppb
Titanium	47-1	0.17	0.18	0.19	0.18	6.21	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICV01 Instrumnet Name : P7
Client Sample ID : ICV01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:35:30 DataFile Name : 014ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00		ppb
Vanadium	51-2	405.56	401.00	405.53	404.03	0.65	ppb
Yttrium	89-1				102		%
Yttrium	89-2				102		%
Zinc	66-2	379.22	379.39	380.54	379.72	0.19	ppb
Zirconium	90-1	0.01	0.02	0.01	0.01	55.77	ppb
Zirconium	91-1	0.09	0.06	0.08	0.08	14.72	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : LLICV01 Instrumnet Name : P7
Client Sample ID : LLICV01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:50:16 DataFile Name : 017LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	20.09	21.19	20.40	20.56	2.77	ppb
Antimony	121-1	2.04	2.22	2.17	2.14	4.36	ppb
Arsenic	75-2	0.99	0.99	0.99	0.99	0.09	ppb
Barium	135-1	10.01	10.11	10.59	10.24	3.05	ppb
Barium	137-1	9.98	10.15	10.11	10.08	0.89	ppb
Beryllium	9-1	1.03	1.19	1.12	1.11	7.13	ppb
Bismuth	209-1				98		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.55	1.62	0.99	1.39	24.86	ppb
Cadmium	106-1	-3.02	-2.14	-3.35	-2.83		ppb
Cadmium	111-1	0.84	1.12	0.85	0.94	16.50	ppb
Calcium	43-1	552.87	559.86	556.83	556.52	0.63	ppb
Calcium	44-1	547.59	553.13	555.64	552.12	0.75	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.06	2.15	2.02	2.08	3.19	ppb
Cobalt	59-2	1.12	1.05	1.09	1.09	3.28	ppb
Copper	63-2	2.06	1.99	1.96	2.00	2.49	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				99		%
Holmium	165-2				101		%
Indium	115-1				100		%
Indium	115-2				97		%
Iron	56-2	57.58	58.03	59.80	58.47	2.01	ppb
Iron	57-2	65.42	57.96	56.73	60.04	7.83	ppb
Iron	54-2	59.60	61.58	63.03	61.40	2.80	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : LLICV01 Instrumnet Name : P7
Client Sample ID : LLICV01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:50:16 DataFile Name : 017LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.93	0.87	0.89	0.90	3.36	ppb
Lead	207-1	0.92	0.92	0.89	0.91	2.12	ppb
Lead	208-1	0.90	0.91	0.91	0.91	0.41	ppb
Lithium	6-1				96		%
Magnesium	24-2	511.86	508.11	510.27	510.08	0.37	ppb
Manganese	55-2	1.18	1.07	1.05	1.10	6.16	ppb
Molybdenum	94-1	6.14	5.97	5.93	6.01	1.82	ppb
Molybdenum	95-1	5.08	5.16	4.91	5.05	2.48	ppb
Molybdenum	96-1	5.13	5.26	4.87	5.09	3.90	ppb
Molybdenum	97-1	5.00	5.21	4.98	5.06	2.59	ppb
Molybdenum	98-1	4.97	5.18	4.88	5.01	3.04	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.94	0.87	0.94	0.92	4.33	ppb
Phosphorus	31-2	238.19	247.19	242.19	242.52	1.86	ppb
Potassium	39-2	548.30	539.66	532.57	540.18	1.46	ppb
Rhodium	103-1				100		%
Rhodium	103-2				99		%
Scandium	45-1				99		%
Scandium	45-2				98		%
Selenium	82-1	5.45	4.95	4.80	5.07	6.72	ppb
Selenium	77-2	3.33	3.81	5.47	4.20	26.83	ppb
Selenium	78-2	4.45	4.11	5.64	4.73	16.88	ppb
Silicon	28-1	0.10	0.32	0.12	0.18	70.03	ppb
Silver	107-1	1.12	1.21	1.09	1.14	5.27	ppb
Silver	109-1	1.07	1.12	1.08	1.09	2.41	ppb
Sodium	23-2	518.05	515.55	512.15	515.25	0.57	ppb
Strontium	86-1	1.01	0.96	1.06	1.01	4.90	ppb
Strontium	88-1	1.02	1.07	0.98	1.02	4.61	ppb
Sulfur	34-1	-123.32	26.35	-49.50	-48.82		ppb
Terbium	159-1				99		%
Terbium	159-2				99		%
Thallium	203-1	1.02	1.01	1.05	1.03	2.35	ppb
Thallium	205-1	0.98	1.01	1.01	1.00	2.04	ppb
Tin	118-1	5.36	5.50	5.40	5.42	1.32	ppb
Titanium	47-1	4.99	5.07	5.10	5.05	1.12	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : LLICV01 Instrumnet Name : P7
Client Sample ID : LLICV01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:50:16 DataFile Name : 017LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.94	0.93	0.93	0.93	0.31	ppb
Vanadium	51-2	5.22	5.32	5.21	5.25	1.15	ppb
Yttrium	89-1				101		%
Yttrium	89-2				99		%
Zinc	66-2	4.52	3.84	3.76	4.04	10.30	ppb
Zirconium	90-1	1.03	1.08	1.02	1.04	2.87	ppb
Zirconium	91-1	0.99	1.08	1.02	1.03	4.43	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICB01 Instrumnet Name : P7
Client Sample ID : ICB01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:56:00 DataFile Name : 018CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.40	0.40	0.94	0.31	215.65	ppb
Antimony	121-1	0.01	0.01	0.00	0.01	71.73	ppb
Arsenic	75-2	0.00	0.00	-0.01	0.00	1000.84	ppb
Barium	135-1	0.02	0.00	-0.01	0.00	408.24	ppb
Barium	137-1	-0.02	0.00	-0.01	-0.01		ppb
Beryllium	9-1	0.01	-0.01	-0.01	0.00		ppb
Bismuth	209-1				98		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	-0.01	-0.04	-0.01	-0.02		ppb
Cadmium	106-1	-4.45	-2.84	-5.28	-4.19		ppb
Cadmium	111-1	-0.31	-0.21	-0.38	-0.30		ppb
Calcium	43-1	-3.42	3.91	-4.30	-1.27		ppb
Calcium	44-1	-7.40	-1.23	3.04	-1.86		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.07	0.01	-0.02	-0.02		ppb
Cobalt	59-2	0.00	0.00	-0.01	0.00		ppb
Copper	63-2	0.03	-0.01	-0.02	0.00		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				99		%
Holmium	165-2				100		%
Indium	115-1				100		%
Indium	115-2				97		%
Iron	56-2	0.52	0.46	0.60	0.53	13.68	ppb
Iron	57-2	-0.43	-0.78	-0.74	-0.65		ppb
Iron	54-2	1.65	1.49	1.75	1.63	7.99	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICB01 Instrumnet Name : P7
Client Sample ID : ICB01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:56:00 DataFile Name : 018CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.01	0.03	0.02	0.02	44.74	ppb
Lead	207-1	0.03	0.03	0.02	0.03	13.43	ppb
Lead	208-1	0.03	0.03	0.03	0.03	9.47	ppb
Lithium	6-1				95		%
Magnesium	24-2	-0.07	0.25	0.00	0.06	282.23	ppb
Manganese	55-2	0.02	-0.01	-0.02	0.00		ppb
Molybdenum	94-1	0.06	0.02	0.06	0.05	43.49	ppb
Molybdenum	95-1	0.00	-0.01	-0.01	0.00		ppb
Molybdenum	96-1	0.00	0.01	0.01	0.01	118.77	ppb
Molybdenum	97-1	0.03	0.05	0.03	0.03	46.58	ppb
Molybdenum	98-1	0.03	0.02	0.00	0.02	82.05	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.04	-0.02	-0.03	-0.03		ppb
Phosphorus	31-2	-27.20	-16.50	-16.84	-20.18		ppb
Potassium	39-2	-1.79	4.41	1.46	1.36	227.61	ppb
Rhodium	103-1				100		%
Rhodium	103-2				98		%
Scandium	45-1				99		%
Scandium	45-2				97		%
Selenium	82-1	-0.38	-0.09	0.69	0.08	730.19	ppb
Selenium	77-2	0.18	0.18	0.18	0.18	0.93	ppb
Selenium	78-2	-2.50	-0.41	-0.83	-1.25		ppb
Silicon	28-1	-1.78	-0.52	16.23	4.64	216.47	ppb
Silver	107-1	0.01	0.00	0.01	0.01	28.95	ppb
Silver	109-1	0.01	0.01	0.00	0.01	29.68	ppb
Sodium	23-2	9.35	9.15	8.58	9.03	4.40	ppb
Strontium	86-1	-0.02	0.05	0.00	0.01	354.82	ppb
Strontium	88-1	0.00	0.00	0.00	0.00		ppb
Sulfur	34-1	-428.42	-140.53	-24.56	-197.83		ppb
Terbium	159-1				97		%
Terbium	159-2				97		%
Thallium	203-1	0.00	0.00	0.00	0.00		ppb
Thallium	205-1	-0.01	-0.01	-0.01	-0.01		ppb
Tin	118-1	0.03	0.00	0.01	0.01	137.60	ppb
Titanium	47-1	0.03	0.02	0.03	0.02	31.99	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICB01 Instrumnet Name : P7
Client Sample ID : ICB01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:56:00 DataFile Name : 018CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00		ppb
Vanadium	51-2	0.00	-0.01	0.00	0.00		ppb
Yttrium	89-1				100		%
Yttrium	89-2				98		%
Zinc	66-2	-0.39	-0.21	-0.05	-0.22		ppb
Zirconium	90-1	-0.01	0.00	0.02	0.00	509.55	ppb
Zirconium	91-1	-0.01	0.01	0.00	0.00		ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICSA01 Instrumnet Name : P7
Client Sample ID : ICSA01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:00:23 DataFile Name : 019ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	90070.40	93051.79	89738.53	90953.57	2.01	ppb
Antimony	121-1	1.11	1.14	1.16	1.14	2.28	ppb
Arsenic	75-2	0.24	0.42	0.32	0.32	28.26	ppb
Barium	135-1	1.54	1.48	1.56	1.53	2.61	ppb
Barium	137-1	1.39	1.41	1.38	1.40	1.11	ppb
Beryllium	9-1	0.28	0.32	0.27	0.29	9.81	ppb
Bismuth	209-1				99		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	7.09	7.14	6.22	6.82	7.56	ppb
Cadmium	106-1	-3.78	-5.09	-5.31	-4.73		ppb
Cadmium	111-1	-0.01	-0.09	-0.10	-0.07		ppb
Calcium	43-1	100056.35	101452.03	100036.55	100514.97	0.81	ppb
Calcium	44-1	97651.00	101854.99	101274.52	100260.17	2.27	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	20.46	20.11	20.09	20.22	1.02	ppb
Cobalt	59-2	1.29	1.28	1.28	1.28	0.37	ppb
Copper	63-2	7.59	7.48	7.59	7.55	0.81	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				106		%
Indium	115-1				100		%
Indium	115-2				97		%
Iron	56-2	100308.92	100229.09	101457.97	100665.32	0.68	ppb
Iron	57-2	100535.74	100253.33	100761.24	100516.77	0.25	ppb
Iron	54-2	101682.92	101432.72	102110.64	101742.09	0.34	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICSA01 Instrumnet Name : P7
Client Sample ID : ICSA01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:00:23 DataFile Name : 019ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	4.50	4.45	4.40	4.45	1.18	ppb
Lead	207-1	4.10	3.90	4.08	4.03	2.76	ppb
Lead	208-1	4.19	4.14	4.15	4.16	0.64	ppb
Lithium	6-1				97		%
Magnesium	24-2	90244.58	91629.22	91324.03	91065.94	0.80	ppb
Manganese	55-2	7.29	7.35	7.10	7.25	1.76	ppb
Molybdenum	94-1	1581.92	1583.52	1620.75	1595.39	1.38	ppb
Molybdenum	95-1	1891.57	1933.79	1992.13	1939.16	2.60	ppb
Molybdenum	96-1	1867.03	1933.97	1953.00	1918.00	2.35	ppb
Molybdenum	97-1	1892.44	1956.34	2002.36	1950.38	2.83	ppb
Molybdenum	98-1	1906.64	1927.88	1934.81	1923.11	0.76	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	5.46	5.00	5.43	5.30	4.83	ppb
Phosphorus	31-2	97760.24	96737.93	96883.48	97127.22	0.57	ppb
Potassium	39-2	100787.61	99435.64	97526.37	99249.87	1.65	ppb
Rhodium	103-1				98		%
Rhodium	103-2				99		%
Scandium	45-1				98		%
Scandium	45-2				100		%
Selenium	82-1	0.17	0.19	0.67	0.34	81.75	ppb
Selenium	77-2	-0.09	-0.09	0.69	0.17	259.72	ppb
Selenium	78-2	-2.46	-2.94	-1.35	-2.25		ppb
Silicon	28-1	-0.23	1.37	-0.15	0.33	272.41	ppb
Silver	107-1	0.04	0.04	0.03	0.04	12.97	ppb
Silver	109-1	0.04	0.03	0.04	0.04	12.75	ppb
Sodium	23-2	101539.53	101795.76	102472.42	101935.90	0.47	ppb
Strontium	86-1	31.74	31.55	32.39	31.90	1.39	ppb
Strontium	88-1	32.21	32.81	33.36	32.79	1.76	ppb
Sulfur	34-1	102248.55	104814.47	103533.80	103532.28	1.24	ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	0.02	0.02	0.04	0.03	42.37	ppb
Thallium	205-1	0.00	0.00	0.03	0.01	130.60	ppb
Tin	118-1	0.50	0.78	0.91	0.73	28.07	ppb
Titanium	47-1	1940.42	2038.96	2035.07	2004.82	2.78	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICSA01 Instrumnet Name : P7
Client Sample ID : ICSA01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:00:23 DataFile Name : 019ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.02	0.01	0.01	0.02	40.27	ppb
Vanadium	51-2	0.20	0.21	0.21	0.20	2.87	ppb
Yttrium	89-1				101		%
Yttrium	89-2				100		%
Zinc	66-2	8.74	9.24	9.24	9.07	3.16	ppb
Zirconium	90-1	0.02	0.02	-0.01	0.01	143.45	ppb
Zirconium	91-1	0.02	0.01	0.00	0.01	143.41	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICSAB01 Instrumnet Name : P7
Client Sample ID : ICSAB01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:03:27 DataFile Name : 020ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	89082.61	92060.49	90826.60	90656.56	1.65	ppb
Antimony	121-1	20.93	21.45	21.48	21.29	1.47	ppb
Arsenic	75-2	17.99	19.85	19.92	19.25	5.69	ppb
Barium	135-1	20.98	22.14	21.27	21.46	2.81	ppb
Barium	137-1	21.55	21.74	21.88	21.72	0.74	ppb
Beryllium	9-1	20.52	19.41	21.29	20.41	4.64	ppb
Bismuth	209-1				102		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	24.57	25.61	24.92	25.03	2.10	ppb
Cadmium	106-1	13.89	13.22	12.98	13.36	3.53	ppb
Cadmium	111-1	19.90	20.67	20.21	20.26	1.91	ppb
Calcium	43-1	101447.58	99333.17	104320.98	101700.58	2.46	ppb
Calcium	44-1	99601.14	101352.51	103992.94	101648.86	2.17	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	40.00	40.31	40.89	40.40	1.13	ppb
Cobalt	59-2	21.62	21.91	22.02	21.85	0.94	ppb
Copper	63-2	25.85	26.14	25.93	25.97	0.58	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				108		%
Indium	115-1				105		%
Indium	115-2				100		%
Iron	56-2	99670.43	101962.22	102465.45	101366.03	1.47	ppb
Iron	57-2	99719.66	99706.93	99980.36	99802.32	0.15	ppb
Iron	54-2	99835.98	101706.60	102494.68	101345.75	1.35	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICSAB01 Instrumnet Name : P7
Client Sample ID : ICSAB01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:03:27 DataFile Name : 020ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	25.31	25.65	25.59	25.52	0.71	ppb
Lead	207-1	25.23	23.81	25.10	24.71	3.17	ppb
Lead	208-1	25.01	24.37	25.17	24.85	1.70	ppb
Lithium	6-1				95		%
Magnesium	24-2	90682.57	89581.46	89848.94	90037.66	0.64	ppb
Manganese	55-2	25.62	25.55	25.48	25.55	0.27	ppb
Molybdenum	94-1	1510.71	1612.29	1542.91	1555.31	3.34	ppb
Molybdenum	95-1	1855.00	1947.25	1866.47	1889.57	2.66	ppb
Molybdenum	96-1	1838.08	1913.39	1838.08	1863.18	2.33	ppb
Molybdenum	97-1	1874.56	1917.71	1898.10	1896.79	1.14	ppb
Molybdenum	98-1	1884.03	1937.03	1896.55	1905.87	1.45	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	25.08	25.61	25.48	25.39	1.10	ppb
Phosphorus	31-2	96438.66	96407.11	97077.84	96641.21	0.39	ppb
Potassium	39-2	98132.39	99444.20	99925.50	99167.36	0.94	ppb
Rhodium	103-1				104		%
Rhodium	103-2				102		%
Scandium	45-1				103		%
Scandium	45-2				104		%
Selenium	82-1	19.41	19.00	19.67	19.36	1.75	ppb
Selenium	77-2	18.23	18.79	27.71	21.58	24.64	ppb
Selenium	78-2	20.15	20.02	20.37	20.18	0.86	ppb
Silicon	28-1	-1.91	-1.46	-1.13	-1.50		ppb
Silver	107-1	19.28	20.52	20.05	19.95	3.12	ppb
Silver	109-1	19.55	19.79	19.79	19.71	0.72	ppb
Sodium	23-2	99755.66	100824.41	99387.07	99989.05	0.75	ppb
Strontium	86-1	31.46	32.15	32.41	32.01	1.53	ppb
Strontium	88-1	31.41	33.08	31.97	32.15	2.63	ppb
Sulfur	34-1	104302.25	100967.32	103639.93	102969.84	1.71	ppb
Terbium	159-1				106		%
Terbium	159-2				104		%
Thallium	203-1	22.53	21.76	22.57	22.29	2.04	ppb
Thallium	205-1	22.53	21.54	22.32	22.13	2.35	ppb
Tin	118-1	0.56	0.60	0.66	0.61	8.14	ppb
Titanium	47-1	1935.81	2004.06	1942.97	1960.95	1.91	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICSAB01 Instrumnet Name : P7
Client Sample ID : ICSAB01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:03:27 DataFile Name : 020ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.02	0.01	0.01	0.01	36.48	ppb
Vanadium	51-2	20.04	20.06	20.05	20.05	0.05	ppb
Yttrium	89-1				107		%
Yttrium	89-2				105		%
Zinc	66-2	28.40	27.70	28.71	28.27	1.84	ppb
Zirconium	90-1	0.01	0.00	0.00	0.00	38.87	ppb
Zirconium	91-1	0.00	0.02	-0.01	0.00	665.93	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCV01 Instrumnet Name : P7
Client Sample ID : CCV01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:06:30 DataFile Name : 021CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	46673.98	45836.17	46494.55	46334.90	0.95	ppb
Antimony	121-1	503.14	519.27	518.13	513.51	1.75	ppb
Arsenic	75-2	493.63	494.15	512.99	500.25	2.20	ppb
Barium	135-1	2489.18	2613.23	2617.63	2573.35	2.83	ppb
Barium	137-1	2504.99	2640.78	2620.53	2588.77	2.83	ppb
Beryllium	9-1	515.00	528.13	526.40	523.18	1.36	ppb
Bismuth	209-1				103		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	492.88	506.80	514.62	504.77	2.18	ppb
Cadmium	106-1	489.17	513.60	507.07	503.28	2.51	ppb
Cadmium	111-1	495.51	511.69	509.83	505.68	1.75	ppb
Calcium	43-1	250149.50	256503.62	255400.19	254017.77	1.34	ppb
Calcium	44-1	248671.84	257925.13	256942.26	254513.08	2.00	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	517.73	504.53	503.22	508.49	1.58	ppb
Cobalt	59-2	501.00	507.87	504.71	504.53	0.68	ppb
Copper	63-2	5057.36	5094.01	4984.48	5045.28	1.11	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				111		%
Holmium	165-2				111		%
Indium	115-1				107		%
Indium	115-2				104		%
Iron	56-2	123859.39	124323.50	122444.12	123542.34	0.79	ppb
Iron	57-2	123389.66	121518.50	122686.58	122531.58	0.77	ppb
Iron	54-2	123318.07	122312.74	122506.18	122712.33	0.43	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCV01 Instrumnet Name : P7
Client Sample ID : CCV01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:06:30 DataFile Name : 021CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2550.26	2671.61	2604.88	2608.92	2.33	ppb
Lead	207-1	2479.70	2643.84	2637.01	2586.85	3.59	ppb
Lead	208-1	2503.92	2605.81	2608.77	2572.83	2.32	ppb
Lithium	6-1				98		%
Magnesium	24-2	245012.26	244724.15	243575.85	244437.42	0.31	ppb
Manganese	55-2	5091.11	5109.70	5055.14	5085.32	0.55	ppb
Molybdenum	94-1	5089.17	5169.01	5105.41	5121.20	0.82	ppb
Molybdenum	95-1	5017.66	5151.08	5179.78	5116.18	1.69	ppb
Molybdenum	96-1	5014.17	5155.38	5143.79	5104.44	1.54	ppb
Molybdenum	97-1	5116.21	5168.14	5104.60	5129.65	0.66	ppb
Molybdenum	98-1	5089.54	5162.93	5101.18	5117.88	0.77	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	499.63	505.28	500.37	501.76	0.61	ppb
Phosphorus	31-2	9982.12	10065.97	10170.81	10072.97	0.94	ppb
Potassium	39-2	124617.91	122935.32	122107.98	123220.41	1.04	ppb
Rhodium	103-1				105		%
Rhodium	103-2				103		%
Scandium	45-1				106		%
Scandium	45-2				107		%
Selenium	82-1	480.91	495.17	489.64	488.57	1.47	ppb
Selenium	77-2	493.86	493.18	467.22	484.75	3.13	ppb
Selenium	78-2	494.91	484.66	490.24	489.94	1.05	ppb
Silicon	28-1	594.80	626.77	611.75	611.11	2.62	ppb
Silver	107-1	497.02	508.92	512.23	506.06	1.58	ppb
Silver	109-1	494.48	510.48	503.95	502.97	1.60	ppb
Sodium	23-2	245939.50	247796.12	242290.24	245341.95	1.14	ppb
Strontium	86-1	505.81	525.28	516.54	515.88	1.89	ppb
Strontium	88-1	514.85	527.17	520.87	520.96	1.18	ppb
Sulfur	34-1	8454.44	9001.32	8826.52	8760.76	3.19	ppb
Terbium	159-1				109		%
Terbium	159-2				107		%
Thallium	203-1	504.61	537.58	519.07	520.42	3.18	ppb
Thallium	205-1	504.31	532.70	519.43	518.81	2.74	ppb
Tin	118-1	527.45	532.71	521.96	527.37	1.02	ppb
Titanium	47-1	5001.09	5219.79	5202.28	5141.05	2.36	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCV01 Instrumnet Name : P7
Client Sample ID : CCV01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:06:30 DataFile Name : 021CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	503.44	514.83	514.68	510.98	1.28	ppb
Vanadium	51-2	517.98	510.52	517.30	515.27	0.80	ppb
Yttrium	89-1				110		%
Yttrium	89-2				108		%
Zinc	66-2	4947.26	5031.55	4909.28	4962.69	1.26	ppb
Zirconium	90-1	509.94	526.20	522.44	519.53	1.64	ppb
Zirconium	91-1	505.99	520.58	518.20	514.93	1.52	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCB01 Instrumnet Name : P7
Client Sample ID : CCB01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:09:47 DataFile Name : 022CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.00	0.39	0.60	0.33	91.42	ppb
Antimony	121-1	0.12	0.12	0.10	0.11	7.30	ppb
Arsenic	75-2	0.01	-0.02	0.00	0.00		ppb
Barium	135-1	-0.01	0.00	0.00	0.00		ppb
Barium	137-1	0.01	0.00	0.00	0.00	232.43	ppb
Beryllium	9-1	0.03	0.00	-0.01	0.00	373.65	ppb
Bismuth	209-1				101		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.05	-0.08	-0.01	-0.01		ppb
Cadmium	106-1	-4.69	-2.61	-4.27	-3.86		ppb
Cadmium	111-1	-0.31	-0.16	-0.28	-0.25		ppb
Calcium	43-1	3.29	2.06	5.26	3.54	45.67	ppb
Calcium	44-1	2.63	4.69	6.09	4.47	38.89	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.02	0.01	0.00	0.00		ppb
Cobalt	59-2	0.00	0.00	0.00	0.00		ppb
Copper	63-2	0.15	0.15	0.12	0.14	11.98	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				105		%
Indium	115-1				105		%
Indium	115-2				102		%
Iron	56-2	1.69	1.46	1.48	1.54	8.34	ppb
Iron	57-2	0.10	1.62	0.98	0.90	85.14	ppb
Iron	54-2	2.16	1.58	3.96	2.57	48.25	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCB01 Instrumnet Name : P7
Client Sample ID : CCB01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:09:47 DataFile Name : 022CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.04	0.06	0.05	0.05	25.50	ppb
Lead	207-1	0.04	0.06	0.07	0.06	28.84	ppb
Lead	208-1	0.05	0.05	0.06	0.06	9.25	ppb
Lithium	6-1				92		%
Magnesium	24-2	2.02	1.73	1.96	1.91	7.98	ppb
Manganese	55-2	-0.07	0.03	0.04	0.00	15676.56	ppb
Molybdenum	94-1	0.19	0.17	0.17	0.18	5.80	ppb
Molybdenum	95-1	0.17	0.16	0.10	0.14	27.91	ppb
Molybdenum	96-1	0.16	0.13	0.14	0.14	8.47	ppb
Molybdenum	97-1	0.21	0.16	0.16	0.18	16.47	ppb
Molybdenum	98-1	0.14	0.16	0.11	0.14	16.35	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.02	0.00	-0.05	-0.02		ppb
Phosphorus	31-2	-15.86	-30.43	-32.65	-26.31		ppb
Potassium	39-2	18.71	20.03	19.87	19.53	3.69	ppb
Rhodium	103-1				105		%
Rhodium	103-2				103		%
Scandium	45-1				102		%
Scandium	45-2				100		%
Selenium	82-1	-0.19	0.07	0.37	0.08	348.53	ppb
Selenium	77-2	-0.09	-0.09	0.17	0.00		ppb
Selenium	78-2	0.03	1.01	-1.52	-0.16		ppb
Silicon	28-1	-1.93	-1.15	-1.66	-1.58		ppb
Silver	107-1	0.05	0.04	0.04	0.04	11.41	ppb
Silver	109-1	0.05	0.04	0.03	0.04	25.17	ppb
Sodium	23-2	59.25	57.80	58.53	58.53	1.23	ppb
Strontium	86-1	0.00	-0.03	0.04	0.00	795.19	ppb
Strontium	88-1	0.00	0.00	0.00	0.00	74.38	ppb
Sulfur	34-1	-1370.12	-1200.14	-1147.09	-1239.12		ppb
Terbium	159-1				102		%
Terbium	159-2				102		%
Thallium	203-1	0.05	0.04	0.05	0.05	14.94	ppb
Thallium	205-1	0.04	0.06	0.04	0.05	26.70	ppb
Tin	118-1	0.10	0.07	0.08	0.09	22.08	ppb
Titanium	47-1	0.05	0.09	0.04	0.06	40.98	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCB01 Instrumnet Name : P7
Client Sample ID : CCB01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:09:47 DataFile Name : 022CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.01	0.00	0.00	0.00	1109.55	ppb
Vanadium	51-2	0.00	0.00	0.00	0.00	31.05	ppb
Yttrium	89-1				106		%
Yttrium	89-2				103		%
Zinc	66-2	-0.12	0.47	-0.40	-0.02		ppb
Zirconium	90-1	0.02	0.01	0.02	0.02	31.36	ppb
Zirconium	91-1	0.02	0.00	0.03	0.02	68.73	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CRI Instrumnet Name : P7
Client Sample ID : CRI Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:15:12 DataFile Name : 023LLCC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	22.41	21.61	21.13	21.72	2.97	ppb
Antimony	121-1	2.17	2.24	2.14	2.19	2.35	ppb
Arsenic	75-2	1.16	1.11	0.87	1.04	14.70	ppb
Barium	135-1	10.83	10.61	10.34	10.60	2.31	ppb
Barium	137-1	10.77	10.67	10.40	10.61	1.81	ppb
Beryllium	9-1	1.19	1.22	1.16	1.19	2.57	ppb
Bismuth	209-1				101		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.93	0.81	0.92	0.89	7.63	ppb
Cadmium	106-1	-3.69	-3.85	-3.97	-3.83		ppb
Cadmium	111-1	0.75	0.74	0.65	0.71	7.62	ppb
Calcium	43-1	589.26	561.52	554.38	568.39	3.24	ppb
Calcium	44-1	571.54	560.65	581.61	571.27	1.84	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.35	2.08	2.03	2.15	8.04	ppb
Cobalt	59-2	1.13	1.09	1.10	1.11	1.60	ppb
Copper	63-2	2.08	2.02	2.16	2.09	3.49	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				106		%
Indium	115-1				104		%
Indium	115-2				101		%
Iron	56-2	60.17	58.55	58.42	59.05	1.66	ppb
Iron	57-2	61.06	60.92	64.35	62.11	3.12	ppb
Iron	54-2	59.53	58.50	60.64	59.56	1.80	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CRI Instrumnet Name : P7
Client Sample ID : CRI Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:15:12 DataFile Name : 023LLCC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.93	0.93	0.90	0.92	2.37	ppb
Lead	207-1	0.89	0.89	0.97	0.92	4.92	ppb
Lead	208-1	0.92	0.91	0.92	0.92	0.68	ppb
Lithium	6-1				93		%
Magnesium	24-2	522.61	515.81	507.59	515.34	1.46	ppb
Manganese	55-2	1.21	1.11	1.12	1.15	4.70	ppb
Molybdenum	94-1	6.16	6.19	6.16	6.17	0.27	ppb
Molybdenum	95-1	5.27	5.16	5.16	5.20	1.19	ppb
Molybdenum	96-1	5.48	5.30	5.22	5.33	2.50	ppb
Molybdenum	97-1	5.24	5.47	5.30	5.34	2.24	ppb
Molybdenum	98-1	5.36	5.25	5.10	5.24	2.47	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.07	1.02	0.99	1.02	3.97	ppb
Phosphorus	31-2	227.24	217.86	221.21	222.10	2.14	ppb
Potassium	39-2	569.83	559.26	552.21	560.43	1.58	ppb
Rhodium	103-1				104		%
Rhodium	103-2				103		%
Scandium	45-1				102		%
Scandium	45-2				102		%
Selenium	82-1	4.40	5.35	5.10	4.95	9.95	ppb
Selenium	77-2	3.50	5.85	6.55	5.30	30.14	ppb
Selenium	78-2	6.90	3.42	4.37	4.90	36.74	ppb
Silicon	28-1	-1.48	-1.59	-0.92	-1.33		ppb
Silver	107-1	1.21	1.21	1.15	1.19	2.87	ppb
Silver	109-1	1.14	1.17	1.18	1.16	1.77	ppb
Sodium	23-2	549.51	538.62	534.84	540.99	1.41	ppb
Strontium	86-1	1.11	1.07	1.08	1.09	2.04	ppb
Strontium	88-1	1.12	1.05	1.05	1.07	3.33	ppb
Sulfur	34-1	-596.62	-707.52	-503.46	-602.53		ppb
Terbium	159-1				101		%
Terbium	159-2				101		%
Thallium	203-1	1.09	1.03	1.03	1.05	3.02	ppb
Thallium	205-1	1.00	1.02	1.07	1.03	3.76	ppb
Tin	118-1	5.70	5.60	5.74	5.68	1.22	ppb
Titanium	47-1	5.21	4.85	5.24	5.10	4.29	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CRI Instrumnet Name : P7
Client Sample ID : CRI Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:15:12 DataFile Name : 023LLCC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.95	0.95	0.92	0.94	2.06	ppb
Vanadium	51-2	5.47	5.44	5.31	5.41	1.55	ppb
Yttrium	89-1				104		%
Yttrium	89-2				103		%
Zinc	66-2	4.32	4.32	4.24	4.29	1.02	ppb
Zirconium	90-1	1.12	1.10	1.08	1.10	1.76	ppb
Zirconium	91-1	1.06	1.05	1.04	1.05	1.08	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : PB169300BL Instrumnet Name : P7
Client Sample ID : PB169300BL Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:19:36 DataFile Name : 024CCBD.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.02	0.26	-0.51	-0.09		ppb
Antimony	121-1	0.02	0.01	0.03	0.02	33.38	ppb
Arsenic	75-2	-0.02	-0.02	-0.01	-0.02		ppb
Barium	135-1	0.02	0.02	0.02	0.02	15.80	ppb
Barium	137-1	-0.01	0.00	-0.01	-0.01		ppb
Beryllium	9-1	0.02	0.00	0.00	0.01	174.59	ppb
Bismuth	209-1				99		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	-0.08	-0.08	0.05	-0.03		ppb
Cadmium	106-1	-4.25	-4.41	-4.29	-4.32		ppb
Cadmium	111-1	-0.29	-0.32	-0.30	-0.30		ppb
Calcium	43-1	-2.98	1.25	-1.56	-1.10		ppb
Calcium	44-1	-0.77	3.97	4.87	2.69	112.65	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.01	-0.05	-0.01	-0.02		ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	572.52	ppb
Copper	63-2	0.00	0.02	0.04	0.02	98.53	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				101		%
Holmium	165-2				104		%
Indium	115-1				102		%
Indium	115-2				101		%
Iron	56-2	0.69	0.46	0.36	0.50	33.50	ppb
Iron	57-2	1.82	0.56	-1.08	0.43	338.24	ppb
Iron	54-2	0.41	0.78	1.00	0.73	41.29	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : PB169300BL Instrumnet Name : P7
Client Sample ID : PB169300BL Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:19:36 DataFile Name : 024CCBD.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.04	0.02	0.00	0.02	91.34	ppb
Lead	207-1	0.04	0.03	0.03	0.03	17.86	ppb
Lead	208-1	0.03	0.03	0.02	0.03	20.56	ppb
Lithium	6-1				91		%
Magnesium	24-2	0.46	0.21	0.42	0.36	37.36	ppb
Manganese	55-2	0.01	-0.03	-0.03	-0.02		ppb
Molybdenum	94-1	0.03	0.02	0.03	0.03	24.09	ppb
Molybdenum	95-1	0.02	0.05	0.03	0.03	44.32	ppb
Molybdenum	96-1	0.03	0.05	0.03	0.03	31.06	ppb
Molybdenum	97-1	0.04	0.03	0.05	0.04	26.86	ppb
Molybdenum	98-1	0.03	0.02	0.02	0.02	22.00	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.02	0.08	-0.04	0.02	260.16	ppb
Phosphorus	31-2	-34.49	-31.14	-23.64	-29.76		ppb
Potassium	39-2	10.07	4.74	0.91	5.24	87.86	ppb
Rhodium	103-1				102		%
Rhodium	103-2				103		%
Scandium	45-1				101		%
Scandium	45-2				101		%
Selenium	82-1	0.01	-0.21	-0.17	-0.13		ppb
Selenium	77-2	-0.09	-0.09	-0.09	-0.09		ppb
Selenium	78-2	0.67	1.46	0.43	0.86	62.85	ppb
Silicon	28-1	-2.30	0.10	-1.57	-1.26		ppb
Silver	107-1	0.02	0.02	0.01	0.02	28.54	ppb
Silver	109-1	0.02	0.01	0.01	0.01	38.71	ppb
Sodium	23-2	22.05	22.62	23.61	22.76	3.49	ppb
Strontium	86-1	0.07	-0.04	0.01	0.01	454.74	ppb
Strontium	88-1	0.00	0.00	0.00	0.00	204.19	ppb
Sulfur	34-1	-915.92	-566.94	-623.05	-701.97		ppb
Terbium	159-1				99		%
Terbium	159-2				100		%
Thallium	203-1	0.00	0.00	0.01	0.00		ppb
Thallium	205-1	0.00	0.00	0.00	0.00		ppb
Tin	118-1	0.04	0.04	0.05	0.04	13.98	ppb
Titanium	47-1	0.05	0.01	0.00	0.02	105.79	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : PB169300BL Instrumnet Name : P7
Client Sample ID : PB169300BL Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:19:36 DataFile Name : 024CCBD.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00		ppb
Vanadium	51-2	-0.01	0.00	0.00	0.00		ppb
Yttrium	89-1				103		%
Yttrium	89-2				103		%
Zinc	66-2	0.10	0.26	-0.21	0.05	469.41	ppb
Zirconium	90-1	0.01	0.00	0.01	0.01	29.87	ppb
Zirconium	91-1	0.00	0.02	0.01	0.01	97.70	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : PB169300BS Instrumnet Name : P7
Client Sample ID : PB169300BS Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:22:53 DataFile Name : 025LCS6.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9909.89	10008.12	10187.27	10035.09	1.40	ppb
Antimony	121-1	503.92	517.19	523.76	514.96	1.96	ppb
Arsenic	75-2	496.04	506.96	500.49	501.16	1.10	ppb
Barium	135-1	2489.59	2589.87	2577.81	2552.43	2.14	ppb
Barium	137-1	2496.86	2518.84	2602.54	2539.41	2.20	ppb
Beryllium	9-1	512.21	512.35	519.76	514.77	0.84	ppb
Bismuth	209-1				102		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	504.56	518.86	520.75	514.72	1.72	ppb
Cadmium	106-1	513.20	511.58	517.08	513.95	0.55	ppb
Cadmium	111-1	510.57	518.34	522.23	517.05	1.15	ppb
Calcium	43-1	53243.58	54756.82	54050.40	54016.93	1.40	ppb
Calcium	44-1	51605.42	52436.97	51425.52	51822.64	1.04	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	511.45	512.98	516.37	513.60	0.49	ppb
Cobalt	59-2	517.27	523.20	519.52	520.00	0.57	ppb
Copper	63-2	5113.19	5181.43	5116.60	5137.07	0.75	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				108		%
Indium	115-1				103		%
Indium	115-2				102		%
Iron	56-2	26779.74	26450.39	27058.90	26763.01	1.14	ppb
Iron	57-2	26379.05	26685.90	26384.49	26483.15	0.66	ppb
Iron	54-2	27036.18	27083.95	26497.73	26872.62	1.21	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : PB169300BS Instrumnet Name : P7
Client Sample ID : PB169300BS Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:22:53 DataFile Name : 025LCS6.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2512.70	2502.80	2603.10	2539.53	2.18	ppb
Lead	207-1	2433.52	2485.51	2560.23	2493.09	2.55	ppb
Lead	208-1	2432.43	2470.02	2550.59	2484.35	2.43	ppb
Lithium	6-1				95		%
Magnesium	24-2	50471.77	51723.53	51349.52	51181.60	1.26	ppb
Manganese	55-2	5095.13	5032.95	5150.59	5092.89	1.16	ppb
Molybdenum	94-1	4854.92	4946.62	5124.17	4975.24	2.75	ppb
Molybdenum	95-1	4933.25	4827.24	5032.98	4931.16	2.09	ppb
Molybdenum	96-1	4954.55	4849.09	5124.68	4976.11	2.79	ppb
Molybdenum	97-1	4880.66	4887.72	5139.17	4969.18	2.96	ppb
Molybdenum	98-1	4916.95	4857.44	5100.61	4958.33	2.56	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	509.31	516.87	512.74	512.97	0.74	ppb
Phosphorus	31-2	9839.57	9952.72	10003.77	9932.02	0.85	ppb
Potassium	39-2	25364.45	25828.72	26056.37	25749.85	1.37	ppb
Rhodium	103-1				103		%
Rhodium	103-2				103		%
Scandium	45-1				102		%
Scandium	45-2				103		%
Selenium	82-1	490.84	491.95	513.88	498.89	2.60	ppb
Selenium	77-2	498.34	518.88	495.76	504.33	2.51	ppb
Selenium	78-2	501.77	515.24	522.34	513.12	2.04	ppb
Silicon	28-1	618.44	615.60	612.01	615.35	0.52	ppb
Silver	107-1	527.16	514.20	507.71	516.36	1.92	ppb
Silver	109-1	508.74	517.97	519.65	515.45	1.14	ppb
Sodium	23-2	51210.55	51678.13	51874.68	51587.79	0.66	ppb
Strontium	86-1	484.56	484.16	506.23	491.65	2.57	ppb
Strontium	88-1	498.48	490.55	514.11	501.05	2.39	ppb
Sulfur	34-1	9198.71	9654.47	9343.25	9398.81	2.48	ppb
Terbium	159-1				104		%
Terbium	159-2				104		%
Thallium	203-1	488.76	499.77	514.88	501.13	2.62	ppb
Thallium	205-1	495.87	500.16	509.86	501.96	1.43	ppb
Tin	118-1	511.06	511.38	530.43	517.62	2.14	ppb
Titanium	47-1	4924.39	5141.32	5047.21	5037.64	2.16	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : PB169300BS Instrumnet Name : P7
Client Sample ID : PB169300BS Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:22:53 DataFile Name : 025LCS6.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	478.80	473.20	491.85	481.28	1.99	ppb
Vanadium	51-2	509.14	518.28	515.57	514.33	0.91	ppb
Yttrium	89-1				106		%
Yttrium	89-2				104		%
Zinc	66-2	5201.02	5240.56	5246.48	5229.35	0.47	ppb
Zirconium	90-1	497.53	487.29	514.71	499.84	2.77	ppb
Zirconium	91-1	485.46	485.05	505.14	491.88	2.33	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : PB169300TB Instrumnet Name : P7
Client Sample ID : PB169300TB Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:25:37 DataFile Name : 026CCBD.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-1.03	0.80	-0.11	-0.11		ppb
Antimony	121-1	0.13	0.15	0.13	0.13	8.87	ppb
Arsenic	75-2	-0.01	-0.02	-0.01	-0.01		ppb
Barium	135-1	0.04	0.02	0.00	0.02	83.23	ppb
Barium	137-1	0.01	0.00	0.00	0.00	351.58	ppb
Beryllium	9-1	0.00	0.00	0.00	0.00		ppb
Bismuth	209-1				100		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	-0.08	0.02	-0.04	-0.03		ppb
Cadmium	106-1	-4.81	-4.01	-4.04	-4.29		ppb
Cadmium	111-1	-0.31	-0.28	-0.26	-0.28		ppb
Calcium	43-1	3.26	-2.65	0.15	0.25	1174.29	ppb
Calcium	44-1	8.63	10.20	4.52	7.79	37.67	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.01	0.01	-0.03	-0.01		ppb
Cobalt	59-2	0.00	0.00	-0.01	0.00		ppb
Copper	63-2	0.11	0.10	0.06	0.09	28.81	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				104		%
Indium	115-1				102		%
Indium	115-2				100		%
Iron	56-2	0.67	0.52	0.55	0.58	14.14	ppb
Iron	57-2	-1.24	1.69	-1.88	-0.48		ppb
Iron	54-2	1.17	0.89	1.33	1.13	19.54	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : PB169300TB Instrumnet Name : P7
Client Sample ID : PB169300TB Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:25:37 DataFile Name : 026CCBD.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.05	0.02	0.06	0.04	43.96	ppb
Lead	207-1	0.07	0.06	0.06	0.06	13.36	ppb
Lead	208-1	0.05	0.05	0.04	0.05	6.96	ppb
Lithium	6-1				91		%
Magnesium	24-2	0.29	0.61	0.49	0.46	35.41	ppb
Manganese	55-2	-0.01	0.01	0.03	0.01	205.43	ppb
Molybdenum	94-1	0.22	0.16	0.18	0.19	16.05	ppb
Molybdenum	95-1	0.18	0.17	0.14	0.16	12.67	ppb
Molybdenum	96-1	0.15	0.18	0.18	0.17	9.96	ppb
Molybdenum	97-1	0.21	0.17	0.18	0.19	10.61	ppb
Molybdenum	98-1	0.20	0.16	0.17	0.18	13.54	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.07	-0.05	-0.02	-0.05		ppb
Phosphorus	31-2	-30.91	-29.53	-28.59	-29.67		ppb
Potassium	39-2	13.03	5.60	7.45	8.69	44.50	ppb
Rhodium	103-1				101		%
Rhodium	103-2				101		%
Scandium	45-1				99		%
Scandium	45-2				100		%
Selenium	82-1	-0.90	-0.28	-0.68	-0.62		ppb
Selenium	77-2	0.17	-0.09	-0.09	0.00		ppb
Selenium	78-2	-0.59	0.44	1.00	0.28	283.57	ppb
Silicon	28-1	0.45	1.01	0.43	0.63	51.87	ppb
Silver	107-1	0.06	0.04	0.03	0.04	32.70	ppb
Silver	109-1	0.07	0.04	0.03	0.05	43.61	ppb
Sodium	23-2	27.20	32.68	23.28	27.72	17.05	ppb
Strontium	86-1	0.02	0.06	0.00	0.03	129.09	ppb
Strontium	88-1	0.00	0.00	0.00	0.00	408.71	ppb
Sulfur	34-1	-1134.96	-1089.12	-1065.87	-1096.65		ppb
Terbium	159-1				99		%
Terbium	159-2				100		%
Thallium	203-1	0.04	0.02	0.02	0.03	42.60	ppb
Thallium	205-1	0.02	0.02	0.02	0.02	14.67	ppb
Tin	118-1	0.04	0.04	0.03	0.04	13.55	ppb
Titanium	47-1	0.05	0.02	0.10	0.05	73.14	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : PB169300TB Instrumnet Name : P7
Client Sample ID : PB169300TB Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:25:37 DataFile Name : 026CCBD.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	220.34	ppb
Vanadium	51-2	0.00	0.00	0.00	0.00		ppb
Yttrium	89-1				102		%
Yttrium	89-2				102		%
Zinc	66-2	0.10	0.15	0.54	0.26	91.17	ppb
Zirconium	90-1	0.03	0.01	0.02	0.02	35.57	ppb
Zirconium	91-1	-0.01	0.03	0.02	0.01	138.36	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-02DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:28:55 DataFile Name : 027SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	22075.94	22361.74	21787.89	22075.19	1.30	ppb
Antimony	121-1	0.19	0.22	0.23	0.21	8.32	ppb
Arsenic	75-2	6.17	6.22	5.74	6.04	4.38	ppb
Barium	135-1	22.03	22.83	22.59	22.48	1.83	ppb
Barium	137-1	22.01	22.67	22.68	22.45	1.72	ppb
Beryllium	9-1	2.78	2.83	3.01	2.87	4.22	ppb
Bismuth	209-1				101		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	2.68	2.38	2.40	2.49	6.84	ppb
Cadmium	106-1	-1.96	-1.67	-1.28	-1.64		ppb
Cadmium	111-1	2.06	2.23	2.33	2.21	6.08	ppb
Calcium	43-1	60055.86	61499.87	61163.36	60906.36	1.24	ppb
Calcium	44-1	58001.00	60457.99	59895.99	59451.66	2.17	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	10.88	10.60	10.50	10.66	1.87	ppb
Cobalt	59-2	26.47	26.89	26.53	26.63	0.86	ppb
Copper	63-2	38.48	39.10	38.64	38.74	0.83	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				110		%
Indium	115-1				105		%
Indium	115-2				104		%
Iron	56-2	11390.69	11147.19	11351.01	11296.30	1.16	ppb
Iron	57-2	11774.00	11988.06	11826.11	11862.72	0.94	ppb
Iron	54-2	11187.82	11512.78	11301.57	11334.06	1.45	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-02DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:28:55 DataFile Name : 027SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	42.30	41.34	41.40	41.68	1.30	ppb
Lead	207-1	40.32	39.93	39.92	40.06	0.57	ppb
Lead	208-1	40.91	40.46	40.50	40.63	0.61	ppb
Lithium	6-1				93		%
Magnesium	24-2	10559.02	10855.45	10796.01	10736.83	1.46	ppb
Manganese	55-2	2691.63	2771.44	2778.22	2747.10	1.75	ppb
Molybdenum	94-1	1.63	1.70	1.63	1.65	2.41	ppb
Molybdenum	95-1	0.11	0.14	0.14	0.13	13.54	ppb
Molybdenum	96-1	0.32	0.29	0.31	0.31	6.15	ppb
Molybdenum	97-1	0.09	0.07	0.09	0.08	10.95	ppb
Molybdenum	98-1	0.09	0.10	0.07	0.09	18.81	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	20.76	20.44	20.67	20.62	0.81	ppb
Phosphorus	31-2	1118.45	1196.02	1159.31	1157.92	3.35	ppb
Potassium	39-2	8091.79	8113.80	7929.08	8044.89	1.25	ppb
Rhodium	103-1				105		%
Rhodium	103-2				106		%
Scandium	45-1				104		%
Scandium	45-2				105		%
Selenium	82-1	0.81	0.78	0.21	0.60	56.58	ppb
Selenium	77-2	6.00	7.44	5.64	6.36	14.95	ppb
Selenium	78-2	0.55	-0.46	2.77	0.95	173.22	ppb
Silicon	28-1	1486.62	1486.98	1482.89	1485.50	0.15	ppb
Silver	107-1	0.09	0.05	0.05	0.06	33.97	ppb
Silver	109-1	0.07	0.05	0.04	0.05	34.94	ppb
Sodium	23-2	3928.49	3970.06	3903.59	3934.05	0.85	ppb
Strontium	86-1	170.16	170.10	170.96	170.41	0.28	ppb
Strontium	88-1	176.15	175.68	177.74	176.52	0.61	ppb
Sulfur	34-1	97903.27	97422.84	97824.68	97716.93	0.26	ppb
Terbium	159-1				104		%
Terbium	159-2				106		%
Thallium	203-1	0.13	0.11	0.15	0.13	18.00	ppb
Thallium	205-1	0.13	0.13	0.13	0.13	2.68	ppb
Tin	118-1	0.31	0.49	0.54	0.45	27.20	ppb
Titanium	47-1	6.37	7.06	6.31	6.58	6.31	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-02DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:28:55 DataFile Name : 027SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.65	0.64	0.62	0.63	2.14	ppb
Vanadium	51-2	52.38	53.64	52.13	52.72	1.53	ppb
Yttrium	89-1				115		%
Yttrium	89-2				113		%
Zinc	66-2	483.29	495.34	484.77	487.80	1.35	ppb
Zirconium	90-1	0.94	0.93	0.91	0.93	1.84	ppb
Zirconium	91-1	0.91	0.89	0.96	0.92	4.12	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-04DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:32:01 DataFile Name : 028SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	20441.25	23626.23	19968.97	21345.49	9.32	ppb
Antimony	121-1	0.18	0.18	0.19	0.18	4.46	ppb
Arsenic	75-2	6.93	8.77	7.21	7.64	13.00	ppb
Barium	135-1	26.41	27.94	26.37	26.91	3.32	ppb
Barium	137-1	26.54	28.07	27.10	27.24	2.84	ppb
Beryllium	9-1	2.73	2.97	2.55	2.75	7.58	ppb
Bismuth	209-1				99		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	2.72	2.53	2.12	2.46	12.47	ppb
Cadmium	106-1	-0.17	-2.03	-1.14	-1.11		ppb
Cadmium	111-1	2.24	2.15	2.24	2.21	2.39	ppb
Calcium	43-1	59011.85	61554.70	58114.50	59560.35	3.00	ppb
Calcium	44-1	56730.82	61108.01	56906.46	58248.43	4.25	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	10.09	11.63	9.86	10.53	9.18	ppb
Cobalt	59-2	24.53	27.97	24.28	25.60	8.05	ppb
Copper	63-2	36.43	41.38	36.36	38.06	7.56	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				106		%
Indium	115-1				106		%
Indium	115-2				101		%
Iron	56-2	10357.85	11959.68	10278.53	10865.35	8.73	ppb
Iron	57-2	11082.73	12687.56	10932.16	11567.48	8.41	ppb
Iron	54-2	10386.46	11839.73	10321.29	10849.16	7.91	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-04DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:32:01 DataFile Name : 028SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	35.28	38.74	36.66	36.89	4.71	ppb
Lead	207-1	33.80	36.94	34.97	35.24	4.50	ppb
Lead	208-1	34.43	37.41	35.52	35.79	4.21	ppb
Lithium	6-1				89		%
Magnesium	24-2	9732.32	11335.69	9679.00	10249.00	9.19	ppb
Manganese	55-2	2682.43	3144.86	2714.22	2847.17	9.07	ppb
Molybdenum	94-1	1.56	1.74	1.70	1.67	5.50	ppb
Molybdenum	95-1	0.12	0.13	0.10	0.12	17.32	ppb
Molybdenum	96-1	0.31	0.32	0.27	0.30	8.79	ppb
Molybdenum	97-1	0.07	0.07	0.06	0.07	11.15	ppb
Molybdenum	98-1	0.07	0.08	0.07	0.07	8.11	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	20.06	22.24	19.43	20.58	7.16	ppb
Phosphorus	31-2	1806.46	2049.21	1826.02	1893.89	7.12	ppb
Potassium	39-2	9016.27	9972.00	8675.96	9221.41	7.29	ppb
Rhodium	103-1				105		%
Rhodium	103-2				104		%
Scandium	45-1				103		%
Scandium	45-2				102		%
Selenium	82-1	0.49	0.25	0.02	0.25	91.72	ppb
Selenium	77-2	6.16	6.80	5.76	6.24	8.42	ppb
Selenium	78-2	0.83	2.84	2.55	2.07	52.55	ppb
Silicon	28-1	1334.19	1355.44	1274.37	1321.33	3.18	ppb
Silver	107-1	0.02	0.03	0.03	0.03	12.87	ppb
Silver	109-1	0.02	0.03	0.02	0.02	24.67	ppb
Sodium	23-2	3130.37	3588.71	3044.78	3254.62	8.99	ppb
Strontium	86-1	202.83	218.96	208.12	209.97	3.92	ppb
Strontium	88-1	206.14	220.17	211.06	212.46	3.35	ppb
Sulfur	34-1	93911.32	94971.62	90149.95	93010.96	2.72	ppb
Terbium	159-1				103		%
Terbium	159-2				103		%
Thallium	203-1	0.13	0.13	0.10	0.12	14.97	ppb
Thallium	205-1	0.12	0.14	0.12	0.13	7.58	ppb
Tin	118-1	0.27	0.33	0.35	0.32	13.09	ppb
Titanium	47-1	6.07	6.49	5.80	6.12	5.75	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-04DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:32:01 DataFile Name : 028SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.50	0.56	0.52	0.53	5.13	ppb
Vanadium	51-2	50.12	56.99	49.58	52.23	7.91	ppb
Yttrium	89-1				113		%
Yttrium	89-2				111		%
Zinc	66-2	386.92	437.37	379.63	401.31	7.84	ppb
Zirconium	90-1	0.88	0.95	0.87	0.90	4.58	ppb
Zirconium	91-1	0.82	0.90	0.88	0.87	4.68	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-06DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:35:09 DataFile Name : 029SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	22168.57	21921.26	22147.14	22078.99	0.62	ppb
Antimony	121-1	0.20	0.20	0.16	0.19	11.79	ppb
Arsenic	75-2	5.97	6.12	5.66	5.91	3.97	ppb
Barium	135-1	26.24	27.12	25.18	26.18	3.72	ppb
Barium	137-1	26.29	27.49	25.73	26.50	3.40	ppb
Beryllium	9-1	3.01	2.78	2.80	2.86	4.60	ppb
Bismuth	209-1				100		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	2.45	2.11	2.22	2.26	7.68	ppb
Cadmium	106-1	-0.68	0.59	-1.56	-0.55		ppb
Cadmium	111-1	2.19	2.45	2.16	2.27	7.02	ppb
Calcium	43-1	53993.21	56266.04	54455.53	54904.93	2.19	ppb
Calcium	44-1	52500.45	53622.42	52537.70	52886.86	1.20	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	11.54	11.49	11.29	11.44	1.19	ppb
Cobalt	59-2	25.88	26.08	25.83	25.93	0.50	ppb
Copper	63-2	45.34	46.81	46.09	46.08	1.59	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				108		%
Indium	115-1				106		%
Indium	115-2				103		%
Iron	56-2	11003.17	10716.69	10786.54	10835.47	1.38	ppb
Iron	57-2	11433.08	11426.73	11378.02	11412.61	0.26	ppb
Iron	54-2	10710.74	10955.60	10826.84	10831.06	1.13	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-06DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:35:09 DataFile Name : 029SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	55.34	55.60	55.45	55.46	0.23	ppb
Lead	207-1	52.72	52.55	52.60	52.62	0.16	ppb
Lead	208-1	53.23	53.72	53.73	53.56	0.54	ppb
Lithium	6-1				87		%
Magnesium	24-2	11209.34	11320.33	10746.56	11092.08	2.74	ppb
Manganese	55-2	2665.47	2668.98	2642.97	2659.14	0.53	ppb
Molybdenum	94-1	1.66	1.72	1.66	1.68	2.23	ppb
Molybdenum	95-1	0.09	0.09	0.08	0.09	4.59	ppb
Molybdenum	96-1	0.28	0.31	0.30	0.30	5.15	ppb
Molybdenum	97-1	0.11	0.07	0.09	0.09	24.41	ppb
Molybdenum	98-1	0.06	0.07	0.07	0.06	8.93	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	19.29	19.71	19.16	19.39	1.48	ppb
Phosphorus	31-2	1122.15	1186.07	1145.33	1151.19	2.81	ppb
Potassium	39-2	7279.41	7367.01	7338.87	7328.43	0.61	ppb
Rhodium	103-1				106		%
Rhodium	103-2				107		%
Scandium	45-1				102		%
Scandium	45-2				103		%
Selenium	82-1	0.67	-0.02	0.02	0.22	174.88	ppb
Selenium	77-2	6.04	8.49	7.72	7.42	16.85	ppb
Selenium	78-2	2.28	1.26	3.76	2.43	51.67	ppb
Silicon	28-1	1462.50	1543.42	1493.78	1499.90	2.72	ppb
Silver	107-1	0.02	0.02	0.03	0.03	6.77	ppb
Silver	109-1	0.02	0.03	0.02	0.02	27.02	ppb
Sodium	23-2	3038.82	3055.47	2990.67	3028.32	1.11	ppb
Strontium	86-1	144.42	148.08	150.53	147.68	2.08	ppb
Strontium	88-1	147.79	149.88	148.66	148.78	0.71	ppb
Sulfur	34-1	95602.88	100039.11	97832.08	97824.69	2.27	ppb
Terbium	159-1				103		%
Terbium	159-2				105		%
Thallium	203-1	0.15	0.15	0.13	0.14	7.65	ppb
Thallium	205-1	0.14	0.13	0.15	0.14	7.26	ppb
Tin	118-1	0.29	0.39	0.32	0.33	16.45	ppb
Titanium	47-1	7.68	8.09	7.95	7.91	2.62	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-06DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:35:09 DataFile Name : 029SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.76	0.78	0.75	0.76	1.81	ppb
Vanadium	51-2	57.01	56.57	56.51	56.70	0.48	ppb
Yttrium	89-1				113		%
Yttrium	89-2				113		%
Zinc	66-2	362.17	361.63	362.29	362.03	0.10	ppb
Zirconium	90-1	0.85	0.92	0.93	0.90	5.13	ppb
Zirconium	91-1	0.87	0.88	0.92	0.89	3.07	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-08DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:38:15 DataFile Name : 030SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	22003.56	21775.39	21393.38	21724.11	1.42	ppb
Antimony	121-1	0.19	0.16	0.18	0.18	9.73	ppb
Arsenic	75-2	6.84	6.82	6.59	6.75	2.03	ppb
Barium	135-1	24.99	24.85	24.77	24.87	0.43	ppb
Barium	137-1	25.09	25.03	24.52	24.88	1.26	ppb
Beryllium	9-1	2.81	2.79	2.95	2.85	3.07	ppb
Bismuth	209-1				101		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	2.34	2.90	2.47	2.57	11.26	ppb
Cadmium	106-1	0.20	-0.80	-1.16	-0.59		ppb
Cadmium	111-1	2.51	2.20	2.24	2.32	7.24	ppb
Calcium	43-1	57223.16	58492.02	58883.10	58199.43	1.49	ppb
Calcium	44-1	55722.85	56654.80	56585.25	56320.97	0.92	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	11.86	12.18	12.24	12.09	1.68	ppb
Cobalt	59-2	26.27	26.77	26.82	26.62	1.14	ppb
Copper	63-2	43.10	43.16	43.18	43.15	0.10	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				111		%
Indium	115-1				106		%
Indium	115-2				106		%
Iron	56-2	12655.66	12490.76	12383.79	12510.07	1.09	ppb
Iron	57-2	12944.96	13117.73	13179.28	13080.66	0.93	ppb
Iron	54-2	12397.69	12683.00	12448.86	12509.85	1.22	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-08DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:38:15 DataFile Name : 030SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	42.15	43.53	44.41	43.36	2.63	ppb
Lead	207-1	40.75	41.09	42.00	41.28	1.57	ppb
Lead	208-1	40.92	41.92	42.92	41.92	2.39	ppb
Lithium	6-1				87		%
Magnesium	24-2	9710.55	9986.57	10012.09	9903.07	1.69	ppb
Manganese	55-2	2674.60	2724.26	2635.52	2678.13	1.66	ppb
Molybdenum	94-1	1.56	1.55	1.70	1.60	4.95	ppb
Molybdenum	95-1	0.10	0.09	0.11	0.10	10.46	ppb
Molybdenum	96-1	0.34	0.27	0.30	0.31	11.63	ppb
Molybdenum	97-1	0.06	0.06	0.06	0.06	5.02	ppb
Molybdenum	98-1	0.07	0.06	0.04	0.05	28.07	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	21.67	21.96	21.71	21.78	0.72	ppb
Phosphorus	31-2	1272.82	1287.53	1316.14	1292.16	1.70	ppb
Potassium	39-2	7735.78	7879.02	7835.20	7816.67	0.94	ppb
Rhodium	103-1				106		%
Rhodium	103-2				107		%
Scandium	45-1				103		%
Scandium	45-2				105		%
Selenium	82-1	0.11	0.97	-0.49	0.20	368.43	ppb
Selenium	77-2	7.12	5.38	6.63	6.37	14.05	ppb
Selenium	78-2	1.95	0.54	2.50	1.66	60.69	ppb
Silicon	28-1	1466.51	1487.13	1510.46	1488.03	1.48	ppb
Silver	107-1	0.03	0.03	0.03	0.03	15.82	ppb
Silver	109-1	0.02	0.03	0.03	0.03	17.87	ppb
Sodium	23-2	3422.20	3379.66	3378.71	3393.52	0.73	ppb
Strontium	86-1	167.16	167.76	166.48	167.13	0.38	ppb
Strontium	88-1	168.21	168.59	170.69	169.16	0.79	ppb
Sulfur	34-1	96018.97	98890.15	99753.67	98220.93	1.99	ppb
Terbium	159-1				103		%
Terbium	159-2				107		%
Thallium	203-1	0.16	0.17	0.17	0.17	3.98	ppb
Thallium	205-1	0.14	0.15	0.16	0.15	8.96	ppb
Tin	118-1	0.34	0.40	0.38	0.37	7.34	ppb
Titanium	47-1	7.49	7.23	7.58	7.43	2.40	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-08DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:38:15 DataFile Name : 030SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.65	0.65	0.69	0.66	2.95	ppb
Vanadium	51-2	56.35	56.18	56.71	56.41	0.48	ppb
Yttrium	89-1				115		%
Yttrium	89-2				114		%
Zinc	66-2	398.64	401.15	401.24	400.34	0.37	ppb
Zirconium	90-1	0.83	0.89	0.86	0.86	3.18	ppb
Zirconium	91-1	0.85	0.88	0.90	0.88	2.66	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-10DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:41:25 DataFile Name : 031SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	4566.26	4623.61	4564.79	4584.89	0.73	ppb
Antimony	121-1	0.14	0.15	0.16	0.15	7.46	ppb
Arsenic	75-2	2.07	2.02	1.98	2.03	2.23	ppb
Barium	135-1	20.09	21.31	20.51	20.63	3.01	ppb
Barium	137-1	20.34	21.40	20.89	20.87	2.55	ppb
Beryllium	9-1	0.95	0.92	1.02	0.96	5.49	ppb
Bismuth	209-1				100		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.23	1.25	1.47	1.32	9.98	ppb
Cadmium	106-1	-1.43	-1.75	-1.11	-1.43		ppb
Cadmium	111-1	1.48	1.44	1.48	1.47	1.50	ppb
Calcium	43-1	101892.63	102764.29	100310.70	101655.87	1.22	ppb
Calcium	44-1	104009.96	102257.72	101143.69	102470.46	1.41	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1.91	2.04	2.03	1.99	3.56	ppb
Cobalt	59-2	18.67	19.14	18.97	18.92	1.26	ppb
Copper	63-2	5.24	5.42	5.18	5.28	2.43	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				111		%
Indium	115-1				109		%
Indium	115-2				106		%
Iron	56-2	3794.24	3917.93	3850.12	3854.10	1.61	ppb
Iron	57-2	4429.06	4533.27	4491.48	4484.61	1.17	ppb
Iron	54-2	3952.19	3991.56	3967.28	3970.34	0.50	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-10DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:41:25 DataFile Name : 031SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	4.99	5.26	5.29	5.18	3.16	ppb
Lead	207-1	4.92	4.95	5.03	4.96	1.18	ppb
Lead	208-1	4.96	5.08	5.04	5.03	1.18	ppb
Lithium	6-1				87		%
Magnesium	24-2	25818.45	26391.13	25590.25	25933.28	1.59	ppb
Manganese	55-2	2375.58	2400.85	2386.21	2387.55	0.53	ppb
Molybdenum	94-1	0.73	0.74	0.74	0.74	1.18	ppb
Molybdenum	95-1	0.06	0.05	0.05	0.05	14.54	ppb
Molybdenum	96-1	0.14	0.12	0.13	0.13	5.76	ppb
Molybdenum	97-1	0.07	0.05	0.02	0.05	46.24	ppb
Molybdenum	98-1	0.02	0.02	0.01	0.01	21.71	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	11.57	11.94	12.27	11.93	2.98	ppb
Phosphorus	31-2	7.56	7.80	11.70	9.02	25.80	ppb
Potassium	39-2	6088.08	6228.31	6104.72	6140.37	1.25	ppb
Rhodium	103-1				107		%
Rhodium	103-2				107		%
Scandium	45-1				103		%
Scandium	45-2				105		%
Selenium	82-1	0.15	-0.16	0.17	0.05	355.95	ppb
Selenium	77-2	4.55	3.70	1.82	3.36	41.69	ppb
Selenium	78-2	0.00	1.47	-0.04	0.48	179.63	ppb
Silicon	28-1	1157.65	1176.78	1131.03	1155.15	1.99	ppb
Silver	107-1	0.03	0.03	0.03	0.03	6.51	ppb
Silver	109-1	0.02	0.02	0.02	0.02	5.35	ppb
Sodium	23-2	2754.43	2791.26	2861.67	2802.45	1.94	ppb
Strontium	86-1	177.04	181.44	179.00	179.16	1.23	ppb
Strontium	88-1	180.01	187.05	186.33	184.46	2.10	ppb
Sulfur	34-1	99096.55	99304.22	98546.84	98982.54	0.40	ppb
Terbium	159-1				104		%
Terbium	159-2				106		%
Thallium	203-1	0.08	0.06	0.07	0.07	12.99	ppb
Thallium	205-1	0.08	0.07	0.08	0.08	9.02	ppb
Tin	118-1	0.26	0.29	0.25	0.27	7.72	ppb
Titanium	47-1	1.12	1.07	1.12	1.11	2.77	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-10DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:41:25 DataFile Name : 031SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.04	0.04	0.04	0.04	4.97	ppb
Vanadium	51-2	3.11	3.25	3.09	3.15	2.72	ppb
Yttrium	89-1				111		%
Yttrium	89-2				111		%
Zinc	66-2	317.93	325.34	325.00	322.76	1.30	ppb
Zirconium	90-1	0.39	0.40	0.40	0.40	1.30	ppb
Zirconium	91-1	0.39	0.42	0.40	0.40	3.59	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-12DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:44:34 DataFile Name : 032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19746.98	19810.88	19866.32	19808.06	0.30	ppb
Antimony	121-1	0.15	0.16	0.15	0.15	3.53	ppb
Arsenic	75-2	6.25	6.28	6.09	6.21	1.62	ppb
Barium	135-1	23.71	23.67	23.76	23.71	0.19	ppb
Barium	137-1	23.55	24.40	24.10	24.02	1.79	ppb
Beryllium	9-1	2.58	2.68	2.64	2.63	1.85	ppb
Bismuth	209-1				101		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	2.34	2.85	1.90	2.37	20.13	ppb
Cadmium	106-1	-1.03	-0.81	-1.07	-0.97		ppb
Cadmium	111-1	2.15	2.08	2.12	2.12	1.83	ppb
Calcium	43-1	67321.07	69278.57	70194.33	68931.32	2.13	ppb
Calcium	44-1	64434.66	67538.67	68299.17	66757.50	3.07	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	9.64	9.47	9.52	9.55	0.89	ppb
Cobalt	59-2	25.21	25.12	25.08	25.14	0.26	ppb
Copper	63-2	33.64	33.64	33.75	33.68	0.19	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				112		%
Indium	115-1				108		%
Indium	115-2				107		%
Iron	56-2	10519.60	10648.49	10661.33	10609.81	0.74	ppb
Iron	57-2	11317.01	11364.13	11340.26	11340.46	0.21	ppb
Iron	54-2	11067.59	10573.33	10686.78	10775.90	2.40	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-12DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:44:34 DataFile Name : 032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	36.24	36.15	36.66	36.35	0.75	ppb
Lead	207-1	34.23	34.45	34.36	34.35	0.32	ppb
Lead	208-1	34.80	34.92	35.46	35.06	1.01	ppb
Lithium	6-1				87		%
Magnesium	24-2	9159.56	9141.41	8975.75	9092.24	1.11	ppb
Manganese	55-2	2744.75	2726.03	2724.79	2731.86	0.41	ppb
Molybdenum	94-1	1.41	1.49	1.39	1.43	3.75	ppb
Molybdenum	95-1	0.09	0.08	0.07	0.08	15.31	ppb
Molybdenum	96-1	0.27	0.29	0.27	0.27	3.73	ppb
Molybdenum	97-1	0.05	0.05	0.10	0.07	47.62	ppb
Molybdenum	98-1	0.03	0.05	0.03	0.03	35.40	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	18.89	18.75	19.40	19.01	1.80	ppb
Phosphorus	31-2	1119.59	1124.86	1149.82	1131.42	1.43	ppb
Potassium	39-2	7700.50	7656.31	7641.21	7666.01	0.40	ppb
Rhodium	103-1				109		%
Rhodium	103-2				108		%
Scandium	45-1				104		%
Scandium	45-2				106		%
Selenium	82-1	0.72	1.10	0.64	0.82	29.99	ppb
Selenium	77-2	6.26	6.63	4.94	5.94	14.94	ppb
Selenium	78-2	0.21	0.93	1.95	1.03	85.20	ppb
Silicon	28-1	1288.65	1338.98	1325.80	1317.81	1.98	ppb
Silver	107-1	0.03	0.02	0.03	0.03	28.87	ppb
Silver	109-1	0.02	0.03	0.03	0.03	15.79	ppb
Sodium	23-2	3330.32	3244.41	3215.08	3263.27	1.84	ppb
Strontium	86-1	186.43	196.95	189.15	190.84	2.86	ppb
Strontium	88-1	192.98	201.26	198.37	197.54	2.13	ppb
Sulfur	34-1	92307.55	98546.85	97112.82	95989.07	3.40	ppb
Terbium	159-1				107		%
Terbium	159-2				108		%
Thallium	203-1	0.14	0.14	0.14	0.14	2.24	ppb
Thallium	205-1	0.12	0.14	0.15	0.14	12.55	ppb
Tin	118-1	0.36	0.39	0.44	0.40	9.66	ppb
Titanium	47-1	5.43	5.62	5.60	5.55	1.88	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-12DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:44:34 DataFile Name : 032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.58	0.58	0.56	0.58	1.85	ppb
Vanadium	51-2	52.76	52.45	53.02	52.74	0.54	ppb
Yttrium	89-1				117		%
Yttrium	89-2				115		%
Zinc	66-2	370.00	367.02	370.09	369.04	0.47	ppb
Zirconium	90-1	0.78	0.82	0.78	0.80	2.75	ppb
Zirconium	91-1	0.80	0.86	0.82	0.83	3.53	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCV02 Instrumnet Name : P7
Client Sample ID : CCV02 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:47:41 DataFile Name : 033CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	46979.53	45653.26	46496.49	46376.43	1.45	ppb
Antimony	121-1	510.83	550.96	526.21	529.33	3.83	ppb
Arsenic	75-2	503.56	500.06	496.72	500.11	0.68	ppb
Barium	135-1	2629.15	2751.61	2650.63	2677.13	2.44	ppb
Barium	137-1	2657.99	2694.25	2647.99	2666.74	0.91	ppb
Beryllium	9-1	517.65	535.00	539.99	530.88	2.21	ppb
Bismuth	209-1				101		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	518.01	524.07	517.33	519.80	0.71	ppb
Cadmium	106-1	507.06	530.04	511.02	516.04	2.38	ppb
Cadmium	111-1	513.22	538.40	518.27	523.30	2.55	ppb
Calcium	43-1	250555.73	258912.43	258481.34	255983.17	1.84	ppb
Calcium	44-1	252816.80	256355.83	257832.92	255668.51	1.01	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	516.52	521.78	506.89	515.06	1.47	ppb
Cobalt	59-2	528.71	508.74	503.66	513.70	2.58	ppb
Copper	63-2	5153.51	5018.81	5004.40	5058.91	1.63	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				112		%
Indium	115-1				106		%
Indium	115-2				102		%
Iron	56-2	125139.88	124459.49	123747.86	124449.08	0.56	ppb
Iron	57-2	124885.63	122207.81	121688.50	122927.31	1.40	ppb
Iron	54-2	125592.52	123819.26	122309.95	123907.24	1.33	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCV02 Instrumnet Name : P7
Client Sample ID : CCV02 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:47:41 DataFile Name : 033CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2623.73	2614.95	2574.70	2604.46	1.00	ppb
Lead	207-1	2564.26	2537.34	2535.15	2545.58	0.64	ppb
Lead	208-1	2585.95	2564.87	2566.12	2572.32	0.46	ppb
Lithium	6-1				92		%
Magnesium	24-2	240054.11	241115.32	239295.57	240155.00	0.38	ppb
Manganese	55-2	5197.63	5228.30	5043.49	5156.47	1.92	ppb
Molybdenum	94-1	5082.35	5343.60	5015.68	5147.21	3.37	ppb
Molybdenum	95-1	5044.45	5342.25	5049.35	5145.35	3.31	ppb
Molybdenum	96-1	5055.16	5311.96	5112.02	5159.72	2.61	ppb
Molybdenum	97-1	5071.57	5314.08	5186.72	5190.79	2.34	ppb
Molybdenum	98-1	5116.87	5325.22	5096.52	5179.54	2.44	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	511.23	501.38	497.34	503.32	1.42	ppb
Phosphorus	31-2	10034.61	10096.66	9989.55	10040.27	0.54	ppb
Potassium	39-2	125196.14	124190.03	122122.75	123836.31	1.27	ppb
Rhodium	103-1				105		%
Rhodium	103-2				104		%
Scandium	45-1				106		%
Scandium	45-2				107		%
Selenium	82-1	486.44	509.08	486.73	494.08	2.63	ppb
Selenium	77-2	517.43	489.20	506.01	504.21	2.82	ppb
Selenium	78-2	491.49	492.92	489.56	491.32	0.34	ppb
Silicon	28-1	585.35	601.90	608.49	598.58	1.99	ppb
Silver	107-1	529.35	536.48	526.92	530.92	0.94	ppb
Silver	109-1	523.36	538.31	525.32	529.00	1.54	ppb
Sodium	23-2	251722.26	244790.15	241272.42	245928.27	2.16	ppb
Strontium	86-1	508.34	529.28	512.21	516.61	2.16	ppb
Strontium	88-1	511.42	542.72	516.91	523.68	3.19	ppb
Sulfur	34-1	8777.76	9174.48	8985.27	8979.17	2.21	ppb
Terbium	159-1				106		%
Terbium	159-2				108		%
Thallium	203-1	519.10	521.21	514.78	518.36	0.63	ppb
Thallium	205-1	512.85	528.91	524.36	522.04	1.59	ppb
Tin	118-1	527.74	549.86	534.85	537.48	2.10	ppb
Titanium	47-1	5040.18	5298.61	5106.68	5148.49	2.61	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCV02 Instrumnet Name : P7
Client Sample ID : CCV02 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:47:41 DataFile Name : 033CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	496.92	514.54	516.63	509.37	2.13	ppb
Vanadium	51-2	516.25	520.82	508.19	515.09	1.24	ppb
Yttrium	89-1				110		%
Yttrium	89-2				108		%
Zinc	66-2	5021.56	5040.59	4957.59	5006.58	0.87	ppb
Zirconium	90-1	508.66	529.36	513.69	517.24	2.09	ppb
Zirconium	91-1	503.73	531.89	517.23	517.62	2.72	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCB02 Instrumnet Name : P7
Client Sample ID : CCB02 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:52:49 DataFile Name : 034CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.71	-0.43	-0.67	-0.13		ppb
Antimony	121-1	0.09	0.08	0.07	0.08	8.70	ppb
Arsenic	75-2	-0.02	0.00	0.00	0.00		ppb
Barium	135-1	0.02	0.03	0.02	0.03	9.01	ppb
Barium	137-1	0.01	-0.01	-0.01	0.00		ppb
Beryllium	9-1	0.00	-0.01	-0.01	-0.01		ppb
Bismuth	209-1				99		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	-0.01	-0.11	0.06	-0.02		ppb
Cadmium	106-1	-6.26	-6.09	-4.47	-5.60		ppb
Cadmium	111-1	-0.42	-0.41	-0.32	-0.38		ppb
Calcium	43-1	2.85	-1.71	-3.86	-0.91		ppb
Calcium	44-1	3.82	3.67	6.42	4.64	33.29	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.01	0.06	-0.01	0.01	379.65	ppb
Cobalt	59-2	0.00	-0.01	-0.01	-0.01		ppb
Copper	63-2	0.03	0.06	0.10	0.06	58.76	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				104		%
Indium	115-1				103		%
Indium	115-2				100		%
Iron	56-2	1.03	1.18	1.16	1.12	6.95	ppb
Iron	57-2	1.15	-0.39	2.18	0.98	131.80	ppb
Iron	54-2	1.05	1.76	2.53	1.78	41.43	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCB02 Instrumnet Name : P7
Client Sample ID : CCB02 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:52:49 DataFile Name : 034CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.03	0.02	0.00	0.02	97.02	ppb
Lead	207-1	0.02	0.01	0.02	0.02	27.24	ppb
Lead	208-1	0.03	0.02	0.03	0.03	13.56	ppb
Lithium	6-1				90		%
Magnesium	24-2	1.01	0.96	0.51	0.83	33.22	ppb
Manganese	55-2	0.00	0.09	0.01	0.03	140.84	ppb
Molybdenum	94-1	0.07	0.11	0.06	0.08	35.01	ppb
Molybdenum	95-1	0.08	0.07	0.05	0.07	22.25	ppb
Molybdenum	96-1	0.06	0.06	0.07	0.06	7.98	ppb
Molybdenum	97-1	0.08	0.08	0.05	0.07	27.84	ppb
Molybdenum	98-1	0.06	0.08	0.05	0.06	23.70	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.05	-0.05	0.03	-0.02		ppb
Phosphorus	31-2	-22.29	-31.47	-36.57	-30.11		ppb
Potassium	39-2	12.81	20.57	14.16	15.85	26.18	ppb
Rhodium	103-1				104		%
Rhodium	103-2				102		%
Scandium	45-1				100		%
Scandium	45-2				99		%
Selenium	82-1	0.10	-0.74	-0.12	-0.25		ppb
Selenium	77-2	-0.09	-0.09	0.17	0.00		ppb
Selenium	78-2	-0.18	-0.42	-0.77	-0.46		ppb
Silicon	28-1	-3.15	-0.70	-1.03	-1.63		ppb
Silver	107-1	0.03	0.03	0.02	0.03	17.37	ppb
Silver	109-1	0.03	0.02	0.03	0.03	21.51	ppb
Sodium	23-2	33.56	36.66	33.73	34.65	5.03	ppb
Strontium	86-1	0.04	0.05	0.01	0.04	67.69	ppb
Strontium	88-1	0.00	0.00	0.00	0.00	42.66	ppb
Sulfur	34-1	-1082.45	-962.08	-716.15	-920.23		ppb
Terbium	159-1				101		%
Terbium	159-2				101		%
Thallium	203-1	0.01	0.02	0.02	0.02	27.04	ppb
Thallium	205-1	0.02	0.00	0.01	0.01	70.88	ppb
Tin	118-1	0.04	0.02	0.03	0.03	37.23	ppb
Titanium	47-1	0.06	0.08	0.06	0.07	22.24	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCB02 Instrumnet Name : P7
Client Sample ID : CCB02 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:52:49 DataFile Name : 034CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.01	0.00	0.00	0.00		ppb
Vanadium	51-2	0.00	0.00	0.00	0.00		ppb
Yttrium	89-1				103		%
Yttrium	89-2				102		%
Zinc	66-2	0.15	0.13	0.12	0.13	11.84	ppb
Zirconium	90-1	0.01	0.01	0.00	0.01	43.57	ppb
Zirconium	91-1	0.01	0.01	0.00	0.01	139.90	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-14DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:56:05 DataFile Name : 035SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19413.80	19259.47	19645.94	19439.74	1.00	ppb
Antimony	121-1	0.16	0.19	0.19	0.18	9.40	ppb
Arsenic	75-2	5.40	5.38	5.40	5.39	0.19	ppb
Barium	135-1	24.50	24.68	24.65	24.61	0.38	ppb
Barium	137-1	24.31	24.47	24.42	24.40	0.33	ppb
Beryllium	9-1	2.51	2.75	2.44	2.57	6.32	ppb
Bismuth	209-1				102		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	2.61	2.41	2.78	2.60	7.05	ppb
Cadmium	106-1	1.00	-1.42	-0.56	-0.33		ppb
Cadmium	111-1	2.33	2.22	2.23	2.26	2.63	ppb
Calcium	43-1	67358.79	68516.56	69388.61	68421.32	1.49	ppb
Calcium	44-1	64895.19	66787.76	68223.17	66635.37	2.50	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	9.31	9.27	9.28	9.29	0.25	ppb
Cobalt	59-2	27.13	26.74	26.81	26.89	0.77	ppb
Copper	63-2	29.09	28.26	28.76	28.70	1.45	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				111		%
Indium	115-1				107		%
Indium	115-2				106		%
Iron	56-2	9403.84	9311.25	9494.90	9403.33	0.98	ppb
Iron	57-2	10118.69	9847.51	10034.14	10000.11	1.39	ppb
Iron	54-2	9601.00	9765.91	9890.10	9752.34	1.49	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-14DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:56:05 DataFile Name : 035SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	36.53	38.37	36.52	37.14	2.87	ppb
Lead	207-1	34.59	35.93	34.52	35.02	2.27	ppb
Lead	208-1	35.43	36.60	35.19	35.74	2.12	ppb
Lithium	6-1				92		%
Magnesium	24-2	12634.13	12771.65	12747.97	12717.91	0.58	ppb
Manganese	55-2	2831.76	2826.09	2816.78	2824.88	0.27	ppb
Molybdenum	94-1	1.57	1.54	1.51	1.54	1.88	ppb
Molybdenum	95-1	0.09	0.10	0.11	0.10	7.28	ppb
Molybdenum	96-1	0.29	0.25	0.29	0.28	9.02	ppb
Molybdenum	97-1	0.08	0.07	0.08	0.08	4.55	ppb
Molybdenum	98-1	0.06	0.07	0.05	0.06	15.40	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	20.52	19.69	20.09	20.10	2.08	ppb
Phosphorus	31-2	977.59	892.02	920.51	930.04	4.69	ppb
Potassium	39-2	8320.17	8164.55	8025.56	8170.09	1.80	ppb
Rhodium	103-1				106		%
Rhodium	103-2				107		%
Scandium	45-1				103		%
Scandium	45-2				104		%
Selenium	82-1	-0.23	0.23	0.08	0.03	832.98	ppb
Selenium	77-2	5.51	4.95	5.57	5.34	6.33	ppb
Selenium	78-2	1.61	0.27	3.11	1.66	85.33	ppb
Silicon	28-1	1368.55	1379.08	1408.92	1385.51	1.51	ppb
Silver	107-1	0.05	0.04	0.03	0.04	20.78	ppb
Silver	109-1	0.05	0.03	0.03	0.04	32.74	ppb
Sodium	23-2	3309.06	3227.38	3273.74	3270.06	1.25	ppb
Strontium	86-1	176.30	178.81	176.91	177.34	0.74	ppb
Strontium	88-1	182.39	184.64	179.64	182.22	1.37	ppb
Sulfur	34-1	95368.01	97469.95	95971.37	96269.78	1.12	ppb
Terbium	159-1				105		%
Terbium	159-2				106		%
Thallium	203-1	0.10	0.11	0.08	0.10	14.41	ppb
Thallium	205-1	0.11	0.13	0.11	0.11	10.00	ppb
Tin	118-1	0.19	0.22	0.24	0.21	12.63	ppb
Titanium	47-1	4.14	3.88	4.16	4.06	3.89	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-14DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:56:05 DataFile Name : 035SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.41	0.41	0.41	0.41	0.90	ppb
Vanadium	51-2	42.96	42.16	42.75	42.62	0.98	ppb
Yttrium	89-1				114		%
Yttrium	89-2				112		%
Zinc	66-2	402.39	403.39	401.90	402.56	0.19	ppb
Zirconium	90-1	0.81	0.80	0.79	0.80	1.38	ppb
Zirconium	91-1	0.90	0.80	0.85	0.85	5.59	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-16DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:59:13 DataFile Name : 036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	22214.07	22475.41	22445.12	22378.20	0.64	ppb
Antimony	121-1	0.16	0.18	0.20	0.18	11.49	ppb
Arsenic	75-2	6.25	5.95	6.01	6.07	2.66	ppb
Barium	135-1	22.92	23.23	22.99	23.05	0.70	ppb
Barium	137-1	23.06	22.80	22.93	22.93	0.59	ppb
Beryllium	9-1	2.97	2.97	2.75	2.90	4.35	ppb
Bismuth	209-1				103		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	2.40	2.96	2.94	2.77	11.38	ppb
Cadmium	106-1	0.02	-0.24	-1.06	-0.43		ppb
Cadmium	111-1	2.35	2.32	2.25	2.31	2.13	ppb
Calcium	43-1	54051.71	54230.56	53197.51	53826.59	1.03	ppb
Calcium	44-1	52231.92	52491.02	51252.38	51991.77	1.26	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	11.18	11.39	11.53	11.37	1.55	ppb
Cobalt	59-2	28.20	28.40	28.79	28.47	1.06	ppb
Copper	63-2	40.26	41.03	41.00	40.77	1.07	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				109		%
Holmium	165-2				111		%
Indium	115-1				107		%
Indium	115-2				104		%
Iron	56-2	11649.80	12209.93	12032.67	11964.13	2.39	ppb
Iron	57-2	12435.54	12710.10	12644.89	12596.85	1.14	ppb
Iron	54-2	12034.99	12092.81	11929.01	12018.94	0.69	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-16DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:59:13 DataFile Name : 036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	54.98	54.08	55.00	54.69	0.96	ppb
Lead	207-1	51.45	51.27	52.32	51.68	1.09	ppb
Lead	208-1	52.70	52.21	52.80	52.57	0.60	ppb
Lithium	6-1				89		%
Magnesium	24-2	9015.79	9144.76	9113.91	9091.49	0.74	ppb
Manganese	55-2	2760.66	2821.80	2779.45	2787.30	1.12	ppb
Molybdenum	94-1	1.61	1.54	1.56	1.57	2.24	ppb
Molybdenum	95-1	0.10	0.11	0.10	0.10	1.95	ppb
Molybdenum	96-1	0.29	0.31	0.32	0.31	4.27	ppb
Molybdenum	97-1	0.07	0.06	0.06	0.07	6.76	ppb
Molybdenum	98-1	0.06	0.03	0.04	0.04	33.38	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	20.70	21.68	21.95	21.44	3.07	ppb
Phosphorus	31-2	1137.10	1119.11	1117.33	1124.51	0.97	ppb
Potassium	39-2	7747.23	7665.48	7805.03	7739.25	0.91	ppb
Rhodium	103-1				107		%
Rhodium	103-2				108		%
Scandium	45-1				104		%
Scandium	45-2				104		%
Selenium	82-1	-0.08	0.98	0.15	0.35	158.60	ppb
Selenium	77-2	6.18	7.85	11.79	8.61	33.46	ppb
Selenium	78-2	2.96	1.79	1.41	2.05	39.34	ppb
Silicon	28-1	1494.30	1499.53	1478.75	1490.86	0.73	ppb
Silver	107-1	0.02	0.03	0.03	0.03	20.01	ppb
Silver	109-1	0.02	0.03	0.03	0.03	14.39	ppb
Sodium	23-2	3294.44	3332.66	3361.82	3329.64	1.01	ppb
Strontium	86-1	158.25	154.70	154.64	155.86	1.33	ppb
Strontium	88-1	161.61	159.71	157.90	159.74	1.16	ppb
Sulfur	34-1	96144.68	93405.95	91262.53	93604.39	2.61	ppb
Terbium	159-1				105		%
Terbium	159-2				106		%
Thallium	203-1	0.11	0.12	0.12	0.12	5.13	ppb
Thallium	205-1	0.12	0.13	0.12	0.12	1.72	ppb
Tin	118-1	0.25	0.22	0.24	0.24	7.25	ppb
Titanium	47-1	6.70	6.71	6.41	6.61	2.58	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-16DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:59:13 DataFile Name : 036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.67	0.64	0.67	0.66	2.55	ppb
Vanadium	51-2	57.15	57.51	57.94	57.53	0.69	ppb
Yttrium	89-1				117		%
Yttrium	89-2				115		%
Zinc	66-2	406.66	415.99	413.50	412.05	1.17	ppb
Zirconium	90-1	0.85	0.85	0.88	0.86	1.86	ppb
Zirconium	91-1	0.86	0.82	0.82	0.83	2.92	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:02:18 DataFile Name : 037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	22040.68	21797.80	21863.32	21900.60	0.57	ppb
Antimony	121-1	0.16	0.15	0.16	0.15	3.61	ppb
Arsenic	75-2	6.40	6.68	6.03	6.37	5.06	ppb
Barium	135-1	26.57	26.06	26.42	26.35	1.01	ppb
Barium	137-1	26.34	26.52	26.25	26.37	0.54	ppb
Beryllium	9-1	2.29	2.58	2.47	2.44	6.07	ppb
Bismuth	209-1				101		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	2.02	2.51	2.00	2.18	13.21	ppb
Cadmium	106-1	-0.82	-0.69	0.61	-0.30		ppb
Cadmium	111-1	1.93	1.90	2.00	1.94	2.53	ppb
Calcium	43-1	42827.60	43314.01	42878.29	43006.63	0.62	ppb
Calcium	44-1	41081.38	42226.12	41895.48	41734.33	1.41	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	12.73	13.12	12.82	12.89	1.57	ppb
Cobalt	59-2	25.31	24.65	24.55	24.84	1.66	ppb
Copper	63-2	50.44	49.23	49.35	49.67	1.35	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				111		%
Indium	115-1				107		%
Indium	115-2				105		%
Iron	56-2	12592.86	12656.86	12538.99	12596.24	0.47	ppb
Iron	57-2	13160.20	13125.53	13023.57	13103.10	0.54	ppb
Iron	54-2	12546.80	12240.41	12528.92	12438.71	1.38	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:02:18 DataFile Name : 037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	58.12	57.83	58.16	58.04	0.31	ppb
Lead	207-1	55.49	55.24	54.25	54.99	1.19	ppb
Lead	208-1	55.97	55.99	55.80	55.92	0.19	ppb
Lithium	6-1				88		%
Magnesium	24-2	8366.78	8197.45	8288.10	8284.11	1.02	ppb
Manganese	55-2	2249.27	2224.37	2212.53	2228.73	0.84	ppb
Molybdenum	94-1	1.68	1.81	1.67	1.72	4.38	ppb
Molybdenum	95-1	0.10	0.08	0.10	0.10	11.54	ppb
Molybdenum	96-1	0.31	0.28	0.33	0.31	7.14	ppb
Molybdenum	97-1	0.14	0.07	0.07	0.09	44.00	ppb
Molybdenum	98-1	0.06	0.07	0.05	0.06	16.60	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	20.34	19.61	20.10	20.02	1.85	ppb
Phosphorus	31-2	1404.08	1277.33	1325.69	1335.70	4.79	ppb
Potassium	39-2	7014.87	7022.07	6902.96	6979.96	0.96	ppb
Rhodium	103-1				106		%
Rhodium	103-2				108		%
Scandium	45-1				104		%
Scandium	45-2				103		%
Selenium	82-1	-0.07	0.50	0.04	0.16	197.43	ppb
Selenium	77-2	11.94	5.57	7.66	8.39	38.69	ppb
Selenium	78-2	3.09	1.21	1.09	1.80	62.31	ppb
Silicon	28-1	1475.62	1474.12	1469.41	1473.05	0.22	ppb
Silver	107-1	0.02	0.02	0.03	0.02	2.81	ppb
Silver	109-1	0.02	0.03	0.02	0.02	16.48	ppb
Sodium	23-2	2681.27	2606.83	2631.10	2639.73	1.44	ppb
Strontium	86-1	118.71	123.00	121.45	121.05	1.79	ppb
Strontium	88-1	121.69	125.96	123.96	123.87	1.73	ppb
Sulfur	34-1	90636.00	92427.38	93021.48	92028.28	1.35	ppb
Terbium	159-1				103		%
Terbium	159-2				107		%
Thallium	203-1	0.12	0.14	0.12	0.13	8.12	ppb
Thallium	205-1	0.12	0.13	0.14	0.13	8.39	ppb
Tin	118-1	0.14	0.12	0.17	0.14	16.25	ppb
Titanium	47-1	11.49	11.10	11.74	11.45	2.81	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:02:18 DataFile Name : 037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.95	0.93	0.92	0.93	1.91	ppb
Vanadium	51-2	60.97	60.16	60.06	60.40	0.83	ppb
Yttrium	89-1				117		%
Yttrium	89-2				115		%
Zinc	66-2	359.80	348.84	343.64	350.76	2.35	ppb
Zirconium	90-1	0.88	0.92	0.92	0.91	2.45	ppb
Zirconium	91-1	0.95	0.88	0.89	0.91	4.13	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18DUPDLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:05:26 DataFile Name : 038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	21530.12	22461.01	22153.72	22048.28	2.15	ppb
Antimony	121-1	0.16	0.16	0.16	0.16	1.29	ppb
Arsenic	75-2	6.35	6.44	6.72	6.50	2.91	ppb
Barium	135-1	25.65	26.12	25.79	25.86	0.93	ppb
Barium	137-1	25.98	25.95	25.75	25.89	0.49	ppb
Beryllium	9-1	2.39	2.71	2.65	2.58	6.73	ppb
Bismuth	209-1				99		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	2.24	1.95	2.08	2.09	7.05	ppb
Cadmium	106-1	0.07	-1.54	-1.73	-1.07		ppb
Cadmium	111-1	2.01	1.82	1.80	1.88	6.26	ppb
Calcium	43-1	42985.18	43785.29	44492.19	43754.22	1.72	ppb
Calcium	44-1	41417.34	42461.93	42966.50	42281.92	1.87	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	13.03	13.32	12.79	13.05	2.03	ppb
Cobalt	59-2	25.34	25.78	25.01	25.38	1.54	ppb
Copper	63-2	49.93	50.91	50.49	50.44	0.98	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				110		%
Indium	115-1				106		%
Indium	115-2				105		%
Iron	56-2	12553.76	12588.88	12732.91	12625.19	0.75	ppb
Iron	57-2	13186.58	13266.14	13283.78	13245.50	0.39	ppb
Iron	54-2	12708.14	12618.18	12749.33	12691.89	0.53	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18DUPDLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:05:26 DataFile Name : 038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	59.73	58.44	61.42	59.87	2.49	ppb
Lead	207-1	56.28	54.65	57.97	56.30	2.95	ppb
Lead	208-1	57.31	56.22	59.28	57.60	2.69	ppb
Lithium	6-1				88		%
Magnesium	24-2	8578.56	8362.59	8606.63	8515.92	1.57	ppb
Manganese	55-2	2288.82	2235.90	2255.84	2260.19	1.18	ppb
Molybdenum	94-1	1.60	1.84	1.71	1.72	6.99	ppb
Molybdenum	95-1	0.11	0.10	0.09	0.10	7.92	ppb
Molybdenum	96-1	0.31	0.34	0.31	0.32	4.06	ppb
Molybdenum	97-1	0.06	0.07	0.06	0.07	11.36	ppb
Molybdenum	98-1	0.05	0.09	0.04	0.06	40.17	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	20.41	20.51	20.61	20.51	0.48	ppb
Phosphorus	31-2	1389.98	1411.81	1413.91	1405.23	0.94	ppb
Potassium	39-2	7113.75	7107.34	7010.55	7077.22	0.82	ppb
Rhodium	103-1				106		%
Rhodium	103-2				107		%
Scandium	45-1				103		%
Scandium	45-2				102		%
Selenium	82-1	0.80	-0.44	0.13	0.16	383.16	ppb
Selenium	77-2	8.74	7.50	9.97	8.74	14.14	ppb
Selenium	78-2	1.15	-0.45	1.76	0.82	139.17	ppb
Silicon	28-1	1478.95	1466.90	1475.70	1473.85	0.42	ppb
Silver	107-1	0.02	0.03	0.04	0.03	17.95	ppb
Silver	109-1	0.02	0.02	0.03	0.02	16.27	ppb
Sodium	23-2	2676.86	2594.13	2688.49	2653.16	1.94	ppb
Strontium	86-1	121.83	124.18	124.35	123.45	1.14	ppb
Strontium	88-1	124.29	127.76	126.94	126.33	1.43	ppb
Sulfur	34-1	94701.08	94166.01	97603.20	95490.10	1.94	ppb
Terbium	159-1				105		%
Terbium	159-2				107		%
Thallium	203-1	0.13	0.12	0.15	0.14	11.49	ppb
Thallium	205-1	0.13	0.12	0.13	0.13	2.45	ppb
Tin	118-1	0.17	0.16	0.15	0.16	6.86	ppb
Titanium	47-1	11.21	11.45	12.01	11.55	3.53	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18DUPDLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:05:26 DataFile Name : 038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.97	0.94	0.99	0.97	2.84	ppb
Vanadium	51-2	61.36	61.96	61.16	61.49	0.68	ppb
Yttrium	89-1				116		%
Yttrium	89-2				114		%
Zinc	66-2	357.77	361.41	351.38	356.85	1.42	ppb
Zirconium	90-1	0.99	0.98	0.98	0.98	0.68	ppb
Zirconium	91-1	0.90	0.97	0.95	0.94	4.02	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18LDLX25 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 25
Date & Time Acquired : 2025-08-20 13:08:33 DataFile Name : 039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	4406.71	4371.53	4467.86	4415.37	1.10	ppb
Antimony	121-1	0.05	0.05	0.06	0.05	3.99	ppb
Arsenic	75-2	1.49	1.42	1.34	1.42	5.46	ppb
Barium	135-1	4.91	5.73	5.30	5.31	7.70	ppb
Barium	137-1	5.23	5.15	5.18	5.19	0.74	ppb
Beryllium	9-1	0.57	0.49	0.51	0.52	8.02	ppb
Bismuth	209-1				100		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.44	0.42	0.44	0.43	2.32	ppb
Cadmium	106-1	-5.49	-2.69	-5.31	-4.50		ppb
Cadmium	111-1	-0.06	0.25	0.02	0.07	228.68	ppb
Calcium	43-1	8867.64	8483.15	8644.55	8665.12	2.23	ppb
Calcium	44-1	8510.96	8400.61	8620.66	8510.74	1.29	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.51	2.44	2.63	2.53	3.83	ppb
Cobalt	59-2	5.03	4.95	5.03	5.00	0.85	ppb
Copper	63-2	10.32	10.31	10.15	10.26	0.88	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				109		%
Indium	115-1				107		%
Indium	115-2				104		%
Iron	56-2	2597.23	2487.24	2553.06	2545.84	2.17	ppb
Iron	57-2	2676.33	2625.43	2690.24	2664.00	1.28	ppb
Iron	54-2	2637.97	2621.69	2632.91	2630.86	0.32	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18LDLX25 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 25
Date & Time Acquired : 2025-08-20 13:08:33 DataFile Name : 039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	11.64	11.94	11.71	11.76	1.32	ppb
Lead	207-1	11.33	10.77	10.43	10.85	4.16	ppb
Lead	208-1	11.36	11.06	10.91	11.11	2.03	ppb
Lithium	6-1				87		%
Magnesium	24-2	1672.84	1623.11	1697.06	1664.34	2.27	ppb
Manganese	55-2	458.41	449.48	455.08	454.32	0.99	ppb
Molybdenum	94-1	0.37	0.35	0.35	0.36	3.22	ppb
Molybdenum	95-1	0.02	0.02	0.00	0.01	63.52	ppb
Molybdenum	96-1	0.09	0.06	0.04	0.06	44.31	ppb
Molybdenum	97-1	0.03	0.03	0.05	0.04	27.14	ppb
Molybdenum	98-1	0.01	0.01	0.00	0.01	54.72	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	4.22	4.20	4.09	4.17	1.71	ppb
Phosphorus	31-2	256.34	230.10	226.61	237.68	6.84	ppb
Potassium	39-2	1489.34	1463.08	1499.54	1483.98	1.27	ppb
Rhodium	103-1				106		%
Rhodium	103-2				106		%
Scandium	45-1				104		%
Scandium	45-2				102		%
Selenium	82-1	0.11	-0.64	0.26	-0.09		ppb
Selenium	77-2	1.64	2.55	1.86	2.02	23.67	ppb
Selenium	78-2	-0.78	-0.94	1.08	-0.21		ppb
Silicon	28-1	304.67	294.33	300.69	299.89	1.74	ppb
Silver	107-1	0.01	0.01	0.01	0.01	3.24	ppb
Silver	109-1	0.01	0.02	0.02	0.02	17.81	ppb
Sodium	23-2	542.31	533.69	549.56	541.85	1.47	ppb
Strontium	86-1	26.36	25.97	25.83	26.05	1.06	ppb
Strontium	88-1	26.47	25.62	26.24	26.11	1.67	ppb
Sulfur	34-1	16929.84	15294.77	15584.28	15936.30	5.48	ppb
Terbium	159-1				103		%
Terbium	159-2				105		%
Thallium	203-1	0.02	-0.01	0.00	0.00	417.14	ppb
Thallium	205-1	0.02	0.01	0.00	0.01	82.03	ppb
Tin	118-1	0.03	0.07	0.03	0.05	46.72	ppb
Titanium	47-1	2.33	2.36	2.26	2.31	2.29	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18LDLX25 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 25
Date & Time Acquired : 2025-08-20 13:08:33 DataFile Name : 039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.19	0.18	0.17	0.18	5.54	ppb
Vanadium	51-2	12.67	12.47	12.23	12.46	1.76	ppb
Yttrium	89-1				109		%
Yttrium	89-2				107		%
Zinc	66-2	74.51	70.76	71.72	72.33	2.69	ppb
Zirconium	90-1	0.20	0.21	0.19	0.20	3.99	ppb
Zirconium	91-1	0.21	0.18	0.19	0.19	8.45	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18MSDLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:11:50 DataFile Name : 040SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	21536.88	21015.98	20845.48	21132.78	1.70	ppb
Antimony	121-1	91.34	99.17	93.94	94.82	4.21	ppb
Arsenic	75-2	140.61	138.42	137.02	138.69	1.30	ppb
Barium	135-1	438.39	479.71	434.15	450.75	5.58	ppb
Barium	137-1	437.41	472.33	448.46	452.73	3.94	ppb
Beryllium	9-1	93.58	95.16	97.00	95.25	1.79	ppb
Bismuth	209-1				102		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	91.70	99.81	93.76	95.09	4.43	ppb
Cadmium	106-1	89.57	99.13	94.06	94.25	5.08	ppb
Cadmium	111-1	94.24	103.34	95.07	97.55	5.16	ppb
Calcium	43-1	46624.08	48312.08	50842.24	48592.80	4.37	ppb
Calcium	44-1	46792.29	47761.12	49436.39	47996.60	2.79	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	103.74	103.00	103.78	103.51	0.43	ppb
Cobalt	59-2	117.44	117.22	117.94	117.53	0.32	ppb
Copper	63-2	942.59	947.82	950.18	946.87	0.41	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				112		%
Indium	115-1				109		%
Indium	115-2				106		%
Iron	56-2	15598.95	15695.99	15729.53	15674.82	0.43	ppb
Iron	57-2	16402.30	16376.72	16375.81	16384.94	0.09	ppb
Iron	54-2	15631.74	15656.69	15569.01	15619.15	0.29	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18MSDLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:11:50 DataFile Name : 040SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	498.40	509.88	530.28	512.85	3.15	ppb
Lead	207-1	484.47	496.36	491.00	490.61	1.21	ppb
Lead	208-1	500.16	517.30	518.64	512.03	2.01	ppb
Lithium	6-1				89		%
Magnesium	24-2	16761.23	16669.36	16768.52	16733.04	0.33	ppb
Manganese	55-2	2851.59	2896.84	2892.91	2880.45	0.87	ppb
Molybdenum	94-1	404.42	407.94	419.87	410.74	1.97	ppb
Molybdenum	95-1	308.83	306.90	325.30	313.67	3.22	ppb
Molybdenum	96-1	314.53	314.18	335.42	321.38	3.79	ppb
Molybdenum	97-1	311.21	315.04	321.85	316.03	1.71	ppb
Molybdenum	98-1	312.18	316.09	320.94	316.40	1.39	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	114.27	112.27	114.89	113.81	1.20	ppb
Phosphorus	31-2	1236.03	1234.80	1195.16	1222.00	1.90	ppb
Potassium	39-2	10460.69	10552.31	10798.71	10603.90	1.65	ppb
Rhodium	103-1				109		%
Rhodium	103-2				107		%
Scandium	45-1				105		%
Scandium	45-2				105		%
Selenium	82-1	86.76	87.53	90.64	88.31	2.32	ppb
Selenium	77-2	93.26	95.44	86.57	91.76	5.04	ppb
Selenium	78-2	93.50	92.53	88.30	91.44	3.02	ppb
Silicon	28-1	1248.86	1283.72	1395.55	1309.38	5.85	ppb
Silver	107-1	15.34	16.83	15.48	15.88	5.20	ppb
Silver	109-1	15.03	16.43	15.61	15.69	4.47	ppb
Sodium	23-2	11646.14	11575.64	11668.84	11630.20	0.42	ppb
Strontium	86-1	205.05	206.67	216.06	209.26	2.84	ppb
Strontium	88-1	211.53	219.36	220.43	217.11	2.24	ppb
Sulfur	34-1	80323.31	81541.25	89197.95	83687.50	5.75	ppb
Terbium	159-1				106		%
Terbium	159-2				107		%
Thallium	203-1	86.29	86.72	89.32	87.44	1.87	ppb
Thallium	205-1	82.28	84.03	88.27	84.86	3.63	ppb
Tin	118-1	86.38	94.23	87.05	89.22	4.88	ppb
Titanium	47-1	10.18	11.20	11.63	11.00	6.80	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18MSDLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:11:50 DataFile Name : 040SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	75.20	78.97	79.85	78.01	3.17	ppb
Vanadium	51-2	149.71	149.63	150.05	149.80	0.15	ppb
Yttrium	89-1				117		%
Yttrium	89-2				114		%
Zinc	66-2	1242.56	1231.10	1255.23	1242.96	0.97	ppb
Zirconium	90-1	84.57	84.72	88.84	86.04	2.81	ppb
Zirconium	91-1	81.33	82.67	89.35	84.45	5.08	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18MSDDLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:14:52 DataFile Name : 041SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	21602.34	21237.60	21681.86	21507.27	1.10	ppb
Antimony	121-1	93.58	99.61	97.46	96.88	3.16	ppb
Arsenic	75-2	142.13	140.96	143.60	142.23	0.93	ppb
Barium	135-1	432.40	480.60	459.49	457.49	5.28	ppb
Barium	137-1	451.40	474.97	459.13	461.83	2.60	ppb
Beryllium	9-1	94.44	98.22	97.23	96.63	2.03	ppb
Bismuth	209-1				101		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	90.49	104.15	95.44	96.69	7.15	ppb
Cadmium	106-1	95.98	100.22	93.18	96.46	3.68	ppb
Cadmium	111-1	95.35	101.93	100.01	99.09	3.41	ppb
Calcium	43-1	48384.84	51496.49	48389.34	49423.55	3.63	ppb
Calcium	44-1	46243.71	50927.13	46288.47	47819.77	5.63	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	104.17	104.92	107.11	105.40	1.45	ppb
Cobalt	59-2	118.64	120.96	120.84	120.15	1.09	ppb
Copper	63-2	960.94	951.58	981.72	964.74	1.60	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				110		%
Indium	115-1				108		%
Indium	115-2				105		%
Iron	56-2	15781.82	16134.99	16173.81	16030.21	1.35	ppb
Iron	57-2	16662.92	16573.66	16998.53	16745.04	1.34	ppb
Iron	54-2	16306.91	15976.87	16347.62	16210.47	1.25	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18MSDDLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:14:52 DataFile Name : 041SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	506.80	547.68	525.79	526.75	3.88	ppb
Lead	207-1	480.91	529.75	521.70	510.79	5.13	ppb
Lead	208-1	509.06	561.03	524.16	531.42	5.03	ppb
Lithium	6-1				88		%
Magnesium	24-2	16692.70	16869.65	16972.73	16845.03	0.84	ppb
Manganese	55-2	2917.90	2922.99	3021.72	2954.20	1.98	ppb
Molybdenum	94-1	413.76	435.31	417.06	422.04	2.75	ppb
Molybdenum	95-1	321.69	331.29	317.24	323.40	2.22	ppb
Molybdenum	96-1	330.25	333.64	326.43	330.11	1.09	ppb
Molybdenum	97-1	319.07	334.90	322.05	325.34	2.59	ppb
Molybdenum	98-1	319.10	334.45	315.06	322.87	3.17	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	114.73	114.84	118.44	116.01	1.82	ppb
Phosphorus	31-2	1180.54	1287.55	1200.53	1222.87	4.65	ppb
Potassium	39-2	10808.52	10872.43	10584.25	10755.07	1.41	ppb
Rhodium	103-1				106		%
Rhodium	103-2				107		%
Scandium	45-1				103		%
Scandium	45-2				104		%
Selenium	82-1	90.55	92.75	89.51	90.94	1.82	ppb
Selenium	77-2	97.08	105.72	97.66	100.15	4.82	ppb
Selenium	78-2	93.40	89.45	88.12	90.32	3.04	ppb
Silicon	28-1	1358.65	1375.30	1316.84	1350.26	2.23	ppb
Silver	107-1	15.52	16.58	16.13	16.08	3.31	ppb
Silver	109-1	15.72	16.38	15.90	16.00	2.12	ppb
Sodium	23-2	11592.67	11712.26	11802.30	11702.41	0.90	ppb
Strontium	86-1	213.67	219.39	211.99	215.02	1.80	ppb
Strontium	88-1	216.43	226.34	218.77	220.51	2.35	ppb
Sulfur	34-1	88284.96	88754.30	83029.16	86689.47	3.67	ppb
Terbium	159-1				106		%
Terbium	159-2				106		%
Thallium	203-1	87.79	94.38	87.04	89.74	4.50	ppb
Thallium	205-1	85.19	88.72	86.72	86.88	2.04	ppb
Tin	118-1	87.35	94.69	89.39	90.48	4.18	ppb
Titanium	47-1	10.43	11.56	11.04	11.01	5.14	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18MSDDLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:14:52 DataFile Name : 041SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	76.59	82.43	79.77	79.60	3.67	ppb
Vanadium	51-2	152.11	152.59	154.42	153.04	0.80	ppb
Yttrium	89-1				114		%
Yttrium	89-2				113		%
Zinc	66-2	1258.15	1263.26	1282.99	1268.14	1.03	ppb
Zirconium	90-1	87.83	91.45	86.56	88.61	2.86	ppb
Zirconium	91-1	87.70	88.04	85.80	87.18	1.38	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18ADLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:17:54 DataFile Name : 042SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	21107.63	21593.67	21168.51	21289.94	1.24	ppb
Antimony	121-1	92.33	97.01	95.39	94.91	2.51	ppb
Arsenic	75-2	147.02	146.81	142.73	145.52	1.66	ppb
Barium	135-1	444.01	463.85	448.13	452.00	2.32	ppb
Barium	137-1	439.32	458.40	459.55	452.42	2.51	ppb
Beryllium	9-1	94.00	100.74	93.73	96.16	4.13	ppb
Bismuth	209-1				103		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	97.25	95.57	97.07	96.63	0.96	ppb
Cadmium	106-1	93.49	92.64	95.48	93.87	1.55	ppb
Cadmium	111-1	96.32	98.78	97.80	97.63	1.27	ppb
Calcium	43-1	46907.82	49163.79	48612.75	48228.12	2.44	ppb
Calcium	44-1	45370.62	47092.50	47110.16	46524.43	2.15	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	105.15	105.39	103.04	104.53	1.24	ppb
Cobalt	59-2	118.79	121.40	116.65	118.95	2.00	ppb
Copper	63-2	977.60	993.52	937.02	969.38	3.01	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				112		%
Indium	115-1				109		%
Indium	115-2				106		%
Iron	56-2	15868.62	16001.49	15591.17	15820.42	1.32	ppb
Iron	57-2	16716.71	16648.62	16226.67	16530.67	1.61	ppb
Iron	54-2	15929.22	16081.40	15263.16	15757.93	2.76	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18ADLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:17:54 DataFile Name : 042SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	518.83	533.67	487.02	513.17	4.64	ppb
Lead	207-1	513.11	538.53	466.08	505.91	7.27	ppb
Lead	208-1	513.24	526.43	495.40	511.69	3.04	ppb
Lithium	6-1				88		%
Magnesium	24-2	16984.21	16832.73	16715.86	16844.27	0.80	ppb
Manganese	55-2	2928.74	2940.82	2815.58	2895.05	2.39	ppb
Molybdenum	94-1	398.60	410.94	407.20	405.58	1.56	ppb
Molybdenum	95-1	299.71	311.53	315.16	308.80	2.62	ppb
Molybdenum	96-1	306.51	325.32	319.89	317.24	3.05	ppb
Molybdenum	97-1	307.08	318.97	311.94	312.66	1.91	ppb
Molybdenum	98-1	296.78	317.54	309.48	307.93	3.40	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	114.23	116.21	113.49	114.64	1.23	ppb
Phosphorus	31-2	1233.88	1182.03	1161.37	1192.43	3.13	ppb
Potassium	39-2	10902.34	10919.52	10451.62	10757.82	2.47	ppb
Rhodium	103-1				108		%
Rhodium	103-2				110		%
Scandium	45-1				106		%
Scandium	45-2				104		%
Selenium	82-1	86.01	90.06	85.76	87.28	2.77	ppb
Selenium	77-2	96.54	99.72	92.55	96.27	3.73	ppb
Selenium	78-2	85.58	90.68	90.28	88.85	3.19	ppb
Silicon	28-1	1218.40	1323.55	1334.53	1292.16	4.96	ppb
Silver	107-1	15.70	16.18	15.67	15.85	1.81	ppb
Silver	109-1	15.22	15.81	16.18	15.74	3.07	ppb
Sodium	23-2	11451.76	11675.52	11511.72	11546.33	1.00	ppb
Strontium	86-1	203.31	212.05	205.40	206.92	2.20	ppb
Strontium	88-1	210.06	216.12	214.26	213.48	1.45	ppb
Sulfur	34-1	79360.78	84694.59	85223.82	83093.06	3.90	ppb
Terbium	159-1				105		%
Terbium	159-2				108		%
Thallium	203-1	86.30	88.10	87.13	87.17	1.04	ppb
Thallium	205-1	83.39	87.75	81.96	84.37	3.58	ppb
Tin	118-1	86.72	89.08	91.50	89.10	2.68	ppb
Titanium	47-1	10.51	11.00	10.89	10.80	2.38	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18ADLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:17:54 DataFile Name : 042SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	78.08	80.76	75.00	77.95	3.70	ppb
Vanadium	51-2	154.37	152.36	149.13	151.95	1.74	ppb
Yttrium	89-1				117		%
Yttrium	89-2				114		%
Zinc	66-2	1258.53	1282.21	1247.88	1262.87	1.39	ppb
Zirconium	90-1	81.90	85.61	86.41	84.64	2.84	ppb
Zirconium	91-1	82.02	86.16	84.33	84.17	2.46	ppb

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCV03 Instrumnet Name : P7
Client Sample ID : CCV03 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 13:27:08 DataFile Name : 043CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	46689.73	45419.74	44920.33	45676.60	2.00	ppb
Antimony	121-1	522.10	536.05	528.65	528.94	1.32	ppb
Arsenic	75-2	488.45	500.17	494.85	494.49	1.19	ppb
Barium	135-1	2594.38	2654.66	2652.15	2633.73	1.29	ppb
Barium	137-1	2627.34	2752.08	2653.30	2677.58	2.46	ppb
Beryllium	9-1	524.69	544.10	548.34	539.04	2.34	ppb
Bismuth	209-1				99		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	502.92	535.95	509.23	516.03	3.40	ppb
Cadmium	106-1	508.06	526.73	510.30	515.03	1.98	ppb
Cadmium	111-1	502.64	532.87	514.98	516.83	2.94	ppb
Calcium	43-1	252689.32	261022.27	252417.46	255376.35	1.92	ppb
Calcium	44-1	255263.88	253552.96	259517.11	256111.31	1.20	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	527.87	524.37	518.43	523.56	0.91	ppb
Cobalt	59-2	518.15	523.21	528.38	523.24	0.98	ppb
Copper	63-2	5100.79	5187.74	5121.09	5136.54	0.89	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				110		%
Holmium	165-2				114		%
Indium	115-1				108		%
Indium	115-2				105		%
Iron	56-2	124894.88	126680.44	127027.16	126200.83	0.91	ppb
Iron	57-2	125265.58	127363.44	127662.82	126763.95	1.03	ppb
Iron	54-2	127566.25	124933.37	126846.64	126448.75	1.08	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCV03 Instrumnet Name : P7
Client Sample ID : CCV03 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 13:27:08 DataFile Name : 043CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2610.17	2700.50	2645.47	2652.05	1.72	ppb
Lead	207-1	2597.37	2688.51	2554.92	2613.60	2.61	ppb
Lead	208-1	2564.67	2679.84	2577.31	2607.27	2.42	ppb
Lithium	6-1				91		%
Magnesium	24-2	242810.73	237178.67	239762.11	239917.17	1.18	ppb
Manganese	55-2	5264.26	5171.25	5171.57	5202.36	1.03	ppb
Molybdenum	94-1	5093.32	5077.34	5230.60	5133.75	1.64	ppb
Molybdenum	95-1	4984.00	5071.36	5195.98	5083.78	2.10	ppb
Molybdenum	96-1	5026.99	5087.33	5210.13	5108.15	1.83	ppb
Molybdenum	97-1	5003.89	5004.94	5144.91	5051.25	1.61	ppb
Molybdenum	98-1	5057.16	5117.73	5256.12	5143.67	1.98	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	513.10	517.39	516.07	515.52	0.43	ppb
Phosphorus	31-2	10001.46	10049.90	9974.57	10008.64	0.38	ppb
Potassium	39-2	124471.81	123992.46	123235.26	123899.84	0.50	ppb
Rhodium	103-1				106		%
Rhodium	103-2				104		%
Scandium	45-1				108		%
Scandium	45-2				106		%
Selenium	82-1	482.13	478.76	491.53	484.14	1.37	ppb
Selenium	77-2	479.19	498.24	487.97	488.47	1.95	ppb
Selenium	78-2	488.45	504.72	487.03	493.40	1.99	ppb
Silicon	28-1	586.51	614.67	608.06	603.08	2.44	ppb
Silver	107-1	504.92	533.53	519.54	519.33	2.75	ppb
Silver	109-1	520.07	547.34	524.57	530.66	2.76	ppb
Sodium	23-2	246982.08	242819.29	241113.51	243638.29	1.24	ppb
Strontium	86-1	497.62	507.14	513.50	506.09	1.58	ppb
Strontium	88-1	509.27	527.38	523.97	520.21	1.85	ppb
Sulfur	34-1	8779.89	8786.07	8749.60	8771.85	0.22	ppb
Terbium	159-1				107		%
Terbium	159-2				109		%
Thallium	203-1	512.39	550.42	524.04	528.95	3.68	ppb
Thallium	205-1	515.25	534.65	521.45	523.78	1.89	ppb
Tin	118-1	530.39	556.62	534.54	540.52	2.61	ppb
Titanium	47-1	5182.05	5265.62	5161.15	5202.94	1.06	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCV03 Instrumnet Name : P7
Client Sample ID : CCV03 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 13:27:08 DataFile Name : 043CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	480.43	513.46	504.29	499.39	3.41	ppb
Vanadium	51-2	532.51	518.39	525.49	525.46	1.34	ppb
Yttrium	89-1				112		%
Yttrium	89-2				109		%
Zinc	66-2	5095.32	5127.91	5095.71	5106.31	0.37	ppb
Zirconium	90-1	515.72	514.62	523.22	517.85	0.90	ppb
Zirconium	91-1	501.00	508.69	515.47	508.39	1.42	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCB03 Instrumnet Name : P7
Client Sample ID : CCB03 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 13:30:00 DataFile Name : 044CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.62	0.27	0.47	0.45	38.98	ppb
Antimony	121-1	0.13	0.14	0.14	0.14	5.89	ppb
Arsenic	75-2	-0.01	0.03	0.00	0.01	221.45	ppb
Barium	135-1	0.05	0.03	0.02	0.03	51.01	ppb
Barium	137-1	0.02	0.02	0.01	0.02	46.57	ppb
Beryllium	9-1	0.01	0.01	-0.01	0.00	621.79	ppb
Bismuth	209-1				99		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	-0.04	0.02	-0.08	-0.03		ppb
Cadmium	106-1	-3.87	-4.83	-5.41	-4.70		ppb
Cadmium	111-1	-0.25	-0.32	-0.36	-0.31		ppb
Calcium	43-1	0.10	2.41	2.94	1.82	83.34	ppb
Calcium	44-1	0.27	2.15	-1.48	0.31	576.74	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.03	0.05	-0.02	0.00		ppb
Cobalt	59-2	0.00	0.00	0.00	0.00		ppb
Copper	63-2	0.08	0.10	0.09	0.09	15.98	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				106		%
Indium	115-1				104		%
Indium	115-2				102		%
Iron	56-2	1.58	3.63	1.72	2.31	49.59	ppb
Iron	57-2	2.45	3.19	1.10	2.25	47.09	ppb
Iron	54-2	2.09	2.89	2.93	2.64	17.95	ppb
Krypton	83-1						cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCB03 Instrumnet Name : P7
Client Sample ID : CCB03 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 13:30:00 DataFile Name : 044CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.04	0.02	0.05	0.04	31.59	ppb
Lead	207-1	0.05	0.04	0.04	0.05	14.49	ppb
Lead	208-1	0.06	0.04	0.04	0.05	19.87	ppb
Lithium	6-1				88		%
Magnesium	24-2	1.82	2.05	1.98	1.95	6.06	ppb
Manganese	55-2	0.03	0.09	0.03	0.05	75.92	ppb
Molybdenum	94-1	0.19	0.22	0.20	0.20	5.97	ppb
Molybdenum	95-1	0.18	0.18	0.14	0.17	12.71	ppb
Molybdenum	96-1	0.17	0.17	0.16	0.17	5.82	ppb
Molybdenum	97-1	0.18	0.18	0.19	0.18	2.78	ppb
Molybdenum	98-1	0.21	0.16	0.16	0.18	18.87	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.09	0.08	0.04	0.07	33.97	ppb
Phosphorus	31-2	-30.81	-42.75	-41.85	-38.47		ppb
Potassium	39-2	12.12	20.08	17.47	16.56	24.51	ppb
Rhodium	103-1				105		%
Rhodium	103-2				103		%
Scandium	45-1				100		%
Scandium	45-2				99		%
Selenium	82-1	0.00	-0.46	-0.62	-0.36		ppb
Selenium	77-2	-0.09	0.17	-0.09	0.00		ppb
Selenium	78-2	0.08	-1.36	0.67	-0.20		ppb
Silicon	28-1	-1.80	-0.58	-1.07	-1.15		ppb
Silver	107-1	0.06	0.04	0.05	0.05	16.04	ppb
Silver	109-1	0.05	0.04	0.04	0.04	24.43	ppb
Sodium	23-2	47.98	51.34	50.01	49.77	3.40	ppb
Strontium	86-1	0.02	0.01	0.00	0.01	67.15	ppb
Strontium	88-1	0.00	0.00	0.01	0.00	46.76	ppb
Sulfur	34-1	-1167.38	-976.73	-1020.90	-1055.00		ppb
Terbium	159-1				102		%
Terbium	159-2				103		%
Thallium	203-1	0.02	0.03	0.02	0.02	35.82	ppb
Thallium	205-1	0.02	0.02	0.02	0.02	15.68	ppb
Tin	118-1	0.03	0.04	0.01	0.03	56.50	ppb
Titanium	47-1	0.07	0.01	0.03	0.04	78.59	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCB03 Instrumnet Name : P7
Client Sample ID : CCB03 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 13:30:00 DataFile Name : 044CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.01	0.00	0.00	0.00	120.62	ppb
Vanadium	51-2	0.00	0.00	0.00	0.00		ppb
Yttrium	89-1				105		%
Yttrium	89-2				103		%
Zinc	66-2	0.17	0.01	0.67	0.28	122.34	ppb
Zirconium	90-1	0.03	0.03	0.03	0.03	12.25	ppb
Zirconium	91-1	0.03	0.06	0.01	0.03	66.91	ppb

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P7
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 10:49:41 DataFile Name : 004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1513	1540	1470	1508	2.34	cps
Antimony	121-1	37	50	23	37	36.37	cps
Arsenic	75-2	17	7	3	9	78.08	cps
Barium	135-1	53	70	40	54	27.61	cps
Barium	137-1	160	113	93	122	27.99	cps
Beryllium	9-1	7	10	10	9	18.10	cps
Bismuth	209-1	4881975	4738851	4807135	4809320	1.49	cps
Bismuth	209-2	4236803	4318844	4230476	4262041	1.16	cps
Bromine	81-1	9713	9567	9356	9545	1.88	cps
Bromine	81-2	190	183	213	196	8.06	cps
Cadmium	108-1	13	3	17	11	62.48	cps
Cadmium	106-1	3340	3187	3304	3277	2.44	cps
Cadmium	111-1	2362	2262	2334	2320	2.23	cps
Calcium	43-1	337	423	393	384	11.45	cps
Calcium	44-1	26834	26757	26347	26646	0.98	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2424	2570	2597	2530	3.69	cps
Cobalt	59-2	120	93	137	117	18.74	cps
Copper	63-2	1357	1213	1327	1299	5.82	cps
Dysprosium	156-1	0	13	3	6	124.93	cps
Dysprosium	156-2	0	13	0	4	173.21	cps
Erbium	164-1	73	50	43	56	28.35	cps
Erbium	164-2	23	47	40	37	32.79	cps
Gadolinium	160-1	60	50	70	60	16.67	cps
Gadolinium	160-2	333	353	367	351	4.78	cps
Holmium	165-1	7690319	7730923	7543992	7655078	1.28	cps
Holmium	165-2	5734284	5600995	5623490	5652923	1.26	cps
Indium	115-1	6531741	6521016	6485230	6512662	0.37	cps
Indium	115-2	2589975	2586599	2548369	2574981	0.90	cps
Iron	56-2	21809	20868	21138	21272	2.28	cps
Iron	57-2	1453	1563	1480	1499	3.83	cps
Iron	54-2	2620	2580	2554	2585	1.30	cps
Krypton	83-1	523	507	477	502	4.71	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P7
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 10:49:41 DataFile Name : 004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	433	377	473	428	11.35	cps
Lead	207-1	350	293	357	333	10.44	cps
Lead	208-1	1717	1447	1593	1586	8.52	cps
Lithium	6-1	458248	461982	459045	459758	0.43	cps
Magnesium	24-2	353	417	460	410	13.08	cps
Manganese	55-2	903	750	813	822	9.37	cps
Molybdenum	94-1	380	343	287	337	13.97	cps
Molybdenum	95-1	340	263	283	296	13.46	cps
Molybdenum	96-1	437	327	290	351	21.74	cps
Molybdenum	97-1	170	197	163	177	9.98	cps
Molybdenum	98-1	497	437	417	450	9.25	cps
Neodymium	150-1	20	3	10	11	75.52	cps
Neodymium	150-2	7	3	13	8	65.47	cps
Nickel	60-2	597	607	627	610	2.50	cps
Phosphorus	31-2	853	927	870	883	4.35	cps
Potassium	39-2	67522	68041	68376	67980	0.63	cps
Rhodium	103-1	6590621	6407083	6599499	6532401	1.66	cps
Rhodium	103-2	4227012	4230135	4195922	4217689	0.45	cps
Scandium	45-1	4060809	4070913	4049780	4060500	0.26	cps
Scandium	45-2	414388	412340	414138	413622	0.27	cps
Selenium	82-1	304	314	346	321	6.76	cps
Selenium	77-2	3	0	0	1	173.21	cps
Selenium	78-2	507	540	503	517	3.92	cps
Silicon	28-1	706807	690151	689927	695628	1.39	cps
Silver	107-1	70	90	80	80	12.50	cps
Silver	109-1	40	70	83	64	34.44	cps
Sodium	23-2	32848	33005	32585	32813	0.65	cps
Strontium	86-1	837	823	727	796	7.55	cps
Strontium	88-1	340	330	300	323	6.44	cps
Sulfur	34-1	177252	178151	177605	177669	0.26	cps
Terbium	159-1	7906882	7941187	8010099	7952723	0.66	cps
Terbium	159-2	5852453	5788986	5813678	5818373	0.55	cps
Thallium	203-1	347	350	390	362	6.66	cps
Thallium	205-1	913	870	870	884	2.83	cps
Tin	118-1	993	973	960	976	1.72	cps
Titanium	47-1	63	97	90	83	21.17	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P7
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 10:49:41 DataFile Name : 004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	190	40	33	88	100.93	cps
Vanadium	51-2	37	7	43	29	67.60	cps
Yttrium	89-1	11514771	11588831	11294677	11466093	1.33	cps
Yttrium	89-2	3374123	3350485	3309958	3344855	0.97	cps
Zinc	66-2	4551	4717	4561	4610	2.03	cps
Zirconium	90-1	500	503	523	509	2.48	cps
Zirconium	91-1	117	117	117	117	0.00	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S2 Instrumnet Name : P7
Client Sample ID : S2 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 10:56:16 DataFile Name : 006CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4561	4827	4661	4683	2.88	cps
Antimony	121-1	10731	10637	10764	10711	0.61	cps
Arsenic	75-2	490	477	377	448	13.83	cps
Barium	135-1	13016	12956	12639	12870	1.57	cps
Barium	137-1	21603	22227	22418	22083	1.93	cps
Beryllium	9-1	823	789	629	747	13.89	cps
Bismuth	209-1	4851964	5013569	4883806	4916446	1.74	cps
Bismuth	209-2	4360426	4244087	4308667	4304393	1.35	cps
Bromine	81-1	9543	9440	9760	9581	1.71	cps
Bromine	81-2	157	180	150	162	9.71	cps
Cadmium	108-1	127	130	127	128	1.50	cps
Cadmium	106-1	3327	3154	3317	3266	2.98	cps
Cadmium	111-1	3730	3693	3767	3730	0.98	cps
Calcium	43-1	8409	8626	8749	8595	2.00	cps
Calcium	44-1	157604	160251	157897	158584	0.91	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	8442	8536	8069	8349	2.96	cps
Cobalt	59-2	5128	4968	4834	4976	2.95	cps
Copper	63-2	8252	8309	8149	8237	0.99	cps
Dysprosium	156-1	7	10	3	7	50.03	cps
Dysprosium	156-2	3	17	3	8	99.04	cps
Erbium	164-1	73	63	90	76	17.83	cps
Erbium	164-2	50	50	67	56	17.32	cps
Gadolinium	160-1	57	53	50	53	6.25	cps
Gadolinium	160-2	340	390	387	372	7.51	cps
Holmium	165-1	7654919	7692416	7545974	7631103	1.00	cps
Holmium	165-2	5842295	5724619	5682623	5749845	1.44	cps
Indium	115-1	6630859	6435140	6495199	6520399	1.54	cps
Indium	115-2	2574864	2515248	2487423	2525845	1.77	cps
Iron	56-2	162068	161609	158973	160883	1.04	cps
Iron	57-2	4981	5094	5238	5104	2.52	cps
Iron	54-2	10864	11101	10430	10798	3.15	cps
Krypton	83-1	453	457	407	439	6.37	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S2 Instrumnet Name : P7
Client Sample ID : S2 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 10:56:16 DataFile Name : 006CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	4431	4517	4457	4469	0.99	cps
Lead	207-1	3824	3787	3924	3845	1.84	cps
Lead	208-1	17648	17261	17761	17557	1.49	cps
Lithium	6-1	473024	464292	468007	468441	0.94	cps
Magnesium	24-2	135409	138150	137236	136932	1.02	cps
Manganese	55-2	3124	3050	2944	3039	2.98	cps
Molybdenum	94-1	11972	12465	12325	12254	2.08	cps
Molybdenum	95-1	14664	14758	14607	14676	0.52	cps
Molybdenum	96-1	16473	16867	16299	16546	1.76	cps
Molybdenum	97-1	9486	9637	9340	9488	1.56	cps
Molybdenum	98-1	23339	23896	23659	23631	1.18	cps
Neodymium	150-1	3	3	3	3	0.00	cps
Neodymium	150-2	0	3	7	3	100.05	cps
Nickel	60-2	1870	1887	1837	1865	1.37	cps
Phosphorus	31-2	1060	1063	1123	1082	3.29	cps
Potassium	39-2	231905	234518	232105	232843	0.62	cps
Rhodium	103-1	6527161	6517458	6444647	6496422	0.69	cps
Rhodium	103-2	4215906	4195957	4145550	4185804	0.87	cps
Scandium	45-1	3997045	3990949	4040264	4009419	0.67	cps
Scandium	45-2	421374	414515	415662	417184	0.88	cps
Selenium	82-1	946	937	900	927	2.64	cps
Selenium	77-2	93	53	63	70	29.74	cps
Selenium	78-2	773	617	770	720	12.43	cps
Silicon	28-1	703348	700192	697483	700341	0.42	cps
Silver	107-1	7479	7702	7552	7578	1.50	cps
Silver	109-1	7062	7122	6935	7040	1.35	cps
Sodium	23-2	245282	249380	245615	246759	0.92	cps
Strontium	86-1	2647	2617	2550	2605	1.90	cps
Strontium	88-1	16476	16279	16666	16474	1.18	cps
Sulfur	34-1	177478	178627	180941	179015	0.99	cps
Terbium	159-1	8087967	7833708	7845650	7922442	1.81	cps
Terbium	159-2	5904634	5771693	5847026	5841118	1.14	cps
Thallium	203-1	5348	5288	5054	5230	2.96	cps
Thallium	205-1	12296	12659	12559	12505	1.50	cps
Tin	118-1	23439	23576	23209	23408	0.79	cps
Titanium	47-1	3687	3600	3787	3692	2.53	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S2 Instrumnet Name : P7
Client Sample ID : S2 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 10:56:16 DataFile Name : 006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	15449	15075	15115	15213	1.35	cps
Vanadium	51-2	12565	12789	12769	12708	0.97	cps
Yttrium	89-1	11366032	11415133	11342084	11374416	0.33	cps
Yttrium	89-2	3348414	3264296	3324092	3312267	1.31	cps
Zinc	66-2	7649	7409	7886	7648	3.12	cps
Zirconium	90-1	10180	10427	10027	10211	1.98	cps
Zirconium	91-1	2134	2284	2340	2252	4.74	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S3 Instrumnet Name : P7
Client Sample ID : S3 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 10:59:31 DataFile Name : 007CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	154889	154243	153920	154350	0.32	cps
Antimony	121-1	257631	258558	258130	258106	0.18	cps
Arsenic	75-2	18659	18301	17724	18228	2.59	cps
Barium	135-1	300716	304853	302096	302555	0.70	cps
Barium	137-1	527042	525609	529927	527526	0.42	cps
Beryllium	9-1	35163	36019	35739	35640	1.22	cps
Bismuth	209-1	4799143	4803805	4829966	4810971	0.35	cps
Bismuth	209-2	4274160	4213160	4249186	4245502	0.72	cps
Bromine	81-1	9293	8919	9086	9100	2.06	cps
Bromine	81-2	127	113	120	120	5.56	cps
Cadmium	108-1	5141	5368	5314	5274	2.25	cps
Cadmium	106-1	10441	10174	10370	10328	1.34	cps
Cadmium	111-1	75159	76585	74791	75512	1.26	cps
Calcium	43-1	79163	79595	79290	79349	0.28	cps
Calcium	44-1	1239452	1247277	1227646	1238125	0.80	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	146638	142772	142828	144079	1.54	cps
Cobalt	59-2	221188	222026	222767	221994	0.36	cps
Copper	63-2	1717015	1708491	1705786	1710431	0.34	cps
Dysprosium	156-1	7	7	17	10	57.72	cps
Dysprosium	156-2	27	20	17	21	24.12	cps
Erbium	164-1	47	70	50	56	22.71	cps
Erbium	164-2	57	63	40	53	22.53	cps
Gadolinium	160-1	63	47	43	51	20.96	cps
Gadolinium	160-2	340	387	387	371	7.26	cps
Holmium	165-1	7443415	7553504	7506743	7501221	0.74	cps
Holmium	165-2	5739640	5675951	5734799	5716797	0.62	cps
Indium	115-1	6325902	6342308	6374689	6347633	0.39	cps
Indium	115-2	2502893	2508728	2509746	2507122	0.15	cps
Iron	56-2	6518882	6645050	6527193	6563708	1.08	cps
Iron	57-2	176856	174008	172582	174482	1.25	cps
Iron	54-2	390628	385209	388463	388100	0.70	cps
Krypton	83-1	540	480	460	493	8.44	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S3 Instrumnet Name : P7
Client Sample ID : S3 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 10:59:31 DataFile Name : 007CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	954563	966019	964930	961837	0.66	cps
Lead	207-1	817463	823424	828950	823279	0.70	cps
Lead	208-1	3794602	3803690	3881109	3826467	1.24	cps
Lithium	6-1	475103	473848	472325	473759	0.29	cps
Magnesium	24-2	1349155	1316245	1310428	1325276	1.58	cps
Manganese	55-2	1189720	1176909	1176637	1181089	0.63	cps
Molybdenum	94-1	963694	982086	983099	976293	1.12	cps
Molybdenum	95-1	1387134	1393071	1393474	1391226	0.26	cps
Molybdenum	96-1	1478397	1498172	1489300	1488623	0.67	cps
Molybdenum	97-1	868357	880780	875018	874718	0.71	cps
Molybdenum	98-1	2188565	2232049	2188401	2203005	1.14	cps
Neodymium	150-1	27	10	13	17	52.93	cps
Neodymium	150-2	10	20	13	14	35.26	cps
Nickel	60-2	58725	58741	57855	58440	0.87	cps
Phosphorus	31-2	9109	9173	9433	9238	1.86	cps
Potassium	39-2	865755	861017	869138	865303	0.47	cps
Rhodium	103-1	6358747	6328148	6415978	6367624	0.70	cps
Rhodium	103-2	4098459	4160270	4078125	4112285	1.04	cps
Scandium	45-1	4037854	3926835	3967686	3977458	1.41	cps
Scandium	45-2	409253	408953	403549	407252	0.79	cps
Selenium	82-1	5975	6033	6057	6022	0.70	cps
Selenium	77-2	643	737	683	688	6.81	cps
Selenium	78-2	2700	2814	2700	2738	2.39	cps
Silicon	28-1	1593823	1622609	1620854	1612429	1.00	cps
Silver	107-1	360953	366634	367311	364966	0.96	cps
Silver	109-1	342414	341998	345444	343285	0.55	cps
Sodium	23-2	2124113	2103929	2104149	2110730	0.55	cps
Strontium	86-1	90218	90252	90715	90395	0.31	cps
Strontium	88-1	781066	787412	790044	786174	0.59	cps
Sulfur	34-1	200004	201375	203421	201600	0.85	cps
Terbium	159-1	7732087	7761285	7830873	7774748	0.65	cps
Terbium	159-2	5756033	5785513	5590889	5710812	1.84	cps
Thallium	203-1	235010	235050	237555	235871	0.62	cps
Thallium	205-1	559757	562080	563352	561730	0.32	cps
Tin	118-1	218853	216996	220061	218637	0.71	cps
Titanium	47-1	363299	369424	366205	366309	0.84	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S3 Instrumnet Name : P7
Client Sample ID : S3 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 10:59:31 DataFile Name : 007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	700464	710523	711885	707624	0.88	cps
Vanadium	51-2	120794	118526	119102	119474	0.99	cps
Yttrium	89-1	11210967	11413535	11238419	11287640	0.97	cps
Yttrium	89-2	3224519	3311278	3238555	3258118	1.43	cps
Zinc	66-2	319088	322115	320853	320685	0.47	cps
Zirconium	90-1	470689	476073	477549	474771	0.76	cps
Zirconium	91-1	104339	105151	104214	104568	0.49	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S4 Instrumnet Name : P7
Client Sample ID : S4 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:02:40 DataFile Name : 008CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	387943	383077	379407	383476	1.12	cps
Antimony	121-1	640806	650423	648670	646633	0.79	cps
Arsenic	75-2	45008	45426	45199	45211	0.46	cps
Barium	135-1	760091	769668	762561	764107	0.65	cps
Barium	137-1	1319226	1337567	1324556	1327117	0.71	cps
Beryllium	9-1	90226	92141	89235	90534	1.63	cps
Bismuth	209-1	4915545	4894275	4893213	4901011	0.26	cps
Bismuth	209-2	4194388	4190725	4359677	4248263	2.27	cps
Bromine	81-1	9196	9026	9053	9092	1.01	cps
Bromine	81-2	120	130	120	123	4.68	cps
Cadmium	108-1	13677	12976	13083	13245	2.85	cps
Cadmium	106-1	21509	21282	21369	21387	0.54	cps
Cadmium	111-1	185232	189457	184926	186538	1.36	cps
Calcium	43-1	195685	199953	196847	197495	1.12	cps
Calcium	44-1	3070720	3061075	3070058	3067284	0.18	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	349641	349221	354090	350984	0.77	cps
Cobalt	59-2	541195	540639	551563	544466	1.13	cps
Copper	63-2	4240095	4212949	4249086	4234044	0.44	cps
Dysprosium	156-1	17	33	43	31	43.29	cps
Dysprosium	156-2	53	50	57	53	6.25	cps
Erbium	164-1	63	97	77	79	21.27	cps
Erbium	164-2	67	53	77	66	17.86	cps
Gadolinium	160-1	63	43	67	58	21.85	cps
Gadolinium	160-2	317	407	360	361	12.47	cps
Holmium	165-1	7838477	7715482	7749338	7767766	0.82	cps
Holmium	165-2	5695948	5596115	5775174	5689079	1.58	cps
Indium	115-1	6390322	6613615	6432029	6478655	1.83	cps
Indium	115-2	2451637	2400280	2513740	2455219	2.31	cps
Iron	56-2	16642941	16495044	16102785	16413590	1.70	cps
Iron	57-2	426950	431157	427823	428643	0.52	cps
Iron	54-2	963432	964959	949805	959399	0.87	cps
Krypton	83-1	457	457	483	466	3.31	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S4 Instrumnet Name : P7
Client Sample ID : S4 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:02:40 DataFile Name : 008CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2546391	2567404	2495678	2536491	1.45	cps
Lead	207-1	2151026	2177614	2172664	2167101	0.65	cps
Lead	208-1	9963596	9997662	9923930	9961729	0.37	cps
Lithium	6-1	482464	485307	482722	483498	0.33	cps
Magnesium	24-2	3375260	3296843	3281813	3317972	1.51	cps
Manganese	55-2	2936869	2920402	2822649	2893306	2.13	cps
Molybdenum	94-1	2436537	2488813	2393098	2439483	1.96	cps
Molybdenum	95-1	3518982	3493758	3479564	3497435	0.57	cps
Molybdenum	96-1	3803678	3798065	3860742	3820828	0.91	cps
Molybdenum	97-1	2191708	2173228	2137580	2167505	1.27	cps
Molybdenum	98-1	5641414	5648382	5547855	5612551	1.00	cps
Neodymium	150-1	23	30	27	27	12.51	cps
Neodymium	150-2	10	10	3	8	49.52	cps
Nickel	60-2	146482	147304	143078	145621	1.54	cps
Phosphorus	31-2	22019	21642	21822	21828	0.86	cps
Potassium	39-2	1964407	1915697	1984788	1954964	1.82	cps
Rhodium	103-1	6601885	6379257	6433892	6471678	1.79	cps
Rhodium	103-2	4092424	4055983	4196869	4115092	1.78	cps
Scandium	45-1	4029950	4024779	3992070	4015600	0.51	cps
Scandium	45-2	416957	413213	416468	415546	0.49	cps
Selenium	82-1	14510	14520	14481	14504	0.14	cps
Selenium	77-2	1687	1557	1577	1607	4.36	cps
Selenium	78-2	5775	5641	5775	5730	1.34	cps
Silicon	28-1	2626711	2678359	2697584	2667551	1.37	cps
Silver	107-1	913547	925210	914291	917683	0.71	cps
Silver	109-1	855331	868179	855784	859765	0.85	cps
Sodium	23-2	5327491	5168383	5266759	5254211	1.53	cps
Strontium	86-1	223619	228211	225595	225808	1.02	cps
Strontium	88-1	1948085	1951091	1977374	1958850	0.82	cps
Sulfur	34-1	233178	234417	234418	234004	0.31	cps
Terbium	159-1	8045813	8073002	8072476	8063764	0.19	cps
Terbium	159-2	5831310	5725877	5724018	5760402	1.07	cps
Thallium	203-1	594998	600272	594379	596550	0.54	cps
Thallium	205-1	1406435	1444369	1411767	1420857	1.45	cps
Tin	118-1	539215	551537	549624	546792	1.21	cps
Titanium	47-1	911174	920018	908875	913355	0.64	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S4 Instrumnet Name : P7
Client Sample ID : S4 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:02:40 DataFile Name : 008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	1887616	1929789	1898076	1905160	1.15	cps
Vanadium	51-2	299308	298312	294266	297296	0.90	cps
Yttrium	89-1	11558607	11494067	11285777	11446150	1.25	cps
Yttrium	89-2	3258607	3293346	3332112	3294688	1.12	cps
Zinc	66-2	768672	771630	781374	773892	0.86	cps
Zirconium	90-1	1191334	1205546	1192626	1196502	0.66	cps
Zirconium	91-1	266337	267431	266456	266741	0.23	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S5 Instrumnet Name : P7
Client Sample ID : S5 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:05:38 DataFile Name : 009CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	751579	748837	749602	750006	0.19	cps
Antimony	121-1	1298515	1298928	1303516	1300320	0.21	cps
Arsenic	75-2	89962	88925	89847	89578	0.63	cps
Barium	135-1	1523827	1534108	1526692	1528209	0.35	cps
Barium	137-1	2704164	2664918	2722128	2697070	1.08	cps
Beryllium	9-1	175080	178130	179285	177498	1.22	cps
Bismuth	209-1	4628172	4917501	4903515	4816396	3.39	cps
Bismuth	209-2	4353829	4230663	4376555	4320349	1.82	cps
Bromine	81-1	9033	9096	9236	9122	1.14	cps
Bromine	81-2	133	117	143	131	10.28	cps
Cadmium	108-1	26107	25846	25893	25949	0.54	cps
Cadmium	106-1	39119	39611	40787	39839	2.15	cps
Cadmium	111-1	367010	371027	370688	369575	0.60	cps
Calcium	43-1	391382	391820	391796	391666	0.06	cps
Calcium	44-1	6116733	6181004	6100834	6132857	0.69	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	701463	696950	693026	697146	0.61	cps
Cobalt	59-2	1092117	1081069	1078277	1083821	0.68	cps
Copper	63-2	8449263	8377843	8372789	8399965	0.51	cps
Dysprosium	156-1	27	50	33	37	32.78	cps
Dysprosium	156-2	73	77	90	80	11.02	cps
Erbium	164-1	87	93	127	102	20.97	cps
Erbium	164-2	73	57	73	68	14.19	cps
Gadolinium	160-1	97	57	60	71	31.21	cps
Gadolinium	160-2	343	403	270	339	19.70	cps
Holmium	165-1	7321202	8050533	7572491	7648076	4.84	cps
Holmium	165-2	5893517	5682318	5888160	5821332	2.07	cps
Indium	115-1	6077873	6610592	6405583	6364683	4.22	cps
Indium	115-2	2493386	2476288	2477443	2482372	0.38	cps
Iron	56-2	32602199	32236880	32291700	32376926	0.61	cps
Iron	57-2	852351	832626	847996	844324	1.23	cps
Iron	54-2	1815443	1810773	1809100	1811772	0.18	cps
Krypton	83-1	473	413	437	441	6.86	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S5 Instrumnet Name : P7
Client Sample ID : S5 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:05:38 DataFile Name : 009CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	4997651	5168753	5105940	5090781	1.70	cps
Lead	207-1	4355912	4437493	4435814	4409740	1.06	cps
Lead	208-1	19712523	20019454	19887992	19873323	0.77	cps
Lithium	6-1	465299	489763	478510	477857	2.56	cps
Magnesium	24-2	6759525	6540087	6555026	6618212	1.85	cps
Manganese	55-2	5681993	5691187	5639184	5670788	0.49	cps
Molybdenum	94-1	4746023	4897412	4944001	4862479	2.13	cps
Molybdenum	95-1	6842645	6950786	6947836	6913755	0.89	cps
Molybdenum	96-1	7495344	7659168	7606420	7586978	1.10	cps
Molybdenum	97-1	4362835	4362211	4387256	4370767	0.33	cps
Molybdenum	98-1	11164767	11178966	11387644	11243792	1.11	cps
Neodymium	150-1	40	63	73	59	29.04	cps
Neodymium	150-2	10	23	37	23	57.15	cps
Nickel	60-2	286374	282747	286025	285048	0.70	cps
Phosphorus	31-2	42118	42108	42145	42124	0.05	cps
Potassium	39-2	3803697	3858617	3753340	3805218	1.38	cps
Rhodium	103-1	6151154	6532039	6483807	6389000	3.25	cps
Rhodium	103-2	4208414	4047842	4115583	4123946	1.95	cps
Scandium	45-1	3802979	4074108	3931473	3936187	3.45	cps
Scandium	45-2	417281	404438	409539	410419	1.58	cps
Selenium	82-1	28016	28269	28497	28260	0.85	cps
Selenium	77-2	3110	3400	3187	3233	4.65	cps
Selenium	78-2	11181	11128	11268	11192	0.63	cps
Silicon	28-1	4274959	4393147	4383975	4350694	1.51	cps
Silver	107-1	1768424	1800915	1826198	1798512	1.61	cps
Silver	109-1	1712655	1732004	1738741	1727800	0.78	cps
Sodium	23-2	10287804	10377279	10437499	10367527	0.73	cps
Strontium	86-1	447179	454385	456800	452788	1.11	cps
Strontium	88-1	3856640	3949506	3981144	3929096	1.65	cps
Sulfur	34-1	287150	288258	286580	287329	0.30	cps
Terbium	159-1	7664339	8229433	7771988	7888587	3.80	cps
Terbium	159-2	5787315	5699927	5744410	5743884	0.76	cps
Thallium	203-1	1183373	1194320	1192000	1189898	0.48	cps
Thallium	205-1	2943832	2950527	2966369	2953576	0.39	cps
Tin	118-1	1089631	1083582	1085487	1086234	0.28	cps
Titanium	47-1	1823555	1822430	1842988	1829657	0.63	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S5 Instrumnet Name : P7
Client Sample ID : S5 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:05:38 DataFile Name : 009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	3780430	3826955	3842457	3816614	0.85	cps
Vanadium	51-2	587667	583275	585898	585613	0.38	cps
Yttrium	89-1	10744453	11633515	11271252	11216407	3.99	cps
Yttrium	89-2	3311279	3214771	3251744	3259264	1.49	cps
Zinc	66-2	1516319	1528303	1535108	1526577	0.62	cps
Zirconium	90-1	2413093	2386399	2415118	2404870	0.67	cps
Zirconium	91-1	531143	535061	534694	533633	0.41	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S6 Instrumnet Name : P7
Client Sample ID : S6 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:08:36 DataFile Name : 010CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1454914	1475115	1504517	1478182	1.69	cps
Antimony	121-1	2612593	2611938	2625581	2616704	0.29	cps
Arsenic	75-2	179157	179926	180903	179995	0.49	cps
Barium	135-1	3094497	3127662	3137262	3119807	0.72	cps
Barium	137-1	5424412	5366981	5406042	5399145	0.54	cps
Beryllium	9-1	343010	353091	347111	347737	1.46	cps
Bismuth	209-1	4981498	4978334	4980166	4979999	0.03	cps
Bismuth	209-2	4321091	4337262	4309229	4322527	0.33	cps
Bromine	81-1	9123	9000	8673	8932	2.61	cps
Bromine	81-2	147	130	107	128	15.72	cps
Cadmium	108-1	51187	52783	52037	52002	1.54	cps
Cadmium	106-1	73941	75807	75476	75075	1.33	cps
Cadmium	111-1	725317	736524	736557	732799	0.88	cps
Calcium	43-1	765511	777081	775193	772595	0.80	cps
Calcium	44-1	12010679	12216419	12148757	12125285	0.86	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1354365	1378213	1393804	1375461	1.44	cps
Cobalt	59-2	2214089	2121178	2173870	2169713	2.15	cps
Copper	63-2	16512759	16791822	17251241	16851941	2.21	cps
Dysprosium	156-1	83	70	73	76	9.18	cps
Dysprosium	156-2	173	197	157	176	11.44	cps
Erbium	164-1	147	123	123	131	10.28	cps
Erbium	164-2	103	90	70	88	19.12	cps
Gadolinium	160-1	93	100	73	89	15.61	cps
Gadolinium	160-2	400	360	350	370	7.15	cps
Holmium	165-1	8033034	7971289	7865203	7956508	1.07	cps
Holmium	165-2	5893593	5871042	5971027	5911887	0.89	cps
Indium	115-1	6590723	6332553	6453484	6458920	2.00	cps
Indium	115-2	2528573	2507467	2470125	2502055	1.18	cps
Iron	56-2	65977077	64900222	65935109	65604136	0.93	cps
Iron	57-2	1627218	1608035	1648432	1627895	1.24	cps
Iron	54-2	3644031	3566673	3661343	3624015	1.39	cps
Krypton	83-1	543	403	543	497	16.28	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S6 Instrumnet Name : P7
Client Sample ID : S6 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:08:36 DataFile Name : 010CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	10104406	10280918	10280187	10221837	0.99	cps
Lead	207-1	8778713	8829442	8867934	8825363	0.51	cps
Lead	208-1	39686349	40372269	40660656	40239758	1.24	cps
Lithium	6-1	496522	480950	488889	488787	1.59	cps
Magnesium	24-2	13127137	13091559	13008966	13075887	0.46	cps
Manganese	55-2	11432008	11330247	11571828	11444694	1.06	cps
Molybdenum	94-1	9649198	9911884	9889243	9816775	1.48	cps
Molybdenum	95-1	13567871	14165287	14080616	13937925	2.32	cps
Molybdenum	96-1	15047260	15307144	15189470	15181291	0.86	cps
Molybdenum	97-1	8571036	8778549	8846774	8732119	1.64	cps
Molybdenum	98-1	22272343	22425475	22803637	22500485	1.22	cps
Neodymium	150-1	97	127	93	106	17.39	cps
Neodymium	150-2	23	23	37	28	27.73	cps
Nickel	60-2	567845	566667	564378	566297	0.31	cps
Phosphorus	31-2	82419	82124	82834	82459	0.43	cps
Potassium	39-2	7579605	7408274	7431772	7473217	1.24	cps
Rhodium	103-1	6545794	6466718	6459455	6490656	0.74	cps
Rhodium	103-2	4190535	4196781	4120742	4169353	1.01	cps
Scandium	45-1	4095577	3980803	3958507	4011629	1.83	cps
Scandium	45-2	413502	410479	414619	412867	0.52	cps
Selenium	82-1	55350	56445	55624	55806	1.02	cps
Selenium	77-2	6538	6702	6435	6558	2.05	cps
Selenium	78-2	22017	22030	22698	22248	1.75	cps
Silicon	28-1	7636223	7719841	7647715	7667926	0.59	cps
Silver	107-1	3618541	3642291	3629817	3630216	0.33	cps
Silver	109-1	3367130	3454891	3461341	3427787	1.54	cps
Sodium	23-2	20412593	21044923	20518381	20658632	1.64	cps
Strontium	86-1	885910	903500	898615	896008	1.01	cps
Strontium	88-1	7817838	7816429	7918286	7850851	0.74	cps
Sulfur	34-1	390764	393008	392835	392203	0.32	cps
Terbium	159-1	8218993	8163169	8116696	8166286	0.63	cps
Terbium	159-2	5928030	5782302	5878346	5862893	1.26	cps
Thallium	203-1	2473273	2535573	2522519	2510455	1.31	cps
Thallium	205-1	6058027	6028083	6072130	6052747	0.37	cps
Tin	118-1	2165243	2144961	2163189	2157798	0.52	cps
Titanium	47-1	3609128	3671623	3654352	3645034	0.89	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S6 Instrumnet Name : P7
Client Sample ID : S6 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:08:36 DataFile Name : 010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	7414398	7722043	7661702	7599381	2.15	cps
Vanadium	51-2	1177102	1171071	1181943	1176705	0.46	cps
Yttrium	89-1	11512570	11426838	11346094	11428501	0.73	cps
Yttrium	89-2	3232752	3290966	3313104	3278941	1.27	cps
Zinc	66-2	3079189	3042510	3002098	3041266	1.27	cps
Zirconium	90-1	4728876	4745541	4703516	4725977	0.45	cps
Zirconium	91-1	1055700	1076366	1070985	1067684	1.00	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S7 Instrumnet Name : P7
Client Sample ID : S7 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:11:20 DataFile Name : 011CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3093873	3116711	3035670	3082085	1.36	cps
Antimony	121-1	5303625	5401754	5318034	5341138	0.99	cps
Arsenic	75-2	368927	367168	366648	367581	0.32	cps
Barium	135-1	6401379	6502809	6436847	6447012	0.80	cps
Barium	137-1	11060030	11309652	11214689	11194790	1.13	cps
Beryllium	9-1	698020	702112	701267	700467	0.31	cps
Bismuth	209-1	5074382	5137858	5091947	5101396	0.64	cps
Bismuth	209-2	4509502	4372102	4236054	4372553	3.13	cps
Bromine	81-1	9506	9463	9213	9394	1.69	cps
Bromine	81-2	143	160	143	149	6.46	cps
Cadmium	108-1	106184	107637	106567	106796	0.71	cps
Cadmium	106-1	149793	152470	150969	151077	0.89	cps
Cadmium	111-1	1470583	1497677	1485790	1484683	0.91	cps
Calcium	43-1	1511390	1516759	1530959	1519703	0.67	cps
Calcium	44-1	24449953	24948625	24758625	24719068	1.02	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2826103	2835942	2800296	2820780	0.65	cps
Cobalt	59-2	4396204	4422961	4355278	4391481	0.78	cps
Copper	63-2	34875499	34039319	33778566	34231128	1.67	cps
Dysprosium	156-1	120	123	100	114	11.03	cps
Dysprosium	156-2	373	363	293	343	12.70	cps
Erbium	164-1	193	180	227	200	12.02	cps
Erbium	164-2	137	170	137	148	13.02	cps
Gadolinium	160-1	157	147	133	146	8.04	cps
Gadolinium	160-2	407	337	417	387	11.27	cps
Holmium	165-1	8200655	8027124	8044052	8090610	1.18	cps
Holmium	165-2	6219742	6098482	5940984	6086403	2.30	cps
Indium	115-1	6742250	6597239	6618846	6652778	1.18	cps
Indium	115-2	2604496	2573128	2529424	2569016	1.47	cps
Iron	56-2	134369771	133280485	133184038	133611431	0.49	cps
Iron	57-2	3351430	3294188	3251682	3299100	1.52	cps
Iron	54-2	7383934	7473614	7344456	7400668	0.89	cps
Krypton	83-1	517	497	423	479	10.26	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S7 Instrumnet Name : P7
Client Sample ID : S7 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:11:20 DataFile Name : 011CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	20485570	20989748	20989581	20821633	1.40	cps
Lead	207-1	18227281	17875584	17860788	17987884	1.15	cps
Lead	208-1	81845380	83120748	82427396	82464508	0.77	cps
Lithium	6-1	491260	494253	488622	491378	0.57	cps
Magnesium	24-2	26741360	26976559	26735846	26817922	0.51	cps
Manganese	55-2	23490139	23815016	23707374	23670843	0.70	cps
Molybdenum	94-1	20529323	20369593	20195236	20364717	0.82	cps
Molybdenum	95-1	29078613	29403447	29460353	29314138	0.70	cps
Molybdenum	96-1	31220960	31808390	31374160	31467836	0.97	cps
Molybdenum	97-1	17920147	18177553	17922921	18006874	0.82	cps
Molybdenum	98-1	46119263	47037264	46173248	46443258	1.11	cps
Neodymium	150-1	203	213	257	224	12.63	cps
Neodymium	150-2	67	60	73	67	10.00	cps
Nickel	60-2	1153960	1146817	1138421	1146399	0.68	cps
Phosphorus	31-2	168901	167822	168447	168390	0.32	cps
Potassium	39-2	15330716	15398633	15722210	15483853	1.35	cps
Rhodium	103-1	6728209	6685364	6657661	6690411	0.53	cps
Rhodium	103-2	4315473	4263172	4268277	4282307	0.67	cps
Scandium	45-1	4188126	4164554	4198314	4183665	0.41	cps
Scandium	45-2	434769	432476	423483	430242	1.39	cps
Selenium	82-1	112003	114044	112864	112971	0.91	cps
Selenium	77-2	13216	13046	12959	13074	1.00	cps
Selenium	78-2	44447	44129	43381	43986	1.24	cps
Silicon	28-1	15444215	15729587	15319428	15497743	1.36	cps
Silver	107-1	7286442	7449909	7327254	7354535	1.16	cps
Silver	109-1	6942160	6918967	7094952	6985360	1.37	cps
Sodium	23-2	41970042	42507274	41869237	42115517	0.81	cps
Strontium	86-1	1875118	1883445	1851042	1869868	0.90	cps
Strontium	88-1	16126361	16241991	16094824	16154392	0.48	cps
Sulfur	34-1	610356	623325	618155	617279	1.06	cps
Terbium	159-1	8594271	8340274	8346113	8426886	1.72	cps
Terbium	159-2	6188843	6091653	6093756	6124751	0.91	cps
Thallium	203-1	5151444	5155150	5113483	5140026	0.45	cps
Thallium	205-1	12370009	12344611	12271080	12328567	0.42	cps
Tin	118-1	4394050	4474631	4496288	4454990	1.21	cps
Titanium	47-1	7466423	7457157	7446644	7456741	0.13	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S7 Instrumnet Name : P7
Client Sample ID : S7 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:11:20 DataFile Name : 011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	15888036	15883596	16026624	15932752	0.51	cps
Vanadium	51-2	2379001	2391778	2389228	2386669	0.28	cps
Yttrium	89-1	12157983	12009961	11945975	12037973	0.90	cps
Yttrium	89-2	3542441	3449324	3392723	3461496	2.18	cps
Zinc	66-2	6120272	6158584	6033580	6104145	1.05	cps
Zirconium	90-1	9910664	9930898	9960998	9934187	0.25	cps
Zirconium	91-1	2192389	2232744	2222732	2215955	0.95	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S8 Instrumnet Name : P7
Client Sample ID : S8 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:14:08 DataFile Name : 012CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	15302792	15549141	15528700	15460211	0.88	cps
Antimony	121-1	4654	4421	4214	4430	4.97	cps
Arsenic	75-2	437	393	497	442	11.73	cps
Barium	135-1	3854	3957	3974	3928	1.66	cps
Barium	137-1	6838	6585	6748	6724	1.91	cps
Beryllium	9-1	96	71	121	96	26.02	cps
Bismuth	209-1	4814440	4691046	4552791	4686092	2.79	cps
Bismuth	209-2	4095926	4120006	4041045	4085659	0.99	cps
Bromine	81-1	9607	9767	10090	9821	2.51	cps
Bromine	81-2	197	170	227	198	14.33	cps
Cadmium	108-1	100	110	107	106	4.82	cps
Cadmium	106-1	3257	3314	3194	3255	1.84	cps
Cadmium	111-1	2930	2953	2861	2915	1.64	cps
Calcium	43-1	7362860	7469222	7541746	7457942	1.21	cps
Calcium	44-1	120676585	120806482	122783808	121422292	0.97	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	14948	14684	14961	14864	1.05	cps
Cobalt	59-2	8086	8086	8006	8059	0.57	cps
Copper	63-2	4444	4467	4371	4427	1.14	cps
Dysprosium	156-1	200	297	300	266	21.39	cps
Dysprosium	156-2	253	237	250	247	3.58	cps
Erbium	164-1	570	697	590	619	11.00	cps
Erbium	164-2	503	460	470	478	4.75	cps
Gadolinium	160-1	403	397	327	376	11.31	cps
Gadolinium	160-2	633	523	523	560	11.34	cps
Holmium	165-1	7961719	7918866	7946964	7942516	0.27	cps
Holmium	165-2	6030256	6065579	5978672	6024836	0.73	cps
Indium	115-1	6349841	6454133	6399873	6401282	0.81	cps
Indium	115-2	2531851	2563203	2583377	2559477	1.01	cps
Iron	56-2	637976017	643375150	643386804	641579324	0.49	cps
Iron	57-2	16289201	15996321	15815901	16033808	1.49	cps
Iron	54-2	35637730	35464968	35326759	35476486	0.44	cps
Krypton	83-1	483	460	387	443	11.38	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S8 Instrumnet Name : P7
Client Sample ID : S8 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:14:08 DataFile Name : 012CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	5638	5428	5234	5433	3.71	cps
Lead	207-1	4621	4537	4591	4583	0.92	cps
Lead	208-1	22267	21113	20813	21398	3.59	cps
Lithium	6-1	492547	478190	469071	479936	2.47	cps
Magnesium	24-2	133276361	134358248	134229858	133954822	0.44	cps
Manganese	55-2	10791	10887	10841	10840	0.45	cps
Molybdenum	94-1	6375	6091	6238	6235	2.27	cps
Molybdenum	95-1	5334	5071	4761	5055	5.68	cps
Molybdenum	96-1	10054	9927	9456	9812	3.21	cps
Molybdenum	97-1	3507	3340	3140	3329	5.52	cps
Molybdenum	98-1	8479	7819	7515	7938	6.21	cps
Neodymium	150-1	93	130	140	121	20.29	cps
Neodymium	150-2	70	107	73	83	24.33	cps
Nickel	60-2	4564	4581	4471	4539	1.31	cps
Phosphorus	31-2	883	900	947	910	3.61	cps
Potassium	39-2	77830576	76368912	76016421	76738636	1.25	cps
Rhodium	103-1	6243178	6190665	6335429	6256424	1.17	cps
Rhodium	103-2	4099880	4135111	4044894	4093295	1.11	cps
Scandium	45-1	4161289	4202855	4229537	4197894	0.82	cps
Scandium	45-2	436029	437060	430619	434569	0.80	cps
Selenium	82-1	433	567	581	527	15.56	cps
Selenium	77-2	17	13	27	19	36.75	cps
Selenium	78-2	550	530	570	550	3.64	cps
Silicon	28-1	759988	750763	754658	755136	0.61	cps
Silver	107-1	2944	1670	1257	1957	44.93	cps
Silver	109-1	2754	1397	1203	1785	47.34	cps
Sodium	23-2	207933097	208267450	200758430	205652992	2.06	cps
Strontium	86-1	23312	23803	23960	23691	1.43	cps
Strontium	88-1	202670	201717	204894	203094	0.80	cps
Sulfur	34-1	168963	171844	169649	170152	0.88	cps
Terbium	159-1	8135548	8115907	8029702	8093719	0.70	cps
Terbium	159-2	5975404	6049518	6016639	6013854	0.62	cps
Thallium	203-1	7125	6942	6969	7012	1.41	cps
Thallium	205-1	17909	16510	16811	17076	4.31	cps
Tin	118-1	1867	1973	1870	1903	3.19	cps
Titanium	47-1	760	670	660	697	7.91	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : S8 Instrumnet Name : P7
Client Sample ID : S8 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:14:08 DataFile Name : 012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	857	440	460	586	40.14	cps
Vanadium	51-2	983	1023	1040	1016	2.87	cps
Yttrium	89-1	11612909	11634297	11710101	11652436	0.44	cps
Yttrium	89-2	3506919	3560732	3424773	3497475	1.96	cps
Zinc	66-2	8042	7622	7755	7807	2.75	cps
Zirconium	90-1	8746	8836	8609	8730	1.31	cps
Zirconium	91-1	1943	1933	1937	1938	0.26	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICV01 Instrumnet Name : P7
Client Sample ID : ICV01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:35:30 DataFile Name : 014ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	228106	226423	228807	227779	0.54	cps
Antimony	121-1	2039681	2076783	2057632	2058032	0.90	cps
Arsenic	75-2	145645	143532	146596	145257	1.08	cps
Barium	135-1	1950933	1973540	1975761	1966745	0.70	cps
Barium	137-1	3393056	3433665	3352779	3393166	1.19	cps
Beryllium	9-1	24634	24753	24677	24688	0.25	cps
Bismuth	209-1	4867615	4756583	4809029	4811075	1.15	cps
Bismuth	209-2	4339427	4322632	4319218	4327092	0.25	cps
Bromine	81-1	10184	10067	9960	10070	1.11	cps
Bromine	81-2	237	217	180	211	13.61	cps
Cadmium	108-1	18759	18886	19413	19019	1.82	cps
Cadmium	106-1	28518	29086	29049	28884	1.10	cps
Cadmium	111-1	291546	293276	289679	291500	0.62	cps
Calcium	43-1	61889	60909	62027	61608	0.99	cps
Calcium	44-1	1023170	1031274	1025897	1026780	0.40	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	460213	448832	449619	452888	1.40	cps
Cobalt	59-2	1776131	1744552	1792681	1771121	1.38	cps
Copper	63-2	640019	636547	639921	638829	0.31	cps
Dysprosium	156-1	17	10	20	16	32.73	cps
Dysprosium	156-2	117	123	87	109	17.94	cps
Erbium	164-1	73	83	57	71	18.94	cps
Erbium	164-2	37	53	47	46	18.41	cps
Gadolinium	160-1	43	73	67	61	25.78	cps
Gadolinium	160-2	397	317	323	346	12.85	cps
Holmium	165-1	7746936	7643252	7633016	7674401	0.82	cps
Holmium	165-2	5876132	5816426	5791721	5828093	0.74	cps
Indium	115-1	6658027	6522482	6599734	6593414	1.03	cps
Indium	115-2	2630602	2629948	2623597	2628049	0.15	cps
Iron	56-2	2082955	2043071	2045724	2057250	1.08	cps
Iron	57-2	56178	54690	55686	55518	1.37	cps
Iron	54-2	135256	134385	134168	134603	0.43	cps
Krypton	83-1	413	513	400	442	14.01	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICV01 Instrumnet Name : P7
Client Sample ID : ICV01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:35:30 DataFile Name : 014ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1466722	1481339	1471850	1473304	0.50	cps
Lead	207-1	1258963	1264278	1263074	1262105	0.22	cps
Lead	208-1	5968785	5952663	5916507	5945985	0.45	cps
Lithium	6-1	439732	433077	432104	434971	0.95	cps
Magnesium	24-2	952927	950512	953719	952386	0.18	cps
Manganese	55-2	845775	841250	836195	841073	0.57	cps
Molybdenum	94-1	687	767	700	718	5.97	cps
Molybdenum	95-1	767	820	797	794	3.37	cps
Molybdenum	96-1	1170	1013	973	1052	9.88	cps
Molybdenum	97-1	570	620	583	591	4.38	cps
Molybdenum	98-1	1223	1360	1227	1270	6.14	cps
Neodymium	150-1	47	53	57	52	9.75	cps
Neodymium	150-2	7	17	7	10	57.72	cps
Nickel	60-2	465083	461044	464204	463443	0.46	cps
Phosphorus	31-2	833	860	900	864	3.88	cps
Potassium	39-2	1259166	1238702	1255526	1251131	0.87	cps
Rhodium	103-1	6772984	6599622	6705348	6692651	1.31	cps
Rhodium	103-2	4378460	4302525	4315544	4332176	0.94	cps
Scandium	45-1	4118658	4110194	4061201	4096684	0.76	cps
Scandium	45-2	421803	421004	420684	421164	0.14	cps
Selenium	82-1	45542	45668	46093	45768	0.63	cps
Selenium	77-2	5371	5358	5544	5424	1.92	cps
Selenium	78-2	18265	18338	18462	18355	0.54	cps
Silicon	28-1	712280	700095	709910	707428	0.91	cps
Silver	107-1	1468896	1486014	1482564	1479158	0.61	cps
Silver	109-1	1392331	1391355	1385865	1389850	0.25	cps
Sodium	23-2	1649864	1632538	1654772	1645725	0.71	cps
Strontium	86-1	900	833	963	899	7.23	cps
Strontium	88-1	1043	1080	1100	1074	2.67	cps
Sulfur	34-1	167432	168120	168366	167973	0.29	cps
Terbium	159-1	7894996	7985013	7863357	7914455	0.80	cps
Terbium	159-2	5911976	5853373	5836699	5867349	0.67	cps
Thallium	203-1	1843210	1817230	1759940	1806793	2.36	cps
Thallium	205-1	4487388	4447426	4404133	4446316	0.94	cps
Tin	118-1	1727	1843	1660	1743	5.32	cps
Titanium	47-1	210	220	223	218	3.19	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICV01 Instrumnet Name : P7
Client Sample ID : ICV01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:35:30 DataFile Name : 014ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	160	23	20	68	117.87	cps
Vanadium	51-2	955732	943205	953127	950688	0.70	cps
Yttrium	89-1	11831127	11739216	11379415	11649920	2.05	cps
Yttrium	89-2	3430707	3378964	3406955	3405542	0.76	cps
Zinc	66-2	233733	233390	233904	233676	0.11	cps
Zirconium	90-1	587	707	600	631	10.42	cps
Zirconium	91-1	310	260	287	286	8.76	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : LLICV01 Instrumnet Name : P7
Client Sample ID : LLICV01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:50:16 DataFile Name : 017LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4377	4571	4451	4466	2.19	cps
Antimony	121-1	10294	11124	10891	10770	3.98	cps
Arsenic	75-2	360	363	357	360	0.93	cps
Barium	135-1	12175	12215	12786	12392	2.76	cps
Barium	137-1	21116	21339	21219	21225	0.53	cps
Beryllium	9-1	655	765	715	711	7.74	cps
Bismuth	209-1	4715312	4739683	4711025	4722007	0.33	cps
Bismuth	209-2	4224919	4263109	4303963	4263997	0.93	cps
Bromine	81-1	9403	9540	10187	9710	4.31	cps
Bromine	81-2	123	133	117	124	6.74	cps
Cadmium	108-1	167	173	110	150	23.20	cps
Cadmium	106-1	2840	2944	2774	2853	3.00	cps
Cadmium	111-1	3488	3846	3478	3604	5.81	cps
Calcium	43-1	8282	8362	8316	8320	0.48	cps
Calcium	44-1	153678	154600	155117	154465	0.47	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	7992	8279	7919	8063	2.36	cps
Cobalt	59-2	4794	4531	4687	4671	2.84	cps
Copper	63-2	7962	7799	7695	7819	1.72	cps
Dysprosium	156-1	7	7	13	9	43.25	cps
Dysprosium	156-2	3	3	3	3	0.00	cps
Erbium	164-1	67	50	63	60	14.70	cps
Erbium	164-2	53	60	40	51	19.92	cps
Gadolinium	160-1	33	57	33	41	32.78	cps
Gadolinium	160-2	347	367	350	354	3.02	cps
Holmium	165-1	7544830	7388056	7764188	7565692	2.50	cps
Holmium	165-2	5683576	5728279	5792331	5734729	0.95	cps
Indium	115-1	6522861	6518414	6537581	6526285	0.15	cps
Indium	115-2	2536340	2481655	2479857	2499284	1.28	cps
Iron	56-2	159144	161432	165530	162035	2.00	cps
Iron	57-2	5394	4984	4904	5094	5.16	cps
Iron	54-2	10450	10794	10975	10740	2.48	cps
Krypton	83-1	477	510	470	486	4.41	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : LLICV01 Instrumnet Name : P7
Client Sample ID : LLICV01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:50:16 DataFile Name : 017LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	4021	3814	3854	3896	2.81	cps
Lead	207-1	3380	3417	3277	3358	2.16	cps
Lead	208-1	15354	15547	15410	15437	0.64	cps
Lithium	6-1	438773	444977	442567	442106	0.71	cps
Magnesium	24-2	128483	128503	128897	128628	0.18	cps
Manganese	55-2	3434	3214	3177	3275	4.24	cps
Molybdenum	94-1	12262	11925	12179	12122	1.45	cps
Molybdenum	95-1	14457	14651	14371	14493	0.99	cps
Molybdenum	96-1	15755	16142	15402	15766	2.35	cps
Molybdenum	97-1	8779	9136	8983	8966	2.00	cps
Molybdenum	98-1	22538	23406	22721	22888	2.00	cps
Neodymium	150-1	7	13	17	12	41.65	cps
Neodymium	150-2	0	0	10	3	173.21	cps
Nickel	60-2	1620	1560	1637	1606	2.51	cps
Phosphorus	31-2	2847	2940	2897	2895	1.61	cps
Potassium	39-2	223701	222888	220583	222391	0.73	cps
Rhodium	103-1	6535653	6550408	6491966	6526009	0.47	cps
Rhodium	103-2	4236117	4163955	4142129	4180734	1.18	cps
Scandium	45-1	4014885	4005383	4003702	4007990	0.15	cps
Scandium	45-2	405536	408588	408108	407411	0.40	cps
Selenium	82-1	911	855	863	877	3.43	cps
Selenium	77-2	43	50	70	54	25.49	cps
Selenium	78-2	700	693	743	712	3.81	cps
Silicon	28-1	689183	690763	687561	689169	0.23	cps
Silver	107-1	7886	8403	7589	7959	5.17	cps
Silver	109-1	7152	7432	7165	7250	2.18	cps
Sodium	23-2	231365	232137	230553	231352	0.34	cps
Strontium	86-1	2590	2504	2757	2617	4.92	cps
Strontium	88-1	16109	16826	15815	16250	3.20	cps
Sulfur	34-1	174871	177599	175933	176134	0.78	cps
Terbium	159-1	7911820	7859846	7852372	7874679	0.41	cps
Terbium	159-2	5758943	5781570	5818147	5786220	0.52	cps
Thallium	203-1	5194	5161	5351	5236	1.94	cps
Thallium	205-1	12036	12499	12433	12322	2.03	cps
Tin	118-1	23436	23857	23416	23569	1.06	cps
Titanium	47-1	3677	3720	3747	3715	0.95	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : LLICV01 Instrumnet Name : P7
Client Sample ID : LLICV01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:50:16 DataFile Name : 017LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	13827	13814	13781	13807	0.17	cps
Vanadium	51-2	11865	12168	11898	11977	1.39	cps
Yttrium	89-1	11439977	11420236	11749797	11536670	1.60	cps
Yttrium	89-2	3316218	3352881	3287086	3318729	0.99	cps
Zinc	66-2	7145	6802	6748	6898	3.12	cps
Zirconium	90-1	10254	10697	10477	10476	2.12	cps
Zirconium	91-1	2214	2400	2344	2319	4.13	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICB01 Instrumnet Name : P7
Client Sample ID : ICB01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:56:00 DataFile Name : 018CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1413	1533	1597	1515	6.15	cps
Antimony	121-1	77	103	47	76	37.52	cps
Arsenic	75-2	10	10	7	9	21.63	cps
Barium	135-1	80	50	43	58	33.81	cps
Barium	137-1	87	113	107	102	13.58	cps
Beryllium	9-1	17	3	3	8	99.58	cps
Bismuth	209-1	4812255	4743492	4654271	4736672	1.67	cps
Bismuth	209-2	4131411	4197635	4206438	4178495	0.98	cps
Bromine	81-1	10087	9797	10080	9988	1.66	cps
Bromine	81-2	177	143	197	172	15.64	cps
Cadmium	108-1	10	7	10	9	21.63	cps
Cadmium	106-1	2614	2784	2460	2619	6.18	cps
Cadmium	111-1	1853	1954	1732	1846	6.02	cps
Calcium	43-1	337	433	313	361	17.62	cps
Calcium	44-1	25024	25906	26607	25846	3.07	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2290	2507	2404	2400	4.52	cps
Cobalt	59-2	123	100	87	103	17.96	cps
Copper	63-2	1360	1240	1190	1263	6.92	cps
Dysprosium	156-1	7	13	3	8	65.47	cps
Dysprosium	156-2	3	0	3	2	86.60	cps
Erbium	164-1	50	60	73	61	19.15	cps
Erbium	164-2	53	30	20	34	49.66	cps
Gadolinium	160-1	53	30	33	39	32.45	cps
Gadolinium	160-2	297	313	357	322	9.61	cps
Holmium	165-1	7760967	7549634	7538120	7616240	1.65	cps
Holmium	165-2	5673663	5724638	5570018	5656106	1.39	cps
Indium	115-1	6619635	6498637	6391239	6503171	1.76	cps
Indium	115-2	2537698	2467438	2496676	2500604	1.41	cps
Iron	56-2	22010	21909	22060	21993	0.35	cps
Iron	57-2	1437	1420	1410	1422	0.95	cps
Iron	54-2	2740	2727	2737	2735	0.25	cps
Krypton	83-1	510	510	457	492	6.26	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICB01 Instrumnet Name : P7
Client Sample ID : ICB01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:56:00 DataFile Name : 018CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	473	543	507	508	6.90	cps
Lead	207-1	430	437	403	423	4.17	cps
Lead	208-1	2007	2057	1953	2006	2.58	cps
Lithium	6-1	440083	441304	433857	438415	0.91	cps
Magnesium	24-2	383	463	397	414	10.34	cps
Manganese	55-2	843	780	757	793	5.65	cps
Molybdenum	94-1	463	380	447	430	10.26	cps
Molybdenum	95-1	317	277	270	288	8.77	cps
Molybdenum	96-1	360	393	360	371	5.19	cps
Molybdenum	97-1	227	267	217	237	11.18	cps
Molybdenum	98-1	613	527	457	532	14.75	cps
Neodymium	150-1	0	3	13	6	124.93	cps
Neodymium	150-2	3	3	3	3	0.00	cps
Nickel	60-2	547	573	560	560	2.38	cps
Phosphorus	31-2	740	827	817	794	5.97	cps
Potassium	39-2	65821	67773	66340	66645	1.52	cps
Rhodium	103-1	6588726	6557742	6440699	6529056	1.20	cps
Rhodium	103-2	4133427	4121461	4116689	4123859	0.21	cps
Scandium	45-1	4080036	3991019	3948613	4006556	1.67	cps
Scandium	45-2	403583	404692	401127	403134	0.45	cps
Selenium	82-1	289	310	390	330	16.25	cps
Selenium	77-2	3	3	3	3	0.00	cps
Selenium	78-2	403	493	470	456	10.25	cps
Silicon	28-1	673265	676425	903310	751000	17.57	cps
Silver	107-1	130	107	130	122	11.02	cps
Silver	109-1	113	97	90	100	12.02	cps
Sodium	23-2	35594	35615	35087	35432	0.84	cps
Strontium	86-1	777	877	790	814	6.67	cps
Strontium	88-1	297	307	333	312	6.07	cps
Sulfur	34-1	171187	173472	174028	172896	0.87	cps
Terbium	159-1	7827624	7687435	7706982	7740680	0.98	cps
Terbium	159-2	5698294	5547176	5655801	5633757	1.38	cps
Thallium	203-1	350	350	357	352	1.09	cps
Thallium	205-1	753	757	710	740	3.52	cps
Tin	118-1	1087	933	980	1000	7.86	cps
Titanium	47-1	107	93	100	100	6.67	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICB01 Instrumnet Name : P7
Client Sample ID : ICB01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 11:56:00 DataFile Name : 018CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	150	13	23	62	122.44	cps
Vanadium	51-2	30	10	23	21	48.24	cps
Yttrium	89-1	11802893	11391218	11279190	11491100	2.40	cps
Yttrium	89-2	3287347	3306583	3265503	3286478	0.63	cps
Zinc	66-2	4274	4387	4444	4368	1.98	cps
Zirconium	90-1	460	483	650	531	19.51	cps
Zirconium	91-1	90	147	107	114	25.45	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICSA01 Instrumnet Name : P7
Client Sample ID : ICSA01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:00:23 DataFile Name : 019ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	13158787	13693729	13245616	13366044	2.15	cps
Antimony	121-1	5645	5831	5911	5796	2.36	cps
Arsenic	75-2	93	160	123	126	26.59	cps
Barium	135-1	1923	1863	1957	1915	2.47	cps
Barium	137-1	3060	3114	3047	3074	1.15	cps
Beryllium	9-1	185	214	184	194	8.87	cps
Bismuth	209-1	4658870	4732961	4850570	4747467	2.04	cps
Bismuth	209-2	4172098	4175907	4154991	4167665	0.27	cps
Bromine	81-1	10210	11471	11375	11019	6.37	cps
Bromine	81-2	387	480	453	440	10.93	cps
Cadmium	108-1	727	733	640	700	7.44	cps
Cadmium	106-1	2744	2567	2534	2615	4.32	cps
Cadmium	111-1	2299	2197	2182	2226	2.85	cps
Calcium	43-1	1438987	1404270	1422343	1421866	1.22	cps
Calcium	44-1	22868151	22955941	23446065	23090053	1.35	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	57781	57275	57369	57475	0.47	cps
Cobalt	59-2	5548	5564	5564	5559	0.17	cps
Copper	63-2	26243	26083	26507	26278	0.82	cps
Dysprosium	156-1	33	27	37	32	15.80	cps
Dysprosium	156-2	17	13	17	16	12.40	cps
Erbium	164-1	93	80	53	76	26.96	cps
Erbium	164-2	47	43	57	49	14.20	cps
Gadolinium	160-1	87	60	67	71	19.52	cps
Gadolinium	160-2	350	347	323	340	4.27	cps
Holmium	165-1	7801704	7715997	8138547	7885416	2.83	cps
Holmium	165-2	5886654	5967005	6070002	5974554	1.54	cps
Indium	115-1	6460679	6571683	6594849	6542404	1.10	cps
Indium	115-2	2464387	2500856	2521231	2495491	1.15	cps
Iron	56-2	243878976	245467190	249218203	246188123	1.11	cps
Iron	57-2	6106183	6133569	6183037	6140929	0.63	cps
Iron	54-2	13672212	13738328	13871411	13760650	0.74	cps
Krypton	83-1	517	460	407	461	11.93	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICSA01 Instrumnet Name : P7
Client Sample ID : ICSA01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:00:23 DataFile Name : 019ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	17592	17648	17899	17713	0.92	cps
Lead	207-1	13821	13373	14338	13844	3.49	cps
Lead	208-1	64727	65011	66724	65487	1.65	cps
Lithium	6-1	446436	442740	446266	445147	0.47	cps
Magnesium	24-2	22856890	23377320	23369004	23201072	1.28	cps
Manganese	55-2	17313	17564	17060	17312	1.46	cps
Molybdenum	94-1	3091978	3143480	3170921	3135460	1.28	cps
Molybdenum	95-1	5304919	5508089	5592317	5468441	2.70	cps
Molybdenum	96-1	5643266	5936959	5908763	5829663	2.78	cps
Molybdenum	97-1	3277329	3440940	3471007	3396425	3.07	cps
Molybdenum	98-1	8513666	8743036	8647784	8634829	1.33	cps
Neodymium	150-1	23	33	37	31	22.31	cps
Neodymium	150-2	13	17	13	14	13.35	cps
Nickel	60-2	6622	6165	6662	6483	4.26	cps
Phosphorus	31-2	785218	782700	786216	784711	0.23	cps
Potassium	39-2	29287168	29106552	28634196	29009305	1.16	cps
Rhodium	103-1	6370870	6505879	6409066	6428605	1.08	cps
Rhodium	103-2	4133707	4169078	4196518	4166434	0.76	cps
Scandium	45-1	4038737	3887091	3992813	3972880	1.96	cps
Scandium	45-2	410472	413475	414709	412885	0.53	cps
Selenium	82-1	341	349	396	362	8.16	cps
Selenium	77-2	0	0	10	3	173.21	cps
Selenium	78-2	410	393	463	422	8.66	cps
Silicon	28-1	688682	684771	681878	685110	0.50	cps
Silver	107-1	380	337	313	343	9.85	cps
Silver	109-1	347	283	320	317	10.04	cps
Sodium	23-2	39550628	39940348	40325633	39938869	0.97	cps
Strontium	86-1	57709	58255	58931	58299	1.05	cps
Strontium	88-1	500964	518298	519355	512872	2.01	cps
Sulfur	34-1	2342232	2306546	2342487	2330422	0.89	cps
Terbium	159-1	7937094	7957279	7949168	7947847	0.13	cps
Terbium	159-2	5760183	5834558	5925589	5840110	1.42	cps
Thallium	203-1	457	447	563	489	13.23	cps
Thallium	205-1	877	920	1253	1017	20.27	cps
Tin	118-1	3097	4284	4788	4056	21.40	cps
Titanium	47-1	1405409	1421331	1457203	1427981	1.86	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICSA01 Instrumnet Name : P7
Client Sample ID : ICSA01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:00:23 DataFile Name : 019ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	407	273	250	310	27.27	cps
Vanadium	51-2	483	513	507	501	3.14	cps
Yttrium	89-1	11503702	11683496	11514771	11567323	0.87	cps
Yttrium	89-2	3327483	3358668	3375296	3353816	0.72	cps
Zinc	66-2	9713	10080	10107	9967	2.21	cps
Zirconium	90-1	717	683	447	616	23.91	cps
Zirconium	91-1	160	130	113	134	17.59	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICSAB01 Instrumnet Name : P7
Client Sample ID : ICSAB01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:03:27 DataFile Name : 020ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	13702799	14036304	13707198	13815434	1.38	cps
Antimony	121-1	113811	113491	114764	114022	0.58	cps
Arsenic	75-2	6875	7459	7492	7275	4.77	cps
Barium	135-1	27483	28211	27377	27690	1.64	cps
Barium	137-1	49075	48142	48921	48712	1.03	cps
Beryllium	9-1	12756	12306	13009	12691	2.81	cps
Bismuth	209-1	4850153	4996670	4877875	4908233	1.59	cps
Bismuth	209-2	4456598	4274160	4370437	4367065	2.09	cps
Bromine	81-1	11161	11705	11758	11541	2.86	cps
Bromine	81-2	390	467	417	424	9.17	cps
Cadmium	108-1	2680	2717	2670	2689	0.91	cps
Cadmium	106-1	5604	5354	5371	5443	2.57	cps
Cadmium	111-1	32586	32833	32466	32628	0.57	cps
Calcium	43-1	1514526	1480916	1538119	1511187	1.90	cps
Calcium	44-1	24212144	24603310	24965391	24593615	1.53	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	116426	116282	116729	116479	0.20	cps
Cobalt	59-2	96240	96643	96164	96349	0.27	cps
Copper	63-2	90835	91036	89383	90418	1.00	cps
Dysprosium	156-1	30	20	30	27	21.65	cps
Dysprosium	156-2	30	27	20	26	19.92	cps
Erbium	164-1	87	93	67	82	16.87	cps
Erbium	164-2	93	37	47	59	51.35	cps
Gadolinium	160-1	70	63	63	66	5.87	cps
Gadolinium	160-2	300	323	327	317	4.59	cps
Holmium	165-1	8201341	8201684	7996909	8133311	1.45	cps
Holmium	165-2	6209543	6086454	6099893	6131963	1.10	cps
Indium	115-1	6845086	6927911	6800678	6857892	0.94	cps
Indium	115-2	2642828	2553573	2567074	2587825	1.86	cps
Iron	56-2	255142890	258714196	257343816	257066967	0.70	cps
Iron	57-2	6376951	6320077	6272878	6323302	0.82	cps
Iron	54-2	14133881	14272061	14236188	14214043	0.50	cps
Krypton	83-1	483	507	510	500	2.91	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICSAB01 Instrumnet Name : P7
Client Sample ID : ICSAB01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:03:27 DataFile Name : 020ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	100918	105352	102633	102968	2.17	cps
Lead	207-1	86875	84483	86911	86090	1.62	cps
Lead	208-1	394129	395756	398933	396272	0.62	cps
Lithium	6-1	434691	443344	427296	435110	1.85	cps
Magnesium	24-2	24182539	23678870	23507762	23789724	1.47	cps
Manganese	55-2	61894	61184	60404	61161	1.22	cps
Molybdenum	94-1	3186853	3359087	3204075	3250005	2.92	cps
Molybdenum	95-1	5614722	5821072	5561406	5665733	2.42	cps
Molybdenum	96-1	5996124	6164626	5902691	6021147	2.20	cps
Molybdenum	97-1	3503683	3540019	3492392	3512031	0.71	cps
Molybdenum	98-1	9079522	9219523	8997467	9098837	1.23	cps
Neodymium	150-1	33	30	37	33	10.01	cps
Neodymium	150-2	23	20	30	24	20.83	cps
Nickel	60-2	29733	30090	29629	29818	0.81	cps
Phosphorus	31-2	815584	808149	805479	809737	0.65	cps
Potassium	39-2	30025603	30158518	29995595	30059905	0.29	cps
Rhodium	103-1	6919450	6693242	6795600	6802764	1.67	cps
Rhodium	103-2	4324070	4265944	4350019	4313345	1.00	cps
Scandium	45-1	4192470	4186668	4140534	4173224	0.68	cps
Scandium	45-2	432181	428382	424020	428194	0.95	cps
Selenium	82-1	2628	2548	2617	2598	1.68	cps
Selenium	77-2	250	253	373	292	24.05	cps
Selenium	78-2	1463	1433	1450	1449	1.04	cps
Silicon	28-1	689834	695646	692745	692742	0.42	cps
Silver	107-1	144753	149817	147844	147471	1.73	cps
Silver	109-1	139247	137161	138483	138297	0.76	cps
Sodium	23-2	40911392	40985784	39990619	40629265	1.36	cps
Strontium	86-1	61735	62285	62586	62202	0.69	cps
Strontium	88-1	527376	548399	528280	534685	2.22	cps
Sulfur	34-1	2476502	2399918	2431454	2435958	1.58	cps
Terbium	159-1	8540005	8308165	8388474	8412215	1.40	cps
Terbium	159-2	6157560	6060427	5955088	6057692	1.67	cps
Thallium	203-1	110328	109795	111145	110423	0.62	cps
Thallium	205-1	265284	261366	264330	263660	0.77	cps
Tin	118-1	3587	3667	3961	3738	5.26	cps
Titanium	47-1	1455446	1504670	1442732	1467616	2.23	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : ICSAB01 Instrumnet Name : P7
Client Sample ID : ICSAB01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:03:27 DataFile Name : 020ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	337	260	210	269	23.73	cps
Vanadium	51-2	48421	48043	47528	47997	0.93	cps
Yttrium	89-1	12415505	12262038	12222066	12299870	0.83	cps
Yttrium	89-2	3562981	3503658	3507000	3524547	0.95	cps
Zinc	66-2	22390	21763	22157	22103	1.43	cps
Zirconium	90-1	613	587	570	590	3.70	cps
Zirconium	91-1	117	167	107	130	24.73	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCV01 Instrumnet Name : P7
Client Sample ID : CCV01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:06:30 DataFile Name : 021CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	7438478	7181398	7350206	7323361	1.78	cps
Antimony	121-1	2810401	2852425	2834282	2832369	0.74	cps
Arsenic	75-2	194199	191869	193867	193312	0.65	cps
Barium	135-1	3343456	3451868	3443227	3412850	1.77	cps
Barium	137-1	5843765	6058361	5986780	5962969	1.83	cps
Beryllium	9-1	335278	336153	338250	336561	0.45	cps
Bismuth	209-1	5115423	4901018	4908073	4974838	2.45	cps
Bismuth	209-2	4364214	4279093	4417326	4353544	1.60	cps
Bromine	81-1	11331	10827	11164	11108	2.31	cps
Bromine	81-2	190	187	183	187	1.78	cps
Cadmium	108-1	55001	55617	56239	55619	1.11	cps
Cadmium	106-1	79085	81481	80153	80240	1.50	cps
Cadmium	111-1	772453	784373	778258	778361	0.77	cps
Calcium	43-1	3880268	3900611	3930409	3903762	0.65	cps
Calcium	44-1	62776099	63831122	64350562	63652595	1.26	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1528541	1464461	1473809	1488937	2.32	cps
Cobalt	59-2	2307263	2299312	2305601	2304058	0.18	cps
Copper	63-2	18135631	17958028	17730348	17941336	1.13	cps
Dysprosium	156-1	163	173	170	169	3.01	cps
Dysprosium	156-2	273	303	253	277	9.10	cps
Erbium	164-1	387	360	407	384	6.09	cps
Erbium	164-2	277	307	313	299	6.54	cps
Gadolinium	160-1	220	213	210	214	2.37	cps
Gadolinium	160-2	457	553	457	489	11.42	cps
Holmium	165-1	8653763	8399673	8424893	8492776	1.65	cps
Holmium	165-2	6324303	6177575	6274891	6258923	1.19	cps
Indium	115-1	7040690	6907556	6996224	6981490	0.97	cps
Indium	115-2	2640928	2690717	2695969	2675872	1.14	cps
Iron	56-2	328462795	324115682	322094522	324891000	1.00	cps
Iron	57-2	8174065	7913939	8062034	8050013	1.62	cps
Iron	54-2	18085594	17634696	17821831	17847374	1.27	cps
Krypton	83-1	540	497	530	522	4.35	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCV01 Instrumnet Name : P7
Client Sample ID : CCV01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:06:30 DataFile Name : 021CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	10680420	10719671	10466977	10622356	1.28	cps
Lead	207-1	8970964	9163885	9153349	9096066	1.19	cps
Lead	208-1	41452376	41330982	41437424	41406927	0.16	cps
Lithium	6-1	455592	445416	449670	450226	1.14	cps
Magnesium	24-2	67687509	66464114	66748696	66966773	0.96	cps
Manganese	55-2	12566488	12398981	12377204	12447558	0.83	cps
Molybdenum	94-1	10990704	10996874	10917116	10968231	0.40	cps
Molybdenum	95-1	15548963	15724697	15893186	15722282	1.09	cps
Molybdenum	96-1	16746296	16961506	17009921	16905908	0.83	cps
Molybdenum	97-1	9790135	9742245	9671674	9734685	0.61	cps
Molybdenum	98-1	25111382	25094126	24920780	25042096	0.42	cps
Neodymium	150-1	150	150	140	147	3.94	cps
Neodymium	150-2	73	83	67	74	11.26	cps
Nickel	60-2	601227	597729	597268	598741	0.36	cps
Phosphorus	31-2	88405	87631	89331	88455	0.96	cps
Potassium	39-2	39481074	38290047	38375760	38715627	1.72	cps
Rhodium	103-1	6905133	6891097	6775651	6857294	1.04	cps
Rhodium	103-2	4356283	4397549	4229222	4327685	2.03	cps
Scandium	45-1	4356770	4271131	4322352	4316751	1.00	cps
Scandium	45-2	447727	440153	444121	444000	0.85	cps
Selenium	82-1	58190	59013	58656	58620	0.70	cps
Selenium	77-2	6948	6848	6315	6704	5.08	cps
Selenium	78-2	23683	22901	22541	23041	2.53	cps
Silicon	28-1	9919448	10207886	10100443	10075926	1.45	cps
Silver	107-1	3830686	3857366	3866191	3851414	0.48	cps
Silver	109-1	3617072	3672161	3610086	3633106	0.94	cps
Sodium	23-2	104439818	103447712	102061932	103316487	1.16	cps
Strontium	86-1	1002912	1025967	1014061	1014313	1.14	cps
Strontium	88-1	8843512	8920291	8858777	8874193	0.46	cps
Sulfur	34-1	385573	390232	390953	388919	0.75	cps
Terbium	159-1	8773666	8628163	8592111	8664647	1.11	cps
Terbium	159-2	6279292	6112101	6269246	6220213	1.51	cps
Thallium	203-1	2597875	2651601	2563998	2604491	1.70	cps
Thallium	205-1	6242997	6317995	6169487	6243493	1.19	cps
Tin	118-1	2453140	2436523	2377387	2422350	1.64	cps
Titanium	47-1	3907293	3997997	4032369	3979220	1.62	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCV01 Instrumnet Name : P7
Client Sample ID : CCV01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:06:30 DataFile Name : 021CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	8013590	7851400	7860404	7908465	1.15	cps
Vanadium	51-2	1295671	1255411	1283543	1278208	1.62	cps
Yttrium	89-1	12711468	12522169	12586220	12606619	0.76	cps
Yttrium	89-2	3672596	3624684	3527965	3608415	2.04	cps
Zinc	66-2	3176529	3175910	3126793	3159744	0.90	cps
Zirconium	90-1	5363182	5451749	5440403	5418445	0.89	cps
Zirconium	91-1	1189603	1205676	1206296	1200525	0.79	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCB01 Instrumnet Name : P7
Client Sample ID : CCB01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:09:47 DataFile Name : 022CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1520	1560	1593	1558	2.36	cps
Antimony	121-1	647	637	557	613	8.04	cps
Arsenic	75-2	13	3	10	9	57.30	cps
Barium	135-1	50	60	53	54	9.35	cps
Barium	137-1	147	117	127	130	11.75	cps
Beryllium	9-1	24	7	3	11	95.75	cps
Bismuth	209-1	4952278	4978334	4661263	4863959	3.62	cps
Bismuth	209-2	4273057	4279634	4377097	4309929	1.35	cps
Bromine	81-1	11004	11068	10407	10826	3.37	cps
Bromine	81-2	183	223	197	201	10.13	cps
Cadmium	108-1	17	3	10	10	66.70	cps
Cadmium	106-1	2730	2930	2684	2781	4.71	cps
Cadmium	111-1	1960	2109	1935	2001	4.71	cps
Calcium	43-1	450	420	463	444	4.99	cps
Calcium	44-1	28407	28136	28253	28265	0.48	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2500	2544	2534	2526	0.90	cps
Cobalt	59-2	110	107	117	111	4.58	cps
Copper	63-2	1817	1780	1697	1765	3.49	cps
Dysprosium	156-1	3	3	0	2	86.60	cps
Dysprosium	156-2	0	0	3	1	173.21	cps
Erbium	164-1	53	50	67	57	15.57	cps
Erbium	164-2	40	43	37	40	8.32	cps
Gadolinium	160-1	53	90	53	66	32.30	cps
Gadolinium	160-2	350	377	323	350	7.62	cps
Holmium	165-1	8192229	7722478	7746936	7887214	3.35	cps
Holmium	165-2	5876093	5890829	6028998	5931973	1.42	cps
Indium	115-1	6887110	6874021	6763558	6841563	0.99	cps
Indium	115-2	2592416	2614373	2638670	2615153	0.88	cps
Iron	56-2	25612	24761	24867	25080	1.85	cps
Iron	57-2	1517	1593	1557	1556	2.47	cps
Iron	54-2	2900	2790	3117	2936	5.66	cps
Krypton	83-1	463	490	443	466	5.03	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCB01 Instrumnet Name : P7
Client Sample ID : CCB01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:09:47 DataFile Name : 022CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	593	703	623	640	8.89	cps
Lead	207-1	480	540	557	526	7.67	cps
Lead	208-1	2447	2523	2457	2476	1.68	cps
Lithium	6-1	427684	428649	415440	423924	1.74	cps
Magnesium	24-2	933	850	910	898	4.79	cps
Manganese	55-2	670	887	913	823	16.21	cps
Molybdenum	94-1	757	713	683	718	5.14	cps
Molybdenum	95-1	833	787	583	734	18.10	cps
Molybdenum	96-1	887	797	797	827	6.29	cps
Molybdenum	97-1	587	483	470	513	12.44	cps
Molybdenum	98-1	1173	1223	983	1127	11.24	cps
Neodymium	150-1	3	3	7	4	43.40	cps
Neodymium	150-2	0	3	0	1	173.21	cps
Nickel	60-2	597	603	553	584	4.64	cps
Phosphorus	31-2	857	730	713	767	10.22	cps
Potassium	39-2	74015	73597	73680	73764	0.30	cps
Rhodium	103-1	6966751	6918643	6781704	6889032	1.39	cps
Rhodium	103-2	4297297	4369407	4381407	4349370	1.05	cps
Scandium	45-1	4230588	4117355	4085978	4144640	1.84	cps
Scandium	45-2	416834	412309	413037	414060	0.59	cps
Selenium	82-1	324	350	373	349	6.94	cps
Selenium	77-2	0	0	3	1	173.21	cps
Selenium	78-2	533	580	463	526	11.17	cps
Silicon	28-1	695793	688656	675939	686796	1.46	cps
Silver	107-1	413	360	333	369	11.04	cps
Silver	109-1	400	317	257	324	22.19	cps
Sodium	23-2	56483	55305	55690	55826	1.08	cps
Strontium	86-1	867	787	893	849	6.54	cps
Strontium	88-1	410	350	377	379	7.93	cps
Sulfur	34-1	156629	156104	156050	156261	0.20	cps
Terbium	159-1	8284675	8003396	7964978	8084350	2.16	cps
Terbium	159-2	5912051	5856358	6018911	5929107	1.39	cps
Thallium	203-1	630	577	603	603	4.42	cps
Thallium	205-1	1397	1693	1343	1478	12.76	cps
Tin	118-1	1477	1267	1333	1359	7.90	cps
Titanium	47-1	127	153	117	132	14.34	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCB01 Instrumnet Name : P7
Client Sample ID : CCB01 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:09:47 DataFile Name : 022CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	170	60	53	94	69.37	cps
Vanadium	51-2	37	33	33	34	5.60	cps
Yttrium	89-1	12382722	12187538	11818526	12129595	2.36	cps
Yttrium	89-2	3443064	3465740	3429908	3446237	0.53	cps
Zinc	66-2	4574	4874	4367	4605	5.53	cps
Zirconium	90-1	763	650	703	706	8.04	cps
Zirconium	91-1	173	133	180	162	15.56	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CRI Instrumnet Name : P7
Client Sample ID : CRI Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:15:12 DataFile Name : 023LLCC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4821	4821	4747	4796	0.88	cps
Antimony	121-1	11144	11421	11144	11237	1.42	cps
Arsenic	75-2	430	427	327	394	14.89	cps
Barium	135-1	13376	13013	12949	13113	1.76	cps
Barium	137-1	23136	22742	22642	22840	1.14	cps
Beryllium	9-1	747	748	721	739	2.03	cps
Bismuth	209-1	4884410	4947657	4794440	4875502	1.58	cps
Bismuth	209-2	4269561	4438138	4370832	4359510	1.95	cps
Bromine	81-1	10577	10140	10440	10386	2.15	cps
Bromine	81-2	183	137	120	147	22.39	cps
Cadmium	108-1	107	93	107	102	7.53	cps
Cadmium	106-1	2790	2747	2787	2775	0.87	cps
Cadmium	111-1	3405	3374	3313	3364	1.40	cps
Calcium	43-1	9043	8773	8466	8760	3.30	cps
Calcium	44-1	163593	163549	164739	163960	0.41	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	8946	8412	8269	8543	4.18	cps
Cobalt	59-2	4924	4901	4931	4919	0.32	cps
Copper	63-2	8209	8212	8703	8375	3.39	cps
Dysprosium	156-1	7	7	7	7	0.00	cps
Dysprosium	156-2	10	3	3	6	69.34	cps
Erbium	164-1	50	67	53	57	15.57	cps
Erbium	164-2	37	50	60	49	23.94	cps
Gadolinium	160-1	47	47	57	50	11.55	cps
Gadolinium	160-2	333	387	333	351	8.77	cps
Holmium	165-1	7805898	8029622	7822159	7885893	1.58	cps
Holmium	165-2	6004426	5994341	5978576	5992448	0.22	cps
Indium	115-1	6867497	6778415	6754465	6800125	0.88	cps
Indium	115-2	2583674	2596886	2644492	2608350	1.23	cps
Iron	56-2	169179	169365	168958	169167	0.12	cps
Iron	57-2	5251	5374	5588	5404	3.15	cps
Iron	54-2	10681	10807	11101	10863	1.98	cps
Krypton	83-1	540	487	490	506	5.91	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CRI Instrumnet Name : P7
Client Sample ID : CRI Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:15:12 DataFile Name : 023LLCC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	4171	4214	3941	4108	3.58	cps
Lead	207-1	3424	3457	3621	3500	3.01	cps
Lead	208-1	16197	16227	15887	16104	1.17	cps
Lithium	6-1	432657	424859	431146	429554	0.96	cps
Magnesium	24-2	134185	135789	133580	134518	0.85	cps
Manganese	55-2	3590	3454	3470	3505	2.13	cps
Molybdenum	94-1	12689	13006	12916	12870	1.27	cps
Molybdenum	95-1	15452	15445	15422	15439	0.10	cps
Molybdenum	96-1	17337	17117	16826	17093	1.50	cps
Molybdenum	97-1	9483	10097	9770	9783	3.14	cps
Molybdenum	98-1	25015	25015	24260	24763	1.76	cps
Neodymium	150-1	3	0	10	4	114.60	cps
Neodymium	150-2	0	7	10	6	91.64	cps
Nickel	60-2	1800	1787	1753	1780	1.35	cps
Phosphorus	31-2	2824	2817	2844	2828	0.49	cps
Potassium	39-2	235148	237909	235696	236251	0.62	cps
Rhodium	103-1	6834269	6917467	6718998	6823578	1.46	cps
Rhodium	103-2	4263014	4364740	4385741	4337832	1.51	cps
Scandium	45-1	4124488	4190004	4093167	4135886	1.19	cps
Scandium	45-2	414853	425326	425157	421779	1.42	cps
Selenium	82-1	822	947	916	895	7.28	cps
Selenium	77-2	47	80	87	71	30.13	cps
Selenium	78-2	823	697	717	746	9.13	cps
Silicon	28-1	684959	694250	687840	689016	0.69	cps
Silver	107-1	8586	8586	8316	8496	1.84	cps
Silver	109-1	7699	7812	8079	7863	2.48	cps
Sodium	23-2	249058	250953	249328	249780	0.41	cps
Strontium	86-1	2860	2837	2857	2851	0.44	cps
Strontium	88-1	18125	17494	17434	17684	2.16	cps
Sulfur	34-1	169417	169673	170128	169740	0.21	cps
Terbium	159-1	8034641	7974723	8143453	8050939	1.06	cps
Terbium	159-2	5804102	5923900	5875736	5867913	1.03	cps
Thallium	203-1	5708	5505	5341	5518	3.33	cps
Thallium	205-1	12736	13066	13347	13050	2.34	cps
Tin	118-1	25236	24655	25763	25218	2.20	cps
Titanium	47-1	3941	3727	3927	3865	3.09	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CRI Instrumnet Name : P7
Client Sample ID : CRI Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:15:12 DataFile Name : 023LLCC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	14515	14735	13764	14338	3.55	cps
Vanadium	51-2	12709	12949	12645	12768	1.25	cps
Yttrium	89-1	11795507	12036321	12006684	11946171	1.10	cps
Yttrium	89-2	3399423	3519732	3411846	3443667	1.92	cps
Zinc	66-2	7188	7372	7322	7294	1.30	cps
Zirconium	90-1	11471	11461	11298	11410	0.85	cps
Zirconium	91-1	2440	2450	2437	2442	0.28	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : PB169300BL Instrumnet Name : P7
Client Sample ID : PB169300BL Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:19:36 DataFile Name : 024CCBD.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1520	1547	1450	1506	3.32	cps
Antimony	121-1	117	110	170	132	24.87	cps
Arsenic	75-2	0	3	7	3	100.05	cps
Barium	135-1	73	73	80	76	5.10	cps
Barium	137-1	107	127	100	111	12.49	cps
Beryllium	9-1	20	10	7	12	57.61	cps
Bismuth	209-1	4784200	4762639	4726884	4757908	0.61	cps
Bismuth	209-2	4354557	4214138	4342902	4303866	1.81	cps
Bromine	81-1	10551	10324	11014	10629	3.31	cps
Bromine	81-2	153	177	180	170	8.54	cps
Cadmium	108-1	3	3	17	8	99.04	cps
Cadmium	106-1	2670	2627	2684	2660	1.11	cps
Cadmium	111-1	1904	1847	1904	1885	1.75	cps
Calcium	43-1	350	400	363	371	6.98	cps
Calcium	44-1	27138	27408	27903	27483	1.41	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2570	2394	2530	2498	3.71	cps
Cobalt	59-2	110	113	137	120	12.11	cps
Copper	63-2	1317	1363	1460	1380	5.30	cps
Dysprosium	156-1	3	7	3	4	43.40	cps
Dysprosium	156-2	7	3	0	3	100.05	cps
Erbium	164-1	87	50	67	68	27.09	cps
Erbium	164-2	53	27	73	51	45.80	cps
Gadolinium	160-1	43	27	53	41	32.76	cps
Gadolinium	160-2	243	370	350	321	21.21	cps
Holmium	165-1	7750730	7659952	7727149	7712610	0.61	cps
Holmium	165-2	5931662	5843648	5942509	5905940	0.92	cps
Indium	115-1	6627605	6721704	6661657	6670322	0.71	cps
Indium	115-2	2633108	2552155	2608448	2597904	1.60	cps
Iron	56-2	23185	22410	22410	22668	1.97	cps
Iron	57-2	1627	1533	1450	1537	5.75	cps
Iron	54-2	2667	2690	2754	2704	1.66	cps
Krypton	83-1	513	483	510	502	3.27	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : PB169300BL Instrumnet Name : P7
Client Sample ID : PB169300BL Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:19:36 DataFile Name : 024CCBD.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	567	497	427	497	14.09	cps
Lead	207-1	470	427	440	446	4.98	cps
Lead	208-1	2073	1993	1880	1982	4.90	cps
Lithium	6-1	419625	413353	424526	419168	1.34	cps
Magnesium	24-2	533	463	523	507	7.47	cps
Manganese	55-2	843	763	773	793	5.49	cps
Molybdenum	94-1	403	387	417	402	3.74	cps
Molybdenum	95-1	357	433	387	392	9.85	cps
Molybdenum	96-1	450	500	443	464	6.67	cps
Molybdenum	97-1	243	240	277	253	8.00	cps
Molybdenum	98-1	603	563	560	576	4.19	cps
Neodymium	150-1	3	7	7	6	34.70	cps
Neodymium	150-2	0	3	0	1	173.21	cps
Nickel	60-2	643	697	577	639	9.41	cps
Phosphorus	31-2	707	727	797	743	6.36	cps
Potassium	39-2	71647	69377	69069	70031	2.01	cps
Rhodium	103-1	6727578	6568041	6684873	6660164	1.24	cps
Rhodium	103-2	4369284	4339317	4298472	4335691	0.82	cps
Scandium	45-1	4163826	4035219	4076799	4091948	1.60	cps
Scandium	45-2	417857	413698	418617	416724	0.64	cps
Selenium	82-1	331	306	312	316	4.19	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	573	583	547	568	3.34	cps
Silicon	28-1	679486	692685	675730	682634	1.30	cps
Silver	107-1	207	213	157	192	16.11	cps
Silver	109-1	190	133	130	151	22.31	cps
Sodium	23-2	41883	41693	42582	42053	1.11	cps
Strontium	86-1	947	737	837	840	12.50	cps
Strontium	88-1	390	380	300	357	13.83	cps
Sulfur	34-1	164067	166378	166893	165779	0.91	cps
Terbium	159-1	7915801	7851283	7970893	7912659	0.76	cps
Terbium	159-2	5780950	5792273	5884937	5819387	0.98	cps
Thallium	203-1	347	337	383	356	6.91	cps
Thallium	205-1	847	847	857	850	0.68	cps
Tin	118-1	1120	1137	1177	1144	2.54	cps
Titanium	47-1	123	93	87	101	19.31	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : PB169300BL Instrumnet Name : P7
Client Sample ID : PB169300BL Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:19:36 DataFile Name : 024CCBD.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	157	37	17	70	108.16	cps
Vanadium	51-2	13	23	30	22	37.76	cps
Yttrium	89-1	11765919	11745672	11829497	11780363	0.37	cps
Yttrium	89-2	3516961	3370993	3417160	3435038	2.17	cps
Zinc	66-2	4717	4764	4541	4674	2.52	cps
Zirconium	90-1	597	563	577	579	2.90	cps
Zirconium	91-1	120	163	143	142	15.25	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : PB169300BS Instrumnet Name : P7
Client Sample ID : PB169300BS Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:22:53 DataFile Name : 025LCS6.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1522945	1502367	1550174	1525162	1.57	cps
Antimony	121-1	2649626	2723183	2732345	2701718	1.68	cps
Arsenic	75-2	186894	186455	186635	186661	0.12	cps
Barium	135-1	3147801	3279171	3233753	3220242	2.07	cps
Barium	137-1	5483022	5539016	5670220	5564086	1.73	cps
Beryllium	9-1	317788	326629	324456	322958	1.43	cps
Bismuth	209-1	4906387	4933297	4858790	4899492	0.77	cps
Bismuth	209-2	4445068	4355598	4380489	4393718	1.05	cps
Bromine	81-1	10657	10647	10160	10488	2.71	cps
Bromine	81-2	140	130	177	149	16.50	cps
Cadmium	108-1	53000	54579	54271	53950	1.55	cps
Cadmium	106-1	77934	77808	77881	77875	0.08	cps
Cadmium	111-1	749165	761585	760201	756984	0.90	cps
Calcium	43-1	792657	802817	803408	799627	0.76	cps
Calcium	44-1	12519957	12528427	12456956	12501780	0.31	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1454927	1425457	1454484	1444956	1.17	cps
Cobalt	59-2	2295250	2267703	2282612	2281855	0.60	cps
Copper	63-2	17666629	17487336	17505021	17552995	0.56	cps
Dysprosium	156-1	60	63	70	64	7.90	cps
Dysprosium	156-2	127	147	153	142	9.76	cps
Erbium	164-1	123	150	133	136	9.94	cps
Erbium	164-2	117	107	110	111	4.58	cps
Gadolinium	160-1	53	87	117	86	37.03	cps
Gadolinium	160-2	340	390	347	359	7.56	cps
Holmium	165-1	7996928	8033739	8074057	8034908	0.48	cps
Holmium	165-2	6140688	6114858	6128430	6127992	0.21	cps
Indium	115-1	6807511	6692774	6714031	6738105	0.91	cps
Indium	115-2	2623693	2622968	2632846	2626502	0.21	cps
Iron	56-2	68442632	66033894	68477594	67651373	2.07	cps
Iron	57-2	1684955	1665018	1668772	1672915	0.63	cps
Iron	54-2	3822464	3740435	3709644	3757515	1.55	cps
Krypton	83-1	470	560	550	527	9.37	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : PB169300BS Instrumnet Name : P7
Client Sample ID : PB169300BS Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:22:53 DataFile Name : 025LCS6.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	10093126	10108479	10354802	10185469	1.44	cps
Lead	207-1	8444144	8671843	8797624	8637870	2.07	cps
Lead	208-1	38623359	39435198	40106579	39388379	1.89	cps
Lithium	6-1	434176	446131	436847	439051	1.43	cps
Magnesium	24-2	13434855	13448844	13534431	13472710	0.40	cps
Manganese	55-2	12117392	11692022	12129139	11979518	2.08	cps
Molybdenum	94-1	10072006	10438969	10396527	10302501	1.95	cps
Molybdenum	95-1	14685489	14617388	14652496	14651791	0.23	cps
Molybdenum	96-1	15895695	15825255	16079526	15933492	0.82	cps
Molybdenum	97-1	8971702	9139399	9238905	9116669	1.48	cps
Molybdenum	98-1	23304677	23419090	23642872	23455547	0.73	cps
Neodymium	150-1	113	103	123	113	8.83	cps
Neodymium	150-2	27	13	47	29	58.08	cps
Nickel	60-2	590490	585353	588631	588158	0.44	cps
Phosphorus	31-2	83977	82961	84524	83821	0.95	cps
Potassium	39-2	7799066	7756429	7931323	7828939	1.16	cps
Rhodium	103-1	6699119	6733209	6756948	6729759	0.43	cps
Rhodium	103-2	4344949	4288682	4347265	4326965	0.77	cps
Scandium	45-1	4179746	4116388	4173229	4156454	0.84	cps
Scandium	45-2	431386	421385	427155	426642	1.18	cps
Selenium	82-1	57046	58159	58393	57866	1.24	cps
Selenium	77-2	6715	6825	6612	6717	1.59	cps
Selenium	78-2	22988	23028	23663	23226	1.63	cps
Silicon	28-1	9866240	9675272	9755744	9765752	0.98	cps
Silver	107-1	3824588	3735798	3654580	3738322	2.27	cps
Silver	109-1	3503013	3571593	3550063	3541556	0.99	cps
Sodium	23-2	20980283	20680687	21043484	20901485	0.93	cps
Strontium	86-1	922970	938094	942995	934686	1.12	cps
Strontium	88-1	8225252	8233841	8296378	8251824	0.47	cps
Sulfur	34-1	386206	390181	388764	388384	0.52	cps
Terbium	159-1	8258876	8270423	8194039	8241113	0.50	cps
Terbium	159-2	6106919	6016226	5989149	6037431	1.02	cps
Thallium	203-1	2413452	2481340	2517751	2470847	2.14	cps
Thallium	205-1	5887642	5971148	5995079	5951290	0.95	cps
Tin	118-1	2237489	2242018	2304019	2261175	1.64	cps
Titanium	47-1	3691047	3795225	3777203	3754492	1.48	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : PB169300BS Instrumnet Name : P7
Client Sample ID : PB169300BS Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:22:53 DataFile Name : 025LCS6.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	7309958	7264091	7436293	7336781	1.22	cps
Vanadium	51-2	1227070	1220141	1230395	1225869	0.43	cps
Yttrium	89-1	12210980	12421276	11942144	12191467	1.97	cps
Yttrium	89-2	3517254	3433429	3481129	3477271	1.21	cps
Zinc	66-2	3217337	3166603	3213587	3199176	0.88	cps
Zirconium	90-1	5026591	5007900	5085716	5040069	0.81	cps
Zirconium	91-1	1096390	1114333	1115726	1108816	0.97	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : PB169300TB Instrumnet Name : P7
Client Sample ID : PB169300TB Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:25:37 DataFile Name : 026CCBD.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1347	1627	1483	1486	9.43	cps
Antimony	121-1	673	773	673	707	8.17	cps
Arsenic	75-2	7	0	7	4	86.60	cps
Barium	135-1	97	73	60	77	24.21	cps
Barium	137-1	143	117	117	126	12.26	cps
Beryllium	9-1	7	10	7	8	23.07	cps
Bismuth	209-1	4776895	4803847	4788737	4789826	0.28	cps
Bismuth	209-2	4206230	4417888	4254868	4292995	2.58	cps
Bromine	81-1	10274	10424	10831	10509	2.74	cps
Bromine	81-2	167	190	220	192	13.91	cps
Cadmium	108-1	3	13	7	8	65.47	cps
Cadmium	106-1	2564	2680	2704	2649	2.83	cps
Cadmium	111-1	1849	1907	1951	1902	2.70	cps
Calcium	43-1	430	343	383	386	11.25	cps
Calcium	44-1	28574	28814	27479	28289	2.52	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2487	2547	2444	2492	2.08	cps
Cobalt	59-2	110	107	90	102	10.48	cps
Copper	63-2	1650	1640	1493	1595	5.50	cps
Dysprosium	156-1	7	7	3	6	34.70	cps
Dysprosium	156-2	7	3	3	4	43.40	cps
Erbium	164-1	57	53	67	59	11.79	cps
Erbium	164-2	27	33	17	26	32.81	cps
Gadolinium	160-1	50	43	40	44	11.46	cps
Gadolinium	160-2	287	363	430	360	19.92	cps
Holmium	165-1	7867567	7707457	7837428	7804151	1.09	cps
Holmium	165-2	5832878	6082031	5801977	5905628	2.60	cps
Indium	115-1	6642561	6528271	6717236	6629356	1.44	cps
Indium	115-2	2530910	2646462	2516303	2564559	2.78	cps
Iron	56-2	22757	22550	22500	22603	0.60	cps
Iron	57-2	1413	1603	1377	1465	8.31	cps
Iron	54-2	2724	2707	2750	2727	0.80	cps
Krypton	83-1	550	527	560	546	3.14	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : PB169300TB Instrumnet Name : P7
Client Sample ID : PB169300TB Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:25:37 DataFile Name : 026CCBD.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	613	517	663	598	12.47	cps
Lead	207-1	567	520	523	537	4.85	cps
Lead	208-1	2360	2320	2263	2315	2.10	cps
Lithium	6-1	425192	415668	418479	419780	1.17	cps
Magnesium	24-2	480	567	533	527	8.30	cps
Manganese	55-2	797	837	897	843	5.97	cps
Molybdenum	94-1	780	667	700	716	8.14	cps
Molybdenum	95-1	830	783	707	773	8.05	cps
Molybdenum	96-1	830	933	910	891	6.08	cps
Molybdenum	97-1	553	490	497	513	6.78	cps
Molybdenum	98-1	1380	1180	1217	1259	8.46	cps
Neodymium	150-1	13	0	10	8	89.21	cps
Neodymium	150-2	7	0	17	8	107.84	cps
Nickel	60-2	523	557	590	557	5.99	cps
Phosphorus	31-2	723	740	743	736	1.46	cps
Potassium	39-2	71283	69655	69796	70245	1.28	cps
Rhodium	103-1	6586744	6563953	6571831	6574176	0.18	cps
Rhodium	103-2	4248241	4308666	4245486	4267464	0.84	cps
Scandium	45-1	4046024	4028198	4026657	4033626	0.27	cps
Scandium	45-2	410721	413855	411501	412026	0.40	cps
Selenium	82-1	229	299	251	260	13.83	cps
Selenium	77-2	3	0	0	1	173.21	cps
Selenium	78-2	503	553	557	538	5.56	cps
Silicon	28-1	699611	704468	695995	700025	0.61	cps
Silver	107-1	493	340	313	382	25.42	cps
Silver	109-1	513	313	270	366	35.51	cps
Sodium	23-2	43177	45657	41726	43520	4.57	cps
Strontium	86-1	843	933	803	860	7.74	cps
Strontium	88-1	360	343	307	337	8.11	cps
Sulfur	34-1	154781	155067	155498	155115	0.23	cps
Terbium	159-1	7828788	7848392	7926692	7867957	0.66	cps
Terbium	159-2	5839084	5934189	5684549	5819274	2.17	cps
Thallium	203-1	540	447	460	482	10.47	cps
Thallium	205-1	1140	1107	1077	1108	2.86	cps
Tin	118-1	1143	1127	1113	1128	1.33	cps
Titanium	47-1	117	97	153	122	23.51	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : PB169300TB Instrumnet Name : P7
Client Sample ID : PB169300TB Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:25:37 DataFile Name : 026CCBD.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	153	83	80	106	39.23	cps
Vanadium	51-2	37	20	23	27	33.08	cps
Yttrium	89-1	11712204	11791025	11641894	11715041	0.64	cps
Yttrium	89-2	3424349	3457002	3329455	3403602	1.95	cps
Zinc	66-2	4637	4701	4904	4747	2.94	cps
Zirconium	90-1	790	657	700	716	9.51	cps
Zirconium	91-1	103	180	160	148	26.91	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-02DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:28:55 DataFile Name : 027SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3444973	3407836	3393919	3415576	0.77	cps
Antimony	121-1	1073	1173	1213	1153	6.25	cps
Arsenic	75-2	2564	2474	2344	2460	4.50	cps
Barium	135-1	28552	28762	28265	28526	0.88	cps
Barium	137-1	49566	49633	49306	49502	0.35	cps
Beryllium	9-1	1746	1746	1812	1768	2.14	cps
Bismuth	209-1	4837583	4898874	4861579	4866012	0.63	cps
Bismuth	209-2	4412435	4381842	4510044	4434773	1.51	cps
Bromine	81-1	17327	20241	21022	19530	9.97	cps
Bromine	81-2	2524	2677	2757	2652	4.47	cps
Cadmium	108-1	300	260	260	273	8.45	cps
Cadmium	106-1	3190	3144	3177	3170	0.76	cps
Cadmium	111-1	5554	5639	5746	5646	1.70	cps
Calcium	43-1	913093	915080	908079	912084	0.40	cps
Calcium	44-1	14368270	14656086	14488249	14504201	1.00	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	34076	32475	32906	33152	2.50	cps
Cobalt	59-2	119453	118509	119493	119152	0.47	cps
Copper	63-2	136459	135380	136773	136204	0.54	cps
Dysprosium	156-1	27026	27554	26749	27110	1.51	cps
Dysprosium	156-2	25012	25226	25433	25224	0.83	cps
Erbium	164-1	36678	36531	37460	36890	1.35	cps
Erbium	164-2	28566	28830	28770	28722	0.48	cps
Gadolinium	160-1	29301	29605	29672	29526	0.67	cps
Gadolinium	160-2	23847	23714	23870	23810	0.36	cps
Holmium	165-1	8191752	8115996	8022034	8109928	1.05	cps
Holmium	165-2	6216330	6173057	6285452	6224946	0.91	cps
Indium	115-1	6947123	6873592	6773521	6864746	1.27	cps
Indium	115-2	2706897	2662065	2642876	2670613	1.23	cps
Iron	56-2	29590944	28280742	29434840	29102175	2.46	cps
Iron	57-2	764982	760622	766976	764193	0.43	cps
Iron	54-2	1608701	1616585	1622103	1615796	0.42	cps
Krypton	83-1	550	540	547	546	0.93	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-02DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:28:55 DataFile Name : 027SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	167959	166230	165188	166459	0.84	cps
Lead	207-1	138264	138675	137581	138173	0.40	cps
Lead	208-1	642078	643097	638805	641327	0.35	cps
Lithium	6-1	437667	429131	419230	428676	2.15	cps
Magnesium	24-2	2856002	2867414	2914834	2879417	1.08	cps
Manganese	55-2	6504209	6540224	6701340	6581924	1.59	cps
Molybdenum	94-1	4004	4217	4051	4091	2.74	cps
Molybdenum	95-1	687	800	783	757	8.09	cps
Molybdenum	96-1	1513	1407	1497	1472	3.90	cps
Molybdenum	97-1	377	350	380	369	4.46	cps
Molybdenum	98-1	987	1027	867	960	8.67	cps
Neodymium	150-1	37624	37717	37029	37456	1.00	cps
Neodymium	150-2	24408	24782	24605	24598	0.76	cps
Nickel	60-2	25071	24116	24927	24705	2.08	cps
Phosphorus	31-2	10617	11017	10947	10861	1.97	cps
Potassium	39-2	2576955	2523264	2522036	2540752	1.23	cps
Rhodium	103-1	6912116	6885781	6862270	6886722	0.36	cps
Rhodium	103-2	4522434	4426182	4481642	4476753	1.08	cps
Scandium	45-1	4268903	4177784	4168618	4205102	1.32	cps
Scandium	45-2	438293	428030	437504	434609	1.31	cps
Selenium	82-1	467	470	397	445	9.36	cps
Selenium	77-2	90	107	83	93	12.88	cps
Selenium	78-2	623	550	720	631	13.51	cps
Silicon	28-1	23195838	22706035	22595861	22832578	1.40	cps
Silver	107-1	733	447	443	541	30.77	cps
Silver	109-1	590	397	323	437	31.55	cps
Sodium	23-2	1667322	1645151	1653991	1655488	0.67	cps
Strontium	86-1	348279	352780	353102	351387	0.77	cps
Strontium	88-1	3118305	3151049	3175189	3148181	0.91	cps
Sulfur	34-1	2378523	2317237	2320930	2338897	1.47	cps
Terbium	159-1	8448692	8212440	8156879	8272670	1.87	cps
Terbium	159-2	6236649	6042044	6170009	6149567	1.61	cps
Thallium	203-1	980	903	1123	1002	11.14	cps
Thallium	205-1	2380	2474	2470	2441	2.17	cps
Tin	118-1	2430	3144	3354	2976	16.27	cps
Titanium	47-1	4964	5374	4804	5048	5.83	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-02DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:28:55 DataFile Name : 027SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	9834	9794	9474	9700	2.04	cps
Vanadium	51-2	128291	128299	127448	128013	0.38	cps
Yttrium	89-1	13099358	13272729	13218754	13196947	0.67	cps
Yttrium	89-2	3860591	3700440	3796687	3785906	2.13	cps
Zinc	66-2	308180	308349	308553	308360	0.06	cps
Zirconium	90-1	10814	10781	10541	10712	1.39	cps
Zirconium	91-1	2330	2310	2480	2374	3.92	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-04DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:32:01 DataFile Name : 028SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3161337	3273454	3112176	3182322	2.60	cps
Antimony	121-1	990	940	1050	993	5.54	cps
Arsenic	75-2	2904	3214	3000	3039	5.22	cps
Barium	135-1	33800	34004	33289	33698	1.09	cps
Barium	137-1	59023	59367	59444	59278	0.38	cps
Beryllium	9-1	1650	1691	1507	1616	5.99	cps
Bismuth	209-1	4917314	4587985	4758393	4754564	3.46	cps
Bismuth	209-2	4440760	4015280	4478722	4311587	5.97	cps
Bromine	81-1	19096	20758	21780	20544	6.59	cps
Bromine	81-2	2680	2630	2697	2669	1.30	cps
Cadmium	108-1	300	267	233	267	12.50	cps
Cadmium	106-1	3414	2987	3227	3209	6.67	cps
Cadmium	111-1	5743	5335	5666	5581	3.89	cps
Calcium	43-1	889484	896098	887346	890976	0.51	cps
Calcium	44-1	13932934	14493165	14157586	14194562	1.99	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	31493	32181	31082	31585	1.76	cps
Cobalt	59-2	109729	112056	109444	110410	1.30	cps
Copper	63-2	128092	130182	128851	129042	0.82	cps
Dysprosium	156-1	23210	24235	23717	23720	2.16	cps
Dysprosium	156-2	22378	22615	22301	22431	0.73	cps
Erbium	164-1	31947	33330	32708	32662	2.12	cps
Erbium	164-2	24976	25066	25086	25043	0.23	cps
Gadolinium	160-1	26101	26555	25964	26207	1.18	cps
Gadolinium	160-2	21206	21213	21280	21233	0.19	cps
Holmium	165-1	8186129	7813142	7998473	7999248	2.33	cps
Holmium	165-2	6185982	5592398	6219914	5999431	5.88	cps
Indium	115-1	7011007	6716319	6941265	6889530	2.24	cps
Indium	115-2	2714677	2466189	2658023	2612963	4.98	cps
Iron	56-2	26668096	27584885	26668356	26973779	1.96	cps
Iron	57-2	713692	731810	709452	718318	1.65	cps
Iron	54-2	1480251	1511435	1482336	1491341	1.17	cps
Krypton	83-1	543	600	597	580	5.48	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-04DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:32:01 DataFile Name : 028SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	142461	145897	143236	143865	1.25	cps
Lead	207-1	117893	120175	118006	118691	1.08	cps
Lead	208-1	549454	556908	548573	551645	0.83	cps
Lithium	6-1	421523	396820	410775	409706	3.02	cps
Magnesium	24-2	2608781	2722307	2614520	2648536	2.41	cps
Manganese	55-2	6423744	6747322	6550052	6573706	2.48	cps
Molybdenum	94-1	3881	4077	4144	4034	3.40	cps
Molybdenum	95-1	730	737	637	701	7.97	cps
Molybdenum	96-1	1457	1423	1307	1396	5.64	cps
Molybdenum	97-1	333	330	313	326	3.29	cps
Molybdenum	98-1	870	887	873	877	1.01	cps
Neodymium	150-1	32912	33329	32912	33051	0.73	cps
Neodymium	150-2	21270	21917	20992	21393	2.22	cps
Nickel	60-2	24036	23809	23479	23775	1.18	cps
Phosphorus	31-2	16362	16506	16656	16508	0.89	cps
Potassium	39-2	2837420	2804839	2754117	2798792	1.50	cps
Rhodium	103-1	6869639	6803828	6998876	6890781	1.44	cps
Rhodium	103-2	4453149	4113127	4560103	4375460	5.33	cps
Scandium	45-1	4232060	4087477	4287051	4202196	2.45	cps
Scandium	45-2	434356	389155	437709	420407	6.45	cps
Selenium	82-1	430	382	368	393	8.28	cps
Selenium	77-2	93	90	87	90	3.70	cps
Selenium	78-2	643	650	723	672	6.60	cps
Silicon	28-1	20712022	20312008	20073446	20365825	1.58	cps
Silver	107-1	257	267	303	276	8.92	cps
Silver	109-1	183	247	237	222	15.32	cps
Sodium	23-2	1323649	1355025	1298347	1325674	2.14	cps
Strontium	86-1	416444	429314	422679	422812	1.52	cps
Strontium	88-1	3661966	3735759	3709003	3702242	1.01	cps
Sulfur	34-1	2269476	2214651	2214476	2232868	1.42	cps
Terbium	159-1	8344461	7937470	8231780	8171237	2.57	cps
Terbium	159-2	6255182	5613027	6116983	5995064	5.64	cps
Thallium	203-1	1030	967	847	948	9.82	cps
Thallium	205-1	2304	2354	2287	2315	1.50	cps
Tin	118-1	2214	2354	2530	2366	6.71	cps
Titanium	47-1	4694	4844	4544	4694	3.20	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-04DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:32:01 DataFile Name : 028SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	7809	8036	7779	7875	1.78	cps
Vanadium	51-2	121665	123940	121261	122288	1.18	cps
Yttrium	89-1	13145623	12555751	13004154	12901843	2.39	cps
Yttrium	89-2	3899862	3411210	3870584	3727219	7.35	cps
Zinc	66-2	245475	248041	242802	245439	1.07	cps
Zirconium	90-1	10130	10384	9957	10157	2.11	cps
Zirconium	91-1	2134	2217	2257	2202	2.86	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-06DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:35:09 DataFile Name : 029SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3390582	3335579	3363592	3363251	0.82	cps
Antimony	121-1	1093	1060	917	1023	9.17	cps
Arsenic	75-2	2460	2470	2307	2412	3.80	cps
Barium	135-1	33359	32878	32621	32953	1.14	cps
Barium	137-1	58083	57911	57921	57972	0.17	cps
Beryllium	9-1	1751	1605	1591	1649	5.39	cps
Bismuth	209-1	4833150	4723283	4804346	4786926	1.19	cps
Bismuth	209-2	4464819	4334016	4351727	4383520	1.62	cps
Bromine	81-1	19954	22133	22658	21582	6.64	cps
Bromine	81-2	2847	2760	2880	2829	2.19	cps
Cadmium	108-1	270	223	250	248	9.45	cps
Cadmium	106-1	3317	3340	3250	3303	1.41	cps
Cadmium	111-1	5640	5739	5697	5692	0.87	cps
Calcium	43-1	811845	816348	809337	812510	0.44	cps
Calcium	44-1	12863925	12677717	12724360	12755334	0.76	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	35271	34947	34303	34840	1.42	cps
Cobalt	59-2	114485	114740	113450	114225	0.60	cps
Copper	63-2	157323	161542	158807	159224	1.34	cps
Dysprosium	156-1	29431	29555	30052	29679	1.11	cps
Dysprosium	156-2	27484	27754	28519	27919	1.92	cps
Erbium	164-1	41144	40713	41519	41125	0.98	cps
Erbium	164-2	31152	32010	31472	31545	1.38	cps
Gadolinium	160-1	31846	32545	32902	32431	1.66	cps
Gadolinium	160-2	26225	25744	26021	25997	0.93	cps
Holmium	165-1	8196804	7889546	7924927	8003759	2.10	cps
Holmium	165-2	6121568	6089370	6126581	6112506	0.33	cps
Indium	115-1	6999915	6890299	6806492	6898902	1.41	cps
Indium	115-2	2672701	2675479	2637062	2661747	0.80	cps
Iron	56-2	28016214	27147405	27272760	27478793	1.71	cps
Iron	57-2	728095	723959	719523	723859	0.59	cps
Iron	54-2	1509570	1536101	1515222	1520298	0.92	cps
Krypton	83-1	560	677	593	610	9.85	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-06DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:35:09 DataFile Name : 029SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	219390	215404	218506	217767	0.96	cps
Lead	207-1	180530	175867	179043	178480	1.33	cps
Lead	208-1	834167	822737	836971	831292	0.91	cps
Lithium	6-1	404650	402458	395881	400996	1.14	cps
Magnesium	24-2	2971545	2985573	2828935	2928684	2.96	cps
Manganese	55-2	6312851	6288723	6215733	6272436	0.81	cps
Molybdenum	94-1	4134	4147	3977	4086	2.31	cps
Molybdenum	95-1	620	613	583	606	3.23	cps
Molybdenum	96-1	1400	1457	1410	1422	2.13	cps
Molybdenum	97-1	430	330	373	378	13.27	cps
Molybdenum	98-1	823	853	823	833	2.08	cps
Neodymium	150-1	40030	40565	40304	40300	0.66	cps
Neodymium	150-2	27039	27110	26358	26836	1.55	cps
Nickel	60-2	22881	23245	22574	22900	1.47	cps
Phosphorus	31-2	10437	10917	10557	10637	2.35	cps
Potassium	39-2	2279198	2293950	2281155	2284768	0.35	cps
Rhodium	103-1	7082706	6949223	6713892	6915274	2.70	cps
Rhodium	103-2	4495994	4540628	4517504	4518042	0.49	cps
Scandium	45-1	4221521	4073547	4172767	4155945	1.81	cps
Scandium	45-2	429572	427368	426564	427835	0.36	cps
Selenium	82-1	457	358	360	392	14.52	cps
Selenium	77-2	90	123	113	109	15.71	cps
Selenium	78-2	703	640	767	703	9.00	cps
Silicon	28-1	22577889	22953332	22779164	22770128	0.83	cps
Silver	107-1	263	250	290	268	7.61	cps
Silver	109-1	177	247	240	221	17.47	cps
Sodium	23-2	1271783	1272007	1243405	1262398	1.30	cps
Strontium	86-1	300356	297825	299973	299384	0.46	cps
Strontium	88-1	2657210	2606164	2561358	2608244	1.84	cps
Sulfur	34-1	2301241	2315263	2323402	2313302	0.48	cps
Terbium	159-1	8291641	7906093	8448336	8215357	3.40	cps
Terbium	159-2	6171362	6034177	6055395	6086978	1.21	cps
Thallium	203-1	1110	1057	1000	1056	5.21	cps
Thallium	205-1	2500	2340	2614	2485	5.53	cps
Tin	118-1	2280	2624	2470	2458	7.00	cps
Titanium	47-1	5901	5991	6035	5976	1.14	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-06DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:35:09 DataFile Name : 029SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	11458	11499	11305	11421	0.89	cps
Vanadium	51-2	136840	135095	134708	135548	0.84	cps
Yttrium	89-1	13304095	12866484	12749403	12973327	2.25	cps
Yttrium	89-2	3832828	3754644	3790557	3792677	1.03	cps
Zinc	66-2	227547	226049	226029	226542	0.38	cps
Zirconium	90-1	9937	10404	10417	10253	2.67	cps
Zirconium	91-1	2284	2224	2307	2271	1.89	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-08DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:38:15 DataFile Name : 030SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3413134	3344376	3288189	3348566	1.87	cps
Antimony	121-1	1020	870	1003	964	8.52	cps
Arsenic	75-2	2844	2800	2664	2769	3.39	cps
Barium	135-1	31104	31582	31301	31329	0.77	cps
Barium	137-1	54267	55274	53838	54460	1.35	cps
Beryllium	9-1	1637	1587	1678	1634	2.78	cps
Bismuth	209-1	4933006	4912901	4790652	4878853	1.58	cps
Bismuth	209-2	4627652	4455204	4488233	4523696	2.02	cps
Bromine	81-1	20645	22524	23088	22086	5.79	cps
Bromine	81-2	2887	3064	3097	3016	3.74	cps
Cadmium	108-1	253	317	270	280	11.72	cps
Cadmium	106-1	3374	3297	3227	3299	2.22	cps
Cadmium	111-1	5975	5643	5677	5765	3.16	cps
Calcium	43-1	863372	873258	872296	869642	0.63	cps
Calcium	44-1	13699151	13781834	13658506	13713164	0.46	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	36681	37219	37423	37108	1.03	cps
Cobalt	59-2	117846	118895	119221	118654	0.61	cps
Copper	63-2	151745	150467	150637	150950	0.46	cps
Dysprosium	156-1	26646	27758	27009	27138	2.09	cps
Dysprosium	156-2	25296	25690	25260	25415	0.94	cps
Erbium	164-1	36348	37016	37310	36891	1.34	cps
Erbium	164-2	28546	28232	27928	28235	1.09	cps
Gadolinium	160-1	30042	30062	29872	29992	0.35	cps
Gadolinium	160-2	24375	23637	22926	23646	3.06	cps
Holmium	165-1	8002113	8012141	8045634	8019963	0.28	cps
Holmium	165-2	6444323	6200698	6228949	6291324	2.12	cps
Indium	115-1	6997956	6912037	6883586	6931193	0.86	cps
Indium	115-2	2789077	2688665	2721478	2733073	1.87	cps
Iron	56-2	32677874	31933636	31684020	32098510	1.61	cps
Iron	57-2	835871	838635	843193	839233	0.44	cps
Iron	54-2	1771706	1794506	1762744	1776319	0.92	cps
Krypton	83-1	560	540	667	589	11.56	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-08DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:38:15 DataFile Name : 030SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	170656	175505	174604	173588	1.49	cps
Lead	207-1	142510	143102	142641	142751	0.22	cps
Lead	208-1	654894	668174	667040	663369	1.11	cps
Lithium	6-1	405213	395732	395663	398869	1.38	cps
Magnesium	24-2	2610824	2658491	2667275	2645530	1.15	cps
Manganese	55-2	6424394	6478982	6272658	6392011	1.67	cps
Molybdenum	94-1	3867	3877	4184	3976	4.53	cps
Molybdenum	95-1	647	620	683	650	4.89	cps
Molybdenum	96-1	1587	1357	1433	1459	8.03	cps
Molybdenum	97-1	330	323	320	324	1.57	cps
Molybdenum	98-1	847	810	703	787	9.47	cps
Neodymium	150-1	36855	36808	37250	36971	0.66	cps
Neodymium	150-2	24812	23961	24371	24381	1.75	cps
Nickel	60-2	25993	26066	25792	25950	0.55	cps
Phosphorus	31-2	11868	11875	12125	11956	1.22	cps
Potassium	39-2	2451986	2471395	2459882	2461088	0.40	cps
Rhodium	103-1	6999560	6898747	6879114	6925807	0.93	cps
Rhodium	103-2	4604176	4399689	4543804	4515890	2.33	cps
Scandium	45-1	4236166	4191770	4159355	4195764	0.92	cps
Scandium	45-2	435670	431365	431687	432907	0.55	cps
Selenium	82-1	382	492	309	394	23.42	cps
Selenium	77-2	107	80	97	94	14.27	cps
Selenium	78-2	693	617	700	670	6.91	cps
Silicon	28-1	22716340	22784242	22951530	22817371	0.53	cps
Silver	107-1	260	330	320	303	12.48	cps
Silver	109-1	223	267	297	262	14.06	cps
Sodium	23-2	1448204	1416494	1417166	1427288	1.27	cps
Strontium	86-1	342682	346491	342937	344036	0.62	cps
Strontium	88-1	2982226	3011549	3040821	3011532	0.97	cps
Sulfur	34-1	2318459	2357221	2357812	2344497	0.96	cps
Terbium	159-1	8116414	8285107	8237977	8213166	1.06	cps
Terbium	159-2	6312489	6187829	6199471	6233263	1.10	cps
Thallium	203-1	1163	1223	1170	1186	2.77	cps
Thallium	205-1	2524	2737	2754	2671	4.80	cps
Tin	118-1	2474	2764	2654	2630	5.57	cps
Titanium	47-1	5778	5524	5738	5680	2.40	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-08DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:38:15 DataFile Name : 030SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	10081	10097	10321	10166	1.32	cps
Vanadium	51-2	137186	135421	136793	136467	0.68	cps
Yttrium	89-1	13119409	13217939	13182808	13173385	0.38	cps
Yttrium	89-2	3866997	3821825	3758540	3815787	1.43	cps
Zinc	66-2	253531	252575	252817	252975	0.20	cps
Zirconium	90-1	9630	10301	10014	9981	3.37	cps
Zirconium	91-1	2200	2287	2324	2270	2.79	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-10DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:41:25 DataFile Name : 031SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	719443	707462	705133	710680	1.08	cps
Antimony	121-1	787	793	893	824	7.25	cps
Arsenic	75-2	843	807	787	812	3.54	cps
Barium	135-1	25894	26522	26158	26191	1.20	cps
Barium	137-1	45556	46285	46305	46049	0.93	cps
Beryllium	9-1	549	532	585	555	4.92	cps
Bismuth	209-1	4826969	4804533	4776770	4802757	0.52	cps
Bismuth	209-2	4511251	4508566	4534040	4517952	0.31	cps
Bromine	81-1	19233	20728	21042	20334	4.75	cps
Bromine	81-2	2384	2500	2364	2416	3.06	cps
Cadmium	108-1	143	140	167	150	9.69	cps
Cadmium	106-1	3250	3094	3264	3203	2.95	cps
Cadmium	111-1	4652	4438	4605	4565	2.46	cps
Calcium	43-1	1514838	1532388	1511279	1519502	0.74	cps
Calcium	44-1	25177455	24828204	24811969	24939209	0.83	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	8256	8382	8422	8353	1.04	cps
Cobalt	59-2	84929	84560	84635	84708	0.23	cps
Copper	63-2	19927	19980	19313	19740	1.88	cps
Dysprosium	156-1	6968	6365	6745	6693	4.56	cps
Dysprosium	156-2	6388	6535	6608	6510	1.72	cps
Erbium	164-1	8536	8606	8543	8562	0.45	cps
Erbium	164-2	6848	6832	6538	6739	2.59	cps
Gadolinium	160-1	7062	7079	7069	7070	0.12	cps
Gadolinium	160-2	6081	5881	6071	6011	1.88	cps
Holmium	165-1	7989113	8075906	7863640	7976220	1.34	cps
Holmium	165-2	6306402	6315133	6189737	6270424	1.12	cps
Indium	115-1	7041723	6998931	7228976	7089877	1.73	cps
Indium	115-2	2765351	2744247	2692755	2734118	1.37	cps
Iron	56-2	9949297	9976837	9897882	9941339	0.40	cps
Iron	57-2	291024	289250	289327	289867	0.35	cps
Iron	54-2	574536	563508	565429	567824	1.04	cps
Krypton	83-1	503	520	530	518	2.60	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-10DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:41:25 DataFile Name : 031SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	20155	21110	21110	20792	2.65	cps
Lead	207-1	17118	17144	17321	17194	0.64	cps
Lead	208-1	79115	80561	79517	79731	0.94	cps
Lithium	6-1	399680	399742	396266	398563	0.50	cps
Magnesium	24-2	7037586	6986341	6838839	6954255	1.48	cps
Manganese	55-2	5785674	5678697	5697811	5720727	1.00	cps
Molybdenum	94-1	1960	1950	1967	1959	0.43	cps
Molybdenum	95-1	523	467	483	491	5.93	cps
Molybdenum	96-1	853	787	817	819	4.08	cps
Molybdenum	97-1	327	290	240	286	15.24	cps
Molybdenum	98-1	593	567	553	571	3.57	cps
Neodymium	150-1	9687	9003	9493	9394	3.75	cps
Neodymium	150-2	6161	6168	6008	6112	1.48	cps
Nickel	60-2	14367	14380	14911	14553	2.13	cps
Phosphorus	31-2	1110	1080	1123	1104	2.01	cps
Potassium	39-2	1972047	1957699	1938534	1956093	0.86	cps
Rhodium	103-1	6985805	6985138	7071670	7014204	0.71	cps
Rhodium	103-2	4597211	4525154	4476484	4532950	1.34	cps
Scandium	45-1	4175023	4187579	4230883	4197828	0.70	cps
Scandium	45-2	441735	429004	433088	434609	1.50	cps
Selenium	82-1	378	333	375	362	6.94	cps
Selenium	77-2	67	53	27	49	41.66	cps
Selenium	78-2	580	637	563	593	6.48	cps
Silicon	28-1	17823871	18161130	17663660	17882887	1.42	cps
Silver	107-1	313	297	283	298	5.05	cps
Silver	109-1	223	230	237	230	2.90	cps
Sodium	23-2	1188685	1169403	1209450	1189179	1.68	cps
Strontium	86-1	355007	356344	353914	355088	0.34	cps
Strontium	88-1	3122129	3177638	3186646	3162138	1.10	cps
Sulfur	34-1	2352319	2363950	2371606	2362625	0.41	cps
Terbium	159-1	8401562	8112866	8314268	8276232	1.79	cps
Terbium	159-2	6268683	6195978	6069327	6177996	1.63	cps
Thallium	203-1	770	673	717	720	6.72	cps
Thallium	205-1	1830	1673	1787	1763	4.59	cps
Tin	118-1	2204	2244	2120	2189	2.87	cps
Titanium	47-1	927	890	940	919	2.82	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-10DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:41:25 DataFile Name : 031SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	677	630	680	662	4.22	cps
Vanadium	51-2	7712	7819	7512	7681	2.03	cps
Yttrium	89-1	12834450	12570977	12655112	12686846	1.06	cps
Yttrium	89-2	3753682	3677943	3658674	3696766	1.36	cps
Zinc	66-2	206012	204622	206365	205666	0.45	cps
Zirconium	90-1	4754	4764	4751	4756	0.15	cps
Zirconium	91-1	1057	1100	1060	1072	2.25	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-12DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:44:34 DataFile Name : 032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3103052	3084463	3085525	3091014	0.34	cps
Antimony	121-1	853	893	857	868	2.56	cps
Arsenic	75-2	2580	2627	2497	2568	2.57	cps
Barium	135-1	31111	30503	30860	30825	0.99	cps
Barium	137-1	53702	54645	54401	54249	0.90	cps
Beryllium	9-1	1520	1530	1506	1519	0.82	cps
Bismuth	209-1	4895981	4888572	4785886	4856813	1.27	cps
Bismuth	209-2	4506360	4507317	4486235	4499971	0.26	cps
Bromine	81-1	20344	22317	23319	21993	6.88	cps
Bromine	81-2	2917	2870	2867	2885	0.97	cps
Cadmium	108-1	267	317	217	267	18.75	cps
Cadmium	106-1	3370	3344	3330	3348	0.61	cps
Cadmium	111-1	5760	5543	5650	5651	1.92	cps
Calcium	43-1	1035571	1035461	1036082	1035705	0.03	cps
Calcium	44-1	16147071	16443815	16421661	16337516	1.01	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	30702	29943	30013	30219	1.39	cps
Cobalt	59-2	114551	113121	112654	113442	0.87	cps
Copper	63-2	120294	119188	119282	119588	0.51	cps
Dysprosium	156-1	26078	25964	25854	25965	0.43	cps
Dysprosium	156-2	24508	24355	24067	24310	0.92	cps
Erbium	164-1	35358	36735	35205	35766	2.36	cps
Erbium	164-2	28175	27691	27297	27721	1.59	cps
Gadolinium	160-1	27577	28282	28389	28083	1.57	cps
Gadolinium	160-2	22962	23006	23286	23085	0.76	cps
Holmium	165-1	8242307	8132009	7990714	8121676	1.55	cps
Holmium	165-2	6328897	6372074	6314885	6338619	0.47	cps
Indium	115-1	7072021	7001211	7013314	7028849	0.54	cps
Indium	115-2	2744112	2785428	2759308	2762949	0.76	cps
Iron	56-2	27519054	27599805	27565473	27561444	0.15	cps
Iron	57-2	740445	736685	733343	736824	0.48	cps
Iron	54-2	1602466	1516949	1529447	1549621	2.98	cps
Krypton	83-1	533	520	507	520	2.56	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-12DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:44:34 DataFile Name : 032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	145676	145123	144070	144956	0.56	cps
Lead	207-1	118848	119425	116640	118304	1.24	cps
Lead	208-1	552911	553973	550756	552547	0.30	cps
Lithium	6-1	409878	397899	396326	401368	1.85	cps
Magnesium	24-2	2494696	2466861	2416241	2459266	1.62	cps
Manganese	55-2	6678511	6571968	6552915	6601131	1.03	cps
Molybdenum	94-1	3687	3717	3537	3647	2.64	cps
Molybdenum	95-1	657	600	560	606	8.02	cps
Molybdenum	96-1	1373	1387	1357	1372	1.10	cps
Molybdenum	97-1	313	293	410	339	18.41	cps
Molybdenum	98-1	683	757	657	699	7.41	cps
Neodymium	150-1	35308	34726	35645	35226	1.32	cps
Neodymium	150-2	23830	23199	23643	23558	1.38	cps
Nickel	60-2	23031	22661	23365	23019	1.53	cps
Phosphorus	31-2	10701	10647	10834	10727	0.90	cps
Potassium	39-2	2472839	2436451	2425843	2445044	1.01	cps
Rhodium	103-1	7135814	7056301	7076056	7089391	0.58	cps
Rhodium	103-2	4639108	4553173	4529715	4573999	1.26	cps
Scandium	45-1	4319227	4196787	4144542	4220185	2.12	cps
Scandium	45-2	441329	437271	436202	438267	0.62	cps
Selenium	82-1	477	505	454	478	5.33	cps
Selenium	77-2	93	100	73	89	15.61	cps
Selenium	78-2	603	647	683	644	6.21	cps
Silicon	28-1	20442462	20610686	20160624	20404590	1.11	cps
Silver	107-1	313	223	340	292	20.92	cps
Silver	109-1	237	290	287	271	11.02	cps
Sodium	23-2	1428570	1379815	1364309	1390898	2.41	cps
Strontium	86-1	398662	404102	393385	398716	1.34	cps
Strontium	88-1	3569871	3572773	3569032	3570559	0.05	cps
Sulfur	34-1	2279926	2352493	2292067	2308162	1.68	cps
Terbium	159-1	8554576	8402989	8468727	8475431	0.90	cps
Terbium	159-2	6322422	6322460	6213572	6286151	1.00	cps
Thallium	203-1	1063	1033	1017	1038	2.28	cps
Thallium	205-1	2314	2574	2657	2515	7.12	cps
Tin	118-1	2694	2770	3007	2824	5.79	cps
Titanium	47-1	4294	4317	4244	4285	0.87	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-12DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:44:34 DataFile Name : 032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	8890	8973	8476	8780	3.03	cps
Vanadium	51-2	130113	128158	129240	129170	0.76	cps
Yttrium	89-1	13688789	13135956	13313811	13379518	2.11	cps
Yttrium	89-2	3839806	3890048	3810707	3846854	1.04	cps
Zinc	66-2	238727	234662	236007	236466	0.88	cps
Zirconium	90-1	9486	9500	9196	9394	1.83	cps
Zirconium	91-1	2174	2220	2144	2179	1.77	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCV02 Instrumnet Name : P7
Client Sample ID : CCV02 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:47:41 DataFile Name : 033CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	7367951	7230858	7379158	7325989	1.13	cps
Antimony	121-1	2778049	2913467	2847033	2846183	2.38	cps
Arsenic	75-2	194528	194220	191179	193309	0.96	cps
Barium	135-1	3438234	3498889	3448589	3461904	0.94	cps
Barium	137-1	6036988	5950151	5983518	5990219	0.73	cps
Beryllium	9-1	314047	321368	323190	319535	1.51	cps
Bismuth	209-1	4846241	4845637	4836355	4842744	0.11	cps
Bismuth	209-2	4373121	4347689	4305566	4342125	0.79	cps
Bromine	81-1	13726	13506	13023	13418	2.68	cps
Bromine	81-2	497	540	487	508	5.58	cps
Cadmium	108-1	56279	55363	55918	55853	0.83	cps
Cadmium	106-1	79685	80838	79868	80130	0.77	cps
Cadmium	111-1	778863	794354	782467	785228	1.03	cps
Calcium	43-1	3912484	3957803	3949847	3940045	0.61	cps
Calcium	44-1	64247564	63774319	64119422	64047102	0.38	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1500711	1530974	1490331	1507339	1.40	cps
Cobalt	59-2	2396076	2328392	2309764	2344744	1.94	cps
Copper	63-2	18186178	17886136	17870594	17980969	0.99	cps
Dysprosium	156-1	150	180	177	169	9.74	cps
Dysprosium	156-2	237	253	273	254	7.22	cps
Erbium	164-1	387	353	363	368	4.65	cps
Erbium	164-2	283	280	240	268	9.01	cps
Gadolinium	160-1	240	220	193	218	10.75	cps
Gadolinium	160-2	477	543	450	490	9.81	cps
Holmium	165-1	8412464	8106712	8245548	8254908	1.85	cps
Holmium	165-2	6317936	6393158	6218903	6309999	1.39	cps
Indium	115-1	7020465	6894843	6843833	6919714	1.31	cps
Indium	115-2	2634852	2631571	2649260	2638561	0.36	cps
Iron	56-2	326574308	328013508	326792455	327126757	0.24	cps
Iron	57-2	8141419	8045734	8027625	8071593	0.76	cps
Iron	54-2	18125833	18046816	17862633	18011761	0.75	cps
Krypton	83-1	450	517	570	512	11.74	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCV02 Instrumnet Name : P7
Client Sample ID : CCV02 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:47:41 DataFile Name : 033CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	10409887	10373770	10194542	10326066	1.12	cps
Lead	207-1	8788704	8695370	8671213	8718429	0.71	cps
Lead	208-1	40557593	40221927	40164430	40314650	0.53	cps
Lithium	6-1	424551	420362	418841	421251	0.70	cps
Magnesium	24-2	65261836	66199114	65831311	65764087	0.72	cps
Manganese	55-2	12625099	12825295	12396798	12615731	1.70	cps
Molybdenum	94-1	11056572	11167559	10851722	11025284	1.45	cps
Molybdenum	95-1	15746791	16020307	15675675	15814258	1.15	cps
Molybdenum	96-1	17007214	17168068	17104225	17093169	0.47	cps
Molybdenum	97-1	9776005	9840455	9943161	9853207	0.86	cps
Molybdenum	98-1	25431615	25425863	25191645	25349708	0.54	cps
Neodymium	150-1	193	147	157	166	14.84	cps
Neodymium	150-2	60	57	50	56	9.17	cps
Nickel	60-2	605374	599594	595967	600311	0.79	cps
Phosphorus	31-2	87449	88854	88099	88134	0.80	cps
Potassium	39-2	39032382	39102506	38529968	38888285	0.80	cps
Rhodium	103-1	6939732	6780037	6839795	6853188	1.18	cps
Rhodium	103-2	4379618	4361143	4367915	4369559	0.21	cps
Scandium	45-1	4385821	4293441	4291956	4323739	1.24	cps
Scandium	45-2	440598	444959	445852	443803	0.63	cps
Selenium	82-1	59288	59589	58997	59291	0.50	cps
Selenium	77-2	7148	6795	6965	6969	2.54	cps
Selenium	78-2	23098	23289	22925	23104	0.79	cps
Silicon	28-1	9838936	9883225	9979855	9900672	0.73	cps
Silver	107-1	3972172	3914336	3933701	3940069	0.75	cps
Silver	109-1	3727250	3727730	3722094	3725691	0.08	cps
Sodium	23-2	105192655	103309215	102029418	103510430	1.54	cps
Strontium	86-1	1015319	1015517	1017431	1016089	0.11	cps
Strontium	88-1	8849148	9021159	8895044	8921784	1.00	cps
Sulfur	34-1	395573	396166	391774	394504	0.60	cps
Terbium	159-1	8542070	8305874	8498357	8448767	1.49	cps
Terbium	159-2	6366098	6320188	6152659	6279648	1.79	cps
Thallium	203-1	2531852	2541822	2505632	2526435	0.74	cps
Thallium	205-1	6014609	6202198	6137028	6117945	1.56	cps
Tin	118-1	2389729	2420966	2409498	2406731	0.66	cps
Titanium	47-1	3964093	4079562	3930430	3991362	1.96	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCV02 Instrumnet Name : P7
Client Sample ID : CCV02 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:47:41 DataFile Name : 033CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	7493571	7758329	7774961	7675620	2.06	cps
Vanadium	51-2	1270792	1294730	1265868	1277130	1.21	cps
Yttrium	89-1	12804830	12301065	12734634	12613510	2.16	cps
Yttrium	89-2	3606263	3625712	3592977	3608317	0.46	cps
Zinc	66-2	3172830	3216357	3169820	3186336	0.82	cps
Zirconium	90-1	5388976	5387594	5412391	5396320	0.26	cps
Zirconium	91-1	1192974	1210112	1218239	1207108	1.07	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCB02 Instrumnet Name : P7
Client Sample ID : CCB02 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:52:49 DataFile Name : 034CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1617	1403	1390	1470	8.65	cps
Antimony	121-1	487	427	403	439	9.80	cps
Arsenic	75-2	3	10	10	8	49.52	cps
Barium	135-1	87	90	83	87	3.85	cps
Barium	137-1	150	103	103	119	22.66	cps
Beryllium	9-1	7	0	0	2	167.88	cps
Bismuth	209-1	4838894	4754522	4737415	4776944	1.14	cps
Bismuth	209-2	4265981	4309166	4270435	4281861	0.55	cps
Bromine	81-1	11268	11208	11528	11334	1.50	cps
Bromine	81-2	273	270	233	259	8.57	cps
Cadmium	108-1	10	0	17	9	94.38	cps
Cadmium	106-1	2470	2450	2627	2516	3.85	cps
Cadmium	111-1	1775	1762	1851	1796	2.66	cps
Calcium	43-1	433	360	323	372	15.05	cps
Calcium	44-1	28046	27532	27702	27760	0.94	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2504	2617	2457	2526	3.26	cps
Cobalt	59-2	103	83	60	82	26.38	cps
Copper	63-2	1390	1467	1613	1490	7.62	cps
Dysprosium	156-1	13	13	7	11	34.61	cps
Dysprosium	156-2	0	10	0	3	173.21	cps
Erbium	164-1	37	83	60	60	38.88	cps
Erbium	164-2	53	33	53	47	24.75	cps
Gadolinium	160-1	77	30	57	54	43.00	cps
Gadolinium	160-2	330	377	317	341	9.24	cps
Holmium	165-1	7878395	7790857	7710030	7793094	1.08	cps
Holmium	165-2	5826206	5834365	5916373	5858981	0.85	cps
Indium	115-1	6841229	6681123	6642727	6721693	1.57	cps
Indium	115-2	2597929	2562687	2595355	2585324	0.76	cps
Iron	56-2	23862	23469	23789	23707	0.88	cps
Iron	57-2	1573	1433	1610	1539	6.06	cps
Iron	54-2	2734	2744	2887	2788	3.08	cps
Krypton	83-1	503	563	487	518	7.79	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCB02 Instrumnet Name : P7
Client Sample ID : CCB02 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:52:49 DataFile Name : 034CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	557	507	417	493	14.38	cps
Lead	207-1	420	377	400	399	5.44	cps
Lead	208-1	2077	1937	1947	1987	3.93	cps
Lithium	6-1	413967	414396	408777	412380	0.76	cps
Magnesium	24-2	670	637	533	613	11.62	cps
Manganese	55-2	833	993	830	886	10.54	cps
Molybdenum	94-1	477	577	467	507	12.01	cps
Molybdenum	95-1	537	513	453	501	8.58	cps
Molybdenum	96-1	537	543	563	548	2.53	cps
Molybdenum	97-1	323	333	267	308	11.68	cps
Molybdenum	98-1	713	820	683	739	9.72	cps
Neodymium	150-1	3	7	13	8	65.47	cps
Neodymium	150-2	0	0	3	1	173.21	cps
Nickel	60-2	557	543	637	579	8.72	cps
Phosphorus	31-2	800	703	673	726	9.12	cps
Potassium	39-2	71892	71892	71132	71639	0.61	cps
Rhodium	103-1	6987559	6636431	6724226	6782739	2.69	cps
Rhodium	103-2	4308122	4294209	4361722	4321351	0.82	cps
Scandium	45-1	4134410	4063878	3995181	4064490	1.71	cps
Scandium	45-2	414606	401894	407972	408157	1.56	cps
Selenium	82-1	340	251	317	303	15.15	cps
Selenium	77-2	0	0	3	1	173.21	cps
Selenium	78-2	520	507	490	506	2.97	cps
Silicon	28-1	662233	686189	669818	672747	1.82	cps
Silver	107-1	283	293	227	268	13.43	cps
Silver	109-1	243	203	273	240	14.63	cps
Sodium	23-2	46082	45851	45413	45782	0.74	cps
Strontium	86-1	890	930	833	884	5.49	cps
Strontium	88-1	373	373	410	386	5.49	cps
Sulfur	34-1	159300	159146	161603	160016	0.86	cps
Terbium	159-1	8178247	8033007	7876782	8029346	1.88	cps
Terbium	159-2	5953999	5906887	5824907	5895264	1.11	cps
Thallium	203-1	427	433	460	440	4.01	cps
Thallium	205-1	1093	907	993	998	9.36	cps
Tin	118-1	1180	1063	1103	1116	5.31	cps
Titanium	47-1	127	143	123	131	8.17	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCB02 Instrumnet Name : P7
Client Sample ID : CCB02 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 12:52:49 DataFile Name : 034CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	163	13	37	71	113.51	cps
Vanadium	51-2	30	23	20	24	20.83	cps
Yttrium	89-1	11721888	11951289	11789965	11821047	1.00	cps
Yttrium	89-2	3417323	3396603	3387849	3400592	0.45	cps
Zinc	66-2	4707	4554	4614	4625	1.67	cps
Zirconium	90-1	610	590	560	587	4.29	cps
Zirconium	91-1	150	150	110	137	16.90	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-14DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:56:05 DataFile Name : 035SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2965006	2981961	3011280	2986082	0.78	cps
Antimony	121-1	880	1023	1050	984	9.29	cps
Arsenic	75-2	2170	2200	2147	2172	1.23	cps
Barium	135-1	31201	31495	31582	31426	0.63	cps
Barium	137-1	53795	54260	54387	54147	0.58	cps
Beryllium	9-1	1553	1662	1456	1557	6.63	cps
Bismuth	209-1	4969323	4771088	4933672	4891361	2.16	cps
Bismuth	209-2	4503342	4591751	4483425	4526173	1.27	cps
Bromine	81-1	17708	19974	20708	19463	8.04	cps
Bromine	81-2	2507	2644	2627	2592	2.88	cps
Cadmium	108-1	287	267	307	287	6.98	cps
Cadmium	106-1	3567	3220	3360	3383	5.16	cps
Cadmium	111-1	5847	5701	5738	5762	1.31	cps
Calcium	43-1	1018878	1028388	1021995	1023087	0.47	cps
Calcium	44-1	15991175	16329767	16368197	16229713	1.28	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	28921	29195	28928	29015	0.54	cps
Cobalt	59-2	119811	119707	118845	119455	0.44	cps
Copper	63-2	101271	99791	100500	100521	0.74	cps
Dysprosium	156-1	21400	21614	21543	21519	0.51	cps
Dysprosium	156-2	20635	20505	20866	20669	0.88	cps
Erbium	164-1	29615	29959	29515	29696	0.79	cps
Erbium	164-2	22886	22682	22432	22666	1.00	cps
Gadolinium	160-1	23600	23573	24078	23750	1.19	cps
Gadolinium	160-2	19303	18709	18996	19003	1.56	cps
Holmium	165-1	8326337	8145887	8080901	8184375	1.55	cps
Holmium	165-2	6149857	6421372	6211640	6260956	2.27	cps
Indium	115-1	7043487	6994088	6945621	6994399	0.70	cps
Indium	115-2	2707442	2743225	2726212	2725626	0.66	cps
Iron	56-2	23911395	24002264	24229942	24047867	0.68	cps
Iron	57-2	643605	635026	640546	639726	0.68	cps
Iron	54-2	1351417	1393516	1397058	1380664	1.84	cps
Krypton	83-1	603	587	613	601	2.24	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-14DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:56:05 DataFile Name : 035SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	149046	150311	147954	149104	0.79	cps
Lead	207-1	121915	121572	120795	121427	0.47	cps
Lead	208-1	571410	566730	563468	567203	0.70	cps
Lithium	6-1	429751	421252	415972	422325	1.65	cps
Magnesium	24-2	3344185	3427143	3386503	3385944	1.23	cps
Manganese	55-2	6696588	6775242	6685244	6719025	0.73	cps
Molybdenum	94-1	3831	3767	3767	3788	0.97	cps
Molybdenum	95-1	630	643	687	653	4.54	cps
Molybdenum	96-1	1397	1240	1403	1347	6.86	cps
Molybdenum	97-1	353	343	363	353	2.83	cps
Molybdenum	98-1	810	867	787	821	5.01	cps
Neodymium	150-1	29594	29207	29615	29472	0.78	cps
Neodymium	150-2	19637	19460	18953	19350	1.84	cps
Nickel	60-2	24263	23622	23849	23911	1.36	cps
Phosphorus	31-2	9210	8609	8763	8860	3.52	cps
Potassium	39-2	2591087	2578980	2510874	2560313	1.69	cps
Rhodium	103-1	6881816	6918414	6906361	6902197	0.27	cps
Rhodium	103-2	4520785	4521224	4440499	4494169	1.03	cps
Scandium	45-1	4247223	4214458	4135643	4199108	1.37	cps
Scandium	45-2	428929	434837	430479	431415	0.71	cps
Selenium	82-1	335	391	379	368	8.04	cps
Selenium	77-2	80	73	80	78	4.95	cps
Selenium	78-2	653	600	717	657	8.89	cps
Silicon	28-1	21302802	21295564	21334211	21310859	0.10	cps
Silver	107-1	467	387	340	398	16.10	cps
Silver	109-1	427	297	267	330	25.77	cps
Sodium	23-2	1379786	1365113	1370351	1371750	0.54	cps
Strontium	86-1	356644	361285	364081	360670	1.04	cps
Strontium	88-1	3191209	3226973	3197734	3205305	0.59	cps
Sulfur	34-1	2310025	2338619	2262412	2303685	1.67	cps
Terbium	159-1	8302832	8320727	8355127	8326229	0.32	cps
Terbium	159-2	6157110	6173596	6155776	6162161	0.16	cps
Thallium	203-1	873	867	767	836	7.15	cps
Thallium	205-1	2180	2330	2190	2234	3.76	cps
Tin	118-1	1837	1984	2087	1969	6.38	cps
Titanium	47-1	3240	3017	3170	3143	3.64	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-14DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP0 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:56:05 DataFile Name : 035SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	6475	6195	6322	6330	2.22	cps
Vanadium	51-2	102969	102443	102852	102755	0.27	cps
Yttrium	89-1	12947390	12932800	13172016	13017402	1.03	cps
Yttrium	89-2	3735342	3799067	3694017	3742809	1.41	cps
Zinc	66-2	251913	256000	252519	253478	0.87	cps
Zirconium	90-1	9230	9153	9156	9180	0.47	cps
Zirconium	91-1	2284	2053	2204	2180	5.36	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-16DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:59:13 DataFile Name : 036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3460184	3407373	3415408	3427655	0.83	cps
Antimony	121-1	883	993	1103	993	11.07	cps
Arsenic	75-2	2614	2454	2464	2510	3.57	cps
Barium	135-1	29327	29791	29441	29520	0.82	cps
Barium	137-1	51282	50807	51015	51035	0.47	cps
Beryllium	9-1	1758	1747	1608	1704	4.90	cps
Bismuth	209-1	4886970	4995275	4906720	4929655	1.17	cps
Bismuth	209-2	4562323	4402196	4402612	4455710	2.07	cps
Bromine	81-1	20324	21693	23439	21819	7.16	cps
Bromine	81-2	2707	2997	2880	2861	5.10	cps
Cadmium	108-1	267	327	323	306	11.04	cps
Cadmium	106-1	3440	3410	3284	3378	2.46	cps
Cadmium	111-1	5899	5876	5763	5846	1.25	cps
Calcium	43-1	812846	809549	808076	810157	0.30	cps
Calcium	44-1	12800181	12769139	12687349	12752223	0.46	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	34880	34530	35057	34823	0.77	cps
Cobalt	59-2	127031	124507	126695	126077	1.09	cps
Copper	63-2	142437	141265	141692	141798	0.42	cps
Dysprosium	156-1	28526	28282	28339	28382	0.45	cps
Dysprosium	156-2	25977	26181	26038	26065	0.40	cps
Erbium	164-1	38430	39596	38898	38975	1.51	cps
Erbium	164-2	29942	29712	29668	29774	0.49	cps
Gadolinium	160-1	31085	31322	31699	31369	0.99	cps
Gadolinium	160-2	24902	24919	24512	24778	0.93	cps
Holmium	165-1	8274086	8536449	8140930	8317155	2.42	cps
Holmium	165-2	6373962	6141527	6295804	6270431	1.89	cps
Indium	115-1	6981352	6971051	6956838	6969747	0.18	cps
Indium	115-2	2754888	2677729	2637131	2689916	2.22	cps
Iron	56-2	30208259	30814055	30479683	30500665	0.99	cps
Iron	57-2	806398	802155	801009	803187	0.35	cps
Iron	54-2	1727148	1689083	1672422	1696218	1.65	cps
Krypton	83-1	597	487	583	556	10.81	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-16DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:59:13 DataFile Name : 036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	220409	221605	221359	221124	0.29	cps
Lead	207-1	178154	181465	181889	180503	1.13	cps
Lead	208-1	835109	845608	839956	840224	0.63	cps
Lithium	6-1	412524	409141	406725	409463	0.71	cps
Magnesium	24-2	2434199	2403072	2403852	2413708	0.74	cps
Manganese	55-2	6658824	6624481	6549278	6610861	0.85	cps
Molybdenum	94-1	4014	3924	3947	3962	1.18	cps
Molybdenum	95-1	670	693	680	681	1.72	cps
Molybdenum	96-1	1420	1503	1527	1483	3.78	cps
Molybdenum	97-1	343	337	330	337	1.98	cps
Molybdenum	98-1	827	697	723	749	9.17	cps
Neodymium	150-1	37560	38182	37102	37615	1.44	cps
Neodymium	150-2	24932	24889	25303	25041	0.91	cps
Nickel	60-2	24958	25412	25816	25395	1.69	cps
Phosphorus	31-2	10757	10320	10344	10474	2.35	cps
Potassium	39-2	2465780	2375337	2426275	2422464	1.87	cps
Rhodium	103-1	7014965	6964716	6924310	6967997	0.65	cps
Rhodium	103-2	4550611	4537190	4532435	4540079	0.21	cps
Scandium	45-1	4222152	4191167	4264740	4226020	0.87	cps
Scandium	45-2	437492	425808	427388	430229	1.47	cps
Selenium	82-1	361	502	394	419	17.56	cps
Selenium	77-2	93	117	173	128	32.20	cps
Selenium	78-2	747	680	657	694	6.73	cps
Silicon	28-1	23056521	22964890	23054307	23025239	0.23	cps
Silver	107-1	227	283	297	269	13.82	cps
Silver	109-1	233	283	283	267	10.83	cps
Sodium	23-2	1401267	1379274	1396206	1392249	0.83	cps
Strontium	86-1	327382	325274	323610	325422	0.58	cps
Strontium	88-1	2890970	2903669	2857185	2883941	0.83	cps
Sulfur	34-1	2313570	2236450	2227813	2259278	2.09	cps
Terbium	159-1	8341645	8361529	8347597	8350257	0.12	cps
Terbium	159-2	6206944	6177201	6202606	6195584	0.26	cps
Thallium	203-1	923	983	987	964	3.70	cps
Thallium	205-1	2374	2444	2350	2389	2.03	cps
Tin	118-1	2120	1987	2107	2071	3.55	cps
Titanium	47-1	5161	5131	4991	5094	1.78	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-16DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 12:59:13 DataFile Name : 036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	10251	10081	10388	10240	1.50	cps
Vanadium	51-2	139702	136850	138376	138309	1.03	cps
Yttrium	89-1	13237370	13453372	13389370	13360038	0.83	cps
Yttrium	89-2	3886674	3836007	3809419	3844033	1.02	cps
Zinc	66-2	259612	258368	257807	258596	0.36	cps
Zirconium	90-1	9923	10017	10304	10081	1.97	cps
Zirconium	91-1	2247	2174	2174	2198	1.93	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:02:18 DataFile Name : 037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3335457	3333387	3343696	3337513	0.16	cps
Antimony	121-1	867	813	863	848	3.52	cps
Arsenic	75-2	2640	2760	2480	2627	5.35	cps
Barium	135-1	33540	32805	33266	33203	1.12	cps
Barium	137-1	57771	58025	57413	57736	0.53	cps
Beryllium	9-1	1343	1506	1406	1418	5.78	cps
Bismuth	209-1	4843577	4877396	4906637	4875870	0.65	cps
Bismuth	209-2	4310831	4471583	4469460	4417291	2.09	cps
Bromine	81-1	18972	20958	22344	20758	8.16	cps
Bromine	81-2	2687	2630	2624	2647	1.32	cps
Cadmium	108-1	223	273	220	239	12.51	cps
Cadmium	106-1	3274	3284	3470	3343	3.31	cps
Cadmium	111-1	5212	5161	5299	5224	1.34	cps
Calcium	43-1	640511	649107	645379	644999	0.67	cps
Calcium	44-1	10016790	10316208	10280209	10204402	1.60	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	38215	39712	38877	38935	1.93	cps
Cobalt	59-2	110773	109037	108601	109470	1.05	cps
Copper	63-2	173046	170679	171120	171615	0.73	cps
Dysprosium	156-1	31505	31943	31740	31729	0.69	cps
Dysprosium	156-2	29695	29534	29003	29411	1.23	cps
Erbium	164-1	41773	42237	42742	42251	1.15	cps
Erbium	164-2	33403	32495	32341	32746	1.75	cps
Gadolinium	160-1	34212	34941	34579	34577	1.05	cps
Gadolinium	160-2	27848	27604	28015	27822	0.74	cps
Holmium	165-1	8204277	8247226	8167390	8206297	0.49	cps
Holmium	165-2	6177727	6271994	6291877	6247199	0.98	cps
Indium	115-1	7042345	6915344	6992802	6983497	0.92	cps
Indium	115-2	2708048	2752516	2688551	2716372	1.21	cps
Iron	56-2	31722335	32218530	31921490	31954119	0.78	cps
Iron	57-2	829007	835517	829111	831211	0.45	cps
Iron	54-2	1749227	1724512	1765251	1746330	1.18	cps
Krypton	83-1	613	590	587	597	2.44	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:02:18 DataFile Name : 037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	230885	231340	234074	232100	0.74	cps
Lead	207-1	190395	190867	188587	189950	0.63	cps
Lead	208-1	878876	885400	887625	883967	0.51	cps
Lithium	6-1	408552	405935	396853	403780	1.52	cps
Magnesium	24-2	2194694	2172885	2197102	2188227	0.61	cps
Manganese	55-2	5271048	5267489	5239909	5259482	0.32	cps
Molybdenum	94-1	4284	4441	4177	4301	3.08	cps
Molybdenum	95-1	693	607	667	656	6.77	cps
Molybdenum	96-1	1530	1393	1560	1495	5.94	cps
Molybdenum	97-1	487	340	337	388	22.09	cps
Molybdenum	98-1	867	883	787	846	6.11	cps
Neodymium	150-1	43521	43681	44106	43769	0.69	cps
Neodymium	150-2	28980	28369	28806	28718	1.10	cps
Nickel	60-2	23836	23248	23816	23633	1.41	cps
Phosphorus	31-2	12669	11738	12145	12184	3.83	cps
Potassium	39-2	2175730	2200780	2164838	2180449	0.85	cps
Rhodium	103-1	7024141	6863271	6936135	6941182	1.16	cps
Rhodium	103-2	4487976	4620598	4506609	4538394	1.58	cps
Scandium	45-1	4198384	4206975	4225291	4210217	0.33	cps
Scandium	45-2	425038	429505	429543	428029	0.61	cps
Selenium	82-1	372	433	379	395	8.55	cps
Selenium	77-2	177	83	113	124	38.29	cps
Selenium	78-2	743	653	643	680	8.10	cps
Silicon	28-1	22649161	22673186	22701436	22674594	0.12	cps
Silver	107-1	263	257	267	262	1.94	cps
Silver	109-1	203	257	230	230	11.59	cps
Sodium	23-2	1114269	1095665	1105646	1105194	0.84	cps
Strontium	86-1	252696	254238	253478	253471	0.30	cps
Strontium	88-1	2237802	2249561	2235403	2240922	0.34	cps
Sulfur	34-1	2179368	2223314	2246147	2216276	1.53	cps
Terbium	159-1	8231461	8209755	8209342	8216853	0.15	cps
Terbium	159-2	6231298	6274334	6222754	6242795	0.44	cps
Thallium	203-1	943	1040	963	982	5.19	cps
Thallium	205-1	2294	2397	2577	2422	5.92	cps
Tin	118-1	1607	1530	1727	1621	6.11	cps
Titanium	47-1	8739	8462	8983	8728	2.98	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18DLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:02:18 DataFile Name : 037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	14478	14188	14144	14270	1.27	cps
Vanadium	51-2	144807	144395	144152	144451	0.23	cps
Yttrium	89-1	13607393	13214922	13343709	13388675	1.49	cps
Yttrium	89-2	3836007	3845348	3821417	3834257	0.31	cps
Zinc	66-2	223704	219317	216137	219720	1.73	cps
Zirconium	90-1	10547	10637	10791	10658	1.16	cps
Zirconium	91-1	2540	2297	2344	2394	5.40	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18DUPDLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:05:26 DataFile Name : 038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3245319	3364082	3340713	3316705	1.90	cps
Antimony	121-1	893	877	883	884	0.95	cps
Arsenic	75-2	2627	2624	2750	2667	2.71	cps
Barium	135-1	32882	33673	33102	33219	1.23	cps
Barium	137-1	57854	58135	57419	57803	0.62	cps
Beryllium	9-1	1414	1556	1519	1497	4.94	cps
Bismuth	209-1	4813295	4878832	4580097	4757408	3.30	cps
Bismuth	209-2	4508649	4423861	4421426	4451312	1.12	cps
Bromine	81-1	19500	21329	22514	21114	7.19	cps
Bromine	81-2	2614	2700	2770	2695	2.91	cps
Cadmium	108-1	250	220	233	234	6.41	cps
Cadmium	106-1	3454	3237	3194	3295	4.23	cps
Cadmium	111-1	5416	5156	5113	5228	3.14	cps
Calcium	43-1	651791	657028	647249	652023	0.75	cps
Calcium	44-1	10238672	10387314	10189570	10271852	1.00	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	38910	39448	38239	38866	1.56	cps
Cobalt	59-2	110468	111683	109050	110400	1.19	cps
Copper	63-2	170602	172851	172605	172019	0.72	cps
Dysprosium	156-1	31893	32535	32748	32392	1.37	cps
Dysprosium	156-2	29341	29865	29608	29605	0.89	cps
Erbium	164-1	42398	43622	41860	42626	2.12	cps
Erbium	164-2	33283	33504	32555	33114	1.50	cps
Gadolinium	160-1	35097	35341	35104	35181	0.40	cps
Gadolinium	160-2	27821	27975	28399	28065	1.07	cps
Holmium	165-1	8102556	8041764	7887850	8010724	1.38	cps
Holmium	165-2	6291362	6213413	6094574	6199783	1.60	cps
Indium	115-1	7118509	6730494	6880446	6909816	2.83	cps
Indium	115-2	2713101	2699766	2679595	2697487	0.63	cps
Iron	56-2	31498611	31386200	31961590	31615467	0.96	cps
Iron	57-2	827374	827074	833821	829423	0.46	cps
Iron	54-2	1764667	1741074	1771143	1758961	0.90	cps
Krypton	83-1	563	720	667	650	12.25	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18DUPDLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:05:26 DataFile Name : 038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	235800	233860	230705	233455	1.10	cps
Lead	207-1	191894	188908	188093	189632	1.06	cps
Lead	208-1	894238	889237	880128	887868	0.81	cps
Lithium	6-1	412375	399524	398812	403570	1.89	cps
Magnesium	24-2	2241320	2171037	2249622	2220660	1.94	cps
Manganese	55-2	5342443	5185832	5267767	5265347	1.49	cps
Molybdenum	94-1	4051	4521	4191	4254	5.67	cps
Molybdenum	95-1	693	663	623	660	5.32	cps
Molybdenum	96-1	1517	1573	1480	1523	3.09	cps
Molybdenum	97-1	337	350	317	334	5.02	cps
Molybdenum	98-1	797	980	733	837	15.31	cps
Neodymium	150-1	44413	45366	43918	44566	1.65	cps
Neodymium	150-2	29027	29715	28853	29198	1.56	cps
Nickel	60-2	23822	23779	24056	23886	0.62	cps
Phosphorus	31-2	12502	12602	12705	12603	0.81	cps
Potassium	39-2	2196677	2180832	2166754	2181421	0.69	cps
Rhodium	103-1	7046124	6968260	6762527	6925637	2.12	cps
Rhodium	103-2	4611036	4502275	4420691	4511334	2.12	cps
Scandium	45-1	4256668	4212510	4083918	4184365	2.14	cps
Scandium	45-2	423354	420667	423537	422520	0.38	cps
Selenium	82-1	480	316	383	393	21.00	cps
Selenium	77-2	130	110	147	129	14.24	cps
Selenium	78-2	650	563	673	629	9.22	cps
Silicon	28-1	23013696	22595341	22032810	22547282	2.18	cps
Silver	107-1	267	293	343	301	12.93	cps
Silver	109-1	197	220	247	221	11.31	cps
Sodium	23-2	1108084	1068057	1113234	1096458	2.26	cps
Strontium	86-1	256872	257313	254231	256139	0.65	cps
Strontium	88-1	2264306	2287540	2242549	2264798	0.99	cps
Sulfur	34-1	2300287	2264614	2269033	2277978	0.85	cps
Terbium	159-1	8357511	8406087	8369209	8377603	0.30	cps
Terbium	159-2	6213516	6190552	6269152	6224406	0.65	cps
Thallium	203-1	1010	970	1053	1011	4.12	cps
Thallium	205-1	2400	2367	2280	2349	2.64	cps
Tin	118-1	1770	1733	1677	1727	2.72	cps
Titanium	47-1	8646	8733	8876	8752	1.33	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18DUPDLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:05:26 DataFile Name : 038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	14662	14331	14228	14407	1.57	cps
Vanadium	51-2	145150	145641	144742	145178	0.31	cps
Yttrium	89-1	13480026	13248929	13072019	13266991	1.54	cps
Yttrium	89-2	3844827	3786889	3808245	3813320	0.77	cps
Zinc	66-2	221586	222374	217810	220590	1.11	cps
Zirconium	90-1	11665	11331	11194	11397	2.12	cps
Zirconium	91-1	2370	2507	2430	2436	2.81	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18LDLX25 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 25
Date & Time Acquired : 2025-08-20 13:08:33 DataFile Name : 039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	660084	664371	667804	664086	0.58	cps
Antimony	121-1	337	297	327	320	6.51	cps
Arsenic	75-2	573	560	523	552	4.69	cps
Barium	135-1	6535	6965	6612	6704	3.42	cps
Barium	137-1	12099	10908	11265	11424	5.35	cps
Beryllium	9-1	322	292	305	306	4.94	cps
Bismuth	209-1	4702242	4911590	4884493	4832775	2.36	cps
Bismuth	209-2	4394599	4466172	4310623	4390465	1.77	cps
Bromine	81-1	14264	14861	14714	14613	2.13	cps
Bromine	81-2	860	887	917	888	3.19	cps
Cadmium	108-1	60	53	57	57	5.89	cps
Cadmium	106-1	2717	2874	2577	2723	5.45	cps
Cadmium	111-1	2423	2648	2384	2485	5.72	cps
Calcium	43-1	130907	130242	130265	130471	0.29	cps
Calcium	44-1	2065049	2119905	2134602	2106519	1.74	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	9510	9443	9817	9590	2.08	cps
Cobalt	59-2	21839	21826	21776	21814	0.15	cps
Copper	63-2	36010	36505	35392	35969	1.55	cps
Dysprosium	156-1	5975	6458	6295	6243	3.94	cps
Dysprosium	156-2	6148	5621	5771	5847	4.64	cps
Erbium	164-1	8012	8609	8609	8410	4.10	cps
Erbium	164-2	6492	6775	6802	6689	2.57	cps
Gadolinium	160-1	7015	6835	6818	6890	1.58	cps
Gadolinium	160-2	5811	5955	5961	5909	1.43	cps
Holmium	165-1	7698554	8097162	8019957	7938558	2.66	cps
Holmium	165-2	6303124	6166537	5958350	6142670	2.83	cps
Indium	115-1	6928779	6921700	6987970	6946149	0.52	cps
Indium	115-2	2713457	2693048	2647975	2684827	1.25	cps
Iron	56-2	6481099	6298026	6357752	6378959	1.46	cps
Iron	57-2	167777	167015	168284	167692	0.38	cps
Iron	54-2	365427	368482	363958	365956	0.63	cps
Krypton	83-1	560	547	487	531	7.36	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18LDLX25 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 25
Date & Time Acquired : 2025-08-20 13:08:33 DataFile Name : 039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	45236	48437	47246	46973	3.44	cps
Lead	207-1	38000	37763	36383	37382	2.34	cps
Lead	208-1	174346	177408	174085	175280	1.05	cps
Lithium	6-1	386103	407140	404662	399301	2.88	cps
Magnesium	24-2	433862	427113	439205	433393	1.40	cps
Manganese	55-2	1062008	1056513	1052060	1056860	0.47	cps
Molybdenum	94-1	1147	1133	1103	1128	1.97	cps
Molybdenum	95-1	367	377	330	358	6.87	cps
Molybdenum	96-1	670	580	497	582	14.89	cps
Molybdenum	97-1	253	250	280	261	6.30	cps
Molybdenum	98-1	543	530	507	527	3.52	cps
Neodymium	150-1	8343	8873	8639	8618	3.08	cps
Neodymium	150-2	5665	5808	5655	5709	1.50	cps
Nickel	60-2	5374	5431	5214	5340	2.10	cps
Phosphorus	31-2	3097	2924	2847	2956	4.33	cps
Potassium	39-2	510742	510287	512680	511236	0.25	cps
Rhodium	103-1	7138517	6771984	6872429	6927643	2.73	cps
Rhodium	103-2	4514592	4491362	4458711	4488221	0.63	cps
Scandium	45-1	4134312	4299145	4219882	4217779	1.95	cps
Scandium	45-2	419928	426050	419039	421672	0.91	cps
Selenium	82-1	361	279	380	340	15.74	cps
Selenium	77-2	23	37	27	29	24.03	cps
Selenium	78-2	510	517	603	543	9.58	cps
Silicon	28-1	5166977	5215612	5214518	5199036	0.53	cps
Silver	107-1	180	170	170	173	3.33	cps
Silver	109-1	163	187	173	174	6.71	cps
Sodium	23-2	249237	249388	251588	250071	0.53	cps
Strontium	86-1	51938	52360	50961	51753	1.39	cps
Strontium	88-1	444990	440733	441554	442425	0.51	cps
Sulfur	34-1	549480	534556	531102	538379	1.81	cps
Terbium	159-1	8611132	7878191	8084756	8191360	4.61	cps
Terbium	159-2	6114711	6246713	5916783	6092736	2.73	cps
Thallium	203-1	430	343	357	377	12.39	cps
Thallium	205-1	1060	983	933	992	6.43	cps
Tin	118-1	1213	1270	1140	1208	5.40	cps
Titanium	47-1	1810	1907	1793	1837	3.33	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18LDLX25 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 25
Date & Time Acquired : 2025-08-20 13:08:33 DataFile Name : 039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	2874	2820	2684	2793	3.51	cps
Vanadium	51-2	29750	29719	28664	29378	2.10	cps
Yttrium	89-1	12431742	12719146	12445207	12532032	1.29	cps
Yttrium	89-2	3528177	3626901	3585853	3580310	1.39	cps
Zinc	66-2	49482	47917	47703	48367	2.01	cps
Zirconium	90-1	2580	2747	2527	2618	4.38	cps
Zirconium	91-1	617	560	557	578	5.84	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18MSDLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:11:50 DataFile Name : 040SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3325257	3241234	3201074	3255855	1.95	cps
Antimony	121-1	506134	509561	516288	510661	1.01	cps
Arsenic	75-2	57304	55935	56320	56520	1.25	cps
Barium	135-1	584173	592727	573784	583562	1.63	cps
Barium	137-1	1012341	1013621	1029406	1018456	0.93	cps
Beryllium	9-1	54860	55329	56928	55706	1.95	cps
Bismuth	209-1	5011759	4904701	4838228	4918229	1.78	cps
Bismuth	209-2	4510772	4445339	4443320	4466477	0.86	cps
Bromine	81-1	18802	20287	21292	20127	6.22	cps
Bromine	81-2	2544	2374	2287	2401	5.44	cps
Cadmium	108-1	10160	10254	10304	10239	0.71	cps
Cadmium	106-1	17294	17394	17834	17507	1.64	cps
Cadmium	111-1	147784	150037	147842	148554	0.86	cps
Calcium	43-1	733073	744487	744388	740649	0.89	cps
Calcium	44-1	11991349	11995550	11796212	11927703	0.95	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	298781	296316	297266	297454	0.42	cps
Cobalt	59-2	523918	522349	523320	523195	0.15	cps
Copper	63-2	3274928	3289407	3283361	3282565	0.22	cps
Dysprosium	156-1	29588	30213	28773	29525	2.45	cps
Dysprosium	156-2	27397	26479	26502	26792	1.95	cps
Erbium	164-1	38286	39129	37390	38268	2.27	cps
Erbium	164-2	30580	30353	30320	30418	0.47	cps
Gadolinium	160-1	31606	31766	32384	31919	1.29	cps
Gadolinium	160-2	25614	25680	25253	25516	0.90	cps
Holmium	165-1	8314213	8351557	8033339	8233036	2.11	cps
Holmium	165-2	6309586	6356347	6359703	6341879	0.44	cps
Indium	115-1	7267926	7102337	6852447	7074237	2.96	cps
Indium	115-2	2684194	2750164	2735634	2723331	1.27	cps
Iron	56-2	40085372	40289382	40201192	40191982	0.25	cps
Iron	57-2	1053775	1050955	1046361	1050364	0.36	cps
Iron	54-2	2222787	2223836	2201854	2216159	0.56	cps
Krypton	83-1	590	627	673	630	6.63	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18MSDLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:11:50 DataFile Name : 040SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2045331	2047744	2100815	2064630	1.52	cps
Lead	207-1	1717443	1722001	1680319	1706588	1.34	cps
Lead	208-1	8113680	8212459	8122036	8149392	0.67	cps
Lithium	6-1	410197	406837	410673	409236	0.51	cps
Magnesium	24-2	4485256	4455677	4462834	4467922	0.35	cps
Manganese	55-2	6817649	6918064	6878845	6871520	0.74	cps
Molybdenum	94-1	940011	949279	923591	937627	1.39	cps
Molybdenum	95-1	1029919	1024678	1026674	1027090	0.26	cps
Molybdenum	96-1	1130539	1130559	1140975	1134024	0.53	cps
Molybdenum	97-1	640881	649509	627262	639218	1.75	cps
Molybdenum	98-1	1657607	1680267	1612726	1650200	2.08	cps
Neodymium	150-1	38954	40702	40254	39970	2.27	cps
Neodymium	150-2	26311	26792	26538	26547	0.91	cps
Nickel	60-2	133672	131200	133661	132844	1.07	cps
Phosphorus	31-2	11501	11478	11094	11358	2.01	cps
Potassium	39-2	3275182	3299544	3360362	3311696	1.32	cps
Rhodium	103-1	7378602	7083618	6966225	7142815	2.97	cps
Rhodium	103-2	4522680	4548418	4488309	4519802	0.67	cps
Scandium	45-1	4414060	4326248	4110516	4283608	3.65	cps
Scandium	45-2	433646	433160	431291	432699	0.29	cps
Selenium	82-1	11609	11722	11461	11597	1.13	cps
Selenium	77-2	1360	1380	1273	1338	4.24	cps
Selenium	78-2	5111	5021	4901	5011	2.10	cps
Silicon	28-1	20269506	20400133	21010072	20559904	1.92	cps
Silver	107-1	117393	119425	117436	118085	0.98	cps
Silver	109-1	109147	110593	112404	110715	1.47	cps
Sodium	23-2	4822840	4788481	4805929	4805750	0.36	cps
Strontium	86-1	437970	441923	436705	438866	0.62	cps
Strontium	88-1	3909229	4058661	3855247	3941046	2.67	cps
Sulfur	34-1	2052814	2039584	2102784	2065061	1.61	cps
Terbium	159-1	8703271	8070185	8631993	8468483	4.09	cps
Terbium	159-2	6246920	6251596	6262636	6253717	0.13	cps
Thallium	203-1	435540	428389	435221	433050	0.93	cps
Thallium	205-1	998676	998103	1034216	1010332	2.05	cps
Tin	118-1	399416	403947	399209	400857	0.67	cps
Titanium	47-1	8146	8779	8659	8528	3.95	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18MSDLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:11:50 DataFile Name : 040SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	1172753	1205371	1202249	1193458	1.51	cps
Vanadium	51-2	362725	362131	361570	362142	0.16	cps
Yttrium	89-1	13675585	13691349	12942500	13436478	3.18	cps
Yttrium	89-2	3803990	3771745	3836562	3804099	0.85	cps
Zinc	66-2	776347	768373	779954	774891	0.76	cps
Zirconium	90-1	957433	960214	951753	956467	0.45	cps
Zirconium	91-1	205823	209471	213983	209759	1.95	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18MSDDLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:14:52 DataFile Name : 041SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3333319	3248942	3254116	3278792	1.44	cps
Antimony	121-1	512666	513341	528796	518268	1.76	cps
Arsenic	75-2	58505	56896	57802	57734	1.40	cps
Barium	135-1	569652	595589	599494	588245	2.76	cps
Barium	137-1	1032861	1022318	1040415	1031865	0.88	cps
Beryllium	9-1	55712	54572	56419	55568	1.68	cps
Bismuth	209-1	4922808	4658017	4926637	4835821	3.18	cps
Bismuth	209-2	4409480	4422675	4356722	4396292	0.79	cps
Bromine	81-1	19460	20908	21236	20534	4.60	cps
Bromine	81-2	2480	2367	2424	2424	2.34	cps
Cadmium	108-1	9913	10731	10354	10333	3.96	cps
Cadmium	106-1	18068	17601	17474	17714	1.77	cps
Cadmium	111-1	147801	148464	153404	149889	2.04	cps
Calcium	43-1	724337	738536	738148	733674	1.10	cps
Calcium	44-1	11283975	11902506	11509167	11565216	2.71	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	299814	299367	299773	299651	0.08	cps
Cobalt	59-2	528970	534663	524044	529226	1.00	cps
Copper	63-2	3336591	3275764	3315526	3309294	0.93	cps
Dysprosium	156-1	28773	30072	30643	29830	3.21	cps
Dysprosium	156-2	27400	27393	27614	27469	0.46	cps
Erbium	164-1	38236	38995	40984	39405	3.60	cps
Erbium	164-2	30487	30604	30300	30463	0.50	cps
Gadolinium	160-1	32712	32231	32718	32553	0.86	cps
Gadolinium	160-2	25493	26422	25323	25746	2.30	cps
Holmium	165-1	7994736	8077107	8388120	8153321	2.54	cps
Holmium	165-2	6290199	6250986	6100179	6213788	1.61	cps
Indium	115-1	7050455	6933857	7076503	7020272	1.08	cps
Indium	115-2	2713884	2729423	2636941	2693416	1.84	cps
Iron	56-2	40530214	41081119	40400782	40670705	0.89	cps
Iron	57-2	1069839	1054985	1061518	1062114	0.70	cps
Iron	54-2	2317259	2250931	2259526	2275905	1.58	cps
Krypton	83-1	603	597	560	587	3.98	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18MSDDLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:14:52 DataFile Name : 041SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2042896	2088890	2121068	2084285	1.89	cps
Lead	207-1	1674596	1745381	1818000	1745992	4.11	cps
Lead	208-1	8111514	8458489	8358470	8309491	2.15	cps
Lithium	6-1	412789	388771	406041	402534	3.08	cps
Magnesium	24-2	4464188	4472789	4414973	4450650	0.70	cps
Manganese	55-2	6971893	6924116	7022534	6972847	0.71	cps
Molybdenum	94-1	920256	950561	934417	935078	1.62	cps
Molybdenum	95-1	1026557	1037945	1019821	1028108	0.89	cps
Molybdenum	96-1	1135835	1126642	1131002	1131160	0.41	cps
Molybdenum	97-1	628741	647911	639284	638645	1.50	cps
Molybdenum	98-1	1621310	1668362	1612551	1634075	1.84	cps
Neodymium	150-1	41404	39726	41651	40927	2.56	cps
Neodymium	150-2	26759	26462	26341	26521	0.81	cps
Nickel	60-2	134130	133104	134664	133966	0.59	cps
Phosphorus	31-2	11024	11828	10887	11246	4.52	cps
Potassium	39-2	3379649	3370039	3220479	3323389	2.69	cps
Rhodium	103-1	7084864	6772054	6940854	6932591	2.26	cps
Rhodium	103-2	4551506	4566700	4459623	4525943	1.28	cps
Scandium	45-1	4202827	4026418	4282566	4170604	3.14	cps
Scandium	45-2	433381	429662	421532	428192	1.42	cps
Selenium	82-1	11577	11634	11533	11581	0.44	cps
Selenium	77-2	1430	1527	1407	1455	4.37	cps
Selenium	78-2	5158	4868	4791	4939	3.92	cps
Silicon	28-1	20932867	20291543	20696316	20640242	1.57	cps
Silver	107-1	117418	118001	120815	118745	1.53	cps
Silver	109-1	112830	110576	113020	112142	1.21	cps
Sodium	23-2	4797919	4805465	4750532	4784639	0.62	cps
Strontium	86-1	436669	440183	436435	437762	0.48	cps
Strontium	88-1	3827300	3929846	3897285	3884810	1.35	cps
Sulfur	34-1	2129901	2050403	2052378	2077561	2.18	cps
Terbium	159-1	8604579	8094239	8521528	8406782	3.26	cps
Terbium	159-2	6209159	6144604	6089813	6147859	0.97	cps
Thallium	203-1	435266	442710	431875	436617	1.27	cps
Thallium	205-1	1015678	1000843	1034639	1017054	1.67	cps
Tin	118-1	399333	407093	404660	403695	0.98	cps
Titanium	47-1	7946	8429	8563	8312	3.91	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18MSDDLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:14:52 DataFile Name : 041SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	1173341	1194831	1223011	1197061	2.08	cps
Vanadium	51-2	368305	366311	363682	366099	0.63	cps
Yttrium	89-1	13086071	12848030	13182547	13038883	1.32	cps
Yttrium	89-2	3842316	3767376	3757252	3788981	1.23	cps
Zinc	66-2	785551	781949	779067	782189	0.42	cps
Zirconium	90-1	951400	972604	944631	956212	1.53	cps
Zirconium	91-1	212367	209308	209302	210326	0.84	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18ADLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:17:54 DataFile Name : 042SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3247144	3270785	3262083	3260004	0.37	cps
Antimony	121-1	497297	514137	505586	505673	1.67	cps
Arsenic	75-2	60292	59382	58037	59237	1.92	cps
Barium	135-1	575102	591144	571193	579146	1.83	cps
Barium	137-1	988304	1014652	1017323	1006760	1.59	cps
Beryllium	9-1	55020	57574	54915	55836	2.70	cps
Bismuth	209-1	4949697	4920914	5032321	4967644	1.16	cps
Bismuth	209-2	4453851	4388168	4413538	4418519	0.75	cps
Bromine	81-1	18845	20394	22290	20510	8.41	cps
Bromine	81-2	2380	2427	2430	2412	1.16	cps
Cadmium	108-1	10474	10127	10287	10296	1.69	cps
Cadmium	106-1	17394	16990	17407	17264	1.37	cps
Cadmium	111-1	146766	148036	146617	147140	0.53	cps
Calcium	43-1	745318	741398	726932	737882	1.31	cps
Calcium	44-1	11750649	11574991	11482002	11602548	1.18	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	301696	297729	296198	298541	0.95	cps
Cobalt	59-2	528039	531307	519418	526255	1.17	cps
Copper	63-2	3384124	3386319	3249262	3339902	2.35	cps
Dysprosium	156-1	28857	29691	28262	28937	2.48	cps
Dysprosium	156-2	26996	27093	27387	27159	0.75	cps
Erbium	164-1	39513	39529	38199	39080	1.95	cps
Erbium	164-2	30734	30978	30189	30634	1.32	cps
Gadolinium	160-1	30497	32084	31897	31492	2.75	cps
Gadolinium	160-2	25934	25640	25260	25611	1.32	cps
Holmium	165-1	8352834	8134468	7942694	8143332	2.52	cps
Holmium	165-2	6390528	6250834	6433553	6358305	1.50	cps
Indium	115-1	7259828	6990684	7011369	7087294	2.11	cps
Indium	115-2	2707254	2702862	2762525	2724214	1.22	cps
Iron	56-2	40629452	40339290	39987834	40318859	0.80	cps
Iron	57-2	1070034	1049290	1040491	1053272	1.44	cps
Iron	54-2	2256788	2243279	2166240	2222102	2.20	cps
Krypton	83-1	573	647	567	596	7.45	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18ADLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:17:54 DataFile Name : 042SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2102808	2150359	2006837	2086668	3.50	cps
Lead	207-1	1796460	1874463	1659043	1776655	6.14	cps
Lead	208-1	8222622	8384879	8069406	8225636	1.92	cps
Lithium	6-1	409575	399896	409946	406472	1.40	cps
Magnesium	24-2	4528368	4418955	4464461	4470594	1.23	cps
Manganese	55-2	6976583	6897588	6718535	6864235	1.93	cps
Molybdenum	94-1	928659	916133	929302	924698	0.80	cps
Molybdenum	95-1	1001850	996470	1031984	1010101	1.89	cps
Molybdenum	96-1	1104269	1121508	1128947	1118241	1.13	cps
Molybdenum	97-1	633863	630010	630734	631536	0.32	cps
Molybdenum	98-1	1579528	1617158	1613470	1603385	1.29	cps
Neodymium	150-1	39161	41662	39318	40047	3.50	cps
Neodymium	150-2	26298	26452	26782	26511	0.93	cps
Nickel	60-2	133147	133352	132505	133001	0.33	cps
Phosphorus	31-2	11441	10834	10847	11041	3.14	cps
Potassium	39-2	3398032	3350927	3266071	3338343	2.00	cps
Rhodium	103-1	7078442	6894220	7166799	7046487	1.97	cps
Rhodium	103-2	4637108	4539751	4700341	4625733	1.75	cps
Scandium	45-1	4460656	4233700	4198118	4297491	3.31	cps
Scandium	45-2	432067	425421	432807	430098	0.95	cps
Selenium	82-1	11538	11544	11271	11451	1.36	cps
Selenium	77-2	1417	1443	1347	1402	3.56	cps
Selenium	78-2	4757	4938	4944	4880	2.17	cps
Silicon	28-1	20002519	20560703	20551077	20371433	1.57	cps
Silver	107-1	116730	118397	114681	116603	1.60	cps
Silver	109-1	107450	109787	112391	109876	2.25	cps
Sodium	23-2	4725648	4743219	4758347	4742405	0.35	cps
Strontium	86-1	435277	434373	430762	433471	0.55	cps
Strontium	88-1	3891213	3830923	3887891	3870009	0.88	cps
Sulfur	34-1	2051988	2065903	2060181	2059357	0.34	cps
Terbium	159-1	8459733	8323863	8324933	8369510	0.93	cps
Terbium	159-2	6272382	6254224	6316695	6281100	0.51	cps
Thallium	203-1	430192	436632	441576	436133	1.31	cps
Thallium	205-1	999676	1045763	998877	1014772	2.65	cps
Tin	118-1	389764	393928	404624	396105	1.94	cps
Titanium	47-1	8499	8439	8286	8408	1.31	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : Q2879-18ADLX5 Instrumnet Name : P7
Client Sample ID : OU4-TS-GRILLO-TSCP1 Dilution Factor : 5
Date & Time Acquired : 2025-08-20 13:17:54 DataFile Name : 042SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	1202694	1236699	1174452	1204615	2.59	cps
Vanadium	51-2	372649	362137	360614	365134	1.79	cps
Yttrium	89-1	13707488	13116736	13427615	13417280	2.20	cps
Yttrium	89-2	3827840	3775592	3795480	3799637	0.69	cps
Zinc	66-2	783401	785774	778141	782439	0.50	cps
Zirconium	90-1	929399	929514	960475	939796	1.91	cps
Zirconium	91-1	208061	209134	209542	208912	0.37	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCV03 Instrumnet Name : P7
Client Sample ID : CCV03 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 13:27:08 DataFile Name : 043CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	7326525	7092486	7015517	7144843	2.27	cps
Antimony	121-1	2840949	2852188	2898639	2863926	1.07	cps
Arsenic	75-2	194148	193825	192676	193550	0.40	cps
Barium	135-1	3394659	3396520	3496881	3429353	1.71	cps
Barium	137-1	5970713	6115515	6075976	6054068	1.24	cps
Beryllium	9-1	313386	325699	325346	321477	2.18	cps
Bismuth	209-1	4757790	4681805	4867906	4769167	1.96	cps
Bismuth	209-2	4331289	4337096	4341196	4336527	0.11	cps
Bromine	81-1	11621	11685	11615	11640	0.33	cps
Bromine	81-2	203	270	227	233	14.50	cps
Cadmium	108-1	54670	56968	55780	55806	2.06	cps
Cadmium	106-1	79879	80851	80831	80521	0.69	cps
Cadmium	111-1	763283	791092	787955	780777	1.95	cps
Calcium	43-1	3959073	4107513	3948240	4004942	2.22	cps
Calcium	44-1	65087417	64934247	66061429	65361031	0.94	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1534454	1516860	1499935	1517083	1.14	cps
Cobalt	59-2	2349522	2360876	2384526	2364975	0.76	cps
Copper	63-2	18009986	18227560	17995942	18077829	0.72	cps
Dysprosium	156-1	183	167	170	173	5.09	cps
Dysprosium	156-2	257	280	290	276	6.21	cps
Erbium	164-1	367	387	413	389	6.02	cps
Erbium	164-2	223	280	290	264	13.60	cps
Gadolinium	160-1	187	193	187	189	2.04	cps
Gadolinium	160-2	533	493	503	510	4.08	cps
Holmium	165-1	8401064	8450018	8301860	8384314	0.90	cps
Holmium	165-2	6474919	6441369	6399449	6438579	0.59	cps
Indium	115-1	7088758	7046694	6968272	7034574	0.87	cps
Indium	115-2	2715840	2672610	2689606	2692685	0.81	cps
Iron	56-2	326113702	329160762	330108615	328461026	0.64	cps
Iron	57-2	8170661	8266912	8287521	8241698	0.76	cps
Iron	54-2	18420737	17952526	18230011	18201092	1.29	cps
Krypton	83-1	443	517	520	493	8.78	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCV03 Instrumnet Name : P7
Client Sample ID : CCV03 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 13:27:08 DataFile Name : 043CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	10167094	10350917	10543075	10353695	1.82	cps
Lead	207-1	8739718	8901892	8795840	8812483	0.93	cps
Lead	208-1	39489579	40603937	40602768	40232095	1.60	cps
Lithium	6-1	417976	418902	415213	417364	0.46	cps
Magnesium	24-2	66047446	64200491	64909029	65052322	1.43	cps
Manganese	55-2	12793954	12506577	12509115	12603215	1.31	cps
Molybdenum	94-1	11155805	11159576	11312728	11209370	0.80	cps
Molybdenum	95-1	15663906	15994050	16125203	15927720	1.49	cps
Molybdenum	96-1	17027450	17291929	17426343	17248574	1.18	cps
Molybdenum	97-1	9711144	9747054	9859525	9772575	0.79	cps
Molybdenum	98-1	25305813	25698191	25971372	25658459	1.30	cps
Neodymium	150-1	147	193	177	172	13.73	cps
Neodymium	150-2	80	70	50	67	22.91	cps
Nickel	60-2	607920	610001	608535	608818	0.18	cps
Phosphorus	31-2	87212	87201	86568	86994	0.42	cps
Potassium	39-2	38828250	38490164	38261001	38526472	0.74	cps
Rhodium	103-1	7166869	6950768	6727332	6948323	3.16	cps
Rhodium	103-2	4472782	4290840	4424533	4396052	2.14	cps
Scandium	45-1	4400578	4419833	4393263	4404558	0.31	cps
Scandium	45-2	440840	438688	438750	439426	0.28	cps
Selenium	82-1	59164	58959	59555	59226	0.51	cps
Selenium	77-2	6812	6905	6795	6837	0.87	cps
Selenium	78-2	23622	23779	23075	23492	1.57	cps
Silicon	28-1	9890144	10373949	10208712	10157602	2.42	cps
Silver	107-1	3790962	3916915	3930624	3879500	1.98	cps
Silver	109-1	3705887	3813755	3766631	3762091	1.44	cps
Sodium	23-2	103269018	101033368	100338155	101546847	1.51	cps
Strontium	86-1	1000677	1023368	1019632	1014559	1.20	cps
Strontium	88-1	8871878	9219456	9013409	9034914	1.93	cps
Sulfur	34-1	396954	398834	395597	397128	0.41	cps
Terbium	159-1	8546821	8357323	8612409	8505518	1.56	cps
Terbium	159-2	6385100	6327041	6310386	6340843	0.62	cps
Thallium	203-1	2453491	2593463	2567330	2538095	2.93	cps
Thallium	205-1	5932486	6057483	6142770	6044246	1.75	cps
Tin	118-1	2403052	2465922	2440431	2436468	1.30	cps
Titanium	47-1	4089381	4173510	4066117	4109669	1.37	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCV03 Instrumnet Name : P7
Client Sample ID : CCV03 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 13:27:08 DataFile Name : 043CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	7112653	7480289	7638717	7410553	3.64	cps
Vanadium	51-2	1311531	1270508	1288104	1290048	1.60	cps
Yttrium	89-1	12891915	12936876	12730150	12852980	0.85	cps
Yttrium	89-2	3710515	3617560	3634824	3654300	1.35	cps
Zinc	66-2	3221122	3225870	3206103	3217698	0.32	cps
Zirconium	90-1	5500878	5508287	5510874	5506680	0.09	cps
Zirconium	91-1	1194587	1217161	1213664	1208471	1.01	cps

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LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCB03 Instrumnet Name : P7
Client Sample ID : CCB03 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 13:30:00 DataFile Name : 044CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1623	1517	1560	1567	3.42	cps
Antimony	121-1	700	777	763	747	5.49	cps
Arsenic	75-2	7	20	10	12	56.76	cps
Barium	135-1	117	90	77	94	21.56	cps
Barium	137-1	173	173	140	162	11.87	cps
Beryllium	9-1	14	14	0	9	83.93	cps
Bismuth	209-1	4845949	4747384	4738913	4777415	1.25	cps
Bismuth	209-2	4354578	4343756	4350998	4349777	0.13	cps
Bromine	81-1	11091	10884	11124	11033	1.18	cps
Bromine	81-2	223	253	223	233	7.42	cps
Cadmium	108-1	7	13	3	8	65.47	cps
Cadmium	106-1	2784	2667	2527	2659	4.83	cps
Cadmium	111-1	2001	1921	1820	1914	4.73	cps
Calcium	43-1	390	417	427	411	4.61	cps
Calcium	44-1	27001	26981	26280	26754	1.54	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2490	2604	2450	2515	3.16	cps
Cobalt	59-2	113	100	113	109	7.07	cps
Copper	63-2	1573	1610	1567	1583	1.47	cps
Dysprosium	156-1	10	7	10	9	21.63	cps
Dysprosium	156-2	0	3	3	2	86.60	cps
Erbium	164-1	57	50	63	57	11.76	cps
Erbium	164-2	40	57	47	48	17.56	cps
Gadolinium	160-1	53	80	60	64	21.54	cps
Gadolinium	160-2	390	347	370	369	5.88	cps
Holmium	165-1	8080138	7870808	7817450	7922799	1.75	cps
Holmium	165-2	6136570	5979148	5909378	6008365	1.94	cps
Indium	115-1	7006867	6696696	6710837	6804800	2.57	cps
Indium	115-2	2625961	2648266	2594497	2622908	1.03	cps
Iron	56-2	25518	29562	25215	26765	9.07	cps
Iron	57-2	1673	1660	1550	1628	4.16	cps
Iron	54-2	2910	2917	2950	2926	0.73	cps
Krypton	83-1	527	570	530	542	4.45	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCB03 Instrumnet Name : P7
Client Sample ID : CCB03 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 13:30:00 DataFile Name : 044CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	600	517	603	573	8.56	cps
Lead	207-1	517	473	463	484	5.85	cps
Lead	208-1	2460	2143	2213	2272	7.32	cps
Lithium	6-1	408745	401509	401954	404069	1.00	cps
Magnesium	24-2	887	913	907	902	1.54	cps
Manganese	55-2	903	1010	870	928	7.88	cps
Molybdenum	94-1	760	807	750	772	3.92	cps
Molybdenum	95-1	847	843	717	802	9.24	cps
Molybdenum	96-1	923	923	847	898	4.93	cps
Molybdenum	97-1	517	520	520	519	0.37	cps
Molybdenum	98-1	1487	1213	1183	1295	12.91	cps
Neodymium	150-1	13	10	3	9	57.30	cps
Neodymium	150-2	0	3	3	2	86.60	cps
Nickel	60-2	717	680	650	682	4.89	cps
Phosphorus	31-2	740	620	633	664	9.90	cps
Potassium	39-2	72575	72364	72321	72420	0.19	cps
Rhodium	103-1	6847462	6815320	6882973	6848585	0.49	cps
Rhodium	103-2	4248609	4363880	4381214	4331235	1.66	cps
Scandium	45-1	4104729	4034981	4057712	4065807	0.87	cps
Scandium	45-2	419715	405314	409297	411442	1.81	cps
Selenium	82-1	341	288	263	297	13.50	cps
Selenium	77-2	0	3	0	1	173.21	cps
Selenium	78-2	533	473	560	522	8.50	cps
Silicon	28-1	677046	682924	679755	679908	0.43	cps
Silver	107-1	490	387	403	427	13.00	cps
Silver	109-1	433	323	300	352	20.22	cps
Sodium	23-2	52389	51884	51877	52050	0.56	cps
Strontium	86-1	883	863	830	859	3.14	cps
Strontium	88-1	420	380	437	412	7.07	cps
Sulfur	34-1	156330	157704	157654	157229	0.50	cps
Terbium	159-1	8089357	8153781	7973277	8072138	1.13	cps
Terbium	159-2	6022028	5967593	6020394	6003339	0.52	cps
Thallium	203-1	447	500	437	461	7.38	cps
Thallium	205-1	1083	1117	1127	1109	2.05	cps
Tin	118-1	1120	1187	1027	1111	7.23	cps
Titanium	47-1	137	93	103	111	20.42	cps

LB Number : LB136893 Operator : Jaswal
Lab Sample ID : CCB03 Instrumnet Name : P7
Client Sample ID : CCB03 Dilution Factor : 1
Date & Time Acquired : 2025-08-20 13:30:00 DataFile Name : 044CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	227	110	97	144	49.51	cps
Vanadium	51-2	30	33	20	28	24.98	cps
Yttrium	89-1	12178490	12156809	11846810	12060703	1.54	cps
Yttrium	89-2	3429191	3449112	3436331	3438211	0.29	cps
Zinc	66-2	4781	4521	4954	4752	4.59	cps
Zirconium	90-1	800	800	837	812	2.61	cps
Zirconium	91-1	190	253	150	198	26.35	cps

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SOP ID : M7470A-Mercury-20

SDG No : N/A

Matrix : WATER

Pipette ID: HG A

Balance ID : N/A

Filter paper ID : N/A

pH Strip ID : M6069

Hood ID : #1

Block ID: 1. HOT BLOCK #1 2. N/A

Start Digest Date: 08/19/2025 Time : 11:30 Temp : 96 °C

End Digest Date: 08/19/2025 Time : 13:30 Temp : 96 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. #1

Dig Technician Signature: *W*

Supervisor Signature: *MO*

Temp : 1. 96°C 2. N/A

Standard Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP86838
CCV	30mL	MP86840
CRA	30mL	MP86842
Blank Spike	0.48mL	MP86831
Matrix Spike	0.48ml	MP86831

Chemical Used	ML/SAMPLE USED	Lot Number
HNO3/H2SO4(1:2)	2.25mL	MP85892
KMnO4 (5%)	4.5ml	MP85893
K2S2O8 (5%)	2.4mL	MP85894
Hydroxylamine HCL (12%)	1.8mL	MP86830
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

LAB SAMPLE ID	CLIENT SAMPLE ID	Wt(g)/Vol(ml)	Comment
0.0 ppb	S0	30mL	MP86832
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP86833
2.5 ppb	S2.5	30mL	MP86834
5.0 ppb	S5.0	30mL	MP86835
7.5 ppb	S7.5	30mL	MP86836
10.0 ppb	S10.0	30mL	MP86837
ICV	ICV	30mL	MP86838
ICB	ICB	30mL	MP86839
CCV	CCV	30mL	MP86840
CCB	CCB	30mL	MP86841
CRI	CRI	30mL	MP86842
CHK STD	CHK STD	30mL	MP86843

Extraction Conformance/Non-Conformance Comments:

N/A		
Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
08/19/25 13:50	<i>W</i> <i>bid lab</i>	<i>ms - met dig.</i>
13:50	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Comment	Prep Pos
PB169293BL	PBW293	30	30	<2	N/A	3-1
PB169293BS	LCS293	30	30	<2	MP86831	2
PB169293TB	LEB293	30	30	<2	N/A	3
Q2818-04	B-2-5-1	30	30	<2	N/A	4
Q2818-05	B-3-5-2	30	30	<2	N/A	5
Q2879-02	OU4-TS-GRILLO-TSCP03-081425	30	30	<2	N/A	6
Q2879-04	OU4-TS-GRILLO-TSCP04-081425	30	30	<2	N/A	7
Q2879-06	OU4-TS-GRILLO-TSCP05-081425	30	30	<2	N/A	8
Q2879-08	OU4-TS-GRILLO-TSCP06-081425	30	30	<2	N/A	9
Q2879-10	OU4-TS-GRILLO-TSCP07-081425	30	30	<2	N/A	10
Q2879-12	OU4-TS-GRILLO-TSCP08-081425	30	30	<2	N/A	11
Q2879-14	OU4-TS-GRILLO-TSCP09-081425	30	30	<2	N/A	12
Q2879-16	OU4-TS-GRILLO-TSCP10-081425	30	30	<2	N/A	13
Q2879-18	OU4-TS-GRILLO-TSCP11-081425	30	30	<2	N/A	14
Q2879-18DUP	OU4-TS-GRILLO-TSCP11-081425DUP	30	30	<2	N/A	15
Q2879-18MS	OU4-TS-GRILLO-TSCP11-081425MS	30	30	<2	MP86831	16
Q2879-18MSD	OU4-TS-GRILLO-TSCP11-081425MSD	30	30	<2	MP86831	17

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep Pos
PB169276TB	LEB276	10	N/A	2000	N/A	N/A	N/A	4.24	1.5	T-1
Q2879-02	OU4-TS-GRILLO-TSCP03-081425	01	100.02	2000	N/A	N/A	N/A	3.5	1.0	T-1
Q2879-04	OU4-TS-GRILLO-TSCP04-081425	02	100.03	2000	N/A	N/A	N/A	4.0	1.0	T-1
Q2879-06	OU4-TS-GRILLO-TSCP05-081425	03	100.02	2000	N/A	N/A	N/A	3.5	1.0	T-1
Q2879-08	OU4-TS-GRILLO-TSCP06-081425	04	100.02	2000	N/A	N/A	N/A	3.5	1.5	T-1
Q2879-10	OU4-TS-GRILLO-TSCP07-081425	05	100.03	2000	N/A	N/A	N/A	5.0	1.0	T-1
Q2879-12	OU4-TS-GRILLO-TSCP08-081425	06	100.02	2000	N/A	N/A	N/A	4.5	1.5	T-1
Q2879-14	OU4-TS-GRILLO-TSCP09-081425	07	100.01	2000	N/A	N/A	N/A	3.5	1.0	T-1
Q2879-16	OU4-TS-GRILLO-TSCP10-081425	08	100.03	2000	N/A	N/A	N/A	4.0	1.5	T-1
Q2879-18	OU4-TS-GRILLO-TSCP11-081425	09	100.03	2000	N/A	N/A	N/A	5.0	1.0	T-1

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep Pos
PB169294TB	LEB294	13	N/A	2000	N/A	N/A	N/A	4.23	1.5	T-2
Q2818-04	B-2-5-1	11	100.02	2000	N/A	N/A	N/A	3.0	1.0	T-2
Q2818-05	B-3-5-2	12	100.03	2000	N/A	N/A	N/A	3.0	1.0	T-2

SOP ID : M3010A-Digestion-17

SDG No : N/A

Matrix : WATER

Pipette ID: ICP A

Balance ID : N/A

Filter paper ID : N/A

pH Strip ID : M6069

Hood ID : #3

Block ID: 1. HOT BLOCK #1 2. N/A

Start Digest Date: 08/18/2025 Time : 12:30 Temp : 96 °C

End Digest Date: 08/18/2025 Time : 14:32 Temp : 96 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. #1

Dig Technician Signature: SKS

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standard Name	MLS USED	STD REF. # FROM LOG
Spike Sol 1	0.50	MP86790
Spike Sol 2	1.00	MP86791
Spike Sol 3	1.00	MP86792
Spike Sol 4	1.00	MP86793
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
Conc. HNO3	3.00	M6158
1:1 HCL	5.00	MP85156
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK#1 CELL#50 96C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
08/18/25 15:32	SKS met dig	SKS (metals lab)
	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
PB169300BL	PBW300	<2	50	50	Colorless	Colorless	Clear	Clear	N/A	1
PB169300BS	LCS300	<2	50	50	Colorless	Colorless	Clear	Clear	MP86790,MP86791,X*	2
PB169300TB	LEB300	<2	50	50	Colorless	Colorless	Clear	Clear	N/A	3
Q2879-02	OU4-TS-GRILLO-TSCP03-08 1425	<2	50	50	Light Yellow	Light Yellow	Clear	Clear	N/A	4
Q2879-04	OU4-TS-GRILLO-TSCP04-08 1425	<2	50	50	Light Yellow	Light Yellow	Clear	Clear	N/A	5
Q2879-06	OU4-TS-GRILLO-TSCP05-08 1425	<2	50	50	Light Yellow	Light Yellow	Clear	Clear	N/A	6
Q2879-08	OU4-TS-GRILLO-TSCP06-08 1425	<2	50	50	Light Yellow	Light Yellow	Clear	Clear	N/A	7
Q2879-10	OU4-TS-GRILLO-TSCP07-08 1425	<2	50	50	Light Yellow	Light Yellow	Clear	Clear	N/A	8
Q2879-12	OU4-TS-GRILLO-TSCP08-08 1425	<2	50	50	Light Yellow	Light Yellow	Clear	Clear	N/A	9
Q2879-14	OU4-TS-GRILLO-TSCP09-08 1425	<2	50	50	Light Yellow	Light Yellow	Clear	Clear	N/A	10
Q2879-16	OU4-TS-GRILLO-TSCP10-08 1425	<2	50	50	Light Yellow	Light Yellow	Clear	Clear	N/A	11
Q2879-18	OU4-TS-GRILLO-TSCP11-08 1425	<2	50	50	Light Yellow	Light Yellow	Clear	Clear	N/A	12
Q2879-18MS	OU4-TS-GRILLO-TSCP11-08 1425MS	<2	50	50	Light Yellow	Light Yellow	Clear	Clear	MP86790,MP86791,X*	14
Q2879-18MSD	OU4-TS-GRILLO-TSCP11-08 1425MSD	<2	50	50	Light Yellow	Light Yellow	Clear	Clear	MP86790,MP86791,X*	15
Q2879-18DUP	OU4-TS-GRILLO-TSCP11-08 1425DUP	<2	50	50	Light Yellow	Light Yellow	Clear	Clear	N/A	13

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Pre Po
PB169276TB	LEB276	10	N/A	2000	N/A	N/A	N/A	4.24	1.5	T-1
Q2879-02	OU4-TS-GRILLO-TSCP03-081425	01	100.02	2000	N/A	N/A	N/A	3.5	1.0	T-1
Q2879-04	OU4-TS-GRILLO-TSCP04-081425	02	100.03	2000	N/A	N/A	N/A	4.0	1.0	T-1
Q2879-06	OU4-TS-GRILLO-TSCP05-081425	03	100.02	2000	N/A	N/A	N/A	3.5	1.0	T-1
Q2879-08	OU4-TS-GRILLO-TSCP06-081425	04	100.02	2000	N/A	N/A	N/A	3.5	1.5	T-1
Q2879-10	OU4-TS-GRILLO-TSCP07-081425	05	100.03	2000	N/A	N/A	N/A	5.0	1.0	T-1
Q2879-12	OU4-TS-GRILLO-TSCP08-081425	06	100.02	2000	N/A	N/A	N/A	4.5	1.5	T-1
Q2879-14	OU4-TS-GRILLO-TSCP09-081425	07	100.01	2000	N/A	N/A	N/A	3.5	1.0	T-1
Q2879-16	OU4-TS-GRILLO-TSCP10-081425	08	100.03	2000	N/A	N/A	N/A	4.0	1.5	T-1
Q2879-18	OU4-TS-GRILLO-TSCP11-081425	09	100.03	2000	N/A	N/A	N/A	5.0	1.0	T-1

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QC Batch ID # LB136879

Review By	MOHAN	Review On	8/20/2025 1:01:55 PM
Supervise By	jaswal	Supervise On	8/20/2025 10:35:11 PM
STD. NAME	STD REF.#		
ICAL Standard	MP86832,MP86833,MP86834,MP86835,MP86836,MP86837		
ICV Standard	MP86838		
CCV Standard	MP86840		
ICSA Standard			
CRI Standard	MP86842		
LCS Standard			
Chk Standard	MP86839,MP86841,MP86843,MP86845		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	08/19/25 13:52		MOHAN	OK
2	S0.2	S0.2	CAL2	08/19/25 13:55		MOHAN	OK
3	S2.5	S2.5	CAL3	08/19/25 13:57		MOHAN	OK
4	S5	S5	CAL4	08/19/25 13:59		MOHAN	OK
5	S7.5	S7.5	CAL5	08/19/25 14:01		MOHAN	OK
6	S10	S10	CAL6	08/19/25 14:04		MOHAN	OK
7	ICV23	ICV23	ICV	08/19/25 14:07		MOHAN	OK
8	ICB23	ICB23	ICB	08/19/25 14:09		MOHAN	OK
9	CCV71	CCV71	CCV	08/19/25 14:11		MOHAN	OK
10	CCB71	CCB71	CCB	08/19/25 14:14		MOHAN	OK
11	CRA	CRA	CRDL	08/19/25 14:16		MOHAN	OK
12	HighStd	HighStd	HIGH STD	08/19/25 14:18		MOHAN	OK
13	ChkStd	ChkStd	SAM	08/19/25 14:20		MOHAN	OK
14	PB169293BL	PB169293BL	MB	08/19/25 14:25		MOHAN	OK
15	PB169293BS	PB169293BS	LCS	08/19/25 14:31		MOHAN	OK
16	Q2818-04	B-2-5-1	SAM	08/19/25 14:33		MOHAN	OK
17	Q2818-05	B-3-5-2	SAM	08/19/25 14:36		MOHAN	OK
18	Q2879-02	OU4-TS-GRILLO-TSC	SAM	08/19/25 14:38		MOHAN	OK

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QC Batch ID # LB136879

Review By	MOHAN	Review On	8/20/2025 1:01:55 PM
Supervise By	jaswal	Supervise On	8/20/2025 10:35:11 PM
STD. NAME	STD REF.#		
ICAL Standard	MP86832,MP86833,MP86834,MP86835,MP86836,MP86837		
ICV Standard	MP86838		
CCV Standard	MP86840		
ICSA Standard			
CRI Standard	MP86842		
LCS Standard			
Chk Standard	MP86839,MP86841,MP86843,MP86845		

19	Q2879-04	OU4-TS-GRILLO-TSC	SAM	08/19/25 14:40		MOHAN	OK
20	Q2879-06	OU4-TS-GRILLO-TSC	SAM	08/19/25 14:43		MOHAN	OK
21	CCV72	CCV72	CCV	08/19/25 14:45		MOHAN	OK
22	CCB72	CCB72	CCB	08/19/25 14:47		MOHAN	OK
23	Q2879-08	OU4-TS-GRILLO-TSC	SAM	08/19/25 14:50		MOHAN	OK
24	Q2879-10	OU4-TS-GRILLO-TSC	SAM	08/19/25 14:52		MOHAN	OK
25	Q2879-12	OU4-TS-GRILLO-TSC	SAM	08/19/25 14:54		MOHAN	OK
26	Q2879-14	OU4-TS-GRILLO-TSC	SAM	08/19/25 14:57		MOHAN	OK
27	Q2879-16	OU4-TS-GRILLO-TSC	SAM	08/19/25 14:59		MOHAN	OK
28	Q2879-18	OU4-TS-GRILLO-TSC	SAM	08/19/25 15:01		MOHAN	OK
29	Q2879-18DUP	OU4-TS-GRILLO-TSC	DUP	08/19/25 15:03		MOHAN	OK
30	Q2879-18MS	OU4-TS-GRILLO-TSC	MS	08/19/25 15:09		MOHAN	OK
31	Q2879-18MSD	OU4-TS-GRILLO-TSC	MSD	08/19/25 15:12		MOHAN	OK
32	CCV73	CCV73	CCV	08/19/25 15:14		MOHAN	OK
33	CCB73	CCB73	CCB	08/19/25 15:16		MOHAN	OK
34	PB169293TB	PB169293TB	MB	08/19/25 15:26		MOHAN	OK
35	Q2879-18L	OU4-TS-GRILLO-TSC	SD	08/19/25 15:29		MOHAN	OK
36	Q2879-18A	OU4-TS-GRILLO-TSC	PS	08/19/25 15:31		MOHAN	OK
37	CCV74	CCV74	CCV	08/19/25 15:37		MOHAN	OK
38	CCB74	CCB74	CCB	08/19/25 15:39		MOHAN	OK

Instrument ID: P7

Daily Analysis Runlog For Sequence/QC Batch ID # LB136893

Review By	Janvi	Review On	8/25/2025 10:24:20 AM
Supervise By	jaswal	Supervise On	8/25/2025 3:47:01 PM
STD. NAME	STD REF.#		
ICAL Standard	MP86739,MP86789,MP86788,MP86745,MP86744,MP86743,MP86742,MP86741,MP86740		
ICV Standard	MP86751,MP86788		
CCV Standard	MP86794		
ICSA Standard	MP86746,MP86747		
CRI Standard	MP86788		
LCS Standard			
Chk Standard	MP86750,MP86748		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	TUNE	TUNE	TUNE	08/20/25 10:19		Jaswal	OK
2	S0	S0	CAL1	08/20/25 10:49		Jaswal	OK
3	S2	S2	CAL3	08/20/25 10:56		Jaswal	OK
4	S3	S3	CAL4	08/20/25 10:59		Jaswal	OK
5	S4	S4	CAL5	08/20/25 11:02		Jaswal	OK
6	S5	S5	CAL6	08/20/25 11:05		Jaswal	OK
7	S6	S6	CAL7	08/20/25 11:08		Jaswal	OK
8	S7	S7	CAL8	08/20/25 11:11		Jaswal	OK
9	S8	S8	CAL9	08/20/25 11:14		Jaswal	OK
10	ICV01	ICV01	ICV	08/20/25 11:35		Jaswal	OK
11	LLICV01	LLICV01	LLICV	08/20/25 11:50		Jaswal	OK
12	ICB01	ICB01	ICB	08/20/25 11:56		Jaswal	OK
13	ICSA01	ICSA01	ICSA	08/20/25 12:00		Jaswal	OK
14	ICSAB01	ICSAB01	ICSAB	08/20/25 12:03		Jaswal	OK
15	CCV01	CCV01	CCV	08/20/25 12:06		Jaswal	OK
16	CCB01	CCB01	CCB	08/20/25 12:09		Jaswal	OK
17	CRI	CRI	CRDL	08/20/25 12:15		Jaswal	OK
18	PB169300BL	PB169300BL	MB	08/20/25 12:19		Jaswal	OK

Instrument ID: P7

Daily Analysis Runlog For Sequence/QC Batch ID # LB136893

Review By	Janvi	Review On	8/25/2025 10:24:20 AM
Supervise By	jaswal	Supervise On	8/25/2025 3:47:01 PM

STD. NAME	STD REF.#
ICAL Standard	MP86739,MP86789,MP86788,MP86745,MP86744,MP86743,MP86742,MP86741,MP86740
ICV Standard	MP86751,MP86788
CCV Standard	MP86794
ICSA Standard	MP86746,MP86747
CRI Standard	MP86788
LCS Standard	
Chk Standard	MP86750,MP86748

19	PB169300BS	PB169300BS	LCS	08/20/25 12:22		Jaswal	OK
20	PB169300TB	PB169300TB	MB	08/20/25 12:25		Jaswal	OK
21	Q2879-02DL	OU4-TS-GRILLO-TSC	SAM	08/20/25 12:28	5X Report Straight Dilution	Jaswal	OK
22	Q2879-04DL	OU4-TS-GRILLO-TSC	SAM	08/20/25 12:32	5X Report Straight Dilution	Jaswal	OK
23	Q2879-06DL	OU4-TS-GRILLO-TSC	SAM	08/20/25 12:35	5X Report Straight Dilution	Jaswal	OK
24	Q2879-08DL	OU4-TS-GRILLO-TSC	SAM	08/20/25 12:38	5X Report Straight Dilution	Jaswal	OK
25	Q2879-10DL	OU4-TS-GRILLO-TSC	SAM	08/20/25 12:41	5X Report Straight Dilution	Jaswal	OK
26	Q2879-12DL	OU4-TS-GRILLO-TSC	SAM	08/20/25 12:44	5X Report Straight Dilution	Jaswal	OK
27	CCV02	CCV02	CCV	08/20/25 12:47		Jaswal	OK
28	CCB02	CCB02	CCB	08/20/25 12:52		Jaswal	OK
29	Q2879-14DL	OU4-TS-GRILLO-TSC	SAM	08/20/25 12:56	5X Report Straight Dilution	Jaswal	OK
30	Q2879-16DL	OU4-TS-GRILLO-TSC	SAM	08/20/25 12:59	5X Report Straight Dilution	Jaswal	OK
31	Q2879-18DL	OU4-TS-GRILLO-TSC	SAM	08/20/25 13:02	5X Report Straight Dilution	Jaswal	OK
32	Q2879-18DUPDL	OU4-TS-GRILLO-TSC	DUP	08/20/25 13:05	5X Report Straight Dilution	Jaswal	OK
33	Q2879-18LDL	OU4-TS-GRILLO-TSC	SD	08/20/25 13:08	25X Report Straight Dilution	Jaswal	OK
34	Q2879-18MSDL	OU4-TS-GRILLO-TSC	MS	08/20/25 13:11	5X Report Straight Dilution	Jaswal	OK
35	Q2879-18MSDDL	OU4-TS-GRILLO-TSC	MSD	08/20/25 13:14	5X Report Straight Dilution	Jaswal	OK

Instrument ID: P7

Daily Analysis Runlog For Sequence/QC Batch ID # LB136893

Review By	Janvi	Review On	8/25/2025 10:24:20 AM
Supervise By	jaswal	Supervise On	8/25/2025 3:47:01 PM

STD. NAME	STD REF.#
ICAL Standard	MP86739,MP86789,MP86788,MP86745,MP86744,MP86743,MP86742,MP86741,MP86740
ICV Standard	MP86751,MP86788
CCV Standard	MP86794
ICSA Standard	MP86746,MP86747
CRI Standard	MP86788
LCS Standard	
Chk Standard	MP86750,MP86748

36	Q2879-18ADL	OU4-TS-GRILLO-TSCPS	08/20/25 13:17	5X Report Straight Dilution, (0.1ML OF MP86790 AND 0.2ML OF EACH MP86791,MP86792 AND MP86793 IN 10ML OF SAMPLE BEFORE DILUTION)	Jaswal	OK
37	CCV03	CCV03	CCV	08/20/25 13:27	Jaswal	OK
38	CCB03	CCB03	CCB	08/20/25 13:30	Jaswal	OK

SOP ID :	<u>M1312-SPLP-10</u>	
SDG No :	<u>N/A</u>	Start Prep Date : <u>08/15/2025</u> Time : <u>17:00</u>
Weigh By :	<u>JP</u>	End Prep Date : <u>08/16/2025</u> Time : <u>11:25</u>
Balance ID :	<u>WC SC-7</u>	Combination Ratio : <u>20</u>
pH Meter ID :	<u>WC PH METER-1</u>	ZHE Cleaning Batch : <u>N/A</u>
Extraction By :	<u>JP</u>	Initial Room Temperature: <u>24 °C</u>
Filter By :	<u>JP</u>	Final Room Temperature: <u>21 °C</u>
Pipette ID :	<u>WC</u>	TCLP Technician Signature : <u>JP</u>
Tumbler ID :	<u>T-1</u>	Supervisor By : <u>RM</u>
TCLP Filter ID :	<u>115525</u>	

Standard Name	MLS USED	STD REF. # FROM LOG
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE U	Lot Number
SPLP FLUID	N/A	WP112802
N/A	N/A	N/A
HNO3-TCLP,1N	N/A	WP112799
pH Strips	N/A	W1931,W1934,W3171,W3172
pH Strips	W1940,W1941,W1942	W3166,W1938,W1939,
N/A	N/A	N/A
120ml Plastic bottle	N/A	2738
1:1 HNO3	N/A	MP84041

Extraction Conformance/Non-Conformance Comments:

Matrix spikes are added after filtration and before preservation. TUMBLER T-1 checked,30 rpm. q2879-18 is used for MS-MSD.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
08/18/25	JP / TCLP Room	S/S, meting
08/18/25	Preparation Group	Analysis Group

11:30

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep Pos
PB169276TB	LEB276	10	N/A	2000	N/A	N/A	N/A	4.24	1.5	T-1
Q2879-02	OU4-TS-GRILLO-TSCP03-081425	01	100.02	2000	N/A	N/A	N/A	3.5	1.0	T-1
Q2879-04	OU4-TS-GRILLO-TSCP04-081425	02	100.03	2000	N/A	N/A	N/A	4.0	1.0	T-1
Q2879-06	OU4-TS-GRILLO-TSCP05-081425	03	100.02	2000	N/A	N/A	N/A	3.5	1.0	T-1
Q2879-08	OU4-TS-GRILLO-TSCP06-081425	04	100.02	2000	N/A	N/A	N/A	3.5	1.5	T-1
Q2879-10	OU4-TS-GRILLO-TSCP07-081425	05	100.03	2000	N/A	N/A	N/A	5.0	1.0	T-1
Q2879-12	OU4-TS-GRILLO-TSCP08-081425	06	100.02	2000	N/A	N/A	N/A	4.5	1.5	T-1
Q2879-14	OU4-TS-GRILLO-TSCP09-081425	07	100.01	2000	N/A	N/A	N/A	3.5	1.0	T-1
Q2879-16	OU4-TS-GRILLO-TSCP10-081425	08	100.03	2000	N/A	N/A	N/A	4.0	1.5	T-1
Q2879-18	OU4-TS-GRILLO-TSCP11-081425	09	100.03	2000	N/A	N/A	N/A	5.0	1.0	T-1

SampleID	ClientID	Sample Weight (g)	Filter Weight (g)	Filtrate (mL)	Filter + Solid (After 100°C)	% solids	% Dry Solids
PB169276TB	LEB276	N/A	N/A	N/A	N/A	N/A	N/A
Q2879-02	OU4-TS-GRILLO-TSCP03-081425	N/A	N/A	N/A	N/A	100	N/A
Q2879-04	OU4-TS-GRILLO-TSCP04-081425	N/A	N/A	N/A	N/A	100	N/A
Q2879-06	OU4-TS-GRILLO-TSCP05-081425	N/A	N/A	N/A	N/A	100	N/A
Q2879-08	OU4-TS-GRILLO-TSCP06-081425	N/A	N/A	N/A	N/A	100	N/A
Q2879-10	OU4-TS-GRILLO-TSCP07-081425	N/A	N/A	N/A	N/A	100	N/A
Q2879-12	OU4-TS-GRILLO-TSCP08-081425	N/A	N/A	N/A	N/A	100	N/A
Q2879-14	OU4-TS-GRILLO-TSCP09-081425	N/A	N/A	N/A	N/A	100	N/A
Q2879-16	OU4-TS-GRILLO-TSCP10-081425	N/A	N/A	N/A	N/A	100	N/A
Q2879-18	OU4-TS-GRILLO-TSCP11-081425	N/A	N/A	N/A	N/A	100	N/A

Hot Block ID : WC S-1 / WC S-2

Thermometer ID : FLASHPOINT

SampleID	ClientID	Sample Weight (g)	Volume DI Water (mL)	PH after 5 min stir	PH after 10 min stir	Extraction Fluid 1 or 2	pH Extraction Fluid
PB169276TB	LEB276	N/A	N/A	N/A	N/A	#1	4.24
Q2879-02	OU4-TS-GRILLO-TSCP03-081425	N/A	N/A	N/A	N/A	#1	4.24
Q2879-04	OU4-TS-GRILLO-TSCP04-081425	N/A	N/A	N/A	N/A	#1	4.24
Q2879-06	OU4-TS-GRILLO-TSCP05-081425	N/A	N/A	N/A	N/A	#1	4.24
Q2879-08	OU4-TS-GRILLO-TSCP06-081425	N/A	N/A	N/A	N/A	#1	4.24
Q2879-10	OU4-TS-GRILLO-TSCP07-081425	N/A	N/A	N/A	N/A	#1	4.24
Q2879-12	OU4-TS-GRILLO-TSCP08-081425	N/A	N/A	N/A	N/A	#1	4.24
Q2879-14	OU4-TS-GRILLO-TSCP09-081425	N/A	N/A	N/A	N/A	#1	4.24
Q2879-16	OU4-TS-GRILLO-TSCP10-081425	N/A	N/A	N/A	N/A	#1	4.24
Q2879-18	OU4-TS-GRILLO-TSCP11-081425	N/A	N/A	N/A	N/A	#1	4.24

Prep Standard - Chemical Standard Summary

Order ID : Q2879
Test : SPLP Mercury,SPLP MetalGroup3
Prepbatch ID : PB169293,PB169300,
Sequence ID/Qc Batch ID: LB136879,LB136893,

Standard ID :
 MP85156,MP85892,MP85893,MP85894,MP86739,MP86740,MP86741,MP86742,MP86743,MP86744,MP86745,MP86746,MP86747,MP86748,MP86750,MP86751,MP86787,MP86788,MP86789,MP86790,MP86791,MP86792,MP86793,MP86794,MP86830,MP86831,MP86832,MP86833,MP86834,MP86835,MP86836,MP86837,MP86838,MP86839,MP86840,MP86841,MP86842,MP86843,MP86845,

Chemical ID :
 M4465,M4916,M5062,M5245,M5305,M5501,M5658,M5697,M5798,M5799,M5800,M5801,M5815,M5817,M5882,M5962,M5979,M5981,M6021,M6023,M6025,M6026,M6027,M6028,M6030,M6032,M6041,M6055,M6079,M6086,M6128,M6137,M6140,M6142,M6144,M6145,M6146,M6151,M6153,M6158,M6159,M6160,M6162,M6163,M6164,M6165,M6171,M6172,M6175,M6176,M6178,M6185,W3112,

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
170	1:1HCL	MP85156	04/07/2025	09/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 04/07/2025

FROM 1250.00000ml of M6151 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3965	2:1 H2SO4 : HNO3	MP85892	06/05/2025	11/27/2025	Mohan Bera	None	None	Sarabjit Jaswal 06/14/2025

FROM 1600.00000ml of M6041 + 800.00000ml of M6162 = Final Quantity: 3200.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP85893	06/05/2025	12/05/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal
06/14/2025								

FROM 100.00000gram of M4916 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
66	POTASSIUM PERSULFATE SOLUTION 5 %	MP85894	06/05/2025	08/31/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal
06/14/2025								

FROM 100.00000ml of M4465 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1122	ICPMS CALIB BLANK(S0/ICB/CCB)	MP86739	08/12/2025	09/02/2025	Janvi Patel	None	METALS_PIP ETTE_1 (ICP A)	Sarabjit Jaswal 08/14/2025

FROM 25.00000ml of M6151 + 4925.00000ml of W3112 + 50.00000ml of M6162 = Final Quantity: 5000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2902	S8 ICPMS	MP86740	08/12/2025	09/02/2025	Janvi Patel	None	METALS_PIP ETTE_1 (ICP A)	Sarabjit Jaswal 08/14/2025

FROM 1.00000ml of M6159 + 2.50000ml of M6140 + 2.50000ml of M6142 + 5.00000ml of M6086 + 5.00000ml of M6171 + 5.00000ml of M6172 + 79.00000ml of MP86739 = Final Quantity: 100.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3947	S7(SFAM,6020,200.8)	MP86741	08/12/2025	09/02/2025	Janvi Patel	None	METALS_PIP ETTE_1 (ICP A)	Sarabjit Jaswal 08/14/2025
FROM 0.10000ml of M6153 + 0.40000ml of M6026 + 1.00000ml of M5799 + 1.00000ml of M5981 + 1.00000ml of M6079 + 1.00000ml of M6137 + 1.90000ml of M6159 + 10.00000ml of M5979 + 10.00000ml of M6162 + 10.00000ml of M6178 + 2.00000ml of M5815 + 2.00000ml of M5817 + 4.00000ml of M6032 + 4.90000ml of M6140 + 4.90000ml of M6142 + 47.00000ml of M5305 + 47.00000ml of M6175 + 5.00000ml of M6151 + 834.10000ml of W3112 + 9.00000ml of M5697 + 9.00000ml of M6128 + 9.00000ml of M6145 + 9.90000ml of M6086 + 9.90000ml of M6171 + 9.90000ml of M6172 = Final Quantity: 1000.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3948	S6(SFAM,6020,200.8)	MP86742	08/12/2025	09/02/2025	Janvi Patel	None	METALS_PIP ETTE_1 (ICP A)	Sarabjit Jaswal 08/14/2025
FROM 0.50000ml of M6151 + 1.00000ml of M6162 + 48.50000ml of W3112 + 50.00000ml of MP86741 = Final Quantity: 100.000 ml								

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3949	S5(SFAM,6020,200.8)	MP86743	08/12/2025	09/02/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/14/2025
FROM 0.50000ml of M6151 + 1.00000ml of M6162 + 73.50000ml of W3112 + 25.00000ml of MP86741 = Final Quantity: 100.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3954	S4(SFAM,6020,200.8)	MP86744	08/12/2025	09/02/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/14/2025
FROM 0.50000ml of M6151 + 1.00000ml of M6162 + 86.00000ml of W3112 + 12.50000ml of MP86741 = Final Quantity: 100.000 ml								

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3951	S3(SFAM, 6020,200.8)	MP86745	08/12/2025	09/02/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/14/2025
FROM 0.50000ml of M6151 + 1.00000ml of M6162 + 88.50000ml of W3112 + 10.00000ml of MP86742 = Final Quantity: 100.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1142	ICSA ICPMS	MP86746	08/12/2025	09/02/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/14/2025
FROM 10.00000ml of M6185 + 90.00000ml of MP86739 = Final Quantity: 100.000 ml								

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1143	ICSAB ICPMS	MP86747	08/12/2025	09/02/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/14/2025

FROM 10.00000ml of M5245 + 10.00000ml of M6185 + 80.00000ml of MP86739 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3962	MG 10PPM FOR TUNE	MP86748	08/12/2025	08/26/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/14/2025

FROM 0.01000ml of M6171 + 9.99000ml of MP86739 = Final Quantity: 100.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3894	TUNE 200PPB	MP86750	08/12/2025	09/02/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/14/2025

FROM 2.00000ml of M6055 + 2.00000ml of MP86748 + 96.00000ml of MP86739 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4213	NEW ICV-6020B	MP86751	08/12/2025	09/02/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/14/2025

FROM 0.00800ml of M6163 + 0.00800ml of M6164 + 0.01600ml of M6165 + 49.96800ml of MP86739 = Final Quantity: 50.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3955	S2CONC(SFAM,6020,200.8)	MP86787	08/12/2025	09/02/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/18/2025
FROM 0.05000ml of M5798 + 0.05000ml of M5800 + 0.05000ml of M5801 + 0.05000ml of M5981 + 0.05000ml of M6023 + 0.05000ml of M6025 + 0.05000ml of M6027 + 0.05000ml of M6028 + 0.05000ml of M6030 + 0.05000ml of M6079 + 0.05000ml of M6128 + 0.05000ml of M6176 + 0.10000ml of M5658 + 0.10000ml of M5697 + 0.10000ml of M6146 + 0.10000ml of M6159 + 0.25000ml of M5799 + 0.25000ml of M5962 + 0.25000ml of M5979 + 0.25000ml of M6021 + 0.25000ml of M6140 + 0.25000ml of M6145 + 0.25000ml of M6178 + 0.50000ml of M6032 + 0.50000ml of M6137 + 1.25000ml of M5815 + 1.25000ml of M5817 + 1.25000ml of M6151 + 2.50000ml of M6086 + 2.50000ml of M6142 + 2.50000ml of M6162 + 2.50000ml of M6171 + 2.50000ml of M6172 + 230.00000ml of W3112 = Final Quantity: 250.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3956	S2(SFAM,6020,200.8)	MP86788	08/12/2025	09/02/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/18/2025
FROM 0.25000ml of M6151 + 0.50000ml of M6162 + 49.00000ml of W3112 + 0.25000ml of MP86787 = Final Quantity: 100.000 ml								

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3957	S1(SFAM,6020,200.8)	MP86789	08/12/2025	09/02/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/18/2025

FROM 0.25000ml of M6151 + 0.50000ml of M6162 + 44.25000ml of W3112 + 5.00000ml of MP86788 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3880	M&B SPIKE-1	MP86790	08/12/2025	09/02/2025	Janvi Patel	None	None	Sarabjit Jaswal 08/18/2025

FROM 5.00000ml of M5658 + 5.00000ml of M5798 + 5.00000ml of M5800 + 5.00000ml of M5962 + 5.00000ml of M5981 + 5.00000ml of M6021 + 5.00000ml of M6023 + 5.00000ml of M6027 + 5.00000ml of M6028 + 5.00000ml of M6030 + 5.00000ml of M6079 + 5.00000ml of M6160 + 5.00000ml of M6176 + 32.50000ml of MP86739 = Final Quantity: 100.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3881	M&B SPIKE-2	MP86791	08/12/2025	09/02/2025	Janvi Patel	None	None	Sarabjit Jaswal
08/18/2025								

FROM 10.00000ml of M5979 + 10.00000ml of M6178 + 12.50000ml of M6032 + 12.50000ml of M6140 + 12.50000ml of M6142 + 2.50000ml of M5799 + 2.50000ml of M6137 + 5.00000ml of M6159 + 32.50000ml of MP86739 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3882	M&B SPIKE-3	MP86792	08/12/2025	09/02/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal
08/18/2025								

FROM 0.62500ml of M6026 + 12.50000ml of M5697 + 12.50000ml of M6128 + 12.50000ml of M6145 + 11.87500ml of MP86739 = Final Quantity: 50.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3900	M&B SPIKE-4	MP86793	08/12/2025	09/02/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/18/2025

FROM 6.25000ml of M6086 + 6.25000ml of M6171 + 6.25000ml of M6172 + 6.25000ml of MP86739 = Final Quantity: 25.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3961	CCV	MP86794	08/12/2025	09/02/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/18/2025

FROM 0.20000ml of M6026 + 0.50000ml of M5799 + 0.50000ml of M5981 + 0.50000ml of M6079 + 0.50000ml of M6137 + 0.50000ml of M6176 + 1.00000ml of M5815 + 1.00000ml of M5817 + 10.00000ml of M6162 + 12.45000ml of M6140 + 12.45000ml of M6142 + 2.00000ml of M6032 + 24.95000ml of M6086 + 24.95000ml of M6144 + 24.95000ml of M6171 + 25.00000ml of M6175 + 4.50000ml of M5697 + 4.50000ml of M6128 + 4.50000ml of M6145 + 4.95000ml of M6159 + 5.00000ml of M6151 + 5.50000ml of M5979 + 5.50000ml of M6178 + 824.10000ml of W3112 = Final Quantity: 1000.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
67	SODIUM CHLORIDE - HYDROXYL- CHLORIDE SOLUTION	MP86830	08/18/2025	02/18/2026	Sagar Kanani	None	None	Sarabjit Jaswal 08/18/2025
FROM 2000.00000ml of W3112 + 240.00000gram of M5501 = Final Quantity: 2000.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP86831	08/19/2025	08/20/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/25/2025
FROM 1.00000ml of M6162 + 2.50000ml of M5062 + 96.50000ml of W3112 = Final Quantity: 100.000 ml								

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1340	Hg 0.00 PPB STD	MP86832	08/19/2025	08/20/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/25/2025

FROM 2.50000ml of M6162 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1341	Hg 0.2 PPB STD	MP86833	08/19/2025	08/20/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/25/2025

FROM 2.50000ml of M6162 + 247.50000ml of W3112 + 0.20000ml of MP86831 = Final Quantity: 250.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1342	Hg 2.5 PPB STD	MP86834	08/19/2025	08/20/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/25/2025
FROM 2.50000ml of M6162 + 245.00000ml of W3112 + 2.50000ml of MP86831 = Final Quantity: 250.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1343	Hg 5.0 PPB STD	MP86835	08/19/2025	08/20/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/25/2025
FROM 2.50000ml of M6162 + 242.50000ml of W3112 + 5.00000ml of MP86831 = Final Quantity: 250.000 ml								

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1344	Hg 7.5 PPB STD	MP86836	08/19/2025	08/20/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/25/2025

FROM 2.50000ml of M6162 + 240.00000ml of W3112 + 7.50000ml of MP86831 = Final Quantity: 250.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1345	Hg 10.0 PPB STD	MP86837	08/19/2025	08/20/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/25/2025

FROM 2.50000ml of M6162 + 237.50000ml of W3112 + 10.00000ml of MP86831 = Final Quantity: 250.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1346	Hg ICV SOLUTION	MP86838	08/19/2025	08/20/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HG A)	Sarabjit Jaswal 08/25/2025

FROM 2.50000ml of M6162 + 245.00000ml of W3112 = Final Quantity: 250.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1351	ICB (Hg 0.00 PPB SOLUTION)	MP86839	08/19/2025	08/20/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HG A)	Sarabjit Jaswal 08/25/2025

FROM 2.50000ml of M6162 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1358	CCV (Hg 5.0 PPB SOLUTION)	MP86840	08/19/2025	08/20/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/25/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6162 + 10.00000ml of MP86831 = Final Quantity: 500.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1352	CCB (Hg 0.00 PPB SOLUTION)	MP86841	08/19/2025	08/20/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/25/2025

FROM 495.00000ml of W3112 + 5.00000ml of M6162 = Final Quantity: 500.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1349	CRA/CRI (Hg 0.2 PPB SOLUTION)	MP86842	08/19/2025	08/20/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HG A)	Sarabjit Jaswal 08/25/2025

FROM 2.50000ml of M6162 + 247.50000ml of W3112 + 0.20000ml of MP86831 = Final Quantity: 250.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1350	CHK STD (Hg 7.0 PPB SOLUTION)	MP86843	08/19/2025	08/20/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HG A)	Sarabjit Jaswal 08/25/2025

FROM 2.50000ml of M6162 + 240.50000ml of W3112 + 7.00000ml of MP86831 = Final Quantity: 250.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
68	STANNOUS CHLORIDE SOLUTION	MP86845	08/19/2025	08/20/2025	Sagar Kanani	None	None	Sarabjit Jaswal
FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M6151 = Final Quantity: 500.000 ml								

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3238-05 / Potassium Persulfate (2.5kg)	0000234156	08/06/2025	07/23/2019 / jaswal	07/25/2019 / manojkumar	M4465

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3227-05 / Potassium Permanganate (2.5kg)	210800	03/31/2026	11/30/2022 / mohan	07/28/2021 / mohan	M4916

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	MSHG-10PPM / MERCURY HCI 125mL 10ug/mL	S2-HG709270	09/22/2026	05/28/2022 / mohan	01/27/2022 / mohan	M5062

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART B / ICSB (ICPMS) STOCK SOLUTION	CP-MS ICSB-0803	07/01/2026	07/02/2025 / jaswal	02/20/2020 / jaswal	M5245

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	6020CAL-1 / Calibration Standard Method 6020	S2-MEB711244	10/20/2026	03/07/2025 / JANVI	04/01/2022 / jaswal	M5305

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3624-05 / Sodium Chloride, Crystal (cs/4x2.5kg)	0000281938	07/06/2026	07/24/2023 / mohan	04/14/2023 / mohan	M5501

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	102523	10/25/2026	04/03/2024 / jaswal	10/27/2023 / jaswal	M5697

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57115 / P, 10000 PPM, 125 ml	041723	04/17/2026	05/21/2024 / Jaswal	02/09/2024 / jaswal	M5815

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57116 / S, 10000 PPM, 125 ml	071123	07/11/2026	03/01/2024 / jaswal	02/09/2024 / jaswal	M5817

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3980-01 / Stannous Chloride (cs/4x500g)	232820	08/31/2028	04/30/2024 / mohan	04/25/2024 / mohan	M5882

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	060624	06/06/2027	07/02/2024 / Jaswal	06/14/2024 / Jaswal	M5962

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGT11-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	08/05/2026	08/06/2025 / Janvi	02/22/2024 / Jaswal	M5979

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57092 / U, 1000 PPM, 125 ml	060724	06/07/2027	07/29/2024 / Jaswal	06/11/2024 / Jaswal	M5981

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57023 / V, 1000 PPM, 125 ml	062424	06/24/2027	09/28/2024 / jaswal	08/05/2024 / Jaswal	M6021

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57081 / TI, 1000 PPM, 125 ml	0624724	06/27/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6023

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57082 / Pb, 1000 PPM, 125 ml	061224	11/09/2026	08/05/2024 / Jaswal	08/05/2024 / Jaswal	M6025

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57182 / Pb, 10000 PPM, 125 ml	110923	11/09/2026	12/05/2024 / janvi	08/05/2024 / Jaswal	M6026

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57028 / Ni, 1000 PPM, 125 ml	062024	06/20/2027	06/04/2025 / Janvi	08/05/2024 / Jaswal	M6027

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6028

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	010924	01/09/2027	01/14/2025 / Jaswal	08/05/2024 / Jaswal	M6032

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	23D2462010	03/20/2028	08/16/2024 / mohan	08/16/2024 / mohan	M6041

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	IV-STOCK-12 / ICP-MS TUNING SOLUTION, 125mL	U2-MEB734294	06/21/2028	08/21/2024 / Jaswal	08/19/2024 / Jaswal	M6055

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57040 / Zr, 1000 PPM, 125 ml	071423	07/14/2026	01/15/2025 / Jaswal	09/30/2024 / Jaswal	M6079

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Calcium, 500 ml, 10000 PPM	082324	08/23/2027	03/06/2025 / JANVI	10/14/2024 / jaswal	M6086

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	101124	10/11/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6128

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSI1-1 / SILICON 125mL 1000ug/mL	V2-SI744713	07/10/2029	01/14/2025 / Jaswal	10/03/2024 / Jaswal	M6137

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58126 / Fe, 10000 PPM, 500 ml	011025	01/10/2028	06/25/2025 / Janvi	01/13/2025 / Jaswal	M6140

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58119 / K, 10000 PPM, 500 ml	103024	10/30/2027	05/06/2025 / JANVI	01/13/2025 / Jaswal	M6142

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	072424	07/24/2027	01/23/2025 / kareem	01/13/2025 / Jaswal	M6144

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	121724	12/17/2027	02/04/2025 / jaswal	01/13/2025 / Jaswal	M6145

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	071724	07/17/2027	01/31/2025 / kareem	10/18/2024 / kareem	M6146

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22G2862015	02/17/2026	02/18/2025 / Sagar	01/15/2025 / Sagar	M6151

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSR10 / Strontium (SR), 125mL 10,000ppm	V2-SR754329	02/28/2026	02/28/2025 / JANVI	01/07/2025 / JANVI	M6153

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	09/09/2025	03/10/2025 / Eman	02/02/2025 / Sagar	M6158

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011325	03/18/2026	03/18/2025 / kareem	02/09/2025 / kareem	M6159

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	071724	07/17/2027	03/24/2025 / kareem	10/18/2024 / kareem	M6160

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24H0162012	11/27/2025	05/27/2025 / Sagar	04/27/2025 / Sagar	M6162

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-1-125ML / EPA CLP ICP Verification Standard1	V2-MEB744107	06/08/2026	06/09/2025 / jaswal	06/06/2025 / jaswal	M6163

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-2-125ML / EPA CLP ICP Verification Standard2	U2-MEB733713	06/08/2026	06/09/2025 / jaswal	06/09/2025 / jaswal	M6164

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-3-125ML / EPA CLP ICP Verification Standard3	V2-MEB749572	06/08/2026	06/09/2025 / jaswal	06/09/2025 / jaswal	M6165

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	011525	01/15/2028	07/15/2025 / jaswal	02/13/2025 / Janvi	M6171

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGNA10-5 / Sodium, 500 ml, 10000 PPM	V2-NA740547	07/29/2026	07/29/2025 / Janvi	01/25/2025 / Janvi	M6172

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	6020CAL-1 / Calibration Standard Method 6020	V2-MEB742014	07/17/2026	07/17/2025 / Janvi	01/27/2025 / Janvi	M6175

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57038 / Sr, 1000 PPM, 125 ml	092724	09/27/2027	08/06/2025 / Janvi	08/06/2025 / Janvi	M6176

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57042 / Mo, 1000 PPM, 125 ml	080528	08/05/2028	08/06/2025 / Janvi	08/06/2025 / Janvi	M6178

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART A / ICSA (ICPMS) STOCK SOLN	MS ICSA-0803	07/01/2026	07/02/2025 / jaswal	07/14/2022 / Janvi	M6185

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

M5882
 M3

Certificate of Analysis

1 Reagent Lane
 Fair Lawn, NJ 07410
 201.796.7100 tel
 201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System
 Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	T142	Quality Test / Release Date	08/17/2023
Lot Number	232820		
Description	STANNOUS CHLORIDE, DIHYDRATE CERTIFIED ACS (Suitable for Mercury Determination)		
Country of Origin	United States	Suggested Retest Date	Aug/2028
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear crystals
ASSAY	%	Inclusive Between 98 - 103	100.65
CALCIUM	%	<= 0.005	0.0017
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	%	<= 0.003	0.0011
LEAD (Pb)	%	<= 0.01	0.0006
MERCURY (Hg)	ppm	<= 0.05	<0.05
POTASSIUM (K)	%	<= 0.005	0.0001
SODIUM (Na)	%	<= 0.01	<0.01
SOLUBILITY IN HCL	PASS/FAIL	= PASS TEST	PASS TEST
SULFATE (SO4)	PASS/FAIL	= P.T. (ABOUT 0.003%)	P.T. (ABOUT 0.003%)



Harout Sahagian - Quality Control Supervisor - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.

If there are any questions with this certificate, please call at (800) 227-6701.

*Based on suggested storage condition.



M6032

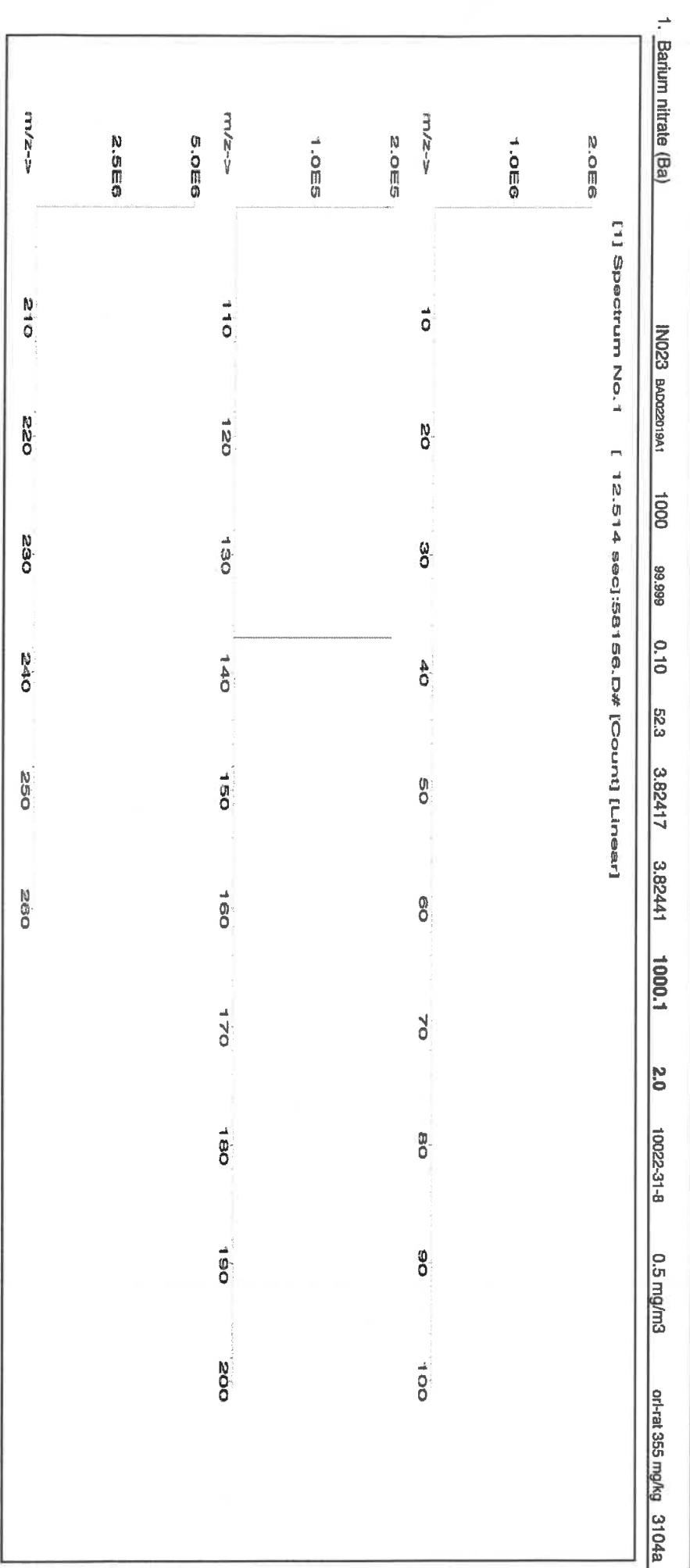


CERTIFIED WEIGHT REPORT:

Part Number: 57056
Lot Number: 010924
Description: Barium (Ba)
Solvent: Nitric Acid
Lot #
Expiration Date: 010927
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02
Balance Uncertainty: 5E-05
Flask Uncertainty: 0.058

<i>Giovanni Caporaso</i>	
Formulated By:	Giovanni Esposito
Reviewed By:	Pedro L. Renterias
	010924

SDS Information									
Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)
1. Barium nitrate (Ba)	IN023	BA0022019A1	1000	99.999	0.10	52.3	3.82417	3.82441	1000.1





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM



Rev'd 2/10/14/2021 M6085 / M6086 / M6087

CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 082324
Description: Calcium (Ca)

Solvent: 24002546 Nitric Acid

Lot #

Giovanni Esposito
Formulated By: Giovanni Esposito
Reviewed By: Pedro L. Rentas

082324

Expiration Date: 082327

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 10000

NIST Test Number: 6UTB

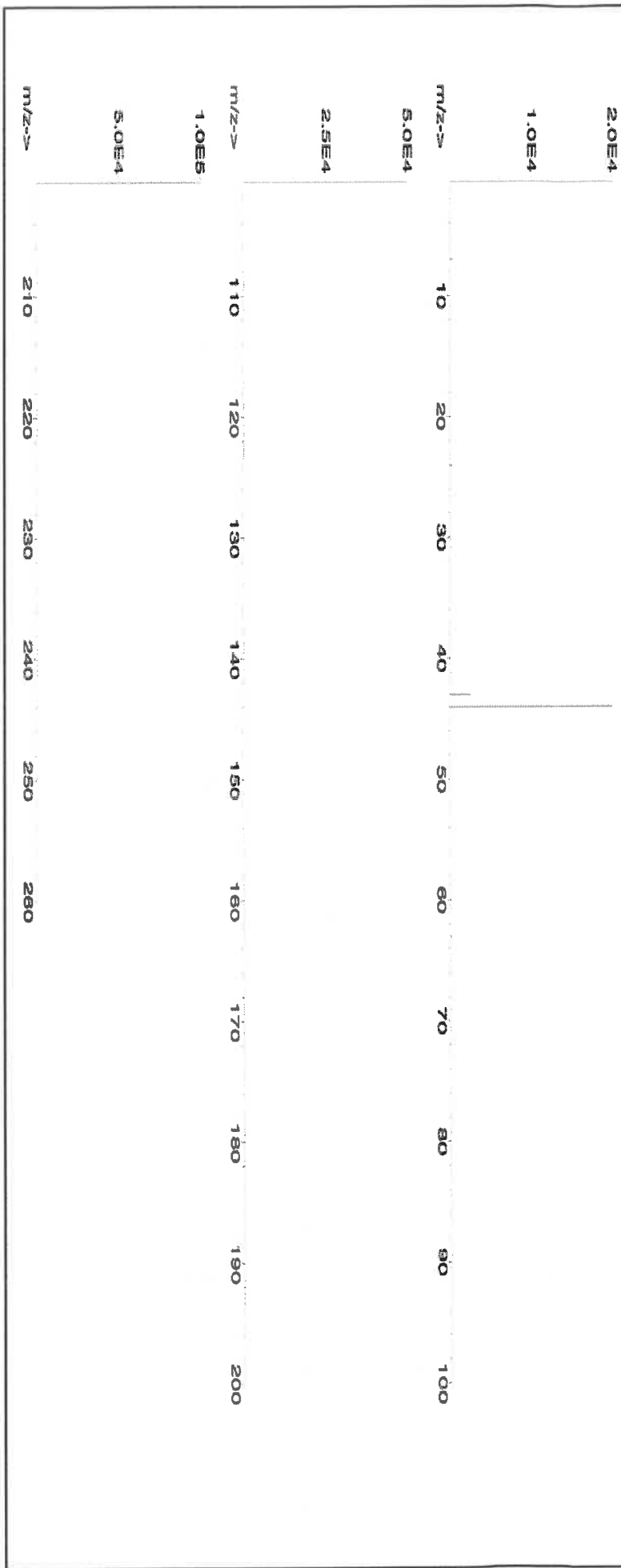
Weight shown below was diluted to (mL): 4000.1 0.15 Flask Uncertainty

SDS Information

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Calcium carbonate (Ca) IN014 CAD03202383 10000 99.999 0.10 39.9 100.2537 100.2656 10001.2 20.0 471-34-1 5 mg/m3 or-rat >2000mg/kg 3109a

[1] Spectrum No. 1 [12.514 sec]: 58120.D* [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	30	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Su	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



M6028



CERTIFIED WEIGHT REPORT:

Part Number: 57048
Lot Number: 070124
Description: Cadmium (Cd)

Lot #
Solvent: 24002546 Nitric Acid

Expiration Date:

070127

2% 40.0 Nitric Acid
(mL)

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Weight shown below was diluted to (mL):

2000.07

SE-05 Balance Uncertainty
0.100 Flask Uncertainty

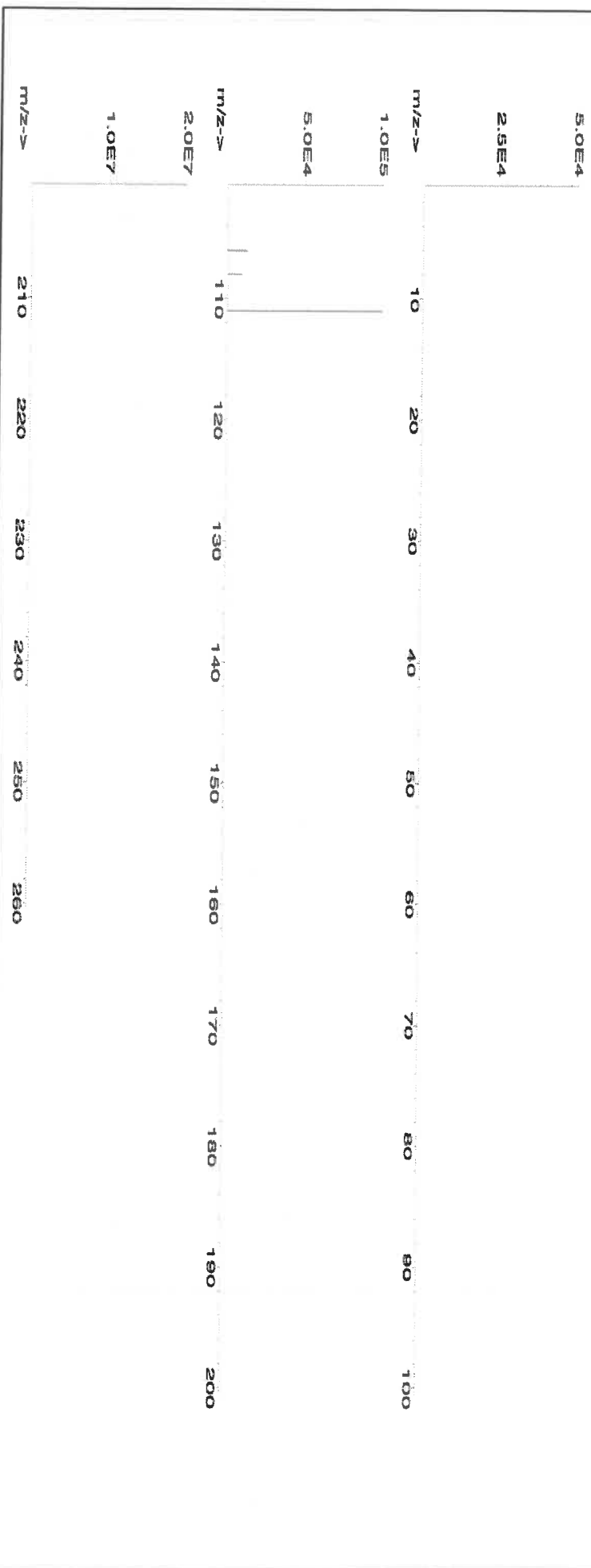
<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
	070124
<i>Pedro L. Rentas</i>	
Reviewed By:	Pedro L. Rentas
	070124

Compound

Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded	SDS Information	NIST
Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	+/- (µg/mL)	(Solvent Safety Info. On Attached pg.)	SRM

1. Cadmium nitrate tetrahydrate (Cd) IN024 CDM09221A1 1000 99.999 0.10 36.5 5.4797 5.4804 1000.1 2.0 10022-68-1 0.01 mg/m3 or-rat 60.2mg/kg 3108

[T1 Spectrum No.1 [12.514 sec]:\$8148.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.2	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Ba	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Cd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pr	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Instructions for QATS Reference Material: ICP-MS ICS

**QATS LABORATORY INORGANIC REFERENCE MATERIAL
INTERFERENCE CHECK SAMPLE SET FOR ICP-MS (ICSA WITH ICSB)**

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) SAMPLE DESCRIPTION

Enclosed is a set of one (1) or more bottles of an Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-0803" and for the ICSAB mixture use "ICSA-0803+ICSB-0803".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) BREAKAGE OR MISSING ITEMS

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

**QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120**

(C) ANALYSIS OF SAMPLES

This interference check sample set is to be used to verify elemental isobaric correction factors of inductively coupled plasma-mass spectrometers (ICP-MS). This reference material set consists of two (2) concentrated solutions. The ICSA solution contains several interferent elements and species; for a complete listing refer to the CLP SOW. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for the ICP-MS ICS Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:



ICSA-0803, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO₃. Analyze this solution by ICP-MS.

ICSB-0803, Analytes, mixed with ICSA-0803, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO₃. Analyze this ICSAB solution by ICP-MS.

(D) "CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-MS ICS SOLUTION(S)

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-MS ICSA-0803, AND ICSA-0803 MIXED WITH ICSB-0803							
Element	CRQL	Part A (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)	Part A +Part B (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)
Al	20	[100000]			[100000]		
Sb	2.0	(1.5)	-2.5	5.5	(22.0)	18.0	26.0
As	1.0	(0.10)	-1.9	2.1	19.0	16.2	21.9
Ba	10	(1.2)	-18.8	21.2	(22.0)	2.0	42.0
Be	1.0	(0.0)	-2.0	2.0	19.0	16.2	21.9
Cd	1.0	(0.70)	-1.3	2.7	20.0	17.0	23.0
Ca	500	[100000]			[100000]		
C		[200000]			[200000]		
Cl		[1000000]			[1000000]		
Cr	2.0	(21.0)	17.0	25.0	40.0	34.0	46.0
Co	1.0	(1.0)	-1.0	3.0	20.0	17.0	23.0
Cu	2.0	(8.0)	4.0	12.0	(25.0)	21.0	29.0
Fe	200	[100000]			[100000]		
Pb	1.0	(4.0)	2.0	6.0	25.0	21.3	28.8
Mg	500	[100000]			[100000]		
Mn	1.0	(7.0)	5.0	9.0	27.0	23.0	31.1
Mo		[2000]			[2000]		
Ni	1.0	(6.0)	4.0	8.0	24.0	20.4	27.6
P		[100000]			[100000]		
K	500	[100000]			[100000]		
Se	5.0	(0.30)	-9.7	10.0	(19.0)	9.0	29.0
Ag	1.0	(0.0)	-2.0	2.0	18.0	15.3	20.7
Na	500	[100000]			[100000]		
S		[100000]			[100000]		
Tl	1.0	(0.0)	-2.0	2.0	21.0	17.9	24.2
Ti		[2000]			[2000]		
V	5.0	(0.50)	-9.5	10.5	(19.0)	9.0	29.0
Zn	5.0	(11.0)	1.0	21.0	(29.0)	19.0	39.0

[] Indicates analytes that do not require ICP-MS determination in the ICS.

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 2 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

ICSA:
M5244

ICSB:
M5245



Certified Reference Material CRM



CERTIFIED WEIGHT REPORT:

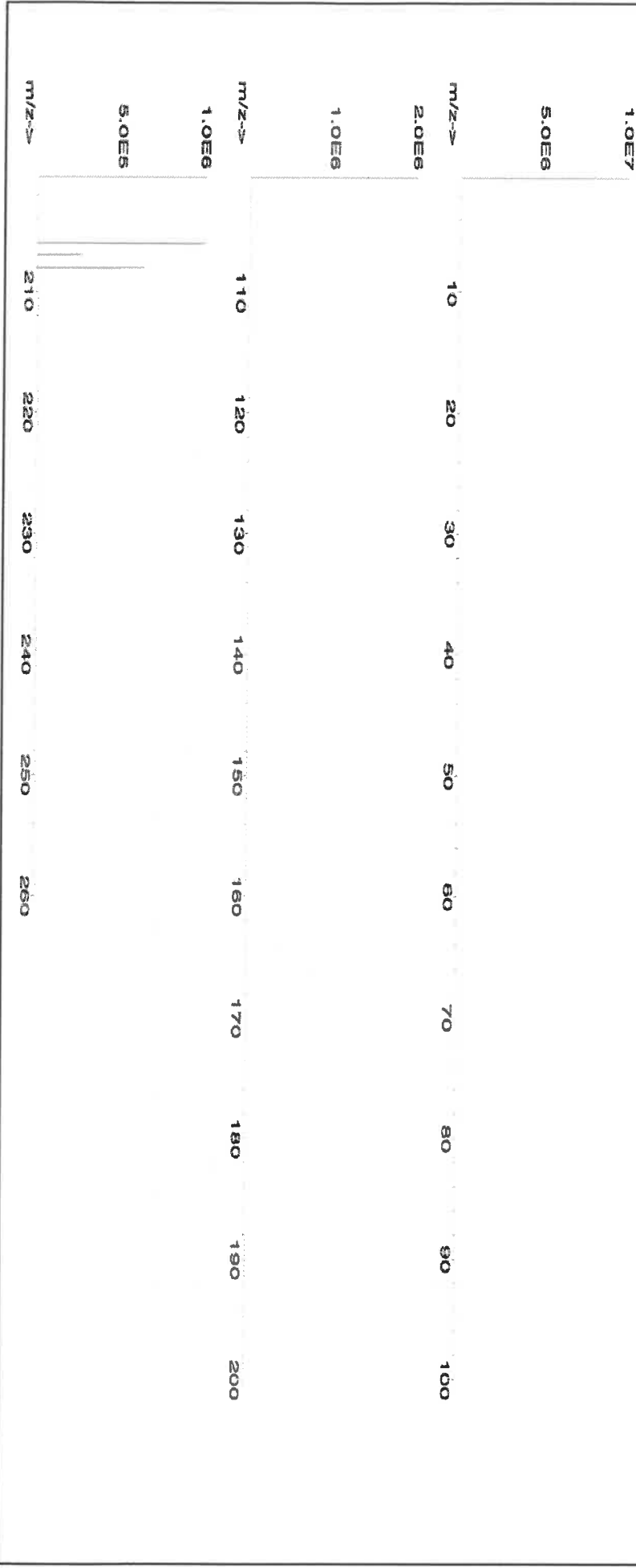
Part Number: **57182**
Lot Number: **110923**
Description: **Lead (Pb)**
Solvent: **24002546 Nitric Acid**
Lot #: **M6025**

Expiration Date: **110926**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **10000**
NIST Test Number: **6UTB**
Weight shown below was diluted to (mL): **2000.02**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawrence Barry
Reviewed By:	Pedro L. Rentas
110923	

SDS Information									
Compound	Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded
	Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	+/- (µg/mL)
1. Lead(II) nitrate (Pb)	IN029	PED12016A1	10000	99.999	0.10	62.5	32.0006	32.0040	10001.1
									20.0
									10099-74-8
									0.05 mg/m3
									intrinsic 83 mg/kg
									3128

[1] Spectrum No.1 [17.284 sec]:58182.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

Physical Characterization:

(T)= Target analyte

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM

MC026



CERTIFIED WEIGHT REPORT:

Part Number: **57182**
Lot Number: **110923**
Description: **Lead (Pb)**

Lot #
Solvent: **24002546 Nitric Acid**

Expiration Date: **110926**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **10000**
NIST Test Number: **6UTB**

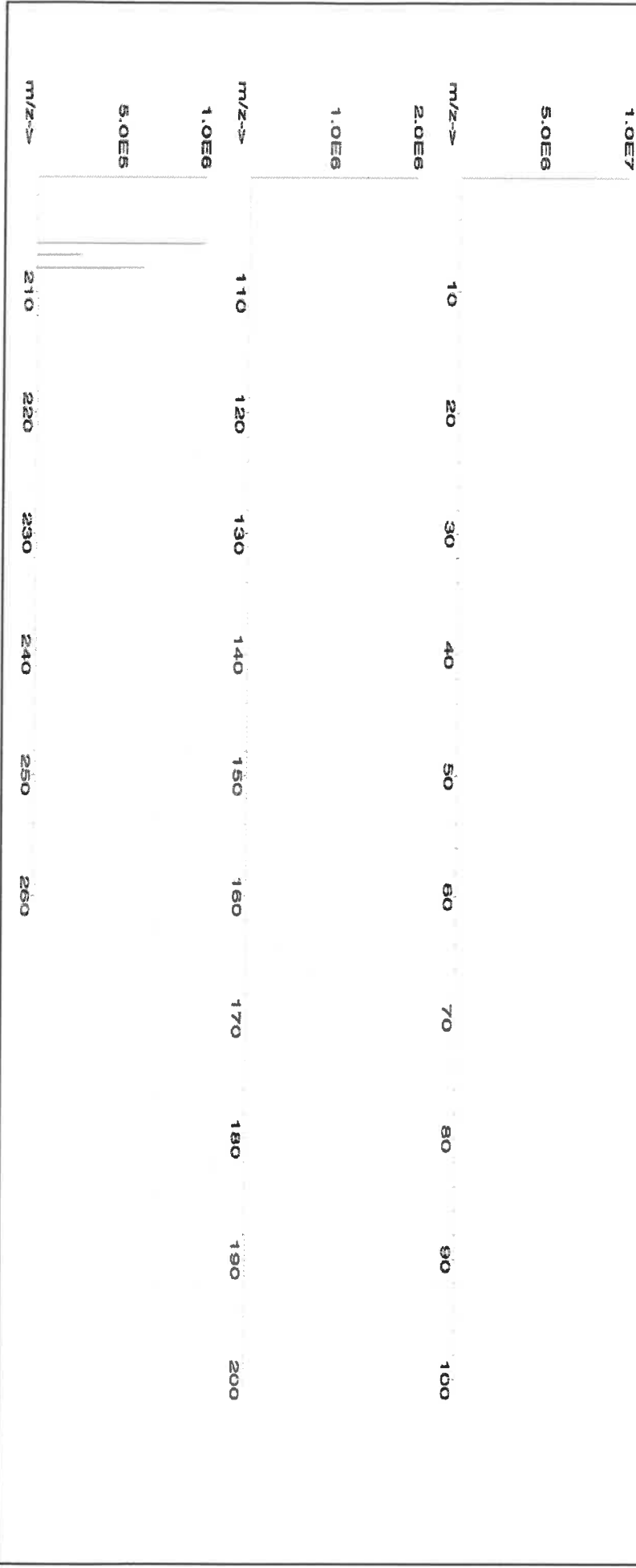
2% **40.0** **Nitric Acid**
(mL)

Weight shown below was diluted to (mL): **2000.02** **0.058** **Flask Uncertainty**

Formulated By:	Lawrence Barry
Reviewed By:	Pedro L. Rentas

SDS Information									
Compound	Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded
	Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	Uncertainty +/- (µg/mL)
1. Lead(II) nitrate (Pb)	IN029	PED12016A1	10000	99.999	0.10	62.5	32.0006	32.0040	10001.1
									20.0
									10099-74-8
									0.05 mg/m3
									intrinsic 83 mg/kg
									3128

[1] Spectrum No.1 [17.284 sec]:58182.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

Physical Characterization:

(T)= Target analyte

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

M4913-16

MS

Certificate of Analysis

1 Reagent Lane
 Fair Lawn, NJ 07410
 201.796.7100 tel
 201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System
 Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	P279	Quality Test / Release Date	01/12/2021
Lot Number	210306		
Description	POTASSIUM PERMANGANATE, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Jan/2026

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Dark purple to purple green crystals
ASSAY	%	>= 99	99.3
CHLORIDE & CHLORATE	%	<= 0.005	<0.005
IDENTIFICATION	PASS/FAIL	= PASS TEST	pass test
INSOLUBLE MATTER	%	<= 0.2	<0.2
MERCURY (Hg)	ppm	<= 0.05	<0.004
SULFATE (SO4)	%	<= 0.02	<0.02

Julian Burton

Julian Burton - Quality Control Manager – Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
 If there are any questions with this certificate, please call at (800) 227-6701.

*Based on suggested storage condition.

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

MS062
MS063
MB

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Mass Spec Solution
Catalog Number: MSHG-10PPM
Lot Number: S2-HG709270
Matrix: 10% (v/v) HCl
Value / Analyte(s): 10 µg/mL ea:
Mercury
Starting Material: Hg metal
Starting Material Lot#: 1959
Starting Material Purity: 99.9994%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.001 ± 0.053 µg/mL
Density: 1.020 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

$$w_i = (1/u_{char i}^2) / (\sum (1/(u_{char i}^2)))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum ((w_i)^2 (u_{char i}^2))]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	0.000011	M	Eu	<	0.000201	O	Na	0.000004	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al	0.000001	O	Fe	0.000001	M	Nb	<	0.000201	O	Si	0.000005	M	Zr	<	0.000201	
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201		
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007		
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201		
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201		
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201		
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216		
O	Ca	0.000007	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201			
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402		
M	Ce	<	0.000201	O	K	0.000020	M	Rb	<	0.000201	O	Tl	<	0.016508			
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201		
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058		
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201		
M	Cu	<	0.000402	O	Mg	0.000001	O	S	<	0.053950	M	W	<	0.000604			
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201		
M	Er	<	0.000201	M	Mo	0.000009	M	Sc	<	0.000201	M	Yb	<	0.000201			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+

Chemical Compatibility - Stable in HNO₃. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

Stability - 2-100 ppb levels not stable in 1% HNO₃ / LDPE container, stable in 10% HNO₃ packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO₃ packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO₃ / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO₃); Oxide (Soluble in HNO₃); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va, 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **September 22, 2026**

- The date after which this CRM/RM should not be used.
- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____
- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation



Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: 6020CAL-1
Lot Number: S2-MEB711244
Matrix: 5% (v/v) HNO₃
tr. HF
Value / Analyte(s): 20 µg/mL ea:
Silver, Aluminum,
Arsenic, Barium,
Beryllium, Calcium,
Cadmium, Cobalt,
Chromium, Copper,
Iron, Potassium,
Magnesium, Manganese,
Sodium, Nickel,
Lead, Antimony,
Selenium, Thallium,
Vanadium, Zinc

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	20.01 ± 0.08 µg/mL	Antimony, Sb	20.01 ± 0.12 µg/mL
Arsenic, As	20.01 ± 0.18 µg/mL	Barium, Ba	20.01 ± 0.11 µg/mL
Beryllium, Be	20.01 ± 0.14 µg/mL	Cadmium, Cd	20.01 ± 0.11 µg/mL
Calcium, Ca	20.01 ± 0.10 µg/mL	Chromium, Cr	20.01 ± 0.16 µg/mL
Cobalt, Co	20.01 ± 0.11 µg/mL	Copper, Cu	20.01 ± 0.10 µg/mL
Iron, Fe	20.01 ± 0.09 µg/mL	Lead, Pb	20.01 ± 0.11 µg/mL
Magnesium, Mg	19.99 ± 0.10 µg/mL	Manganese, Mn	20.01 ± 0.10 µg/mL
Nickel, Ni	20.01 ± 0.11 µg/mL	Potassium, K	20.01 ± 0.10 µg/mL
Selenium, Se	20.02 ± 0.14 µg/mL	Silver, Ag	20.02 ± 0.09 µg/mL
Sodium, Na	20.01 ± 0.10 µg/mL	Thallium, Tl	20.01 ± 0.13 µg/mL
Vanadium, V	20.01 ± 0.11 µg/mL	Zinc, Zn	20.01 ± 0.11 µg/mL

Density: 1.026 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Fe	Calculated		See Sec. 4.2
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum(1/u_{\text{char } i}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = [\sum(w_i)^2 (u_{\text{char } i}^2)]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a)(u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

HF Note: This standard should not be prepared or stored in glass.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

October 20, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **October 20, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent



M5497 - M5508
And on 4/14/23
063

Material No.: 3624-01

Batch No.: 0000281938

Manufactured Date: 2021-06-07

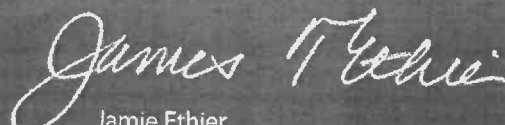
Retest Date: 2026-06-07

Revision No.: 2

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	≥ 99.0 %	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	≤ 0.005 %	0.003 %
Iodide (I)	≤ 0.002 %	< 0.002 %
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO ₃)	≤ 0.003 %	< 0.001 %
ACS - Phosphate (PO ₄)	≤ 5 ppm	< 5 ppm
Sulfate (SO ₄)	≤ 0.004 %	< 0.004 %
Barium (Ba)	Passes Test	Passes Test
ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Calcium (Ca)	≤ 0.002 %	< 0.001 %
Magnesium (Mg)	≤ 0.001 %	< 0.001 %
Potassium (K)	≤ 0.005 %	0.001 %

For Laboratory, Research, or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs
Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC


Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700



CERTIFIED WEIGHT REPORT:

Part Number: 58024
Lot Number: 060523
Description: Chromium (Cr)

Lot # 21110221
Solvent: Nitric Acid

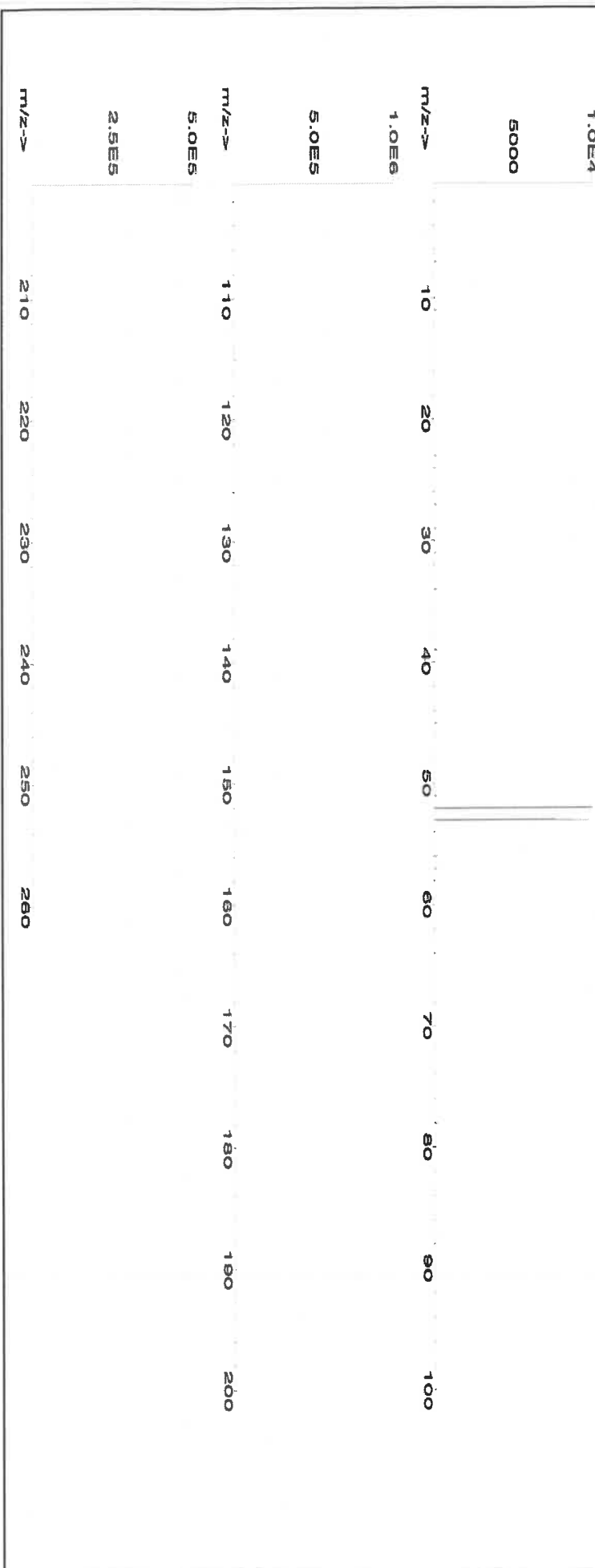
Formulated By:	Lawrence Barry
	060523
Reviewed By:	Pedro L. Ruelas
	060523

Expiration Date: 060526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 2000.02
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
----------	-------------	------------	-----------------	-------------------	------------------	-----------------------	-----------------------	---------------------	----------------------------------	------	----------------	------	----------

1. Chromium(III) nitrate nonahydrate (Cr) 58124 071122 0.1000 200.0 0.084 1000 10000.1 1000.0 2.2 7789-02-8 0.5 mg(Cr)/m3 or rat 3250 mg/kg 3112a

[1] Spectrum No.1 [31.393 sec]:57024.D# [Count] [Linear]





Certified Reference Material CRM



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM



CERTIFIED WEIGHT REPORT:

Part Number: 58029
Lot Number: 102523
Description: Copper (Cu)

Lot # 24002546
Solvent: Nitric Acid

Expiration Date: 102526

2.0%

40.0 (mL)

Nitric Acid

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 1000

NIST Test Number: 6UTB

5E-05 Balance Uncertainty

Volume shown below was diluted to (mL): 2000.02

0.058 Flask Uncertainty

Formulated By: Benson Chan 102523

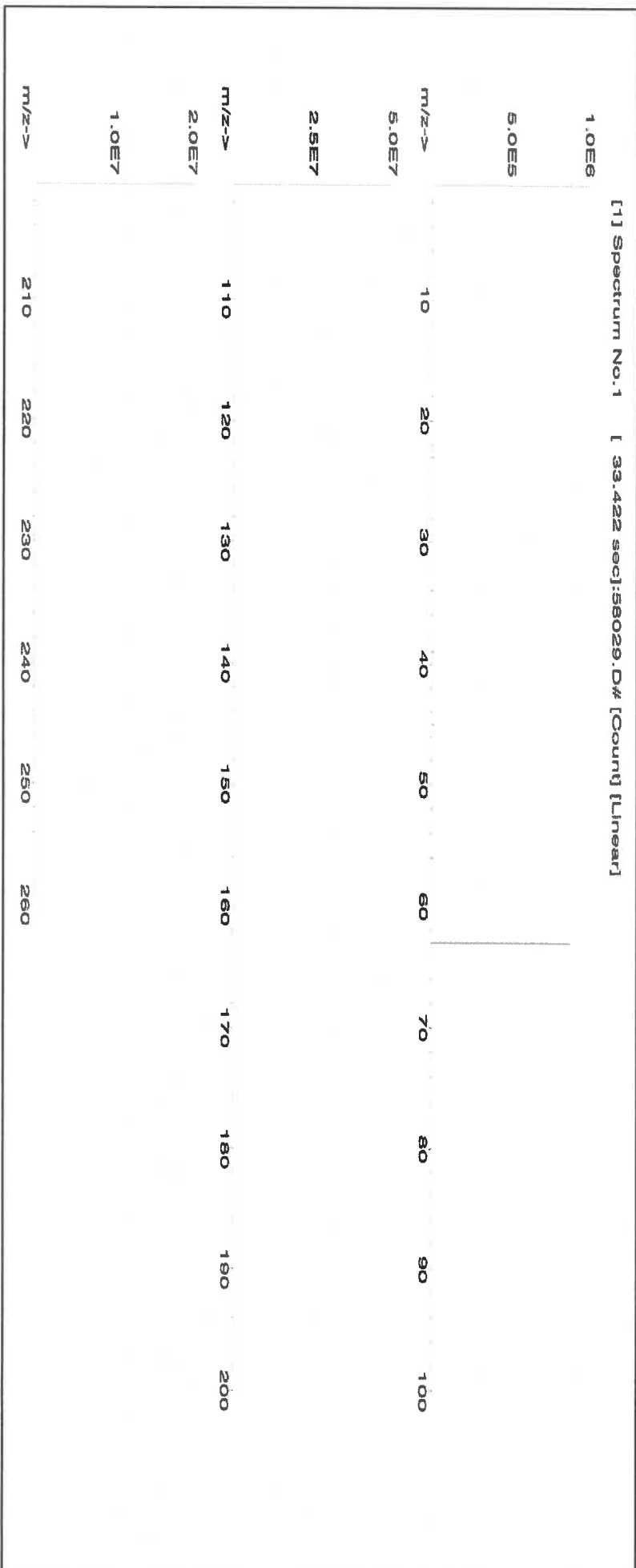
Reviewed By: Pedro L. Rentas 102523

SDS Information

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
----------	-------------	------------	-----------------	-------------------	--------------------------	-----------------------	-----------------------	---------------------	----------------------------------	------	----------------	------	----------

1. Copper(II) nitrate trihydrate (Cu) 58129 100223 0.1000 200.0 0.084 1000 10000.1 1000.0 2.2 10031-43-3 1 mg/m3 or-rat 794 mg/kg 3114

[1] Spectrum No.1 [33.422 sec]:58029.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
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- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: 57004
Lot Number: 102523
Description: Beryllium (Be)

Lot # 24002546
Solvent: Nitric Acid

Expiration Date:

102526

2.0%

40.0 (mL)

Nitric Acid

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Volume shown below was diluted to (mL): 2000.02

5E-05 Balance Uncertainty

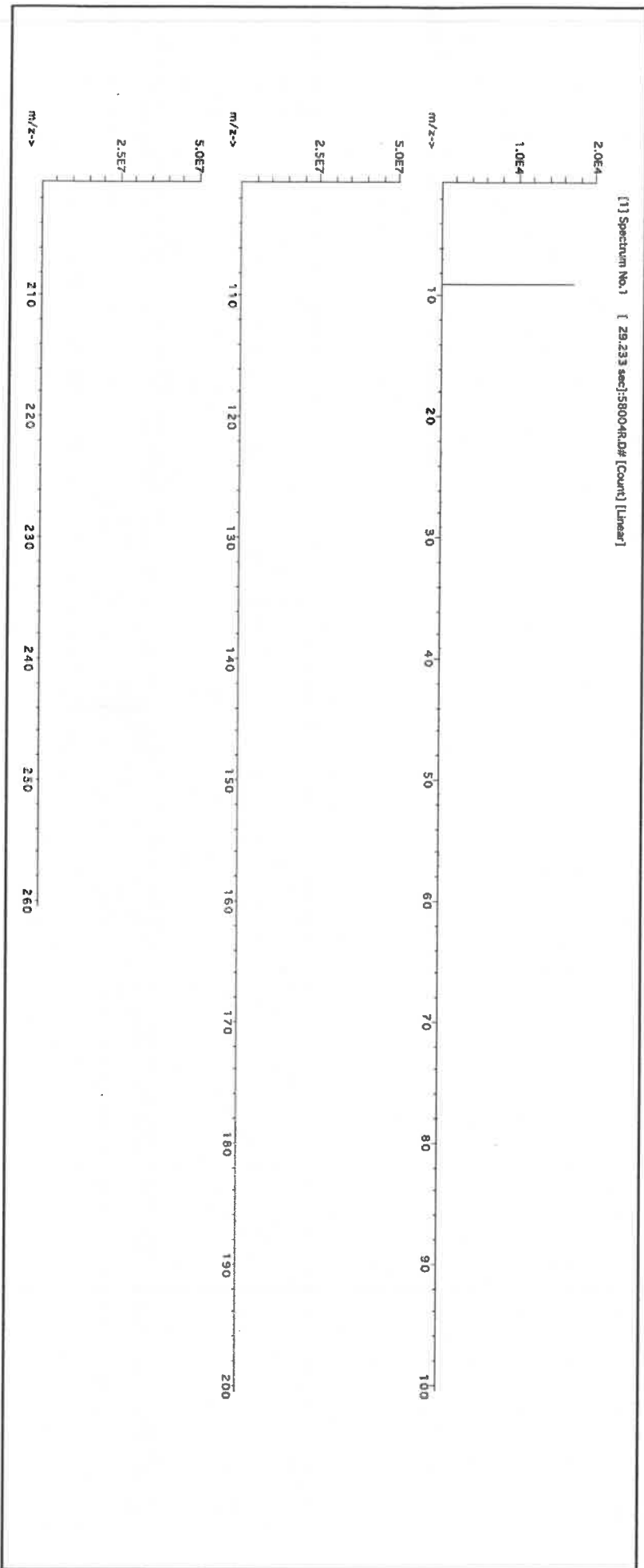
0.058 Flask Uncertainty

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

SDS Information

Compound	Part Number	Lot	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	1000.0	2.2	13597-99-4	0.2µg/m3	intrinsc-rat 3.16mg/kg	NA
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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<0.02	U	<0.02
As	<0.02	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Ti	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	T	Cr	<0.02	Ga	<0.02	Fe	<0.02	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Ta	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Tl	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E. "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM

CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

Solvents: 21110221 Nitric Acid
22D0562008 Hydrochloric acid

Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000

2% 10.0 Nitric Acid
6% 30.0 Hydrochloric acid
(mL)

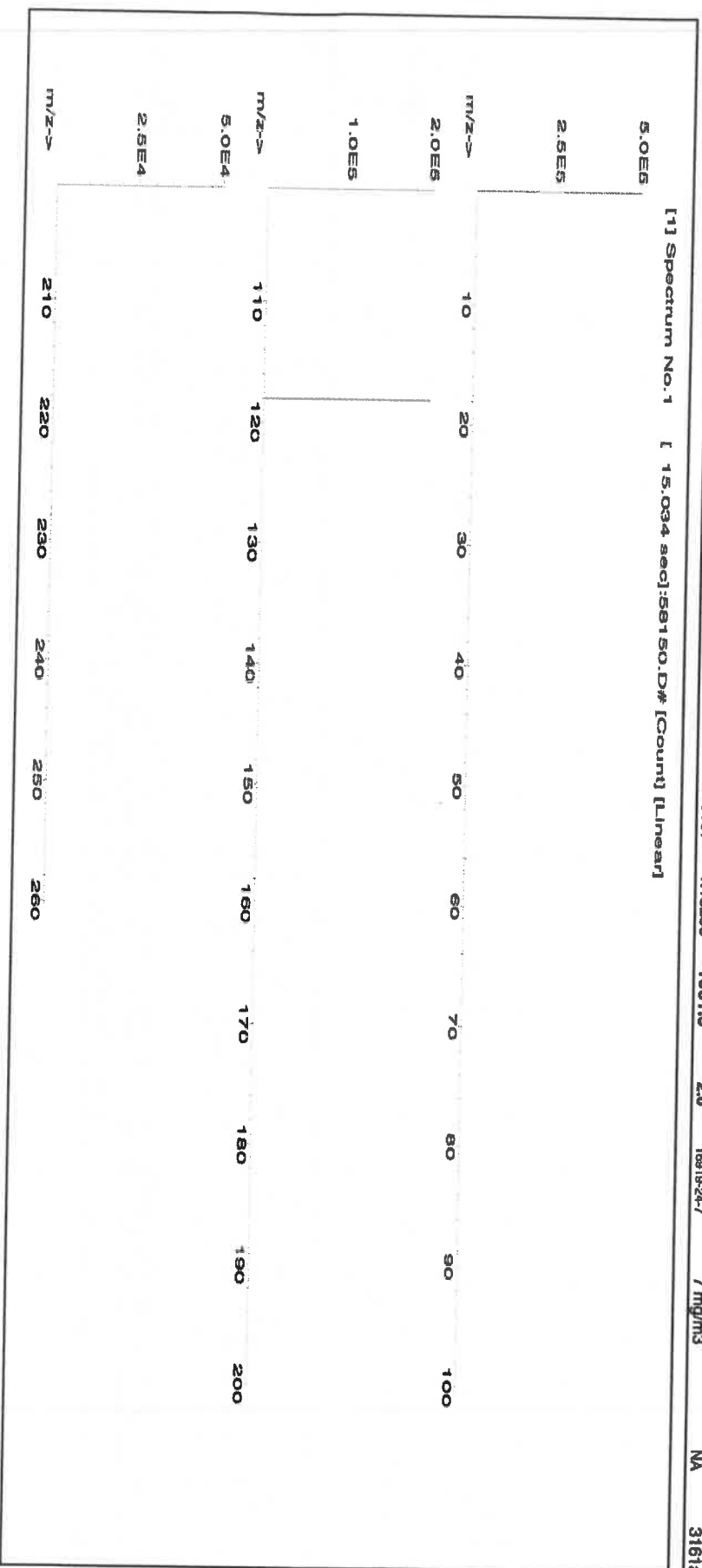
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93
5E-05 Balance Uncertainty
0.0058 Flask Uncertainty

<i>[Signature]</i>	
Formulated By:	Benson Chan
	071123
Reviewed By:	Pedro L. Rientas
	071123

SDS Information														NIST					
Compound		Lot		Nominal		Purity		Uncertainty		Assay		Target		Actual		Expanded		Solvent Safety Info. On Attached pg.)	
RM#	Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	(%)	CAS#	OSHA PEL (TWA)

1. Ammonium hexafluoroantimonate(V) (Sn) IN010 SMD042023A1 1000 99.999 0.10 44.2 1.13107 1.13286 1001.6 2.0 16919-24-7 7 mg/m3 NA 3161a

[1] Spectrum No. 1 [15.034 sec] :56150.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Ta	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



R: 02/09/24 115800 (BA)

CERTIFIED WEIGHT REPORT:

Part Number: 57027
Lot Number: 091923
Description: Cobalt (Co)

Expiration Date: 091926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 2000.02

Lot # 24002546
Solvent: Nitric Acid

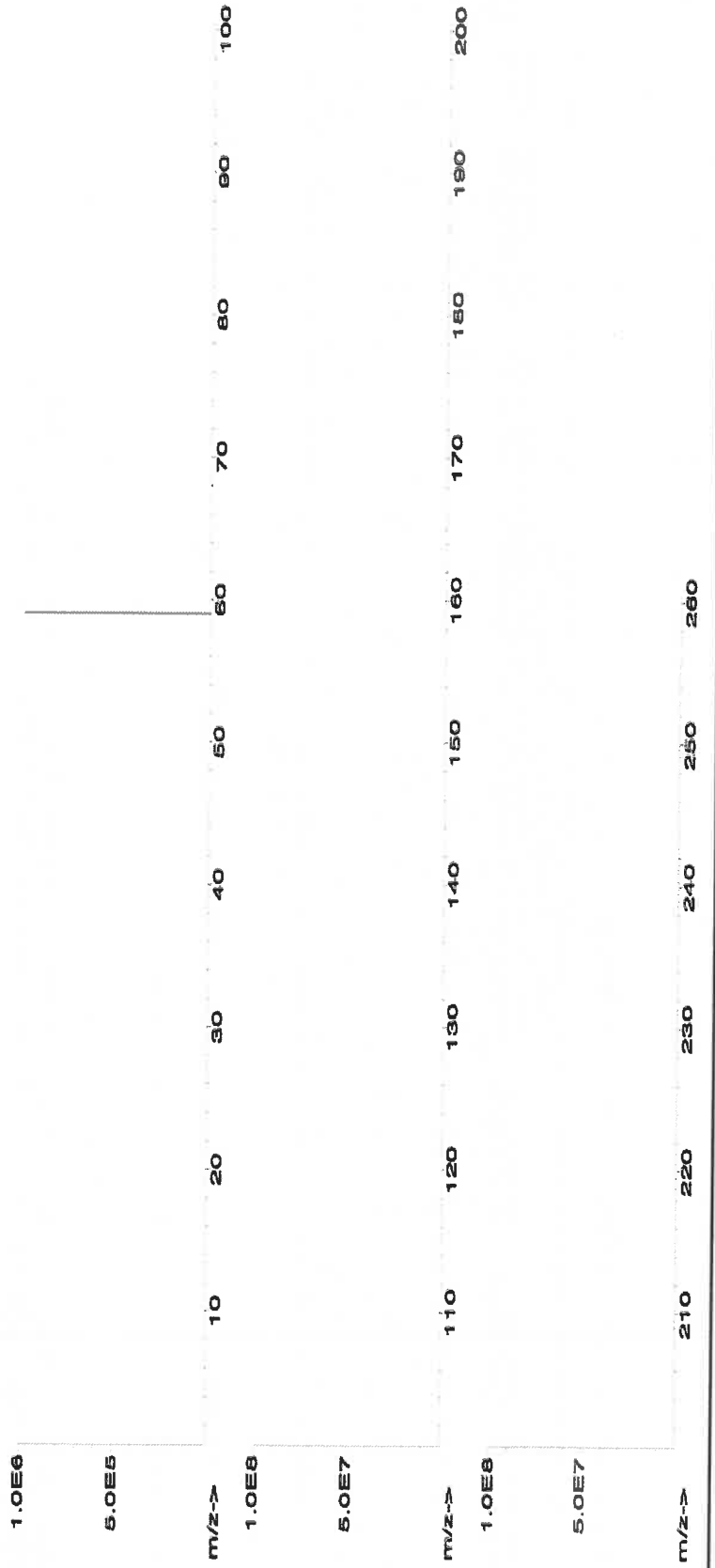
Formulated By: Lawrence Barry 091923
Reviewed By: Pedro L. Rentas 091923

SDS Information

Expanded Uncertainty +/- (µg/mL)
(Solvent Safety Info. On Attached pg.)
NIST SRM
CAS# OSHA PEL (TWA) LD50

1. Cobalt(II) nitrate hexahydrate (Co) 58127 050923 0.1000 200.0 0.084 1000 10000.0 1000.0 2.2 10026-22-9 0.02 mg/m3 orl-rat 691 mg/kg 3113

[1] Spectrum No.1 [34.243 sec]:58027.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.01	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.2	Na	<0.02	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.2	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

[Signature]

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM

AR: 02/09/24

M5801

BA



CERTIFIED WEIGHT REPORT:

Part Number: 57033
Lot Number: 111323
Description: Arsenic (As)

Lot # 24002546
Solvent: Nitric Acid

Expiration Date: 111326

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 1000

NIST Test Number: 6LUTB

Volume shown below was diluted to (mL): 4000.0

Balance Uncertainty: 5E-05
Flask Uncertainty: 0.06

2.0%

80.0 (mL)

Nitric Acid

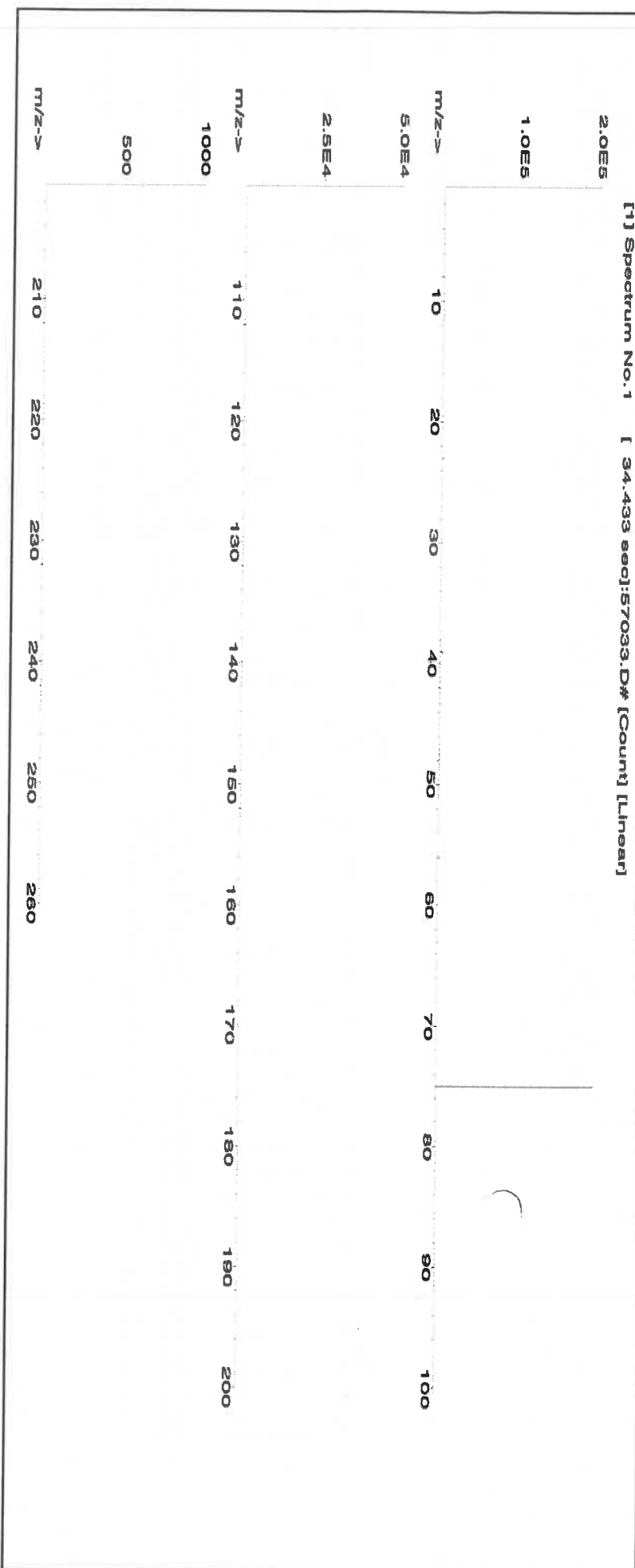
Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rendas	111323

SDS Information

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Arsenic (As) 58133 020522 0.1000 400.0 0.084 1000 10001.0 1000.0 2.0 7440-38-2 0.5 mg/m3 or-lat 500 mg/kg 3103a

[1] Spectrum No.1 [34.433 sec]:57033.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Ti	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Bc	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sa	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Tl	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM



CERTIFIED WEIGHT REPORT:

Part Number: 57115
Lot Number: 041723
Description: Phosphorous (P)

Solvent: 21110221 Nitric Acid

Lot #

Expiration Date: 041726

2% 40.0 (mL) Nitric Acid

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 10000

NIST Test Number: 6UTB

5E-05 Balance Uncertainty

Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

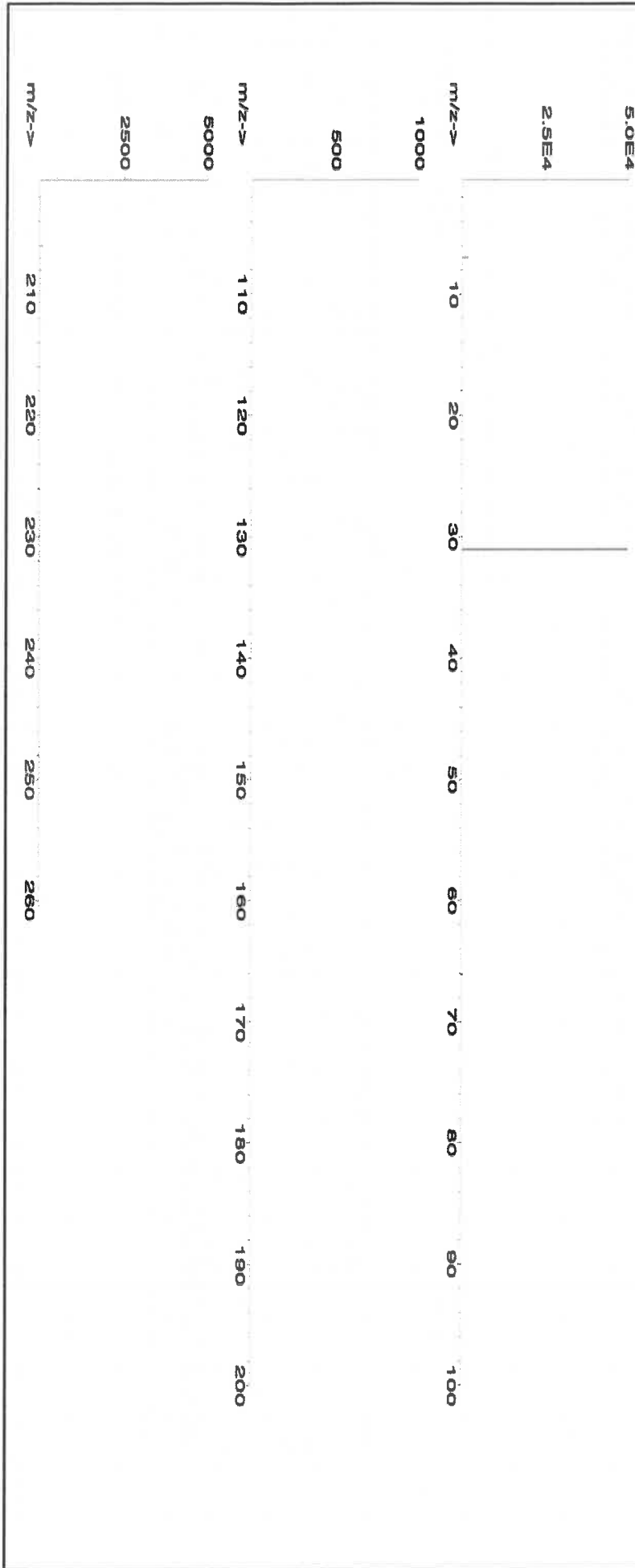
Formulated By:	Lawrence Barry	041723
Reviewed By:	Pedro L. Rentas	041723

Compound

RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Ammonium dihydrogen phosphate (P) IN008 PVR2019A1 10000 99.999 0.10 27.5 72.7287 72.7289 10000.0 20.0 7722-76-1 5 mg/m3 or-hal->2000mg/kg 3186

[1] Spectrum No.1 [12.074 sec]:58115.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: **57116**
Lot Number: **071123**
Description: **Sulfur (S)**

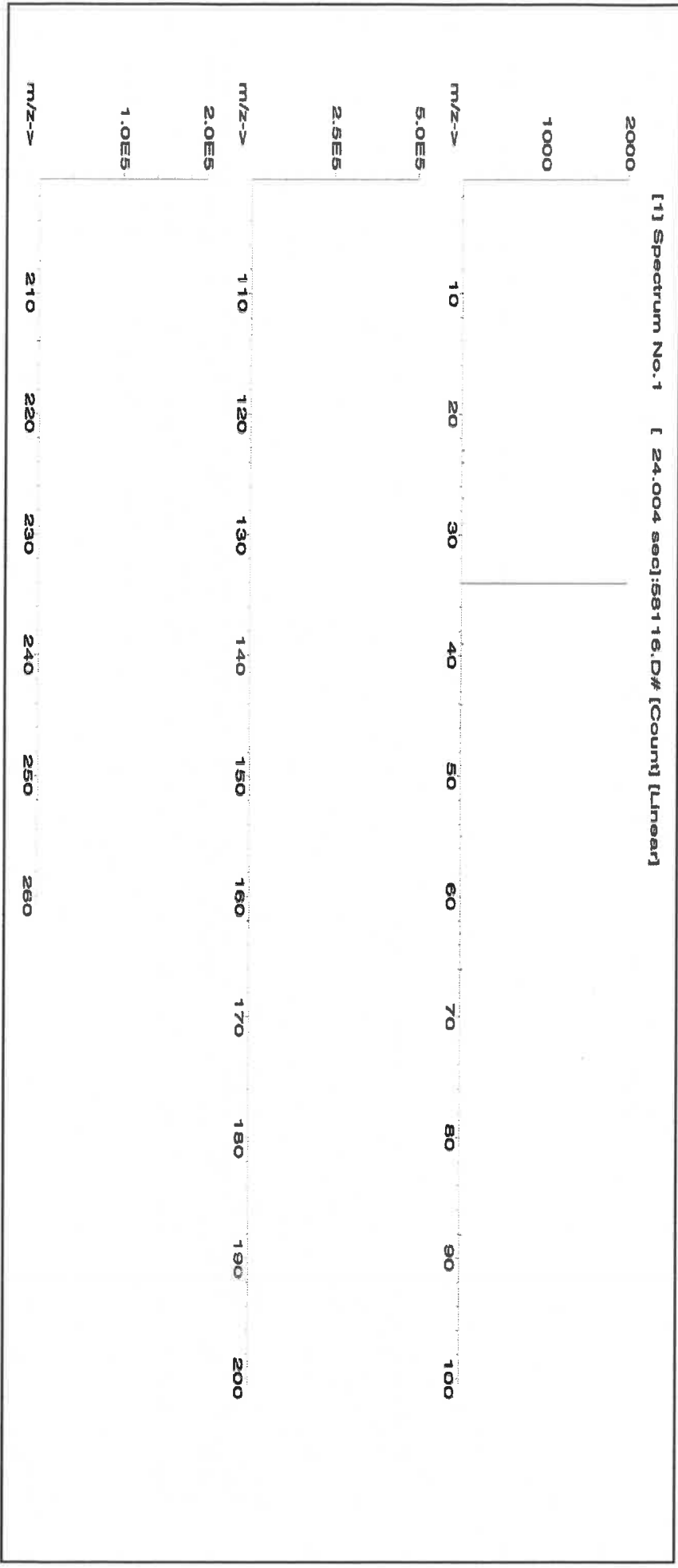
Solvent: **071123** Lot #
ASTM Type 1 Water

Formulated By:	Lawrence Barry
Reviewed By:	Pedro L. Rentas
071123	

Expiration Date: **071126**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **10000**
NIST Test Number: **6UTB**
Weight shown below was diluted to (mL): **1999.48**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

SDS Information									
Compound	Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded
	Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	+/- (µg/mL)
									CAS# OSHA PEL (TWA) LD50 SRM

1. Ammonium sulfate (S)	IN117	SLBR725V	10000	99.9	0.10	24.3	82.4675	82.4692	10000.1	20.0	7783-20-2	NA	oral 4250mg/kg	3181
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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Ti	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

Physical Characterization:

(T)= Target analyte

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.

800-368-1131
www.absolutestandards.com



Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
<https://AbsoluteStandards.com>

CERTIFIED WEIGHT REPORT:

Part Number:

57034

Lot Number:

060624

Description:

Selenium (Se)

Lot #

24002546

Solvent:

Nitric Acid

2.0%

40.0 (mL)

Nitric Acid

(mL)

Expiration Date:

060627

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Volume shown below was diluted to (mL):

2000.07

SE-05 Balance Uncertainty

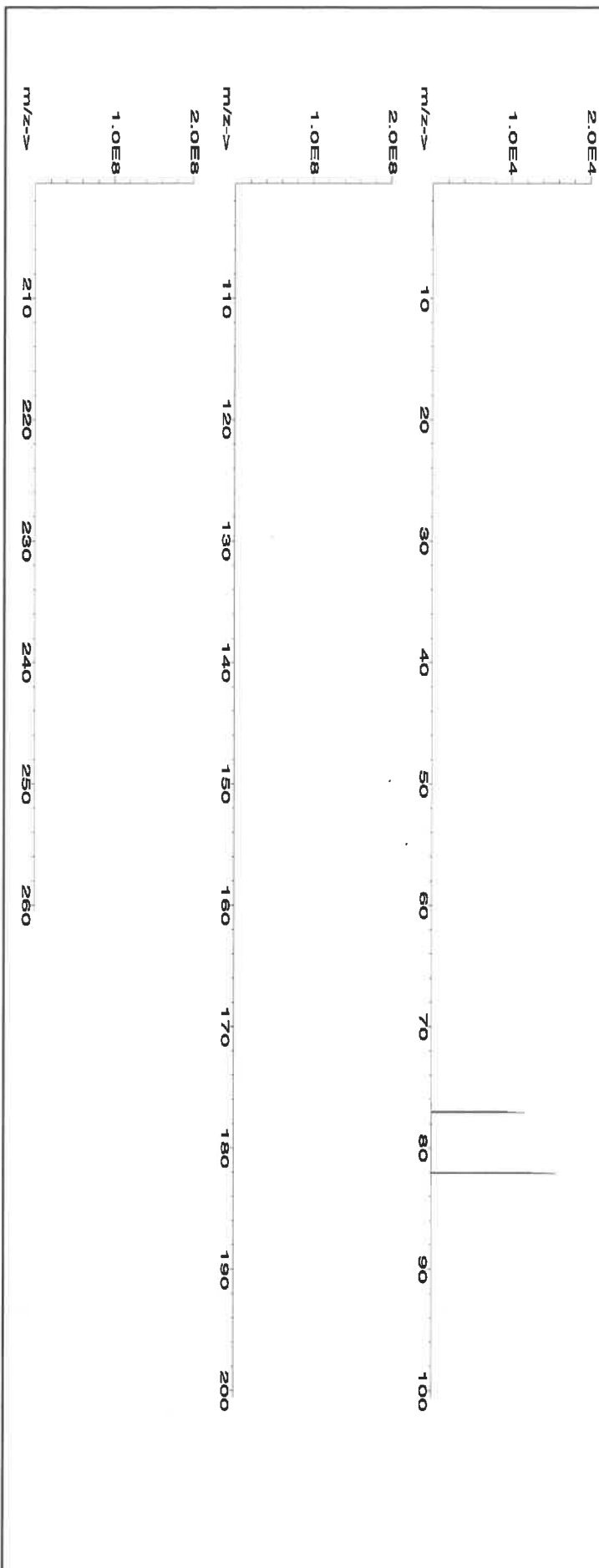
0.100 Flask Uncertainty

Compound

Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)	NIST SRM
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1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	1000.0	2.2	7782-49-2	0.2 mg/m3	or-tral 6700 mg/kg	3149
------------------	-------	--------	--------	-------	-------	------	---------	--------	-----	-----------	-----------	--------------------	------

[1] Spectrum No. 1 [33.702 sec]:58034.D# [Count] [Linear]



Part # 57034 Lot # 060624

1 of 2

Printed: 6/12/2024, 11:20:20 PM



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	T	Tb	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



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Christiansburg, VA 24073 USA
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R: 2/22/24

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com



INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories".
Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution

Catalog Number: CGT1

Lot Number: T2-T1719972

Matrix: 2% (v/v) HNO₃

Value / Analyte(s): tr. HF

Starting Material: 1 000 µg/mL ea.

Starting Material: Titanium

Starting Material: Ti Metal

Starting Material Lot#: 2094

Starting Material Purity: 99.9975%

CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Method #1

1002 ± 4 µg/mL

ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = (x_p) / (x_{p,m})$

x_p = mean of Assay Method A with

$U_{char, A}$ = the standard uncertainty of characterization Method A

$U_{char, B}$ = the standard uncertainty of characterization Method B

k = coverage factor = 2

$U_{char, B}$ = the mean from characterization

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$U_{char, B}$ = the mean from characterization

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0

TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-MS and ICP-OES. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an UHPA-filtered Clean Room. An UHPA-filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se	<	0.001204	O	Zn	<	0.003267
M	Al	<	0.000872	O	Fe	<	0.003225	O	Nb	<	0.043560	O	Si	<	0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn	<	0.000986				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr	<	0.000986				
M	Ba	<	0.002683	M	Hf	<	0.002161	O	P	<	0.054450	M	Ta	<	0.010560				
M	Be	<	0.005366	M	Hg	<	0.003231	M	Pb	<	0.001073	M	Tb	<	0.000268				
M	Bi	<	0.001609	M	Ho	<	0.000268	M	Pd	<	0.000268	M	Td	<	0.001341				
O	Ca	<	0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<	0.000268				
M	Ce	<	0.000268	M	K	<	0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr	<	0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	I	S	<	0.006976	M	W	<	0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo	<	0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence: Soluble in concentrated HCl, HF, H₃PO₄, H₂SO₄ and HNO₃. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F⁻ away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements forming the hydrated oxide in all dilute acids except HF. Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability: 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)₆-2 for months in 1% HNO₃ / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)₆-2 chemically stable for years in 2-5% HNO₃ / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H₂O / HF caution - powder reacts violently): Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H₂O / HF / H₂SO₄); K₂SiO₇ - no KF if silica not present); Organic Matrices (Dry ash at 450EC in P10 and dissolve by heating with 1:1:1 H₂O / HF / H₂SO₄ or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystaline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	14 ppt
ICP-MS 48 amu	N/A	
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1
ICP-OES 334.941 nm	0.0038 / 0.00028 µg/mL	1
ICP-OES 336.121 nm	0.0053 / 0.00034 µg/mL	1

HF Note: This standard should not be prepared or stored in glass.

HAZARDOUS INFORMATION

HOMOGENEITY

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

QUALITY STANDARD DOCUMENTATION

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY
Inorganic Ventures, 300 Technology Drive, Chesapeake, VA 24073, USA; Telephone: 800.868.6786; 540.565.3030; Fax: 540.565.3012; info@inorganicventures.com
- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.1 Certification Issue Date

June 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Thomas Kozlikowski
Manager, Quality Control

TD978L

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Paul R. Gaines



MS981

R: 6/11/24



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57092
060724
Uranium (U)

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

060727
Ambient (20 °C)
1000
6UTB

Volume shown below was diluted to (mL): 2000.07

5E-05 Balance Uncertainty
0.100 Flask Uncertainty

Lot # Solvent:
24002546 Nitric Acid

2.0% Nitric Acid
40.0 (mL)

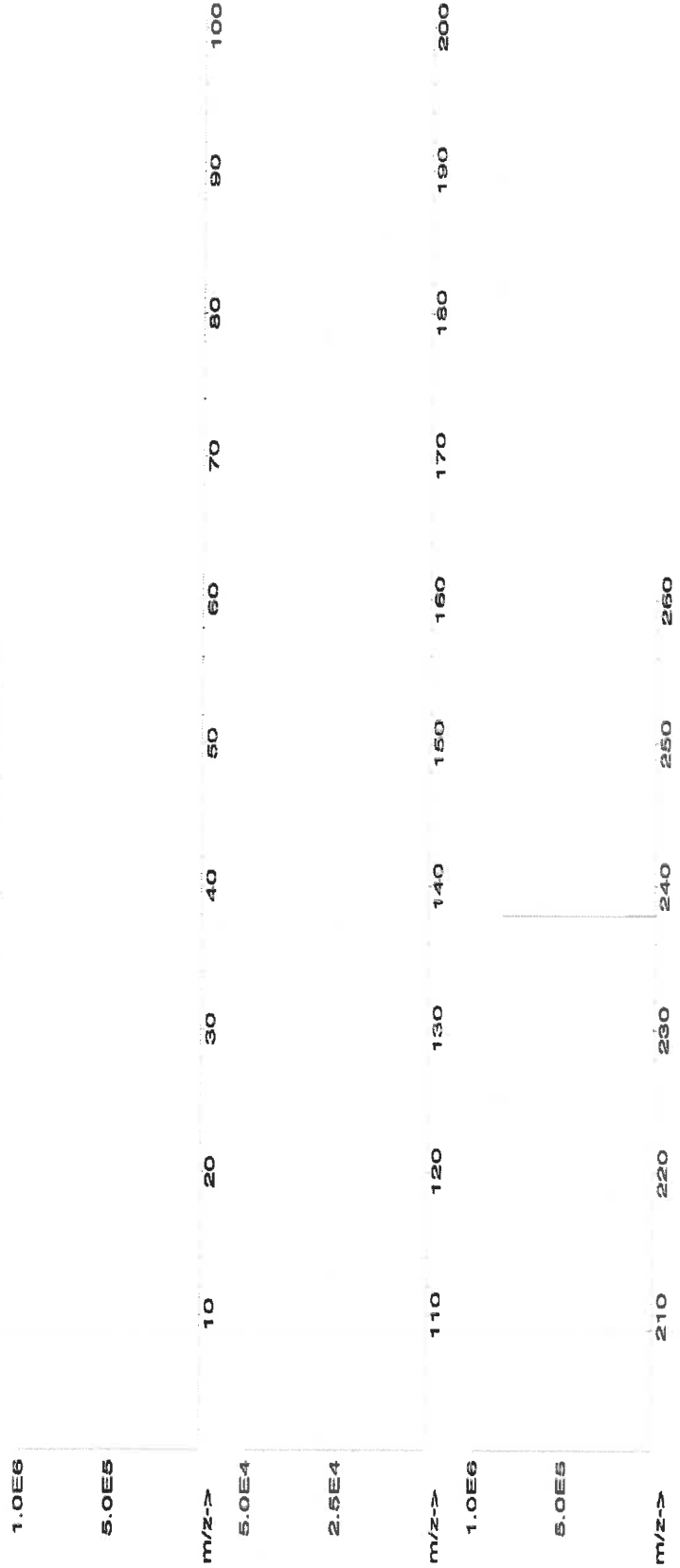
<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
<i>Pedro L. Rentas</i>	
Reviewed By:	Pedro L. Rentas

SDS Information

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	Solvent Safety Info. On Attached pg.)		
										CAS#	OSHA PEL (TWA)	LD50

1. Uranyl nitrate hexahydrate (U)	58192	041524	0.1000	200.0	0.084	1000	10001.5	1000.0	2.2	13620-83-7	0.05 mg/m3	orl-rat 1040 mg/kg
												NIST SRM
												3164

[1] Spectrum No.1 [23.264 sec]:57092.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.01	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.02	Hg	<0.2	P	<0.2	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
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Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

avantor™



M 6041-4b
MS

Material No.: 9673-33
Batch No.: 23D2462010
Manufactured Date: 2023-03-22
Retest Date: 2028-03-20
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (H ₂ SO ₄)	95.0 – 98.0 %	96.1 %
Appearance	Passes Test	Passes Test
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Substances Reducing Permanganate (as SO ₂)	≤ 2 ppm	< 2 ppm
Ammonium (NH ₄)	≤ 1 ppm	1 ppm
Chloride (Cl)	≤ 0.1 ppm	< 0.1 ppm
Nitrate (NO ₃)	≤ 0.2 ppm	< 0.1 ppm
Phosphate (PO ₄)	≤ 0.5 ppm	< 0.1 ppm
Trace Impurities – Aluminum (Al)	≤ 30.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 4.0 ppb	< 2.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	8.5 ppb
Trace Impurities – Cadmium (Cd)	≤ 2.0 ppb	< 0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 6.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 0.5 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gold (Au)	≤ 10.0 ppb	0.5 ppb
Heavy Metals (as Pb)	≤ 500.0 ppb	< 100.0 ppb
Trace Impurities – Iron (Fe)	≤ 50.0 ppb	1.3 ppb
Trace Impurities – Lead (Pb)	≤ 0.5 ppb	< 0.5 ppb
Trace Impurities – Magnesium (Mg)	≤ 7.0 ppb	0.8 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Nickel (Ni)	≤ 2.0 ppb	0.3 ppb
Trace Impurities – Potassium (K)	≤ 500.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se)	≤ 50.0 ppb	< 0.1 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	31.5 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb

>>> Continued on page 2 >>>

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

 **avantor™**

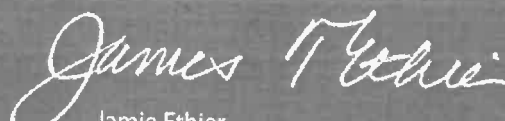


Material No.: 9673-33
Batch No.: 23D2462010

Test	Specification	Result
Trace Impurities – Sodium (Na)	≤ 500.0 ppb	5.4 ppb
Trace Impurities – Strontium (Sr)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	0.4 ppb

For Laboratory, Research, or Manufacturing Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Ethier
Vice President Global Quality

8/19/24, M6055

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030

F: 540-585-3012

info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories".

Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: IV-STOCK-12
Lot Number: U2-MEB734294
Matrix: 5% (v/v) HNO₃
Value / Analyte(s): 10 µg/mL ea:
Barium, Beryllium,
Bismuth, Cerium,
Cobalt, Indium,
Lithium, Nickel,
Lead, Uranium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Barium, Ba	10.01 ± 0.04 µg/mL	Beryllium, Be	10.01 ± 0.05 µg/mL
Bismuth, Bi	10.01 ± 0.06 µg/mL	Cerium, Ce	10.01 ± 0.04 µg/mL
Cobalt, Co	10.01 ± 0.05 µg/mL	Indium, In	10.01 ± 0.04 µg/mL
Lead, Pb	10.00 ± 0.04 µg/mL	Lithium, Li	10.01 ± 0.04 µg/mL
Nickel, Ni	10.01 ± 0.04 µg/mL	Uranium, U	10.01 ± 0.05 µg/mL

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ba	ICP Assay	3104a	140909
Ba	Calculated		See Sec. 4.2
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Bi	ICP Assay	3106	180815
Ce	ICP Assay	3110	160830
Ce	EDTA	928	928
Ce	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
In	ICP Assay	3124a	110516
In	EDTA	928	928
In	Calculated		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Calculated		See Sec. 4.2
Li	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Ni	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
U	ICP Assay	traceable to 3164	R2-U689597
U	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i})^2 / (\sum (1/(u_{\text{char } i})^2))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{ts}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = [\sum ((w_i)^2 (u_{\text{char } i})^2)]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{ts}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, <https://www.inorganicventures.com/terms-and-conditions-sale>. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 21, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 21, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





Certified Reference Material CRM



CERTIFIED WEIGHT REPORT:

Part Number: **57040**
Lot Number: **071423**
Description: **Zirconium (Zr)**

Lot # **21110221**
Solvent: **Nitric Acid**

2.0% 40.0 (mL) Nitric Acid

Expiration Date: **071426**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test Number: **6UTB**

Volume shown below was diluted to (mL): **2000.02** 5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:		Benson Chan	071423
Reviewed By:		Pedro L. Renteria	071423

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty		CAS#	SDS Information		NIST SRM
									+/-	(µg/mL)		OSHA PEL (TWA)	LDSO	

1. **Zirconium chloride octahydrate (Zr)** 58140 070621 0.1000 200.0 0.084 1000 10000.3 1000.0 2.2 13520-82-8 NA NA NA

[1] Spectrum No. 1 [41.163 sec]: 57040.DW [Count] [Linear]

m/z	1.0E6	10	20	30	40	50	60	70	80	90	100
m/z	1.0E8	110	120	130	140	150	160	170	180	190	200
m/z	5.0E7	210	220	230	240	250	260				



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02
																			T

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

58025
101124
Manganese (Mn)

Lot #
Solvent: Nitric Acid

24002546
2%
80.0 (mL)
Nitric Acid

Giovanni Esposito	
Formulated By:	Giovanni Esposito
	101124
Reviewed By:	Pedro L. Renteria
	101124

Expiration Date: 101127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 4000.2
5E-05 Balance Uncertainty
0.10 Flask Uncertainty

Compound

RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Manganese(II) nitrate hydrate (Mn) IN031 MMN032020A1 1000 99.999 0.10 20.8 19.2322 19.2344 1000.1 2.0 15710-66-4 5 mg/m3 or-rel >300mg/kg 3132

[1] Spectrum No.1 [34.243 sec]:57025.D# [Count] [Linear]

5.0E6													
2.5E6													
m/z->	10	20	30	40	50	60	70	80	90	100			
1.0E6													
5.0E7													
m/z->	110	120	130	140	150	160	170	180	190	200			
1.0E6													
5.0E7													
m/z->	210	220	230	240	250	260							



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Certificate of Analysis

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 inorganicventures.com

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 F: 540-585-3012
 info@inorganicventures.com

M6137
 R-71013124

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
 Catalog Number: CGSI1
 Lot Number: V2-SI744713
 Matrix: tr. HNO₃
 tr. HF
 Value / Analyte(s): 1 000 µg/mL ea:
 Silicon
 Starting Material: Silica
 Starting Material Lot#: 1771
 Starting Material Purity: 99.9981%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 6 µg/mL
 Density: 1.003 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	999 ± 5 µg/mL ICP Assay NIST SRM Traceable to 3150 Lot Number: S2-SI702546
Assay Method #2	1000 ± 7 µg/mL Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i})^2 / (\sum (1/(u_{char\ i})^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum (w_i)^2 (u_{char\ i})^2]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char\ a})$$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000310	M	Eu	<	0.000310	O	Na		0.001656	M	Se	<	0.022000	M	Zn	<	0.002500
M	Al		0.010787	M	Fe	<	0.027000	M	Nb	<	0.001300	s	Si	<		O	Zr	<	0.001900
M	As	<	0.001900	M	Ga	<	0.001300	M	Nd	<	0.000310	M	Sm	<	0.000310				
M	Au	<	0.000910	M	Gd	<	0.000310	M	Ni	<	0.005500	M	Sn		0.000096				
M	B		0.016180	M	Ge	<	0.001900	M	Os	<	0.000610	O	Sr		0.000092				
M	Ba		0.000096	M	Hf		0.000423	i	P	<		M	Ta		0.002542				
O	Be	<	0.000570	M	Hg	<	0.000610	M	Pb	<	0.000310	M	Tb	<	0.000310				
M	Bi	<	0.000310	M	Ho	<	0.000610	M	Pd	<	0.000610	M	Te	<	0.000910				
O	Ca		0.011557	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.001900				
M	Cd	<	0.000310	M	Ir	<	0.000310	M	Pt	<	0.000310	M	Ti		0.001078				
M	Ce	<	0.000610	O	K		0.000577	M	Rb	<	0.009100	M	Tl	<	0.000310				
M	Co	<	0.001600	M	La	<	0.000310	M	Re	<	0.000310	M	Tm	<	0.000310				
M	Cr	<	0.010000	O	Li	<	0.000460	M	Rh	<	0.000310	M	U	<	0.000310				
M	Cs	<	0.000310	M	Lu	<	0.000310	M	Ru	<	0.000310	O	V	<	0.001300				
M	Cu	<	0.002500	O	Mg		0.001348	O	S	<	0.570000	M	W	<	0.001900				
M	Dy	<	0.000310	M	Mn	<	0.002500	M	Sb	<	0.000310	M	Y	<	0.000310				
M	Er	<	0.000310	M	Mo	<	0.000310	O	Sc	<	0.000590	M	Yb	<	0.000310				

M - Checked by ICP-MS

O - Checked by ICP-OES

i - Spectral Interference

n - Not Checked For

s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, <https://www.inorganicventures.com/terms-and-conditions-sale>. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form In Solution - 28.09 +4 6 Si(OH)x(F)y2-

Chemical Compatibility -Soluble in HCl, HF, H3PO4 H2SO4 and HNO3 as the Si(OH)x(F)y2-. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths, or high levels of transition elements unless they are fluorinated. Stable with most inorganic anions with a tendency to hydrolyze forming silicic acid (silicic acid is soluble up to ∼100 ppm in water) in all dilute acids except HF.

Stability - 2-100 ppb levels - stability unknown - (alone or mixed with all other metals) as the Si(OH)x(F)y2-. 1-10,000 ppm single element solutions as the Si(OH)x(F)y2- chemically stable for years in 2-5 % HNO3 / trace HF in a LDPE container.

Si Containing Samples (Preparation and Solution) -Metal (Soluble in 1:1:1 H2O / HF / HNO3); Oxide - SiO2, amorphous (dissolve by heating in 1:1:1 H2O / HF / HNO3); Oxide - quartz (fuse in Pt0 with Na2CO3); Geological Samples(fuse in Pt0with Na2CO3 followed by HCl solution of the fuseate); Organic Matrices containing silicates and non volatile silicon compounds (dry ash at 4500C in Pt0 and dissolve by gently warming with 1:1:1 H2O / HF / H2SO4 or fuse / ash with Na2CO3 and dissolve fuseate with HCl / H2O); Silicone Oils - dimethyl silicones depolymerize to form volatile monomer units when heated (Measure directly in alcoholic KOH / xylene mixture where sample is treated first with the KOH at 60-1000C to "unzip" the Si- O-Si polymeric structure or digest with conc. H2SO4 / H2O2 followed by cooling and dissolution of the dehydrated silica with HF.) Note that the direct analysis of silicone oils in an organic solvent will result in false high results due to high vapor pressure of volatile monomer units like hexamethylcyclotrisiloxane. The KOH forms the K2+Si(CH3)2O= salt which is not volatile at room temperature.

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 28 amu	4000 - 8000 ppt	N/A	N2, 12C16O
ICP-OES 212.412 nm	0.02/0.01 µg/mL	1	Hf, Os, Mo, Ta
ICP-OES 251.611 nm	0.012/0.003 µg/mL	1	Ta, U, Zn, Th
ICP-OES 288.158 nm	0.03/0.004 µg/mL	1	Ta, Ce, Cr, Cd, Th

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; Inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 10, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 10, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

58126
011025
Iron (Fe)
M6140

Lot #
Solvent: 24012496 Nitric Acid

Expiration Date:

011028

2%

40.0 (mL) Nitric Acid

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

10000

NIST Test Number:

6U7B

5E-05 Balance Uncertainty

Weight shown below was diluted to (mL):

2000.07

0.100 Flask Uncertainty

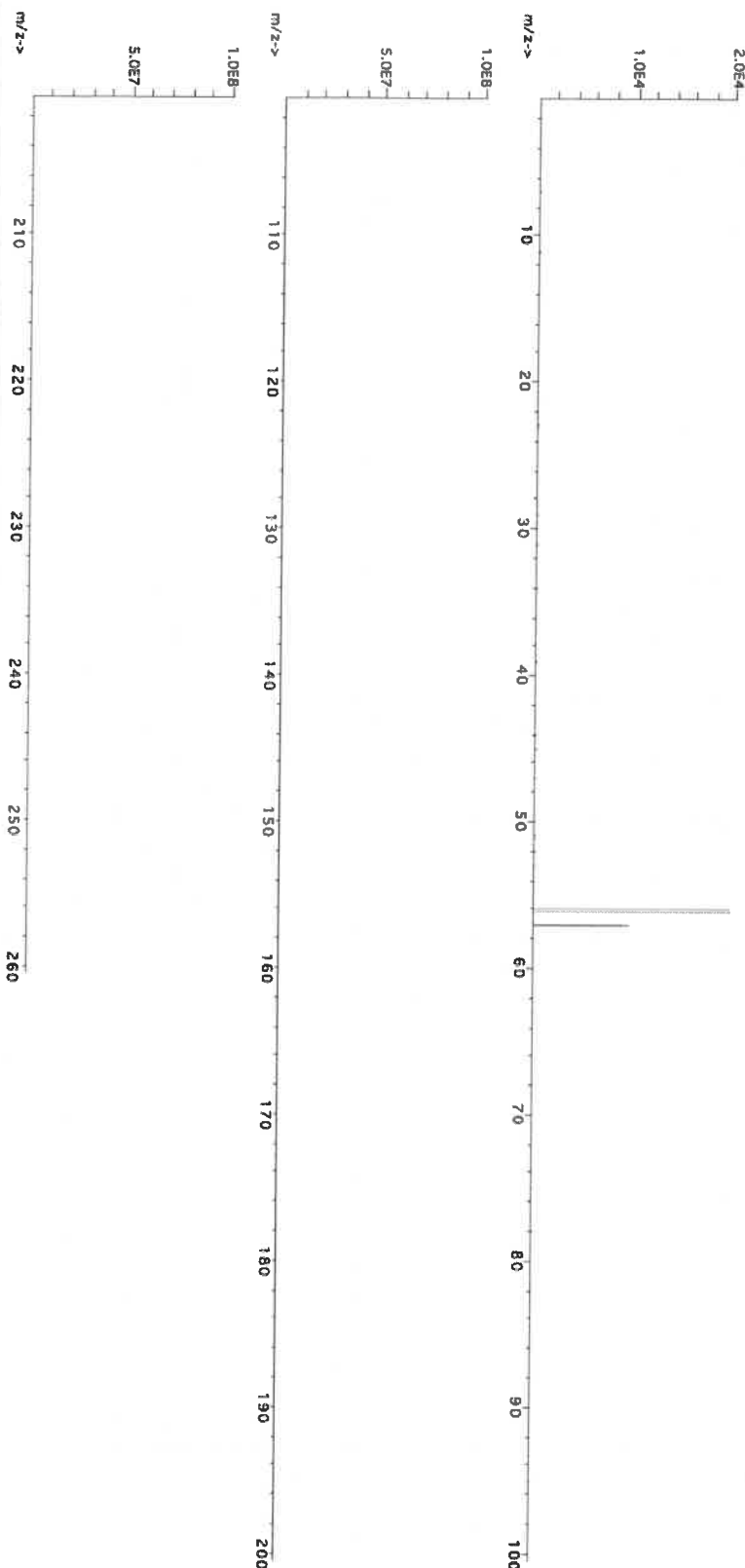
Formulated By:	Benson Chan	011025
Reviewed By:	Pedro L. Renteria	011025

Compound

Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded	SDS Information	NIST
Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	± (µg/mL)	(Solvent Safety Info. On Attached pg.)	SFM

1. Iron(III) nitrate nonahydrate (Fe) IN028 FED082023A1 10000 99.999 0.10 13.0 153.8534 ##### 10000.2 20.0 7782-61-8 1 mg/m³ or-rel 3250mg/kg 3126A

[1] Spectrum No.1 [30.763 sec]58126.D# [Count] [Linear]



Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Ru	<0.02	Na	<0.2	Tl	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	T	Hg	<0.2	P	<0.02	Sb	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

Certified by:

Har. P. J.

- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57119
103024
Potassium (K)

R-21113125

Solvent: 24002546 Nitric Acid
Lot #

<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
Reviewed By:	Pedro L. Rentes
	103024

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):

103027
Ambient (20 °C)
10000

M6141
M6142
M6143

2%
80.0
(mL)
Nitric Acid

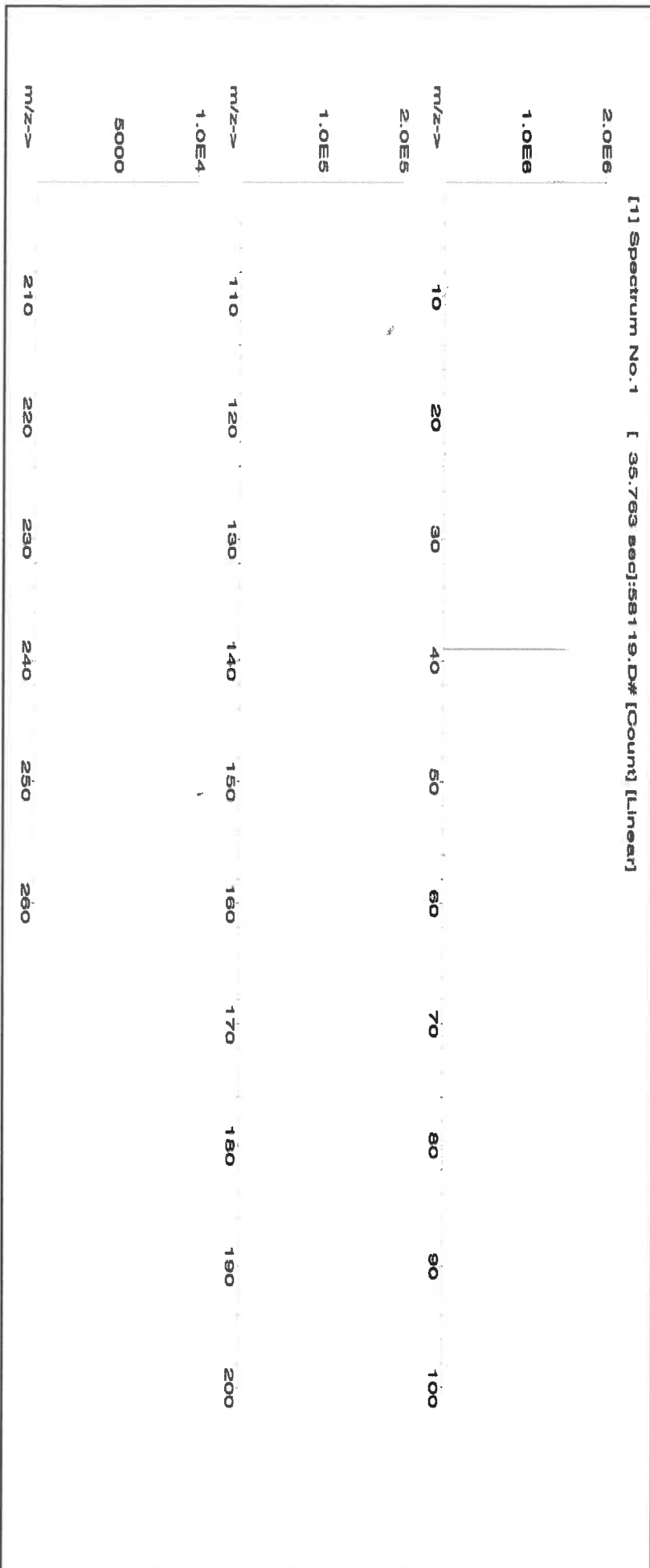
Weight shown below was diluted to (mL):

4000.1
0.15
Flask Uncertainty

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM

1. Potassium nitrate (K) IN034 KD062022A1 10000 99.999 0.10 37.7 106.1040 ##### 10001.1 20.0 7757-79-1 5 mg/m3 orl-rat 3750 mg/kg 3141a

[1] Spectrum No. 1 [35.763 sec]:58119.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: **58111** Lot # **R-1113125**
Lot Number: **072424** Solvent: **24002546 Nitric Acid**
Description: **Sodium (Na)**

Expiration Date: **072427** 2% 80.0 Nitric Acid (mL)

Recommended Storage: **Ambient (20 °C)**

Nominal Concentration (µg/mL): **10000**

NIST Test Number: **6UTB** SE-05 Balance Uncertainty

Weight shown below was diluted to (mL): **4000.2** 0.10 Flask Uncertainty

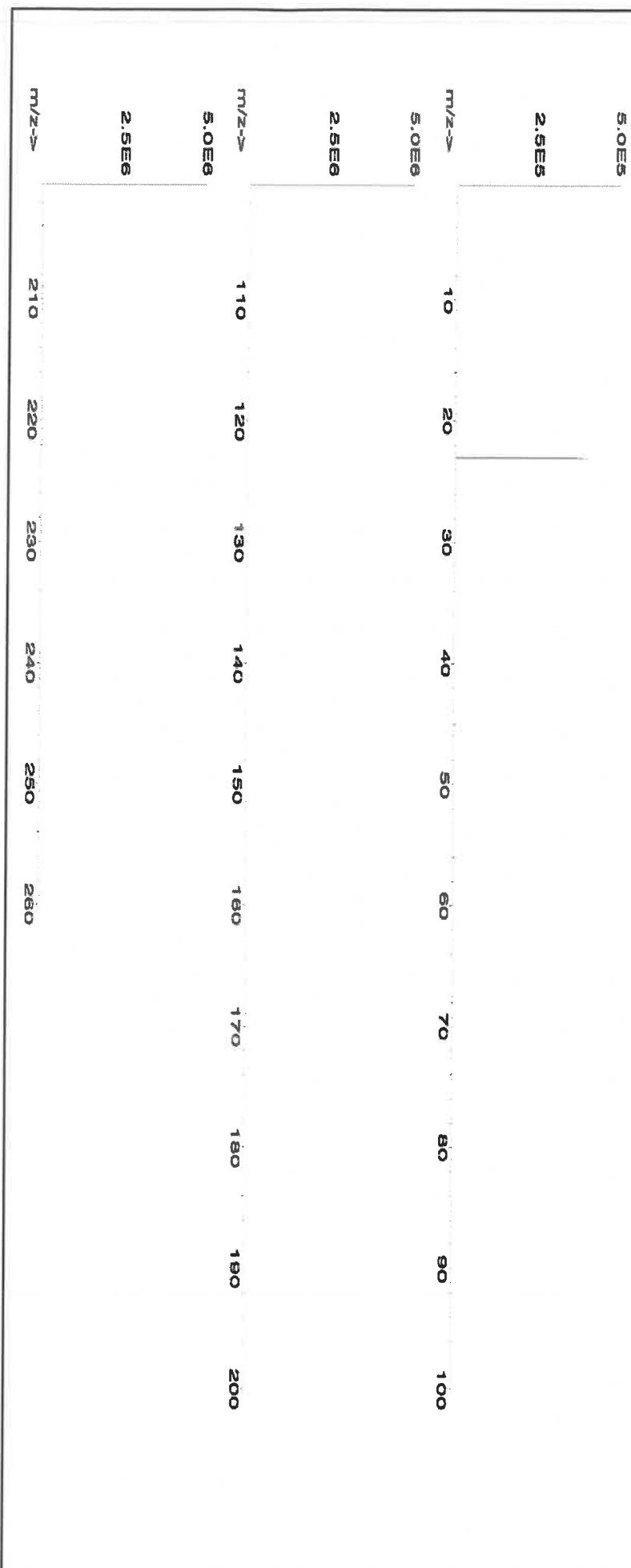
Formulated By:	Benson Chan	072424
Reviewed By:	Pedro L. Renteria	072424

SDS Information

Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Sodium nitrate (Na) IN036 NAV01201511 10000 99.999 0.10 26.9 148.7096 ##### 10000.0 20.0 7631-99-4 5 mg/m3 orl-rat 3430 mg/kg 3152a

[1] Spectrum No. 1 [8.935 sec]: 58111.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rb	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.02	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 121724
Description: Zinc (Zn)

Lot #

R → 11/13/25 Solvent: 24012496 Nitric Acid

Expiration Date: 121727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

M6145

2% 40.0 (mL) Nitric Acid

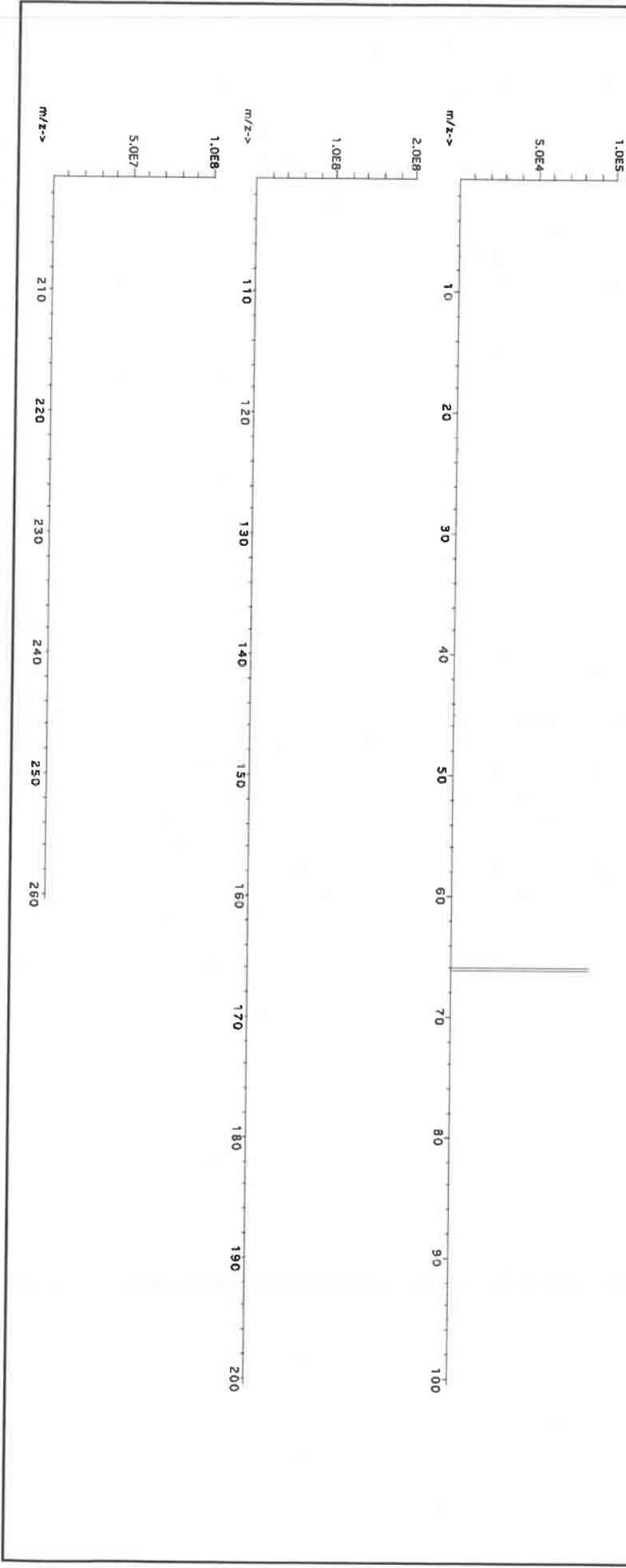
Weight shown below was diluted to (mL): 2000.1 0.10 Balance Uncertainty
5E-05 Flask Uncertainty

<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
Reviewed By:	<i>Pedro L. Rentias</i>
	Pedro L. Rentias
	121724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Zinc nitrate hexahydrate (Zn) IN016 ZNE032021A1 1000 99.999 0.10 24.3 8.2308 8.2311 1000.0 2.0 10196-18-6 1 mg/m3 or-rat 1190mg/kg 3168

[1] Spectrum No.1 [31.103 sec; 58130.D# [Count] [Lines]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™



M6151

R → 11/15/25

Material No.: 9530-33
Batch No.: 22G2862015
Manufactured Date: 2022-06-15
Retest Date: 2027-06-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid–base titrn)	36.5 – 38.0 %	37.9 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.191
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl ₂)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO ₄)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO ₄)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO ₃)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH ₄)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	1.3 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	163.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.7 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.6 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™



Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	2.9 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	0.8 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.3 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	1.6 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	4.0 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	1.5 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	0.3 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA–ANALYZED® Reagent
For Trace Metal Analysis

 **avantor**™

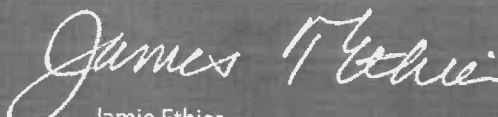


Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
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For Laboratory, Research, or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC


Jamie Ethier
Vice President Global Quality

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

R → 1/7/23
M6153

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGSR10
Lot Number: V2-SR745329
Matrix: 2% (v/v) HNO₃
Value / Analyte(s): 10 000 µg/mL ea:
Strontium
Starting Material: Strontium Carbonate
Starting Material Lot#: 2647
Starting Material Purity: 99.9960%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10081 ± 39 µg/mL
Density: 1.030 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **10059 ± 50 µg/mL**
ICP Assay NIST SRM Traceable to 3153a Lot Number: K2-SR650985

Assay Method #2 **10087 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum (1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum (w_i)^2 (u_{char i}^2)]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000960	M	Eu	<	0.000480	O	Na		0.002964	M	Se	<	0.042000	M	Zn		0.004560
M	Al		0.003420	O	Fe		0.013225	M	Nb	<	0.000480	O	Si		0.012997	M	Zr		0.001847
M	As	<	0.007200	M	Ga	<	0.002900	M	Nd	<	0.000480	M	Sm	<	0.000480				
M	Au	<	0.003900	M	Gd	<	0.000480	O	Ni		0.001482	M	Sn	<	0.000480				
O	B	<	0.003200	M	Ge	<	0.004800	M	Os	<	0.001500	s	Sr	<					
M	Ba		0.638494	M	Hf	<	0.000480	O	P	<	0.017000	M	Ta	<	0.000480				
O	Be	<	0.000450	M	Hg	<	0.000960	M	Pb		0.010717	M	Tb	<	0.000480				
M	Bi	<	0.002000	M	Ho	<	0.000480	M	Pd	<	0.002000	M	Te	<	0.016000				
O	Ca		0.025083	M	In	<	0.008600	M	Pr		0.000547	M	Th	<	0.000480				
M	Cd	<	0.000960	M	Ir	<	0.000480	M	Pt	<	0.000480	M	Ti		0.004560				
M	Ce		0.000661	O	K		0.025083	M	Rb	<	0.003400	M	Tl	<	0.000480				
M	Co		0.001527	M	La	<	0.000480	M	Re	<	0.000480	M	Tm		0.004332				
O	Cr	<	0.004700	O	Li	<	0.005600	O	Rh	<	0.013000	M	U	<	0.000480				
M	Cs	<	0.000480	M	Lu	<	0.000480	M	Ru	<	0.000960	M	V	<	0.000960				
O	Cu	<	0.003800	O	Mg		0.001048	O	S	<	0.045000	M	W	<	0.002400				
M	Dy	<	0.000960	O	Mn		0.000319	M	Sb	<	0.009600	O	Y	<	0.001200				
M	Er	<	0.000480	M	Mo	<	0.002900	M	Sc	<	0.001500	M	Yb	<	0.000480				

M - Checked by ICP-MS

O - Checked by ICP-OES

i - Spectral Interference

n - Not Checked For

s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures [Terms and Conditions of Sale](https://www.inorganicventures.com/terms-and-conditions-sale). <https://www.inorganicventures.com/terms-and-conditions-sale>. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 87.62 +2 6 Sr(H₂O)₆+2

Chemical Compatibility - Soluble in HCl, and HNO₃. Avoid H₂SO₄, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate and tungstate in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO₃ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1 - 3.5% HNO₃ / LDPE container.

Sr Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO₃); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 88 amu	1200 ppt	N/A	72Ge16O, 176Yb+2, 176Lu+2, 176Hf+2
ICP-OES 407.771 nm	0.0004 / 0.00006 µg/mL	1	U, Ce
ICP-OES 421.552 nm	0.0008 / 0.00004 µg/mL	1	Rb
ICP-OES 460.733 nm	0.07 / 0.003 µg/mL	1	Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 26, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- August 26, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Nitric Acid 69%
CMOS



R- 0210212025

m - 6158

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO ₃)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO ₄)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO ₄)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™



Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	16 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	10 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	3 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

 **avantorsTM**



Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result
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For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Croak
Director Quality Operations, Bioscience Division

Nitric Acid 69%
CMOS



m-6162

Material No.: 9606-03
Batch No.: 24H0162012
Manufactured Date: 2024-06-28
Retest Date: 2029-06-27
Revision No.: 0

R. Date :- 04/27/2025

Certificate of Analysis

Test	Specification	Result
Assay (HNO ₃)	69.0 – 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	< 1 ppm
Chloride (Cl)	≤ 0.08 ppm	0.03 ppm
Phosphate (PO ₄)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO ₄)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities – Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	0.1 ppb
Trace Impurities – Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 30.0 ppb	0.1 ppb
Trace Impurities – Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Germanium (Ge)	≤ 20 ppb	< 1 ppb
Trace Impurities – Gold (Au)	≤ 20 ppb	< 1 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities – Lead (Pb)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Nickel (Ni)	≤ 20.0 ppb	< 1.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™



Material No.: 9606-03
Batch No.: 24H0162012

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 1 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	1 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 1.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	13 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	5 par/ml

>>> Continued on page 3 >>>



Test	Specification	Result
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Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Joak

Jamie Croak
Director Quality Operations, Bioscience Production

300 Technology Drive
 Christiansburg, VA 24073 USA
 inorganicventures.com

P: 800-669-6799/540-585-3030
 F: 540-585-3012
 info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution		
Catalog Number:	QCP-CICV-1		
Lot Number:	V2-MEB744107		
Matrix:	7% (v/v) HNO ₃		
Value / Analyte(s):	2 500 µg/mL ea:		
	Calcium,	Potassium,	
	Magnesium,	Sodium,	
	1 000 µg/mL ea:		
	Aluminum,	Barium,	
	500 µg/mL ea:		
	Iron,		
	250 µg/mL ea:		
	Nickel,	Vanadium,	
	Zinc,	Cobalt,	
	Manganese,		
	125 µg/mL ea:		
	Silver,	Copper,	
	100 µg/mL ea:		
	Chromium,		
	25 µg/mL ea:		
	Beryllium		

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 000 ± 4 µg/mL	Barium, Ba	1 000 ± 6 µg/mL
Beryllium, Be	24.98 ± 0.12 µg/mL	Calcium, Ca	2 500 ± 8 µg/mL
Chromium, Cr	99.9 ± 0.6 µg/mL	Cobalt, Co	250.2 ± 1.2 µg/mL
Copper, Cu	125.0 ± 0.5 µg/mL	Iron, Fe	500.0 ± 2.2 µg/mL
Magnesium, Mg	2 500 ± 11 µg/mL	Manganese, Mn	249.9 ± 1.1 µg/mL
Nickel, Ni	250.0 ± 1.2 µg/mL	Potassium, K	2 500 ± 11 µg/mL
Silver, Ag	125.0 ± 0.6 µg/mL	Sodium, Na	2 500 ± 11 µg/mL
Vanadium, V	250.0 ± 1.1 µg/mL	Zinc, Zn	249.9 ± 1.1 µg/mL

Density: 1.081 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	120618
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	200413
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum(1/u_{\text{char } i}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = [\sum(w_i)^2 (u_{\text{char } i})^2]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures [Terms and Conditions of Sale](https://www.inorganicventures.com/terms-and-conditions-sale), <https://www.inorganicventures.com/terms-and-conditions-sale>. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information (<https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver>)

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 22, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 22, 2029**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0

NAMES AND SIGNATURES OF CERTIFYING OFFICERS

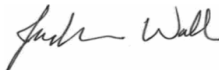
Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor



Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: QCP-CICV-2
Lot Number: U2-MEB733713
Matrix: 3% (w/v) Tartaric acid
1% (v/v) HNO₃
Value / Analyte(s): 500 µg/mL ea:
Antimony

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	500.0 ± 2.8 µg/mL		

Density: 1.017 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Sb	ICP Assay	3102a	140911

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2(u_{char i}^2)]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a)(u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures [Terms and Conditions of Sale](https://www.inorganicventures.com/terms-and-conditions-sale). <https://www.inorganicventures.com/terms-and-conditions-sale>. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 01, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 01, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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 Christiansburg, VA 24073 USA
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2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
 Catalog Number: QCP-CICV-3
 Lot Number: V2-MEB749572
 Matrix: 7% (v/v) HNO₃
 Value / Analyte(s):
 500 µg/mL ea:
 Arsenic, Lead,
 Selenium, Thallium,
 250 µg/mL ea:
 Cadmium

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	500.0 ± 3.1 µg/mL	Cadmium, Cd	250.1 ± 1.1 µg/mL
Lead, Pb	500.0 ± 2.3 µg/mL	Selenium, Se	500.0 ± 3.2 µg/mL
Thallium, Tl	500.0 ± 3.0 µg/mL		

Density: 1.040 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum (1/u_{\text{char } i}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = [\sum (w_i)^2 (u_{\text{char } i})^2]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

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- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

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- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

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8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 02, 2025

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 02, 2030**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor



Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





Certified Reference Material CRM



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://AbsoluteStandards.com

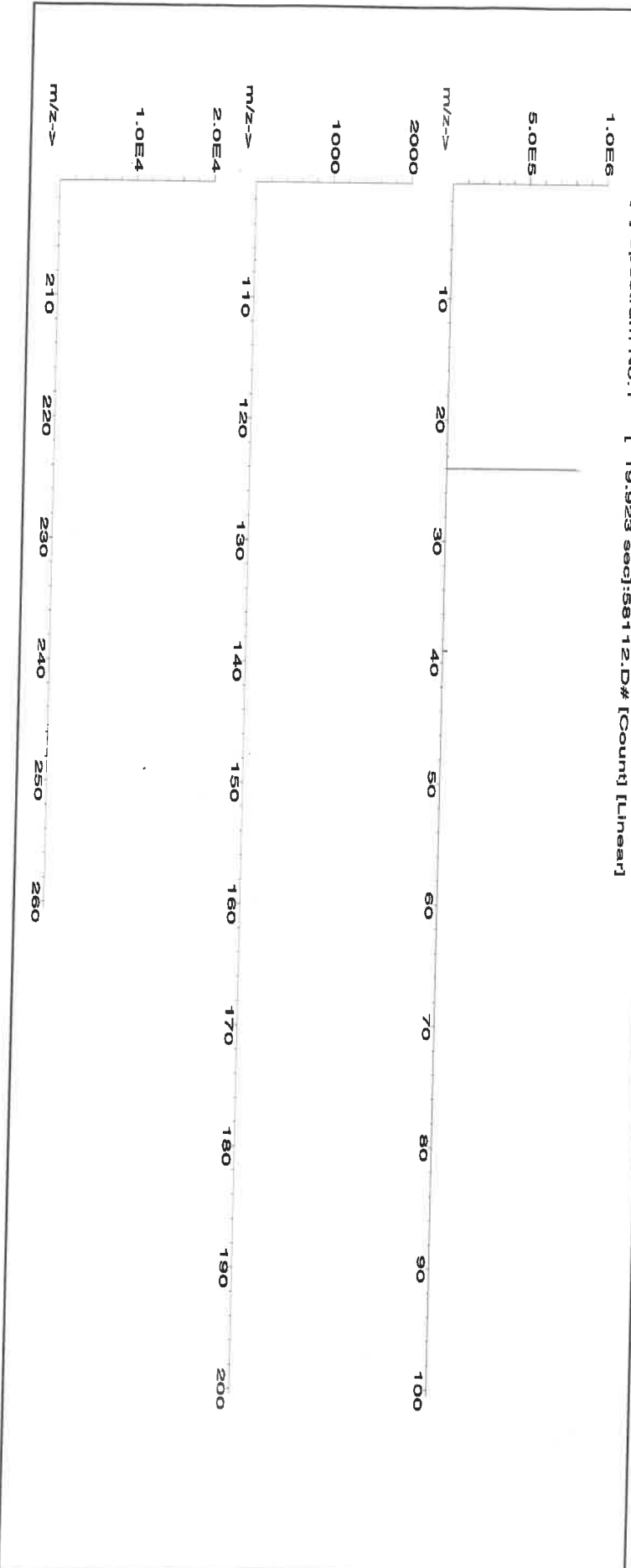
CERTIFIED WEIGHT REPORT:

Part Number: 58112 **Lot #** M 6171
Lot Number: 011525 **Solvent:** 24012496 Nitric Acid
Description: Magnesium (Mg)
Expiration Date: 011528
Recommended Storage: Ambient (20 °C) 2% 40.0 Nitric Acid (mL)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB 5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): 2000.07 0.100 Flask Uncertainty

Formulated By:	Benson Chan	011525
Reviewed By:	Pedro L. Rentas	011525

Compound

1. Magnesium nitrate hexahydrate (Mg) IN030 MGD05023A1 10000 99.999 0.10 8.51 234.9183 234.9195 10000.1 20.0 13446-18-9 NA off-ret 5440 mg/kg 3131a





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ku	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGNA10
Lot Number: V2-NA740547
Matrix: 2% (v/v) HNO₃
Value / Analyte(s): 10 000 µg/mL ea:
Sodium
Starting Material: Sodium Carbonate
Starting Material Lot#: 2453 and 2606
Starting Material Purity: 99.9976%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10018 ± 30 µg/mL
Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	10026 ± 18 µg/mL Gravimetric NIST SRM Lot Number: See Sec. 4.2
Assay Method #2	9986 ± 66 µg/mL ICP Assay NIST SRM 3152a Lot Number: 200413
Assay Method #3	10002 ± 31 µg/mL Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k(u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2(u_{char i}^2)]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

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u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty errors and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.000860	M Eu < 0.000860	s Na < 0.034000	O Se < 0.000387
O Al < 0.003121	O Fe < 0.001622	M Nb < 0.000860	O Si < 0.044943
M As < 0.001800	M Ga < 0.000860	M Nd < 0.000860	M Sm < 0.000860
M Au < 0.005700	M Gd < 0.000860	O Ni < 0.000980	M Sn < 0.000860
O B < 0.025000	M Ge < 0.003500	M Os < 0.029000	M Sr < 0.000436
M Ba < 0.004494	M Hf < 0.000860	O P < 0.005742	M Ta < 0.000086
O Be < 0.000160	M Hg < 0.002900	M Pb < 0.002600	M Tb < 0.000860
M Bi < 0.000860	M Ho < 0.000860	M Pd < 0.004300	M Te < 0.004300
O Ca < 0.112358	M In < 0.000860	M Pr < 0.000860	M Th < 0.003500
O Cd < 0.000730	M Ir < 0.000940	M Pt < 0.000860	O Ti < 0.000399
M Ce < 0.000860	O K < 0.349560	M Rb < 0.000436	M Tl < 0.000860
M Co < 0.000860	M La < 0.000860	M Re < 0.000860	M Tm < 0.000860
O Cr < 0.002000	O Li < 0.000224	M Rh < 0.000860	M U < 0.000860
M Cs < 0.000287	M Lu < 0.000860	M Ru < 0.000940	O V < 0.001500
O Cu < 0.004100	M Mg < 0.097377	O S < 0.018726	M W < 0.007700
M Dy < 0.000860	M Mn < 0.007700	M Sb < 0.000860	M Y < 0.000860
M Er < 0.000860	O Mo < 0.002800	O Sc < 0.000610	M Yb < 0.000860

M - Checked by ICP-MS

O - Checked by ICP-OES

i - Spectral Interference

n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

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7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 22.99 +1 (6) Na+(aq) largely ionic in nature

Chemical Compatibility -Soluble in HCl, HNO₃, H₂SO₄ and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1% HNO₃ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO₃ / LDPE container.

Na Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Lithium carbonate fusion in graphite crucible followed by HCl dissolution - blank levels of Na in lithium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric/sulfuric/perchloric acid decomposition).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 23 amu	310 ppt	n/a	46Ti+2, 46Ca+2
ICP-OES 330.237 nm	2.0 / 0.09 µg/mL	1	Pd, Zn
ICP-OES 588.995 nm	0.03 / 0.006 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 589.595 nm	0.07 / 0.00009 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 23, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 23, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Certificate of Analysis

P: 800-669-6799/540-585-3030

F: 540-585-3012

info@inorganicventures.com

R → 1127/25

M6175

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: 6020CAL-1
Lot Number: V2-MEB742014
Matrix: 5% (v/v) HNO₃
tr. HF
Value / Analyte(s): 20 µg/mL ea:
Silver, Aluminum,
Arsenic, Barium,
Beryllium, Calcium,
Cadmium, Cobalt,
Chromium, Copper,
Iron, Potassium,
Magnesium, Manganese,
Sodium, Nickel,
Lead, Antimony,
Selenium, Thallium,
Vanadium, Zinc

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	20.02 ± 0.08 µg/mL	Antimony, Sb	20.03 ± 0.11 µg/mL
Arsenic, As	20.03 ± 0.16 µg/mL	Barium, Ba	20.02 ± 0.11 µg/mL
Beryllium, Be	20.02 ± 0.15 µg/mL	Cadmium, Cd	20.02 ± 0.11 µg/mL
Calcium, Ca	20.03 ± 0.09 µg/mL	Chromium, Cr	20.03 ± 0.13 µg/mL
Cobalt, Co	20.03 ± 0.12 µg/mL	Copper, Cu	20.03 ± 0.10 µg/mL
Iron, Fe	20.04 ± 0.09 µg/mL	Lead, Pb	20.03 ± 0.11 µg/mL
Magnesium, Mg	20.03 ± 0.10 µg/mL	Manganese, Mn	20.03 ± 0.11 µg/mL
Nickel, Ni	20.03 ± 0.11 µg/mL	Potassium, K	20.03 ± 0.10 µg/mL
Selenium, Se	20.03 ± 0.13 µg/mL	Silver, Ag	20.03 ± 0.09 µg/mL
Sodium, Na	20.03 ± 0.10 µg/mL	Thallium, Tl	20.03 ± 0.10 µg/mL
Vanadium, V	20.03 ± 0.11 µg/mL	Zinc, Zn	20.03 ± 0.11 µg/mL

Density: 1.027 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Sb	ICP Assay	3102a	140911
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum (1/u_{\text{char } i}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (k) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = [\sum (w_i)^2 (u_{\text{char } i}^2)]^{1/2}$, where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (k) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures [Terms and Conditions of Sale](https://www.inorganicventures.com/terms-and-conditions-sale). <https://www.inorganicventures.com/terms-and-conditions-sale>. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

HF Note: This standard should not be prepared or stored in glass.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information (<https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver>)

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 11, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 11, 2029**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





CERTIFIED WEIGHT REPORT:

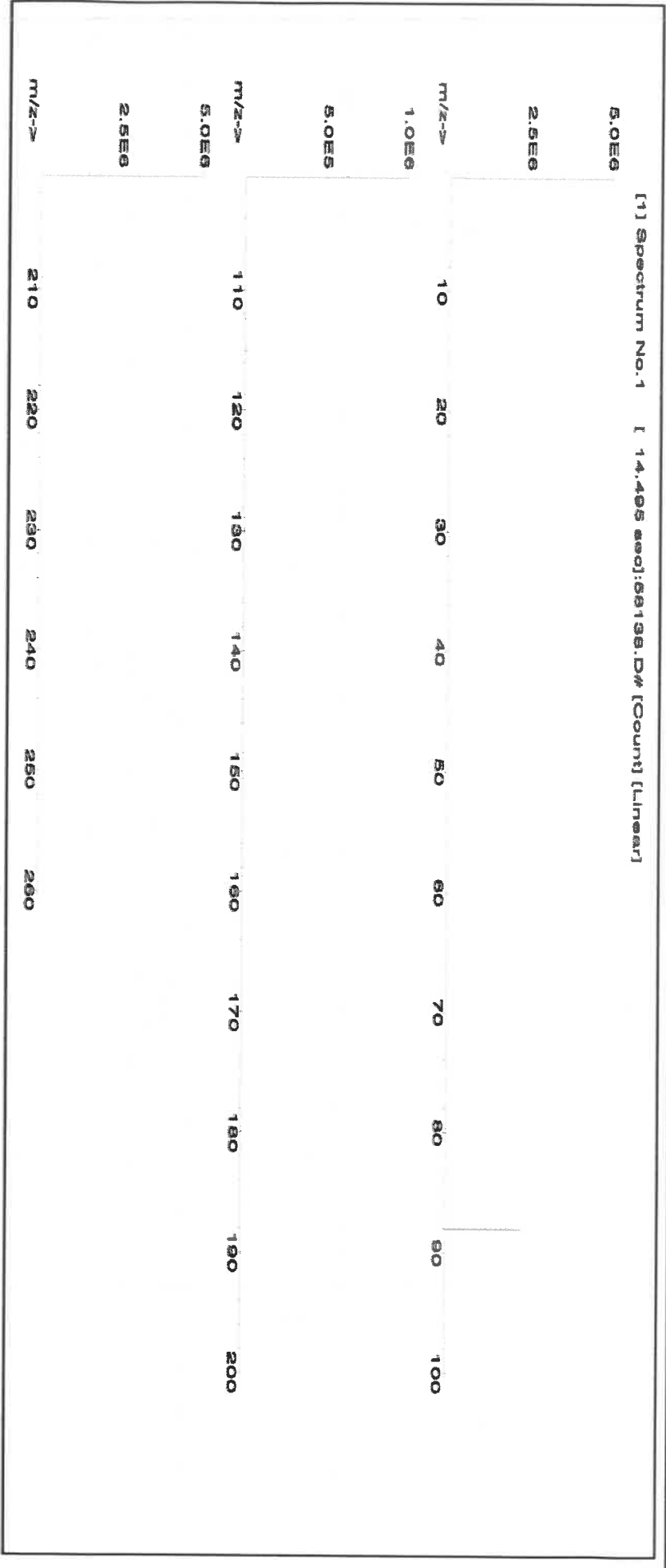
Part Number: 57038 **Lot #** 24002546 **Nitric Acid**
Lot Number: 092724
Description: Strontium (Sr)
Expiration Date: 092727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 8UTB
Weight shown below was diluted to (mL): 2000.07
5E-05 Balance Uncertainty
0.100 Flask Uncertainty

R-5816125
M 6/76

<i>[Signature]</i>	
Formulated By:	Benson Chan
Reviewed By:	Pedro L. Rentas
	092724

SDS Information

Compound	Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded	Uncertainty	CAS#	OSHA PEL (TWA)	LD50	NIST
Strontium nitrate (Sr)	IN017 SR2022018A1	1000	99.997	0.10	41.2	4.85470	4.85481	1000.0	2.0	10042-76-9	NA			or-rel >2000mg/kg 3153a





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	T	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM



ANAB ISO 17034 Accredited
AFR-1539 Certificate Number
https://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57082
031525
Lead (Pb)

Lot #

Nitric Acid

Expiration Date:

031528

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Weight shown below was diluted to (mL):

2000.07

0.10 Flask Uncertainty

2%

40.0 (mL)

Nitric Acid

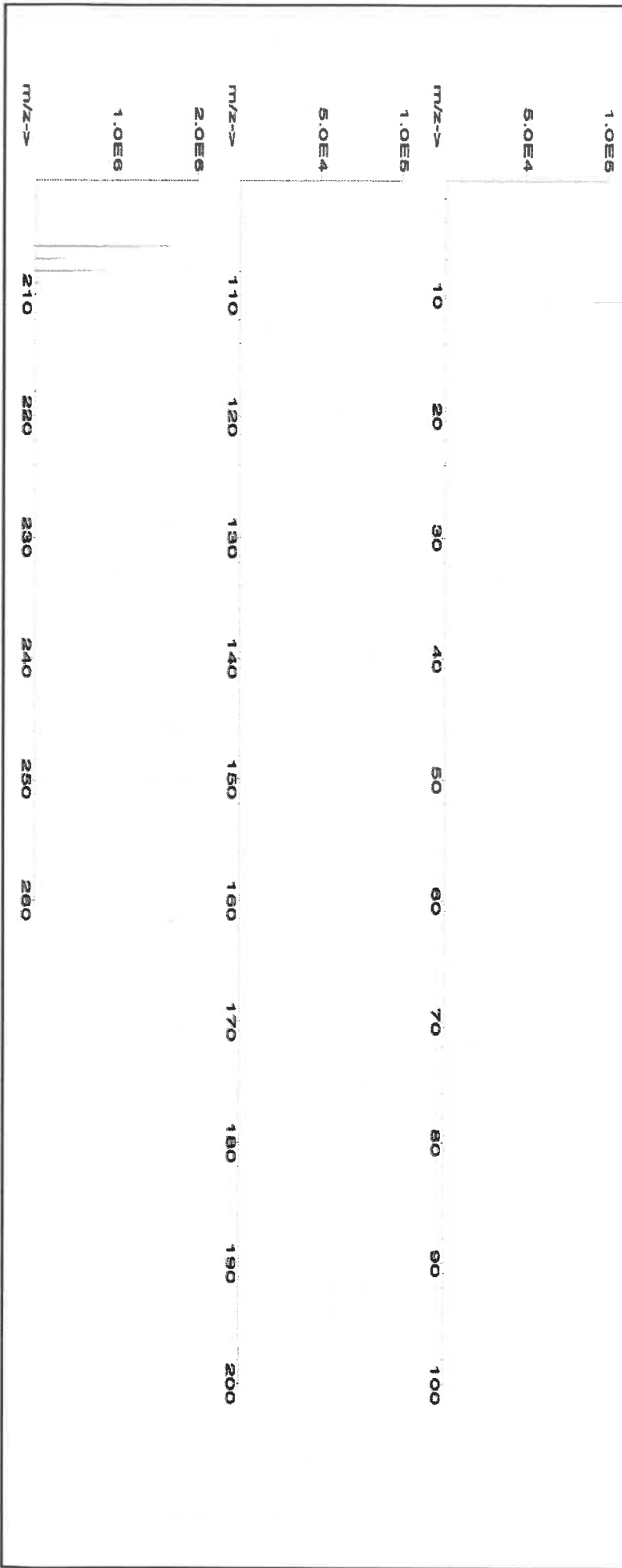
<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
Reviewed By:	<i>Pedro L. Renteria</i>
	Pedro L. Renteria
	031525

SDS Information

Compound	Lot	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Lead(II) nitrate (Pb) IN029 PBD122016A1 1000 99.999 0.10 62.5 3.20015 3.20067 1000.2 2.0 10099-74-8 0.05 mg/m3 Intra-rat 93 mg/kg 3128

[1] Spectrum No. 1 [14.144 sec]:58082.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Se	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

Instructions for QATS Reference Material: *ICP-MS ICS*

QATS LABORATORY INORGANIC REFERENCE MATERIAL
INTERFERENCE CHECK SAMPLE SET FOR ICP-MS (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.



(A) **SAMPLE DESCRIPTION**

Enclosed is a set of one (1) or more bottles of an Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-0803" and for the ICSAB mixture use "ICSA-0803+ICSB-0803".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) **BREAKAGE OR MISSING ITEMS**

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to the Contracting Officer, Ross Miller at miller.ross@epa.gov. If directed by Ross Miller, return the chain of custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) **ANALYSIS OF SAMPLES**

This interference check sample set is to be used to verify elemental isobaric correction factors of inductively coupled plasma-mass spectrometers (ICP-MS). This reference material set consists of two (2) concentrated solutions. The ICSA solution contains several interferent elements and species; for a complete listing refer to the CLP SOW. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for the ICP-MS ICS Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:





ICSA-0803, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO₃. Analyze this solution by ICP-MS.

ICSB-0803, Analytes, mixed with ICSA-0803, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO₃. Analyze this ICSAB solution by ICP-MS.

(D) "CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-MS ICS SOLUTION(S)

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-MS
ICSA-0803, AND ICSA-0803 MIXED WITH ICSB-0803

Element	CRQL	Part A (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)	Part A +Part B (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)
Al	20.0	[100000]			[100000]		
Sb	2.0	(1.5)	-2.5	5.5	(22.0)	18.0	26.0
As	1.0	(0.1)	-1.9	2.1	19.0	16.2	21.9
Ba	10.0	(1.2)	-18.8	21.2	(22.0)	2.0	42.0
Be	1.0	(0)	-2.0	2.0	19.0	16.2	21.9
Cd	1.0	(0.7)	-1.3	2.7	20.0	17.0	23.0
Ca	500	[100000]			[100000]		
C		[200000]			[200000]		
Cl		[1000000]			[1000000]		
Cr	2.0	(21.0)	17.0	25.0	40.0	34.0	46.0
Co	1.0	(1.0)	-1.0	3.0	20.0	17.0	23.0
Cu	2.0	(8.0)	4.0	12.0	(25.0)	21.0	29.0
Fe	200	[100000]			[100000]		
Pb	1.0	(4.0)	2.0	6.0	25.0	21.3	28.8
Mg	500	[100000]			[100000]		
Mn	1.0	(7.0)	5.0	9.0	27.0	23.0	31.1
Mo		[2000]			[2000]		
Ni	1.0	(6.0)	4.0	8.0	24.0	20.4	27.6
P		[100000]			[100000]		
K	500	[100000]			[100000]		
Se	5.0	(0.3)	-9.7	10.3	(19.0)	9.0	29.0
Ag	1.0	(0)	-2.0	2.0	18.0	15.3	20.7
Na	500	[100000]			[100000]		
S		[100000]			[100000]		
Tl	1.0	(0)	-2.0	2.0	21.0	17.9	24.2
Ti		[2000]			[2000]		
V	5.0	(0.5)	-9.5	10.5	(19.0)	9.0	29.0
Zn	5.0	(11.0)	1.0	21.0	(29.0)	19.0	39.0

[] Indicates analytes that do not require ICP-MS determination in the ICS.

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value $\pm$ 2 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value $\pm$ 15 percent of the listed certified value.

M6185
ICSA



Certified Reference Material CRM

M6027



ANAB ISO 17034 Accredited
AFR-1539 Certificate Number
https://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT:

Part Number: **57028**
Lot Number: **062024**
Description: **Nickel (NI)**

Lot # **24002546**
Solvent: **Nitric Acid**

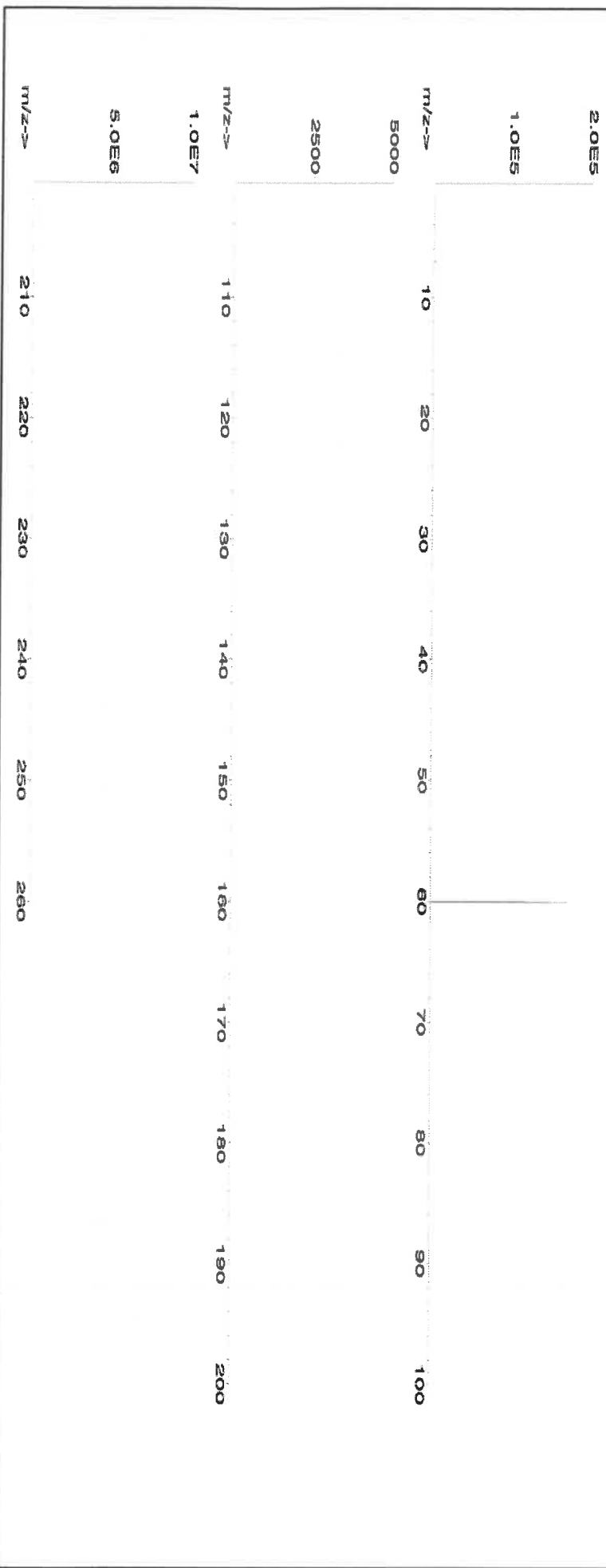
Formulated By:	Benson Chan
062024	
Reviewed By:	Pedro L. Rentes
062024	

Expiration Date: **062027**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test Number: **6UTB**
Volume shown below was diluted to (mL): **2000.07**
5E-05 Balance Uncertainty
0.100 Flask Uncertainty

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pippet (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM

1. Nickel(II) nitrate hexahydrate (NI) 58128 062023 0.1000 200.0 0.084 1000 10000.4 1000.0 2.2 13478-00-7 1 mg/m3 orl-rat 1620 mg/kg 3136

[1] Spectrum No.1 [9.136 sec]:58028.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: **57047**
Lot Number: **122823**
Description: **Silver (Ag)**

Lot #
Solvent: 24002546 Nitric Acid

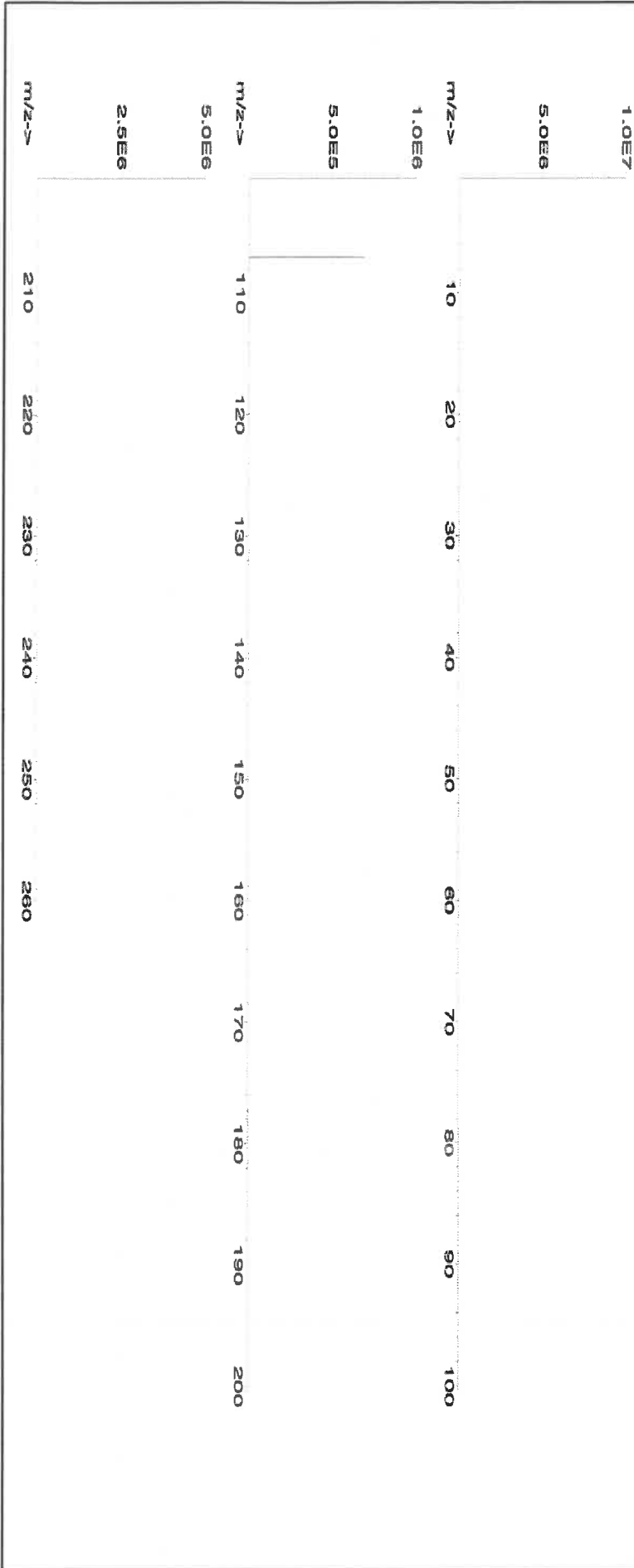
Formulated By:	Benson Chan	122823
Reviewed By:	Pedro L. Rentas	122823

Expiration Date: 122826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 4000.30
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty		CAS#	SDS Information		NIST SRM
										+/- (µg/mL)	(µg/mL)		(Solvent Safety Info. On Attached pg.)	OSHA PEL (TWA)	

1. Silver nitrate (Ag) IN035 J0612AGA1 1000.0 99.999 0.10 63.7 6.27992 6.27998 1000.0 2.0 7761-88-8 10 µg/m³ NA 3151

[1] Spectrum No. 1 [14.044 sec]:58147.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

Physical Characterization:

(T)= Target analyte

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 meghom deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



R: 10/18/24
Certified Reference Material CRM



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57051
Lot Number: 071724
Description: Antimony (Sb)
Expiration Date: 071727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6LJB
Volume shown below was diluted to (mL): 2000.26
Balance Uncertainty: 5E-05
Flask Uncertainty: 0.058

Lot # 24002546
Solvent: Nitric Acid

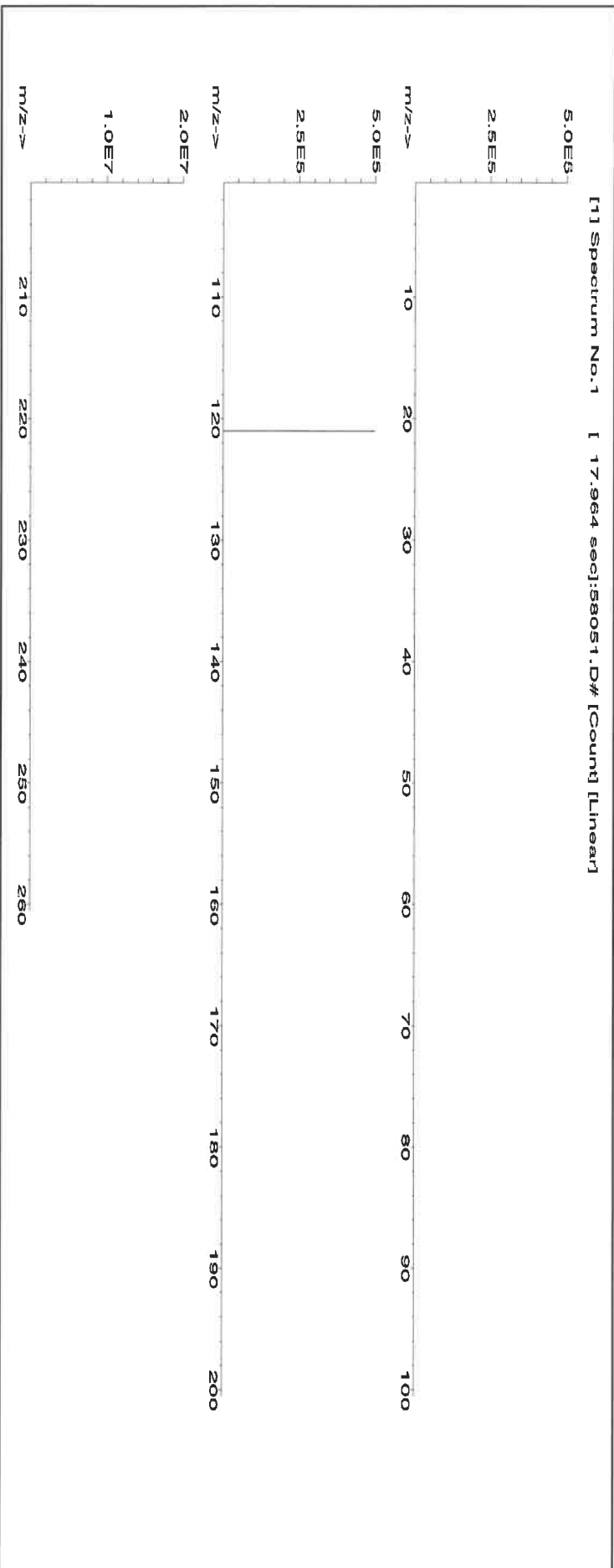
Giovanni Esposito
Formulated By: Giovanni Esposito
Reviewed By: Pedro L. Rentas

071724

SDS Information

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Antimony (Sb)	58151	060324	0.1000	200.0	0.084	1000	10001.4	1000.0	2.2	7440-36-0	0.5 mg/m3	or-rat 7000 mg/kg	3102a
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Certified Reference Material CRM



CERTIFIED WEIGHT REPORT:

Part Number: 57051
Lot Number: 071724
Description: Antimony (Sb)

MG160

Lot # 24002546
Solvent: Nitric Acid

Expiration Date: 071727

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Volume shown below was diluted to (mL): 2000.26
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

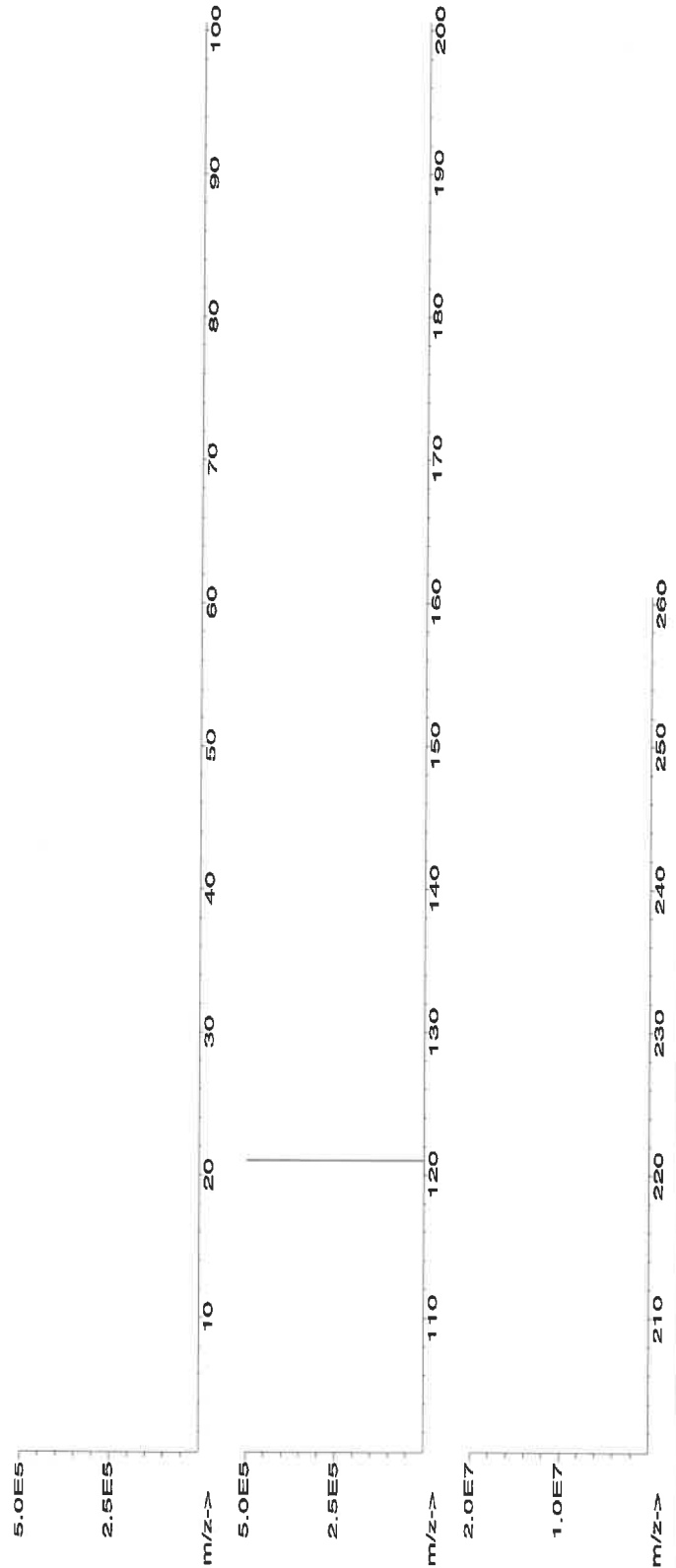
<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito 071724
<i>Pedro L. Rentas</i>	
Reviewed By:	Pedro L. Rentas 071724

SDS Information

Expanded			SDS Information			
Uncertainty	(Solvent Safety Info, On Attached pg.)	NIST	CAS#	OSHA PEL (TWA)	LD50	SRM
+/- (µg/mL)						

1. Antimony (Sb)	58151	060324	0.1000	200.0	0.084	1000	10001.4	1000.0	2.2	7440-36-0	0.5 mg/m3	or-rat 7000 mg/kg	3102a
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[1] Spectrum No.1 [17.964 sec]:58051.D# [Count] [Linear]





Certified Reference Material CRM

M6023



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57081
Lot Number: 062724
Description: Thallium (TI)

Solvent: 24002546 Nitric Acid
Lot #

Expiration Date:

062727

2% 40.0 Nitric Acid (mL)

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

5E-05 Balance Uncertainty

Weight shown below was diluted to (mL): 2000.1 0.10 Flask Uncertainty

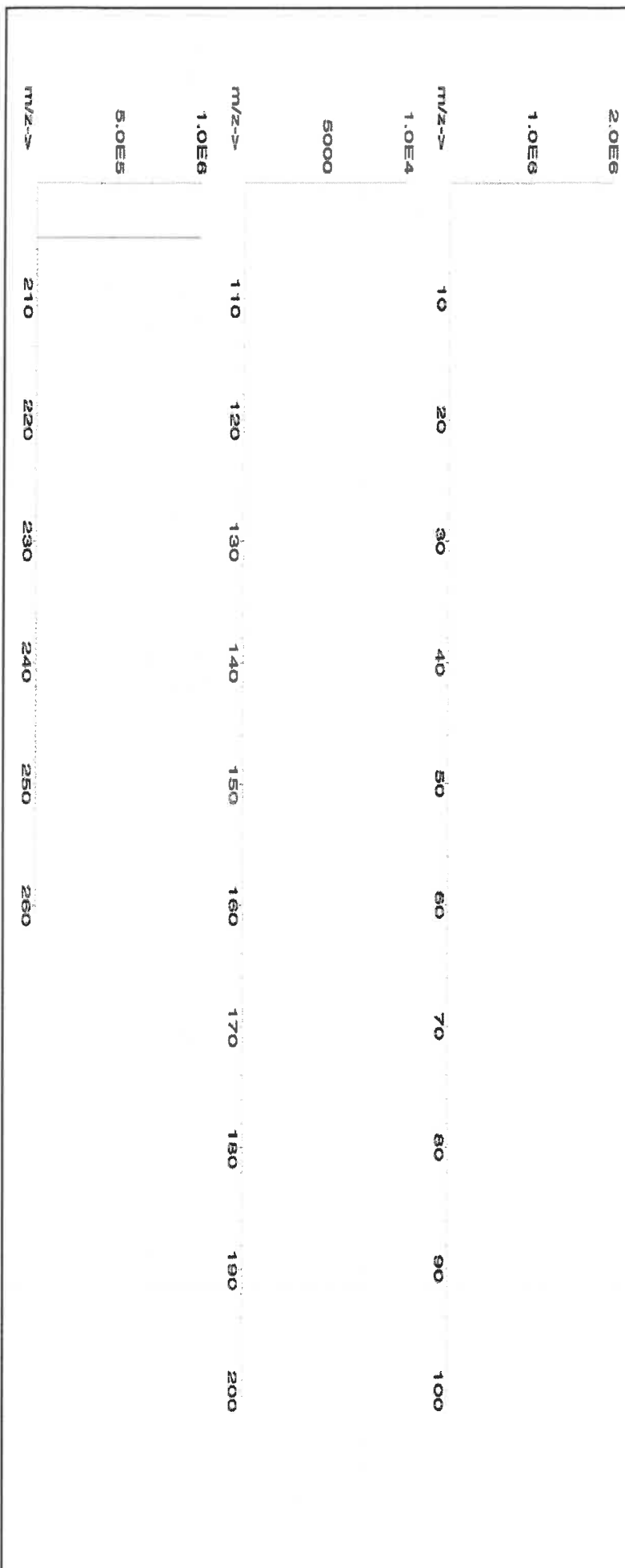
<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
	062724
Reviewed By:	<i>Pedro L. Renteria</i>
	Pedro L. Renteria
	062724

SDS Information

Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Thallium nitrate (TI) IN037 BCCF4399 1000 99.999 0.10 77.0 2.5975 2.5977 1000.1 2.0 10102-45-1 0.1 mg/m3 or-mus 15mg/kg 3158

[1] Spectrum No.1 [14.044 sec]:57081.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Tm	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Sn	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Ti	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Se	<0.02	Ta	<0.02			Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM

M6021



CERTIFIED WEIGHT REPORT:

Part Number: 57023
Lot Number: 062424
Description: Vanadium (V)

Lot # 24002546
Solvent: Nitric Acid

Aleah O'Brady	
Formulated By:	Aleah O'Brady
Reviewed By:	Pedro L. Rantas
	062424

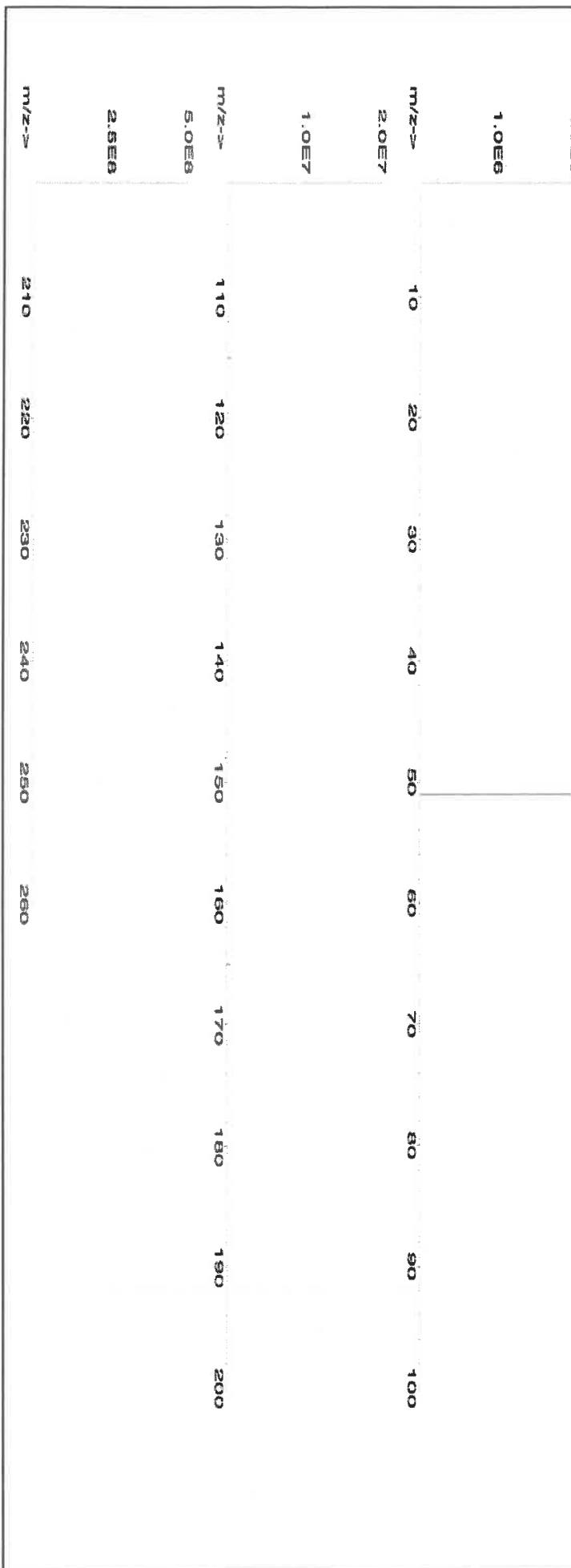
Expiration Date: 062427
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Volume shown below was diluted to (mL): 2000.3
5E-05 Balance Uncertainty
0.06 Flask Uncertainty

2.0% 40.0 (mL) Nitric Acid

Compound		Part Number	Lot	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)		58123	021224	0.1000	200.0	0.084	1000	10000.3	1000.0	2.2	7803-55-6	0.05 mg/m3	or-rat 58.1mg/kg	3165

[1] Spectrum No.1 [34.243 sec]:58023.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



SHIPPING DOCUMENTS

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Chemtech

Fax: (908) 789-8922

Company Name: Nobis Group

Address: 55 Technology Dr Suite 101, Lowell, MA 01851

Phone: 978-703-6014

Project Name:	Raymark
---------------	---------

Project Location: Stratford, CT

Project Number: 95700

Project Manager: Adam Roy

Con-Test	Quote	Name/Number
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100	100	100

Invoice Recipient:

Sampled By: A. Brittingham

39 Spruce Street
East Longmeadow, MA 01028

Doc # 381 Rev 4 01/08/2020

Page 1 of 1

ANALYSIS REQUESTED

Fax: (908) 789-8922			284 Sheffield Street, Mountainside, NJ 07092			Requested Turnaround Time			Dissolved Metals Samples			ANALYSIS REQUESTED										2 Preservation Code																			
Company Name: Nobis Group			Address: 55 Technology Dr Suite 101, Lowell, MA 01851			5-Day ☒ 10-Day ☐ PFAS 10-Day (std) ☐ Due Date:			☐ Field Filtered ☐ Lab to Filter																																
Phone: 978-703-6014			Project Location: Stratford, CT			Rush-Approval Required			Orthophosphate Samples													Total Number Of:																			
Project Name: Raymark			Project Number: 95700			1-Day ☐ 3-Day ☒ 2-Day ☐ 4-Day ☐			☐ Field Filtered ☐ Lab to Filter													VIALS _____ GLASS _____ PLASTIC _____ BACTERIA _____ ENCORE _____																			
Project Manager: Adam Roy			Format: PDF ☒ EXCEL ☒			Data Delivery			PCB ONLY													Glassware in the fridge? Y / N																			
Con-Test Quote Name/Numbe			Other:			CLP Like Data Pkg Required: ☐ No			SOXHLET ☒													Glassware in freezer? Y / N																			
Invoice Recipient:			Email To: aroy@nobis-group.com			Fax To #:			NON SOXHLET ☐													Prepackaged Cooler? Y / N																			
Sampled By: A. Brittingham																						*Contest is not responsible for missing samples from prepacked coolers																			
Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Contc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	RCP VOCs	% Solids	PAHs	Herbicides	Pesticides	PCBs	Metals ICP + Hg - 6010	Cyanide	SPL RCP Metals - 6020																					
	OU4-TS-Grillo-TSCP03-081425	8/14/25	11:30	G	SO		3	2	1			X	X	X	X	X	X	X	X	X																					
	OU4-TS-Grillo-TSCP04-081425	8/14/25	11:35	G	SO		3	2	1			X	X	X	X	X	X	X	X	X																					
	OU4-TS-Grillo-TSCP05-081425	8/14/25	11:40	G	SO		3	2	1			X	X	X	X	X	X	X	X	X																					
	OU4-TS-Grillo-TSCP06-081425	8/14/25	11:45	G	SO		3	2	1			X	X	X	X	X	X	X	X	X																					
	OU4-TS-Grillo-TSCP07-081425	8/14/25	11:50	G	SO		3	2	1			X	X	X	X	X	X	X	X	X																					
	OU4-TS-Grillo-TSCP08-081425	8/14/25	11:55	G	SO		3	2	1			X	X	X	X	X	X	X	X	X																					
	OU4-TS-Grillo-TSCP09-081425	8/14/25	12:00	G	SO		3	2	1			X	X	X	X	X	X	X	X	X																					
	OU4-TS-Grillo-TSCP10-081425	8/14/25	12:05	G	SO		3	2	1			X	X	X	X	X	X	X	X	X																					
	OU4-TS-Grillo-TSCP11-081425	8/14/25	12:10	G	SO		3	2	1			X	X	X	X	X	X	X	X	X																					
Relinquished by: (signature)		Date/Time: 8/15 9:09		Client Comments:																																					
Received by: (signature)		Date/Time: 8/15 9:09		3-2																																					
Relinquished by: (signature)		Date/Time:		Detection Limit Requirements				Special Requirements													Please use the following codes to indicate possible sample concentration within the Conc Code column above: H - High; M - Medium; L - Low; C - Clean; U - Unknown																				
				MA ☐				MA MCP Required																																	
								MCP Certification Form Required																																	
				CT ☒				CT RCP Required																																	
Received by: (signature)		Date/Time:						RCP Certification Form Required																																	
Relinquished by: (signature)		Date/Time:						MA State DW Required																																	
Received by: (signature)		Date/Time:		Other: ☐				PWSID #													NELAC and AIHA-LAP, LLC Accredited																				
Relinquished by: (signature)		Date/Time:		Project Entity				Other																																	
				Government ☐ Municipality ☐ MWRA ☐ WRTA ☐				☐ Chromatogram																																	
				Federal ☐ 21 J ☐ School ☐ MBTA ☐				☐ AIHA-LAP, LLC																																	
				City ☐ Brownfield ☐																																					
Lab Comments:																					Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con-Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.																				

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	TX-C25-00189
Virginia	460312

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2879	NOBI03	Order Date : 8/15/2025 9:15:00 AM	Project Mgr :
Client Name : Nobis Group		Project Name : Raymark Superfund Site	Report Type : Level 4
Client Contact : Adam Roy		Receive DateTime : 8/15/2025 9:09:00 AM	EDD Type : EQUIS
Invoice Name : Nobis Group		Purchase Order :	Hard Copy Date :
Invoice Contact : Adam Roy			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2879-01	OU4-TS-GRILLO-TSCP03-081425	Solid	08/14/2025	11:30					
					VOCMS Group3		8260D	5 Bus. Days	
Q2879-03	OU4-TS-GRILLO-TSCP04-081425	Solid	08/14/2025	11:35					
					VOCMS Group3		8260D	5 Bus. Days	
Q2879-05	OU4-TS-GRILLO-TSCP05-081425	Solid	08/14/2025	11:40					
					VOCMS Group3		8260D	5 Bus. Days	
Q2879-07	OU4-TS-GRILLO-TSCP06-081425	Solid	08/14/2025	11:45					
					VOCMS Group3		8260D	5 Bus. Days	
Q2879-09	OU4-TS-GRILLO-TSCP07-081425	Solid	08/14/2025	11:50					
					VOCMS Group3		8260D	5 Bus. Days	
Q2879-11	OU4-TS-GRILLO-TSCP08-081425	Solid	08/14/2025	11:55					
					VOCMS Group3		8260D	5 Bus. Days	
Q2879-13	OU4-TS-GRILLO-TSCP09-081425	Solid	08/14/2025	12:00					
					VOCMS Group3		8260D	5 Bus. Days	
Q2879-15	OU4-TS-GRILLO-TSCP10-081425	Solid	08/14/2025	12:05					

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2879 NOBI03

Order Date : 8/15/2025 9:15:00 AM

Project Mgr :

Client Name : Nobis Group

Project Name : Raymark Superfund Site

Report Type : Level 4

Client Contact : Adam Roy

Receive DateTime : 8/15/2025 9:09:00 AM

EDD Type : EQUIS

Invoice Name : Nobis Group

Purchase Order :

Hard Copy Date :

Invoice Contact : Adam Roy

Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2879-17	OU4-TS-GRILLO-TSCP11-081425	Solid	08/14/2025	12:10	VOCMS Group3		8260D	5 Bus. Days	
					VOCMS Group3		8260D	5 Bus. Days	

Relinquished By :

Date / Time : 8/15/25 1230

Received By :

Date / Time : 08/15/25 12:30

Storage Area : VOA Refridgerator Room