

SDG COVER PAGE

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
 Lab Code: ACE Case No.: 51822 MA No.: 3105.0 SDG No.: MH2GN9
 SOW No. : SFAM01.1

EPA Sample No.	Lab Sample Id	ICP-AES	Analysis Method		
			ICP-MS	Mercury	Cyanide
<u>MH2GN9</u>	<u>P4805-01</u>	<u></u>	<u>X</u>	<u></u>	<u></u>
<u>MH2GN9D</u>	<u>P4805-02</u>	<u></u>	<u>X</u>	<u></u>	<u></u>
<u>MH2GN9S</u>	<u>P4805-03</u>	<u></u>	<u>X</u>	<u></u>	<u></u>
<u>MH2GP0</u>	<u>P4805-04</u>	<u></u>	<u>X</u>	<u></u>	<u></u>
<u>MH2GP1</u>	<u>P4805-05</u>	<u></u>	<u>X</u>	<u></u>	<u></u>
<u>MH2GP2</u>	<u>P4805-06</u>	<u></u>	<u>X</u>	<u></u>	<u></u>
<u>MH2GP3</u>	<u>P4805-07</u>	<u></u>	<u>X</u>	<u></u>	<u></u>
<u>MH2GP4</u>	<u>P4805-08</u>	<u></u>	<u>X</u>	<u></u>	<u></u>
<u>MH2GP5</u>	<u>P4805-09</u>	<u></u>	<u>X</u>	<u></u>	<u></u>
<u>MH2GP6</u>	<u>P4805-10</u>	<u></u>	<u>X</u>	<u></u>	<u></u>
<u>MH2GP7</u>	<u>P4805-11</u>	<u></u>	<u>X</u>	<u></u>	<u></u>
<u>MH2GP8</u>	<u>P4805-12</u>	<u></u>	<u>X</u>	<u></u>	<u></u>
<u>MH2GP9</u>	<u>P4805-13</u>	<u></u>	<u>X</u>	<u></u>	<u></u>
<u>MH2GQ0</u>	<u>P4805-14</u>	<u></u>	<u>X</u>	<u></u>	<u></u>
<u>MH2GQ1</u>	<u>P4805-15</u>	<u></u>	<u>X</u>	<u></u>	<u></u>

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the SDG Narrative. All edits and manual integrations have been peer-reviewed. Release of the data contained in this hardcopy Complete SDG File and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: _____
 Date: _____ Title: _____

USEPA CLP Inorganics COC (LAB COPY)

68HERH20D0011

SDG # MH2GN9

CHAIN OF CUSTODY RECORD

No: 8-110724-144849-0598

Date Shipped: 11/17/2024

Lab: Alliance Technical Group LLC

Carrier Name: FedEx

Case #: 51822

Lab Contact: Sohli Jodhani

Airbill No: 7915 3430 7671

Cooler #: 1

Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
S-LABOC-2024-702	MH2GN9	Soil/ SH	Subsample	ICP/MS(14)	24416 (None) (3)	XX	11/01/2024 10:30	
S2549-VL-0001-31	MH2GP0	Soil/ SH	Composite	ICP/MS(14)	24417 (None) (1)	VL-2549	11/01/2024 10:25	
S2549-VL-0106-31	MH2GP1	Soil/ SH	Composite	ICP/MS(14)	24418 (None) (1)	VL-2549	11/01/2024 10:30	
S2549-VL-0612-31	MH2GP2	Soil/ SH	Composite	ICP/MS(14)	24419 (None) (1)	VL-2549	11/01/2024 10:35	
S2549-VL-1218-31	MH2GP3	Soil/ SH	Composite	ICP/MS(14)	24420 (None) (1)	VL-2549	11/01/2024 10:40	
S2549-VL-0001-32	MH2GP4	Soil/ SH	Composite	ICP/MS(14)	24421 (None) (1)	VL-2549	11/01/2024 10:45	
S2549-VL-0106-32	MH2GP5	Soil/ SH	Composite	ICP/MS(14)	24422 (None) (1)	VL-2549	11/01/2024 10:50	
S2549-VL-0612-32	MH2GP6	Soil/ SH	Composite	ICP/MS(14)	24423 (None) (1)	VL-2549	11/01/2024 10:55	
S2549-VL-1218-32	MH2GP7	Soil/ SH	Composite	ICP/MS(14)	24424 (None) (1)	VL-2549	11/01/2024 11:00	
S2549-VL-0001-33	MH2GP8	Soil/ SH	Composite	ICP/MS(14)	24425 (None) (1)	VL-2549	11/01/2024 11:05	

Sample(s) to be used for Lab QC: S-LABOC-2024-702 Tag 24416 - Special Instructions: Analyze per MA3105

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: ICP/MS=CLP TAL Total Metals ICP/MS

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
Samples		11/17/24 1530		11/11/24 7:05	IF G-1 3.4x
					Custody Seal Intact
					Temp Blank present

CHAIN OF CUSTODY RECORD

Lab Contact: Sohil Jodhan
Lab Phone: 908-789-8900

[illegible]

Samples Transferred From Chain of Custody

Analysis Key: ICP/MS=CLP TAL Total Metals ICP/MS

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
Samples	Joe Ptk FBI	11/1/24 1530		7:05 PM 11-11-24	IR-Case #1 3.4°C
					Custody Seal Intact
					Temp Blank present

FORM DC-1
SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page <u>1</u> of <u>1</u>
Received By (Print Name) <u>Agnesa Rose</u>		Log-in Date 11/11/2024
Received By (Signature) <u>[Signature]</u>		
Case Number 51822	SDG No. MH2GN9	MA No. 3105.0

Remarks:	
1. Custody Seal (s)	Present, Intact
2. Custody Seal Nos.	<u>n/a</u>
3. Traffic Reports/Chain Of Custody Records	Present
4. Airbill	Present
5. Airbill No. and Shipping Container ID No.	<u>779812353467</u> <u>1</u>
6. Shipping Container Temperature Indicator Bottle	Present
7. Shipping Container Temperature	<u>3.4</u> Degree C
8. Sample Condition	Intact
9. Sample Tags Sample Tag Numbers	Absent Listed on Traffic Report
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	<u>11/11/2024</u>
12. Time Received	<u>07:05</u>

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding		Remarks: Condition of Sample Shipment, etc.
			Sample Tag #	Assigned Lab #	
1	MH2GN9	N/A	24416	P4805-01	Intact
2	MH2GN9D	N/A	24416	P4805-02	Intact
3	MH2GN9S	N/A	24416	P4805-03	Intact
4	MH2GP0	N/A	24417	P4805-04	Intact
5	MH2GP1	N/A	24418	P4805-05	Intact
6	MH2GP2	N/A	24419	P4805-06	Intact
7	MH2GP3	N/A	24420	P4805-07	Intact
8	MH2GP4	N/A	24421	P4805-08	Intact
9	MH2GP5	N/A	24422	P4805-09	Intact
10	MH2GP6	N/A	24423	P4805-10	Intact
11	MH2GP7	N/A	24424	P4805-11	Intact
12	MH2GP8	N/A	24425	P4805-12	Intact
13	MH2GP9	N/A	24426	P4805-13	Intact
14	MH2GQ0	N/A	24427	P4805-14	Intact
15	MH2GQ1	N/A	24428	P4805-15	Intact
16	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A
23	N/A	N/A	N/A	N/A	N/A

* Contact SMO and attach record of resolution

Reviewed By <u>[Signature]</u>	Logbook No. N/A
Date <u>11/11/24</u>	Logbook Page No. N/A

FORM DC-2
COMPLETE SDG FILE (CSF) INVENTORY SHEET

LAB NAME	Alliance Technical Group, LLC		
LAB CODE	ACE		
CONTRACT NO.	68HERH20D0011		
CASE NO.	51822	SDG NO.	MH2GN9
MA NO.	3105.0	SOW NO.	SFAM01.1

All documents delivered in the Complete SDG File must be original documents where possible.
(Reference - Exhibit B Section 2.4)

	PAGE NOS:		CHECK	
	FROM	TO	LAB	REGION
1. SDG Cover Page	1	1	✓	
2. Traffic Report/Chain of Custody Record(s)	2	3	✓	
3. Sample Log-In Sheet (DC-1)	4	4	✓	
4. CSF Inventory Sheet (DC-2)	5	7	✓	
5. SDG Narrative	8	11	✓	
6. Communication Logs	12	16	✓	
7. Percent Solids Log	NA	NA	✓	

Analysis Forms and Data (ICP-AES)

8. Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	NA	NA	✓	
9. Instrument raw data by instrument in analysis order	NA	NA	✓	

Other Data

10. Standard and Reagent Preparation Logs	NA	NA	✓	
11. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	NA	NA	✓	
12. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	NA	NA	✓	
13. Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	
14. Extraction Logs for TCLP and SPLP	NA	NA	✓	
15. Raw GPC Data	NA	NA	✓	
16. Raw Florisil Data	NA	NA	✓	

Analysis Forms and Data (ICP-MS)

17. Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	17	29	✓	
18. Instrument raw data by instrument in analysis order	30	296	✓	

Other Data

19. Standard and Reagent Preparation Logs	297	434	✓	
20. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	435	436	✓	
21. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	437	439	✓	
22. Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	

- 23 . Extraction Logs for TCLP and SPLP
- 24 . Raw GPC Data
- 25 . Raw Florisil Data

PAGE NOS:		CHECK	
FROM	TO	LAB	REGION
NA	NA	✓	
NA	NA	✓	
NA	NA	✓	

Analysis Forms and Data (Mercury)

- 26 . Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable
- 27 . Instrument raw data by instrument in analysis order

NA	NA	✓	
NA	NA	✓	

Other Data

- 28 . Standard and Reagent Preparation Logs
- 29 . Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks
- 30 . Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks
- 31 . Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions
- 32 . Extraction Logs for TCLP and SPLP
- 33 . Raw GPC Data
- 34 . Raw Florisil Data

NA	NA	✓	
NA	NA	✓	
NA	NA	✓	
NA	NA	✓	
NA	NA	✓	
NA	NA	✓	
NA	NA	✓	

Analysis Forms and Data (Cyanide)

- 35 . Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable
- 36 . Instrument raw data by instrument in analysis order

NA	NA	✓	
NA	NA	✓	

Other Data

- 37 . Standard and Reagent Preparation Logs
- 38 . Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks
- 39 . Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks
- 40 . Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions
- 41 . Extraction Logs for TCLP and SPLP
- 42 . Raw GPC Data
- 43 . Raw Florisil Data

NA	NA	✓	
NA	NA	✓	
NA	NA	✓	
NA	NA	✓	
NA	NA	✓	
NA	NA	✓	
NA	NA	✓	

Additional

44. EPA Shipping/Receiving Documents

Airbill (No. of Shipments 1)

Sample Tags

Sample Log-In Sheet (Lab)

45. Misc. Shipping/Receiving Records (list all individual records)

46. Internal Lab Sample Transfer Records and Tracking Sheets
(describe or list)47. Other Records and related Communication Logs
(describe or list)

48. Comments:

Completed by:
(CLP Lab)Audited by:
(EPA)

Nimisha Pandya, Document Control Officer



**284 Sheffield Street
Mountainside, NJ 07092**

SDG NARRATIVE

USEPA

SDG # MH2GN9

CASE # 51822

CONTRACT # 68HERH20D0011

SOW# SFAM01.1

LAB NAME: Alliance Technical Group, LLC

LAB CODE: ACE

LAB ORDER ID # P4805

MODIFIED ANALYSIS #3105.0

A. Number of Samples and Date of Receipt

13 Soil samples was delivered to the laboratory intact on 11/11/2024

B. Parameters

Test requested for Metals CLP MS FULL = Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

C. Cooler Temp

Indicator Bottle: Presence/Absence

Cooler: 3.4°C

D. Detail Documentation (related to Sample Handling Shipping, Analytical Problem, Temp of Cooler etc):

Issue 1 : A "P" or "M" prefix was listed at the beginning of a CLP sample ID.

Issue 2: The routine analyses in this Case are scheduled with a 21-day TAT, but the received COC indicates a 14-day TAT. Please advise on how the laboratory may proceed.

E. Corrective Action taken for above:

Resolution 1 : To maintain COC integrity, ASB requests no changes to the Sample IDs. The laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

Resolution 2: Per Region 8, the laboratory should proceed and have all soil samples analyzed as a 14-day TAT. The laboratory should note the issue in the SDG Narrative and proceed with the analysis of the samples.



**284 Sheffield Street
Mountainside, NJ 07092**

F. Analytical Techniques:

All analyses were based on CLP Methodology by method SFAM01.1.

Inter Element correction factors (IECs) are determined annually and correction factor are applied during ICP-AES analysis.

G. Calculation:

Calculation for ICP-MS Soil Sample:

Conversion of Results from $\mu\text{g/L}$ or ppb to mg/kg :

$$\text{Concentration (mg/kg)} = C \times \frac{V_f}{W \times S} \times DF / 1000$$

Where,

C = Instrument value in ppb (The average of all replicate integrations)

Vf = Final digestion volume (mL)

W = Initial aliquot amount (g) (Fraction of Sample amount taken in prep)

S = % Solids / 100 (Fraction of Percent Solids)

DF = Dilution Factor

Example Calculation For Sample MH2GN9 For Antimony:

If C = 0.85 ppb

Vf = 500 ml

W = 2.10 g

S = 1.0(100/100)

DF = 1

$$\text{Concentration (mg/kg)} = 0.85 \times \frac{500}{2.10 \times 1.0} \times 1 / 1000$$

$$= 0.202380 \text{ mg/kg}$$

$$= 0.20 \text{ mg/kg (Reported Result with Signification)}$$

H. QA/ QC

Calibrations met requirements. Interference check met requirements. Blank analyses did not indicate any presence of contamination. Laboratory Control sample was within control limits. Spike sample did meet requirements. Duplicate sample did meet. Serial Dilution did meet requirements except for Zinc.

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.



**284 Sheffield Street
Mountainside, NJ 07092**

Internal Standard Association for ICP-MS analysis.

Target Analyte	Associated Internal Standard
Antimony	159Tb
Arsenic	89Y
Barium	159Tb
Beryllium	6Li
Cadmium	159Tb
Chromium	45Sc
Cobalt	45Sc
Copper	45Sc
Lead	209Bi
Manganese	45Sc
Nickel	45Sc
Selenium	89Y
Silver	159Tb
Thallium	209Bi
Vanadium	45Sc
Zinc	45Sc

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 Director or his designee, as verified by the following signature.

Signature_____

Name: Nimisha Pandya

Date _____

Title: Document Control Officer

Date: 06/25/2021	MA: 3105.0	Title: ICP-MS Analysis with Increased Sample Mass
Method Source: SFAM01.1	Method: ICP-MS	
Matrix: Soil/Sediment		
Summary of Modification		
The purpose of this modified analysis is to analyze dried, composited, and sieved soil/sediment samples by ICP-MS (processed by Incremental Sampling Methodology). Unless specifically modified by this modification, all analyses, Quality Control (QC), and reporting requirements specified in the SOW listed in your current EPA agreement remain unchanged and in full force and effect.		
I. Analyte Modifications		Not applicable ☒
II. Calibration and QC Requirements		Not applicable ☒
III. Preparation and Method Modifications		Not applicable ☐
The Laboratory shall: • Calculate and report results for the samples on the basis of 100% solids. The Laboratory is not required to determine the Percent (%) Solids for the samples. • Receive the composited samples dried and sieved prior to shipment to the Laboratory. The samples will be received in plastic baggies as individual aliquots with approximately 2 grams each. The aliquots shall not be re-combined and/or subsampled at the Laboratory. • Not increase the amount of acid reagents added to the sample to account for the increase in mass. • Store the samples at ambient temperature from the time of receipt until preparation. Do not refrigerate. • Remove and weigh the entire content within each baggie followed by digesting the entire sample per the SOW. • Prepare and analyze Matrix Spikes and Duplicates if additional aliquots were provided for these analyses.		
IV. Special Reporting Requirements		Not applicable ☐
• Report 100.0 on Form 1 for % Solids. • Ensure that the SDG Narrative is updated as stated in the SOW, including any technical and administrative problems encountered and the corrective action taken. These problems may include interference problems encountered during analysis, dilutions, re-analyses or re-preparations performed, and problems with the analysis of samples. Also include a discussion of any SOW Modified Analysis including a copy of the approved modification with the SDG Narrative.		

From: Hairston, Miles (NE) <Miles.Hairston@gdit.com>
Sent: Tuesday, November 12, 2024 9:31 AM
To: Sohil Jodhani; Deepak Parmar; Mohammad Ahmed
Cc: Goodrich.Donald@epa.gov; mark.wood@pwt.com
Subject: Region 08 | Case 51822 | Lab ACE | Issue Discrepancies with tags, jars, and/or COC | FINAL
Attachments: SKM_95824111109510.pdf; 51822-ASR.pdf

EXTERNAL EMAIL - This email was sent by a person from outside your organization. Exercise caution when clicking links, opening attachments or taking further action, before validating its authenticity.

Secured by Check Point

Good morning,

Please see the resolution below.

Issue: The routine analyses in this Case are scheduled with a 21-day TAT, but the received COC indicates a 14-day TAT. Please advise on how the laboratory may proceed.

Resolution: Per Region 8, the laboratory should proceed and have all soil samples analyzed as a 14-day TAT. The laboratory should note the issue in the SDG Narrative and proceed with the analysis of the samples.

Please note that the laboratory will have to contact the appropriate CLP COR should any defects need to be waived for this issue.

Thanks,
Miles Hairston
Associate Environmental Analyst
Under contract to EPA
QSS Coordinator – EPA Regions 1, 8, 7, and 9

Work Phone: +1 571-454-0346
Miles.Hairston@gdit.com
15036 Conference Center Drive
Chantilly, VA 20151
www.gdit.com

Leave alert: 11/11/2024

GENERAL DYNAMICS
Information Technology

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From: Goodrich, Donald <Goodrich.Donald@epa.gov>
Sent: Tuesday, November 12, 2024 9:08 AM
To: Hairston, Miles (NE) <Miles.Hairston@gdit.com>
Subject: RE: Region 08 | Case 51822 | Lab ACE | Issue Discrepancies with tags, jars, and/or COC

This Message Is From an External Sender

Please use caution with links, attachments, and any requests for credentials.

Good morning Miles,

Yes, please proceed and have all soil samples analyzed as 14-day TAT for this case.

Thanks,
Don

Don Goodrich
EPA Region 8
8LSASD-LSB | 5247
303-905-4024 (cell) | goodrich.donald@epa.gov

From: Hairston, Miles (NE) <Miles.Hairston@gdit.com>
Sent: Monday, November 11, 2024 9:27 AM
To: Goodrich, Donald <Goodrich.Donald@epa.gov>
Subject: RE: Region 08 | Case 51822 | Lab ACE | Issue Discrepancies with tags, jars, and/or COC

Caution: This email originated from outside EPA, please exercise additional caution when deciding whether to open attachments or click on provided links.

Good morning,

Would the Region please confirm if the laboratory should proceed with a 14-day TAT for all soils in Case 51822 as indicated in the below emails?

Thank you,

Casey Shaeffer

Associate Environmental Analyst
CLP QSS Coordinator – EPA Regions 4 & 10
Under contract to the EPA

T: (571) 454-2416
casey.shaeffer@gdit.com

15036 Conference Center Drive
Chantilly, VA 20151
www.gdit.com



Leave Alert: November 19, 2024

From: Mark R. Wood <mark.wood@pwt.com>
Sent: Monday, November 11, 2024 11:15 AM
To: Hairston, Miles (NE) <Miles.Hairston@gdit.com>; Goodrich, Donald <goodrich.donald@epa.gov>
Subject: RE: Region 08 | Case 51822 | Lab ACE | Issue Discrepancies with tags, jars, and/or COC

This Message Is From an External Sender

Please use caution with links, attachments, and any requests for credentials.

Yes, that is correct.

Mark Wood, PG
Senior Geologist
Pacific Western Technology, LTD
3000 Youngfield Street, Wheat Ridge, CO 80215
(O) 303-274-5400 x1014 | (c) 303-994-3853

From: Shaeffer, Casey <Casey.Shaeffer@gdit.com> **On Behalf Of** Hairston, Miles (NE)
Sent: Monday, November 11, 2024 8:51 AM
To: Mark R. Wood <mark.wood@pwt.com>; Hairston, Miles (NE) <Miles.Hairston@gdit.com>; Goodrich, Donald <goodrich.donald@epa.gov>
Subject: RE: Region 08 | Case 51822 | Lab ACE | Issue Discrepancies with tags, jars, and/or COC

Good morning,

Thank you for your response. To confirm, the routine soil samples and the soil samples under MA 3105.0 should all be analyzed under a 14-day TAT?

Thank you,

Casey Shaeffer

Associate Environmental Analyst
CLP QSS Coordinator – EPA Regions 4 & 10
Under contract to the EPA

T: (571) 454-2416
casey.shaeffer@gdit.com
15036 Conference Center Drive
Chantilly, VA 20151

Leave Alert: November 19, 2024

From: Mark R. Wood <mark.wood@pwt.com>
Sent: Monday, November 11, 2024 10:40 AM
To: Hairston, Miles (NE) <Miles.Hairston@gdit.com>; Goodrich, Donald <goodrich.donald@epa.gov>
Subject: RE: Region 08 | Case 51822 | Lab ACE | Issue Discrepancies with tags, jars, and/or COC

This Message Is From an External Sender

Please use caution with links, attachments, and any requests for credentials.

Hi Miles,
The dust/soil samples should be for 14 day TAT. I missed this reviewing the case 51822.
Thank you,
Mark Wood, PG
Senior Geologist
Pacific Western Technology, LTD
3000 Youngfield Street, Wheat Ridge, CO 80215
(O) 303-274-5400 x1014 | (c) 303-994-3853

From: Hairston, Miles (NE) <Miles.Hairston@gdit.com>
Sent: Monday, November 11, 2024 8:36 AM
To: Goodrich, Donald <goodrich.donald@epa.gov>
Cc: Mark R. Wood <mark.wood@pwt.com>
Subject: Region 08 | Case 51822 | Lab ACE | Issue Discrepancies with tags, jars, and/or COC

Good morning,

Please see the below issue from ACE.

Issue: The routine analyses in this Case are scheduled with a 21-day TAT, but the received COC indicates a 14-day TAT.
Please advise on how the laboratory may proceed.

Thank you,

Casey Shaeffer

Associate Environmental Analyst
CLP QSS Coordinator – EPA Regions 4 & 10
Under contract to the EPA

T: (571) 454-2416
casey.shaeffer@gdit.com
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Chantilly, VA 20151

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GENERAL DYNAMICS
a technology company

Leave Alert: November 19, 2024

From: Deepak Parmar <Deepak.Parmar@alliancetg.com>

Sent: Monday, November 11, 2024 10:09 AM

To: Hairston, Miles (NE) <Miles.Hairston@gdit.com>

Cc: Sohil Jodhani <Sohil.Jodhani@AllianceTG.com>

Subject: Region 08 | Case 51822 | Lab ACE | Issue Discrepancies with tags, jars, and/or COC

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Please use caution with links, attachments, and any requests for credentials.

Good morning,

As per ASR case 51822 is 21 days TAT for soil sample without MA but all COC received today for this case mentioned 14 days TAT there for lab would like to confirm they should proceed with analysis ?

Please see attachment for your reference.

Thanks & Regards,



Deepak Parmar

QA/QC

An Alliance Technical Group Company

Main: 908-789-8900

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www.alliancetg.com



FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MH2GN9

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51822 MA No. : 3105.0 SDG No.: MH2GN9

Matrix: SOIL Lab Sample ID: P4805-01

% Solids: 100 Date Received: 11/11/2024

Analytical Method: ICP_MS

Concentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.20	J	11/18/2024	0638
7440-38-2	Arsenic	4.0		11/18/2024	0638
7440-39-3	Barium	180		11/18/2024	0638
7440-41-7	Beryllium	0.46		11/18/2024	0638
7440-43-9	Cadmium	1.8		11/18/2024	0638
7440-47-3	Chromium	5.0		11/18/2024	0638
7440-48-4	Cobalt	3.0		11/18/2024	0638
7440-50-8	Copper	26		11/18/2024	0638
7439-92-1	Lead	140		11/18/2024	0638
7439-96-5	Manganese	250		11/18/2024	0638
7440-02-0	Nickel	14		11/18/2024	0638
7782-49-2	Selenium	0.31	J	11/18/2024	0638
7440-22-4	Silver	0.32		11/18/2024	0638
7440-28-0	Thallium	0.095	J	11/18/2024	0638
7440-62-2	Vanadium	12		11/18/2024	0638
7440-66-6	Zinc	170		11/18/2024	0638

NOTE: Hardness (total) is reported in mg/L

Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MH2GP0

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51822 MA No. : 3105.0 SDG No.: MH2GN9

Matrix: SOIL Lab Sample ID: P4805-04

% Solids: 100 Date Received: 11/11/2024

Analytical Method: ICP_MS

Concentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.18	J	11/18/2024	0650
7440-38-2	Arsenic	3.1		11/18/2024	0650
7440-39-3	Barium	170		11/18/2024	0650
7440-41-7	Beryllium	0.42		11/18/2024	0650
7440-43-9	Cadmium	1.7		11/18/2024	0650
7440-47-3	Chromium	6.1		11/18/2024	0650
7440-48-4	Cobalt	2.8		11/18/2024	0650
7440-50-8	Copper	25		11/18/2024	0650
7439-92-1	Lead	150		11/18/2024	0650
7439-96-5	Manganese	270		11/18/2024	0650
7440-02-0	Nickel	45		11/18/2024	0650
7782-49-2	Selenium	0.34	J	11/18/2024	0650
7440-22-4	Silver	0.31		11/18/2024	0650
7440-28-0	Thallium	0.088	J	11/18/2024	0650
7440-62-2	Vanadium	9.9		11/18/2024	0650
7440-66-6	Zinc	190		11/18/2024	0650

NOTE: Hardness (total) is reported in mg/L

Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MH2GP1

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51822 MA No. : 3105.0 SDG No.: MH2GN9

Matrix: SOIL Lab Sample ID: P4805-05

% Solids: 100 Date Received: 11/11/2024

Analytical Method: ICP_MS

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.20	J	11/18/2024	0653
7440-38-2	Arsenic	3.9		11/18/2024	0653
7440-39-3	Barium	170		11/18/2024	0653
7440-41-7	Beryllium	0.45		11/18/2024	0653
7440-43-9	Cadmium	1.8		11/18/2024	0653
7440-47-3	Chromium	4.3		11/18/2024	0653
7440-48-4	Cobalt	2.8		11/18/2024	0653
7440-50-8	Copper	24		11/18/2024	0653
7439-92-1	Lead	140		11/18/2024	0653
7439-96-5	Manganese	250		11/18/2024	0653
7440-02-0	Nickel	14		11/18/2024	0653
7782-49-2	Selenium	0.34	J	11/18/2024	0653
7440-22-4	Silver	0.31		11/18/2024	0653
7440-28-0	Thallium	0.075	J	11/18/2024	0653
7440-62-2	Vanadium	11		11/18/2024	0653
7440-66-6	Zinc	160		11/18/2024	0653

NOTE: Hardness (total) is reported in mg/L

Comments:

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MH2GP2

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51822 MA No. : 3105.0 SDG No.: MH2GN9

Matrix: SOIL Lab Sample ID: P4805-06

% Solids: 100 Date Received: 11/11/2024

Analytical Method: ICP_MS

Concentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.19	J	11/18/2024	0656
7440-38-2	Arsenic	4.1		11/18/2024	0656
7440-39-3	Barium	170		11/18/2024	0656
7440-41-7	Beryllium	0.45		11/18/2024	0656
7440-43-9	Cadmium	1.7		11/18/2024	0656
7440-47-3	Chromium	4.7		11/18/2024	0656
7440-48-4	Cobalt	3.2		11/18/2024	0656
7440-50-8	Copper	24		11/18/2024	0656
7439-92-1	Lead	150		11/18/2024	0656
7439-96-5	Manganese	270		11/18/2024	0656
7440-02-0	Nickel	18		11/18/2024	0656
7782-49-2	Selenium	0.28	J	11/18/2024	0656
7440-22-4	Silver	0.27		11/18/2024	0656
7440-28-0	Thallium	0.084	J	11/18/2024	0656
7440-62-2	Vanadium	13		11/18/2024	0656
7440-66-6	Zinc	160		11/18/2024	0656

NOTE: Hardness (total) is reported in mg/L

Comments:

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MH2GP3

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51822 MA No. : 3105.0 SDG No.: MH2GN9

Matrix: SOIL Lab Sample ID: P4805-07

% Solids: 100 Date Received: 11/11/2024

Analytical Method: ICP_MS

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.25	J	11/18/2024	0659
7440-38-2	Arsenic	4.3		11/18/2024	0659
7440-39-3	Barium	180		11/18/2024	0659
7440-41-7	Beryllium	0.50		11/18/2024	0659
7440-43-9	Cadmium	1.7		11/18/2024	0659
7440-47-3	Chromium	5.6		11/18/2024	0659
7440-48-4	Cobalt	3.1		11/18/2024	0659
7440-50-8	Copper	35		11/18/2024	0659
7439-92-1	Lead	210		11/18/2024	0659
7439-96-5	Manganese	260		11/18/2024	0659
7440-02-0	Nickel	32		11/18/2024	0659
7782-49-2	Selenium	0.33	J	11/18/2024	0659
7440-22-4	Silver	0.33		11/18/2024	0659
7440-28-0	Thallium	0.10	J	11/18/2024	0659
7440-62-2	Vanadium	13		11/18/2024	0659
7440-66-6	Zinc	210		11/18/2024	0659

NOTE: Hardness (total) is reported in mg/L

Comments:

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MH2GP4

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51822 MA No. : 3105.0 SDG No.: MH2GN9

Matrix: SOIL Lab Sample ID: P4805-08

% Solids: 100 Date Received: 11/11/2024

Analytical Method: ICP_MS

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.19	J	11/18/2024	0702
7440-38-2	Arsenic	2.8		11/18/2024	0702
7440-39-3	Barium	160		11/18/2024	0702
7440-41-7	Beryllium	0.41		11/18/2024	0702
7440-43-9	Cadmium	1.6		11/18/2024	0702
7440-47-3	Chromium	4.3		11/18/2024	0702
7440-48-4	Cobalt	2.5		11/18/2024	0702
7440-50-8	Copper	20		11/18/2024	0702
7439-92-1	Lead	160		11/18/2024	0702
7439-96-5	Manganese	260		11/18/2024	0702
7440-02-0	Nickel	7.4		11/18/2024	0702
7782-49-2	Selenium	0.29	J	11/18/2024	0702
7440-22-4	Silver	0.29		11/18/2024	0702
7440-28-0	Thallium	0.071	J	11/18/2024	0702
7440-62-2	Vanadium	9.0		11/18/2024	0702
7440-66-6	Zinc	170		11/18/2024	0702

NOTE: Hardness (total) is reported in mg/L

Comments:

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MH2GP5

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51822 MA No. : 3105.0 SDG No.: MH2GN9

Matrix: SOIL Lab Sample ID: P4805-09

% Solids: 100 Date Received: 11/11/2024

Analytical Method: ICP_MS

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.21	J	11/18/2024	0705
7440-38-2	Arsenic	3.7		11/18/2024	0705
7440-39-3	Barium	180		11/18/2024	0705
7440-41-7	Beryllium	0.44		11/18/2024	0705
7440-43-9	Cadmium	1.8		11/18/2024	0705
7440-47-3	Chromium	3.8		11/18/2024	0705
7440-48-4	Cobalt	2.8		11/18/2024	0705
7440-50-8	Copper	27		11/18/2024	0705
7439-92-1	Lead	170		11/18/2024	0705
7439-96-5	Manganese	260		11/18/2024	0705
7440-02-0	Nickel	16		11/18/2024	0705
7782-49-2	Selenium	0.29	J	11/18/2024	0705
7440-22-4	Silver	0.31		11/18/2024	0705
7440-28-0	Thallium	0.077	J	11/18/2024	0705
7440-62-2	Vanadium	10		11/18/2024	0705
7440-66-6	Zinc	180		11/18/2024	0705

NOTE: Hardness (total) is reported in mg/L

Comments:

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MH2GP6

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51822 MA No. : 3105.0 SDG No.: MH2GN9

Matrix: SOIL Lab Sample ID: P4805-10

% Solids: 100 Date Received: 11/11/2024

Analytical Method: ICP_MS

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.22	J	11/18/2024	0708
7440-38-2	Arsenic	3.7		11/18/2024	0708
7440-39-3	Barium	180		11/18/2024	0708
7440-41-7	Beryllium	0.48		11/18/2024	0708
7440-43-9	Cadmium	1.7		11/18/2024	0708
7440-47-3	Chromium	4.0		11/18/2024	0708
7440-48-4	Cobalt	2.9		11/18/2024	0708
7440-50-8	Copper	25		11/18/2024	0708
7439-92-1	Lead	130		11/18/2024	0708
7439-96-5	Manganese	240		11/18/2024	0708
7440-02-0	Nickel	24		11/18/2024	0708
7782-49-2	Selenium	0.32	J	11/18/2024	0708
7440-22-4	Silver	0.27		11/18/2024	0708
7440-28-0	Thallium	0.080	J	11/18/2024	0708
7440-62-2	Vanadium	11		11/18/2024	0708
7440-66-6	Zinc	140		11/18/2024	0708

NOTE: Hardness (total) is reported in mg/L

Comments:

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MH2GP7

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51822 MA No. : 3105.0 SDG No.: MH2GN9

Matrix: SOIL Lab Sample ID: P4805-11

% Solids: 100 Date Received: 11/11/2024

Analytical Method: ICP_MS

Concentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.31	J	11/18/2024	0711
7440-38-2	Arsenic	4.9		11/18/2024	0711
7440-39-3	Barium	230		11/18/2024	0711
7440-41-7	Beryllium	0.57		11/18/2024	0711
7440-43-9	Cadmium	2.8		11/18/2024	0711
7440-47-3	Chromium	7.3		11/18/2024	0711
7440-48-4	Cobalt	3.3		11/18/2024	0711
7440-50-8	Copper	37		11/18/2024	0711
7439-92-1	Lead	220		11/18/2024	0711
7439-96-5	Manganese	280		11/18/2024	0711
7440-02-0	Nickel	44		11/18/2024	0711
7782-49-2	Selenium	0.63	J	11/18/2024	0711
7440-22-4	Silver	0.43		11/18/2024	0711
7440-28-0	Thallium	0.12	J	11/18/2024	0711
7440-62-2	Vanadium	13		11/18/2024	0711
7440-66-6	Zinc	420		11/18/2024	0711

NOTE: Hardness (total) is reported in mg/L

Comments:

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MH2GP8

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51822 MA No. : 3105.0 SDG No.: MH2GN9

Matrix: SOIL Lab Sample ID: P4805-12

% Solids: 100 Date Received: 11/11/2024

Analytical Method: ICP_MS

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.17	J	11/18/2024	0714
7440-38-2	Arsenic	3.0		11/18/2024	0714
7440-39-3	Barium	160		11/18/2024	0714
7440-41-7	Beryllium	0.42		11/18/2024	0714
7440-43-9	Cadmium	1.8		11/18/2024	0714
7440-47-3	Chromium	4.3		11/18/2024	0714
7440-48-4	Cobalt	2.6		11/18/2024	0714
7440-50-8	Copper	22		11/18/2024	0714
7439-92-1	Lead	150		11/18/2024	0714
7439-96-5	Manganese	270		11/18/2024	0714
7440-02-0	Nickel	7.4		11/18/2024	0714
7782-49-2	Selenium	0.35	J	11/18/2024	0714
7440-22-4	Silver	0.29		11/18/2024	0714
7440-28-0	Thallium	0.072	J	11/18/2024	0714
7440-62-2	Vanadium	9.5		11/18/2024	0714
7440-66-6	Zinc	190		11/18/2024	0714

NOTE: Hardness (total) is reported in mg/L

Comments:

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INORGANIC ANALYSIS DATA SHEET

MH2GP9

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51822 MA No. : 3105.0 SDG No.: MH2GN9

Matrix: SOIL Lab Sample ID: P4805-13

% Solids: 100 Date Received: 11/11/2024

Analytical Method: ICP_MS

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.25	J	11/18/2024	0717
7440-38-2	Arsenic	4.0		11/18/2024	0717
7440-39-3	Barium	180		11/18/2024	0717
7440-41-7	Beryllium	0.45		11/18/2024	0717
7440-43-9	Cadmium	1.9		11/18/2024	0717
7440-47-3	Chromium	4.8		11/18/2024	0717
7440-48-4	Cobalt	2.8		11/18/2024	0717
7440-50-8	Copper	25		11/18/2024	0717
7439-92-1	Lead	160		11/18/2024	0717
7439-96-5	Manganese	260		11/18/2024	0717
7440-02-0	Nickel	17		11/18/2024	0717
7782-49-2	Selenium	0.33	J	11/18/2024	0717
7440-22-4	Silver	0.30		11/18/2024	0717
7440-28-0	Thallium	0.073	J	11/18/2024	0717
7440-62-2	Vanadium	11		11/18/2024	0717
7440-66-6	Zinc	180		11/18/2024	0717

NOTE: Hardness (total) is reported in mg/L

Comments:

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MH2GQ0

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51822 MA No. : 3105.0 SDG No.: MH2GN9

Matrix: SOIL Lab Sample ID: P4805-14

% Solids: 100 Date Received: 11/11/2024

Analytical Method: ICP_MS

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.23	J	11/18/2024	0720
7440-38-2	Arsenic	4.0		11/18/2024	0720
7440-39-3	Barium	180		11/18/2024	0720
7440-41-7	Beryllium	0.52		11/18/2024	0720
7440-43-9	Cadmium	1.7		11/18/2024	0720
7440-47-3	Chromium	5.1		11/18/2024	0720
7440-48-4	Cobalt	3.2		11/18/2024	0720
7440-50-8	Copper	22		11/18/2024	0720
7439-92-1	Lead	140		11/18/2024	0720
7439-96-5	Manganese	260		11/18/2024	0720
7440-02-0	Nickel	23		11/18/2024	0720
7782-49-2	Selenium	0.35	J	11/18/2024	0720
7440-22-4	Silver	0.29		11/18/2024	0720
7440-28-0	Thallium	0.10	J	11/18/2024	0720
7440-62-2	Vanadium	12		11/18/2024	0720
7440-66-6	Zinc	140		11/18/2024	0720

NOTE: Hardness (total) is reported in mg/L

Comments:

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MH2GQ1

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51822 MA No. : 3105.0 SDG No.: MH2GN9

Matrix: SOIL Lab Sample ID: P4805-15

% Solids: 100 Date Received: 11/11/2024

Analytical Method: ICP_MS

Concentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.23	J	11/18/2024	0723
7440-38-2	Arsenic	4.6		11/18/2024	0723
7440-39-3	Barium	180		11/18/2024	0723
7440-41-7	Beryllium	0.53		11/18/2024	0723
7440-43-9	Cadmium	1.9		11/18/2024	0723
7440-47-3	Chromium	4.7		11/18/2024	0723
7440-48-4	Cobalt	3.1		11/18/2024	0723
7440-50-8	Copper	26		11/18/2024	0723
7439-92-1	Lead	150		11/18/2024	0723
7439-96-5	Manganese	260		11/18/2024	0723
7440-02-0	Nickel	23		11/18/2024	0723
7782-49-2	Selenium	0.41	J	11/18/2024	0723
7440-22-4	Silver	0.41		11/18/2024	0723
7440-28-0	Thallium	0.11	J	11/18/2024	0723
7440-62-2	Vanadium	14		11/18/2024	0723
7440-66-6	Zinc	150		11/18/2024	0723

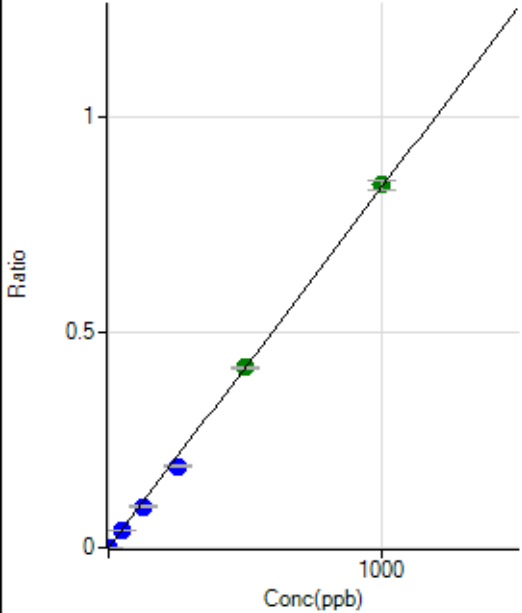
NOTE: Hardness (total) is reported in mg/L

Comments:

Batch Folder: D:\Agilent\ICPMH\1\DATA\P7111724 MS.b\
Analysis File: P7111724 MS.batch.bin
DA Date-Time: 2024-11-18 10:07:58
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	004CALB.d	S00	2024-11-18 04:31:53
2	006CALS.d	S02	2024-11-18 04:38:22
3	007CALS.d	S03	2024-11-18 04:41:36
4	008CALS.d	S04	2024-11-18 04:44:28
5	009CALS.d	S05	2024-11-18 04:47:12
6	010CALS.d	S06	2024-11-18 04:49:58
7	011CALS.d	S07	2024-11-18 04:52:42
8	012CALS.d	S08	2024-11-18 04:55:28

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	50.00	0.0000	P	13.
2	☐	1.000	1.010	2922.55	0.0009	P	9.2
3	☐	50.000	47.755	138178.71	0.0399	P	0.7
4	☐	125.000	114.365	337217.90	0.0955	P	5.3
5	☐	250.000	226.665	653714.75	0.1893	P	4.3
6	☐	500.000	499.362	1391738.21	0.4171	A	1.4
7	☐	1000.000	1007.594	2568275.81	0.8416	A	2.8
8	☐			466.68	0.0002	P	26.

$y = 8.3521E-004 * x + 1.5119E-005$

R = 0.9997

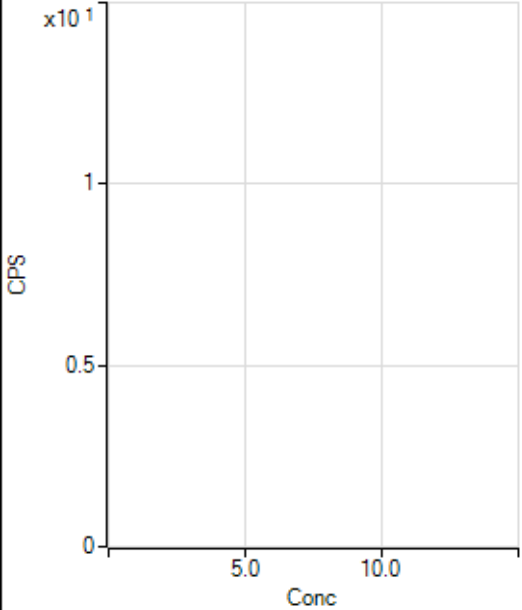
DL = 0.007302

BEC = 0.0181

Weight: <None>

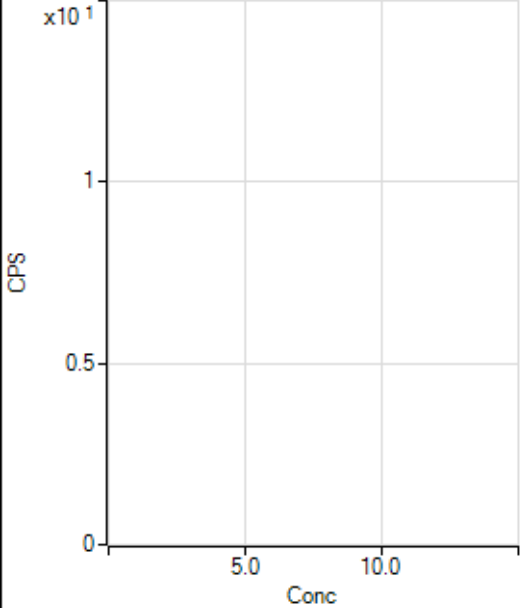
Min Conc: 0

12 C [No Gas] No available calibration points



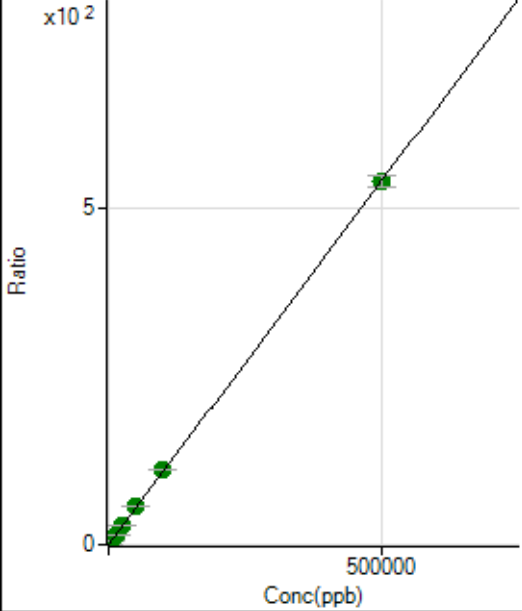
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐						
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
7	☐						
8	☐						

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	37550.16	0.0265	P	1.0
2	☐	500.000	473.149	766897.66	0.5376	P	4.1
3	☐	5000.000	5412.149	8132767.52	5.8729	A	0.5
4	☐	12500.000	13562.832	19604884.15	14.6777	A	0.8
5	☐	25000.000	27315.333	38858518.59	29.5338	A	1.5
6	☐	50000.000	53542.137	75967562.20	57.8652	A	0.2
7	☐	100000.00	102647.78	148283637.79	110.9115	A	0.9
8	☐	500000.00	498969.79	696557438.51	539.0372	A	3.0

$y = 0.0011 * x + 0.0265$

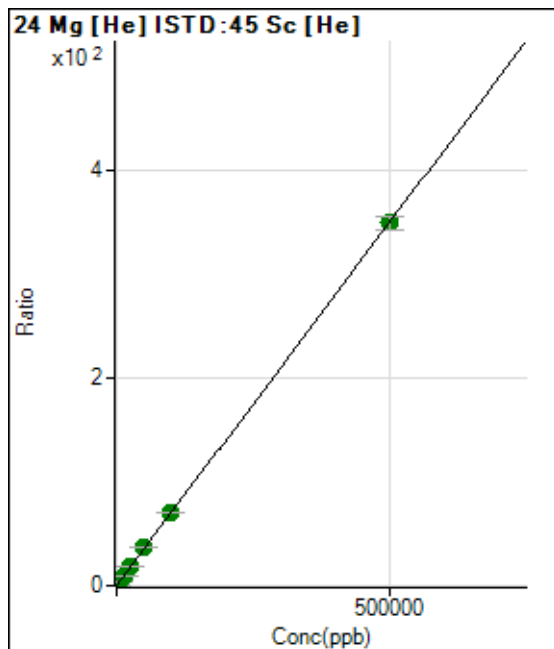
$R = 1.0000$

$DL = 0.7311$

$BEC = 24.52$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1105.60	0.0008	P	2.0
2	☐	500.000	478.404	479016.54	0.3358	P	4.1
3	☐	5000.000	5356.265	5195214.61	3.7516	A	0.2
4	☐	12500.000	13424.283	12556872.59	9.4014	A	2.1
5	☐	25000.000	26950.093	24830548.24	18.8732	A	1.6
6	☐	50000.000	52498.468	48255923.17	36.7640	A	1.7
7	☐	100000.00	101036.51	94593727.48	70.7538	A	1.0
8	☐	500000.00	499418.69	451865762.15	349.7296	A	3.8

$$y = 7.0027E-004 * x + 7.7978E-004$$

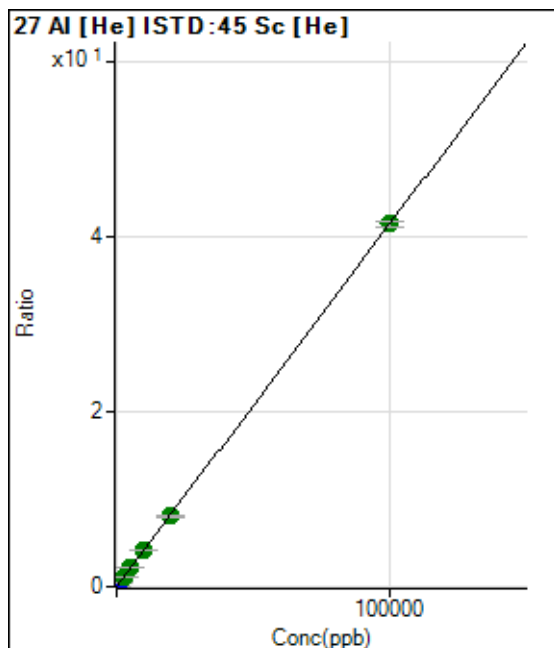
R = 1.0000

DL = 0.06666

BEC = 1.114

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	484.46	0.0003	P	15.
2	☐	20.000	18.078	11169.69	0.0078	P	4.8
3	☐	1000.000	992.031	569606.99	0.4113	P	0.2
4	☐	2500.000	2637.540	1459928.66	1.0930	A	3.2
5	☐	5000.000	5228.971	2850701.31	2.1666	A	1.7
6	☐	10000.000	10015.761	5446718.74	4.1498	A	2.1
7	☐	20000.000	19434.289	10764887.90	8.0517	A	1.1
8	☐	100000.00	100096.75	53607145.87	41.4693	A	1.2

$$y = 4.1429E-004 * x + 3.4185E-004$$

R = 1.0000

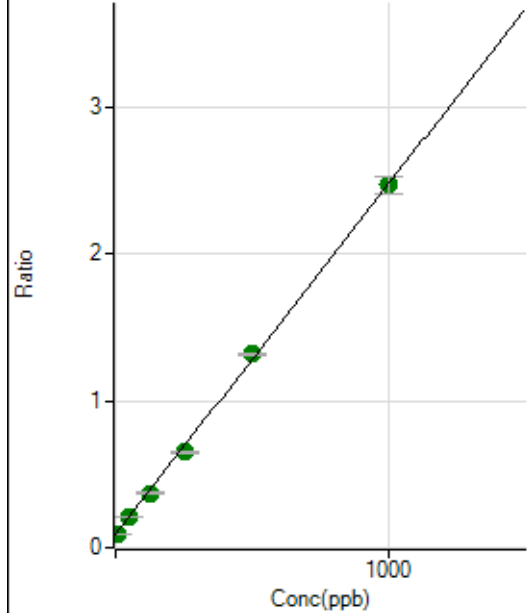
DL = 0.3876

BEC = 0.8252

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1546319.53	0.0912	A	0.8
2	☐	10.000	1.443	1591449.66	0.0947	A	1.7
3	☐	50.000	51.824	3568625.29	0.2147	A	0.5
4	☐	125.000	117.141	6096745.67	0.3703	A	4.6
5	☐	250.000	233.866	10328371.51	0.6483	A	3.0
6	☐	500.000	514.837	20146464.70	1.3176	A	0.5
7	☐	1000.000	997.592	36118904.74	2.4675	A	4.7
8	☐			1367816.04	0.0921	A	0.9

$$y = 0.0024 * x + 0.0912$$

$$R = 0.9997$$

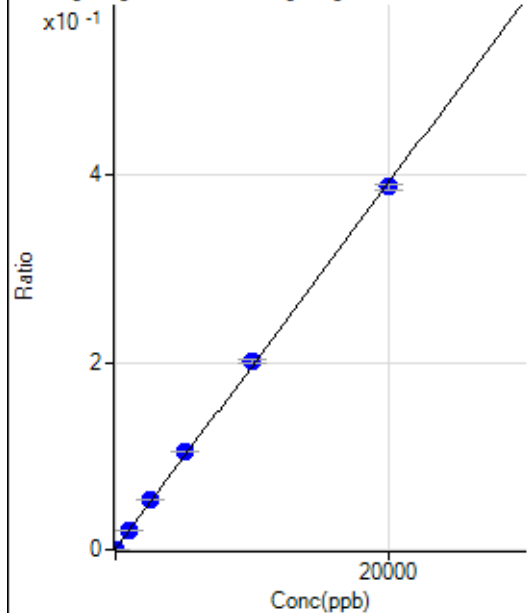
$$DL = 0.8663$$

$$BEC = 38.3$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-15.215	510.01	0.0004	P	5.2
2	☐	0.000	15.215	1362.30	0.0010	P	3.6
3	☐	1000.000	1056.831	29522.98	0.0213	P	1.9
4	☐	2500.000	2722.645	71982.59	0.0539	P	0.5
5	☐	5000.000	5302.120	137263.23	0.1043	P	0.7
6	☐	10000.000	10236.789	263556.54	0.2008	P	2.2
7	☐	20000.000	19775.403	517784.05	0.3873	P	1.2
8	☐			635.58	0.0005	P	9.2

$$y = 1.9551E-005 * x + 6.5726E-004$$

$$R = 0.9997$$

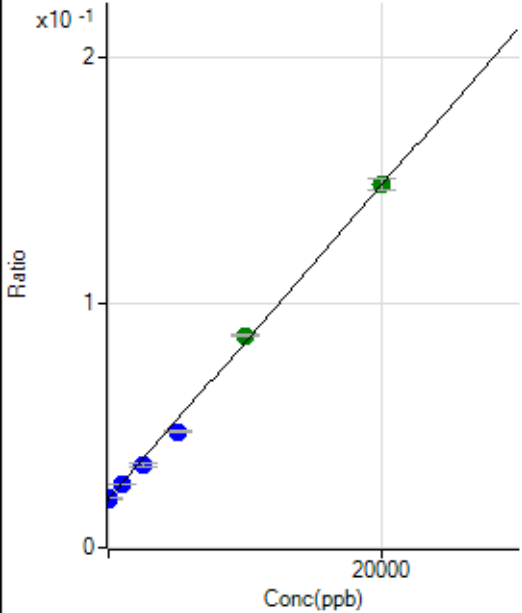
$$DL = 4.104$$

$$BEC = 33.62$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-66.301	331686.22	0.0196	P	0.8
2	☐	0.000	66.301	343235.03	0.0204	P	0.8
3	☐	1000.000	949.018	433225.80	0.0261	P	1.0
4	☐	2500.000	2141.370	554819.28	0.0337	P	2.9
5	☐	5000.000	4279.877	754537.43	0.0474	P	2.5
6	☐	10000.000	10415.521	1324028.79	0.0866	A	1.0
7	☐	20000.000	20019.648	2167105.25	0.1480	A	3.3
8	☐			263076.55	0.0177	P	0.6

$y = 6.3939E-006 * x + 0.0200$

R = 0.9989

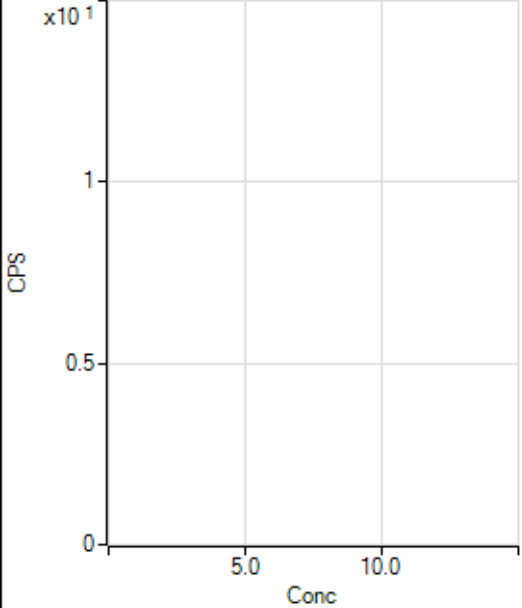
DL = 75.27

BEC = 3127

Weight: <None>

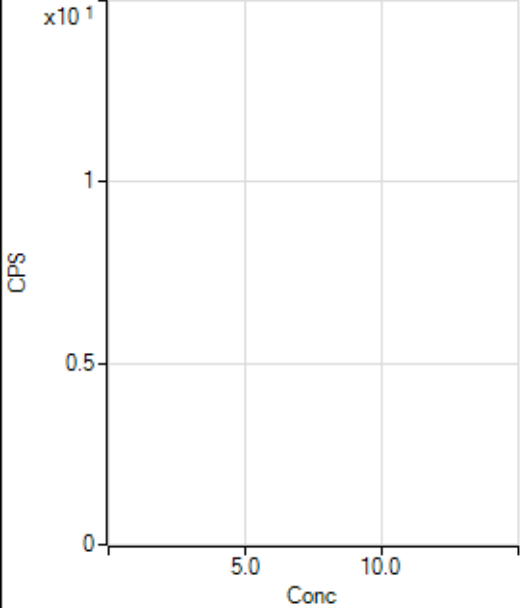
Min Conc: 0

35 Cl [No Gas] No available calibration points



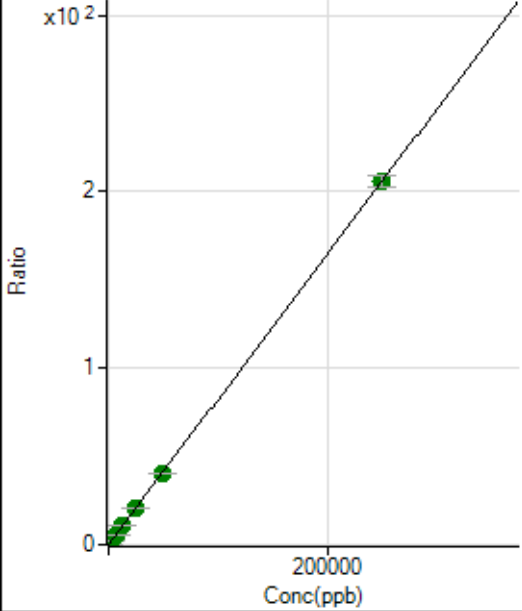
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐						
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
7	☐						
8	☐						

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	80281.40	0.0566	P	0.4
2	☐	500.000	502.535	669771.63	0.4695	P	4.1
3	☐	2500.000	2626.302	3066653.32	2.2145	A	0.9
4	☐	6250.000	6615.354	7335659.96	5.4920	A	0.8
5	☐	12500.000	12904.627	14025389.23	10.6595	A	0.5
6	☐	25000.000	25246.597	27302000.43	20.8001	A	1.7
7	☐	50000.000	49002.604	53901946.97	40.3188	A	1.5
8	☐	250000.00	250144.18	265655398.26	205.5834	A	3.2

$y = 8.2163E-004 * x + 0.0566$

$R = 1.0000$

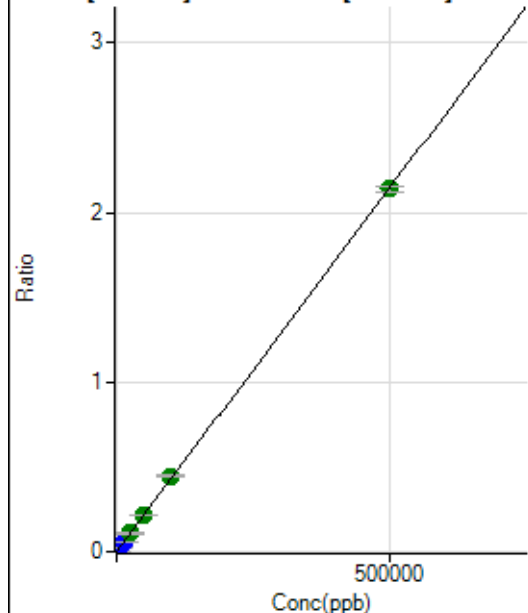
$DL = 0.9178$

$BEC = 68.91$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1400.08	0.0001	P	9.6
2	☐	500.000	513.720	38405.15	0.0023	P	0.8
3	☐	5000.000	5307.874	379567.01	0.0228	P	0.8
4	☐	12500.000	12703.382	898039.91	0.0545	P	4.1
5	☐	25000.000	25261.413	1726355.69	0.1084	A	3.3
6	☐	50000.000	50996.900	3343837.84	0.2187	A	1.0
7	☐	100000.00	104209.44	6542554.63	0.4468	A	2.8
8	☐	500000.00	499037.17	31767469.80	2.1392	A	1.6

$$y = 4.2866E-006 * x + 8.2617E-005$$

R = 1.0000

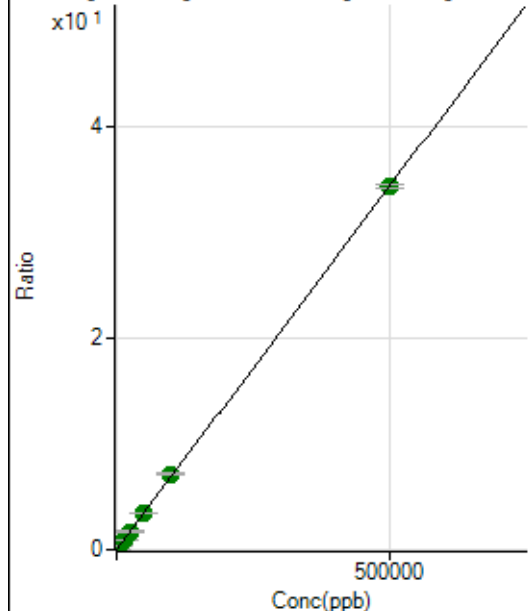
DL = 5.528

BEC = 19.27

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	39287.64	0.0023	P	0.8
2	☐	500.000	518.791	638989.42	0.0380	P	0.6
3	☐	5000.000	5245.568	6037792.20	0.3632	A	1.1
4	☐	12500.000	12602.310	14319011.03	0.8694	A	2.9
5	☐	25000.000	25022.711	27463497.09	1.7240	A	3.6
6	☐	50000.000	50851.987	53534278.65	3.5012	A	0.1
7	☐	100000.00	103872.11	104688602.88	7.1492	A	3.0
8	☐	500000.00	499134.21	510039454.62	34.3449	A	1.1

$$y = 6.8804E-005 * x + 0.0023$$

R = 1.0000

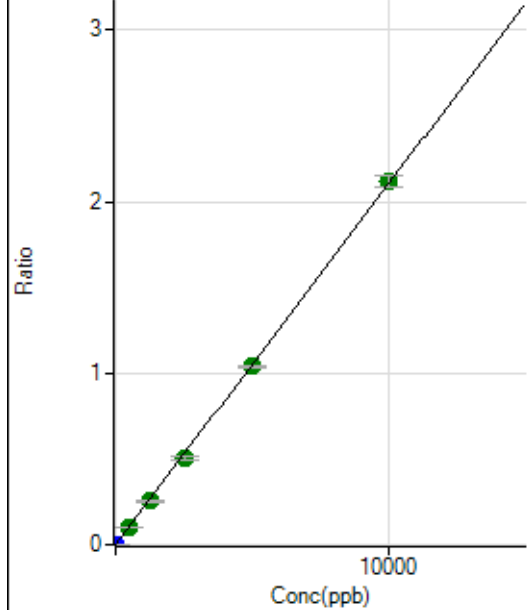
DL = 0.7792

BEC = 33.69

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1285.62	0.0001	P	4.0
2	☐	5.000	4.803	18242.21	0.0011	P	2.1
3	☐	500.000	498.835	1744104.68	0.1049	A	1.1
4	☐	1250.000	1212.149	4196599.28	0.2549	A	4.0
5	☐	2500.000	2412.545	8079377.52	0.5072	A	3.5
6	☐	5000.000	4932.389	15852773.10	1.0368	A	0.6
7	☐	10000.000	10060.459	30964772.04	2.1147	A	3.2
8	☐			5452.18	0.0004	P	25.

$$y = 2.1019E-004 * x + 7.5849E-005$$

R = 0.9999

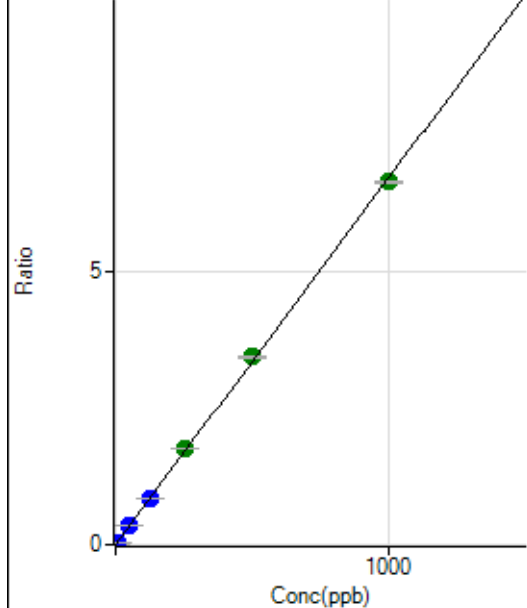
DL = 0.04316

BEC = 0.3609

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	32.22	0.0000	P	38.
2	☐	5.000	4.892	47007.44	0.0330	P	4.2
3	☐	50.000	50.493	470706.28	0.3399	P	0.3
4	☐	125.000	126.822	1140291.89	0.8537	P	0.8
5	☐	250.000	263.676	2335416.42	1.7749	A	0.9
6	☐	500.000	512.978	4533118.72	3.4531	A	0.8
7	☐	1000.000	989.840	8908357.23	6.6630	A	0.5
8	☐			2379.10	0.0018	P	8.2

$$y = 0.0067 * x + 2.2686E-005$$

R = 0.9998

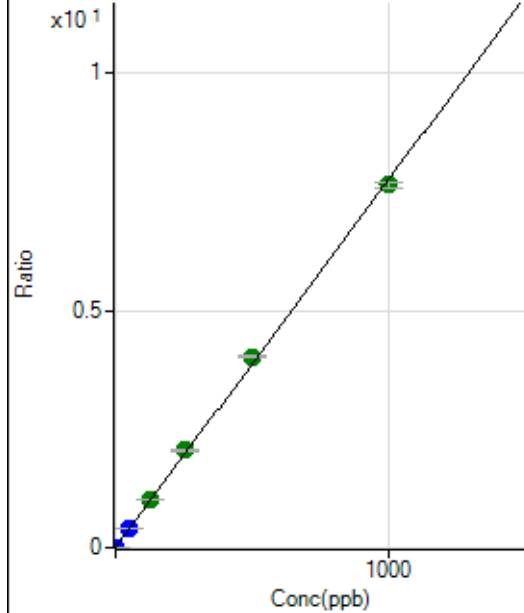
DL = 0.003886

BEC = 0.00337

Weight: <None>

Min Conc: 0

52 Cr [He] ISTD:45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	4728.57	0.0033	P	1.0
2	☐	2.000	2.020	27096.70	0.0190	P	4.0
3	☐	50.000	51.109	553208.01	0.3995	P	0.5
4	☐	125.000	131.355	1364371.42	1.0215	A	1.6
5	☐	250.000	265.204	2708788.92	2.0590	A	2.0
6	☐	500.000	517.822	5273185.62	4.0171	A	1.1
7	☐	1000.000	986.438	10226618.11	7.6494	A	1.4
8	☐			19931.03	0.0154	P	2.8

$$y = 0.0078 * x + 0.0033$$

$$R = 0.9996$$

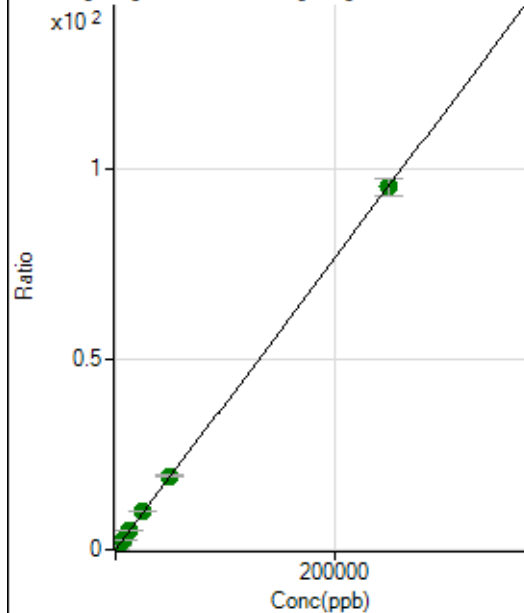
$$DL = 0.01278$$

$$BEC = 0.4302$$

Weight: <None>

Min Conc: 0

54 Fe [He] ISTD:45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	5172.04	0.0036	P	2.7
2	☐	50.000	54.737	35064.11	0.0246	P	4.6
3	☐	2500.000	2701.610	1435832.88	1.0369	A	0.5
4	☐	6250.000	6920.059	3539694.88	2.6502	A	2.7
5	☐	12500.000	13712.231	6904536.50	5.2478	A	1.2
6	☐	25000.000	26390.704	13252165.78	10.0966	A	2.1
7	☐	50000.000	50464.254	25805857.95	19.3034	A	1.9
8	☐	250000.00	249688.69	123364925.94	95.4957	A	4.6

$$y = 3.8244E-004 * x + 0.0036$$

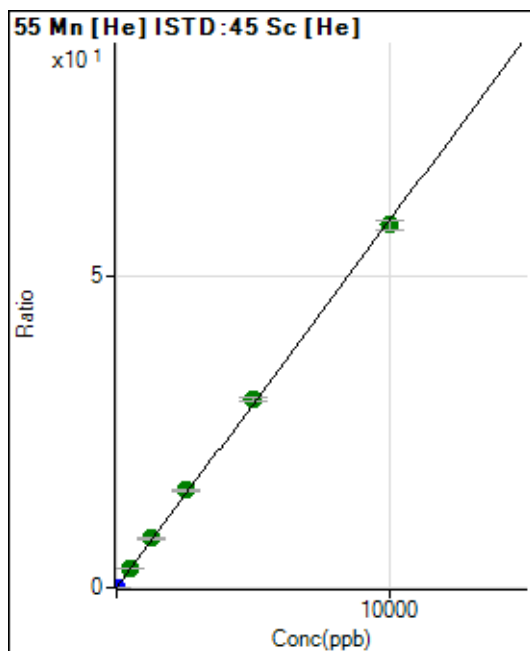
$$R = 1.0000$$

$$DL = 0.7671$$

$$BEC = 9.539$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1462.31	0.0010	P	6.5
2	☐	1.000	1.062	10376.99	0.0073	P	3.0
3	☐	500.000	527.615	4295512.30	3.1019	A	1.2
4	☐	1250.000	1339.884	10519716.79	7.8758	A	2.2
5	☐	2500.000	2647.280	20472748.31	15.5597	A	0.6
6	☐	5000.000	5138.890	39643051.91	30.2035	A	2.1
7	☐	10000.000	9881.119	77633078.84	58.0746	A	2.7
8	☐			41011.32	0.0317	P	2.2

$$y = 0.0059 * x + 0.0010$$

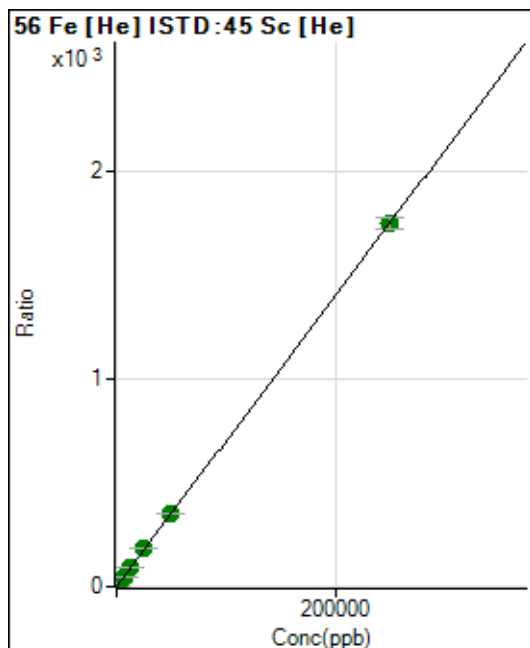
$$R = 0.9997$$

$$DL = 0.03408$$

$$BEC = 0.1754$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	44206.99	0.0312	P	0.7
2	☐	50.000	52.925	573611.39	0.4021	P	3.8
3	☐	2500.000	2692.786	26174913.50	18.9017	A	0.8
4	☐	6250.000	6897.678	64611271.26	48.3689	A	1.8
5	☐	12500.000	13551.773	124996018.14	94.9996	A	0.6
6	☐	25000.000	26240.035	241408094.18	183.9167	A	1.8
7	☐	50000.000	50182.165	470178495.22	351.6990	A	1.7
8	☐	250000.00	249768.85	2261828748.5	1,750.367	A	3.1

$$y = 0.0070 * x + 0.0312$$

$$R = 1.0000$$

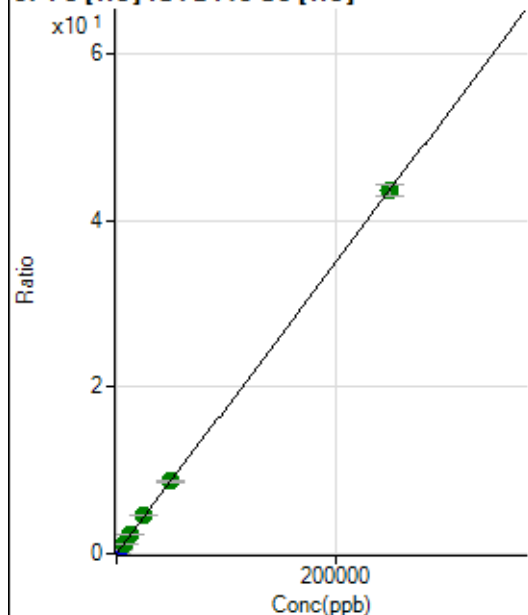
$$DL = 0.08746$$

$$BEC = 4.449$$

Weight: <None>

Min Conc: 0

57 Fe [He] ISTD:45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	2251.31	0.0016	P	2.7
2	☐	50.000	55.791	16135.43	0.0113	P	6.2
3	☐	2500.000	2710.874	656826.79	0.4743	P	0.2
4	☐	6250.000	6891.347	1607356.94	1.2033	A	1.2
5	☐	12500.000	13569.004	3115418.95	2.3678	A	0.8
6	☐	25000.000	26082.106	5972342.48	4.5498	A	1.3
7	☐	50000.000	50076.158	11675905.38	8.7339	A	2.0
8	☐	250000.00	249804.96	56290528.60	43.5630	A	3.3

$$y = 1.7438\text{E-}004 * x + 0.0016$$

$$R = 1.0000$$

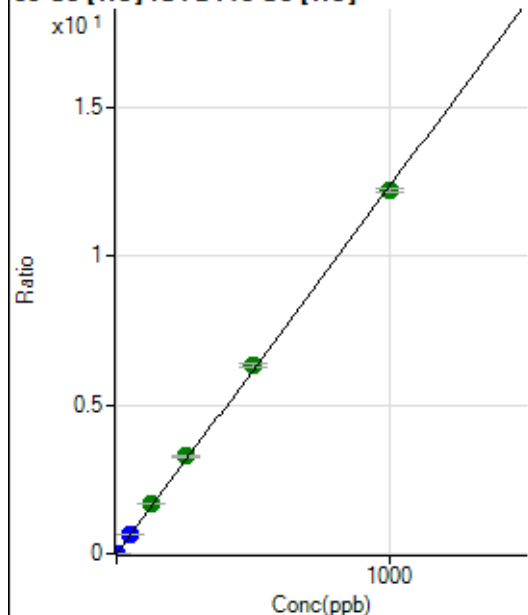
$$DL = 0.7341$$

$$BEC = 9.104$$

Weight: <None>

Min Conc: 0

59 Co [He] ISTD:45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	226.67	0.0002	P	8.9
2	☐	1.000	1.050	18737.35	0.0131	P	2.5
3	☐	50.000	51.800	885825.19	0.6397	P	0.3
4	☐	125.000	138.172	2278795.25	1.7060	A	0.3
5	☐	250.000	265.337	4310413.27	3.2760	A	0.7
6	☐	500.000	512.576	8306604.74	6.3284	A	1.8
7	☐	1000.000	988.141	16310583.51	12.1998	A	1.2
8	☐			40726.26	0.0315	P	3.1

$$y = 0.0123 * x + 1.5986\text{E-}004$$

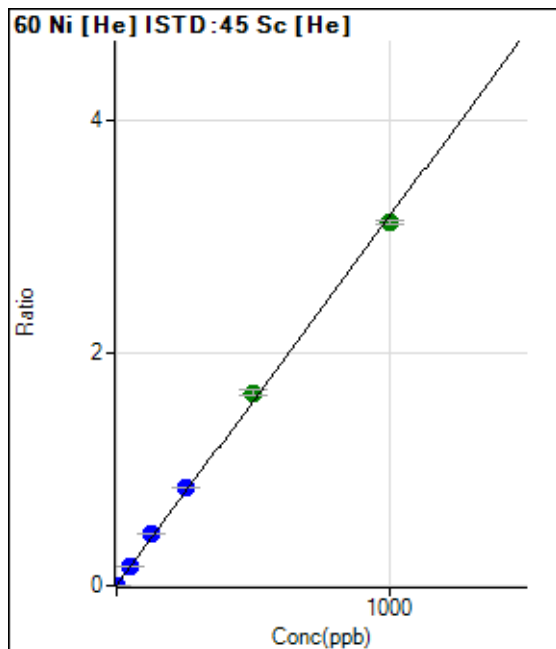
$$R = 0.9997$$

$$DL = 0.00347$$

$$BEC = 0.01295$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1064.49	0.0008	P	3.1
2	☐	1.000	0.932	5286.53	0.0037	P	6.7
3	☐	50.000	52.601	232083.87	0.1676	P	0.8
4	☐	125.000	140.654	596896.52	0.4469	P	1.5
5	☐	250.000	266.061	1111300.06	0.8447	P	1.3
6	☐	500.000	522.812	2177502.75	1.6591	A	2.8
7	☐	1000.000	982.492	4167384.14	3.1171	A	1.1
8	☐			11770.25	0.0091	P	3.8

$$y = 0.0032 * x + 7.5078E-004$$

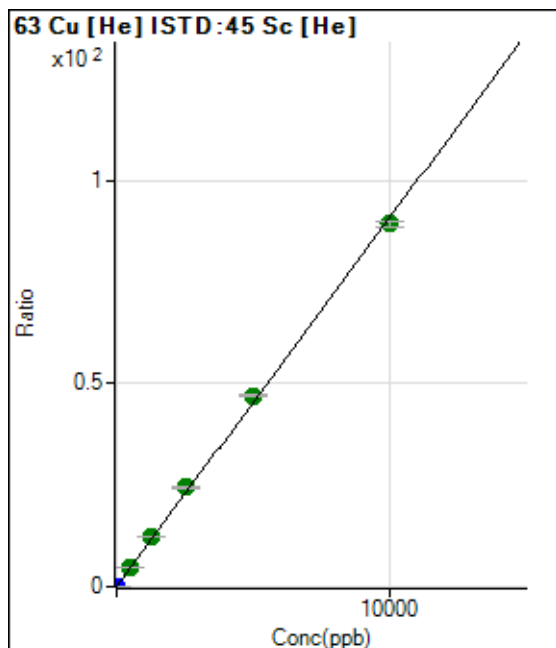
R = 0.9994

DL = 0.02187

BEC = 0.2367

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1833.47	0.0013	P	1.2
2	☐	2.000	1.959	27202.55	0.0191	P	4.6
3	☐	500.000	541.881	6812481.91	4.9195	A	0.7
4	☐	1250.000	1367.260	16577727.53	12.4109	A	0.6
5	☐	2500.000	2699.957	32244238.96	24.5068	A	1.5
6	☐	5000.000	5186.969	61796155.75	47.0795	A	1.8
7	☐	10000.000	9839.775	119399161.55	89.3096	A	1.4
8	☐			21615.75	0.0167	P	7.0

$$y = 0.0091 * x + 0.0013$$

R = 0.9995

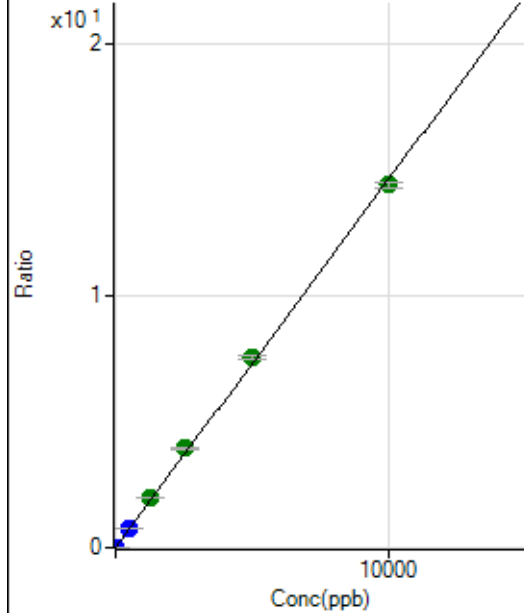
DL = 0.005181

BEC = 0.1425

Weight: <None>

Min Conc: 0

66 Zn [He] ISTD:45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	4691.90	0.0033	P	1.1
2	☐	2.000	4.550	14190.19	0.0099	P	4.6
3	☐	500.000	530.732	1077052.36	0.7778	P	1.0
4	☐	1250.000	1345.701	2627434.98	1.9670	A	0.1
5	☐	2500.000	2704.330	5196485.34	3.9496	A	1.3
6	☐	5000.000	5167.220	9901343.32	7.5436	A	2.0
7	☐	10000.000	9851.808	19223800.96	14.3796	A	1.8
8	☐			7808.78	0.0060	P	5.1

$$y = 0.0015 * x + 0.0033$$

$$R = 0.9995$$

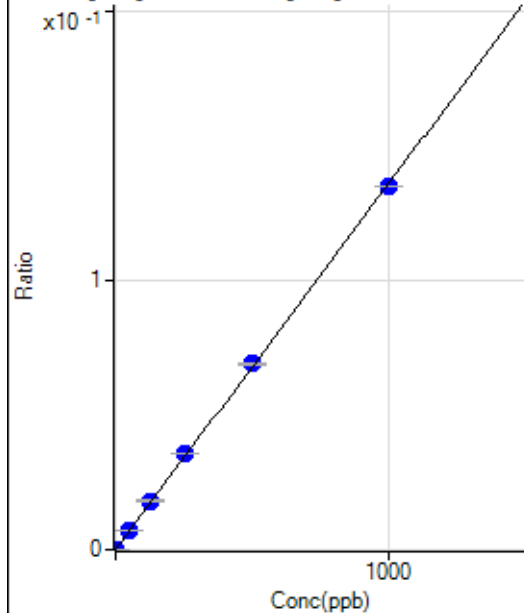
$$DL = 0.07359$$

$$BEC = 2.268$$

Weight: <None>

Min Conc: 0

75 As [He] ISTD:89 Y [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	21.11	0.0000	P	46.
2	☐	1.000	1.072	1504.54	0.0001	P	7.7
3	☐	50.000	53.044	70755.25	0.0072	P	0.8
4	☐	125.000	133.593	172240.90	0.0182	P	1.8
5	☐	250.000	263.016	336758.11	0.0357	P	0.6
6	☐	500.000	507.445	650088.94	0.0690	P	0.6
7	☐	1000.000	991.797	1272738.85	0.1348	P	0.0
8	☐			748.92	0.0001	P	14.

$$y = 1.3589E-004 * x + 2.0888E-006$$

$$R = 0.9998$$

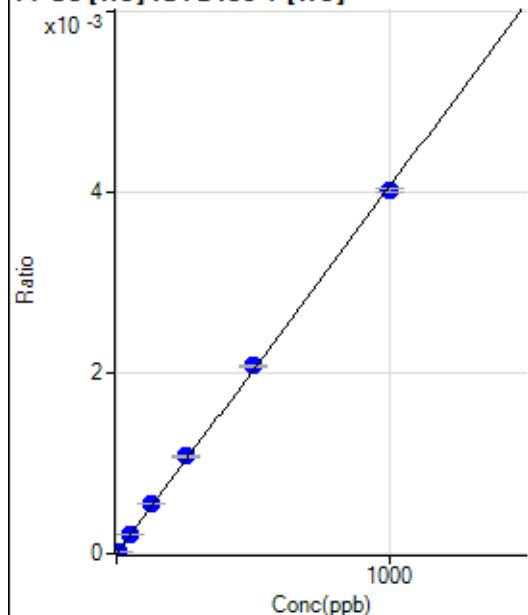
$$DL = 0.02122$$

$$BEC = 0.01537$$

Weight: <None>

Min Conc: 0

77 Se [He] ISTD:89 Y [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	5.000	5.276	217.78	0.0000	P	18.
3	☐	50.000	51.436	2051.28	0.0002	P	4.8
4	☐	125.000	136.663	5269.88	0.0006	P	1.6
5	☐	250.000	266.022	10189.16	0.0011	P	2.3
6	☐	500.000	511.737	19609.74	0.0021	P	0.9
7	☐	1000.000	988.595	37947.45	0.0040	P	1.0
8	☐			8.89	0.0000	P	57.

$$y = 4.0647\text{E-}006 * x + 0.0000\text{E+}000$$

$$R = 0.9997$$

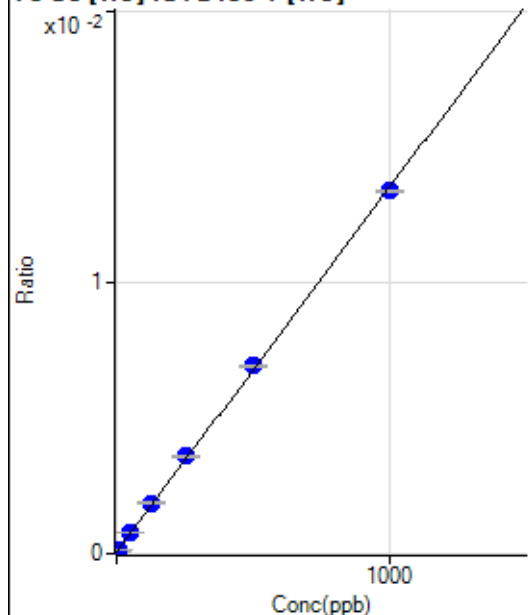
$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

78 Se [He] ISTD:89 Y [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	570.02	0.0001	P	8.6
2	☐	5.000	4.432	1178.95	0.0001	P	8.6
3	☐	50.000	53.289	7589.79	0.0008	P	2.0
4	☐	125.000	135.334	17813.03	0.0019	P	2.0
5	☐	250.000	262.154	33770.74	0.0036	P	0.9
6	☐	500.000	510.145	65257.45	0.0069	P	0.4
7	☐	1000.000	990.436	126407.71	0.0134	P	0.8
8	☐			515.57	0.0001	P	2.8

$$y = 1.3458\text{E-}005 * x + 5.6255\text{E-}005$$

$$R = 0.9998$$

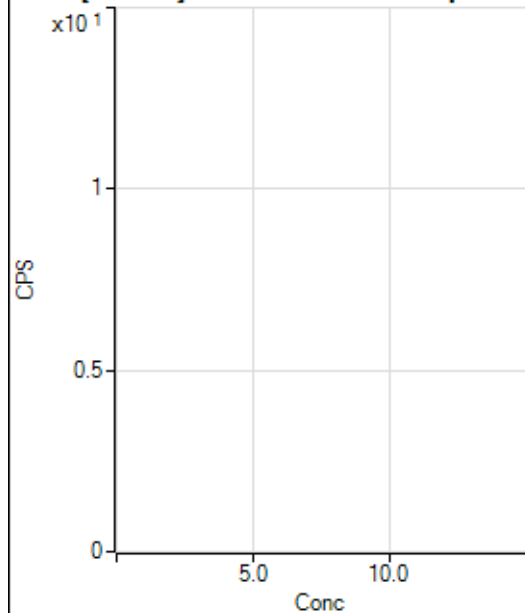
$$DL = 1.079$$

$$BEC = 4.18$$

Weight: <None>

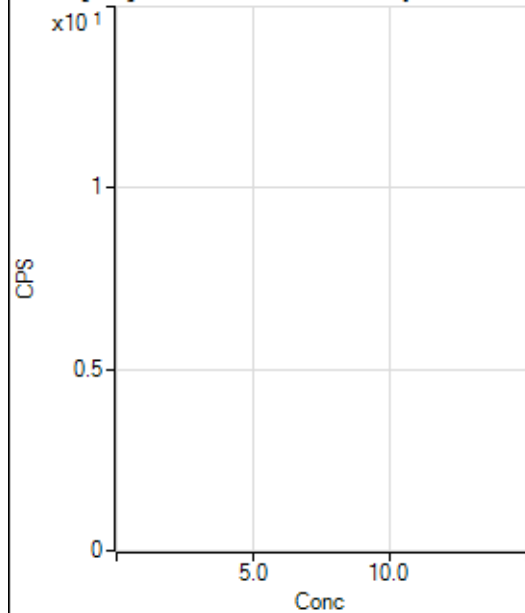
Min Conc: 0

81 Br [No Gas] No available calibration points



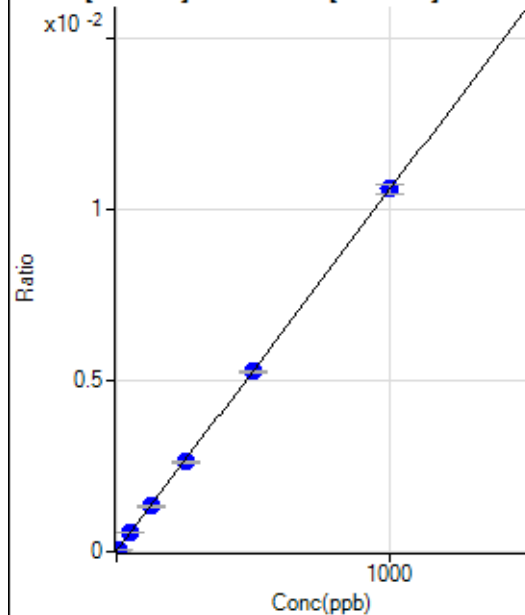
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			16373.64		P	0.6
2	☐			17065.52		P	3.0
3	☐			16613.89		P	1.7
4	☐			16087.78		P	2.2
5	☐			15770.78		P	0.8
6	☐			15555.02		P	1.7
7	☐			15819.69		P	1.0
8	☐			17206.79		P	1.7

81 Br [He] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			101.12		P	13.
2	☐			96.67		P	19.
3	☐			93.33		P	12.
4	☐			111.11		P	13.
5	☐			116.67		P	17.
6	☐			111.11		P	22.
7	☐			135.56		P	32.
8	☐			215.56		P	8.5

82 Se [No Gas] ISTD:89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	599.05	0.0000	P	5.1
2	☐	5.000	5.380	2880.62	0.0001	P	3.5
3	☐	50.000	51.240	22141.91	0.0006	P	1.7
4	☐	125.000	125.465	52736.39	0.0013	P	4.2
5	☐	250.000	246.436	101556.91	0.0026	P	3.5
6	☐	500.000	496.902	197461.99	0.0053	P	0.5
7	☐	1000.000	1002.318	384484.09	0.0106	P	2.6
8	☐			771.40	0.0000	P	6.0

$y = 1.0565E-005 * x + 1.4967E-005$

$R = 1.0000$

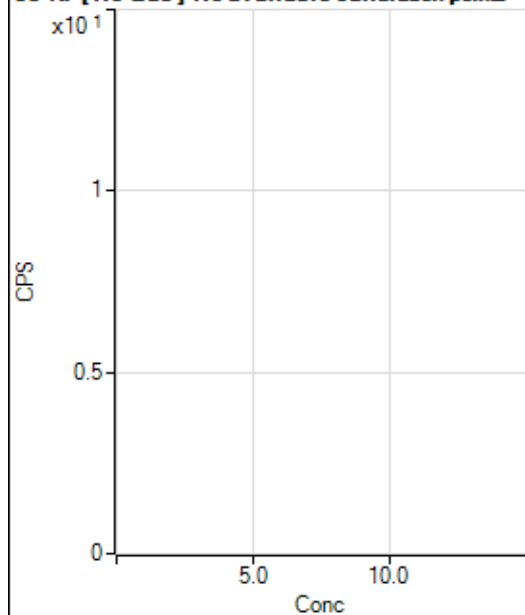
$DL = 0.2181$

$BEC = 1.417$

Weight: <None>

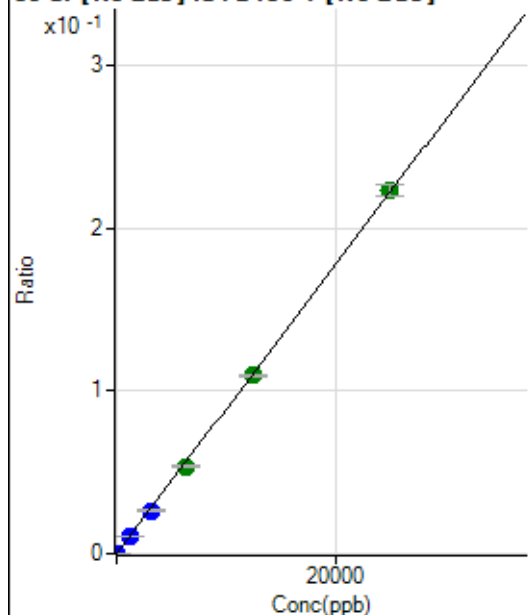
Min Conc: 0

83 Kr [No Gas] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			346.67		P	10.
2	☐			366.67		P	2.4
3	☐			313.34		P	12.
4	☐			322.23		P	12.
5	☐			300.01		P	14.
6	☐			322.23		P	8.8
7	☐			335.57		P	13.
8	☐			408.90		P	9.3

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	574.46	0.0000	P	4.0
2	☐	1.000	24.346	9238.52	0.0002	P	1.4
3	☐	1250.000	1218.265	430618.99	0.0108	P	1.2
4	☐	3125.000	2963.339	1034428.61	0.0263	P	4.7
5	☐	6250.000	6061.220	2085293.46	0.0538	A	3.9
6	☐	12500.000	12331.477	4102667.33	0.1094	A	0.7
7	☐	25000.000	25153.250	8087982.31	0.2231	A	3.1
8	☐			26647.51	0.0007	P	1.5

$$y = 8.8686E-006 * x + 1.4359E-005$$

R = 0.9999

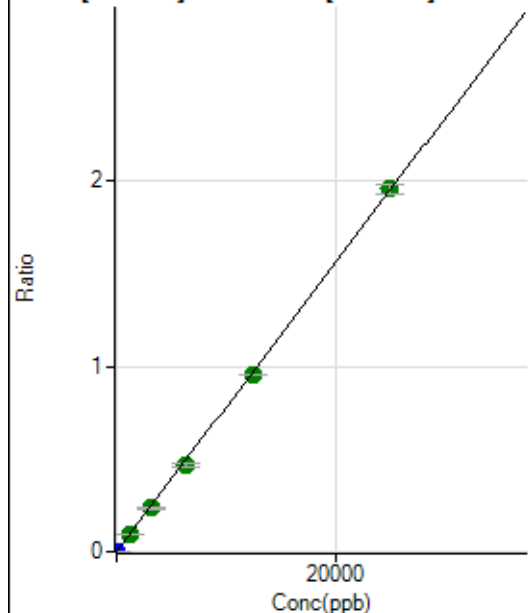
DL = 0.193

BEC = 1.619

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	906.70	0.0000	P	4.9
2	☐	1.000	23.692	74899.33	0.0019	P	1.0
3	☐	1250.000	1254.218	3887181.23	0.0977	A	0.5
4	☐	3125.000	3034.706	9294921.11	0.2363	A	4.1
5	☐	6250.000	6047.320	18257959.87	0.4708	A	3.8
6	☐	12500.000	12290.775	35886176.13	0.9568	A	0.7
7	☐	25000.000	25166.357	71027820.05	1.9590	A	2.9
8	☐			227769.42	0.0063	P	1.2

$$y = 7.7843E-005 * x + 2.2654E-005$$

R = 0.9999

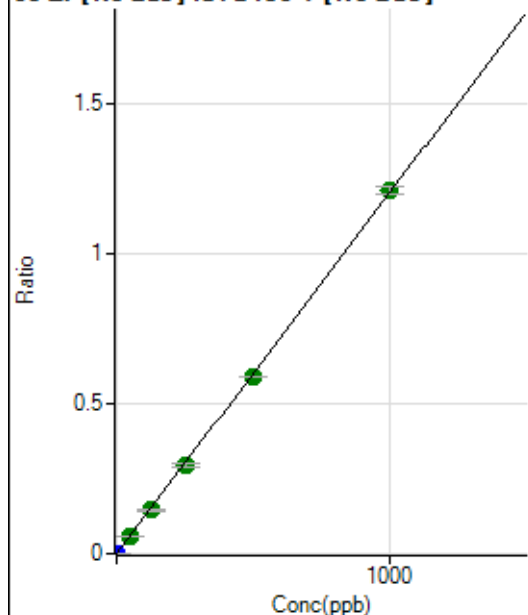
DL = 0.04252

BEC = 0.291

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	2821.42	0.0001	P	2.3
2	☐	1.000	0.937	48044.97	0.0012	P	0.1
3	☐	50.000	49.794	2386929.18	0.0600	A	1.1
4	☐	125.000	120.720	5715811.79	0.1453	A	4.1
5	☐	250.000	244.068	11388274.41	0.2936	A	4.6
6	☐	500.000	491.069	22158656.61	0.5908	A	0.2
7	☐	1000.000	1006.494	43904929.90	1.2107	A	2.1
8	☐			28597.89	0.0008	P	5.9

$$y = 0.0012 * x + 7.0497E-005$$

R = 0.9999

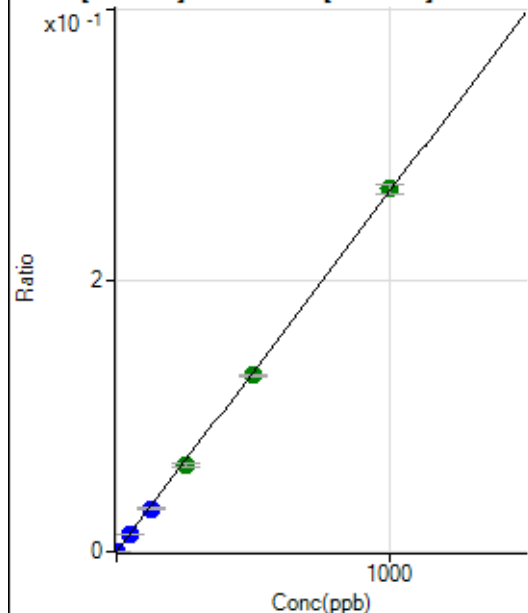
DL = 0.003998

BEC = 0.05861

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	557.79	0.0000	P	7.3
2	☐	1.000	0.937	10545.00	0.0003	P	0.3
3	☐	50.000	48.116	509399.59	0.0128	P	1.4
4	☐	125.000	118.057	1234510.68	0.0314	P	4.6
5	☐	250.000	242.018	2494460.22	0.0643	A	3.7
6	☐	500.000	489.213	4875994.93	0.1300	A	0.1
7	☐	1000.000	1008.351	9714297.98	0.2679	A	2.9
8	☐			6261.39	0.0002	P	4.6

$$y = 2.6569E-004 * x + 1.3947E-005$$

R = 0.9999

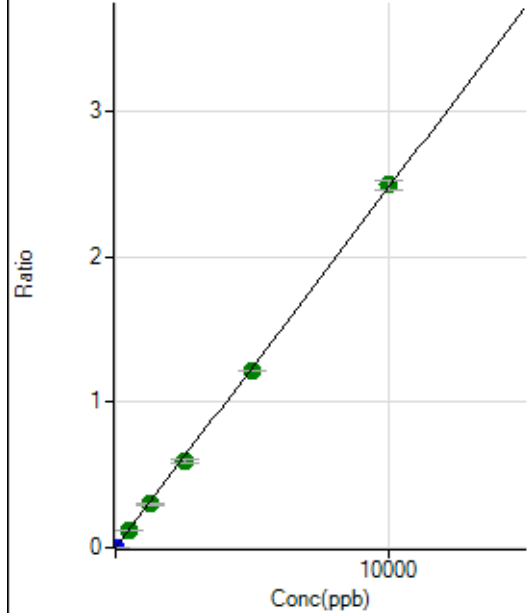
DL = 0.01156

BEC = 0.05249

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1030.05	0.0000	P	9.5
2	☐	5.000	5.467	55418.78	0.0014	P	0.5
3	☐	500.000	495.009	4886801.60	0.1228	A	1.2
4	☐	1250.000	1216.210	11865724.82	0.3016	A	4.4
5	☐	2500.000	2412.344	23198656.32	0.5982	A	4.5
6	☐	5000.000	4904.351	45616164.32	1.2162	A	0.4
7	☐	10000.000	10074.212	90585596.43	2.4981	A	2.3
8	☐			25970.15	0.0007	P	16.

$$y = 2.4797E-004 * x + 2.5732E-005$$

R = 0.9999

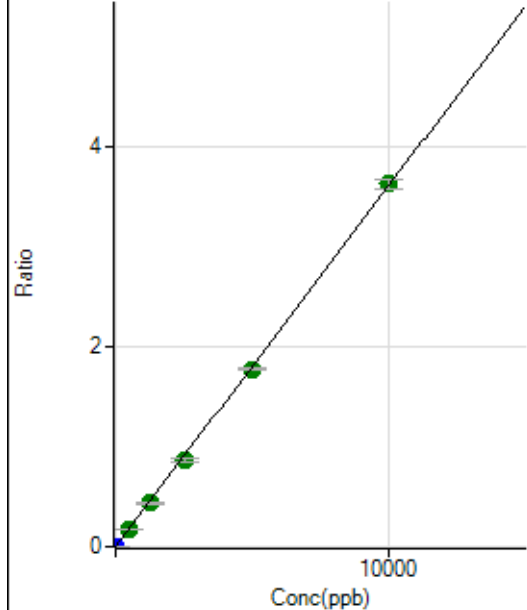
DL = 0.02954

BEC = 0.1038

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	108.89	0.0000	P	30.
2	☐	5.000	4.608	66722.19	0.0017	P	0.5
3	☐	500.000	497.570	7136189.55	0.1793	A	0.9
4	☐	1250.000	1218.382	17269896.97	0.4390	A	4.7
5	☐	2500.000	2406.948	33634552.00	0.8672	A	3.7
6	☐	5000.000	4922.775	66527894.01	1.7737	A	0.7
7	☐	10000.000	10065.949	131504755.82	3.6268	A	2.6
8	☐			25619.83	0.0007	P	21.

$$y = 3.6031E-004 * x + 2.7150E-006$$

R = 0.9999

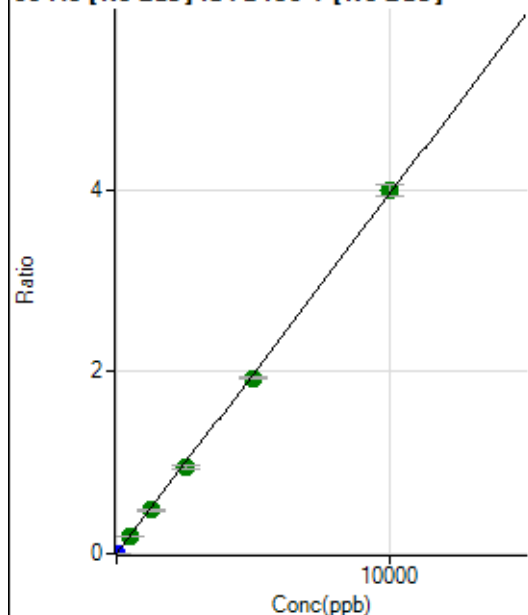
DL = 0.006871

BEC = 0.007535

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	341.12	0.0000	P	13.
2	☐	5.000	4.668	74426.85	0.0019	P	0.9
3	☐	500.000	495.248	7799255.72	0.1959	A	0.5
4	☐	1250.000	1215.572	18917335.27	0.4809	A	5.0
5	☐	2500.000	2405.925	36916675.28	0.9518	A	3.3
6	☐	5000.000	4880.215	72414134.48	1.9306	A	0.6
7	☐	10000.000	10087.952	144687885.62	3.9908	A	3.0
8	☐			46903.57	0.0013	P	12.

$$y = 3.9560E-004 * x + 8.5165E-006$$

R = 0.9998

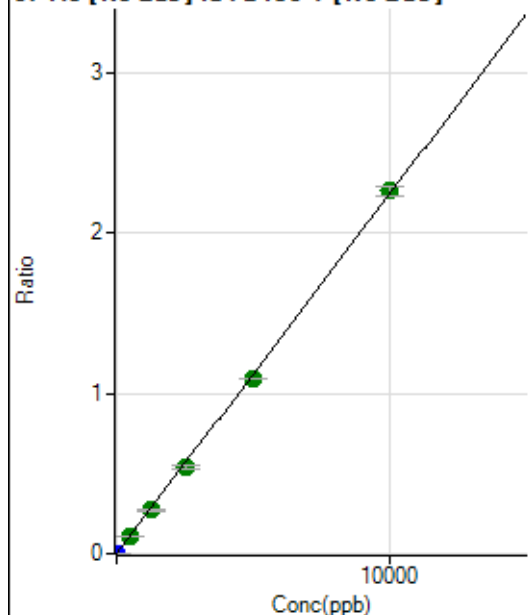
DL = 0.008395

BEC = 0.02153

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	81.11	0.0000	P	21.
2	☐	5.000	4.648	41851.98	0.0010	P	1.4
3	☐	500.000	492.723	4393782.29	0.1104	A	0.3
4	☐	1250.000	1209.016	10654861.65	0.2708	A	4.7
5	☐	2500.000	2408.588	20926207.60	0.5396	A	3.7
6	☐	5000.000	4880.431	41009561.89	1.0933	A	0.4
7	☐	10000.000	10088.125	81943608.78	2.2599	A	2.4
8	☐			16046.96	0.0004	P	21.

$$y = 2.2402E-004 * x + 2.0236E-006$$

R = 0.9998

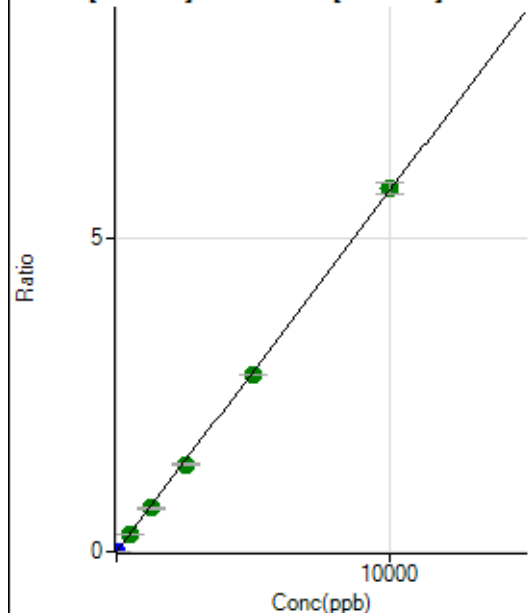
DL = 0.005871

BEC = 0.009033

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	208.89	0.0000	P	12.
2	☐	5.000	4.647	107571.07	0.0027	P	1.0
3	☐	500.000	495.150	11348903.86	0.2851	A	1.3
4	☐	1250.000	1216.207	27547322.65	0.7003	A	5.1
5	☐	2500.000	2422.400	54094845.86	1.3948	A	3.8
6	☐	5000.000	4922.806	106322188.42	2.8345	A	0.3
7	☐	10000.000	10062.464	210048727.98	5.7940	A	3.3
8	☐			39568.86	0.0011	P	22.

$y = 5.7580E-004 * x + 5.2160E-006$

$R = 0.9999$

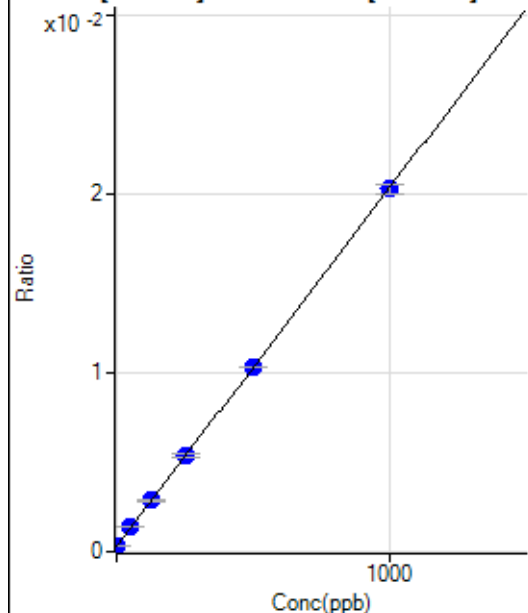
$DL = 0.003429$

$BEC = 0.009059$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	9689.98	0.0003	P	4.8
2	☐	1.000	1.917	11043.18	0.0003	P	3.1
3	☐	50.000	54.795	47590.99	0.0014	P	0.5
4	☐	125.000	129.887	101298.78	0.0029	P	3.4
5	☐	250.000	254.586	186223.76	0.0054	P	2.8
6	☐	500.000	501.352	352076.23	0.0103	P	0.2
7	☐	1000.000	997.326	675896.13	0.0203	P	2.6
8	☐			9550.99	0.0003	P	1.3

$y = 2.0035E-005 * x + 2.8069E-004$

$R = 1.0000$

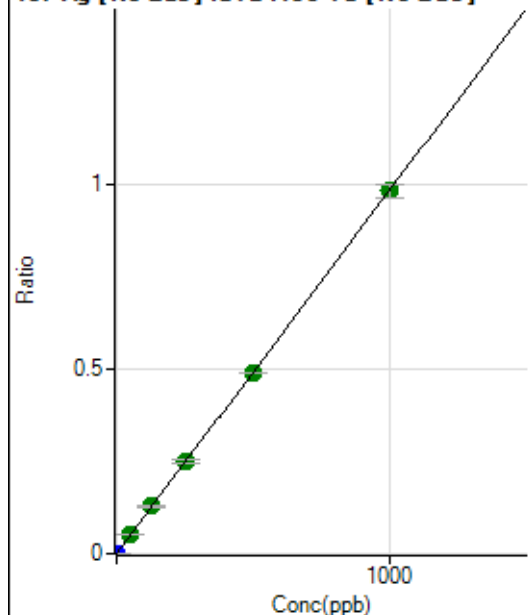
$DL = 2.025$

$BEC = 14.01$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	284.45	0.0000	P	10.
2	☐	1.000	1.016	34964.31	0.0010	P	2.0
3	☐	50.000	54.241	1846330.91	0.0535	A	1.7
4	☐	125.000	129.796	4496965.07	0.1280	A	2.2
5	☐	250.000	254.192	8671265.50	0.2506	A	3.2
6	☐	500.000	498.815	16766964.75	0.4917	A	0.5
7	☐	1000.000	998.733	32834153.96	0.9845	A	3.6
8	☐			5075.41	0.0002	P	25.

$$y = 9.8578E-004 * x + 8.2367E-006$$

$$R = 1.0000$$

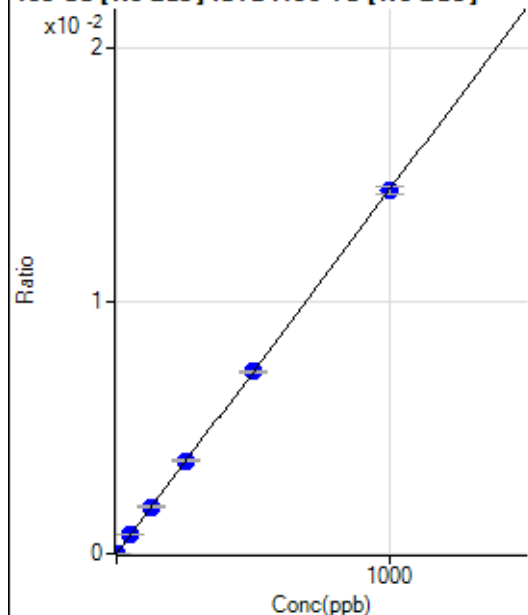
$$DL = 0.002732$$

$$BEC = 0.008355$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	37.78	0.0000	P	33.
2	☐	1.000	0.989	530.02	0.0000	P	11.
3	☐	50.000	54.654	27197.77	0.0008	P	2.1
4	☐	125.000	128.711	65143.19	0.0019	P	3.5
5	☐	250.000	256.230	127682.75	0.0037	P	3.2
6	☐	500.000	500.915	245926.20	0.0072	P	0.8
7	☐	1000.000	997.288	478982.78	0.0144	P	2.1
8	☐			222.23	0.0000	P	14.

$$y = 1.4396E-005 * x + 1.0937E-006$$

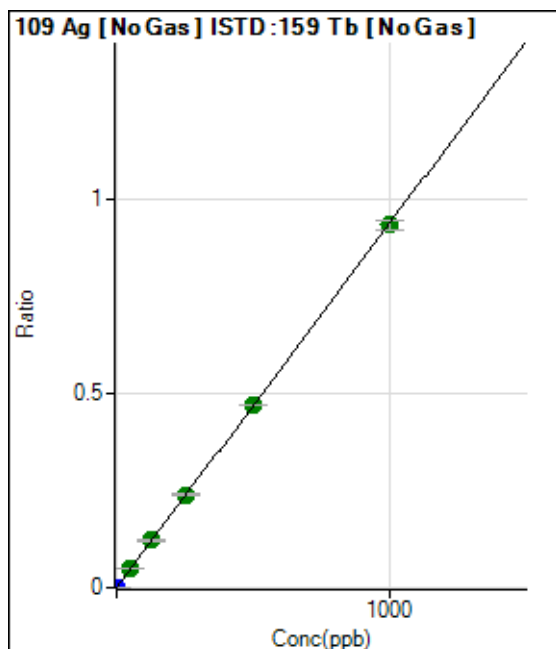
$$R = 1.0000$$

$$DL = 0.07589$$

$$BEC = 0.07597$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	156.67	0.0000	P	10.
2	☐	1.000	1.029	33566.59	0.0010	P	2.4
3	☐	50.000	54.960	1780019.52	0.0516	A	0.8
4	☐	125.000	129.457	4266865.67	0.1214	A	3.6
5	☐	250.000	255.729	8301363.63	0.2399	A	2.7
6	☐	500.000	503.143	16093326.29	0.4720	A	0.1
7	☐	1000.000	996.191	31169156.20	0.9345	A	2.9
8	☐			4718.65	0.0001	P	29.

$$y = 9.3805\text{E-}004 * x + 4.5363\text{E-}006$$

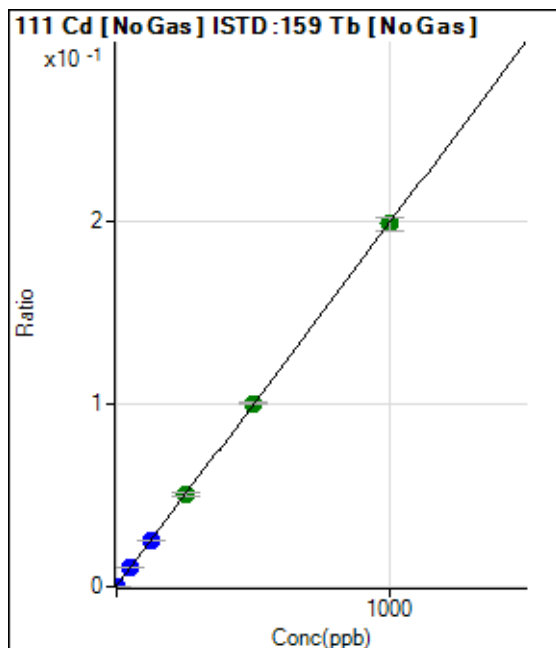
$$R = 1.0000$$

$$DL = 0.001568$$

$$BEC = 0.004836$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	6795.43	0.0002	P	4.7
2	☐	1.000	1.145	14692.23	0.0004	P	3.2
3	☐	50.000	53.110	371498.24	0.0108	P	1.4
4	☐	125.000	126.101	888287.27	0.0253	P	3.6
5	☐	250.000	252.857	1747262.55	0.0505	A	3.6
6	☐	500.000	503.083	3419002.44	0.1003	A	0.7
7	☐	1000.000	997.451	6623864.59	0.1986	A	3.4
8	☐			8053.57	0.0002	P	3.9

$$y = 1.9892\text{E-}004 * x + 1.9684\text{E-}004$$

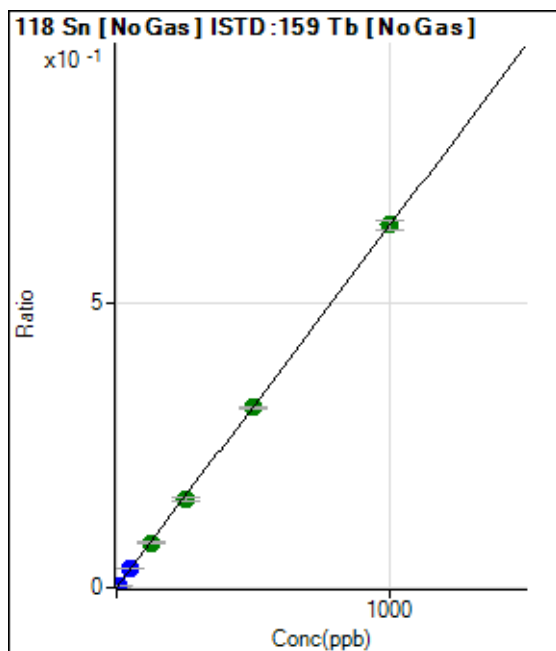
$$R = 1.0000$$

$$DL = 0.1394$$

$$BEC = 0.9896$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	5042.06	0.0001	P	2.2
2	☐	5.000	5.021	115546.30	0.0033	P	1.7
3	☐	50.000	51.083	1126154.87	0.0326	P	1.9
4	☐	125.000	124.258	2781013.64	0.0791	A	3.6
5	☐	250.000	246.476	5427206.66	0.1569	A	4.2
6	☐	500.000	497.189	10783497.62	0.3162	A	1.3
7	☐	1000.000	1002.325	21262193.16	0.6374	A	2.5
8	☐			13449.75	0.0004	P	6.1

$$y = 6.3578E-004 * x + 1.4604E-004$$

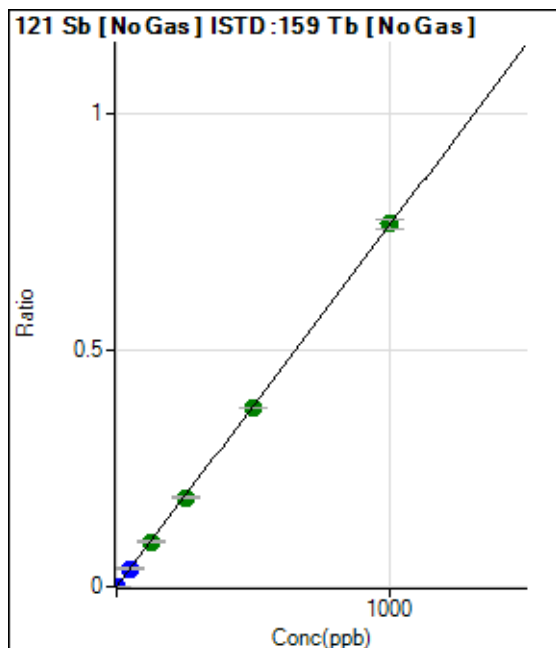
$$R = 1.0000$$

$$DL = 0.0151$$

$$BEC = 0.2297$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	55.56	0.0000	P	13.
2	☐	2.000	1.981	52354.92	0.0015	P	1.2
3	☐	50.000	50.304	1324602.06	0.0384	P	1.1
4	☐	125.000	124.394	3333697.90	0.0949	A	3.7
5	☐	250.000	246.907	6517041.15	0.1883	A	2.8
6	☐	500.000	494.177	12852523.42	0.3769	A	0.7
7	☐	1000.000	1003.745	25539007.67	0.7656	A	2.4
8	☐			13804.55	0.0004	P	9.9

$$y = 7.6274E-004 * x + 1.6089E-006$$

$$R = 1.0000$$

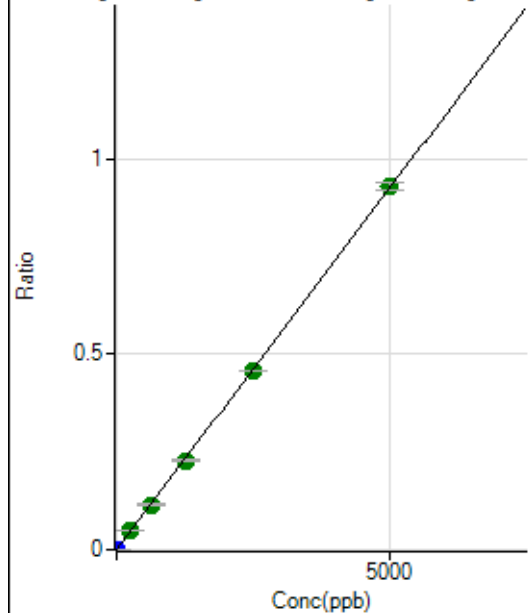
$$DL = 0.0008659$$

$$BEC = 0.002109$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	157.78	0.0000	P	9.7
2	☐	10.000	9.692	62138.30	0.0018	P	1.2
3	☐	250.000	258.130	1646580.05	0.0477	A	1.8
4	☐	625.000	620.765	4029774.66	0.1147	A	4.6
5	☐	1250.000	1235.642	7900695.16	0.2283	A	2.5
6	☐	2500.000	2469.760	15559740.19	0.4563	A	0.2
7	☐	5000.000	5018.833	30933904.26	0.9273	A	2.3
8	☐			19501.26	0.0006	P	6.5

$$y = 1.8476E-004 * x + 4.5690E-006$$

$$R = 1.0000$$

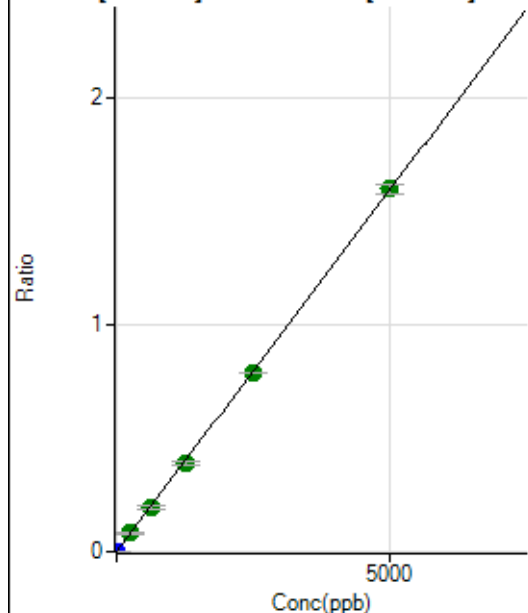
$$DL = 0.007181$$

$$BEC = 0.02473$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	327.79	0.0000	P	9.8
2	☐	10.000	9.686	107303.23	0.0031	P	2.5
3	☐	250.000	253.885	2797572.08	0.0810	A	1.1
4	☐	625.000	611.649	6858393.02	0.1952	A	5.0
5	☐	1250.000	1231.380	13598878.13	0.3930	A	3.6
6	☐	2500.000	2475.719	26941489.04	0.7901	A	0.5
7	☐	5000.000	5018.271	53421825.87	1.6016	A	2.7
8	☐			33868.17	0.0010	P	6.8

$$y = 3.1915E-004 * x + 9.4925E-006$$

$$R = 1.0000$$

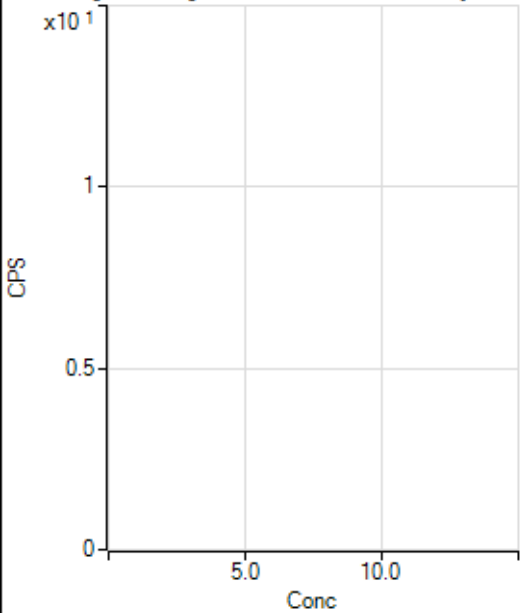
$$DL = 0.008707$$

$$BEC = 0.02974$$

Weight: <None>

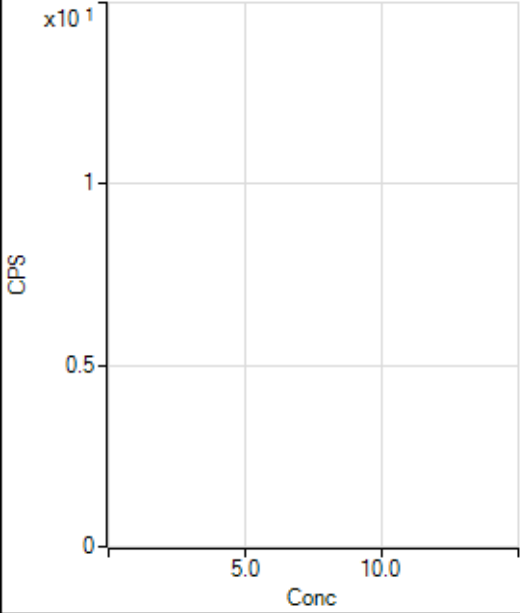
Min Conc: 0

150 Nd [No Gas] No available calibration points



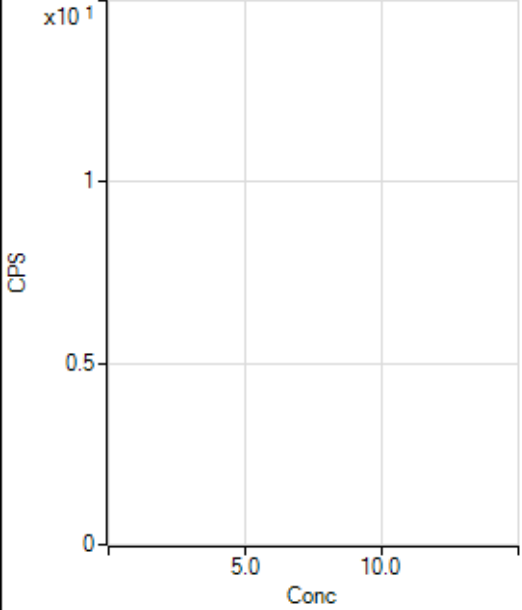
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			30.00		P	11.
2	☐			37.78		P	27.
3	☐			76.67		P	34.
4	☐			207.78		P	16.
5	☐			358.90		P	6.6
6	☐			735.59		P	5.4
7	☐			1362.30		P	1.2
8	☐			523.35		P	2.9

150 Nd [He] No available calibration points



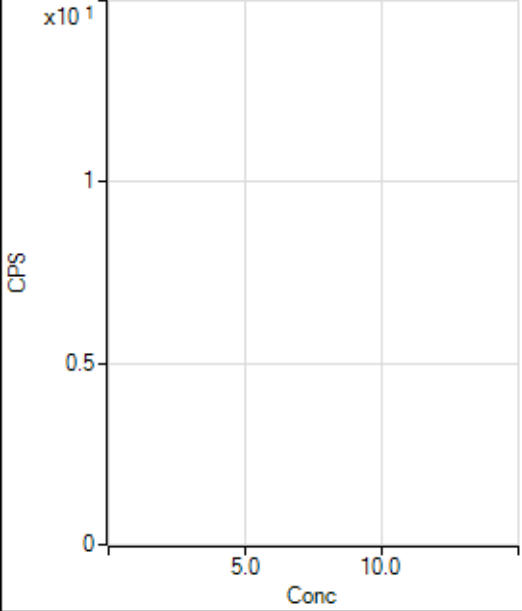
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			12.22		P	63.
2	☐			12.22		P	41.
3	☐			40.00		P	28.
4	☐			46.67		P	31.
5	☐			92.22		P	11.
6	☐			183.34		P	1.8
7	☐			335.56		P	5.8
8	☐			270.01		P	4.5

156 Dy [No Gas] No available calibration points



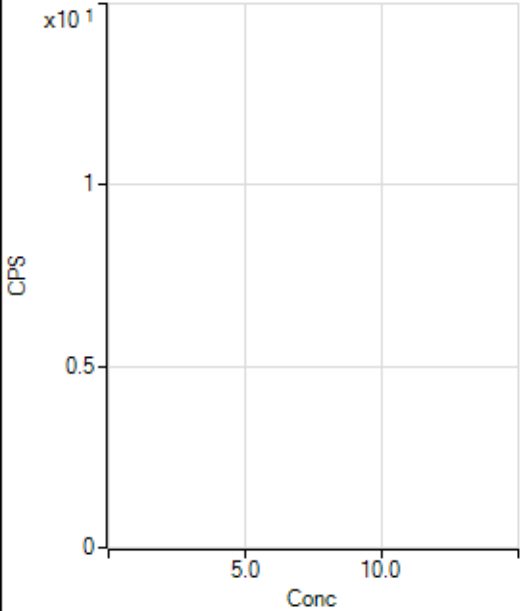
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			22.22		P	17.
2	☐			25.55		P	27.
3	☐			70.00		P	9.5
4	☐			85.55		P	18.
5	☐			140.00		P	22.
6	☐			283.34		P	9.6
7	☐			530.02		P	14.
8	☐			907.82		P	3.6

156 Dy [He] No available calibration points



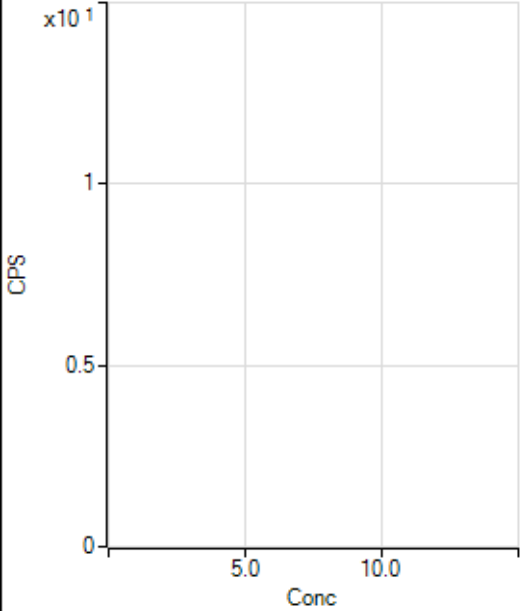
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			13.33		P	25.
2	☐			23.33		P	62.
3	☐			84.44		P	11.
4	☐			193.34		P	19.
5	☐			388.90		P	5.5
6	☐			672.25		P	7.0
7	☐			1316.74		P	0.3
8	☐			751.14		P	5.3

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



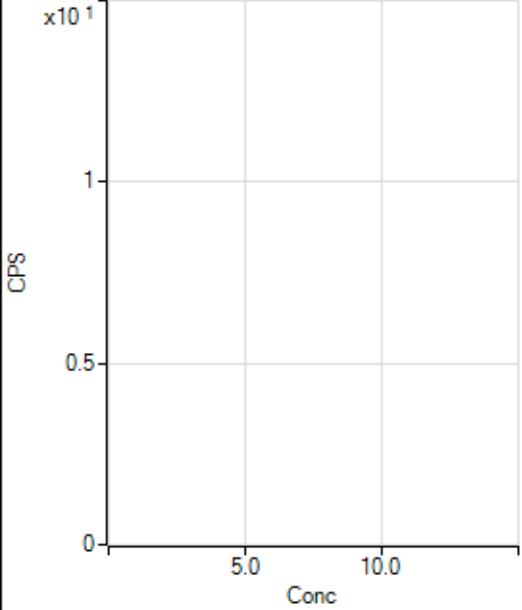
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			137.78		P	20.
2	☐			178.89		P	14.
3	☐			133.33		P	27.
4	☐			173.33		P	21.
5	☐			200.00		P	23.
6	☐			248.90		P	11.
7	☐			357.79		P	6.5
8	☐			1026.71		P	2.3

160 Gd [He] No available calibration points



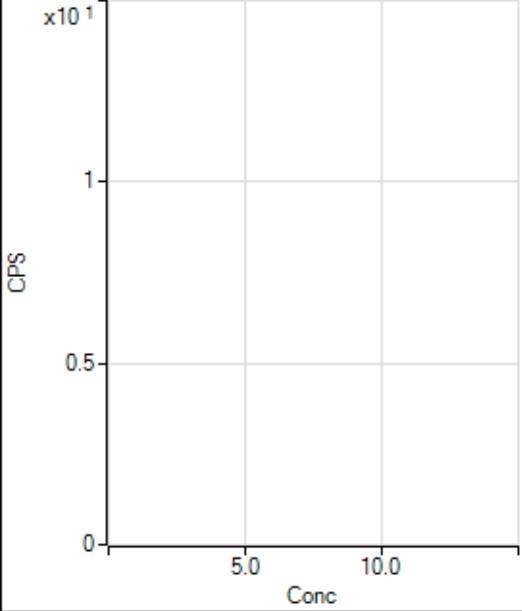
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1205.62		P	4.2
2	☐			1285.63		P	10.
3	☐			1238.96		P	9.8
4	☐			1240.07		P	3.5
5	☐			1242.29		P	4.5
6	☐			1246.73		P	8.6
7	☐			1370.08		P	1.8
8	☐			1663.45		P	1.2

164 Er [No Gas] No available calibration points



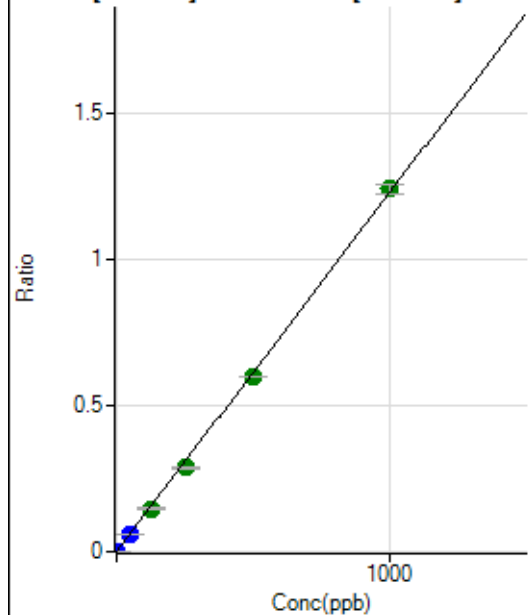
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			138.89		P	17.
2	☐			151.11		P	9.2
3	☐			164.45		P	12.
4	☐			188.89		P	5.1
5	☐			235.56		P	24.
6	☐			274.45		P	4.6
7	☐			446.68		P	9.7
8	☐			1081.17		P	9.0

164 Er [He] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			106.67		P	10.
2	☐			105.56		P	12.
3	☐			110.00		P	28.
4	☐			114.45		P	26.
5	☐			135.56		P	12.
6	☐			188.89		P	16.
7	☐			297.79		P	6.8
8	☐			700.02		P	5.0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	164.45	0.0000	P	23.
2	☐	1.000	0.915	22433.04	0.0011	P	0.4
3	☐	50.000	47.390	1155339.53	0.0582	P	0.2
4	☐	125.000	119.245	2970831.24	0.1466	A	4.2
5	☐	250.000	234.158	5804591.58	0.2878	A	2.9
6	☐	500.000	487.870	11610217.61	0.5996	A	0.3
7	☐	1000.000	1010.875	22926642.99	1.2423	A	2.7
8	☐			2518.07	0.0002	P	41.

$$y = 0.0012 * x + 8.3525E-006$$

R = 0.9998

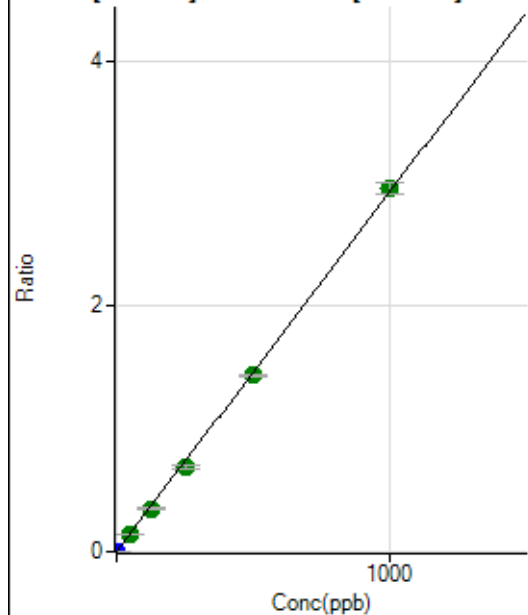
DL = 0.004718

BEC = 0.006796

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	330.01	0.0000	P	13.
2	☐	1.000	0.910	53079.74	0.0027	P	1.3
3	☐	50.000	48.510	2816826.94	0.1420	A	1.0
4	☐	125.000	119.092	7066682.46	0.3486	A	4.9
5	☐	250.000	235.035	13876295.77	0.6880	A	4.3
6	☐	500.000	489.912	27770647.92	1.4341	A	0.7
7	☐	1000.000	1009.598	54535548.08	2.9554	A	3.2
8	☐			5815.92	0.0004	P	43.

$$y = 0.0029 * x + 1.6730E-005$$

R = 0.9998

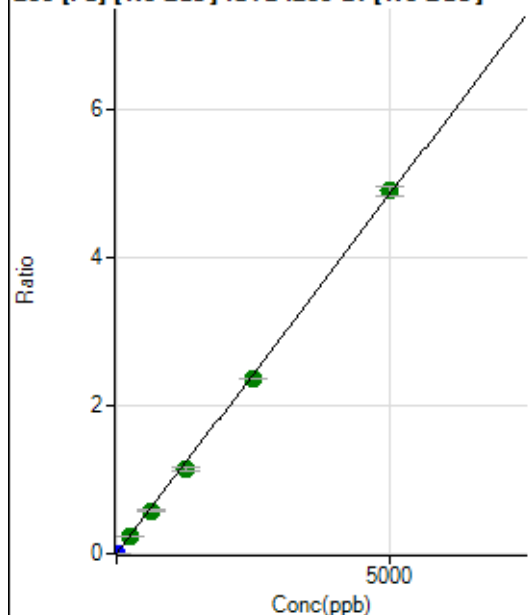
DL = 0.00239

BEC = 0.005715

Weight: <None>

Min Conc: 0

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



$$y = 9.7156E-004 * x + 2.0984E-004$$

R = 0.9998

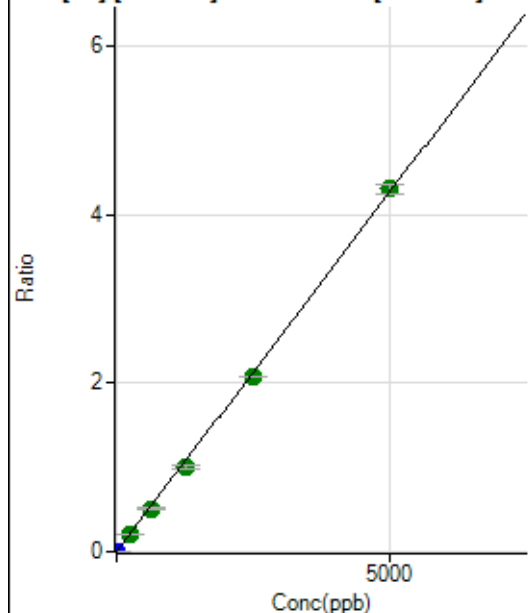
DL = 0.01759

BEC = 0.216

Weight: <None>

Min Conc: 0

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



$$y = 8.5214E-004 * x + 1.8638E-004$$

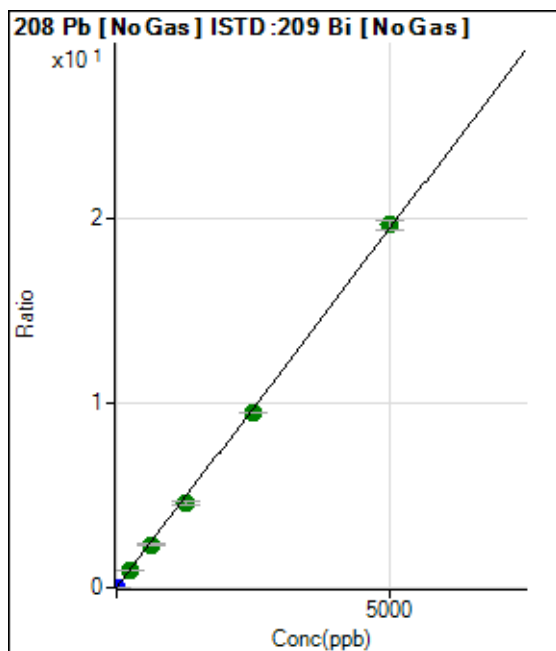
R = 0.9998

DL = 0.014

BEC = 0.2187

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	16499.62	0.0008	P	1.2
2	☐	1.000	0.787	77060.11	0.0039	P	0.9
3	☐	250.000	244.517	18854935.31	0.9506	A	1.1
4	☐	625.000	594.884	46859386.52	2.3116	A	4.4
5	☐	1250.000	1181.335	92564994.46	4.5896	A	4.0
6	☐	2500.000	2435.176	183180743.94	9.4599	A	0.3
7	☐	5000.000	5053.617	362296576.27	19.6309	A	2.4
8	☐			63387.61	0.0038	P	23.

$$y = 0.0039 * x + 8.3679E-004$$

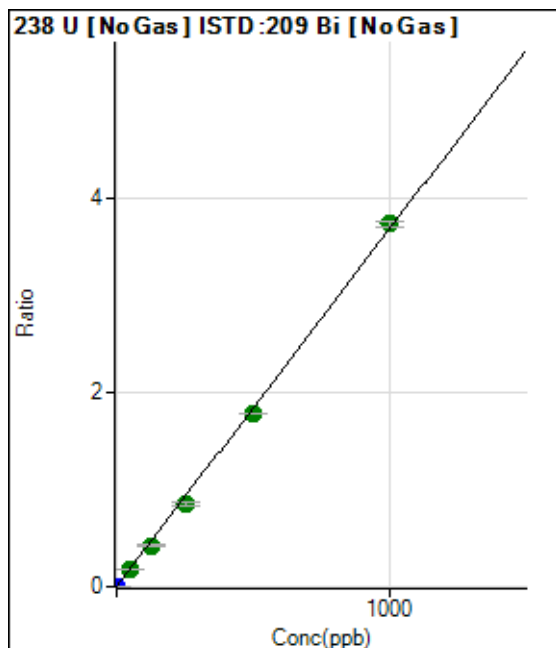
$$R = 0.9998$$

$$DL = 0.007983$$

$$BEC = 0.2154$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	65.56	0.0000	P	38.
2	☐	1.000	0.850	62148.95	0.0031	P	0.7
3	☐	50.000	46.913	3434284.98	0.1731	A	0.4
4	☐	125.000	115.537	8644374.04	0.4264	A	3.9
5	☐	250.000	230.732	17174878.91	0.8516	A	4.3
6	☐	500.000	483.795	34575844.48	1.7856	A	0.4
7	☐	1000.000	1014.257	69094188.97	3.7434	A	1.8
8	☐			7373.49	0.0004	P	39.

$$y = 0.0037 * x + 3.3190E-006$$

$$R = 0.9996$$

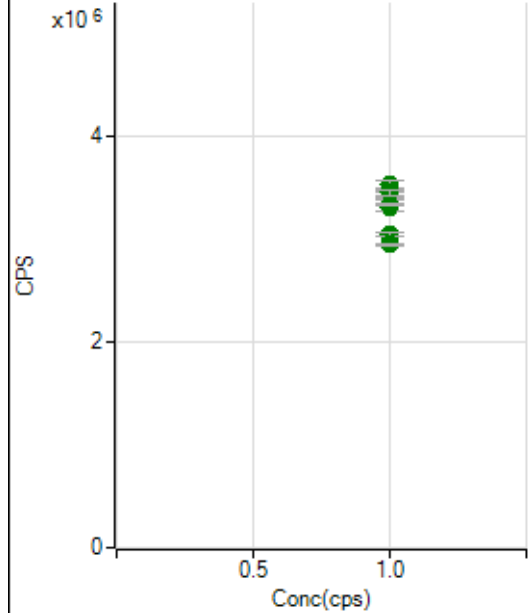
$$DL = 0.001048$$

$$BEC = 0.0008993$$

Weight: <None>

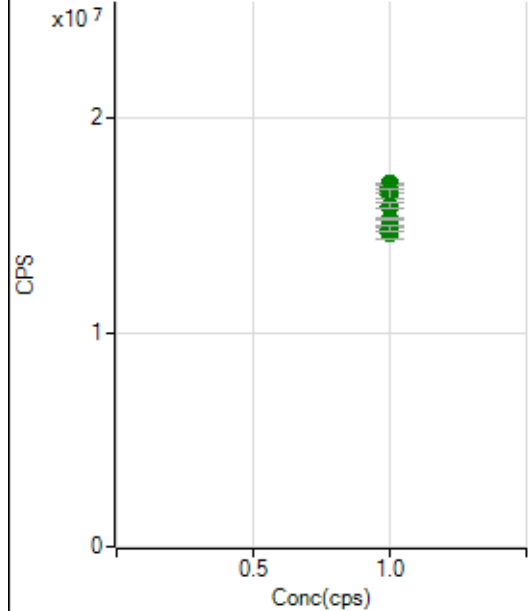
Min Conc: 0

6 Li (ISTD) [No Gas]

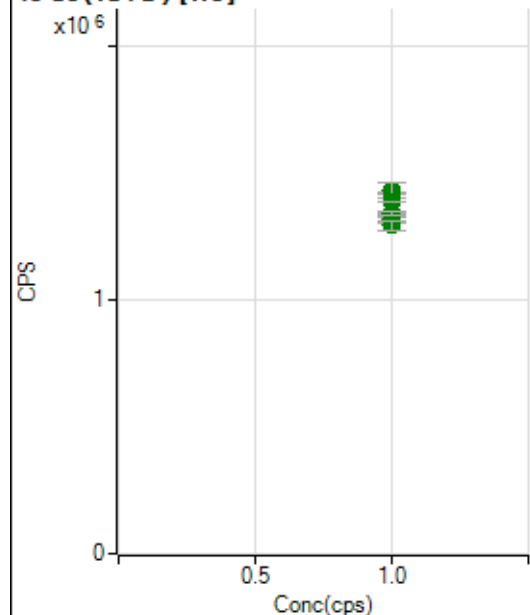


	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3314276.78		A	2.4
2	☐	1.000		3403621.49		A	0.6
3	☐	1.000		3463103.95		A	0.4
4	☐	1.000		3532380.61		A	2.2
5	☐	1.000		3454496.66		A	1.7
6	☐	1.000		3337039.51		A	0.8
7	☐	1.000		3052555.74		A	1.8
8	☐	1.000		2951609.67		A	0.5

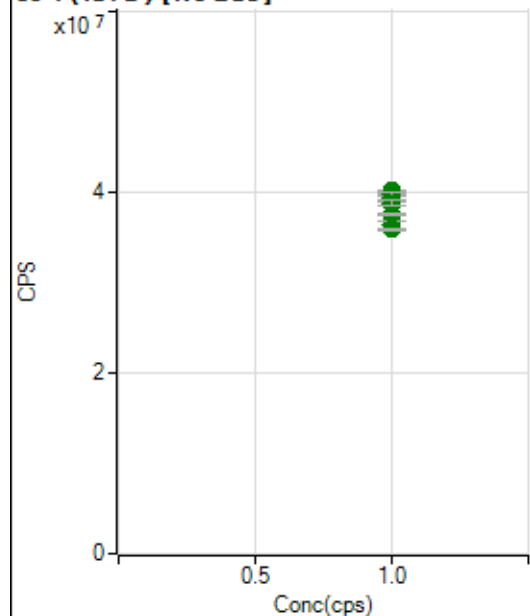
45 Sc (ISTD) [No Gas]



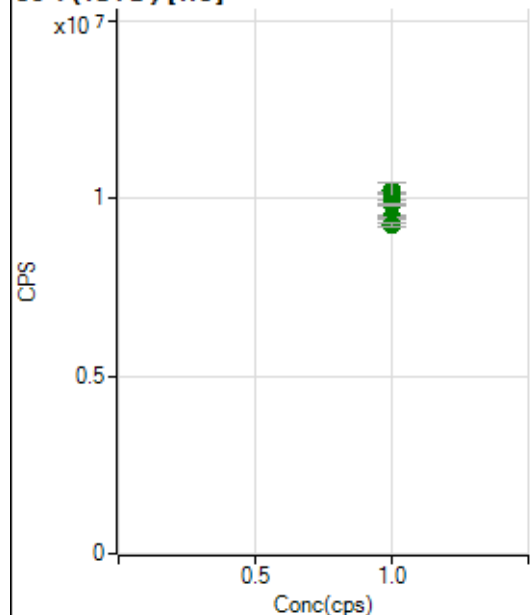
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		16947713.78		A	0.5
2	☐	1.000		16810245.58		A	1.1
3	☐	1.000		16622822.53		A	0.8
4	☐	1.000		16477689.06		A	2.6
5	☐	1.000		15935248.93		A	1.3
6	☐	1.000		15290381.02		A	0.7
7	☐	1.000		14653052.28		A	3.4
8	☐	1.000		14852177.00		A	1.5

45 Sc (ISTD) [He]

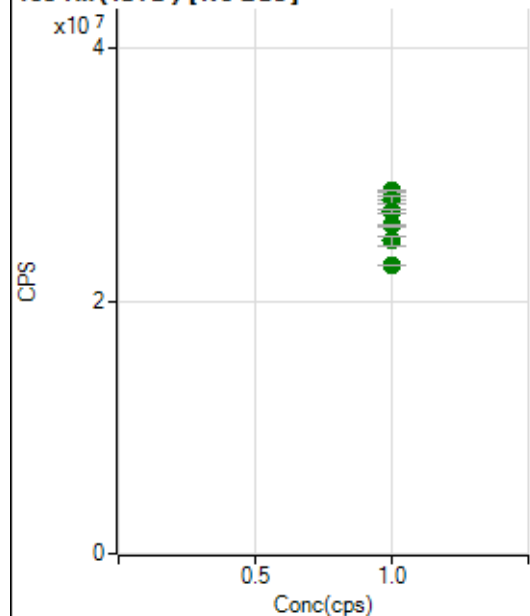
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1417914.15		A	0.7
2	☐	1.000		1428116.75		A	4.1
3	☐	1.000		1384796.07		A	0.3
4	☐	1.000		1335733.35		A	0.6
5	☐	1.000		1315813.37		A	1.2
6	☐	1.000		1312841.56		A	1.7
7	☐	1.000		1337043.02		A	1.1
8	☐	1.000		1292988.96		A	3.0

89 Y (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		40014993.57		A	1.2
2	☐	1.000		40121427.46		A	0.6
3	☐	1.000		39806478.02		A	1.0
4	☐	1.000		39371959.14		A	2.8
5	☐	1.000		38801113.03		A	1.9
6	☐	1.000		37509347.50		A	1.0
7	☐	1.000		36277813.35		A	3.1
8	☐	1.000		35870898.63		A	0.5

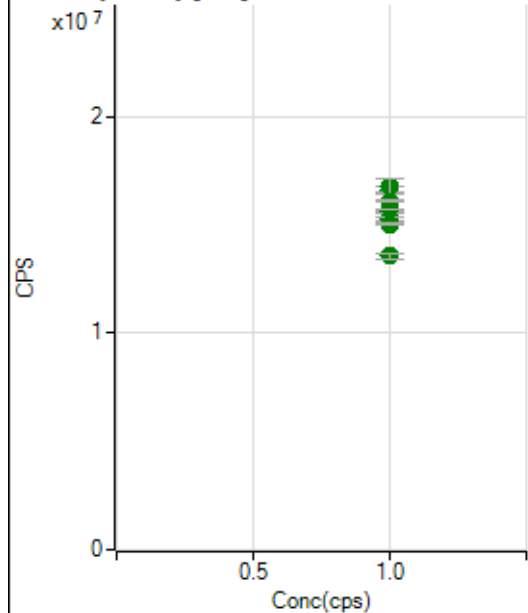
89 Y (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		10130242.00		A	0.8
2	☐	1.000		10198715.82		A	4.7
3	☐	1.000		9813928.81		A	0.9
4	☐	1.000		9486802.08		A	0.2
5	☐	1.000		9422055.90		A	0.8
6	☐	1.000		9427734.51		A	0.5
7	☐	1.000		9443596.39		A	0.5
8	☐	1.000		9230920.42		A	0.9

103 Rh (ISTD) [No Gas]

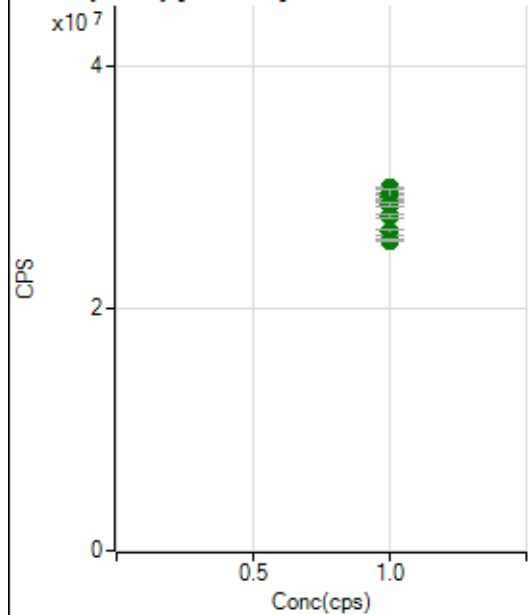
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		28649382.63		A	0.8
2	☐	1.000		28699403.46		A	0.5
3	☐	1.000		28039472.08		A	0.1
4	☐	1.000		27959495.14		A	2.0
5	☐	1.000		27058927.93		A	1.5
6	☐	1.000		25937463.22		A	0.9
7	☐	1.000		24740490.74		A	3.0
8	☐	1.000		22830992.16		A	0.5

103 Rh (ISTD) [He]

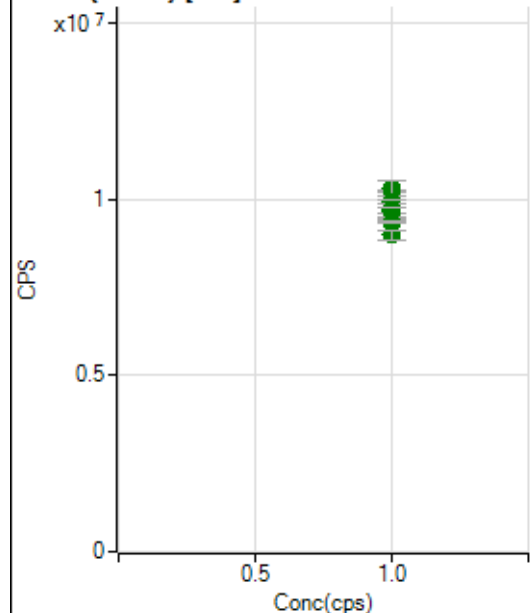


	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		16653129.06		A	1.3
2	☐	1.000		16761358.08		A	4.2
3	☐	1.000		16083237.96		A	0.5
4	☐	1.000		15669521.02		A	0.5
5	☐	1.000		15623441.99		A	0.7
6	☐	1.000		15321147.55		A	1.2
7	☐	1.000		15047989.50		A	0.3
8	☐	1.000		13575841.32		A	2.0

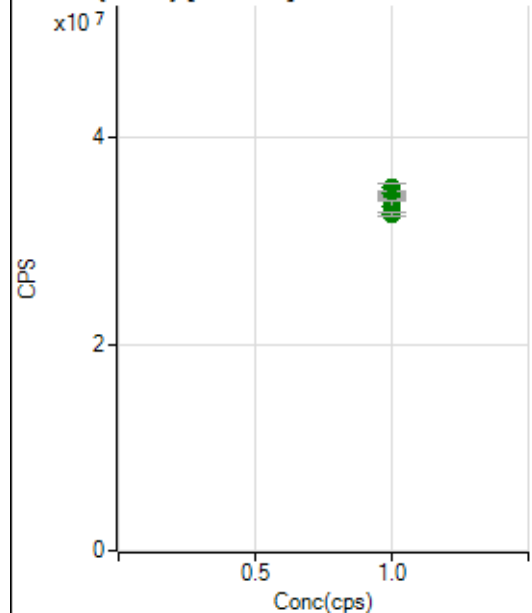
115 In (ISTD) [No Gas]



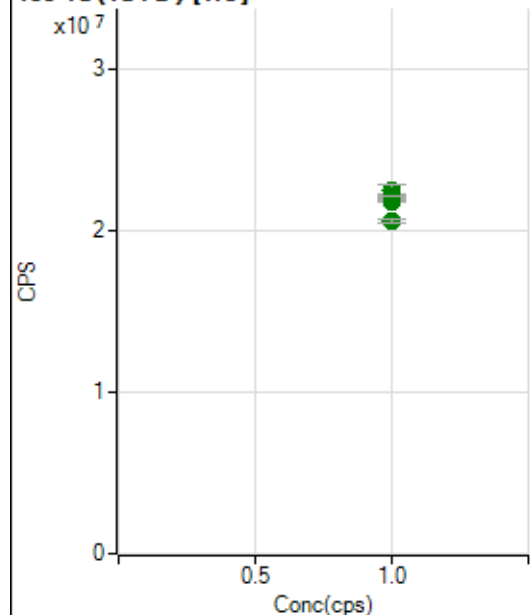
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		29442942.06		A	0.8
2	☐	1.000		29917319.62		A	0.6
3	☐	1.000		29119698.65		A	1.3
4	☐	1.000		29443151.32		A	3.0
5	☐	1.000		28528513.67		A	1.4
6	☐	1.000		27546416.82		A	1.2
7	☐	1.000		26278888.62		A	1.8
8	☐	1.000		25583322.75		A	0.7

115 In (ISTD) [He]

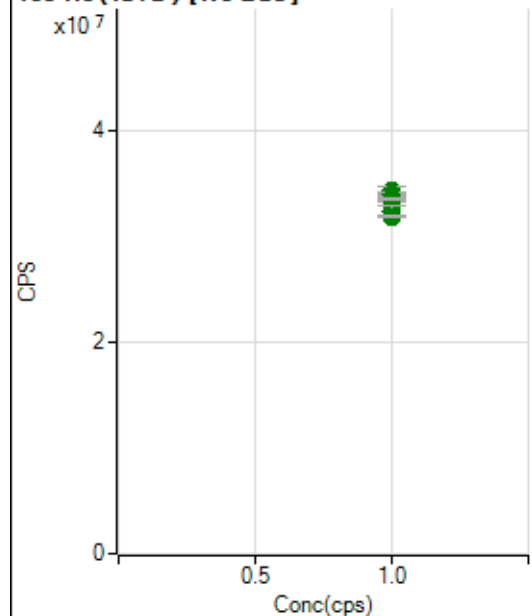
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10204871.62		A	0.6
2	☐	1.000		10289103.43		A	4.1
3	☐	1.000		9923208.01		A	0.8
4	☐	1.000		9693924.92		A	1.7
5	☐	1.000		9671017.49		A	1.4
6	☐	1.000		9465617.22		A	0.8
7	☐	1.000		9345934.71		A	0.2
8	☐	1.000		8971539.20		A	2.5

159 Tb (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		34526045.32		A	0.4
2	☐	1.000		34615325.04		A	1.6
3	☐	1.000		34524238.37		A	1.0
4	☐	1.000		35151332.53		A	2.0
5	☐	1.000		34611016.98		A	1.0
6	☐	1.000		34097666.44		A	0.3
7	☐	1.000		33374359.78		A	3.1
8	☐	1.000		32608351.74		A	1.4

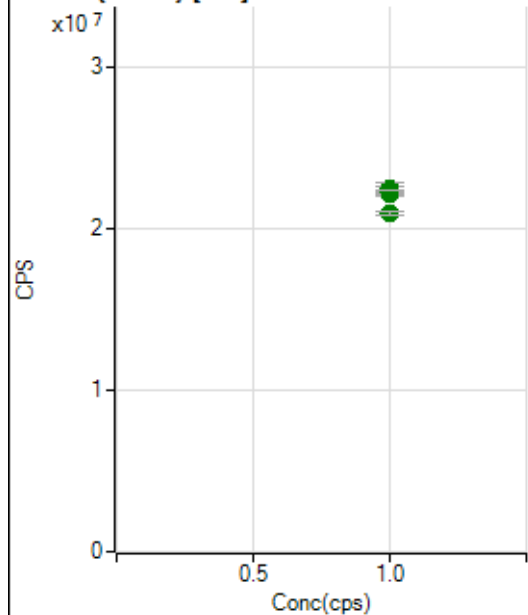
159 Tb (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		21854712.18		A	0.5
2	☐	1.000		22498006.61		A	3.9
3	☐	1.000		22137519.39		A	0.3
4	☐	1.000		21931485.78		A	0.4
5	☐	1.000		22187522.44		A	1.5
6	☐	1.000		22190989.95		A	0.3
7	☐	1.000		22226109.11		A	0.1
8	☐	1.000		20655795.25		A	1.0

165 Ho (ISTD) [No Gas]

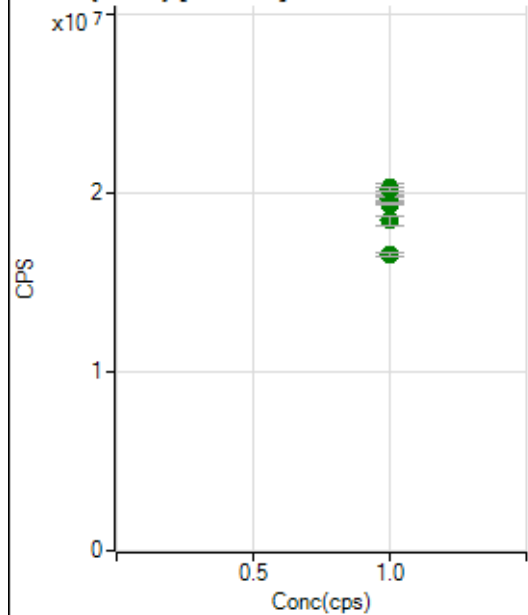
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		33510796.72		A	0.5
2	☐	1.000		33648633.94		A	0.5
3	☐	1.000		33478783.39		A	0.6
4	☐	1.000		34355249.49		A	2.2
5	☐	1.000		34052345.60		A	1.3
6	☐	1.000		33658227.83		A	0.6
7	☐	1.000		32501771.74		A	2.4
8	☐	1.000		31952993.41		A	0.7

165 Ho (ISTD) [He]

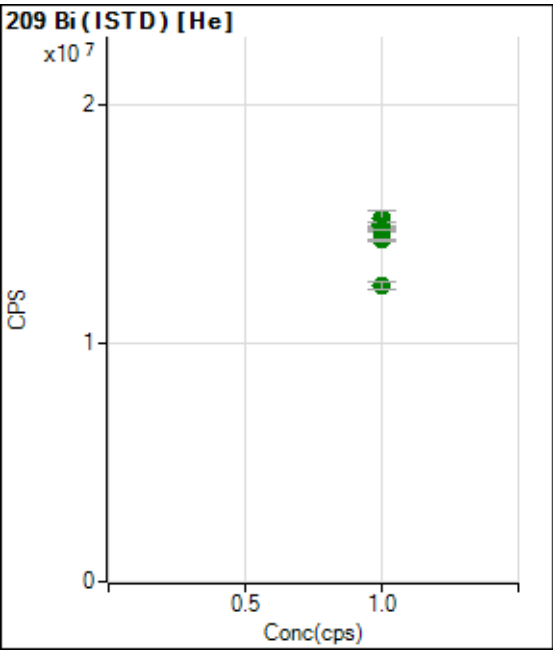


	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		22114960.50		A	0.5
2	☐	1.000		22427098.00		A	3.9
3	☐	1.000		22098007.17		A	0.7
4	☐	1.000		22050781.89		A	0.4
5	☐	1.000		22363923.55		A	1.5
6	☐	1.000		22257621.33		A	0.8
7	☐	1.000		22352269.11		A	0.4
8	☐	1.000		20929197.33		A	1.3

209 Bi (ISTD) [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		19717774.15		A	1.2
2	☐	1.000		19793841.93		A	0.3
3	☐	1.000		19834265.95		A	0.2
4	☐	1.000		20282549.42		A	2.1
5	☐	1.000		20174451.78		A	1.1
6	☐	1.000		19363678.74		A	0.5
7	☐	1.000		18463629.03		A	2.8
8	☐	1.000		16545262.25		A	0.9



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		14990342.28		A	0.9
2	☐	1.000		15211025.88		A	4.2
3	☐	1.000		14928565.33		A	0.4
4	☐	1.000		14743359.22		A	1.0
5	☐	1.000		14931479.22		A	1.7
6	☐	1.000		14732120.75		A	0.0
7	☐	1.000		14326238.12		A	0.5
8	☐	1.000		12428600.23		A	2.3

US EPA Tune Check Report

Reviewed By:Mohan
On:11/19/2024 1:25:53
AM
Inst Id :P7
ClientSampleId
:TUNE001

Operator Name Jaswal
Acq/Data Batch D:\Agilent\ICPMH\1\DATA\IP7111724 MS.b
Acq. Date-Time 2024-11-18 03:52:08
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		33754	337540.00			2.565	5.000
24		202270	2022696.87			2.640	5.000
25		23624	236236.57			2.701	5.000
26		27000	270000.94			2.401	5.000
59		246529	2465289.82			2.873	5.000
113		30985	309854.45			2.834	5.000
115		391576	3915756.74			3.029	5.000
206		72441	724405.43			2.516	5.000
207		63207	632068.01			2.938	5.000
208		154062	1540619.95			2.240	5.000
220		0	4.20			33.249	

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	34198	34161	32211	34186	34014
24	203861	204493	192846	206084	204064
25	23805	23876	22490	23970	23977
26	27238	27230	25845	27377	27310
59	251714	247254	234186	250095	249396
113	31666	31377	29449	31241	31193
115	402915	396543	371545	392607	394268
206	74051	73006	69295	72989	72862
207	64714	63843	59991	64060	63427
208	156678	156774	148439	155150	153268

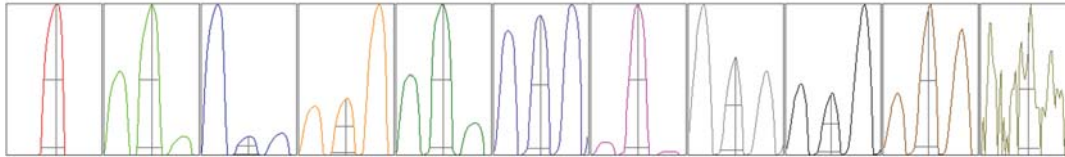
US EPA Tune Check Report

Reviewed By: Mohan
On: 11/19/2024 1:25:53 AM
Inst Id : P7
Client Sample Id : TUNE001

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

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	59469.40	9.10	8.90 - 9.10	
24	349607.73	24.05	23.90 - 24.10	
25	42089.78	25.00	24.90 - 25.10	
26	48695.51	26.00	25.90 - 26.10	
59	427283.98	59.00	58.90 - 59.10	
113	59385.32	113.00	112.90 - 113.10	
115	748823.70	115.00	114.90 - 115.10	
206	150351.54	206.00	205.90 - 206.10	
207	128068.58	206.95	206.90 - 207.10	
208	308218.87	207.95	207.90 - 208.10	
220	0.70	220.05	-	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.59	0.737	0.900	
24	0.62	0.781	0.900	
25	0.59	0.748	0.900	
26	0.58	0.745	0.900	
59	0.60	0.739	0.900	
113	0.53	0.729	0.900	
115	0.53	0.769	0.900	
206	0.51	0.729	0.900	
207	0.50	0.731	0.900	
208	0.51	0.742	0.900	
220	0.48	0.690		

Integration Time [sec] 0.1

Acquisition Time [sec] 256.770000000002

Y Axis Linear

Tune Parameters

Plasma Parameters

Plasma Mode --- Nebulizer Gas 0.82 L/min Dilution Gas 0.40 L/min

US EPA Tune Check Report

Reviewed By: Mohan
On: 11/19/2024 1:25:53 AM
Inst Id : P7
ClientSampleId
TUNE001

RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.9 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	7.4 V	Deflect	15.8 V
Extract 2	-140.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-65 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	136	Axis Gain	0.9973	QP Bias	-3.0 V
Mass Offset	130	Axis Offset	0.17		

Hardware Settings

Torch

Torch H	0.0 mm	Torch V	0.5 mm
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EM

Discriminator	4.6 mV	Analog HV	2221 V	Pulse HV	973 V
---------------	--------	-----------	--------	----------	-------

[He]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
59		80695	806945.90			0.349	
89		120487	1204870.22			0.610	
205		73110	731102.49			0.975	

Mass	RSD% (Flag)
59	
89	
205	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	80686	81175	80453	80561	80599
89	120809	120741	121267	120292	119326
205	74021	73734	72476	72602	72718

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.82 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	8.5 V	Deflect	3.6 V
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US EPA Tune Check Report

Reviewed By:Mohan
On:11/19/2024 1:25:53
AM
Inst Id :P7
ClientSampleId
TUNE001

Extract 2	-155.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-80 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	136	Axis Gain	0.9973	QP Bias	-13.0 V
Mass Offset	130	Axis Offset	0.17		
Hardware Settings					
Torch					
Torch H	0.0 mm	Torch V	0.5 mm		
EM					
Discriminator	4.6 mV	Analog HV	2221 V	Pulse HV	973 V

LB Number :LB133504

Operator :Jaswal

Lab Sample ID :S00

Instrumnet Name :P7

Client Sample ID :S0

Dilution Factor :1

Date & Time Acquired :2024-11-18 04:31:53

DataFile Name :004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.02	0.12	-0.14	0.00	N/A	ppb
Antimony	121-1	0.00	0.00	0.00	0.00	N/A	ppb
Arsenic	75-2	-0.01	0.00	0.00	0.00	N/A	ppb
Barium	135-1	0.00	0.00	0.00	0.00	N/A	ppb
Barium	137-1	0.00	0.00	0.00	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	0.01	-0.03	0.00	N/A	ppb
Cadmium	106-1	0.73	-0.60	-0.13	0.00	N/A	ppb
Cadmium	111-1	0.05	-0.04	-0.01	0.00	N/A	ppb
Calcium	43-1	-1.46	-0.61	2.07	0.00	N/A	ppb
Calcium	44-1	0.23	0.06	-0.28	0.00	N/A	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.00	0.00	0.00	0.00	N/A	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	N/A	ppb
Copper	63-2	0.00	0.00	0.00	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	0.03	0.00	-0.03	0.00	N/A	ppb
Iron	57-2	0.04	-0.26	0.22	0.00	N/A	ppb
Iron	54-2	0.12	0.17	-0.29	0.00	N/A	ppb
Krypton	83-1						cps

2

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

S00

Instrumnet Name :

P7

Client Sample ID :

S0

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 04:31:53

DataFile Name :

004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	N/A	ppb
Vanadium	51-2	0.00	0.00	0.00	0.00	N/A	ppb
Yttrium	89-1				100		%
Yttrium	89-2				100		%
Zinc	66-2	0.01	-0.03	0.02	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

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

S02

Instrumnet Name :

P7

Client Sample ID :

S02

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 04:38:22

DataFile Name :

006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	18.18	18.93	17.12	18.08	5.02	ppb
Antimony	121-1	1.97	2.01	1.97	1.98	1.21	ppb
Arsenic	75-2	0.98	1.14	1.09	1.07	7.79	ppb
Barium	135-1	9.68	9.82	9.58	9.69	1.21	ppb
Barium	137-1	9.67	9.94	9.45	9.69	2.52	ppb
Beryllium	9-1	0.92	1.00	1.11	1.01	9.33	ppb
Bismuth	209-1				100		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.96	1.12	0.88	0.99	12.09	ppb
Cadmium	106-1	2.39	1.95	1.41	1.92	25.53	ppb
Cadmium	111-1	1.19	1.18	1.07	1.14	6.05	ppb
Calcium	43-1	514.29	517.48	509.39	513.72	0.79	ppb
Calcium	44-1	520.18	521.05	515.14	518.79	0.61	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.05	2.10	1.91	2.02	4.87	ppb
Cobalt	59-2	1.07	1.07	1.02	1.05	2.49	ppb
Copper	63-2	1.98	2.04	1.85	1.96	4.99	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				101		%
Indium	115-1				102		%
Indium	115-2				101		%
Iron	56-2	53.26	54.91	50.61	52.93	4.09	ppb
Iron	57-2	58.17	58.04	51.16	55.79	7.18	ppb
Iron	54-2	54.41	57.84	51.96	54.74	5.40	ppb
Krypton	83-1						cps

LB Number :
Lab Sample ID :
Client Sample ID :
Date & Time Acquired :

LB133504
S02
S02
2024-11-18 04:38:22

Operator :
Instrumnet Name :
Dilution Factor :
DataFile Name :

Jaswal
P7
1
006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.78	0.81	0.81	0.80	2.37	ppb
Lead	207-1	0.78	0.76	0.79	0.78	2.22	ppb
Lead	208-1	0.78	0.80	0.78	0.79	1.15	ppb
Lithium	6-1				103		%
Magnesium	24-2	483.75	494.75	456.72	478.40	4.09	ppb
Manganese	55-2	1.05	1.10	1.03	1.06	3.54	ppb
Molybdenum	94-1	5.46	5.50	5.44	5.47	0.51	ppb
Molybdenum	95-1	4.61	4.63	4.58	4.61	0.53	ppb
Molybdenum	96-1	4.64	4.72	4.65	4.67	0.90	ppb
Molybdenum	97-1	4.62	4.72	4.60	4.65	1.42	ppb
Molybdenum	98-1	4.60	4.69	4.65	4.65	0.98	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.00	0.95	0.85	0.93	8.45	ppb
Phosphorus	31-2	16.58	15.85	13.21	15.22	11.65	ppb
Potassium	39-2	506.68	523.78	477.14	502.53	4.70	ppb
Rhodium	103-1				100		%
Rhodium	103-2				101		%
Scandium	45-1				99		%
Scandium	45-2				101		%
Selenium	82-1	5.63	5.36	5.15	5.38	4.42	ppb
Selenium	77-2	4.36	6.28	5.19	5.28	18.19	ppb
Selenium	78-2	4.11	5.27	3.91	4.43	16.63	ppb
Silicon	28-1	2.18	0.89	1.25	1.44	46.12	ppb
Silver	107-1	0.99	1.04	1.02	1.02	2.03	ppb
Silver	109-1	1.03	1.05	1.00	1.03	2.45	ppb
Sodium	23-2	478.90	490.02	450.52	473.15	4.30	ppb
Strontium	86-1	24.72	24.34	23.98	24.35	1.52	ppb
Strontium	88-1	23.95	23.62	23.51	23.69	0.98	ppb
Sulfur	34-1	89.95	69.82	39.13	66.30	38.61	ppb
Terbium	159-1				100		%
Terbium	159-2				103		%
Thallium	203-1	0.92	0.91	0.91	0.92	0.39	ppb
Thallium	205-1	0.91	0.92	0.90	0.91	1.35	ppb
Tin	118-1	5.05	5.09	4.92	5.02	1.73	ppb
Titanium	47-1	4.86	4.87	4.68	4.80	2.26	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

S02

Instrumnet Name :

P7

Client Sample ID :

S02

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 04:38:22

DataFile Name :

006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.85	0.86	0.84	0.85	0.75	ppb
Vanadium	51-2	4.98	5.04	4.66	4.89	4.20	ppb
Yttrium	89-1				100		%
Yttrium	89-2				101		%
Zinc	66-2	4.68	4.77	4.19	4.55	6.89	ppb
Zirconium	90-1	0.94	0.94	0.94	0.94	0.08	ppb
Zirconium	91-1	0.94	0.93	0.94	0.94	0.36	ppb

LB Number :LB133504Operator :Jaswal

Lab Sample ID :S03Instrumnet Name :P7

Client Sample ID :S03Dilution Factor :1

Date & Time Acquired :2024-11-18 04:41:36DataFile Name :007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	990.15	992.78	993.16	992.03	0.17	ppb
Antimony	121-1	49.71	50.41	50.79	50.30	1.09	ppb
Arsenic	75-2	52.74	52.84	53.55	53.04	0.83	ppb
Barium	135-1	256.78	254.44	263.17	258.13	1.75	ppb
Barium	137-1	253.20	251.47	256.99	253.88	1.11	ppb
Beryllium	9-1	47.55	48.11	47.61	47.76	0.65	ppb
Bismuth	209-1				101		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	53.46	54.81	55.69	54.65	2.06	ppb
Cadmium	106-1	54.57	54.62	55.20	54.79	0.64	ppb
Cadmium	111-1	52.57	52.78	53.97	53.11	1.42	ppb
Calcium	43-1	5259.10	5332.81	5331.71	5307.87	0.80	ppb
Calcium	44-1	5213.52	5311.46	5211.73	5245.57	1.09	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	51.14	50.86	51.33	51.11	0.46	ppb
Cobalt	59-2	52.00	51.66	51.74	51.80	0.34	ppb
Copper	63-2	544.00	537.81	543.83	541.88	0.65	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				99		%
Indium	115-2				97		%
Iron	56-2	2672.70	2691.04	2714.63	2692.79	0.78	ppb
Iron	57-2	2717.93	2705.27	2709.42	2710.87	0.24	ppb
Iron	54-2	2710.37	2686.92	2707.54	2701.61	0.47	ppb
Krypton	83-1						cps

LB Number : LB133504

Operator : Jaswal

Lab Sample ID : S03

Instrumnet Name : P7

Client Sample ID : S03

Dilution Factor : 1

Date & Time Acquired : 2024-11-18 04:41:36

DataFile Name : 007CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	241.99	241.32	249.29	244.20	1.81	ppb
Lead	207-1	242.35	245.51	246.77	244.88	0.93	ppb
Lead	208-1	242.06	244.12	247.37	244.52	1.10	ppb
Lithium	6-1				104		%
Magnesium	24-2	5346.30	5351.49	5371.00	5356.27	0.24	ppb
Manganese	55-2	521.75	526.48	534.62	527.61	1.23	ppb
Molybdenum	94-1	488.52	497.03	499.48	495.01	1.16	ppb
Molybdenum	95-1	494.18	495.69	502.84	497.57	0.93	ppb
Molybdenum	96-1	495.36	492.76	497.62	495.25	0.49	ppb
Molybdenum	97-1	492.03	491.60	494.55	492.72	0.32	ppb
Molybdenum	98-1	491.10	502.59	491.76	495.15	1.30	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	53.08	52.39	52.33	52.60	0.80	ppb
Phosphorus	31-2	1078.15	1036.38	1055.96	1056.83	1.98	ppb
Potassium	39-2	2624.64	2651.93	2602.33	2626.30	0.95	ppb
Rhodium	103-1				98		%
Rhodium	103-2				97		%
Scandium	45-1				98		%
Scandium	45-2				98		%
Selenium	82-1	50.22	51.92	51.57	51.24	1.75	ppb
Selenium	77-2	48.59	52.93	52.79	51.44	4.80	ppb
Selenium	78-2	52.98	52.35	54.54	53.29	2.12	ppb
Silicon	28-1	51.30	52.10	52.07	51.82	0.88	ppb
Silver	107-1	54.98	53.20	54.54	54.24	1.71	ppb
Silver	109-1	54.57	55.47	54.84	54.96	0.84	ppb
Sodium	23-2	5438.17	5383.66	5414.62	5412.15	0.51	ppb
Strontium	86-1	1201.34	1228.21	1225.24	1218.26	1.21	ppb
Strontium	88-1	1250.46	1250.06	1262.13	1254.22	0.55	ppb
Sulfur	34-1	909.78	989.03	948.24	949.02	4.18	ppb
Terbium	159-1				100		%
Terbium	159-2				101		%
Thallium	203-1	47.43	47.44	47.30	47.39	0.16	ppb
Thallium	205-1	48.17	48.31	49.05	48.51	0.98	ppb
Tin	118-1	50.05	51.24	51.96	51.08	1.89	ppb
Titanium	47-1	496.43	504.91	495.17	498.83	1.06	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

S03

Instrumnet Name :

P7

Client Sample ID :

S03

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 04:41:36

DataFile Name :

007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	46.72	47.00	47.02	46.91	0.36	ppb
Vanadium	51-2	50.61	50.33	50.54	50.49	0.29	ppb
Yttrium	89-1				99		%
Yttrium	89-2				97		%
Zinc	66-2	535.22	525.15	531.82	530.73	0.96	ppb
Zirconium	90-1	49.39	50.42	49.57	49.79	1.10	ppb
Zirconium	91-1	47.41	48.71	48.23	48.12	1.37	ppb

LB Number :LB133504

Operator :Jaswal

Lab Sample ID :S04

Instrumnet Name :P7

Client Sample ID :S04

Dilution Factor :1

Date & Time Acquired :2024-11-18 04:44:28

DataFile Name :008CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2734.01	2607.49	2571.12	2637.54	3.24	ppb
Antimony	121-1	120.60	123.05	129.54	124.39	3.71	ppb
Arsenic	75-2	136.37	132.15	132.26	133.59	1.80	ppb
Barium	135-1	594.49	617.06	650.75	620.76	4.56	ppb
Barium	137-1	582.66	609.11	643.17	611.65	4.96	ppb
Beryllium	9-1	107.76	115.75	119.59	114.36	5.28	ppb
Bismuth	209-1				103		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	125.29	127.04	133.80	128.71	3.49	ppb
Cadmium	106-1	126.19	128.02	135.45	129.89	3.78	ppb
Cadmium	111-1	121.99	125.36	130.95	126.10	3.59	ppb
Calcium	43-1	12207.90	12662.53	13239.71	12703.38	4.07	ppb
Calcium	44-1	12256.19	12560.45	12990.28	12602.31	2.93	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	133.08	132.03	128.96	131.36	1.63	ppb
Cobalt	59-2	137.83	138.56	138.13	138.17	0.27	ppb
Copper	63-2	1357.41	1372.57	1371.80	1367.26	0.62	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				100		%
Indium	115-1				100		%
Indium	115-2				95		%
Iron	56-2	6963.06	6756.91	6973.06	6897.68	1.77	ppb
Iron	57-2	6942.15	6794.03	6937.86	6891.35	1.22	ppb
Iron	54-2	7118.63	6899.03	6742.51	6920.06	2.73	ppb
Krypton	83-1						cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

S04

Instrumnet Name :

P7

Client Sample ID :

S04

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 04:44:28

DataFile Name :

008CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	565.54	605.38	620.94	597.29	4.78	ppb
Lead	207-1	573.63	599.09	624.75	599.16	4.27	ppb
Lead	208-1	566.64	599.65	618.37	594.88	4.40	ppb
Lithium	6-1				107		%
Magnesium	24-2	13651.71	13513.50	13107.64	13424.28	2.11	ppb
Manganese	55-2	1374.22	1324.42	1321.02	1339.88	2.22	ppb
Molybdenum	94-1	1163.10	1216.34	1269.19	1216.21	4.36	ppb
Molybdenum	95-1	1158.72	1223.77	1272.66	1218.38	4.69	ppb
Molybdenum	96-1	1151.92	1222.40	1272.40	1215.57	4.98	ppb
Molybdenum	97-1	1148.33	1216.81	1261.91	1209.02	4.73	ppb
Molybdenum	98-1	1151.71	1221.30	1275.61	1216.21	5.11	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	139.98	143.03	138.96	140.65	1.51	ppb
Phosphorus	31-2	2725.55	2708.34	2734.05	2722.64	0.48	ppb
Potassium	39-2	6595.68	6678.81	6571.58	6615.35	0.85	ppb
Rhodium	103-1				98		%
Rhodium	103-2				94		%
Scandium	45-1				97		%
Scandium	45-2				94		%
Selenium	82-1	120.08	125.53	130.78	125.46	4.27	ppb
Selenium	77-2	134.85	139.14	136.01	136.66	1.62	ppb
Selenium	78-2	136.14	137.66	132.20	135.33	2.08	ppb
Silicon	28-1	110.31	116.59	124.51	117.14	6.07	ppb
Silver	107-1	126.81	130.05	132.53	129.80	2.21	ppb
Silver	109-1	126.16	127.43	134.78	129.46	3.60	ppb
Sodium	23-2	13611.64	13635.21	13441.64	13562.83	0.78	ppb
Strontium	86-1	2821.00	2970.23	3098.79	2963.34	4.69	ppb
Strontium	88-1	2906.66	3040.64	3156.82	3034.71	4.13	ppb
Sulfur	34-1	2010.70	2107.82	2305.59	2141.37	7.02	ppb
Terbium	159-1				102		%
Terbium	159-2				100		%
Thallium	203-1	114.60	118.57	124.56	119.24	4.20	ppb
Thallium	205-1	113.20	119.26	124.82	119.09	4.88	ppb
Tin	118-1	119.89	123.95	128.93	124.26	3.64	ppb
Titanium	47-1	1169.16	1202.42	1264.87	1212.15	4.01	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

S04

Instrumnet Name :

P7

Client Sample ID :

S04

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 04:44:28

DataFile Name :

008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	111.46	114.74	120.41	115.54	3.92	ppb
Vanadium	51-2	127.22	127.56	125.69	126.82	0.79	ppb
Yttrium	89-1				98		%
Yttrium	89-2				94		%
Zinc	66-2	1344.92	1344.97	1347.21	1345.70	0.10	ppb
Zirconium	90-1	115.63	121.10	125.43	120.72	4.07	ppb
Zirconium	91-1	112.64	118.00	123.52	118.06	4.61	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

S05

Instrumnet Name :

P7

Client Sample ID :

S05

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 04:47:12

DataFile Name :

009CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	5221.33	5320.29	5145.29	5228.97	1.68	ppb
Antimony	121-1	239.08	250.08	251.56	246.91	2.76	ppb
Arsenic	75-2	261.98	264.94	262.13	263.02	0.63	ppb
Barium	135-1	1200.49	1250.11	1256.33	1235.64	2.48	ppb
Barium	137-1	1183.52	1238.56	1272.06	1231.38	3.63	ppb
Beryllium	9-1	216.31	235.38	228.31	226.66	4.25	ppb
Bismuth	209-1				102		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	246.70	260.81	261.19	256.23	3.22	ppb
Cadmium	106-1	245.94	257.89	259.93	254.59	2.97	ppb
Cadmium	111-1	242.43	256.06	260.08	252.86	3.66	ppb
Calcium	43-1	24305.65	25688.90	25789.69	25261.41	3.28	ppb
Calcium	44-1	23973.16	25547.99	25546.99	25022.71	3.63	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	259.86	270.67	265.08	265.20	2.04	ppb
Cobalt	59-2	264.32	267.49	264.20	265.34	0.70	ppb
Copper	63-2	2695.96	2743.66	2660.25	2699.96	1.55	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				101		%
Indium	115-1				97		%
Indium	115-2				95		%
Iron	56-2	13491.67	13647.35	13516.30	13551.77	0.62	ppb
Iron	57-2	13453.41	13573.79	13679.82	13569.00	0.83	ppb
Iron	54-2	13602.23	13905.02	13629.44	13712.23	1.22	ppb
Krypton	83-1						cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : S05 Instrumnet Name : P7
Client Sample ID : S05 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 04:47:12 DataFile Name : 009CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1120.00	1200.50	1205.71	1175.40	4.09	ppb
Lead	207-1	1122.80	1208.86	1207.40	1179.68	4.18	ppb
Lead	208-1	1126.34	1210.11	1207.55	1181.33	4.03	ppb
Lithium	6-1				104		%
Magnesium	24-2	26615.30	27425.64	26809.34	26950.09	1.57	ppb
Manganese	55-2	2629.75	2657.18	2654.91	2647.28	0.58	ppb
Molybdenum	94-1	2292.37	2440.19	2504.47	2412.34	4.51	ppb
Molybdenum	95-1	2308.57	2428.16	2484.12	2406.95	3.73	ppb
Molybdenum	96-1	2313.81	2442.04	2461.93	2405.92	3.34	ppb
Molybdenum	97-1	2309.65	2432.06	2484.04	2408.59	3.72	ppb
Molybdenum	98-1	2321.11	2441.82	2504.26	2422.40	3.84	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	262.25	269.31	266.62	266.06	1.34	ppb
Phosphorus	31-2	5296.22	5343.30	5266.84	5302.12	0.73	ppb
Potassium	39-2	12826.16	12934.23	12953.50	12904.63	0.53	ppb
Rhodium	103-1				94		%
Rhodium	103-2				94		%
Scandium	45-1				94		%
Scandium	45-2				93		%
Selenium	82-1	236.41	250.10	252.79	246.44	3.57	ppb
Selenium	77-2	271.19	267.70	259.17	266.02	2.33	ppb
Selenium	78-2	259.51	263.02	263.93	262.15	0.89	ppb
Silicon	28-1	224.57	237.79	239.24	233.87	3.46	ppb
Silver	107-1	244.93	257.61	260.04	254.19	3.19	ppb
Silver	109-1	247.79	258.22	261.17	255.73	2.75	ppb
Sodium	23-2	27276.16	27740.44	26929.40	27315.33	1.49	ppb
Strontium	86-1	5802.89	6115.32	6265.45	6061.22	3.89	ppb
Strontium	88-1	5785.78	6141.14	6215.04	6047.32	3.79	ppb
Sulfur	34-1	4065.01	4376.93	4397.68	4279.88	4.35	ppb
Terbium	159-1				100		%
Terbium	159-2				102		%
Thallium	203-1	226.38	237.05	239.05	234.16	2.91	ppb
Thallium	205-1	223.33	239.95	241.82	235.03	4.33	ppb
Tin	118-1	236.02	246.79	256.62	246.48	4.18	ppb
Titanium	47-1	2315.74	2462.41	2459.49	2412.55	3.48	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

S05

Instrumnet Name :

P7

Client Sample ID :

S05

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 04:47:12

DataFile Name :

009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	219.40	234.58	238.21	230.73	4.33	ppb
Vanadium	51-2	264.11	265.70	261.21	263.68	0.86	ppb
Yttrium	89-1				97		%
Yttrium	89-2				93		%
Zinc	66-2	2683.30	2744.49	2685.20	2704.33	1.29	ppb
Zirconium	90-1	231.18	250.67	250.35	244.07	4.57	ppb
Zirconium	91-1	231.70	245.75	248.61	242.02	3.74	ppb

LB Number :LB133504Operator :Jaswal

Lab Sample ID :S06Instrumnet Name :P7

Client Sample ID :S06Dilution Factor :1

Date & Time Acquired :2024-11-18 04:49:58DataFile Name :010CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10061.85	9790.42	10195.01	10015.76	2.06	ppb
Antimony	121-1	490.37	494.42	497.75	494.18	0.75	ppb
Arsenic	75-2	505.24	511.15	505.95	507.45	0.64	ppb
Barium	135-1	2464.54	2474.50	2470.24	2469.76	0.20	ppb
Barium	137-1	2485.71	2480.66	2460.79	2475.72	0.53	ppb
Beryllium	9-1	505.62	500.67	491.80	499.36	1.40	ppb
Bismuth	209-1				98		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	496.13	502.79	503.82	500.92	0.83	ppb
Cadmium	106-1	500.18	502.26	501.61	501.35	0.21	ppb
Cadmium	111-1	499.26	506.18	503.81	503.08	0.70	ppb
Calcium	43-1	50616.23	50816.12	51558.35	50996.90	0.97	ppb
Calcium	44-1	50775.15	50920.19	50860.63	50851.99	0.14	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	519.90	511.58	521.98	517.82	1.06	ppb
Cobalt	59-2	515.76	502.29	519.67	512.58	1.78	ppb
Copper	63-2	5220.36	5083.62	5256.93	5186.97	1.76	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				100		%
Holmium	165-2				101		%
Indium	115-1				94		%
Indium	115-2				93		%
Iron	56-2	26065.35	25892.60	26762.15	26240.03	1.75	ppb
Iron	57-2	26085.53	25751.16	26409.63	26082.11	1.26	ppb
Iron	54-2	26435.55	25826.14	26910.42	26390.70	2.06	ppb
Krypton	83-1						cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : S06 Instrumnet Name : P7
Client Sample ID : S06 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 04:49:58 DataFile Name : 010CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2434.66	2440.34	2450.73	2441.91	0.33	ppb
Lead	207-1	2440.49	2444.22	2438.89	2441.20	0.11	ppb
Lead	208-1	2427.05	2442.93	2435.55	2435.18	0.33	ppb
Lithium	6-1				101		%
Magnesium	24-2	52425.15	51642.49	53427.77	52498.47	1.70	ppb
Manganese	55-2	5115.27	5044.82	5256.58	5138.89	2.10	ppb
Molybdenum	94-1	4929.45	4891.92	4891.68	4904.35	0.44	ppb
Molybdenum	95-1	4964.07	4899.31	4904.95	4922.78	0.73	ppb
Molybdenum	96-1	4908.81	4882.15	4849.69	4880.22	0.61	ppb
Molybdenum	97-1	4873.87	4864.08	4903.35	4880.43	0.42	ppb
Molybdenum	98-1	4927.67	4906.65	4934.10	4922.81	0.29	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	532.38	506.11	529.94	522.81	2.78	ppb
Phosphorus	31-2	10170.61	10049.44	10490.32	10236.79	2.22	ppb
Potassium	39-2	25167.46	24863.77	25708.57	25246.60	1.69	ppb
Rhodium	103-1				91		%
Rhodium	103-2				92		%
Scandium	45-1				90		%
Scandium	45-2				93		%
Selenium	82-1	499.88	496.19	494.63	496.90	0.54	ppb
Selenium	77-2	508.73	517.32	509.16	511.74	0.95	ppb
Selenium	78-2	507.97	511.99	510.48	510.15	0.40	ppb
Silicon	28-1	515.38	511.59	517.55	514.84	0.59	ppb
Silver	107-1	498.16	501.43	496.86	498.82	0.47	ppb
Silver	109-1	502.96	503.81	502.66	503.14	0.12	ppb
Sodium	23-2	53438.41	53573.95	53614.05	53542.14	0.17	ppb
Strontium	86-1	12292.40	12434.92	12267.11	12331.48	0.73	ppb
Strontium	88-1	12367.18	12310.14	12195.01	12290.78	0.71	ppb
Sulfur	34-1	10411.37	10553.52	10281.68	10415.52	1.31	ppb
Terbium	159-1				99		%
Terbium	159-2				102		%
Thallium	203-1	487.34	486.55	489.72	487.87	0.34	ppb
Thallium	205-1	486.09	493.30	490.34	489.91	0.74	ppb
Tin	118-1	491.26	496.52	503.79	497.19	1.27	ppb
Titanium	47-1	4964.48	4905.27	4927.41	4932.39	0.61	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

S06

Instrumnet Name :

P7

Client Sample ID :

S06

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 04:49:58

DataFile Name :

010CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	482.03	485.96	483.40	483.79	0.41	ppb
Vanadium	51-2	509.10	512.87	516.97	512.98	0.77	ppb
Yttrium	89-1				94		%
Yttrium	89-2				93		%
Zinc	66-2	5140.27	5079.77	5281.62	5167.22	2.00	ppb
Zirconium	90-1	491.09	492.06	490.06	491.07	0.20	ppb
Zirconium	91-1	489.14	489.69	488.81	489.21	0.09	ppb

LB Number :LB133504Operator :Jaswal

Lab Sample ID :S07Instrumnet Name :P7

Client Sample ID :S07Dilution Factor :1

Date & Time Acquired :2024-11-18 04:52:42DataFile Name :011CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19660.60	19391.63	19250.64	19434.29	1.07	ppb
Antimony	121-1	1026.06	1006.41	978.77	1003.75	2.37	ppb
Arsenic	75-2	991.81	991.54	992.04	991.80	0.03	ppb
Barium	135-1	5125.61	5032.45	4898.44	5018.83	2.28	ppb
Barium	137-1	5155.72	5016.56	4882.54	5018.27	2.72	ppb
Beryllium	9-1	1038.25	1002.51	982.02	1007.59	2.82	ppb
Bismuth	209-1				94		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1018.41	997.65	975.81	997.29	2.14	ppb
Cadmium	106-1	1022.46	998.75	970.77	997.33	2.59	ppb
Cadmium	111-1	1030.42	998.85	963.08	997.45	3.38	ppb
Calcium	43-1	107127.19	104288.90	101212.24	104209.44	2.84	ppb
Calcium	44-1	106376.39	104790.08	100449.88	103872.12	2.95	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	990.09	997.64	971.59	986.44	1.36	ppb
Cobalt	59-2	983.98	1001.81	978.64	988.14	1.23	ppb
Copper	63-2	9872.23	9955.26	9691.84	9839.77	1.37	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				97		%
Holmium	165-2				101		%
Indium	115-1				89		%
Indium	115-2				92		%
Iron	56-2	50755.54	50579.24	49211.72	50182.17	1.68	ppb
Iron	57-2	50673.95	50655.19	48899.34	50076.16	2.04	ppb
Iron	54-2	51057.54	50984.10	49351.12	50464.25	1.91	ppb
Krypton	83-1						cps

LB Number :
Lab Sample ID :
Client Sample ID :
Date & Time Acquired :

LB133504
S07
S07
2024-11-18 04:52:42

Operator :
Instrumnet Name :
Dilution Factor :
DataFile Name :

Jaswal
P7
1
011CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	5186.13	5072.07	4896.14	5051.45	2.89	ppb
Lead	207-1	5196.64	5031.17	4923.59	5050.47	2.72	ppb
Lead	208-1	5173.64	5057.82	4929.39	5053.62	2.42	ppb
Lithium	6-1				92		%
Magnesium	24-2	101740.29	101523.73	99845.52	101036.52	1.03	ppb
Manganese	55-2	9959.02	10103.30	9581.04	9881.12	2.73	ppb
Molybdenum	94-1	10268.22	10142.64	9811.77	10074.21	2.34	ppb
Molybdenum	95-1	10310.75	10089.37	9797.73	10065.95	2.56	ppb
Molybdenum	96-1	10417.30	10032.41	9814.15	10087.95	3.03	ppb
Molybdenum	97-1	10353.36	10034.33	9876.69	10088.12	2.41	ppb
Molybdenum	98-1	10429.44	9977.36	9780.60	10062.46	3.31	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	985.83	990.96	970.68	982.49	1.07	ppb
Phosphorus	31-2	19888.53	19943.66	19494.01	19775.40	1.24	ppb
Potassium	39-2	49241.32	49614.04	48152.45	49002.60	1.55	ppb
Rhodium	103-1				86		%
Rhodium	103-2				90		%
Scandium	45-1				86		%
Scandium	45-2				94		%
Selenium	82-1	1028.82	1001.35	976.78	1002.32	2.60	ppb
Selenium	77-2	985.17	999.50	981.12	988.60	0.98	ppb
Selenium	78-2	983.68	999.47	988.15	990.44	0.82	ppb
Silicon	28-1	1039.71	1008.94	944.13	997.59	4.89	ppb
Silver	107-1	1038.34	989.81	968.06	998.73	3.60	ppb
Silver	109-1	1024.35	997.56	966.67	996.19	2.90	ppb
Sodium	23-2	103467.38	102886.33	101589.63	102647.78	0.94	ppb
Strontium	86-1	25937.39	25140.40	24381.96	25153.25	3.09	ppb
Strontium	88-1	25823.44	25309.86	24365.77	25166.36	2.94	ppb
Sulfur	34-1	20828.45	19895.37	19335.13	20019.65	3.77	ppb
Terbium	159-1				97		%
Terbium	159-2				102		%
Thallium	203-1	1037.10	1013.13	982.40	1010.88	2.71	ppb
Thallium	205-1	1039.68	1013.50	975.62	1009.60	3.19	ppb
Tin	118-1	1030.01	994.99	981.97	1002.33	2.48	ppb
Titanium	47-1	10292.91	10200.77	9687.70	10060.46	3.24	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

S07

Instrumnet Name :

P7

Client Sample ID :

S07

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 04:52:42

DataFile Name :

011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1029.30	1020.06	993.41	1014.26	1.84	ppb
Vanadium	51-2	992.61	993.11	983.80	989.84	0.53	ppb
Yttrium	89-1				91		%
Yttrium	89-2				93		%
Zinc	66-2	10012.76	9878.47	9664.20	9851.81	1.78	ppb
Zirconium	90-1	1024.04	1011.80	983.65	1006.49	2.06	ppb
Zirconium	91-1	1031.58	1018.53	974.95	1008.35	2.94	ppb

LB Number :LB133504Operator :Jaswal

Lab Sample ID :S08Instrumnet Name :P7

Client Sample ID :S08Dilution Factor :1

Date & Time Acquired :2024-11-18 04:55:28DataFile Name :012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	101228.44	100287.32	98774.52	100096.76	1.24	ppb
Antimony	121-1	0.53	0.52	0.62	0.55	9.97	ppb
Arsenic	75-2	0.68	0.52	0.54	0.58	15.20	ppb
Barium	135-1	3.46	3.08	3.10	3.21	6.58	ppb
Barium	137-1	3.46	3.19	3.02	3.22	6.81	ppb
Beryllium	9-1	0.23	0.16	0.13	0.17	29.18	ppb
Bismuth	209-1				84		%
Bismuth	209-2				83		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.46	0.41	0.33	0.40	16.69	ppb
Cadmium	106-1	0.65	0.77	0.40	0.61	30.39	ppb
Cadmium	111-1	0.30	0.24	0.21	0.25	19.11	ppb
Calcium	43-1	506500.46	499774.89	490836.17	499037.17	1.57	ppb
Calcium	44-1	505263.17	497511.64	494627.82	499134.21	1.10	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1.61	1.57	1.50	1.56	3.53	ppb
Cobalt	59-2	2.56	2.61	2.45	2.54	3.15	ppb
Copper	63-2	1.82	1.72	1.56	1.70	7.57	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				95		%
Holmium	165-2				95		%
Indium	115-1				87		%
Indium	115-2				88		%
Iron	56-2	254582.31	253871.24	240853.01	249768.85	3.09	ppb
Iron	57-2	252868.84	256148.68	240397.37	249804.96	3.33	ppb
Iron	54-2	254160.03	258344.10	236561.97	249688.70	4.63	ppb
Krypton	83-1						cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :S08Instrumnet Name :P7

Client Sample ID :S08Dilution Factor :1

Date & Time Acquired :2024-11-18 04:55:28DataFile Name :012CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1.04	0.74	0.57	0.79	30.45	ppb
Lead	207-1	0.99	0.69	0.53	0.74	32.31	ppb
Lead	208-1	1.02	0.72	0.57	0.77	30.08	ppb
Lithium	6-1				89		%
Magnesium	24-2	513113.50	507081.23	478061.36	499418.70	3.75	ppb
Manganese	55-2	5.25	5.33	5.10	5.22	2.24	ppb
Molybdenum	94-1	3.35	2.64	2.47	2.82	16.55	ppb
Molybdenum	95-1	2.43	1.88	1.61	1.98	21.26	ppb
Molybdenum	96-1	3.74	3.20	2.92	3.28	12.77	ppb
Molybdenum	97-1	2.47	1.88	1.62	1.99	21.85	ppb
Molybdenum	98-1	2.38	1.79	1.55	1.91	22.37	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	2.73	2.66	2.52	2.64	4.19	ppb
Phosphorus	31-2	-8.38	-6.14	-10.79	-8.44		ppb
Potassium	39-2	252875.27	256406.64	241150.64	250144.19	3.19	ppb
Rhodium	103-1				80		%
Rhodium	103-2				82		%
Scandium	45-1				88		%
Scandium	45-2				91		%
Selenium	82-1	0.65	0.72	0.48	0.62	19.59	ppb
Selenium	77-2	0.36	0.26	0.09	0.24	57.66	ppb
Selenium	78-2	0.09	-0.14	-0.04	-0.03		ppb
Silicon	28-1	0.71	0.39	-0.02	0.36	101.47	ppb
Silver	107-1	0.19	0.14	0.12	0.15	26.53	ppb
Silver	109-1	0.20	0.13	0.11	0.15	30.59	ppb
Sodium	23-2	507605.34	507648.01	481656.05	498969.80	3.01	ppb
Strontium	86-1	83.60	81.32	81.52	82.15	1.54	ppb
Strontium	88-1	82.41	80.90	80.54	81.28	1.22	ppb
Sulfur	34-1	-372.07	-358.67	-340.62	-357.12		ppb
Terbium	159-1				94		%
Terbium	159-2				95		%
Thallium	203-1	0.17	0.10	0.08	0.12	43.98	ppb
Thallium	205-1	0.17	0.10	0.07	0.11	46.06	ppb
Tin	118-1	0.46	0.42	0.38	0.42	9.51	ppb
Titanium	47-1	1.88	1.27	1.01	1.39	32.05	ppb

LB Number :LB133504

Operator :Jaswal

Lab Sample ID :S08

Instrumnet Name :P7

Client Sample ID :S08

Dilution Factor :1

Date & Time Acquired :2024-11-18 04:55:28

DataFile Name :012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.17	0.11	0.08	0.12	39.96	ppb
Vanadium	51-2	0.29	0.27	0.25	0.27	8.33	ppb
Yttrium	89-1				90		%
Yttrium	89-2				91		%
Zinc	66-2	1.96	2.03	1.63	1.88	11.27	ppb
Zirconium	90-1	0.65	0.60	0.57	0.60	6.50	ppb
Zirconium	91-1	0.63	0.61	0.57	0.60	5.02	ppb

LB Number :LB133504Operator :Jaswal

Lab Sample ID :ICV001Instrumnet Name :P7

Client Sample ID :ICV001Dilution Factor :1

Date & Time Acquired :2024-11-18 05:53:44DataFile Name :014ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	453.84	459.29	449.55	454.23	1.07	ppb
Antimony	121-1	191.99	192.63	193.04	192.55	0.28	ppb
Arsenic	75-2	202.32	204.60	203.17	203.36	0.57	ppb
Barium	135-1	93.71	93.68	93.92	93.77	0.14	ppb
Barium	137-1	94.93	93.03	94.05	94.00	1.01	ppb
Beryllium	9-1	91.56	93.09	93.87	92.84	1.27	ppb
Bismuth	209-1				101		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	89.77	89.85	89.50	89.71	0.20	ppb
Cadmium	106-1	88.91	89.26	88.78	88.98	0.28	ppb
Cadmium	111-1	100.26	99.03	99.61	99.63	0.62	ppb
Calcium	43-1	1876.92	1896.78	1902.95	1892.22	0.72	ppb
Calcium	44-1	1886.56	1841.45	1885.64	1871.22	1.38	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	97.00	98.69	97.21	97.63	0.94	ppb
Cobalt	59-2	100.93	101.98	100.83	101.25	0.63	ppb
Copper	63-2	94.65	96.34	94.56	95.18	1.05	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				101		%
Indium	115-1				100		%
Indium	115-2				99		%
Iron	56-2	1959.86	1995.49	1953.96	1969.77	1.14	ppb
Iron	57-2	1963.75	2011.69	1964.78	1980.08	1.38	ppb
Iron	54-2	2034.63	2079.81	2034.06	2049.50	1.28	ppb
Krypton	83-1						cps

LB Number :	LB133504		Operator :	Jaswal			
Lab Sample ID :	ICV001		Instrumnet Name :	P7			
Client Sample ID :	ICV001		Dilution Factor :	1			
Date & Time Acquired :	2024-11-18 05:53:44		DataFile Name :	014ICV.d			
Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	193.37	198.40	199.37	197.05	1.63	ppb
Lead	207-1	186.32	188.83	187.61	187.59	0.67	ppb
Lead	208-1	189.48	192.89	191.28	191.22	0.89	ppb
Lithium	6-1				102		%
Magnesium	24-2	1036.69	1054.07	1038.75	1043.17	0.91	ppb
Manganese	55-2	95.34	97.17	95.92	96.14	0.97	ppb
Molybdenum	94-1	0.05	0.05	0.05	0.05	6.95	ppb
Molybdenum	95-1	0.04	0.05	0.05	0.05	4.84	ppb
Molybdenum	96-1	0.06	0.06	0.06	0.06	3.32	ppb
Molybdenum	97-1	0.04	0.04	0.04	0.04	10.30	ppb
Molybdenum	98-1	0.05	0.04	0.04	0.04	10.63	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	99.84	101.81	99.69	100.45	1.17	ppb
Phosphorus	31-2	-17.23	-14.81	-18.22	-16.75		ppb
Potassium	39-2	1897.09	1933.94	1862.02	1897.68	1.90	ppb
Rhodium	103-1				99		%
Rhodium	103-2				99		%
Scandium	45-1				99		%
Scandium	45-2				99		%
Selenium	82-1	200.56	201.99	204.33	202.29	0.94	ppb
Selenium	77-2	208.46	214.95	215.82	213.08	1.89	ppb
Selenium	78-2	208.79	208.70	213.98	210.49	1.44	ppb
Silicon	28-1	-1.91	-2.48	-1.97	-2.12		ppb
Silver	107-1	49.45	50.16	49.67	49.76	0.73	ppb
Silver	109-1	49.40	49.70	50.53	49.87	1.18	ppb
Sodium	23-2	1945.75	1988.32	1940.52	1958.19	1.34	ppb
Strontium	86-1	6.04	6.35	6.50	6.30	3.74	ppb
Strontium	88-1	6.25	6.11	6.23	6.20	1.18	ppb
Sulfur	34-1	-2.59	29.42	9.81	12.21	132.14	ppb
Terbium	159-1				101		%
Terbium	159-2				101		%
Thallium	203-1	193.50	197.81	199.79	197.03	1.63	ppb
Thallium	205-1	194.03	196.30	197.82	196.05	0.97	ppb
Tin	118-1	0.04	0.01	0.02	0.02	62.14	ppb
Titanium	47-1	-0.19	-0.20	-0.19	-0.19		ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

ICV001

Instrumnet Name :

P7

Client Sample ID :

ICV001

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 05:53:44

DataFile Name :

014ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	65.35	ppb
Vanadium	51-2	93.89	95.00	93.07	93.99	1.03	ppb
Yttrium	89-1				99		%
Yttrium	89-2				99		%
Zinc	66-2	193.64	196.26	192.31	194.07	1.04	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00		ppb
Zirconium	91-1	0.04	0.05	0.05	0.05	14.09	ppb

LB Number :LB133504Operator :Jaswal

Lab Sample ID :ICB001Instrumnet Name :P7

Client Sample ID :ICB001Dilution Factor :1

Date & Time Acquired :2024-11-18 05:57:00DataFile Name :015CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.11	-0.02	-0.07	0.01	1146.72	ppb
Antimony	121-1	0.06	0.06	0.07	0.06	9.81	ppb
Arsenic	75-2	0.03	0.02	0.00	0.02	97.47	ppb
Barium	135-1	0.03	0.02	0.02	0.02	17.28	ppb
Barium	137-1	0.02	0.02	0.01	0.02	26.41	ppb
Beryllium	9-1	0.01	0.02	0.02	0.02	33.60	ppb
Bismuth	209-1				99		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	-0.04	0.04	0.03	0.01	557.90	ppb
Cadmium	106-1	0.74	0.96	0.41	0.70	39.63	ppb
Cadmium	111-1	0.08	0.09	0.04	0.07	34.79	ppb
Calcium	43-1	4.53	4.27	3.09	3.97	19.38	ppb
Calcium	44-1	5.58	4.02	4.20	4.60	18.61	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.01	-0.01	-0.01	0.00		ppb
Cobalt	59-2	0.01	0.01	0.01	0.01	27.10	ppb
Copper	63-2	0.01	0.01	0.00	0.01	133.25	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				98		%
Indium	115-2				99		%
Iron	56-2	0.92	0.94	0.75	0.87	12.42	ppb
Iron	57-2	0.25	0.28	0.63	0.39	54.63	ppb
Iron	54-2	1.09	0.57	0.02	0.56	95.46	ppb
Krypton	83-1						cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : ICB001 Instrumnet Name : P7
Client Sample ID : ICB001 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 05:57:00 DataFile Name : 015CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	-0.09	-0.09	-0.11	-0.10		ppb
Lead	207-1	-0.10	-0.11	-0.12	-0.11		ppb
Lead	208-1	-0.09	-0.10	-0.11	-0.10		ppb
Lithium	6-1				102		%
Magnesium	24-2	0.50	0.43	0.35	0.43	16.63	ppb
Manganese	55-2	-0.07	-0.07	-0.07	-0.07		ppb
Molybdenum	94-1	0.02	0.02	0.02	0.02	22.49	ppb
Molybdenum	95-1	0.00	0.00	0.00	0.00	71.95	ppb
Molybdenum	96-1	0.00	0.00	0.00	0.00	86.47	ppb
Molybdenum	97-1	0.00	0.00	0.00	0.00		ppb
Molybdenum	98-1	0.00	0.00	0.00	0.00		ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.09	-0.11	-0.09	-0.10		ppb
Phosphorus	31-2	-14.37	-12.18	-15.48	-14.01		ppb
Potassium	39-2	4.47	2.69	0.95	2.70	65.06	ppb
Rhodium	103-1				98		%
Rhodium	103-2				99		%
Scandium	45-1				97		%
Scandium	45-2				100		%
Selenium	82-1	0.32	0.22	-0.04	0.17	113.67	ppb
Selenium	77-2	0.00	0.08	0.00	0.03	173.21	ppb
Selenium	78-2	0.11	-0.46	-0.39	-0.25		ppb
Silicon	28-1	-1.66	-1.18	-2.43	-1.76		ppb
Silver	107-1	0.02	0.01	0.01	0.01	33.62	ppb
Silver	109-1	0.02	0.02	0.01	0.02	21.28	ppb
Sodium	23-2	0.31	0.35	-0.51	0.05	955.38	ppb
Strontium	86-1	0.51	0.35	0.11	0.32	61.91	ppb
Strontium	88-1	0.05	-0.01	0.04	0.03	115.28	ppb
Sulfur	34-1	121.07	88.19	36.30	81.85	52.22	ppb
Terbium	159-1				99		%
Terbium	159-2				101		%
Thallium	203-1	0.04	0.03	0.03	0.03	28.13	ppb
Thallium	205-1	0.05	0.04	0.03	0.04	24.10	ppb
Tin	118-1	0.04	0.02	0.02	0.03	32.11	ppb
Titanium	47-1	0.16	0.12	0.10	0.13	22.97	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

ICB001

Instrumnet Name :

P7

Client Sample ID :

ICB001

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 05:57:00

DataFile Name :

015CCBE.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	0.01	0.00	0.01	37.59	ppb
Yttrium	89-1				97		%
Yttrium	89-2				98		%
Zinc	66-2	-0.49	-0.58	-0.59	-0.55		ppb
Zirconium	90-1	0.02	0.01	0.01	0.01	38.92	ppb
Zirconium	91-1	0.02	0.01	0.01	0.01	29.67	ppb

LB Number :LB133504Operator :Jaswal

Lab Sample ID :ICSA001Instrumnet Name :P7

Client Sample ID :ICSA001Dilution Factor :1

Date & Time Acquired :2024-11-18 06:00:15DataFile Name :016ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	87751.84	88685.57	87810.85	88082.75	0.59	ppb
Antimony	121-1	1.03	1.04	1.04	1.04	0.24	ppb
Arsenic	75-2	0.36	0.38	0.32	0.35	8.85	ppb
Barium	135-1	1.32	1.30	1.32	1.31	0.60	ppb
Barium	137-1	1.31	1.33	1.32	1.32	0.99	ppb
Beryllium	9-1	0.28	0.31	0.29	0.29	5.33	ppb
Bismuth	209-1				94		%
Bismuth	209-2				92		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	8.96	8.83	8.55	8.78	2.37	ppb
Cadmium	106-1	0.31	-0.41	-0.27	-0.12		ppb
Cadmium	111-1	0.37	0.32	0.30	0.33	11.14	ppb
Calcium	43-1	93819.33	96475.36	96855.90	95716.86	1.73	ppb
Calcium	44-1	93866.19	96301.81	96507.23	95558.41	1.54	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	19.10	19.28	19.09	19.16	0.55	ppb
Cobalt	59-2	1.20	1.21	1.17	1.20	1.50	ppb
Copper	63-2	6.99	7.04	6.96	7.00	0.57	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				99		%
Holmium	165-2				98		%
Indium	115-1				93		%
Indium	115-2				93		%
Iron	56-2	98330.94	99447.55	98343.07	98707.19	0.65	ppb
Iron	57-2	99067.51	100028.32	98233.48	99109.77	0.91	ppb
Iron	54-2	99441.23	98168.25	98000.15	98536.54	0.80	ppb
Krypton	83-1						cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : ICSA001 Instrumnet Name : P7
Client Sample ID : ICSA001 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:00:15 DataFile Name : 016ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	4.28	4.25	4.19	4.24	1.08	ppb
Lead	207-1	3.77	3.84	3.80	3.80	0.88	ppb
Lead	208-1	3.95	3.95	3.92	3.94	0.42	ppb
Lithium	6-1				90		%
Magnesium	24-2	92518.03	92396.36	91784.75	92233.04	0.43	ppb
Manganese	55-2	7.49	7.42	7.33	7.41	1.03	ppb
Molybdenum	94-1	1473.68	1499.31	1504.38	1492.45	1.10	ppb
Molybdenum	95-1	1785.50	1829.72	1831.13	1815.45	1.43	ppb
Molybdenum	96-1	1748.47	1807.35	1806.48	1787.43	1.89	ppb
Molybdenum	97-1	1778.73	1823.96	1832.31	1811.66	1.59	ppb
Molybdenum	98-1	1781.40	1827.24	1840.06	1816.23	1.70	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	5.01	5.11	4.95	5.02	1.60	ppb
Phosphorus	31-2	101705.74	102220.44	100555.69	101493.95	0.84	ppb
Potassium	39-2	95745.02	96744.77	95257.31	95915.70	0.79	ppb
Rhodium	103-1				88		%
Rhodium	103-2				90		%
Scandium	45-1				91		%
Scandium	45-2				94		%
Selenium	82-1	0.17	-0.06	-0.22	-0.04		ppb
Selenium	77-2	0.17	0.26	0.09	0.17	49.79	ppb
Selenium	78-2	-0.38	-0.56	-0.71	-0.55		ppb
Silicon	28-1	1.55	0.97	1.16	1.23	24.12	ppb
Silver	107-1	0.02	0.02	0.02	0.02	8.14	ppb
Silver	109-1	0.02	0.02	0.02	0.02	6.65	ppb
Sodium	23-2	98044.77	97689.99	97781.35	97838.70	0.19	ppb
Strontium	86-1	762.48	787.98	790.72	780.39	2.00	ppb
Strontium	88-1	793.40	821.13	796.58	803.70	1.89	ppb
Sulfur	34-1	88197.78	89817.70	88959.41	88991.63	0.91	ppb
Terbium	159-1				99		%
Terbium	159-2				99		%
Thallium	203-1	0.06	0.07	0.09	0.07	18.54	ppb
Thallium	205-1	0.07	0.07	0.08	0.07	7.51	ppb
Tin	118-1	0.08	0.09	0.06	0.07	22.92	ppb
Titanium	47-1	1840.83	1879.04	1901.84	1873.90	1.65	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

ICSA001

Instrumnet Name :

P7

Client Sample ID :

ICSA001

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:00:15

DataFile Name :

016ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.01	0.01	0.01	0.01	6.18	ppb
Vanadium	51-2	0.18	0.17	0.18	0.18	3.94	ppb
Yttrium	89-1				94		%
Yttrium	89-2				94		%
Zinc	66-2	8.99	8.79	9.12	8.97	1.86	ppb
Zirconium	90-1	-0.01	-0.01	-0.01	-0.01		ppb
Zirconium	91-1	-0.01	-0.01	0.00	-0.01		ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

ICSAB001

Instrumnet Name :

P7

Client Sample ID :

ICSAB001

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:03:18

DataFile Name :

017ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	84583.43	85629.63	86806.95	85673.34	1.30	ppb
Antimony	121-1	19.29	19.53	19.34	19.39	0.64	ppb
Arsenic	75-2	19.57	19.94	19.79	19.76	0.94	ppb
Barium	135-1	19.54	19.78	19.23	19.52	1.42	ppb
Barium	137-1	19.54	19.97	19.37	19.63	1.56	ppb
Beryllium	9-1	18.35	19.02	18.59	18.65	1.82	ppb
Bismuth	209-1				97		%
Bismuth	209-2				95		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	24.67	24.48	24.09	24.41	1.21	ppb
Cadmium	106-1	15.71	14.97	15.67	15.45	2.70	ppb
Cadmium	111-1	18.39	18.65	18.46	18.50	0.71	ppb
Calcium	43-1	96138.01	95879.43	97650.22	96555.89	0.99	ppb
Calcium	44-1	95414.94	96782.54	97415.59	96537.69	1.06	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	36.96	37.71	37.68	37.45	1.14	ppb
Cobalt	59-2	19.74	20.25	20.24	20.08	1.45	ppb
Copper	63-2	24.63	24.75	24.82	24.73	0.38	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				102		%
Indium	115-1				97		%
Indium	115-2				96		%
Iron	56-2	96340.40	97884.67	97511.71	97245.59	0.83	ppb
Iron	57-2	96616.34	96500.86	98414.64	97177.28	1.10	ppb
Iron	54-2	97483.02	97448.81	98254.11	97728.65	0.47	ppb
Krypton	83-1						cps

LB Number : LB133504

Operator : Jaswal

Lab Sample ID : ICSAB001

Instrumnet Name : P7

Client Sample ID : ICSAB001

Dilution Factor : 1

Date & Time Acquired : 2024-11-18 06:03:18

DataFile Name : 017ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	23.87	24.06	24.58	24.17	1.52	ppb
Lead	207-1	22.77	22.76	23.33	22.95	1.42	ppb
Lead	208-1	23.05	23.24	23.57	23.29	1.13	ppb
Lithium	6-1				85		%
Magnesium	24-2	88094.16	89973.25	90169.56	89412.32	1.28	ppb
Manganese	55-2	25.47	26.10	26.07	25.88	1.39	ppb
Molybdenum	94-1	1480.77	1490.85	1508.63	1493.42	0.94	ppb
Molybdenum	95-1	1795.40	1817.16	1818.99	1810.52	0.72	ppb
Molybdenum	96-1	1751.50	1786.52	1795.28	1777.77	1.30	ppb
Molybdenum	97-1	1777.90	1822.74	1823.72	1808.12	1.45	ppb
Molybdenum	98-1	1768.85	1818.54	1830.53	1805.97	1.81	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	23.02	23.73	23.58	23.44	1.59	ppb
Phosphorus	31-2	96766.30	97839.58	100409.41	98338.43	1.90	ppb
Potassium	39-2	94107.96	95228.10	95930.74	95088.94	0.97	ppb
Rhodium	103-1				92		%
Rhodium	103-2				94		%
Scandium	45-1				92		%
Scandium	45-2				96		%
Selenium	82-1	18.35	19.03	18.58	18.65	1.84	ppb
Selenium	77-2	16.87	17.89	18.45	17.74	4.52	ppb
Selenium	78-2	18.84	18.77	18.01	18.54	2.47	ppb
Silicon	28-1	1.14	1.55	1.83	1.51	22.84	ppb
Silver	107-1	17.56	17.80	17.42	17.59	1.09	ppb
Silver	109-1	17.53	17.65	17.49	17.56	0.48	ppb
Sodium	23-2	93332.95	96079.71	96904.19	95438.95	1.96	ppb
Strontium	86-1	775.65	783.78	786.94	782.12	0.75	ppb
Strontium	88-1	800.81	802.68	815.45	806.31	0.99	ppb
Sulfur	34-1	86574.54	88880.61	87582.76	87679.30	1.32	ppb
Terbium	159-1				103		%
Terbium	159-2				102		%
Thallium	203-1	19.02	19.24	19.59	19.28	1.49	ppb
Thallium	205-1	18.94	19.14	19.27	19.12	0.86	ppb
Tin	118-1	0.07	0.07	0.06	0.07	8.80	ppb
Titanium	47-1	1861.83	1873.07	1915.75	1883.55	1.51	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

ICSAB001

Instrumnet Name :

P7

Client Sample ID :

ICSAB001

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:03:18

DataFile Name :

017ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.01	0.01	0.01	0.01	4.37	ppb
Vanadium	51-2	18.33	18.54	18.81	18.56	1.30	ppb
Yttrium	89-1				98		%
Yttrium	89-2				98		%
Zinc	66-2	28.15	28.84	28.83	28.61	1.38	ppb
Zirconium	90-1	-0.01	-0.01	-0.01	-0.01		ppb
Zirconium	91-1	-0.01	0.00	0.00	0.00	1456.14	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

CCV001

Instrumnet Name :

P7

Client Sample ID :

CCV001

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:06:18

DataFile Name :

018CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	47491.28	46965.02	46440.22	46965.51	1.12	ppb
Antimony	121-1	486.61	491.22	492.09	489.97	0.60	ppb
Arsenic	75-2	499.69	492.63	501.00	497.77	0.90	ppb
Barium	135-1	2313.94	2408.72	2340.07	2354.24	2.08	ppb
Barium	137-1	2325.99	2356.99	2324.33	2335.77	0.79	ppb
Beryllium	9-1	500.50	498.58	503.36	500.81	0.48	ppb
Bismuth	209-1				95		%
Bismuth	209-2				92		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	443.72	458.41	461.03	454.39	2.05	ppb
Cadmium	106-1	454.11	461.18	458.55	457.95	0.78	ppb
Cadmium	111-1	454.35	458.46	459.80	457.54	0.62	ppb
Calcium	43-1	235355.70	235601.18	238403.96	236453.61	0.72	ppb
Calcium	44-1	236338.80	237839.23	237196.13	237124.72	0.32	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	490.82	490.50	478.96	486.76	1.39	ppb
Cobalt	59-2	497.72	496.43	492.58	495.58	0.54	ppb
Copper	63-2	5027.90	5089.77	4902.50	5006.72	1.91	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				102		%
Indium	115-1				96		%
Indium	115-2				93		%
Iron	56-2	120511.76	122229.52	119607.77	120783.02	1.10	ppb
Iron	57-2	120839.55	122661.00	119582.58	121027.71	1.28	ppb
Iron	54-2	120806.29	121159.48	118790.12	120251.96	1.06	ppb
Krypton	83-1						cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : CCV001 Instrumnet Name : P7
Client Sample ID : CCV001 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:06:18 DataFile Name : 018CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2377.85	2377.04	2372.29	2375.73	0.13	ppb
Lead	207-1	2363.07	2364.99	2397.85	2375.30	0.82	ppb
Lead	208-1	2368.91	2357.74	2386.31	2370.99	0.61	ppb
Lithium	6-1				82		%
Magnesium	24-2	242097.56	239618.34	234863.72	238859.87	1.54	ppb
Manganese	55-2	4894.04	4877.95	4796.25	4856.08	1.08	ppb
Molybdenum	94-1	4655.71	4720.78	4690.22	4688.90	0.69	ppb
Molybdenum	95-1	4618.60	4725.45	4673.11	4672.39	1.14	ppb
Molybdenum	96-1	4703.41	4716.64	4683.73	4701.26	0.35	ppb
Molybdenum	97-1	4669.46	4688.41	4713.68	4690.52	0.47	ppb
Molybdenum	98-1	4656.01	4700.68	4720.59	4692.43	0.70	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	494.85	500.32	487.53	494.24	1.30	ppb
Phosphorus	31-2	9474.03	9455.57	9196.90	9375.50	1.65	ppb
Potassium	39-2	120157.30	120169.91	117329.76	119218.99	1.37	ppb
Rhodium	103-1				90		%
Rhodium	103-2				90		%
Scandium	45-1				94		%
Scandium	45-2				96		%
Selenium	82-1	470.28	474.82	471.92	472.34	0.49	ppb
Selenium	77-2	489.48	488.98	498.65	492.37	1.11	ppb
Selenium	78-2	490.86	491.63	485.77	489.42	0.65	ppb
Silicon	28-1	515.76	518.31	512.25	515.44	0.59	ppb
Silver	107-1	472.87	479.40	475.92	476.06	0.69	ppb
Silver	109-1	467.83	482.01	476.86	475.57	1.51	ppb
Sodium	23-2	240610.86	242660.44	231622.63	238297.98	2.46	ppb
Strontium	86-1	11797.48	12026.72	11660.06	11828.09	1.57	ppb
Strontium	88-1	11575.11	11830.05	11694.93	11700.03	1.09	ppb
Sulfur	34-1	8914.57	8812.08	8838.30	8854.99	0.60	ppb
Terbium	159-1				103		%
Terbium	159-2				102		%
Thallium	203-1	480.19	476.45	472.34	476.33	0.82	ppb
Thallium	205-1	471.74	476.72	469.76	472.74	0.76	ppb
Tin	118-1	462.20	469.38	469.77	467.12	0.91	ppb
Titanium	47-1	4599.78	4643.00	4653.87	4632.22	0.62	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

CCV001

Instrumnet Name :

P7

Client Sample ID :

CCV001

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:06:18

DataFile Name :

018CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	479.61	477.61	484.65	480.63	0.75	ppb
Vanadium	51-2	495.83	497.16	482.17	491.72	1.69	ppb
Yttrium	89-1				98		%
Yttrium	89-2				97		%
Zinc	66-2	5011.40	5065.60	4869.47	4982.15	2.03	ppb
Zirconium	90-1	467.39	467.74	475.19	470.11	0.94	ppb
Zirconium	91-1	460.88	474.89	470.14	468.64	1.52	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

CCB001

Instrumnet Name :

P7

Client Sample ID :

CCB001

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:09:00

DataFile Name :

019CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2.28	1.97	1.94	2.06	8.98	ppb
Antimony	121-1	0.18	0.22	0.26	0.22	16.83	ppb
Arsenic	75-2	0.02	0.02	0.02	0.02	16.86	ppb
Barium	135-1	0.32	0.23	0.16	0.24	34.04	ppb
Barium	137-1	0.31	0.24	0.16	0.24	32.37	ppb
Beryllium	9-1	0.07	0.09	0.06	0.08	21.98	ppb
Bismuth	209-1				106		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.09	0.02	0.01	0.04	99.30	ppb
Cadmium	106-1	-0.22	0.22	-0.51	-0.17		ppb
Cadmium	111-1	0.04	0.07	0.01	0.04	84.27	ppb
Calcium	43-1	36.27	28.59	17.57	27.47	34.21	ppb
Calcium	44-1	41.52	31.15	23.33	32.00	28.51	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.02	0.03	0.02	0.02	29.89	ppb
Cobalt	59-2	0.02	0.02	0.02	0.02	13.72	ppb
Copper	63-2	0.28	0.25	0.24	0.26	7.38	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				105		%
Indium	115-1				104		%
Indium	115-2				102		%
Iron	56-2	6.73	6.82	6.31	6.62	4.09	ppb
Iron	57-2	5.59	6.16	4.98	5.58	10.57	ppb
Iron	54-2	6.15	6.16	5.68	5.99	4.52	ppb
Krypton	83-1						cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :CCB001Instrumnet Name :P7

Client Sample ID :CCB001Dilution Factor :1

Date & Time Acquired :2024-11-18 06:09:00DataFile Name :019CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.23	0.12	0.06	0.13	62.64	ppb
Lead	207-1	0.19	0.12	0.04	0.12	63.46	ppb
Lead	208-1	0.21	0.12	0.05	0.13	62.61	ppb
Lithium	6-1				92		%
Magnesium	24-2	10.38	9.74	8.91	9.68	7.64	ppb
Manganese	55-2	0.15	0.13	0.10	0.13	19.00	ppb
Molybdenum	94-1	0.69	0.56	0.46	0.57	20.12	ppb
Molybdenum	95-1	0.69	0.52	0.43	0.55	24.20	ppb
Molybdenum	96-1	0.69	0.55	0.42	0.55	24.35	ppb
Molybdenum	97-1	0.69	0.56	0.43	0.56	22.68	ppb
Molybdenum	98-1	0.69	0.55	0.43	0.56	23.35	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.10	-0.10	-0.09	-0.10		ppb
Phosphorus	31-2	-15.22	-17.22	-18.20	-16.88		ppb
Potassium	39-2	16.49	18.14	15.12	16.58	9.11	ppb
Rhodium	103-1				101		%
Rhodium	103-2				103		%
Scandium	45-1				97		%
Scandium	45-2				100		%
Selenium	82-1	0.28	0.31	-0.01	0.19	90.16	ppb
Selenium	77-2	0.08	0.24	0.32	0.21	57.16	ppb
Selenium	78-2	-0.26	-0.21	-0.39	-0.29		ppb
Silicon	28-1	-2.81	-3.68	-3.93	-3.47		ppb
Silver	107-1	0.08	0.06	0.05	0.07	27.45	ppb
Silver	109-1	0.09	0.07	0.05	0.07	29.29	ppb
Sodium	23-2	24.92	24.61	21.20	23.58	8.75	ppb
Strontium	86-1	1.21	1.65	1.00	1.29	25.59	ppb
Strontium	88-1	1.62	1.24	0.80	1.22	33.46	ppb
Sulfur	34-1	-559.99	-580.69	-530.34	-557.01		ppb
Terbium	159-1				104		%
Terbium	159-2				106		%
Thallium	203-1	0.13	0.10	0.08	0.10	21.74	ppb
Thallium	205-1	0.12	0.10	0.08	0.10	19.23	ppb
Tin	118-1	0.10	0.09	0.09	0.09	4.54	ppb
Titanium	47-1	0.76	0.63	0.44	0.61	26.94	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

CCB001

Instrumnet Name :

P7

Client Sample ID :

CCB001

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:09:00

DataFile Name :

019CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.06	0.04	0.03	0.04	36.98	ppb
Vanadium	51-2	0.02	0.02	0.02	0.02	2.10	ppb
Yttrium	89-1				102		%
Yttrium	89-2				102		%
Zinc	66-2	-0.21	-0.17	-0.20	-0.19		ppb
Zirconium	90-1	0.08	0.07	0.07	0.07	8.59	ppb
Zirconium	91-1	0.10	0.08	0.07	0.08	14.34	ppb

LB Number :LB133504Operator :Jaswal

Lab Sample ID :PB164950BLInstrumnet Name :P7

Client Sample ID :PBS950Dilution Factor :1

Date & Time Acquired :2024-11-18 06:25:27DataFile Name :024CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.41	-0.21	-0.41	-0.34		ppb
Antimony	121-1	0.01	0.02	0.03	0.02	51.24	ppb
Arsenic	75-2	-0.01	0.01	0.00	0.00		ppb
Barium	135-1	-0.01	-0.01	-0.01	-0.01		ppb
Barium	137-1	-0.02	-0.02	-0.02	-0.02		ppb
Beryllium	9-1	0.00	0.00	0.00	0.00	86.79	ppb
Bismuth	209-1				104		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	-0.01	0.00	-0.04	-0.02		ppb
Cadmium	106-1	0.53	0.59	0.91	0.68	29.81	ppb
Cadmium	111-1	0.04	0.04	0.06	0.05	28.40	ppb
Calcium	43-1	-10.40	-11.56	-11.74	-11.23		ppb
Calcium	44-1	-10.67	-10.66	-10.69	-10.67		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.03	-0.03	-0.02	-0.03		ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	127.17	ppb
Copper	63-2	-0.01	0.00	-0.03	-0.01		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				104		%
Holmium	165-2				103		%
Indium	115-1				104		%
Indium	115-2				101		%
Iron	56-2	-2.29	-2.23	-2.26	-2.26		ppb
Iron	57-2	-3.08	-2.43	-2.32	-2.61		ppb
Iron	54-2	-2.68	-2.65	-2.79	-2.71		ppb
Krypton	83-1						cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : PB164950BL Instrumnet Name : P7
Client Sample ID : PBS950 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:25:27 DataFile Name : 024CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	-0.17	-0.17	-0.17	-0.17		ppb
Lead	207-1	-0.17	-0.17	-0.18	-0.17		ppb
Lead	208-1	-0.17	-0.17	-0.17	-0.17		ppb
Lithium	6-1				99		%
Magnesium	24-2	-0.26	-0.29	-0.12	-0.23		ppb
Manganese	55-2	-0.13	-0.14	-0.14	-0.13		ppb
Molybdenum	94-1	-0.03	-0.02	-0.02	-0.02		ppb
Molybdenum	95-1	0.01	0.01	0.01	0.01	20.81	ppb
Molybdenum	96-1	0.00	0.00	0.01	0.00	106.60	ppb
Molybdenum	97-1	0.02	0.01	0.01	0.01	29.90	ppb
Molybdenum	98-1	0.01	0.01	0.01	0.01	2.90	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.18	-0.19	-0.19	-0.18		ppb
Phosphorus	31-2	-18.28	-17.28	-16.37	-17.31		ppb
Potassium	39-2	2.94	5.78	5.17	4.63	32.30	ppb
Rhodium	103-1				102		%
Rhodium	103-2				102		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	82-1	-0.26	-0.35	-0.41	-0.34		ppb
Selenium	77-2	0.08	0.08	0.00	0.05	86.60	ppb
Selenium	78-2	-0.76	-0.07	-0.37	-0.40		ppb
Silicon	28-1	-3.90	-3.72	-3.22	-3.61		ppb
Silver	107-1	0.00	0.00	0.00	0.00	44.07	ppb
Silver	109-1	0.00	0.00	0.00	0.00	48.73	ppb
Sodium	23-2	7.66	8.00	8.69	8.12	6.52	ppb
Strontium	86-1	-0.09	-0.14	-0.24	-0.16		ppb
Strontium	88-1	-0.19	-0.17	-0.18	-0.18		ppb
Sulfur	34-1	-224.72	-142.42	-113.94	-160.36		ppb
Terbium	159-1				104		%
Terbium	159-2				104		%
Thallium	203-1	0.02	0.02	0.02	0.02	2.40	ppb
Thallium	205-1	0.02	0.02	0.02	0.02	11.45	ppb
Tin	118-1	-0.07	-0.06	-0.05	-0.06		ppb
Titanium	47-1	-0.25	-0.28	-0.29	-0.27		ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

PB164950BL

Instrumnet Name :

P7

Client Sample ID :

PBS950

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:25:27

DataFile Name :

024CCBE.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	0.00	0.00	0.00		ppb
Yttrium	89-1				103		%
Yttrium	89-2				101		%
Zinc	66-2	-1.96	-1.95	-1.97	-1.96		ppb
Zirconium	90-1	-0.02	-0.02	-0.02	-0.02		ppb
Zirconium	91-1	-0.02	-0.02	-0.01	-0.02		ppb

LB Number :LB133504

Operator :Jaswal

Lab Sample ID :PB164950BS

Instrumnet Name :P7

Client Sample ID :LCS950

Dilution Factor :1

Date & Time Acquired :2024-11-18 06:28:43

DataFile Name :025LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	37.03	38.75	37.45	37.74	2.38	ppb
Antimony	121-1	4.10	3.98	4.01	4.03	1.50	ppb
Arsenic	75-2	2.19	2.30	2.25	2.25	2.32	ppb
Barium	135-1	19.76	19.00	19.22	19.33	2.04	ppb
Barium	137-1	19.87	19.28	19.39	19.52	1.61	ppb
Beryllium	9-1	1.90	1.94	1.95	1.93	1.49	ppb
Bismuth	209-1				101		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.94	1.82	1.89	1.88	3.21	ppb
Cadmium	106-1	2.80	2.25	1.53	2.19	29.06	ppb
Cadmium	111-1	2.16	1.99	1.96	2.04	5.44	ppb
Calcium	43-1	1016.26	988.42	988.95	997.88	1.60	ppb
Calcium	44-1	1013.12	1003.40	990.90	1002.47	1.11	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4.09	4.17	4.16	4.14	1.09	ppb
Cobalt	59-2	2.07	2.11	2.12	2.10	1.21	ppb
Copper	63-2	4.30	4.47	4.33	4.37	2.03	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				103		%
Indium	115-1				101		%
Indium	115-2				101		%
Iron	56-2	419.66	432.30	424.96	425.64	1.49	ppb
Iron	57-2	416.67	433.38	428.59	426.21	2.02	ppb
Iron	54-2	426.86	430.29	429.21	428.79	0.41	ppb
Krypton	83-1						cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : PB164950BS Instrumnet Name : P7
Client Sample ID : LCS950 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:28:43 DataFile Name : 025LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1.78	1.74	1.73	1.75	1.42	ppb
Lead	207-1	1.79	1.77	1.79	1.78	0.63	ppb
Lead	208-1	1.78	1.74	1.76	1.76	1.10	ppb
Lithium	6-1				99		%
Magnesium	24-2	949.89	980.16	957.77	962.61	1.63	ppb
Manganese	55-2	1.88	1.99	2.03	1.97	4.19	ppb
Molybdenum	94-1	11.53	11.43	11.39	11.45	0.60	ppb
Molybdenum	95-1	9.61	9.60	9.60	9.60	0.08	ppb
Molybdenum	96-1	9.74	9.77	9.65	9.72	0.65	ppb
Molybdenum	97-1	9.87	9.62	9.61	9.70	1.50	ppb
Molybdenum	98-1	9.89	9.67	9.63	9.73	1.41	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.85	2.06	1.94	1.95	5.50	ppb
Phosphorus	31-2	-16.08	-14.49	-16.58	-15.72		ppb
Potassium	39-2	1022.42	1050.89	1046.38	1039.90	1.47	ppb
Rhodium	103-1				100		%
Rhodium	103-2				101		%
Scandium	45-1				97		%
Scandium	45-2				100		%
Selenium	82-1	10.66	11.14	10.79	10.87	2.29	ppb
Selenium	77-2	11.25	11.93	10.49	11.22	6.39	ppb
Selenium	78-2	10.82	11.06	11.57	11.15	3.40	ppb
Silicon	28-1	4.29	3.47	2.76	3.51	21.83	ppb
Silver	107-1	2.05	2.00	2.05	2.03	1.42	ppb
Silver	109-1	2.07	2.03	2.03	2.04	1.06	ppb
Sodium	23-2	1041.29	1066.95	1053.20	1053.82	1.22	ppb
Strontium	86-1	49.42	50.54	48.85	49.60	1.73	ppb
Strontium	88-1	48.96	48.71	48.44	48.70	0.53	ppb
Sulfur	34-1	117.47	29.83	-12.53	44.92	147.59	ppb
Terbium	159-1				103		%
Terbium	159-2				104		%
Thallium	203-1	1.97	1.91	1.90	1.93	1.85	ppb
Thallium	205-1	1.94	1.89	1.94	1.92	1.49	ppb
Tin	118-1	-0.02	-0.05	-0.04	-0.04		ppb
Titanium	47-1	9.84	9.29	9.28	9.47	3.38	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

PB164950BS

Instrumnet Name :

P7

Client Sample ID :

LCS950

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:28:43

DataFile Name :

025LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.83	1.79	1.81	1.81	1.13	ppb
Vanadium	51-2	9.92	10.03	9.94	9.96	0.62	ppb
Yttrium	89-1				99		%
Yttrium	89-2				99		%
Zinc	66-2	8.66	9.27	8.90	8.94	3.45	ppb
Zirconium	90-1	1.98	1.95	1.94	1.96	1.10	ppb
Zirconium	91-1	1.98	1.96	1.94	1.96	1.13	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

PB164951BL

Instrumnet Name :

P7

Client Sample ID :

PBS951

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:31:54

DataFile Name :

026CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.22	-0.26	-0.27	-0.25		ppb
Antimony	121-1	0.00	0.01	0.01	0.01	47.59	ppb
Arsenic	75-2	-0.01	-0.01	0.00	-0.01		ppb
Barium	135-1	-0.01	-0.01	-0.01	-0.01		ppb
Barium	137-1	-0.02	-0.02	-0.02	-0.02		ppb
Beryllium	9-1	-0.01	0.00	0.01	0.00	4118.98	ppb
Bismuth	209-1				102		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	-0.03	-0.05	-0.04	-0.04		ppb
Cadmium	106-1	0.94	-0.01	0.31	0.41	117.32	ppb
Cadmium	111-1	0.07	0.00	0.02	0.03	112.77	ppb
Calcium	43-1	-9.82	-11.21	-11.59	-10.87		ppb
Calcium	44-1	-9.45	-10.18	-9.38	-9.67		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.02	-0.04	-0.01	-0.02		ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	262.41	ppb
Copper	63-2	-0.01	-0.02	-0.02	-0.01		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				102		%
Holmium	165-2				101		%
Indium	115-1				101		%
Indium	115-2				98		%
Iron	56-2	-2.22	-2.28	-2.20	-2.23		ppb
Iron	57-2	-2.75	-2.62	-2.15	-2.51		ppb
Iron	54-2	-2.82	-3.02	-2.63	-2.82		ppb
Krypton	83-1						cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : PB164951BL Instrumnet Name : P7
Client Sample ID : PBS951 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:31:54 DataFile Name : 026CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	-0.17	-0.18	-0.18	-0.18		ppb
Lead	207-1	-0.18	-0.18	-0.17	-0.18		ppb
Lead	208-1	-0.17	-0.17	-0.18	-0.18		ppb
Lithium	6-1				99		%
Magnesium	24-2	-0.26	-0.17	-0.30	-0.24		ppb
Manganese	55-2	-0.14	-0.14	-0.14	-0.14		ppb
Molybdenum	94-1	-0.02	-0.03	-0.02	-0.02		ppb
Molybdenum	95-1	0.00	0.00	0.00	0.00	16.97	ppb
Molybdenum	96-1	0.00	0.00	0.00	0.00		ppb
Molybdenum	97-1	0.00	0.00	0.01	0.01	21.74	ppb
Molybdenum	98-1	0.00	0.00	0.00	0.00	111.76	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.20	-0.19	-0.18	-0.19		ppb
Phosphorus	31-2	-16.41	-17.84	-13.77	-16.00		ppb
Potassium	39-2	5.43	4.23	6.64	5.43	22.23	ppb
Rhodium	103-1				100		%
Rhodium	103-2				99		%
Scandium	45-1				97		%
Scandium	45-2				98		%
Selenium	82-1	-0.14	-0.32	-0.45	-0.30		ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.68	-0.38	-0.12	-0.39		ppb
Silicon	28-1	-2.84	-3.39	-2.69	-2.97		ppb
Silver	107-1	0.00	0.00	0.00	0.00	53.36	ppb
Silver	109-1	0.00	0.00	0.00	0.00	27.68	ppb
Sodium	23-2	8.24	7.10	8.85	8.06	11.02	ppb
Strontium	86-1	-0.30	-0.09	-0.19	-0.19		ppb
Strontium	88-1	-0.17	-0.18	-0.18	-0.17		ppb
Sulfur	34-1	-67.72	-35.60	-39.14	-47.48		ppb
Terbium	159-1				103		%
Terbium	159-2				101		%
Thallium	203-1	0.02	0.02	0.02	0.02	5.00	ppb
Thallium	205-1	0.01	0.02	0.01	0.01	1.55	ppb
Tin	118-1	-0.07	-0.07	-0.07	-0.07		ppb
Titanium	47-1	-0.29	-0.28	-0.27	-0.28		ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

PB164951BL

Instrumnet Name :

P7

Client Sample ID :

PBS951

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:31:54

DataFile Name :

026CCBE.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	0.00	0.00	0.00		ppb
Yttrium	89-1				100		%
Yttrium	89-2				98		%
Zinc	66-2	-1.98	-1.95	-1.92	-1.95		ppb
Zirconium	90-1	-0.02	-0.02	-0.02	-0.02		ppb
Zirconium	91-1	-0.02	-0.02	-0.01	-0.02		ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

PB164951BS

Instrumnet Name :

P7

Client Sample ID :

LCS951

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:35:11

DataFile Name :

027LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	38.14	39.20	37.91	38.42	1.80	ppb
Antimony	121-1	4.15	4.13	4.17	4.15	0.46	ppb
Arsenic	75-2	2.22	2.28	2.24	2.25	1.50	ppb
Barium	135-1	20.13	20.07	20.06	20.09	0.18	ppb
Barium	137-1	19.93	20.08	20.35	20.12	1.06	ppb
Beryllium	9-1	1.93	1.86	2.02	1.94	4.00	ppb
Bismuth	209-1				102		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	2.20	2.04	2.06	2.10	4.29	ppb
Cadmium	106-1	3.33	2.63	2.64	2.87	14.07	ppb
Cadmium	111-1	2.17	2.10	2.08	2.12	2.17	ppb
Calcium	43-1	1041.28	1007.85	1016.39	1021.84	1.70	ppb
Calcium	44-1	1015.11	1007.39	1012.22	1011.58	0.39	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4.28	4.18	4.30	4.26	1.51	ppb
Cobalt	59-2	2.15	2.15	2.18	2.16	0.84	ppb
Copper	63-2	4.52	4.44	4.41	4.45	1.25	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				100		%
Indium	115-1				100		%
Indium	115-2				98		%
Iron	56-2	434.29	440.00	438.79	437.70	0.69	ppb
Iron	57-2	433.11	441.50	437.65	437.42	0.96	ppb
Iron	54-2	439.97	442.67	438.26	440.30	0.50	ppb
Krypton	83-1						cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : PB164951BS Instrumnet Name : P7
Client Sample ID : LCS951 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:35:11 DataFile Name : 027LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1.84	1.82	1.78	1.81	1.70	ppb
Lead	207-1	1.83	1.83	1.81	1.82	0.70	ppb
Lead	208-1	1.82	1.81	1.82	1.82	0.41	ppb
Lithium	6-1				97		%
Magnesium	24-2	991.93	995.65	989.26	992.28	0.32	ppb
Manganese	55-2	1.97	1.96	1.96	1.96	0.34	ppb
Molybdenum	94-1	11.51	11.68	11.81	11.67	1.29	ppb
Molybdenum	95-1	9.68	9.81	9.87	9.79	0.99	ppb
Molybdenum	96-1	9.84	10.10	9.99	9.97	1.31	ppb
Molybdenum	97-1	9.75	9.72	9.85	9.77	0.69	ppb
Molybdenum	98-1	9.75	9.94	9.98	9.89	1.26	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	2.02	1.95	1.91	1.96	2.64	ppb
Phosphorus	31-2	-13.80	-15.58	-13.15	-14.18		ppb
Potassium	39-2	1070.27	1068.72	1084.20	1074.39	0.79	ppb
Rhodium	103-1				99		%
Rhodium	103-2				98		%
Scandium	45-1				96		%
Scandium	45-2				98		%
Selenium	82-1	10.55	10.53	10.61	10.56	0.39	ppb
Selenium	77-2	11.53	10.04	12.60	11.39	11.28	ppb
Selenium	78-2	11.71	11.06	11.04	11.27	3.40	ppb
Silicon	28-1	4.09	3.91	3.88	3.96	2.89	ppb
Silver	107-1	2.09	2.12	2.09	2.10	0.92	ppb
Silver	109-1	2.10	2.16	2.12	2.12	1.33	ppb
Sodium	23-2	1078.66	1074.90	1084.64	1079.40	0.46	ppb
Strontium	86-1	50.36	50.01	51.13	50.50	1.14	ppb
Strontium	88-1	49.56	50.01	49.82	49.80	0.45	ppb
Sulfur	34-1	10.26	13.79	-12.84	3.73	387.42	ppb
Terbium	159-1				101		%
Terbium	159-2				101		%
Thallium	203-1	1.97	1.96	1.96	1.96	0.10	ppb
Thallium	205-1	1.96	1.94	1.97	1.96	0.61	ppb
Tin	118-1	-0.05	-0.05	-0.05	-0.05		ppb
Titanium	47-1	9.49	9.60	9.76	9.62	1.39	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

PB164951BS

Instrumnet Name :

P7

Client Sample ID :

LCS951

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:35:11

DataFile Name :

027LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.85	1.82	1.85	1.84	1.06	ppb
Vanadium	51-2	10.35	10.33	10.23	10.30	0.66	ppb
Yttrium	89-1				99		%
Yttrium	89-2				98		%
Zinc	66-2	8.98	9.39	9.32	9.23	2.37	ppb
Zirconium	90-1	2.00	2.00	2.00	2.00	0.02	ppb
Zirconium	91-1	1.99	2.05	2.04	2.02	1.62	ppb

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4805-01Instrumnet Name :P7

Client Sample ID :MH2GN9Dilution Factor :1

Date & Time Acquired :2024-11-18 06:38:23DataFile Name :028SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	14046.94	14345.79	13929.64	14107.46	1.52	ppb
Antimony	121-1	0.84	0.84	0.88	0.85	2.75	ppb
Arsenic	75-2	16.44	16.78	16.57	16.60	1.03	ppb
Barium	135-1	759.34	731.61	739.90	743.62	1.91	ppb
Barium	137-1	747.11	722.39	737.59	735.69	1.69	ppb
Beryllium	9-1	1.82	1.97	1.92	1.91	4.15	ppb
Bismuth	209-1				103		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	6.95	6.97	7.00	6.97	0.43	ppb
Cadmium	106-1	8.24	8.62	8.70	8.52	2.87	ppb
Cadmium	111-1	7.36	7.38	7.37	7.37	0.15	ppb
Calcium	43-1	148164.08	146294.78	149343.85	147934.24	1.04	ppb
Calcium	44-1	149635.94	146590.34	149537.37	148587.89	1.16	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	20.89	21.29	20.82	21.00	1.22	ppb
Cobalt	59-2	12.64	12.73	12.58	12.65	0.58	ppb
Copper	63-2	107.09	108.33	107.00	107.47	0.69	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				103		%
Indium	115-1				100		%
Indium	115-2				98		%
Iron	56-2	14127.21	14258.86	13958.66	14114.91	1.07	ppb
Iron	57-2	14541.24	15278.63	14719.02	14846.30	2.59	ppb
Iron	54-2	14073.54	14301.23	13950.44	14108.40	1.26	ppb
Krypton	83-1						cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4805-01Instrumnet Name :P7

Client Sample ID :MH2GN9Dilution Factor :1

Date & Time Acquired :2024-11-18 06:38:23DataFile Name :028SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	606.83	612.52	613.71	611.02	0.60	ppb
Lead	207-1	589.43	593.56	597.80	593.60	0.71	ppb
Lead	208-1	593.95	599.37	598.89	597.41	0.50	ppb
Lithium	6-1				99		%
Magnesium	24-2	8177.58	8358.66	8186.74	8240.99	1.24	ppb
Manganese	55-2	1075.49	1068.69	1051.73	1065.30	1.15	ppb
Molybdenum	94-1	6.13	6.09	6.20	6.14	0.86	ppb
Molybdenum	95-1	0.80	0.82	0.77	0.80	3.16	ppb
Molybdenum	96-1	1.45	1.37	1.39	1.40	2.90	ppb
Molybdenum	97-1	0.79	0.74	0.78	0.77	3.39	ppb
Molybdenum	98-1	0.78	0.79	0.78	0.78	0.27	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	60.25	60.59	59.75	60.20	0.70	ppb
Phosphorus	31-2	4191.59	4239.35	4111.10	4180.68	1.55	ppb
Potassium	39-2	6497.27	6606.45	6548.37	6550.70	0.83	ppb
Rhodium	103-1				95		%
Rhodium	103-2				96		%
Scandium	45-1				99		%
Scandium	45-2				97		%
Selenium	82-1	1.35	1.30	1.27	1.31	3.04	ppb
Selenium	77-2	16.01	18.20	18.58	17.60	7.89	ppb
Selenium	78-2	3.78	4.10	3.95	3.94	4.09	ppb
Silicon	28-1	2180.87	2184.56	2205.33	2190.26	0.60	ppb
Silver	107-1	1.35	1.34	1.38	1.36	1.33	ppb
Silver	109-1	1.39	1.36	1.39	1.38	1.08	ppb
Sodium	23-2	741.77	752.11	737.01	743.63	1.04	ppb
Strontium	86-1	12422.88	12240.21	12363.57	12342.22	0.76	ppb
Strontium	88-1	12300.66	12274.78	12276.67	12284.04	0.12	ppb
Sulfur	34-1	597.22	594.74	578.23	590.06	1.75	ppb
Terbium	159-1				103		%
Terbium	159-2				103		%
Thallium	203-1	0.38	0.39	0.40	0.39	2.73	ppb
Thallium	205-1	0.40	0.40	0.40	0.40	0.79	ppb
Tin	118-1	1.47	1.44	1.44	1.45	1.12	ppb
Titanium	47-1	167.90	166.18	166.53	166.87	0.54	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-01

Instrumnet Name :

P7

Client Sample ID :

MH2GN9

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:38:23

DataFile Name :

028SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	3.38	3.40	3.39	3.39	0.22	ppb
Vanadium	51-2	48.53	49.32	48.55	48.80	0.92	ppb
Yttrium	89-1				109		%
Yttrium	89-2				106		%
Zinc	66-2	695.85	708.32	700.67	701.62	0.90	ppb
Zirconium	90-1	3.12	3.13	3.14	3.13	0.36	ppb
Zirconium	91-1	3.16	3.08	3.15	3.13	1.29	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-02

Instrumnet Name :

P7

Client Sample ID :

MH2GN9D

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:41:25

DataFile Name :

029SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	14068.61	14037.02	13787.95	13964.53	1.10	ppb
Antimony	121-1	0.83	0.90	0.85	0.86	4.17	ppb
Arsenic	75-2	17.21	16.81	16.68	16.90	1.61	ppb
Barium	135-1	718.23	743.07	737.42	732.91	1.78	ppb
Barium	137-1	707.30	742.97	732.12	727.46	2.51	ppb
Beryllium	9-1	1.81	1.86	1.90	1.86	2.36	ppb
Bismuth	209-1				104		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	6.25	6.91	6.89	6.68	5.65	ppb
Cadmium	106-1	8.01	8.51	8.76	8.43	4.53	ppb
Cadmium	111-1	7.18	7.49	7.51	7.39	2.48	ppb
Calcium	43-1	145612.91	152729.18	152728.24	150356.78	2.73	ppb
Calcium	44-1	147085.22	152293.50	153202.26	150860.32	2.19	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	21.24	21.11	20.59	20.98	1.63	ppb
Cobalt	59-2	12.75	12.66	12.56	12.66	0.74	ppb
Copper	63-2	108.02	107.98	106.36	107.45	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				105		%
Holmium	165-2				104		%
Indium	115-1				101		%
Indium	115-2				99		%
Iron	56-2	14166.77	14097.24	13953.29	14072.43	0.77	ppb
Iron	57-2	15110.07	14857.97	14485.49	14817.84	2.12	ppb
Iron	54-2	14292.36	13966.85	13919.32	14059.51	1.44	ppb
Krypton	83-1						cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4805-02Instrumnet Name :P7

Client Sample ID :MH2GN9DDilution Factor :1

Date & Time Acquired :2024-11-18 06:41:25DataFile Name :029SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	603.60	621.87	610.01	611.83	1.51	ppb
Lead	207-1	581.01	604.93	595.99	593.98	2.04	ppb
Lead	208-1	590.67	610.50	597.19	599.46	1.69	ppb
Lithium	6-1				101		%
Magnesium	24-2	8102.27	8263.24	8099.54	8155.02	1.15	ppb
Manganese	55-2	1096.72	1085.88	1068.78	1083.80	1.30	ppb
Molybdenum	94-1	5.98	6.13	6.17	6.10	1.62	ppb
Molybdenum	95-1	0.79	0.82	0.81	0.81	1.70	ppb
Molybdenum	96-1	1.37	1.40	1.40	1.39	1.35	ppb
Molybdenum	97-1	0.78	0.80	0.81	0.80	2.15	ppb
Molybdenum	98-1	0.79	0.80	0.81	0.80	1.21	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	61.65	60.77	60.58	61.00	0.94	ppb
Phosphorus	31-2	4197.12	4222.57	4123.12	4180.94	1.24	ppb
Potassium	39-2	6691.30	6535.92	6453.98	6560.40	1.84	ppb
Rhodium	103-1				96		%
Rhodium	103-2				97		%
Scandium	45-1				98		%
Scandium	45-2				99		%
Selenium	82-1	1.85	1.39	1.55	1.60	14.59	ppb
Selenium	77-2	17.37	14.43	17.51	16.44	10.56	ppb
Selenium	78-2	4.17	4.54	4.00	4.24	6.48	ppb
Silicon	28-1	2118.32	2222.63	2205.95	2182.30	2.57	ppb
Silver	107-1	1.34	1.39	1.39	1.37	1.90	ppb
Silver	109-1	1.32	1.42	1.38	1.38	3.70	ppb
Sodium	23-2	753.31	744.89	720.97	739.72	2.27	ppb
Strontium	86-1	12222.78	12597.80	12438.10	12419.56	1.52	ppb
Strontium	88-1	12063.42	12479.83	12285.73	12276.33	1.70	ppb
Sulfur	34-1	504.69	610.00	620.30	578.33	11.06	ppb
Terbium	159-1				104		%
Terbium	159-2				105		%
Thallium	203-1	0.38	0.42	0.38	0.39	5.87	ppb
Thallium	205-1	0.38	0.40	0.39	0.39	1.66	ppb
Tin	118-1	1.38	1.51	1.45	1.45	4.43	ppb
Titanium	47-1	163.15	168.40	167.76	166.44	1.72	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-02

Instrumnet Name :

P7

Client Sample ID :

MH2GN9D

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:41:25

DataFile Name :

029SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	3.29	3.46	3.43	3.39	2.73	ppb
Vanadium	51-2	49.50	49.04	48.12	48.89	1.44	ppb
Yttrium	89-1				109		%
Yttrium	89-2				108		%
Zinc	66-2	705.26	696.65	697.21	699.71	0.69	ppb
Zirconium	90-1	3.03	3.14	3.15	3.11	2.20	ppb
Zirconium	91-1	3.05	3.15	3.18	3.13	2.28	ppb

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4805-01LX5Instrumnet Name :P7

Client Sample ID :MH2GN9LDilution Factor :5

Date & Time Acquired :2024-11-18 06:44:24DataFile Name :030SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3066.89	3138.69	3099.34	3101.64	1.16	ppb
Antimony	121-1	0.21	0.19	0.19	0.20	7.20	ppb
Arsenic	75-2	3.74	3.83	3.96	3.84	2.94	ppb
Barium	135-1	169.83	156.25	155.52	160.54	5.02	ppb
Barium	137-1	173.79	157.68	159.44	163.64	5.40	ppb
Beryllium	9-1	0.46	0.42	0.48	0.45	7.00	ppb
Bismuth	209-1				102		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.55	1.45	1.45	1.48	3.75	ppb
Cadmium	106-1	2.23	2.33	1.42	1.99	25.09	ppb
Cadmium	111-1	1.73	1.65	1.57	1.65	5.07	ppb
Calcium	43-1	36240.36	32150.25	32848.39	33746.33	6.48	ppb
Calcium	44-1	36277.61	32515.61	32844.50	33879.24	6.15	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4.67	4.63	4.70	4.67	0.83	ppb
Cobalt	59-2	2.85	2.81	2.81	2.82	0.79	ppb
Copper	63-2	24.40	24.16	24.46	24.34	0.65	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				103		%
Indium	115-1				99		%
Indium	115-2				100		%
Iron	56-2	3143.16	3096.78	3117.30	3119.08	0.75	ppb
Iron	57-2	3255.32	3246.47	3236.33	3246.04	0.29	ppb
Iron	54-2	3130.70	3122.97	3162.16	3138.61	0.66	ppb
Krypton	83-1						cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4805-01LX5Instrumnet Name :P7

Client Sample ID :MH2GN9LDilution Factor :5

Date & Time Acquired :2024-11-18 06:44:24DataFile Name :030SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	146.91	131.06	131.22	136.40	6.68	ppb
Lead	207-1	143.92	128.77	128.10	133.59	6.70	ppb
Lead	208-1	143.81	128.96	129.20	133.99	6.35	ppb
Lithium	6-1				97		%
Magnesium	24-2	1806.91	1830.56	1812.91	1816.79	0.68	ppb
Manganese	55-2	240.13	236.57	241.99	239.57	1.15	ppb
Molybdenum	94-1	1.51	1.41	1.39	1.44	4.27	ppb
Molybdenum	95-1	0.21	0.18	0.19	0.19	7.16	ppb
Molybdenum	96-1	0.36	0.32	0.34	0.34	6.16	ppb
Molybdenum	97-1	0.21	0.19	0.18	0.20	6.41	ppb
Molybdenum	98-1	0.20	0.19	0.20	0.20	2.87	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	13.48	13.37	13.29	13.38	0.70	ppb
Phosphorus	31-2	908.17	889.32	920.79	906.09	1.75	ppb
Potassium	39-2	1419.60	1448.21	1425.57	1431.13	1.05	ppb
Rhodium	103-1				96		%
Rhodium	103-2				100		%
Scandium	45-1				94		%
Scandium	45-2				98		%
Selenium	82-1	0.33	0.13	0.16	0.21	54.72	ppb
Selenium	77-2	4.14	3.50	4.43	4.03	11.83	ppb
Selenium	78-2	0.49	0.63	1.25	0.79	51.70	ppb
Silicon	28-1	526.02	484.40	490.13	500.18	4.51	ppb
Silver	107-1	0.32	0.30	0.30	0.31	3.44	ppb
Silver	109-1	0.33	0.30	0.31	0.32	4.72	ppb
Sodium	23-2	156.26	156.19	156.27	156.24	0.03	ppb
Strontium	86-1	2996.48	2773.75	2799.05	2856.43	4.27	ppb
Strontium	88-1	3120.26	2833.52	2851.18	2934.99	5.48	ppb
Sulfur	34-1	198.21	-78.96	-65.42	17.95	870.73	ppb
Terbium	159-1				101		%
Terbium	159-2				104		%
Thallium	203-1	0.10	0.09	0.09	0.09	5.88	ppb
Thallium	205-1	0.10	0.09	0.09	0.09	7.63	ppb
Tin	118-1	0.36	0.33	0.32	0.34	6.91	ppb
Titanium	47-1	40.12	36.92	36.77	37.94	4.99	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-01LX5

Instrumnet Name :

P7

Client Sample ID :

MH2GN9L

Dilution Factor :

5

Date & Time Acquired :

2024-11-18 06:44:24

DataFile Name :

030SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.79	0.72	0.73	0.75	5.16	ppb
Vanadium	51-2	10.71	10.62	10.78	10.70	0.72	ppb
Yttrium	89-1				99		%
Yttrium	89-2				101		%
Zinc	66-2	159.38	157.76	157.96	158.36	0.56	ppb
Zirconium	90-1	0.75	0.70	0.73	0.72	3.52	ppb
Zirconium	91-1	0.76	0.72	0.71	0.73	3.96	ppb

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4805-03Instrumnet Name :P7

Client Sample ID :MH2GN9SDilution Factor :1

Date & Time Acquired :2024-11-18 06:47:29DataFile Name :031SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	13208.14	13517.53	13934.93	13553.54	2.69	ppb
Antimony	121-1	18.97	19.60	19.88	19.48	2.40	ppb
Arsenic	75-2	23.39	23.50	24.19	23.69	1.82	ppb
Barium	135-1	1067.59	1093.00	1100.26	1086.95	1.58	ppb
Barium	137-1	1053.74	1098.19	1104.71	1085.55	2.55	ppb
Beryllium	9-1	10.44	11.09	10.71	10.75	3.06	ppb
Bismuth	209-1				106		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	15.29	15.44	15.46	15.40	0.60	ppb
Cadmium	106-1	16.24	16.25	16.61	16.37	1.32	ppb
Cadmium	111-1	16.17	16.71	17.27	16.71	3.28	ppb
Calcium	43-1	143395.29	148367.08	150334.55	147365.64	2.43	ppb
Calcium	44-1	143149.58	149866.86	151540.25	148185.56	3.00	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	55.63	57.97	59.12	57.57	3.09	ppb
Cobalt	59-2	105.19	111.04	113.49	109.91	3.88	ppb
Copper	63-2	150.81	154.35	159.83	155.00	2.93	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				106		%
Indium	115-1				103		%
Indium	115-2				100		%
Iron	56-2	12812.82	13402.84	13860.29	13358.65	3.93	ppb
Iron	57-2	13217.46	13952.65	14451.08	13873.73	4.47	ppb
Iron	54-2	12992.12	13329.17	13521.43	13280.90	2.02	ppb
Krypton	83-1						cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-03

Instrumnet Name :

P7

Client Sample ID :

MH2GN9S

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:47:29

DataFile Name :

031SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	585.30	599.57	614.63	599.83	2.45	ppb
Lead	207-1	567.68	584.30	592.28	581.42	2.16	ppb
Lead	208-1	573.02	588.57	598.06	586.55	2.15	ppb
Lithium	6-1				100		%
Magnesium	24-2	7504.17	7620.77	7899.47	7674.80	2.65	ppb
Manganese	55-2	1090.80	1120.90	1158.79	1123.50	3.03	ppb
Molybdenum	94-1	6.01	6.07	6.19	6.09	1.54	ppb
Molybdenum	95-1	0.78	0.81	0.81	0.80	2.22	ppb
Molybdenum	96-1	1.38	1.40	1.43	1.40	2.06	ppb
Molybdenum	97-1	0.80	0.78	0.78	0.79	1.25	ppb
Molybdenum	98-1	0.77	0.80	0.82	0.80	3.33	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	150.81	156.91	156.17	154.63	2.15	ppb
Phosphorus	31-2	3804.82	4079.38	4100.37	3994.85	4.13	ppb
Potassium	39-2	6209.37	6404.12	6370.62	6328.04	1.65	ppb
Rhodium	103-1				99		%
Rhodium	103-2				98		%
Scandium	45-1				100		%
Scandium	45-2				102		%
Selenium	82-1	19.20	19.51	19.85	19.52	1.67	ppb
Selenium	77-2	35.67	33.55	36.00	35.07	3.79	ppb
Selenium	78-2	22.95	21.72	22.89	22.52	3.08	ppb
Silicon	28-1	1994.74	2092.13	2101.18	2062.69	2.86	ppb
Silver	107-1	10.34	10.78	11.04	10.72	3.32	ppb
Silver	109-1	10.40	10.75	10.98	10.71	2.70	ppb
Sodium	23-2	672.04	707.61	733.04	704.23	4.35	ppb
Strontium	86-1	11946.67	12168.91	12394.77	12170.12	1.84	ppb
Strontium	88-1	11953.35	12119.46	12265.16	12112.66	1.29	ppb
Sulfur	34-1	453.61	561.18	592.04	535.61	13.57	ppb
Terbium	159-1				107		%
Terbium	159-2				105		%
Thallium	203-1	9.03	9.52	9.58	9.38	3.25	ppb
Thallium	205-1	9.08	9.55	9.60	9.41	3.04	ppb
Tin	118-1	1.39	1.45	1.49	1.44	3.53	ppb
Titanium	47-1	155.52	161.88	164.99	160.80	3.00	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-03

Instrumnet Name :

P7

Client Sample ID :

MH2GN9S

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:47:29

DataFile Name :

031SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	3.21	3.38	3.40	3.33	3.10	ppb
Vanadium	51-2	144.56	145.78	147.86	146.07	1.14	ppb
Yttrium	89-1				111		%
Yttrium	89-2				110		%
Zinc	66-2	769.20	798.41	825.58	797.73	3.53	ppb
Zirconium	90-1	2.99	3.08	3.18	3.08	2.97	ppb
Zirconium	91-1	3.06	3.14	3.20	3.13	2.32	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-04

Instrumnet Name :

P7

Client Sample ID :

MH2GP0

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:50:23

DataFile Name :

032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	14110.06	13720.69	14090.93	13973.89	1.57	ppb
Antimony	121-1	0.80	0.81	0.80	0.80	0.78	ppb
Arsenic	75-2	13.75	13.73	13.84	13.77	0.42	ppb
Barium	135-1	759.15	757.79	757.44	758.13	0.12	ppb
Barium	137-1	756.08	744.93	758.38	753.13	0.96	ppb
Beryllium	9-1	1.92	1.78	1.89	1.86	4.00	ppb
Bismuth	209-1				105		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	7.04	7.21	7.05	7.10	1.32	ppb
Cadmium	106-1	8.46	8.81	8.71	8.66	2.09	ppb
Cadmium	111-1	7.47	7.60	7.63	7.57	1.16	ppb
Calcium	43-1	151595.84	148590.47	149442.79	149876.36	1.03	ppb
Calcium	44-1	149396.57	148929.83	149829.27	149385.22	0.30	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	27.45	26.75	27.29	27.16	1.35	ppb
Cobalt	59-2	12.34	12.00	12.34	12.23	1.62	ppb
Copper	63-2	109.62	107.09	109.33	108.68	1.28	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				104		%
Indium	115-1				102		%
Indium	115-2				99		%
Iron	56-2	14117.57	14012.47	14297.60	14142.55	1.02	ppb
Iron	57-2	14869.84	14692.43	14728.39	14763.55	0.64	ppb
Iron	54-2	14429.36	13595.75	14282.03	14102.38	3.15	ppb
Krypton	83-1						cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-04 Instrumnet Name : P7
Client Sample ID : MH2GP0 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:50:23 DataFile Name : 032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	667.59	686.41	673.86	675.95	1.42	ppb
Lead	207-1	656.89	666.89	654.34	659.37	1.01	ppb
Lead	208-1	663.35	677.34	662.12	667.60	1.27	ppb
Lithium	6-1				100		%
Magnesium	24-2	8564.17	8418.05	8643.67	8541.97	1.34	ppb
Manganese	55-2	1225.73	1187.17	1232.27	1215.05	2.01	ppb
Molybdenum	94-1	6.78	6.82	7.02	6.87	1.92	ppb
Molybdenum	95-1	1.13	1.16	1.11	1.13	2.46	ppb
Molybdenum	96-1	1.77	1.84	1.85	1.82	2.49	ppb
Molybdenum	97-1	1.12	1.14	1.14	1.13	0.72	ppb
Molybdenum	98-1	1.12	1.15	1.12	1.13	1.16	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	199.64	194.70	200.90	198.41	1.65	ppb
Phosphorus	31-2	5069.04	4977.07	5145.89	5064.00	1.67	ppb
Potassium	39-2	7723.94	7536.67	7692.99	7651.20	1.31	ppb
Rhodium	103-1				97		%
Rhodium	103-2				98		%
Scandium	45-1				98		%
Scandium	45-2				99		%
Selenium	82-1	1.53	1.61	1.36	1.50	8.31	ppb
Selenium	77-2	19.75	20.31	21.58	20.55	4.55	ppb
Selenium	78-2	4.47	4.80	4.43	4.57	4.42	ppb
Silicon	28-1	2686.55	2704.67	2696.08	2695.77	0.34	ppb
Silver	107-1	1.37	1.38	1.41	1.38	1.35	ppb
Silver	109-1	1.38	1.39	1.41	1.39	1.04	ppb
Sodium	23-2	831.88	806.99	851.79	830.22	2.70	ppb
Strontium	86-1	12705.89	12924.60	12873.59	12834.69	0.89	ppb
Strontium	88-1	12724.89	12656.64	12978.48	12786.67	1.33	ppb
Sulfur	34-1	688.84	692.55	769.97	717.12	6.39	ppb
Terbium	159-1				106		%
Terbium	159-2				105		%
Thallium	203-1	0.38	0.39	0.39	0.39	1.48	ppb
Thallium	205-1	0.39	0.39	0.39	0.39	0.92	ppb
Tin	118-1	1.74	1.87	1.75	1.79	3.89	ppb
Titanium	47-1	184.83	183.41	185.49	184.58	0.58	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-04

Instrumnet Name :

P7

Client Sample ID :

MH2GP0

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:50:23

DataFile Name :

032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	3.54	3.61	3.54	3.56	1.14	ppb
Vanadium	51-2	44.29	43.35	44.40	44.02	1.31	ppb
Yttrium	89-1				111		%
Yttrium	89-2				109		%
Zinc	66-2	855.89	845.58	854.94	852.14	0.67	ppb
Zirconium	90-1	3.32	3.35	3.39	3.35	0.92	ppb
Zirconium	91-1	3.35	3.45	3.39	3.40	1.50	ppb

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4805-05Instrumnet Name :P7

Client Sample ID :MH2GP1Dilution Factor :1

Date & Time Acquired :2024-11-18 06:53:23DataFile Name :033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	12284.59	12804.96	12586.83	12558.79	2.08	ppb
Antimony	121-1	0.86	0.87	0.88	0.87	1.42	ppb
Arsenic	75-2	16.38	16.62	16.61	16.54	0.82	ppb
Barium	135-1	751.48	745.31	742.72	746.50	0.60	ppb
Barium	137-1	741.69	743.09	736.79	740.52	0.45	ppb
Beryllium	9-1	1.88	1.87	1.94	1.90	1.82	ppb
Bismuth	209-1				105		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	7.52	6.72	7.44	7.23	6.10	ppb
Cadmium	106-1	9.23	8.58	8.98	8.93	3.69	ppb
Cadmium	111-1	7.71	7.74	7.57	7.67	1.22	ppb
Calcium	43-1	155165.74	158239.96	156588.12	156664.60	0.98	ppb
Calcium	44-1	153812.76	160586.71	159151.51	157850.32	2.26	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	17.97	18.51	18.14	18.21	1.51	ppb
Cobalt	59-2	11.62	11.83	11.64	11.70	1.00	ppb
Copper	63-2	100.85	102.73	101.03	101.54	1.02	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				105		%
Indium	115-1				102		%
Indium	115-2				99		%
Iron	56-2	11266.92	11376.04	11105.98	11249.65	1.21	ppb
Iron	57-2	11824.27	12112.35	11843.94	11926.85	1.35	ppb
Iron	54-2	11104.63	11235.86	10978.79	11106.42	1.16	ppb
Krypton	83-1						cps

LB Number : LB133504

Operator : Jaswal

Lab Sample ID : P4805-05

Instrumnet Name : P7

Client Sample ID : MH2GP1

Dilution Factor : 1

Date & Time Acquired : 2024-11-18 06:53:23

DataFile Name : 033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	608.70	603.55	605.02	605.76	0.44	ppb
Lead	207-1	590.92	588.58	587.89	589.13	0.27	ppb
Lead	208-1	599.70	598.18	599.33	599.07	0.13	ppb
Lithium	6-1				100		%
Magnesium	24-2	7070.47	7341.96	7347.73	7253.39	2.18	ppb
Manganese	55-2	1059.39	1063.31	1026.41	1049.70	1.93	ppb
Molybdenum	94-1	5.50	5.44	5.49	5.48	0.56	ppb
Molybdenum	95-1	0.71	0.73	0.74	0.73	2.16	ppb
Molybdenum	96-1	1.28	1.27	1.28	1.28	0.50	ppb
Molybdenum	97-1	0.72	0.72	0.69	0.71	2.74	ppb
Molybdenum	98-1	0.70	0.69	0.70	0.70	0.67	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	60.00	61.14	60.07	60.40	1.06	ppb
Phosphorus	31-2	4294.99	4375.82	4377.21	4349.34	1.08	ppb
Potassium	39-2	6074.61	6261.29	6174.79	6170.23	1.51	ppb
Rhodium	103-1				98		%
Rhodium	103-2				97		%
Scandium	45-1				100		%
Scandium	45-2				101		%
Selenium	82-1	1.56	1.39	1.33	1.43	8.30	ppb
Selenium	77-2	19.82	19.33	20.12	19.76	2.02	ppb
Selenium	78-2	4.41	3.90	3.92	4.07	7.16	ppb
Silicon	28-1	2537.56	2583.34	2539.79	2553.56	1.01	ppb
Silver	107-1	1.32	1.33	1.33	1.33	0.33	ppb
Silver	109-1	1.35	1.34	1.34	1.34	0.36	ppb
Sodium	23-2	689.42	727.42	739.70	718.85	3.65	ppb
Strontium	86-1	12932.76	12872.75	12746.50	12850.67	0.74	ppb
Strontium	88-1	12725.31	12648.20	12842.89	12738.80	0.77	ppb
Sulfur	34-1	433.17	487.79	492.63	471.20	7.01	ppb
Terbium	159-1				106		%
Terbium	159-2				106		%
Thallium	203-1	0.32	0.33	0.31	0.32	2.48	ppb
Thallium	205-1	0.32	0.33	0.32	0.32	1.68	ppb
Tin	118-1	1.33	1.34	1.36	1.35	1.20	ppb
Titanium	47-1	128.33	130.91	130.77	130.01	1.12	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-05

Instrumnet Name :

P7

Client Sample ID :

MH2GP1

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:53:23

DataFile Name :

033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	3.31	3.34	3.33	3.33	0.40	ppb
Vanadium	51-2	44.68	45.29	44.90	44.96	0.68	ppb
Yttrium	89-1				112		%
Yttrium	89-2				110		%
Zinc	66-2	683.65	693.68	692.09	689.80	0.78	ppb
Zirconium	90-1	2.77	2.77	2.81	2.78	0.87	ppb
Zirconium	91-1	2.85	2.83	2.90	2.86	1.21	ppb

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4805-06Instrumnet Name :P7

Client Sample ID :MH2GP2Dilution Factor :1

Date & Time Acquired :2024-11-18 06:56:21DataFile Name :034SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	18263.79	15947.13	15801.11	16670.68	8.29	ppb
Antimony	121-1	0.89	0.90	0.91	0.90	1.28	ppb
Arsenic	75-2	21.46	18.48	18.72	19.55	8.48	ppb
Barium	135-1	801.48	812.27	819.29	811.01	1.11	ppb
Barium	137-1	805.09	797.55	797.44	800.03	0.55	ppb
Beryllium	9-1	2.22	2.21	1.93	2.12	7.73	ppb
Bismuth	209-1				105		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	7.53	7.06	7.76	7.45	4.82	ppb
Cadmium	106-1	9.67	9.02	9.01	9.23	4.06	ppb
Cadmium	111-1	7.85	7.97	7.91	7.91	0.73	ppb
Calcium	43-1	179882.61	175921.48	176770.43	177524.84	1.17	ppb
Calcium	44-1	177456.47	176319.54	175812.17	176529.39	0.48	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	24.66	21.21	21.02	22.30	9.17	ppb
Cobalt	59-2	16.54	14.53	14.28	15.12	8.18	ppb
Copper	63-2	125.01	106.90	106.14	112.68	9.48	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				101		%
Indium	115-1				104		%
Indium	115-2				96		%
Iron	56-2	18036.55	15594.72	15298.87	16310.05	9.21	ppb
Iron	57-2	18983.94	16175.68	16153.24	17104.29	9.52	ppb
Iron	54-2	18123.57	15632.03	15528.45	16428.02	8.94	ppb
Krypton	83-1						cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-06 Instrumnet Name : P7
Client Sample ID : MH2GP2 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:56:21 DataFile Name : 034SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	705.70	717.80	709.14	710.88	0.88	ppb
Lead	207-1	690.69	699.19	697.75	695.88	0.65	ppb
Lead	208-1	697.01	706.12	704.31	702.48	0.69	ppb
Lithium	6-1				100		%
Magnesium	24-2	10092.18	8663.41	8652.70	9136.10	9.06	ppb
Manganese	55-2	1400.56	1214.42	1192.14	1269.04	9.02	ppb
Molybdenum	94-1	6.28	6.43	6.38	6.36	1.20	ppb
Molybdenum	95-1	1.16	1.17	1.13	1.15	1.91	ppb
Molybdenum	96-1	1.75	1.74	1.72	1.74	0.65	ppb
Molybdenum	97-1	1.14	1.12	1.12	1.13	0.96	ppb
Molybdenum	98-1	1.13	1.14	1.13	1.13	0.83	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	96.20	81.75	81.90	86.62	9.58	ppb
Phosphorus	31-2	5258.17	4483.93	4497.17	4746.42	9.34	ppb
Potassium	39-2	6954.59	5888.86	5922.63	6255.36	9.68	ppb
Rhodium	103-1				98		%
Rhodium	103-2				94		%
Scandium	45-1				101		%
Scandium	45-2				95		%
Selenium	82-1	1.48	1.32	1.24	1.35	9.17	ppb
Selenium	77-2	21.69	19.24	23.97	21.63	10.94	ppb
Selenium	78-2	6.10	4.69	4.32	5.04	18.65	ppb
Silicon	28-1	2687.60	2638.79	2632.14	2652.84	1.14	ppb
Silver	107-1	1.27	1.30	1.31	1.29	1.45	ppb
Silver	109-1	1.26	1.33	1.32	1.30	2.70	ppb
Sodium	23-2	1100.07	932.70	941.91	991.56	9.49	ppb
Strontium	86-1	14603.87	14678.80	14400.71	14561.13	0.99	ppb
Strontium	88-1	14200.59	14516.36	14500.41	14405.79	1.23	ppb
Sulfur	34-1	2517.09	2345.71	2370.67	2411.16	3.84	ppb
Terbium	159-1				108		%
Terbium	159-2				102		%
Thallium	203-1	0.40	0.41	0.40	0.40	1.25	ppb
Thallium	205-1	0.40	0.41	0.40	0.40	1.13	ppb
Tin	118-1	1.44	1.46	1.48	1.46	1.43	ppb
Titanium	47-1	155.12	154.98	154.54	154.88	0.20	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-06

Instrumnet Name :

P7

Client Sample ID :

MH2GP2

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:56:21

DataFile Name :

034SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	4.54	4.53	4.51	4.52	0.37	ppb
Vanadium	51-2	66.17	57.07	56.14	59.79	9.26	ppb
Yttrium	89-1				113		%
Yttrium	89-2				106		%
Zinc	66-2	875.36	720.96	717.06	771.13	11.71	ppb
Zirconium	90-1	3.02	3.12	3.08	3.07	1.64	ppb
Zirconium	91-1	3.02	3.15	3.13	3.10	2.19	ppb

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4805-07Instrumnet Name :P7

Client Sample ID :MH2GP3Dilution Factor :1

Date & Time Acquired :2024-11-18 06:59:23DataFile Name :035SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	15021.17	15097.32	15098.38	15072.29	0.29	ppb
Antimony	121-1	1.01	1.03	1.00	1.01	1.65	ppb
Arsenic	75-2	16.91	17.39	17.52	17.27	1.86	ppb
Barium	135-1	705.68	718.08	719.42	714.39	1.06	ppb
Barium	137-1	691.98	722.42	711.46	708.62	2.18	ppb
Beryllium	9-1	1.96	2.02	2.05	2.01	2.38	ppb
Bismuth	209-1				106		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	6.28	6.27	6.88	6.48	5.43	ppb
Cadmium	106-1	8.40	8.39	8.41	8.40	0.13	ppb
Cadmium	111-1	6.71	7.01	6.98	6.90	2.43	ppb
Calcium	43-1	140843.03	146627.33	148218.16	145229.50	2.67	ppb
Calcium	44-1	142625.99	146726.71	150035.09	146462.60	2.53	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	21.90	22.59	22.09	22.19	1.62	ppb
Cobalt	59-2	12.08	12.57	12.41	12.35	2.01	ppb
Copper	63-2	138.92	136.08	138.72	137.91	1.15	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				105		%
Indium	115-1				105		%
Indium	115-2				100		%
Iron	56-2	15632.91	15727.01	15668.65	15676.19	0.30	ppb
Iron	57-2	15993.72	16629.25	16613.75	16412.24	2.21	ppb
Iron	54-2	15451.19	15627.83	15722.70	15600.57	0.88	ppb
Krypton	83-1						cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4805-07Instrumnet Name :P7

Client Sample ID :MH2GP3Dilution Factor :1

Date & Time Acquired :2024-11-18 06:59:23DataFile Name :035SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	819.06	852.95	843.87	838.63	2.09	ppb
Lead	207-1	796.12	822.45	807.96	808.84	1.63	ppb
Lead	208-1	806.71	838.75	827.75	824.40	1.98	ppb
Lithium	6-1				99		%
Magnesium	24-2	7120.42	7068.35	7196.80	7128.52	0.91	ppb
Manganese	55-2	1056.32	1036.83	1037.15	1043.43	1.07	ppb
Molybdenum	94-1	6.55	6.89	6.79	6.74	2.63	ppb
Molybdenum	95-1	1.44	1.55	1.46	1.49	3.88	ppb
Molybdenum	96-1	2.07	2.13	2.19	2.13	2.83	ppb
Molybdenum	97-1	1.46	1.50	1.51	1.49	1.77	ppb
Molybdenum	98-1	1.45	1.54	1.49	1.49	2.87	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	128.63	129.98	130.49	129.70	0.74	ppb
Phosphorus	31-2	3830.80	3837.74	3821.84	3830.13	0.21	ppb
Potassium	39-2	4490.46	4445.02	4433.88	4456.46	0.67	ppb
Rhodium	103-1				100		%
Rhodium	103-2				99		%
Scandium	45-1				102		%
Scandium	45-2				100		%
Selenium	82-1	1.59	1.34	1.03	1.32	21.39	ppb
Selenium	77-2	18.83	16.95	19.99	18.59	8.26	ppb
Selenium	78-2	4.62	3.85	4.24	4.24	9.13	ppb
Silicon	28-1	2467.91	2483.41	2539.40	2496.91	1.51	ppb
Silver	107-1	1.30	1.35	1.36	1.33	2.51	ppb
Silver	109-1	1.29	1.35	1.38	1.34	3.40	ppb
Sodium	23-2	1053.73	1046.69	1077.05	1059.16	1.50	ppb
Strontium	86-1	13135.93	13495.46	13443.41	13358.26	1.45	ppb
Strontium	88-1	12752.23	13386.89	13214.71	13117.94	2.50	ppb
Sulfur	34-1	7179.15	5783.37	5997.19	6319.91	11.90	ppb
Terbium	159-1				108		%
Terbium	159-2				105		%
Thallium	203-1	0.39	0.41	0.41	0.40	1.79	ppb
Thallium	205-1	0.39	0.41	0.40	0.40	3.17	ppb
Tin	118-1	1.65	1.70	1.71	1.69	1.88	ppb
Titanium	47-1	181.23	188.14	189.75	186.37	2.43	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-07

Instrumnet Name :

P7

Client Sample ID :

MH2GP3

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:59:23

DataFile Name :

035SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	3.80	4.03	3.97	3.94	3.06	ppb
Vanadium	51-2	50.44	51.27	51.69	51.13	1.24	ppb
Yttrium	89-1				113		%
Yttrium	89-2				109		%
Zinc	66-2	843.79	828.29	848.65	840.24	1.27	ppb
Zirconium	90-1	3.03	3.20	3.14	3.12	2.79	ppb
Zirconium	91-1	3.06	3.25	3.20	3.17	3.13	ppb

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4805-08Instrumnet Name :P7

Client Sample ID :MH2GP4Dilution Factor :1

Date & Time Acquired :2024-11-18 07:02:21DataFile Name :036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	12968.29	13682.95	13420.60	13357.28	2.71	ppb
Antimony	121-1	0.89	0.91	0.90	0.90	0.88	ppb
Arsenic	75-2	13.20	13.27	13.13	13.20	0.52	ppb
Barium	135-1	777.49	780.53	763.06	773.69	1.21	ppb
Barium	137-1	767.07	778.56	759.47	768.37	1.25	ppb
Beryllium	9-1	1.99	1.92	1.91	1.94	2.27	ppb
Bismuth	209-1				104		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	7.40	7.45	7.49	7.45	0.62	ppb
Cadmium	106-1	9.75	9.21	8.80	9.25	5.17	ppb
Cadmium	111-1	7.70	7.89	7.72	7.77	1.36	ppb
Calcium	43-1	153397.05	150083.62	149350.68	150943.78	1.43	ppb
Calcium	44-1	153464.57	150025.91	149527.00	151005.83	1.42	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	20.06	20.81	20.17	20.35	2.00	ppb
Cobalt	59-2	12.01	12.25	12.15	12.14	0.98	ppb
Copper	63-2	93.87	95.08	93.60	94.18	0.84	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				105		%
Indium	115-1				103		%
Indium	115-2				100		%
Iron	56-2	12851.10	13004.81	13112.28	12989.40	1.01	ppb
Iron	57-2	13583.39	14018.90	13788.72	13797.00	1.58	ppb
Iron	54-2	12887.32	13056.83	13047.02	12997.05	0.73	ppb
Krypton	83-1						cps

LB Number :	LB133504	Operator :	Jaswal
Lab Sample ID :	P4805-08	Instrumnet Name :	P7
Client Sample ID :	MH2GP4	Dilution Factor :	1
Date & Time Acquired :	2024-11-18 07:02:21	DataFile Name :	036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	789.69	791.70	781.96	787.79	0.65	ppb
Lead	207-1	778.30	775.82	767.90	774.01	0.70	ppb
Lead	208-1	785.08	782.53	772.89	780.16	0.82	ppb
Lithium	6-1				98		%
Magnesium	24-2	8023.64	8307.35	8300.28	8210.42	1.97	ppb
Manganese	55-2	1216.22	1221.65	1225.59	1221.15	0.39	ppb
Molybdenum	94-1	6.94	6.96	7.03	6.98	0.70	ppb
Molybdenum	95-1	0.84	0.83	0.83	0.83	0.69	ppb
Molybdenum	96-1	1.53	1.55	1.52	1.53	1.02	ppb
Molybdenum	97-1	0.82	0.85	0.82	0.83	2.57	ppb
Molybdenum	98-1	0.85	0.82	0.83	0.83	1.75	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	34.95	35.66	35.19	35.27	1.02	ppb
Phosphorus	31-2	5513.03	5625.62	5561.94	5566.87	1.01	ppb
Potassium	39-2	7379.14	7572.38	7509.22	7486.91	1.32	ppb
Rhodium	103-1				98		%
Rhodium	103-2				98		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	82-1	1.29	1.48	1.32	1.37	7.60	ppb
Selenium	77-2	20.40	16.82	18.30	18.51	9.72	ppb
Selenium	78-2	4.55	4.19	4.03	4.26	6.27	ppb
Silicon	28-1	2640.05	2601.02	2566.64	2602.57	1.41	ppb
Silver	107-1	1.36	1.40	1.38	1.38	1.14	ppb
Silver	109-1	1.37	1.40	1.37	1.38	1.09	ppb
Sodium	23-2	757.13	798.95	794.72	783.60	2.94	ppb
Strontium	86-1	13056.00	12936.34	12847.14	12946.50	0.81	ppb
Strontium	88-1	12939.51	12880.55	12853.88	12891.31	0.34	ppb
Sulfur	34-1	696.17	671.98	668.63	678.93	2.21	ppb
Terbium	159-1				106		%
Terbium	159-2				105		%
Thallium	203-1	0.35	0.34	0.33	0.34	2.45	ppb
Thallium	205-1	0.35	0.35	0.34	0.34	0.55	ppb
Tin	118-1	1.99	2.05	2.01	2.02	1.55	ppb
Titanium	47-1	159.17	161.02	158.99	159.73	0.71	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-08

Instrumnet Name :

P7

Client Sample ID :

MH2GP4

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:02:21

DataFile Name :

036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	3.26	3.32	3.27	3.28	0.90	ppb
Vanadium	51-2	42.39	43.44	42.68	42.84	1.27	ppb
Yttrium	89-1				111		%
Yttrium	89-2				109		%
Zinc	66-2	821.19	832.51	837.16	830.29	0.99	ppb
Zirconium	90-1	3.54	3.56	3.64	3.58	1.42	ppb
Zirconium	91-1	3.60	3.63	3.60	3.61	0.52	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-09

Instrumnet Name :

P7

Client Sample ID :

MH2GP5

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:05:20

DataFile Name :

037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	13644.12	14263.41	13974.78	13960.77	2.22	ppb
Antimony	121-1	0.96	0.99	1.03	1.00	3.52	ppb
Arsenic	75-2	17.98	18.23	17.45	17.89	2.24	ppb
Barium	135-1	852.07	883.04	882.17	872.43	2.02	ppb
Barium	137-1	847.10	880.04	866.29	864.48	1.91	ppb
Beryllium	9-1	2.09	2.15	2.17	2.13	2.06	ppb
Bismuth	209-1				104		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	7.99	8.73	8.65	8.45	4.83	ppb
Cadmium	106-1	10.01	9.89	10.22	10.04	1.70	ppb
Cadmium	111-1	8.56	8.89	8.86	8.77	2.07	ppb
Calcium	43-1	171891.78	180917.24	174384.84	175731.29	2.65	ppb
Calcium	44-1	171774.68	179891.59	175478.39	175714.89	2.31	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	18.60	18.28	18.41	18.43	0.89	ppb
Cobalt	59-2	13.57	13.37	13.52	13.49	0.78	ppb
Copper	63-2	131.68	132.36	129.13	131.06	1.30	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				107		%
Holmium	165-2				103		%
Indium	115-1				103		%
Indium	115-2				99		%
Iron	56-2	12391.02	12190.57	12468.29	12349.96	1.16	ppb
Iron	57-2	13223.94	13071.02	13377.94	13224.30	1.16	ppb
Iron	54-2	12340.03	12361.75	12373.37	12358.39	0.14	ppb
Krypton	83-1						cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-09 Instrumnet Name : P7
Client Sample ID : MH2GP5 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:05:20 DataFile Name : 037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	809.90	819.22	814.88	814.67	0.57	ppb
Lead	207-1	781.24	796.60	790.29	789.37	0.98	ppb
Lead	208-1	786.48	804.84	800.13	797.15	1.20	ppb
Lithium	6-1				99		%
Magnesium	24-2	8317.05	8336.37	8173.74	8275.72	1.07	ppb
Manganese	55-2	1242.34	1208.58	1243.00	1231.31	1.60	ppb
Molybdenum	94-1	7.37	7.68	7.82	7.62	3.02	ppb
Molybdenum	95-1	0.78	0.83	0.81	0.81	2.79	ppb
Molybdenum	96-1	1.51	1.60	1.61	1.58	3.34	ppb
Molybdenum	97-1	0.81	0.82	0.85	0.83	2.51	ppb
Molybdenum	98-1	0.76	0.80	0.82	0.80	3.56	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	75.83	75.46	76.13	75.81	0.45	ppb
Phosphorus	31-2	5262.23	5281.85	5311.06	5285.05	0.46	ppb
Potassium	39-2	7179.46	7188.43	7118.26	7162.05	0.53	ppb
Rhodium	103-1				98		%
Rhodium	103-2				96		%
Scandium	45-1				101		%
Scandium	45-2				99		%
Selenium	82-1	1.26	1.68	1.25	1.40	17.76	ppb
Selenium	77-2	19.28	21.95	18.54	19.92	9.00	ppb
Selenium	78-2	4.42	5.10	4.23	4.58	9.98	ppb
Silicon	28-1	2499.09	2600.06	2623.20	2574.11	2.56	ppb
Silver	107-1	1.41	1.50	1.50	1.47	3.25	ppb
Silver	109-1	1.41	1.46	1.48	1.45	2.46	ppb
Sodium	23-2	874.99	873.63	890.70	879.77	1.08	ppb
Strontium	86-1	14272.92	14868.17	14949.89	14696.99	2.51	ppb
Strontium	88-1	14393.38	14821.94	14758.01	14657.78	1.58	ppb
Sulfur	34-1	488.15	659.19	607.51	584.95	15.00	ppb
Terbium	159-1				106		%
Terbium	159-2				104		%
Thallium	203-1	0.37	0.38	0.37	0.37	1.01	ppb
Thallium	205-1	0.36	0.37	0.37	0.37	1.08	ppb
Tin	118-1	2.00	2.13	2.12	2.08	3.30	ppb
Titanium	47-1	141.92	147.80	146.06	145.26	2.08	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-09

Instrumnet Name :

P7

Client Sample ID :

MH2GP5

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:05:20

DataFile Name :

037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	3.80	3.91	3.90	3.87	1.46	ppb
Vanadium	51-2	49.43	48.68	49.38	49.16	0.85	ppb
Yttrium	89-1				113		%
Yttrium	89-2				109		%
Zinc	66-2	865.91	866.07	862.73	864.91	0.22	ppb
Zirconium	90-1	3.79	4.03	4.04	3.96	3.52	ppb
Zirconium	91-1	3.82	4.04	4.04	3.97	3.21	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-10

Instrumnet Name :

P7

Client Sample ID :

MH2GP6

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:08:17

DataFile Name :

038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	13517.40	13503.31	13211.75	13410.82	1.29	ppb
Antimony	121-1	0.94	0.95	0.92	0.94	1.73	ppb
Arsenic	75-2	15.68	16.35	16.20	16.08	2.18	ppb
Barium	135-1	820.27	801.49	805.02	808.93	1.23	ppb
Barium	137-1	811.31	801.87	786.04	799.74	1.60	ppb
Beryllium	9-1	2.18	2.15	2.01	2.11	4.41	ppb
Bismuth	209-1				103		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	7.21	6.74	6.67	6.88	4.29	ppb
Cadmium	106-1	9.05	8.16	8.60	8.60	5.14	ppb
Cadmium	111-1	7.53	7.29	7.33	7.38	1.71	ppb
Calcium	43-1	187195.22	184610.88	182408.17	184738.09	1.30	ppb
Calcium	44-1	186365.75	184505.75	185470.59	185447.36	0.50	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	17.59	17.38	17.31	17.43	0.85	ppb
Cobalt	59-2	12.88	12.80	12.74	12.81	0.52	ppb
Copper	63-2	109.50	110.46	108.57	109.51	0.86	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				102		%
Indium	115-1				102		%
Indium	115-2				97		%
Iron	56-2	12411.96	12259.65	12067.09	12246.24	1.41	ppb
Iron	57-2	13264.49	13050.87	13092.02	13135.79	0.86	ppb
Iron	54-2	12311.74	12302.40	12290.93	12301.69	0.08	ppb
Krypton	83-1						cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-10 Instrumnet Name : P7
Client Sample ID : MH2GP6 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:08:17 DataFile Name : 038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	600.95	597.92	596.00	598.29	0.42	ppb
Lead	207-1	581.82	578.10	583.04	580.98	0.44	ppb
Lead	208-1	589.76	585.91	588.35	588.00	0.33	ppb
Lithium	6-1				97		%
Magnesium	24-2	7656.63	7706.00	7682.29	7681.64	0.32	ppb
Manganese	55-2	1054.61	1046.15	1048.33	1049.70	0.42	ppb
Molybdenum	94-1	6.59	6.64	6.74	6.66	1.15	ppb
Molybdenum	95-1	1.36	1.32	1.30	1.33	2.21	ppb
Molybdenum	96-1	1.98	1.89	1.96	1.94	2.26	ppb
Molybdenum	97-1	1.30	1.30	1.32	1.31	0.81	ppb
Molybdenum	98-1	1.34	1.31	1.35	1.33	1.52	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	106.89	106.48	105.22	106.19	0.82	ppb
Phosphorus	31-2	4263.30	4282.80	4293.37	4279.82	0.36	ppb
Potassium	39-2	5578.04	5542.92	5541.76	5554.24	0.37	ppb
Rhodium	103-1				95		%
Rhodium	103-2				95		%
Scandium	45-1				98		%
Scandium	45-2				98		%
Selenium	82-1	1.76	1.37	1.14	1.42	21.78	ppb
Selenium	77-2	18.90	19.47	18.78	19.05	1.92	ppb
Selenium	78-2	4.57	5.06	4.19	4.61	9.38	ppb
Silicon	28-1	2504.79	2467.07	2473.45	2481.77	0.81	ppb
Silver	107-1	1.19	1.19	1.21	1.20	0.93	ppb
Silver	109-1	1.20	1.22	1.22	1.21	0.92	ppb
Sodium	23-2	918.62	927.09	916.92	920.88	0.59	ppb
Strontium	86-1	14484.79	14167.84	14462.02	14371.55	1.23	ppb
Strontium	88-1	14252.20	14360.20	14194.35	14268.92	0.59	ppb
Sulfur	34-1	2547.88	2469.02	2536.08	2517.66	1.69	ppb
Terbium	159-1				104		%
Terbium	159-2				103		%
Thallium	203-1	0.35	0.35	0.36	0.35	1.72	ppb
Thallium	205-1	0.36	0.35	0.35	0.35	1.07	ppb
Tin	118-1	1.30	1.38	1.38	1.35	3.25	ppb
Titanium	47-1	140.49	139.48	140.03	140.00	0.36	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-10

Instrumnet Name :

P7

Client Sample ID :

MH2GP6

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:08:17

DataFile Name :

038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	4.28	4.22	4.24	4.24	0.70	ppb
Vanadium	51-2	50.22	49.98	49.85	50.02	0.37	ppb
Yttrium	89-1				111		%
Yttrium	89-2				108		%
Zinc	66-2	612.74	624.19	612.17	616.37	1.10	ppb
Zirconium	90-1	3.11	3.13	3.12	3.12	0.41	ppb
Zirconium	91-1	3.12	3.16	3.17	3.15	0.84	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-11

Instrumnet Name :

P7

Client Sample ID :

MH2GP7

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:11:18

DataFile Name :

039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	15792.61	15723.86	15906.23	15807.57	0.58	ppb
Antimony	121-1	1.24	1.33	1.27	1.28	3.51	ppb
Arsenic	75-2	20.22	20.60	20.52	20.45	0.99	ppb
Barium	135-1	936.28	995.88	963.11	965.09	3.09	ppb
Barium	137-1	925.34	993.31	950.44	956.37	3.59	ppb
Beryllium	9-1	2.22	2.54	2.46	2.41	6.90	ppb
Bismuth	209-1				99		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	10.79	11.78	10.98	11.19	4.67	ppb
Cadmium	106-1	12.93	13.40	12.35	12.89	4.08	ppb
Cadmium	111-1	11.38	12.00	11.66	11.68	2.68	ppb
Calcium	43-1	213237.37	225607.80	221270.64	220038.60	2.85	ppb
Calcium	44-1	214230.64	226964.60	220087.96	220427.73	2.89	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	30.66	30.29	31.01	30.65	1.18	ppb
Cobalt	59-2	13.74	13.56	13.59	13.63	0.73	ppb
Copper	63-2	154.10	153.13	155.80	154.34	0.87	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				98		%
Indium	115-2				100		%
Iron	56-2	15860.52	15675.28	15678.65	15738.15	0.67	ppb
Iron	57-2	16949.64	16785.78	16946.16	16893.86	0.55	ppb
Iron	54-2	15803.54	15754.32	15798.11	15785.32	0.17	ppb
Krypton	83-1						cps

LB Number :	LB133504	Operator :	Jaswal
Lab Sample ID :	P4805-11	Instrumnet Name :	P7
Client Sample ID :	MH2GP7	Dilution Factor :	1
Date & Time Acquired :	2024-11-18 07:11:18	DataFile Name :	039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	881.40	949.88	920.88	917.39	3.75	ppb
Lead	207-1	857.46	915.81	886.42	886.56	3.29	ppb
Lead	208-1	873.60	931.86	898.57	901.34	3.24	ppb
Lithium	6-1				94		%
Magnesium	24-2	7899.85	7651.07	7847.00	7799.31	1.68	ppb
Manganese	55-2	1185.20	1186.41	1177.98	1183.20	0.39	ppb
Molybdenum	94-1	11.23	11.79	11.44	11.49	2.46	ppb
Molybdenum	95-1	2.36	2.51	2.44	2.44	3.11	ppb
Molybdenum	96-1	3.38	3.53	3.47	3.46	2.14	ppb
Molybdenum	97-1	2.44	2.50	2.45	2.46	1.32	ppb
Molybdenum	98-1	2.41	2.54	2.49	2.48	2.54	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	184.34	181.93	182.97	183.08	0.66	ppb
Phosphorus	31-2	4282.45	4305.28	4293.94	4293.89	0.27	ppb
Potassium	39-2	5067.23	4980.48	5078.93	5042.22	1.07	ppb
Rhodium	103-1				93		%
Rhodium	103-2				96		%
Scandium	45-1				96		%
Scandium	45-2				100		%
Selenium	82-1	2.84	2.63	2.46	2.64	7.08	ppb
Selenium	77-2	20.61	21.95	21.68	21.41	3.31	ppb
Selenium	78-2	5.67	5.60	5.80	5.69	1.78	ppb
Silicon	28-1	2530.54	2667.72	2584.85	2594.37	2.66	ppb
Silver	107-1	1.76	1.89	1.80	1.82	3.60	ppb
Silver	109-1	1.75	1.87	1.80	1.81	3.36	ppb
Sodium	23-2	1483.39	1482.12	1513.33	1492.95	1.18	ppb
Strontium	86-1	16586.40	17498.17	16970.15	17018.24	2.69	ppb
Strontium	88-1	16459.06	17523.50	16971.34	16984.63	3.13	ppb
Sulfur	34-1	8718.92	9579.16	9070.19	9122.76	4.74	ppb
Terbium	159-1				102		%
Terbium	159-2				105		%
Thallium	203-1	0.47	0.49	0.48	0.48	2.44	ppb
Thallium	205-1	0.48	0.51	0.49	0.49	3.39	ppb
Tin	118-1	3.77	4.08	3.85	3.90	4.13	ppb
Titanium	47-1	207.67	222.07	216.44	215.39	3.37	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-11

Instrumnet Name :

P7

Client Sample ID :

MH2GP7

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:11:18

DataFile Name :

039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	5.32	5.65	5.47	5.48	3.02	ppb
Vanadium	51-2	55.96	55.31	56.42	55.90	1.00	ppb
Yttrium	89-1				108		%
Yttrium	89-2				109		%
Zinc	66-2	1743.82	1747.03	1747.87	1746.24	0.12	ppb
Zirconium	90-1	5.18	5.51	5.40	5.36	3.14	ppb
Zirconium	91-1	5.24	5.55	5.43	5.41	2.96	ppb

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-12 Instrumnet Name : P7
Client Sample ID : MH2GP8 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:14:13 DataFile Name : 040SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	12782.23	12955.56	13040.57	12926.12	1.02	ppb
Antimony	121-1	0.72	0.75	0.76	0.75	2.95	ppb
Arsenic	75-2	13.38	13.37	13.73	13.49	1.52	ppb
Barium	135-1	732.36	728.19	744.16	734.90	1.13	ppb
Barium	137-1	716.41	741.20	730.64	729.42	1.71	ppb
Beryllium	9-1	1.87	1.87	1.88	1.88	0.31	ppb
Bismuth	209-1				106		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	7.74	7.64	7.63	7.67	0.77	ppb
Cadmium	106-1	9.63	9.00	8.66	9.10	5.43	ppb
Cadmium	111-1	7.91	7.98	8.07	7.99	0.95	ppb
Calcium	43-1	147333.07	147393.72	148900.85	147875.88	0.60	ppb
Calcium	44-1	146596.56	148739.18	146780.01	147371.92	0.81	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	19.06	19.22	19.59	19.29	1.41	ppb
Cobalt	59-2	11.61	11.58	11.91	11.70	1.55	ppb
Copper	63-2	97.40	97.56	99.68	98.21	1.30	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				107		%
Holmium	165-2				106		%
Indium	115-1				103		%
Indium	115-2				101		%
Iron	56-2	12187.88	12160.58	12368.84	12239.10	0.92	ppb
Iron	57-2	12947.22	12753.31	13170.02	12956.85	1.61	ppb
Iron	54-2	12194.67	12144.65	12398.55	12245.96	1.10	ppb
Krypton	83-1						cps

LB Number :	LB133504	Operator :	Jaswal
Lab Sample ID :	P4805-12	Instrumnet Name :	P7
Client Sample ID :	MH2GP8	Dilution Factor :	1
Date & Time Acquired :	2024-11-18 07:14:13	DataFile Name :	040SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	648.47	664.15	666.77	659.80	1.50	ppb
Lead	207-1	633.04	647.71	659.32	646.69	2.04	ppb
Lead	208-1	642.70	655.55	662.91	653.72	1.56	ppb
Lithium	6-1				99		%
Magnesium	24-2	8124.81	8049.66	8123.20	8099.22	0.53	ppb
Manganese	55-2	1180.12	1179.65	1207.07	1188.95	1.32	ppb
Molybdenum	94-1	5.48	5.63	5.68	5.60	1.81	ppb
Molybdenum	95-1	0.67	0.68	0.68	0.68	1.28	ppb
Molybdenum	96-1	1.24	1.24	1.23	1.24	0.40	ppb
Molybdenum	97-1	0.64	0.67	0.69	0.67	3.26	ppb
Molybdenum	98-1	0.68	0.67	0.67	0.67	1.26	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	32.62	32.77	33.61	33.00	1.63	ppb
Phosphorus	31-2	5143.68	5073.59	5134.06	5117.11	0.74	ppb
Potassium	39-2	7183.92	7146.18	7266.97	7199.03	0.86	ppb
Rhodium	103-1				97		%
Rhodium	103-2				98		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	82-1	1.56	1.53	1.56	1.55	1.02	ppb
Selenium	77-2	18.49	18.65	18.50	18.54	0.47	ppb
Selenium	78-2	3.76	4.64	4.56	4.32	11.28	ppb
Silicon	28-1	2413.55	2439.88	2465.04	2439.49	1.06	ppb
Silver	107-1	1.29	1.31	1.34	1.31	1.96	ppb
Silver	109-1	1.27	1.32	1.36	1.32	3.36	ppb
Sodium	23-2	792.69	788.75	811.02	797.48	1.49	ppb
Strontium	86-1	12436.22	12671.80	12635.20	12581.07	1.01	ppb
Strontium	88-1	12424.53	12584.99	12560.11	12523.21	0.69	ppb
Sulfur	34-1	575.74	604.70	658.39	612.95	6.84	ppb
Terbium	159-1				106		%
Terbium	159-2				107		%
Thallium	203-1	0.32	0.34	0.34	0.33	3.57	ppb
Thallium	205-1	0.32	0.32	0.33	0.32	2.83	ppb
Tin	118-1	4.08	4.17	4.12	4.12	1.01	ppb
Titanium	47-1	144.33	145.43	144.54	144.77	0.40	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-12

Instrumnet Name :

P7

Client Sample ID :

MH2GP8

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:14:13

DataFile Name :

040SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	2.89	2.92	2.96	2.92	1.22	ppb
Vanadium	51-2	42.08	42.04	43.19	42.44	1.54	ppb
Yttrium	89-1				111		%
Yttrium	89-2				109		%
Zinc	66-2	842.43	848.40	847.44	846.09	0.38	ppb
Zirconium	90-1	2.87	2.88	2.88	2.88	0.26	ppb
Zirconium	91-1	2.89	2.97	2.91	2.92	1.44	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-13

Instrumnet Name :

P7

Client Sample ID :

MH2GP9

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:17:13

DataFile Name :

041SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	13452.76	13669.81	13652.87	13591.81	0.89	ppb
Antimony	121-1	1.12	1.14	1.14	1.13	0.92	ppb
Arsenic	75-2	18.11	17.87	17.59	17.86	1.45	ppb
Barium	135-1	797.61	807.05	822.37	809.01	1.54	ppb
Barium	137-1	780.74	800.87	817.84	799.82	2.32	ppb
Beryllium	9-1	1.92	2.08	2.05	2.02	4.01	ppb
Bismuth	209-1				105		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	7.19	7.95	8.12	7.75	6.39	ppb
Cadmium	106-1	9.64	9.98	10.23	9.95	2.97	ppb
Cadmium	111-1	8.22	8.43	8.38	8.34	1.34	ppb
Calcium	43-1	169042.70	173867.58	168734.55	170548.28	1.69	ppb
Calcium	44-1	166717.97	173126.48	168331.43	169391.96	1.97	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	21.46	21.70	21.53	21.56	0.57	ppb
Cobalt	59-2	12.68	12.73	12.85	12.75	0.69	ppb
Copper	63-2	110.29	110.68	111.88	110.95	0.74	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				105		%
Indium	115-1				103		%
Indium	115-2				100		%
Iron	56-2	11983.56	12001.34	11892.80	11959.23	0.49	ppb
Iron	57-2	12787.18	12826.07	12921.98	12845.08	0.54	ppb
Iron	54-2	11919.80	11840.03	11906.33	11888.72	0.36	ppb
Krypton	83-1						cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-13 Instrumnet Name : P7
Client Sample ID : MH2GP9 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:17:13 DataFile Name : 041SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	712.80	730.63	725.90	723.11	1.28	ppb
Lead	207-1	689.60	716.34	712.97	706.30	2.06	ppb
Lead	208-1	698.98	723.20	717.18	713.12	1.77	ppb
Lithium	6-1				102		%
Magnesium	24-2	7568.63	7663.97	7626.27	7619.62	0.63	ppb
Manganese	55-2	1157.77	1163.94	1145.02	1155.58	0.84	ppb
Molybdenum	94-1	5.44	5.59	5.49	5.51	1.40	ppb
Molybdenum	95-1	0.77	0.80	0.76	0.78	2.87	ppb
Molybdenum	96-1	1.29	1.36	1.32	1.32	2.43	ppb
Molybdenum	97-1	0.74	0.77	0.81	0.77	4.47	ppb
Molybdenum	98-1	0.76	0.77	0.78	0.77	1.52	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	76.20	76.54	76.09	76.28	0.31	ppb
Phosphorus	31-2	4488.70	4537.70	4557.33	4527.91	0.78	ppb
Potassium	39-2	6002.95	6178.90	6074.11	6085.32	1.45	ppb
Rhodium	103-1				98		%
Rhodium	103-2				98		%
Scandium	45-1				100		%
Scandium	45-2				101		%
Selenium	82-1	1.73	1.43	1.31	1.49	14.54	ppb
Selenium	77-2	19.01	21.04	20.03	20.03	5.08	ppb
Selenium	78-2	4.31	4.26	3.73	4.10	7.88	ppb
Silicon	28-1	2510.25	2632.25	2601.68	2581.39	2.46	ppb
Silver	107-1	1.32	1.35	1.34	1.34	1.20	ppb
Silver	109-1	1.28	1.35	1.36	1.33	3.04	ppb
Sodium	23-2	817.22	822.44	823.25	820.97	0.40	ppb
Strontium	86-1	13627.27	14305.66	14137.71	14023.55	2.52	ppb
Strontium	88-1	13508.17	14174.08	13803.21	13828.49	2.41	ppb
Sulfur	34-1	811.13	891.36	858.17	853.56	4.72	ppb
Terbium	159-1				107		%
Terbium	159-2				106		%
Thallium	203-1	0.33	0.34	0.33	0.33	1.97	ppb
Thallium	205-1	0.33	0.33	0.33	0.33	0.39	ppb
Tin	118-1	1.10	1.18	1.16	1.15	3.58	ppb
Titanium	47-1	126.85	133.67	128.68	129.73	2.72	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-13

Instrumnet Name :

P7

Client Sample ID :

MH2GP9

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:17:13

DataFile Name :

041SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	3.76	3.91	3.90	3.86	2.24	ppb
Vanadium	51-2	47.82	48.17	48.30	48.10	0.51	ppb
Yttrium	89-1				112		%
Yttrium	89-2				110		%
Zinc	66-2	778.98	793.65	789.66	787.43	0.96	ppb
Zirconium	90-1	2.67	2.76	2.79	2.74	2.19	ppb
Zirconium	91-1	2.67	2.76	2.79	2.74	2.26	ppb

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4805-14Instrumnet Name :P7

Client Sample ID :MH2GQ0Dilution Factor :1

Date & Time Acquired :2024-11-18 07:20:11DataFile Name :042SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	16844.01	16898.87	16625.18	16789.35	0.86	ppb
Antimony	121-1	0.94	0.96	0.94	0.95	1.12	ppb
Arsenic	75-2	16.74	17.06	16.69	16.83	1.21	ppb
Barium	135-1	772.03	767.81	770.88	770.24	0.28	ppb
Barium	137-1	761.30	764.11	765.09	763.50	0.26	ppb
Beryllium	9-1	2.21	2.11	2.29	2.20	4.18	ppb
Bismuth	209-1				106		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	6.79	6.92	6.83	6.85	0.95	ppb
Cadmium	106-1	9.00	8.29	8.38	8.56	4.47	ppb
Cadmium	111-1	7.20	7.20	7.08	7.16	0.99	ppb
Calcium	43-1	166476.26	165836.29	167864.88	166725.81	0.62	ppb
Calcium	44-1	167048.33	167489.73	169933.59	168157.22	0.92	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	21.32	21.27	21.04	21.21	0.71	ppb
Cobalt	59-2	13.39	13.27	13.48	13.38	0.77	ppb
Copper	63-2	91.18	89.90	90.52	90.53	0.71	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				106		%
Indium	115-1				103		%
Indium	115-2				100		%
Iron	56-2	15148.10	14891.67	14865.94	14968.57	1.04	ppb
Iron	57-2	15796.59	15296.43	15516.40	15536.47	1.61	ppb
Iron	54-2	15215.96	14961.36	14877.50	15018.27	1.17	ppb
Krypton	83-1						cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-14 Instrumnet Name : P7
Client Sample ID : MH2GQ0 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:20:11 DataFile Name : 042SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	589.16	577.20	597.29	587.88	1.72	ppb
Lead	207-1	569.50	559.71	578.62	569.28	1.66	ppb
Lead	208-1	577.98	571.65	582.51	577.38	0.94	ppb
Lithium	6-1				102		%
Magnesium	24-2	8219.60	8209.22	8199.58	8209.46	0.12	ppb
Manganese	55-2	1093.66	1081.65	1068.06	1081.12	1.18	ppb
Molybdenum	94-1	6.77	6.87	6.93	6.86	1.24	ppb
Molybdenum	95-1	1.07	1.10	1.14	1.11	3.12	ppb
Molybdenum	96-1	1.74	1.76	1.77	1.75	1.01	ppb
Molybdenum	97-1	1.08	1.11	1.11	1.10	1.37	ppb
Molybdenum	98-1	1.08	1.08	1.11	1.09	1.64	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	98.50	97.18	96.66	97.45	0.97	ppb
Phosphorus	31-2	3751.59	3714.87	3720.25	3728.90	0.53	ppb
Potassium	39-2	5469.13	5461.36	5466.52	5465.67	0.07	ppb
Rhodium	103-1				97		%
Rhodium	103-2				97		%
Scandium	45-1				100		%
Scandium	45-2				101		%
Selenium	82-1	1.67	1.38	1.37	1.47	11.55	ppb
Selenium	77-2	17.93	20.33	18.02	18.76	7.24	ppb
Selenium	78-2	3.81	4.85	4.27	4.31	12.07	ppb
Silicon	28-1	2855.56	2903.51	2924.52	2894.53	1.22	ppb
Silver	107-1	1.23	1.21	1.23	1.22	0.76	ppb
Silver	109-1	1.20	1.19	1.21	1.20	0.53	ppb
Sodium	23-2	1082.11	1061.13	1053.15	1065.46	1.40	ppb
Strontium	86-1	13867.78	14050.27	14221.18	14046.41	1.26	ppb
Strontium	88-1	13865.80	14039.54	14005.01	13970.12	0.66	ppb
Sulfur	34-1	2193.30	2190.63	2262.61	2215.51	1.84	ppb
Terbium	159-1				107		%
Terbium	159-2				107		%
Thallium	203-1	0.43	0.41	0.44	0.43	3.23	ppb
Thallium	205-1	0.43	0.42	0.43	0.43	1.39	ppb
Tin	118-1	1.08	1.10	1.04	1.07	2.74	ppb
Titanium	47-1	177.26	177.02	180.61	178.30	1.13	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-14

Instrumnet Name :

P7

Client Sample ID :

MH2GQ0

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:20:11

DataFile Name :

042SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	4.26	4.24	4.27	4.25	0.32	ppb
Vanadium	51-2	51.70	50.91	51.08	51.23	0.81	ppb
Yttrium	89-1				111		%
Yttrium	89-2				109		%
Zinc	66-2	595.12	585.30	590.13	590.19	0.83	ppb
Zirconium	90-1	3.28	3.40	3.38	3.35	1.90	ppb
Zirconium	91-1	3.30	3.36	3.40	3.36	1.57	ppb

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4805-15Instrumnet Name :P7

Client Sample ID :MH2GQ1Dilution Factor :1

Date & Time Acquired :2024-11-18 07:23:14DataFile Name :043SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	18028.68	18226.67	18187.76	18147.70	0.58	ppb
Antimony	121-1	0.96	1.00	1.01	0.99	2.54	ppb
Arsenic	75-2	19.49	19.86	19.85	19.73	1.08	ppb
Barium	135-1	741.93	779.39	796.66	772.66	3.62	ppb
Barium	137-1	744.77	786.58	792.34	774.56	3.35	ppb
Beryllium	9-1	2.13	2.39	2.25	2.26	5.88	ppb
Bismuth	209-1				106		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	7.50	7.98	7.83	7.77	3.15	ppb
Cadmium	106-1	8.73	10.17	10.00	9.64	8.17	ppb
Cadmium	111-1	7.68	8.20	8.18	8.02	3.68	ppb
Calcium	43-1	165597.80	176661.81	173909.71	172056.44	3.35	ppb
Calcium	44-1	164666.65	175838.88	174111.45	171538.99	3.51	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	20.16	20.33	20.08	20.19	0.62	ppb
Cobalt	59-2	13.54	13.46	13.36	13.45	0.66	ppb
Copper	63-2	108.86	110.08	108.54	109.16	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				108		%
Holmium	165-2				105		%
Indium	115-1				104		%
Indium	115-2				101		%
Iron	56-2	16256.13	16582.46	16354.43	16397.67	1.02	ppb
Iron	57-2	17107.87	17354.03	17282.60	17248.17	0.73	ppb
Iron	54-2	16563.54	16373.18	16496.00	16477.57	0.59	ppb
Krypton	83-1						cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-15 Instrumnet Name : P7
Client Sample ID : MH2GQ1 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:23:14 DataFile Name : 043SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	644.20	683.90	681.91	670.01	3.34	ppb
Lead	207-1	630.42	664.10	659.06	651.19	2.79	ppb
Lead	208-1	635.61	671.03	669.89	658.84	3.05	ppb
Lithium	6-1				103		%
Magnesium	24-2	7899.83	8032.90	8038.13	7990.28	0.98	ppb
Manganese	55-2	1105.34	1111.27	1095.33	1103.98	0.73	ppb
Molybdenum	94-1	7.67	8.00	8.11	7.93	2.85	ppb
Molybdenum	95-1	1.33	1.42	1.41	1.39	3.80	ppb
Molybdenum	96-1	2.05	2.12	2.24	2.14	4.58	ppb
Molybdenum	97-1	1.41	1.40	1.42	1.41	0.62	ppb
Molybdenum	98-1	1.39	1.42	1.43	1.41	1.28	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	99.39	99.45	98.71	99.19	0.41	ppb
Phosphorus	31-2	3848.84	3891.45	3829.27	3856.52	0.82	ppb
Potassium	39-2	4707.12	4832.80	4749.11	4763.01	1.34	ppb
Rhodium	103-1				99		%
Rhodium	103-2				97		%
Scandium	45-1				101		%
Scandium	45-2				100		%
Selenium	82-1	1.54	2.06	1.67	1.76	15.54	ppb
Selenium	77-2	20.39	16.90	19.99	19.09	10.01	ppb
Selenium	78-2	4.44	4.49	4.31	4.41	2.10	ppb
Silicon	28-1	2526.59	2673.65	2733.73	2644.66	4.03	ppb
Silver	107-1	1.66	1.79	1.78	1.74	4.11	ppb
Silver	109-1	1.66	1.79	1.81	1.75	4.69	ppb
Sodium	23-2	1509.73	1548.56	1506.78	1521.69	1.53	ppb
Strontium	86-1	14001.13	14439.67	14345.16	14261.99	1.62	ppb
Strontium	88-1	13906.18	14347.32	14519.69	14257.73	2.22	ppb
Sulfur	34-1	5270.38	5723.14	5812.19	5601.90	5.19	ppb
Terbium	159-1				108		%
Terbium	159-2				106		%
Thallium	203-1	0.46	0.49	0.48	0.48	3.49	ppb
Thallium	205-1	0.45	0.48	0.48	0.47	3.15	ppb
Tin	118-1	1.67	1.78	1.77	1.74	3.29	ppb
Titanium	47-1	206.85	219.06	219.66	215.19	3.36	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-15

Instrumnet Name :

P7

Client Sample ID :

MH2GQ1

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:23:14

DataFile Name :

043SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	4.42	4.67	4.67	4.59	3.08	ppb
Vanadium	51-2	57.62	58.09	57.58	57.76	0.49	ppb
Yttrium	89-1				113		%
Yttrium	89-2				109		%
Zinc	66-2	652.52	657.12	654.75	654.80	0.35	ppb
Zirconium	90-1	3.71	3.91	3.90	3.84	2.89	ppb
Zirconium	91-1	3.79	3.97	4.05	3.94	3.38	ppb

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4806-01Instrumnet Name :P7

Client Sample ID :MH2GT6Dilution Factor :1

Date & Time Acquired :2024-11-18 07:26:15DataFile Name :044SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	7341.41	7328.76	7315.83	7328.67	0.17	ppb
Antimony	121-1	5.86	5.76	5.88	5.83	1.12	ppb
Arsenic	75-2	16.58	16.37	16.52	16.49	0.67	ppb
Barium	135-1	1216.23	1220.04	1231.65	1222.64	0.66	ppb
Barium	137-1	1213.20	1219.08	1228.24	1220.17	0.62	ppb
Beryllium	9-1	1.56	1.59	1.69	1.61	4.28	ppb
Bismuth	209-1				107		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	7.88	7.64	7.32	7.61	3.67	ppb
Cadmium	106-1	8.38	8.52	8.12	8.34	2.43	ppb
Cadmium	111-1	7.39	7.44	7.48	7.44	0.59	ppb
Calcium	43-1	95576.40	94512.61	95219.48	95102.83	0.57	ppb
Calcium	44-1	94740.27	94448.31	95257.83	94815.47	0.43	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	40.20	40.63	39.81	40.21	1.02	ppb
Cobalt	59-2	13.43	13.77	13.47	13.56	1.39	ppb
Copper	63-2	155.29	152.16	153.74	153.73	1.02	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				108		%
Indium	115-1				104		%
Indium	115-2				102		%
Iron	56-2	10586.23	10804.48	10492.75	10627.82	1.51	ppb
Iron	57-2	10840.18	11246.38	10935.73	11007.43	1.93	ppb
Iron	54-2	10575.47	10789.24	10613.50	10659.40	1.07	ppb
Krypton	83-1						cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4806-01 Instrumnet Name : P7
Client Sample ID : MH2GT6 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:26:15 DataFile Name : 044SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	5811.65	5924.75	5953.30	5896.57	1.27	ppb
Lead	207-1	5374.96	5540.62	5557.73	5491.10	1.84	ppb
Lead	208-1	5549.92	5635.28	5712.98	5632.73	1.45	ppb
Lithium	6-1				102		%
Magnesium	24-2	6638.31	6647.47	6551.90	6612.56	0.80	ppb
Manganese	55-2	674.14	701.04	682.53	685.91	2.01	ppb
Molybdenum	94-1	5.25	5.23	5.27	5.25	0.45	ppb
Molybdenum	95-1	2.11	2.15	2.15	2.13	1.06	ppb
Molybdenum	96-1	2.49	2.49	2.46	2.48	0.76	ppb
Molybdenum	97-1	2.18	2.14	2.15	2.16	0.79	ppb
Molybdenum	98-1	2.12	2.15	2.16	2.14	0.94	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	16.88	17.07	16.80	16.92	0.83	ppb
Phosphorus	31-2	2820.82	2941.17	2819.75	2860.58	2.44	ppb
Potassium	39-2	7175.94	7397.33	7178.39	7250.56	1.75	ppb
Rhodium	103-1				100		%
Rhodium	103-2				101		%
Scandium	45-1				100		%
Scandium	45-2				102		%
Selenium	82-1	1.49	1.54	1.77	1.60	9.43	ppb
Selenium	77-2	12.66	11.94	13.45	12.68	5.97	ppb
Selenium	78-2	3.58	2.69	3.88	3.38	18.37	ppb
Silicon	28-1	1837.60	1817.31	1832.90	1829.27	0.58	ppb
Silver	107-1	1.22	1.26	1.26	1.25	1.79	ppb
Silver	109-1	1.19	1.24	1.27	1.23	3.17	ppb
Sodium	23-2	27129.71	27432.88	27011.12	27191.23	0.80	ppb
Strontium	86-1	10229.75	10076.85	10224.17	10176.92	0.85	ppb
Strontium	88-1	10122.56	10064.32	10111.44	10099.44	0.31	ppb
Sulfur	34-1	10983.23	10575.32	10766.23	10774.93	1.89	ppb
Terbium	159-1				108		%
Terbium	159-2				109		%
Thallium	203-1	0.26	0.27	0.25	0.26	2.99	ppb
Thallium	205-1	0.26	0.26	0.25	0.26	1.81	ppb
Tin	118-1	16.08	16.12	16.31	16.17	0.77	ppb
Titanium	47-1	60.01	59.95	59.77	59.91	0.21	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4806-01

Instrumnet Name :

P7

Client Sample ID :

MH2GT6

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:26:15

DataFile Name :

044SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	4.07	4.10	4.21	4.12	1.82	ppb
Vanadium	51-2	12.20	12.40	12.29	12.30	0.82	ppb
Yttrium	89-1				108		%
Yttrium	89-2				106		%
Zinc	66-2	1708.74	1706.68	1724.87	1713.43	0.58	ppb
Zirconium	90-1	1.98	1.97	2.00	1.98	0.93	ppb
Zirconium	91-1	1.95	1.96	2.04	1.98	2.47	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

CCV002

Instrumnet Name :

P7

Client Sample ID :

CCV002

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:29:12

DataFile Name :

045CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	48511.02	47000.68	47445.19	47652.30	1.63	ppb
Antimony	121-1	442.52	476.19	481.72	466.81	4.54	ppb
Arsenic	75-2	509.66	511.79	514.99	512.15	0.52	ppb
Barium	135-1	2182.95	2336.91	2385.87	2301.91	4.60	ppb
Barium	137-1	2192.47	2322.43	2352.48	2289.13	3.72	ppb
Beryllium	9-1	439.82	469.08	475.99	461.63	4.16	ppb
Bismuth	209-1				96		%
Bismuth	209-2				92		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	451.16	487.01	495.22	477.80	4.90	ppb
Cadmium	106-1	454.73	486.28	494.39	478.46	4.38	ppb
Cadmium	111-1	456.35	486.51	501.64	481.50	4.79	ppb
Calcium	43-1	217805.98	237679.41	239656.22	231713.87	5.22	ppb
Calcium	44-1	218252.58	239613.06	241324.75	233063.46	5.52	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	482.78	478.34	488.22	483.12	1.02	ppb
Cobalt	59-2	494.61	480.81	492.05	489.16	1.50	ppb
Copper	63-2	5062.03	4952.90	4995.77	5003.56	1.10	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				101		%
Indium	115-1				96		%
Indium	115-2				94		%
Iron	56-2	122056.62	118504.78	120855.10	120472.17	1.50	ppb
Iron	57-2	123943.27	119487.30	121153.70	121528.09	1.85	ppb
Iron	54-2	120797.59	119604.98	122195.32	120865.96	1.07	ppb
Krypton	83-1						cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :CCV002Instrumnet Name :P7

Client Sample ID :CCV002Dilution Factor :1

Date & Time Acquired :2024-11-18 07:29:12DataFile Name :045CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2220.42	2392.03	2407.76	2340.07	4.44	ppb
Lead	207-1	2191.10	2387.84	2389.54	2322.83	4.91	ppb
Lead	208-1	2183.12	2377.37	2388.85	2316.44	4.99	ppb
Lithium	6-1				96		%
Magnesium	24-2	245516.53	239503.31	239134.31	241384.72	1.48	ppb
Manganese	55-2	4870.46	4773.26	4871.13	4838.28	1.16	ppb
Molybdenum	94-1	4334.09	4660.24	4833.41	4609.25	5.50	ppb
Molybdenum	95-1	4338.49	4688.58	4835.18	4620.75	5.52	ppb
Molybdenum	96-1	4346.43	4691.88	4811.80	4616.70	5.23	ppb
Molybdenum	97-1	4333.84	4682.44	4796.85	4604.38	5.24	ppb
Molybdenum	98-1	4372.80	4669.30	4781.71	4607.94	4.58	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	491.94	478.25	484.65	484.95	1.41	ppb
Phosphorus	31-2	9623.60	9494.51	9458.76	9525.62	0.91	ppb
Potassium	39-2	121871.36	120407.77	118718.97	120332.70	1.31	ppb
Rhodium	103-1				91		%
Rhodium	103-2				90		%
Scandium	45-1				95		%
Scandium	45-2				97		%
Selenium	82-1	445.93	479.73	493.18	472.95	5.15	ppb
Selenium	77-2	502.48	499.22	510.22	503.97	1.12	ppb
Selenium	78-2	496.27	504.97	496.64	499.29	0.98	ppb
Silicon	28-1	496.51	537.97	549.25	527.91	5.26	ppb
Silver	107-1	451.47	483.23	484.79	473.16	3.97	ppb
Silver	109-1	454.08	484.51	496.42	478.34	4.56	ppb
Sodium	23-2	248879.07	241124.96	243512.26	244505.43	1.62	ppb
Strontium	86-1	10861.98	11744.63	12111.51	11572.71	5.55	ppb
Strontium	88-1	10769.11	11667.12	11900.10	11445.44	5.22	ppb
Sulfur	34-1	9014.73	9740.80	9840.57	9532.03	4.73	ppb
Terbium	159-1				103		%
Terbium	159-2				102		%
Thallium	203-1	438.27	481.65	486.71	468.88	5.68	ppb
Thallium	205-1	441.69	478.72	484.06	468.16	4.93	ppb
Tin	118-1	431.43	459.59	470.59	453.87	4.45	ppb
Titanium	47-1	4264.76	4699.94	4661.45	4542.05	5.30	ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

CCV002

Instrumnet Name :

P7

Client Sample ID :

CCV002

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:29:12

DataFile Name :

045CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	440.69	473.67	484.37	466.24	4.88	ppb
Vanadium	51-2	501.48	487.84	494.35	494.56	1.38	ppb
Yttrium	89-1				99		%
Yttrium	89-2				97		%
Zinc	66-2	5062.43	4949.61	4945.76	4985.93	1.33	ppb
Zirconium	90-1	435.93	475.61	480.64	464.06	5.28	ppb
Zirconium	91-1	439.50	474.53	488.92	467.65	5.44	ppb

LB Number :LB133504Operator :Jaswal

Lab Sample ID :CCB002Instrumnet Name :P7

Client Sample ID :CCB002Dilution Factor :1

Date & Time Acquired :2024-11-18 07:31:52DataFile Name :046CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.31	0.15	-0.08	0.13	150.78	ppb
Antimony	121-1	0.16	0.18	0.24	0.20	20.14	ppb
Arsenic	75-2	0.01	0.01	-0.01	0.00	284.77	ppb
Barium	135-1	0.19	0.11	0.05	0.12	57.54	ppb
Barium	137-1	0.20	0.10	0.06	0.12	58.35	ppb
Beryllium	9-1	0.05	0.07	0.02	0.04	46.65	ppb
Bismuth	209-1				103		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.02	-0.02	0.00	0.00	1755.55	ppb
Cadmium	106-1	1.20	0.63	0.16	0.66	78.79	ppb
Cadmium	111-1	0.14	0.08	0.03	0.09	66.17	ppb
Calcium	43-1	9.31	0.58	-4.08	1.94	350.97	ppb
Calcium	44-1	15.07	5.43	0.42	6.97	106.81	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.01	-0.02	-0.03	-0.02		ppb
Cobalt	59-2	0.01	0.01	0.01	0.01	29.05	ppb
Copper	63-2	0.08	0.08	0.05	0.07	20.65	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				102		%
Indium	115-1				100		%
Indium	115-2				99		%
Iron	56-2	0.20	-0.24	-0.70	-0.25		ppb
Iron	57-2	-0.26	-1.72	-1.58	-1.19		ppb
Iron	54-2	0.03	-0.81	-1.29	-0.69		ppb
Krypton	83-1						cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : CCB002 Instrumnet Name : P7
Client Sample ID : CCB002 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:31:52 DataFile Name : 046CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.07	0.00	-0.05	0.01	1203.48	ppb
Lead	207-1	0.07	-0.01	-0.05	0.00	2280.52	ppb
Lead	208-1	0.08	-0.01	-0.06	0.00	1403.21	ppb
Lithium	6-1				102		%
Magnesium	24-2	3.81	2.86	2.35	3.01	24.67	ppb
Manganese	55-2	-0.04	-0.07	-0.08	-0.06		ppb
Molybdenum	94-1	0.46	0.33	0.29	0.36	24.52	ppb
Molybdenum	95-1	0.48	0.32	0.27	0.35	30.36	ppb
Molybdenum	96-1	0.47	0.30	0.27	0.35	31.03	ppb
Molybdenum	97-1	0.48	0.34	0.29	0.37	27.47	ppb
Molybdenum	98-1	0.48	0.32	0.26	0.35	31.25	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.19	-0.18	-0.19	-0.19		ppb
Phosphorus	31-2	-15.25	-12.96	-14.55	-14.25		ppb
Potassium	39-2	9.61	10.09	7.41	9.04	15.84	ppb
Rhodium	103-1				97		%
Rhodium	103-2				99		%
Scandium	45-1				94		%
Scandium	45-2				97		%
Selenium	82-1	-0.08	-0.15	-0.14	-0.12		ppb
Selenium	77-2	0.08	0.00	0.00	0.03	173.21	ppb
Selenium	78-2	-0.38	-0.46	-0.75	-0.53		ppb
Silicon	28-1	-2.96	-3.75	-4.13	-3.61		ppb
Silver	107-1	0.06	0.04	0.03	0.04	38.91	ppb
Silver	109-1	0.06	0.04	0.03	0.04	38.89	ppb
Sodium	23-2	15.63	15.56	12.87	14.69	10.71	ppb
Strontium	86-1	0.86	0.68	0.14	0.56	66.25	ppb
Strontium	88-1	0.81	0.42	0.17	0.47	68.54	ppb
Sulfur	34-1	-154.16	-188.05	-186.16	-176.12		ppb
Terbium	159-1				101		%
Terbium	159-2				103		%
Thallium	203-1	0.06	0.04	0.03	0.04	35.63	ppb
Thallium	205-1	0.06	0.04	0.03	0.04	37.89	ppb
Tin	118-1	-0.02	-0.02	-0.03	-0.02		ppb
Titanium	47-1	0.13	-0.02	-0.12	0.00		ppb

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

CCB002

Instrumnet Name :

P7

Client Sample ID :

CCB002

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:31:52

DataFile Name :

046CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.04	0.02	0.02	0.03	45.10	ppb
Vanadium	51-2	0.01	0.00	0.00	0.00	37.50	ppb
Yttrium	89-1				97		%
Yttrium	89-2				97		%
Zinc	66-2	-1.90	-1.85	-1.90	-1.88		ppb
Zirconium	90-1	0.04	0.03	0.03	0.03	21.74	ppb
Zirconium	91-1	0.04	0.03	0.03	0.03	23.22	ppb

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P7
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 04:31:53 DataFile Name : 004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	493	553	407	484	15.22	cps
Antimony	121-1	47	60	60	56	13.85	cps
Arsenic	75-2	10	27	27	21	45.58	cps
Barium	135-1	163	170	140	158	9.98	cps
Barium	137-1	347	347	290	328	9.98	cps
Beryllium	9-1	50	44	56	50	11.11	cps
Bismuth	209-1	19980602	19552228	19620492	19717774	1.17	cps
Bismuth	209-2	15071467	14840059	15059501	14990342	0.87	cps
Bromine	81-1	16456	16269	16396	16374	0.58	cps
Bromine	81-2	113	103	87	101	13.32	cps
Cadmium	108-1	47	43	23	38	33.41	cps
Cadmium	106-1	10174	9323	9573	9690	4.51	cps
Cadmium	111-1	7122	6539	6725	6795	4.38	cps
Calcium	43-1	1290	1363	1547	1400	9.44	cps
Calcium	44-1	39425	39578	38860	39288	0.96	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4711	4671	4804	4729	1.45	cps
Cobalt	59-2	240	203	237	227	8.94	cps
Copper	63-2	1800	1853	1847	1833	1.59	cps
Dysprosium	156-1	20	27	20	22	17.33	cps
Dysprosium	156-2	13	17	10	13	25.01	cps
Erbium	164-1	127	167	123	139	17.36	cps
Erbium	164-2	120	100	100	107	10.83	cps
Gadolinium	160-1	167	110	137	138	20.58	cps
Gadolinium	160-2	1147	1233	1237	1206	4.23	cps
Holmium	165-1	33672365	33325978	33534047	33510797	0.52	cps
Holmium	165-2	22107017	22002724	22235141	22114961	0.53	cps
Indium	115-1	29713708	29364725	29250392	29442942	0.82	cps
Indium	115-2	10234994	10130921	10248700	10204872	0.63	cps
Iron	56-2	44238	44111	44272	44207	0.19	cps
Iron	57-2	2247	2184	2324	2251	3.11	cps
Iron	54-2	5208	5258	5051	5172	2.09	cps
Krypton	83-1	387	317	337	347	10.40	cps

2

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

S00

Instrumnet Name :

P7

Client Sample ID :

S0

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 04:31:53

DataFile Name :

004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	87	73	37	66	39.49	cps
Vanadium	51-2	23	27	47	32	39.17	cps
Yttrium	89-1	40282931	40279649	39482401	40014994	1.15	cps
Yttrium	89-2	10214866	10063893	10111968	10130242	0.76	cps
Zinc	66-2	4687	4627	4761	4692	1.42	cps
Zirconium	90-1	2877	2877	2710	2821	3.41	cps
Zirconium	91-1	557	523	593	558	6.28	cps

LB Number : LB133504

Operator : Jaswal

Lab Sample ID : S02

Instrumnet Name : P7

Client Sample ID : S02

Dilution Factor : 1

Date & Time Acquired : 2024-11-18 04:38:22

DataFile Name : 006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	11124	11284	11101	11170	0.89	cps
Antimony	121-1	51850	52298	52917	52355	1.02	cps
Arsenic	75-2	1397	1520	1597	1505	6.71	cps
Barium	135-1	61904	62008	62503	62138	0.52	cps
Barium	137-1	106908	108480	106522	107303	0.97	cps
Beryllium	9-1	2673	2873	3223	2923	9.53	cps
Bismuth	209-1	19866032	19736831	19778663	19793842	0.33	cps
Bismuth	209-2	15172447	14589357	15871273	15211026	4.22	cps
Bromine	81-1	17507	17194	16496	17066	3.03	cps
Bromine	81-2	117	93	80	97	19.20	cps
Cadmium	108-1	517	587	487	530	9.68	cps
Cadmium	106-1	11348	10904	10878	11043	2.39	cps
Cadmium	111-1	15000	14684	14392	14692	2.07	cps
Calcium	43-1	38054	38653	38509	38405	0.81	cps
Calcium	44-1	634063	641207	641699	638989	0.67	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	27141	27058	27091	27097	0.16	cps
Cobalt	59-2	18819	18351	19042	18737	1.88	cps
Copper	63-2	27208	27368	27031	27203	0.62	cps
Dysprosium	156-1	33	23	20	26	27.15	cps
Dysprosium	156-2	33	7	30	23	62.26	cps
Erbium	164-1	140	147	167	151	9.18	cps
Erbium	164-2	113	90	113	106	12.77	cps
Gadolinium	160-1	150	190	197	179	14.11	cps
Gadolinium	160-2	1247	1170	1440	1286	10.82	cps
Holmium	165-1	33475961	33704583	33765358	33648634	0.45	cps
Holmium	165-2	22493635	21518486	23269174	22427098	3.91	cps
Indium	115-1	29799953	29833385	30118621	29917320	0.59	cps
Indium	115-2	10312446	9857856	10697008	10289103	4.08	cps
Iron	56-2	571422	573430	575982	573611	0.40	cps
Iron	57-2	16576	16142	15688	16135	2.75	cps
Iron	54-2	34560	35525	35108	35064	1.38	cps
Krypton	83-1	357	370	373	367	2.41	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : S02 Instrumnet Name : P7
Client Sample ID : S02 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 04:38:22 DataFile Name : 006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	19187	19758	19634	19526	1.54	cps
Lead	207-1	16864	16407	17017	16763	1.90	cps
Lead	208-1	76886	77641	76654	77060	0.67	cps
Lithium	6-1	3405429	3382064	3423372	3403621	0.61	cps
Magnesium	24-2	479766	478700	478583	479017	0.14	cps
Manganese	55-2	10150	10370	10610	10377	2.22	cps
Molybdenum	94-1	55103	55625	55528	55419	0.50	cps
Molybdenum	95-1	66494	66915	66758	66722	0.32	cps
Molybdenum	96-1	73611	75058	74612	74427	1.00	cps
Molybdenum	97-1	41445	42448	41663	41852	1.26	cps
Molybdenum	98-1	106028	108432	108254	107571	1.25	cps
Neodymium	150-1	27	47	40	38	26.95	cps
Neodymium	150-2	17	7	13	12	41.65	cps
Nickel	60-2	5548	5184	5128	5287	4.31	cps
Phosphorus	31-2	1387	1333	1367	1362	1.98	cps
Potassium	39-2	668244	671347	669725	669772	0.23	cps
Rhodium	103-1	28582015	28668460	28847735	28699403	0.47	cps
Rhodium	103-2	16902853	15994583	17386638	16761358	4.22	cps
Scandium	45-1	16638135	16799436	16993166	16810246	1.06	cps
Scandium	45-2	1413006	1378598	1492747	1428117	4.10	cps
Selenium	82-1	2972	2867	2802	2881	2.97	cps
Selenium	77-2	183	247	223	218	14.71	cps
Selenium	78-2	1153	1230	1153	1179	3.76	cps
Silicon	28-1	1604626	1568630	1601093	1591450	1.25	cps
Silver	107-1	34150	35092	35650	34964	2.17	cps
Silver	109-1	33515	33876	33308	33567	0.86	cps
Sodium	23-2	768419	766257	766018	766898	0.17	cps
Strontium	86-1	9330	9220	9166	9239	0.90	cps
Strontium	88-1	75372	74534	74792	74899	0.57	cps
Sulfur	34-1	342256	343412	344037	343235	0.26	cps
Terbium	159-1	34540744	34098734	35206498	34615325	1.61	cps
Terbium	159-2	22615094	21556616	23322310	22498007	3.95	cps
Thallium	203-1	22606	22359	22335	22433	0.67	cps
Thallium	205-1	53163	53689	52387	53080	1.23	cps
Tin	118-1	115868	115397	115374	115546	0.24	cps
Titanium	47-1	18248	18481	17997	18242	1.33	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

S02

Instrumnet Name :

P7

Client Sample ID :

S02

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 04:38:22

DataFile Name :

006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	62245	62486	61716	62149	0.63	cps
Vanadium	51-2	47388	46802	46832	47007	0.70	cps
Yttrium	89-1	39938004	40050459	40375819	40121427	0.57	cps
Yttrium	89-2	10333495	9666907	10595745	10198716	4.70	cps
Zinc	66-2	14334	14167	14070	14190	0.94	cps
Zirconium	90-1	47834	47918	48383	48045	0.61	cps
Zirconium	91-1	10491	10494	10651	10545	0.87	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : S03 Instrumnet Name : P7
Client Sample ID : S03 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 04:41:36 DataFile Name : 007CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	568124	571894	568803	569607	0.35	cps
Antimony	121-1	1322344	1327953	1323510	1324602	0.22	cps
Arsenic	75-2	71029	70453	70784	70755	0.41	cps
Barium	135-1	1654678	1623714	1661348	1646580	1.22	cps
Barium	137-1	2818417	2771949	2802350	2797572	0.84	cps
Beryllium	9-1	137390	138792	138355	138179	0.52	cps
Bismuth	209-1	19815521	19884076	19803201	19834266	0.22	cps
Bismuth	209-2	14977605	14872713	14935378	14928565	0.35	cps
Bromine	81-1	16910	16346	16586	16614	1.70	cps
Bromine	81-2	103	80	97	93	12.88	cps
Cadmium	108-1	26878	27286	27429	27198	1.05	cps
Cadmium	106-1	47915	47487	47370	47591	0.60	cps
Cadmium	111-1	371577	369402	373516	371498	0.55	cps
Calcium	43-1	379760	379195	379746	379567	0.08	cps
Calcium	44-1	6059608	6078640	5975129	6037792	0.91	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	553121	552354	554149	553208	0.16	cps
Cobalt	59-2	888610	886365	882500	885825	0.35	cps
Copper	63-2	6834355	6783477	6819614	6812482	0.38	cps
Dysprosium	156-1	70	63	77	70	9.53	cps
Dysprosium	156-2	73	90	90	84	11.40	cps
Erbium	164-1	160	147	187	164	12.39	cps
Erbium	164-2	93	90	147	110	28.91	cps
Gadolinium	160-1	93	167	140	133	27.84	cps
Gadolinium	160-2	1337	1277	1103	1239	9.78	cps
Holmium	165-1	33543311	33265315	33627724	33478783	0.57	cps
Holmium	165-2	22209576	22163501	21920944	22098007	0.70	cps
Indium	115-1	29555337	28895334	28908425	29119699	1.30	cps
Indium	115-2	9916542	10008427	9844655	9923208	0.83	cps
Iron	56-2	25961704	26243330	26319706	26174913	0.72	cps
Iron	57-2	658065	657611	654804	656827	0.27	cps
Iron	54-2	1439465	1432718	1435316	1435833	0.24	cps
Krypton	83-1	340	270	330	313	12.08	cps

LB Number :	LB133504	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P7
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired :	2024-11-18 04:41:36	DataFile Name :	007CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	4662863	4666101	4800417	4709794	1.67	cps
Lead	207-1	4095955	4163641	4167986	4142527	0.98	cps
Lead	208-1	18647796	18871983	19045027	18854935	1.06	cps
Lithium	6-1	3458414	3452635	3478262	3463104	0.39	cps
Magnesium	24-2	5181894	5207516	5196234	5195215	0.25	cps
Manganese	55-2	4244799	4300284	4341453	4295512	1.13	cps
Molybdenum	94-1	4878280	4887030	4895094	4886802	0.17	cps
Molybdenum	95-1	7168904	7080414	7159250	7136190	0.68	cps
Molybdenum	96-1	7890217	7728378	7779173	7799256	1.06	cps
Molybdenum	97-1	4437772	4365838	4377737	4393782	0.88	cps
Molybdenum	98-1	11385212	11472691	11188809	11348904	1.28	cps
Neodymium	150-1	57	67	107	77	34.51	cps
Neodymium	150-2	33	53	33	40	28.87	cps
Nickel	60-2	234039	231907	230306	232084	0.81	cps
Phosphorus	31-2	30080	29064	29425	29523	1.74	cps
Potassium	39-2	3062537	3105849	3031575	3066653	1.22	cps
Rhodium	103-1	28054245	28011822	28052350	28039472	0.09	cps
Rhodium	103-2	16164015	15997302	16088396	16083238	0.52	cps
Scandium	45-1	16784204	16528406	16555859	16622823	0.84	cps
Scandium	45-2	1383815	1389309	1381264	1384796	0.30	cps
Selenium	82-1	21964	22340	22122	22142	0.85	cps
Selenium	77-2	1957	2110	2087	2051	4.03	cps
Selenium	78-2	7622	7462	7685	7590	1.52	cps
Silicon	28-1	3582442	3559457	3563977	3568625	0.34	cps
Silver	107-1	1890265	1811501	1837226	1846331	2.18	cps
Silver	109-1	1785239	1797196	1757624	1780020	1.14	cps
Sodium	23-2	8165962	8116573	8115767	8132768	0.35	cps
Strontium	86-1	429533	432387	429937	430619	0.36	cps
Strontium	88-1	3919915	3858535	3883094	3887181	0.79	cps
Sulfur	34-1	433243	435015	431420	433226	0.41	cps
Terbium	159-1	34873848	34535222	34163645	34524238	1.03	cps
Terbium	159-2	22204704	22083967	22123887	22137519	0.28	cps
Thallium	203-1	1155219	1159413	1151387	1155340	0.35	cps
Thallium	205-1	2794370	2812371	2843740	2816827	0.89	cps
Tin	118-1	1114803	1130161	1133501	1126155	0.89	cps
Titanium	47-1	1752588	1755352	1724374	1744105	0.98	cps

LB Number :LB133504

Operator :Jaswal

Lab Sample ID :S03

Instrumnet Name :P7

Client Sample ID :S03

Dilution Factor :1

Date & Time Acquired :2024-11-18 04:41:36

DataFile Name :007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	3416762	3449492	3436601	3434285	0.48	cps
Vanadium	51-2	471459	470693	469967	470706	0.16	cps
Yttrium	89-1	40261521	39643497	39514416	39806478	1.00	cps
Yttrium	89-2	9908600	9808408	9724779	9813929	0.94	cps
Zinc	66-2	1085373	1069272	1076512	1077052	0.75	cps
Zirconium	90-1	2394965	2406922	2358901	2386929	1.05	cps
Zirconium	91-1	507667	513660	506872	509400	0.73	cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :S04Instrumnet Name :P7

Client Sample ID :S04Dilution Factor :1

Date & Time Acquired :2024-11-18 04:44:28DataFile Name :008CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1510613	1436410	1432763	1459929	3.01	cps
Antimony	121-1	3259680	3347500	3393914	3333698	2.04	cps
Arsenic	75-2	176189	170459	170075	172241	1.99	cps
Barium	135-1	3892521	4066619	4130185	4029775	3.05	cps
Barium	137-1	6589996	6934009	7051174	6858393	3.50	cps
Beryllium	9-1	324154	342999	344501	337218	3.36	cps
Bismuth	209-1	20606918	20433742	19806988	20282549	2.07	cps
Bismuth	209-2	14627318	14904493	14698267	14743359	0.98	cps
Bromine	81-1	15975	15802	16486	16088	2.21	cps
Bromine	81-2	127	97	110	111	13.53	cps
Cadmium	108-1	63957	65269	66204	65143	1.73	cps
Cadmium	106-1	99538	101498	102860	101299	1.65	cps
Cadmium	111-1	866924	896453	901484	888287	2.10	cps
Calcium	43-1	878163	907903	908054	898040	1.92	cps
Calcium	44-1	14167852	14472187	14316994	14319011	1.06	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1379735	1364769	1348610	1364371	1.14	cps
Cobalt	59-2	2268937	2274190	2293259	2278795	0.56	cps
Copper	63-2	16427957	16561494	16743732	16577728	0.96	cps
Dysprosium	156-1	73	80	103	86	18.41	cps
Dysprosium	156-2	167	237	177	193	19.58	cps
Erbium	164-1	200	183	183	189	5.09	cps
Erbium	164-2	97	150	97	114	26.90	cps
Gadolinium	160-1	200	190	130	173	21.84	cps
Gadolinium	160-2	1280	1193	1247	1240	3.53	cps
Holmium	165-1	35005254	34541335	33519159	34355249	2.21	cps
Holmium	165-2	22100270	22110887	21941189	22050782	0.43	cps
Indium	115-1	30164265	29714402	28450787	29443151	3.02	cps
Indium	115-2	9673142	9870622	9538011	9693925	1.73	cps
Iron	56-2	65099842	62984232	65749739	64611271	2.24	cps
Iron	57-2	1616154	1576975	1628942	1607357	1.68	cps
Iron	54-2	3634675	3512134	3472276	3539695	2.39	cps
Krypton	83-1	367	293	307	322	12.12	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : S04 Instrumnet Name : P7
Client Sample ID : S04 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 04:44:28 DataFile Name : 008CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	11326767	12022664	11953354	11767595	3.26	cps
Lead	207-1	10076758	10435402	10548400	10353520	2.38	cps
Lead	208-1	45373653	47612306	47592201	46859387	2.75	cps
Lithium	6-1	3601181	3547405	3448555	3532381	2.19	cps
Magnesium	24-2	12747001	12580122	12343494	12556873	1.61	cps
Manganese	55-2	10769670	10348324	10441156	10519717	2.10	cps
Molybdenum	94-1	11616256	11969638	12011280	11865725	1.83	cps
Molybdenum	95-1	16813681	17496997	17499013	17269897	2.29	cps
Molybdenum	96-1	18352801	19189665	19209540	18917335	2.58	cps
Molybdenum	97-1	10359993	10816624	10787969	10654862	2.40	cps
Molybdenum	98-1	26707075	27905195	28029698	27547323	2.65	cps
Neodymium	150-1	247	197	180	208	16.70	cps
Neodymium	150-2	37	63	40	47	31.13	cps
Nickel	60-2	592956	604056	593678	596897	1.04	cps
Phosphorus	31-2	71924	71261	72762	71983	1.04	cps
Potassium	39-2	7300797	7369699	7336483	7335660	0.47	cps
Rhodium	103-1	28403512	28135792	27339181	27959495	1.98	cps
Rhodium	103-2	15634682	15754041	15619840	15669521	0.47	cps
Scandium	45-1	16754858	16701296	15976913	16477689	2.64	cps
Scandium	45-2	1333273	1329275	1344653	1335733	0.60	cps
Selenium	82-1	51693	53218	53298	52736	1.71	cps
Selenium	77-2	5211	5368	5231	5270	1.62	cps
Selenium	78-2	17954	18118	17367	17813	2.22	cps
Silicon	28-1	5931447	6162317	6196474	6096746	2.36	cps
Silver	107-1	4429978	4572974	4487943	4496965	1.60	cps
Silver	109-1	4193759	4263761	4343077	4266866	1.75	cps
Sodium	23-2	19639674	19614620	19560358	19604884	0.21	cps
Strontium	86-1	1008132	1045850	1049304	1034429	2.21	cps
Strontium	88-1	9113086	9393161	9378517	9294921	1.70	cps
Sulfur	34-1	550427	559037	554994	554819	0.78	cps
Terbium	159-1	35436838	35667624	34349536	35151333	2.00	cps
Terbium	159-2	22026266	21936775	21831417	21931486	0.44	cps
Thallium	203-1	2902476	2977855	3032162	2970831	2.19	cps
Thallium	205-1	6828606	7133920	7237522	7066682	3.01	cps
Tin	118-1	2706289	2816057	2820695	2781014	2.33	cps
Titanium	47-1	4118666	4222262	4248870	4196599	1.64	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

S04

Instrumnet Name :

P7

Client Sample ID :

S04

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 04:44:28

DataFile Name :

008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	8477360	8653118	8802644	8644374	1.88	cps
Vanadium	51-2	1141837	1141390	1137649	1140292	0.20	cps
Yttrium	89-1	40272704	39681496	38161677	39371959	2.77	cps
Yttrium	89-2	9507065	9491106	9462235	9486802	0.24	cps
Zinc	66-2	2621064	2613305	2647936	2627435	0.69	cps
Zirconium	90-1	5604070	5782972	5760393	5715812	1.70	cps
Zirconium	91-1	1205880	1244678	1252975	1234511	2.04	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : S05 Instrumnet Name : P7
Client Sample ID : S05 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 04:47:12 DataFile Name : 009CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2883489	2866221	2802394	2850701	1.50	cps
Antimony	121-1	6376529	6600039	6574555	6517041	1.88	cps
Arsenic	75-2	338696	337718	333860	336758	0.76	cps
Barium	135-1	7756151	7992009	7953925	7900695	1.60	cps
Barium	137-1	13208145	13677393	13911096	13598878	2.63	cps
Beryllium	9-1	634913	667592	658640	653715	2.58	cps
Bismuth	209-1	20428185	20067138	20028032	20174452	1.09	cps
Bismuth	209-2	15183977	14935045	14675416	14931479	1.70	cps
Bromine	81-1	15892	15635	15785	15771	0.82	cps
Bromine	81-2	140	107	103	117	17.38	cps
Cadmium	108-1	124223	129949	128876	127683	2.38	cps
Cadmium	106-1	182117	188494	188061	186224	1.91	cps
Cadmium	111-1	1693177	1769203	1779408	1747263	2.70	cps
Calcium	43-1	1686618	1748712	1743736	1726356	2.00	cps
Calcium	44-1	26718228	27930803	27741460	27463497	2.38	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2689016	2732184	2705166	2708789	0.81	cps
Cobalt	59-2	4349502	4294029	4287710	4310413	0.79	cps
Copper	63-2	32614329	32378986	31739402	32244239	1.40	cps
Dysprosium	156-1	103	160	157	140	22.71	cps
Dysprosium	156-2	373	413	380	389	5.51	cps
Erbium	164-1	257	170	280	236	24.61	cps
Erbium	164-2	150	140	117	136	12.62	cps
Gadolinium	160-1	230	223	147	200	23.15	cps
Gadolinium	160-2	1290	1257	1180	1242	4.54	cps
Holmium	165-1	34564576	33862351	33730110	34052346	1.32	cps
Holmium	165-2	22729787	22286991	22074992	22363924	1.49	cps
Indium	115-1	28995006	28312357	28278178	28528514	1.42	cps
Indium	115-2	9819373	9621768	9571911	9671017	1.35	cps
Iron	56-2	126054255	124387635	124546165	124996018	0.74	cps
Iron	57-2	3128903	3079619	3137735	3115419	1.01	cps
Iron	54-2	6938223	6918979	6856408	6904536	0.62	cps
Krypton	83-1	280	350	270	300	14.53	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : S05 Instrumnet Name : P7
Client Sample ID : S05 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 04:47:12 DataFile Name : 009CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	22233144	23409508	23465281	23035978	3.02	cps
Lead	207-1	19549020	20675090	20609901	20278004	3.12	cps
Lead	208-1	89392645	94342822	93959517	92564994	2.98	cps
Lithium	6-1	3514095	3395580	3453815	3454497	1.72	cps
Magnesium	24-2	24841703	24971529	24678413	24830548	0.59	cps
Manganese	55-2	20600661	20306071	20511513	20472748	0.74	cps
Molybdenum	94-1	22470181	23484979	23640809	23198656	2.74	cps
Molybdenum	95-1	32879030	33954587	34070039	33634552	1.95	cps
Molybdenum	96-1	36182074	37494232	37073720	36916675	1.81	cps
Molybdenum	97-1	20451748	21144826	21182048	20926208	1.97	cps
Molybdenum	98-1	52828704	54567553	54888281	54094846	2.05	cps
Neodymium	150-1	333	363	380	359	6.59	cps
Neodymium	150-2	100	80	97	92	11.62	cps
Nickel	60-2	1109643	1111640	1112617	1111300	0.14	cps
Phosphorus	31-2	138886	136684	136220	137263	1.04	cps
Potassium	39-2	14121047	13890896	14064225	14025389	0.85	cps
Rhodium	103-1	27519350	26847200	26810234	27058928	1.48	cps
Rhodium	103-2	15753726	15584328	15532272	15623442	0.74	cps
Scandium	45-1	16175477	15868612	15761658	15935249	1.35	cps
Scandium	45-2	1332801	1300182	1314457	1315813	1.24	cps
Selenium	82-1	99315	103128	102228	101557	1.96	cps
Selenium	77-2	10487	10207	9873	10189	3.02	cps
Selenium	78-2	33762	33732	33819	33771	0.13	cps
Silicon	28-1	10128560	10436276	10420278	10328372	1.68	cps
Silver	107-1	8443146	8786882	8783769	8671265	2.28	cps
Silver	109-1	8128058	8381290	8394743	8301364	1.81	cps
Sodium	23-2	39306271	38996381	38272904	38858519	1.36	cps
Strontium	86-1	2034804	2105413	2115663	2085293	2.11	cps
Strontium	88-1	17803408	18553888	18416584	18257960	2.19	cps
Sulfur	34-1	743860	761396	758356	754537	1.24	cps
Terbium	159-1	34967430	34600582	34265039	34611017	1.02	cps
Terbium	159-2	22532325	21893175	22137068	22187522	1.45	cps
Thallium	203-1	5683575	5846203	5883997	5804592	1.83	cps
Thallium	205-1	13355438	14095569	14177880	13876296	3.26	cps
Tin	118-1	5252105	5434066	5595448	5427207	3.17	cps
Titanium	47-1	7874504	8214337	8149292	8079378	2.23	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

S05

Instrumnet Name :

P7

Client Sample ID :

S05

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 04:47:12

DataFile Name :

009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	16541833	17374246	17608557	17174879	3.26	cps
Vanadium	51-2	2369536	2325448	2311265	2335416	1.30	cps
Yttrium	89-1	39527769	38810416	38065154	38801113	1.88	cps
Yttrium	89-2	9513603	9380122	9372444	9422056	0.84	cps
Zinc	66-2	5223152	5211401	5154903	5196485	0.70	cps
Zirconium	90-1	10994637	11704782	11465405	11388274	3.17	cps
Zirconium	91-1	2433953	2534589	2514838	2494460	2.14	cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :S06Instrumnet Name :P7

Client Sample ID :S06Dilution Factor :1

Date & Time Acquired :2024-11-18 04:49:58DataFile Name :010CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5472121	5416900	5451136	5446719	0.51	cps
Antimony	121-1	12710870	12892720	12953980	12852523	0.98	cps
Arsenic	75-2	649303	650953	650010	650089	0.13	cps
Barium	135-1	15475065	15630904	15573252	15559740	0.51	cps
Barium	137-1	26960160	27066970	26797338	26941489	0.50	cps
Beryllium	9-1	1396383	1399155	1379677	1391738	0.76	cps
Bismuth	209-1	19257468	19396305	19437263	19363679	0.49	cps
Bismuth	209-2	14725280	14734688	14736394	14732121	0.04	cps
Bromine	81-1	15595	15275	15795	15555	1.69	cps
Bromine	81-2	137	110	87	111	22.52	cps
Cadmium	108-1	242762	247499	247517	245926	1.11	cps
Cadmium	106-1	350105	353632	352492	352076	0.51	cps
Cadmium	111-1	3381730	3449088	3426189	3419002	1.00	cps
Calcium	43-1	3293102	3347661	3390751	3343838	1.46	cps
Calcium	44-1	53039133	53859164	53704539	53534279	0.81	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	5294088	5299780	5225689	5273186	0.78	cps
Cobalt	59-2	8358496	8281383	8279935	8306605	0.54	cps
Copper	63-2	62195352	61617151	61575964	61796156	0.56	cps
Dysprosium	156-1	253	290	307	283	9.63	cps
Dysprosium	156-2	663	723	630	672	7.04	cps
Erbium	164-1	280	283	260	274	4.60	cps
Erbium	164-2	177	223	167	189	16.01	cps
Gadolinium	160-1	243	280	223	249	11.55	cps
Gadolinium	160-2	1333	1280	1127	1247	8.61	cps
Holmium	165-1	33416638	33818524	33739522	33658228	0.63	cps
Holmium	165-2	22437932	22260931	22074001	22257621	0.82	cps
Indium	115-1	27245700	27486280	27907271	27546417	1.22	cps
Indium	115-2	9442094	9401813	9552945	9465617	0.83	cps
Iron	56-2	239805983	242350250	242068050	241408094	0.58	cps
Iron	57-2	5972976	5998753	5945298	5972342	0.45	cps
Iron	54-2	13275548	13194661	13286289	13252166	0.38	cps
Krypton	83-1	293	323	350	322	8.80	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : S06 Instrumnet Name : P7
Client Sample ID : S06 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 04:49:58 DataFile Name : 010CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	45555859	45991206	46284678	45943914	0.80	cps
Lead	207-1	40051928	40402362	40399380	40284557	0.50	cps
Lead	208-1	181566562	184072266	183903403	183180744	0.76	cps
Lithium	6-1	3306514	3345820	3358785	3337040	0.82	cps
Magnesium	24-2	48189731	48293989	48284049	48255923	0.12	cps
Manganese	55-2	39463457	39595244	39870455	39643052	0.52	cps
Molybdenum	94-1	45374401	45572068	45902024	45616164	0.58	cps
Molybdenum	95-1	66391569	66315959	66876154	66527894	0.46	cps
Molybdenum	96-1	72084311	72557616	72600477	72414134	0.40	cps
Molybdenum	97-1	40528122	40934647	41565917	41009562	1.28	cps
Molybdenum	98-1	105321115	106136902	107508548	106322188	1.04	cps
Neodymium	150-1	760	757	690	736	5.37	cps
Neodymium	150-2	180	183	187	183	1.82	cps
Nickel	60-2	2217537	2144765	2170206	2177503	1.70	cps
Phosphorus	31-2	261878	263258	265533	263557	0.70	cps
Potassium	39-2	27217226	27356273	27332502	27302000	0.27	cps
Rhodium	103-1	25658948	26075852	26077590	25937463	0.93	cps
Rhodium	103-2	15364296	15124474	15474672	15321148	1.17	cps
Scandium	45-1	15171963	15362679	15336501	15290381	0.68	cps
Scandium	45-2	1312620	1335396	1290509	1312842	1.71	cps
Selenium	82-1	196586	197492	198308	197462	0.44	cps
Selenium	77-2	19556	19707	19566	19610	0.43	cps
Selenium	78-2	65186	65102	65484	65257	0.31	cps
Silicon	28-1	20010052	20123013	20306329	20146465	0.74	cps
Silver	107-1	16689162	16899373	16712359	16766965	0.69	cps
Silver	109-1	16033876	16157508	16088595	16093326	0.38	cps
Sodium	23-2	75807971	77318871	74775846	75967562	1.68	cps
Strontium	86-1	4047170	4143475	4117357	4102667	1.21	cps
Strontium	88-1	35735564	35999854	35923111	35886176	0.38	cps
Sulfur	34-1	1313363	1343835	1314888	1324029	1.30	cps
Terbium	159-1	33984059	34188169	34120772	34097666	0.31	cps
Terbium	159-2	22263926	22199239	22109805	22190990	0.35	cps
Thallium	203-1	11533860	11598223	11698570	11610218	0.71	cps
Thallium	205-1	27402455	28009395	27900094	27770648	1.16	cps
Tin	118-1	10619231	10797449	10933814	10783498	1.46	cps
Titanium	47-1	15832754	15840589	15884977	15852773	0.18	cps

LB Number :LB133504

Operator :Jaswal

Lab Sample ID :S06

Instrumnet Name :P7

Client Sample ID :S06

Dilution Factor :1

Date & Time Acquired :2024-11-18 04:49:58

DataFile Name :010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	34260175	34789054	34678304	34575844	0.81	cps
Vanadium	51-2	4498310	4610193	4490853	4533119	1.47	cps
Yttrium	89-1	37119558	37567336	37841149	37509347	0.97	cps
Yttrium	89-2	9457279	9371677	9454247	9427735	0.52	cps
Zinc	66-2	9850253	9903276	9950501	9901343	0.51	cps
Zirconium	90-1	21929361	22237716	22308893	22158657	0.91	cps
Zirconium	91-1	4824595	4888332	4915058	4875995	0.95	cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :S07Instrumnet Name :P7

Client Sample ID :S07Dilution Factor :1

Date & Time Acquired :2024-11-18 04:52:42DataFile Name :011CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	10822687	10671473	10800504	10764888	0.76	cps
Antimony	121-1	25270291	25706109	25640623	25539008	0.92	cps
Arsenic	75-2	1279796	1268406	1270015	1272739	0.48	cps
Barium	135-1	30579290	31137700	31084723	30933904	1.00	cps
Barium	137-1	53130884	53615256	53519338	53421826	0.48	cps
Beryllium	9-1	2621670	2527809	2555348	2568276	1.88	cps
Bismuth	209-1	17972514	18427735	18990638	18463629	2.76	cps
Bismuth	209-2	14376971	14238550	14363194	14326238	0.53	cps
Bromine	81-1	15932	15632	15895	15820	1.04	cps
Bromine	81-2	107	113	187	136	32.74	cps
Cadmium	108-1	473435	480995	482518	478983	1.02	cps
Cadmium	106-1	670532	679502	677653	675896	0.70	cps
Cadmium	111-1	6624757	6660322	6586515	6623865	0.56	cps
Calcium	43-1	6515813	6528903	6582948	6542555	0.54	cps
Calcium	44-1	103867738	105314642	104883428	104688603	0.71	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	10201149	10275860	10202845	10226618	0.42	cps
Cobalt	59-2	16141147	16428798	16361806	16310584	0.92	cps
Copper	63-2	119054245	120020032	119123208	119399162	0.45	cps
Dysprosium	156-1	490	617	483	530	14.18	cps
Dysprosium	156-2	1313	1317	1320	1317	0.25	cps
Erbium	164-1	490	403	447	447	9.70	cps
Erbium	164-2	320	280	293	298	6.84	cps
Gadolinium	160-1	380	360	333	358	6.54	cps
Gadolinium	160-2	1390	1377	1343	1370	1.75	cps
Holmium	165-1	31666448	32588614	33250254	32501772	2.45	cps
Holmium	165-2	22293644	22307903	22455261	22352269	0.40	cps
Indium	115-1	25832442	26244367	26759857	26278889	1.77	cps
Indium	115-2	9360576	9319181	9358047	9345935	0.25	cps
Iron	56-2	472630566	470849686	467055233	470178495	0.61	cps
Iron	57-2	11743038	11735217	11549461	11675905	0.94	cps
Iron	54-2	25949347	25904363	25563864	25805858	0.82	cps
Krypton	83-1	387	310	310	336	13.19	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : S07 Instrumnet Name : P7
Client Sample ID : S07 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 04:52:42 DataFile Name : 011CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	90560239	90812082	90340019	90570780	0.26	cps
Lead	207-1	79589915	79007495	79680040	79425817	0.46	cps
Lead	208-1	361196011	362054255	363639463	362296576	0.34	cps
Lithium	6-1	3023242	3018935	3115491	3052556	1.79	cps
Magnesium	24-2	94663249	94433795	94684139	94593727	0.15	cps
Manganese	55-2	77770272	78873637	76255327	77633079	1.69	cps
Molybdenum	94-1	89339749	91582682	90834359	90585596	1.26	cps
Molybdenum	95-1	130348845	132371315	131794108	131504756	0.79	cps
Molybdenum	96-1	144597455	144518518	144947685	144687886	0.16	cps
Molybdenum	97-1	81377767	81851280	82601779	81943609	0.75	cps
Molybdenum	98-1	210705724	209191397	210249064	210048728	0.37	cps
Neodymium	150-1	1357	1350	1380	1362	1.16	cps
Neodymium	150-2	343	350	313	336	5.82	cps
Nickel	60-2	4155666	4176073	4170414	4167384	0.25	cps
Phosphorus	31-2	517527	518806	517019	517784	0.18	cps
Potassium	39-2	53830961	54221794	53653086	53901947	0.54	cps
Rhodium	103-1	24017754	24704693	25499025	24740491	3.00	cps
Rhodium	103-2	15073453	15073506	14997009	15047990	0.29	cps
Scandium	45-1	14186736	14602041	15170379	14653052	3.37	cps
Scandium	45-2	1328670	1328277	1354183	1337043	1.11	cps
Selenium	82-1	381885	385753	385814	384484	0.59	cps
Selenium	77-2	38025	38246	37571	37947	0.91	cps
Selenium	78-2	126246	127158	125819	126408	0.54	cps
Silicon	28-1	36429424	36425678	35501612	36118905	1.48	cps
Silver	107-1	33051060	32675464	32775939	32834154	0.59	cps
Silver	109-1	31026830	31336571	31144067	31169156	0.50	cps
Sodium	23-2	148541081	147663378	148646454	148283638	0.36	cps
Strontium	86-1	8071476	8119184	8073287	8087982	0.33	cps
Strontium	88-1	70531156	71741331	70810974	71027820	0.89	cps
Sulfur	34-1	2173001	2149497	2178817	2167105	0.72	cps
Terbium	159-1	32289645	33487896	34345539	33374360	3.09	cps
Terbium	159-2	22238296	22201079	22238953	22226109	0.10	cps
Thallium	203-1	22907111	22944530	22928288	22926643	0.08	cps
Thallium	205-1	54698711	54671848	54236086	54535548	0.48	cps
Tin	118-1	21149936	21189214	21447429	21262193	0.76	cps
Titanium	47-1	30693411	31309155	30891750	30964772	1.02	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

S07

Instrumnet Name :

P7

Client Sample ID :

S07

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 04:52:42

DataFile Name :

011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	68276211	69377632	69628724	69094189	1.04	cps
Vanadium	51-2	8877705	8879493	8967874	8908357	0.58	cps
Yttrium	89-1	35086891	36413094	37333454	36277813	3.11	cps
Yttrium	89-2	9495801	9413916	9421073	9443596	0.48	cps
Zinc	66-2	19417793	19151751	19101859	19223801	0.88	cps
Zirconium	90-1	43221213	44318676	44174901	43904930	1.36	cps
Zirconium	91-1	9617176	9854448	9671270	9714298	1.28	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : S08 Instrumnet Name : P7
Client Sample ID : S08 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 04:55:28 DataFile Name : 012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	53258746	52849954	54712738	53607146	1.83	cps
Antimony	121-1	13096	13109	15208	13805	8.81	cps
Arsenic	75-2	870	683	693	749	14.02	cps
Barium	135-1	20915	18976	18612	19501	6.35	cps
Barium	137-1	36199	34027	31378	33868	7.13	cps
Beryllium	9-1	606	433	361	467	26.91	cps
Bismuth	209-1	16712660	16521835	16401292	16545262	0.95	cps
Bismuth	209-2	12272940	12252669	12760191	12428600	2.31	cps
Bromine	81-1	16870	17404	17347	17207	1.70	cps
Bromine	81-2	197	217	233	216	8.52	cps
Cadmium	108-1	250	230	187	222	14.57	cps
Cadmium	106-1	9553	9797	9303	9551	2.58	cps
Cadmium	111-1	8362	8127	7672	8054	4.36	cps
Calcium	43-1	31704029	31955920	31642461	31767470	0.52	cps
Calcium	44-1	507658659	510622459	511837246	510039455	0.42	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	20037	19770	19987	19931	0.71	cps
Cobalt	59-2	40381	41126	40672	40726	0.92	cps
Copper	63-2	22621	21512	20714	21616	4.43	cps
Dysprosium	156-1	870	923	930	908	3.62	cps
Dysprosium	156-2	763	707	783	751	5.29	cps
Erbium	164-1	1193	1033	1017	1081	9.02	cps
Erbium	164-2	713	727	660	700	5.04	cps
Gadolinium	160-1	1000	1043	1037	1027	2.27	cps
Gadolinium	160-2	1687	1653	1650	1663	1.22	cps
Holmium	165-1	32178495	31913445	31767041	31952993	0.65	cps
Holmium	165-2	20796455	20753240	21237897	20929197	1.28	cps
Indium	115-1	25387970	25663143	25698856	25583323	0.66	cps
Indium	115-2	8771090	8931671	9211857	8971539	2.49	cps
Iron	56-2	2265691913	2263061353	2256732980	2261828749	0.20	cps
Iron	57-2	56000691	56819861	56051034	56290529	0.82	cps
Iron	54-2	123445055	125682525	120967198	123364926	1.91	cps
Krypton	83-1	420	440	367	409	9.27	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : S08 Instrumnet Name : P7
Client Sample ID : S08 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 04:55:28 DataFile Name : 012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	20439	15399	12526	16121	24.85	cps
Lead	207-1	17274	12759	10411	13482	25.88	cps
Lead	208-1	80330	59959	49873	63388	24.48	cps
Lithium	6-1	2969704	2938417	2946707	2951610	0.55	cps
Magnesium	24-2	456312927	451686433	447597927	451865762	0.96	cps
Manganese	55-2	40471	41136	41427	41011	1.19	cps
Molybdenum	94-1	30532	24501	22878	25970	15.53	cps
Molybdenum	95-1	31400	24537	20922	25620	20.78	cps
Molybdenum	96-1	53133	45845	41733	46904	12.31	cps
Molybdenum	97-1	19814	15205	13123	16047	21.34	cps
Molybdenum	98-1	49120	37304	32282	39569	21.85	cps
Neodymium	150-1	507	537	527	523	2.92	cps
Neodymium	150-2	257	273	280	270	4.45	cps
Nickel	60-2	11962	11678	11671	11770	1.41	cps
Phosphorus	31-2	627	683	597	636	6.93	cps
Potassium	39-2	263927416	268050089	264988689	265655398	0.81	cps
Rhodium	103-1	22831606	22949158	22712212	22830992	0.52	cps
Rhodium	103-2	13415995	13429031	13882499	13575841	1.96	cps
Scandium	45-1	14601915	14915983	15038634	14852177	1.52	cps
Scandium	45-2	1269936	1272014	1337017	1292989	2.95	cps
Selenium	82-1	780	813	721	771	6.05	cps
Selenium	77-2	13	10	3	9	57.30	cps
Selenium	78-2	527	507	513	516	1.98	cps
Silicon	28-1	1357152	1374790	1371506	1367816	0.69	cps
Silver	107-1	6492	4714	4021	5075	25.11	cps
Silver	109-1	6285	4261	3610	4719	29.56	cps
Sodium	23-2	696389323	697587643	695695350	696557439	0.14	cps
Strontium	86-1	26975	26497	26471	26648	1.06	cps
Strontium	88-1	229761	227672	225875	227769	0.85	cps
Sulfur	34-1	257234	264044	267951	263077	2.06	cps
Terbium	159-1	32518703	33093205	32213147	32608352	1.37	cps
Terbium	159-2	20884925	20566898	20515562	20655795	0.97	cps
Thallium	203-1	3724	2154	1677	2518	42.54	cps
Thallium	205-1	8650	5274	3524	5816	44.80	cps
Tin	118-1	14270	13570	12509	13450	6.59	cps
Titanium	47-1	6885	5124	4347	5452	23.85	cps

LB Number :LB133504

Operator :Jaswal

Lab Sample ID :S08

Instrumnet Name :P7

Client Sample ID :S08

Dilution Factor :1

Date & Time Acquired :2024-11-18 04:55:28

DataFile Name :012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	10651	6688	4781	7373	40.61	cps
Vanadium	51-2	2540	2327	2270	2379	5.99	cps
Yttrium	89-1	35689707	36023179	35899809	35870899	0.47	cps
Yttrium	89-2	9155610	9321467	9215683	9230920	0.91	cps
Zinc	66-2	7842	7972	7612	7809	2.34	cps
Zirconium	90-1	30231	28528	27035	28598	5.59	cps
Zirconium	91-1	6512	6301	5971	6261	4.35	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : ICV001 Instrumnet Name : P7
Client Sample ID : ICV001 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 05:53:44 DataFile Name : 014ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	266599	264352	264417	265123	0.48	cps
Antimony	121-1	5071170	5143488	5108531	5107730	0.71	cps
Arsenic	75-2	277734	275876	274733	276114	0.55	cps
Barium	135-1	599764	606101	602212	602692	0.53	cps
Barium	137-1	1049575	1039688	1041700	1043654	0.50	cps
Beryllium	9-1	259025	262651	261737	261138	0.72	cps
Bismuth	209-1	20113986	20103476	19772648	19996703	0.97	cps
Bismuth	209-2	15112613	15143623	15018709	15091648	0.43	cps
Bromine	81-1	16946	17143	16656	16915	1.45	cps
Bromine	81-2	90	90	140	107	27.06	cps
Cadmium	108-1	44792	45317	44739	44949	0.71	cps
Cadmium	106-1	71411	72429	71448	71763	0.80	cps
Cadmium	111-1	697451	696449	694304	696068	0.23	cps
Calcium	43-1	137311	138206	138347	137955	0.41	cps
Calcium	44-1	2231954	2171006	2217298	2206752	1.44	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1068850	1065440	1072511	1068934	0.33	cps
Cobalt	59-2	1763945	1746337	1764335	1758206	0.58	cps
Copper	63-2	1217772	1214374	1218086	1216744	0.17	cps
Dysprosium	156-1	20	30	30	27	21.65	cps
Dysprosium	156-2	30	53	33	39	32.45	cps
Erbium	164-1	107	117	120	114	6.06	cps
Erbium	164-2	80	100	80	87	13.32	cps
Gadolinium	160-1	133	160	137	143	10.13	cps
Gadolinium	160-2	1193	1273	1273	1247	3.71	cps
Holmium	165-1	33483838	33529432	33510424	33507898	0.07	cps
Holmium	165-2	22484999	22455622	21999083	22313235	1.22	cps
Indium	115-1	29551820	29481632	29076555	29370002	0.87	cps
Indium	115-2	10125376	10148396	10157241	10143671	0.16	cps
Iron	56-2	19483073	19436197	19448879	19456050	0.12	cps
Iron	57-2	486923	488691	487789	487801	0.18	cps
Iron	54-2	1106493	1108128	1107573	1107398	0.08	cps
Krypton	83-1	260	327	297	294	11.34	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : ICV001 Instrumnet Name : P7
Client Sample ID : ICV001 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 05:53:44 DataFile Name : 014ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	3783123	3879380	3834155	3832219	1.26	cps
Lead	207-1	3197249	3238490	3164738	3200159	1.16	cps
Lead	208-1	14820661	15079274	14707728	14869221	1.28	cps
Lithium	6-1	3386566	3377659	3337638	3367288	0.77	cps
Magnesium	24-2	1028596	1024720	1031935	1028417	0.35	cps
Manganese	55-2	794528	793378	800320	796075	0.47	cps
Molybdenum	94-1	1470	1490	1523	1495	1.80	cps
Molybdenum	95-1	720	787	750	752	4.44	cps
Molybdenum	96-1	1233	1273	1200	1236	2.97	cps
Molybdenum	97-1	467	400	453	440	8.02	cps
Molybdenum	98-1	1303	1100	1227	1210	8.49	cps
Neodymium	150-1	37	37	23	32	23.90	cps
Neodymium	150-2	10	3	10	8	49.52	cps
Nickel	60-2	449297	448857	449156	449103	0.05	cps
Phosphorus	31-2	453	510	427	463	9.19	cps
Potassium	39-2	2286257	2282113	2248290	2272220	0.92	cps
Rhodium	103-1	28503590	28469027	28185570	28386062	0.61	cps
Rhodium	103-2	16522214	16314551	16402733	16413166	0.64	cps
Scandium	45-1	16893204	16827184	16790299	16836896	0.31	cps
Scandium	45-2	1415350	1386792	1417127	1406423	1.21	cps
Selenium	82-1	84614	85684	85701	85333	0.73	cps
Selenium	77-2	8559	8669	8729	8653	1.00	cps
Selenium	78-2	28952	28427	29216	28865	1.39	cps
Silicon	28-1	1464399	1435950	1453281	1451210	0.99	cps
Silver	107-1	1688376	1731240	1699049	1706222	1.31	cps
Silver	109-1	1604770	1632163	1644593	1627175	1.25	cps
Sodium	23-2	3012390	3015382	3008165	3011979	0.12	cps
Strontium	86-1	2694	2817	2840	2784	2.83	cps
Strontium	88-1	20194	19880	20004	20026	0.79	cps
Sulfur	34-1	337507	339632	336783	337974	0.44	cps
Terbium	159-1	34630533	35006241	34694503	34777092	0.58	cps
Terbium	159-2	22500178	21924626	21992542	22139115	1.42	cps
Thallium	203-1	4783355	4887429	4855070	4841951	1.10	cps
Thallium	205-1	11424750	11552533	11450147	11475810	0.59	cps
Tin	118-1	5845	5321	5491	5552	4.81	cps
Titanium	47-1	620	577	613	603	3.87	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : ICV001 Instrumnet Name : P7
Client Sample ID : ICV001 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 05:53:44 DataFile Name : 014ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	100	73	87	87	15.39	cps
Vanadium	51-2	894556	886888	887853	889765	0.47	cps
Yttrium	89-1	39654289	39874055	39428685	39652343	0.56	cps
Yttrium	89-2	10101290	9922179	9950659	9991376	0.96	cps
Zinc	66-2	404626	401754	402374	402918	0.38	cps
Zirconium	90-1	2647	2857	2697	2734	4.01	cps
Zirconium	91-1	960	1100	1027	1029	6.81	cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :ICB001Instrumnet Name :P7

Client Sample ID :ICB001Dilution Factor :1

Date & Time Acquired :2024-11-18 05:57:00DataFile Name :015CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	543	470	457	490	9.52	cps
Antimony	121-1	1517	1537	1803	1619	9.89	cps
Arsenic	75-2	63	47	20	43	50.44	cps
Barium	135-1	320	283	280	294	7.54	cps
Barium	137-1	583	570	480	544	10.32	cps
Beryllium	9-1	83	122	106	104	18.81	cps
Bismuth	209-1	19203232	19586548	19628359	19472713	1.20	cps
Bismuth	209-2	15111614	15083060	15169304	15121326	0.29	cps
Bromine	81-1	16740	16586	16426	16584	0.95	cps
Bromine	81-2	83	103	93	93	10.71	cps
Cadmium	108-1	17	57	50	41	52.12	cps
Cadmium	106-1	9990	10234	9873	10032	1.83	cps
Cadmium	111-1	7171	7334	7023	7176	2.17	cps
Calcium	43-1	1663	1667	1597	1642	2.40	cps
Calcium	44-1	44044	42844	43422	43437	1.38	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4811	4594	4741	4715	2.35	cps
Cobalt	59-2	387	470	390	416	11.35	cps
Copper	63-2	1913	1960	1847	1907	2.99	cps
Dysprosium	156-1	47	43	33	41	16.89	cps
Dysprosium	156-2	17	30	23	23	28.56	cps
Erbium	164-1	153	150	133	146	7.36	cps
Erbium	164-2	57	53	87	66	28.01	cps
Gadolinium	160-1	113	170	170	151	21.65	cps
Gadolinium	160-2	1277	1243	1203	1241	2.96	cps
Holmium	165-1	32541550	33490811	33093234	33041865	1.44	cps
Holmium	165-2	22334497	22233348	22426324	22331390	0.43	cps
Indium	115-1	28420021	29327664	29041208	28929631	1.60	cps
Indium	115-2	10163346	10153174	10110631	10142383	0.28	cps
Iron	56-2	52702	53154	53026	52961	0.44	cps
Iron	57-2	2284	2304	2474	2354	4.44	cps
Iron	54-2	5688	5444	5324	5485	3.38	cps
Krypton	83-1	297	287	303	296	2.84	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : ICB001 Instrumnet Name : P7
Client Sample ID : ICB001 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 05:57:00 DataFile Name : 015CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2417	2350	2090	2286	7.55	cps
Lead	207-1	1980	1893	1710	1861	7.41	cps
Lead	208-1	9151	8805	8214	8723	5.43	cps
Lithium	6-1	3312812	3437809	3366718	3372446	1.86	cps
Magnesium	24-2	1577	1520	1497	1531	2.69	cps
Manganese	55-2	867	843	917	876	4.28	cps
Molybdenum	94-1	1193	1167	1160	1173	1.50	cps
Molybdenum	95-1	107	117	110	111	4.58	cps
Molybdenum	96-1	387	333	400	373	9.45	cps
Molybdenum	97-1	93	87	47	76	33.40	cps
Molybdenum	98-1	197	137	197	177	19.61	cps
Neodymium	150-1	20	13	20	18	21.66	cps
Neodymium	150-2	20	10	30	20	50.00	cps
Nickel	60-2	660	577	657	631	7.48	cps
Phosphorus	31-2	527	590	517	544	7.30	cps
Potassium	39-2	84382	82804	83618	83601	0.94	cps
Rhodium	103-1	27602406	28139915	28201570	27981297	1.18	cps
Rhodium	103-2	16636450	16515652	16412470	16521524	0.68	cps
Scandium	45-1	16299473	16513312	16655541	16489442	1.09	cps
Scandium	45-2	1399502	1407578	1456688	1421256	2.18	cps
Selenium	82-1	700	676	571	649	10.58	cps
Selenium	77-2	0	3	0	1	173.21	cps
Selenium	78-2	573	500	510	528	7.54	cps
Silicon	28-1	1422629	1460347	1423152	1435376	1.51	cps
Silver	107-1	917	743	607	756	20.56	cps
Silver	109-1	737	657	537	643	15.65	cps
Sodium	23-2	37539	37813	37770	37707	0.39	cps
Strontium	86-1	717	683	603	668	8.72	cps
Strontium	88-1	1003	863	1000	956	8.36	cps
Sulfur	34-1	338533	339503	336900	338312	0.39	cps
Terbium	159-1	33800759	34115631	34180203	34032198	0.60	cps
Terbium	159-2	22466492	22074504	22006136	22182377	1.12	cps
Thallium	203-1	1167	873	770	937	21.97	cps
Thallium	205-1	2904	2390	1953	2416	19.69	cps
Tin	118-1	5711	5484	5428	5541	2.71	cps
Titanium	47-1	1790	1683	1623	1699	4.97	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

ICB001

Instrumnet Name :

P7

Client Sample ID :

ICB001

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 05:57:00

DataFile Name :

015CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	43	50	30	41	24.77	cps
Vanadium	51-2	107	127	77	103	24.35	cps
Yttrium	89-1	38035469	39133146	39344095	38837570	1.81	cps
Yttrium	89-2	9933118	9987828	9987485	9969477	0.32	cps
Zinc	66-2	3634	3467	3567	3556	2.36	cps
Zirconium	90-1	3407	3187	3150	3248	4.27	cps
Zirconium	91-1	693	640	667	667	4.00	cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :ICSA001Instrumnet Name :P7

Client Sample ID :ICSA001Dilution Factor :1

Date & Time Acquired :2024-11-18 06:00:15DataFile Name :016ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	48411701	48523629	48592288	48509206	0.19	cps
Antimony	121-1	26525	26979	27379	26961	1.59	cps
Arsenic	75-2	483	513	430	476	8.88	cps
Barium	135-1	8323	8359	8549	8410	1.45	cps
Barium	137-1	14341	14834	14898	14691	2.08	cps
Beryllium	9-1	767	811	739	772	4.72	cps
Bismuth	209-1	18340929	18583867	18754546	18559781	1.12	cps
Bismuth	209-2	13838981	13880750	13746805	13822179	0.50	cps
Bromine	81-1	17931	17781	18605	18106	2.43	cps
Bromine	81-2	363	327	307	332	8.65	cps
Cadmium	108-1	4367	4367	4284	4340	1.11	cps
Cadmium	106-1	9637	9283	9493	9471	1.88	cps
Cadmium	111-1	9110	8902	8861	8957	1.49	cps
Calcium	43-1	6233834	6314314	6388041	6312063	1.22	cps
Calcium	44-1	100125762	101185098	102181858	101164240	1.02	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	201566	201745	202118	201810	0.14	cps
Cobalt	59-2	20000	19893	19580	19824	1.10	cps
Copper	63-2	86193	86086	86112	86130	0.06	cps
Dysprosium	156-1	117	103	120	113	7.78	cps
Dysprosium	156-2	80	77	103	87	16.77	cps
Erbium	164-1	183	217	230	210	11.44	cps
Erbium	164-2	190	147	117	151	24.40	cps
Gadolinium	160-1	267	263	210	247	12.89	cps
Gadolinium	160-2	1183	1223	1100	1169	5.38	cps
Holmium	165-1	32887660	33070800	33499197	33152552	0.95	cps
Holmium	165-2	22122211	21734584	21479826	21778874	1.49	cps
Indium	115-1	27521258	27420872	27605919	27516017	0.34	cps
Indium	115-2	9353413	9583834	9450369	9462539	1.22	cps
Iron	56-2	917656333	920428306	920573986	919552875	0.18	cps
Iron	57-2	23006935	23038614	22882973	22976174	0.36	cps
Iron	54-2	50648136	49587793	50066748	50100892	1.06	cps
Krypton	83-1	300	317	383	333	13.23	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : ICSA001 Instrumnet Name : P7
Client Sample ID : ICSA001 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:00:15 DataFile Name : 016ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	80181	80661	80345	80396	0.30	cps
Lead	207-1	62319	64204	64204	63576	1.71	cps
Lead	208-1	296516	300472	301108	299365	0.83	cps
Lithium	6-1	3105026	2979455	2899793	2994758	3.45	cps
Magnesium	24-2	86275035	85451535	85852789	85859786	0.48	cps
Manganese	55-2	59966	58955	58955	59292	0.98	cps
Molybdenum	94-1	13705157	13883481	14077686	13888775	1.34	cps
Molybdenum	95-1	24125981	24616977	24896378	24546445	1.59	cps
Molybdenum	96-1	25940315	26698300	26967540	26535385	2.01	cps
Molybdenum	97-1	14943159	15257153	15489005	15229772	1.80	cps
Molybdenum	98-1	38466753	39286531	39980437	39244574	1.93	cps
Neodymium	150-1	160	103	90	118	31.56	cps
Neodymium	150-2	63	67	57	62	8.18	cps
Nickel	60-2	22163	22400	21980	22181	0.95	cps
Phosphorus	31-2	2648841	2640302	2626901	2638681	0.42	cps
Potassium	39-2	104831945	105052868	104617038	104833951	0.21	cps
Rhodium	103-1	25283081	25010555	25507166	25266934	0.98	cps
Rhodium	103-2	14925321	15178320	14947691	15017110	0.93	cps
Scandium	45-1	15497634	15265632	15383210	15382159	0.75	cps
Scandium	45-2	1331640	1320667	1335710	1329339	0.59	cps
Selenium	82-1	630	534	477	547	14.09	cps
Selenium	77-2	7	10	3	7	50.03	cps
Selenium	78-2	490	467	443	467	5.00	cps
Silicon	28-1	1471402	1428254	1446119	1448592	1.50	cps
Silver	107-1	1057	960	997	1004	4.86	cps
Silver	109-1	910	933	853	899	4.58	cps
Sodium	23-2	141072745	139404048	141123748	140533513	0.70	cps
Strontium	86-1	254131	261479	265160	260257	2.16	cps
Strontium	88-1	2316959	2387603	2340716	2348426	1.53	cps
Sulfur	34-1	9049485	9072130	9057584	9059733	0.13	cps
Terbium	159-1	33577500	34071130	34492505	34047045	1.35	cps
Terbium	159-2	21982459	21569947	21647308	21733238	1.01	cps
Thallium	203-1	1477	1850	2130	1819	18.02	cps
Thallium	205-1	3927	4294	4617	4280	8.07	cps
Tin	118-1	6558	6912	6261	6577	4.95	cps
Titanium	47-1	5997555	6030354	6150541	6059484	1.33	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

ICSA001

Instrumnet Name :

P7

Client Sample ID :

ICSA001

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:00:15

DataFile Name :

016ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	1053	957	990	1000	4.91	cps
Vanadium	51-2	1600	1550	1690	1613	4.40	cps
Yttrium	89-1	37501742	37340219	37734940	37525634	0.53	cps
Yttrium	89-2	9588282	9576577	9503984	9556281	0.48	cps
Zinc	66-2	21883	21305	22190	21793	2.06	cps
Zirconium	90-1	2220	2347	2407	2325	4.10	cps
Zirconium	91-1	390	440	567	466	19.56	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : ICSAB001 Instrumnet Name : P7
Client Sample ID : ICSAB001 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:03:18 DataFile Name : 017ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	48525928	48167086	48576076	48423030	0.46	cps
Antimony	121-1	518390	525050	527708	523716	0.92	cps
Arsenic	75-2	26517	26838	26921	26759	0.80	cps
Barium	135-1	127343	128995	127239	127859	0.77	cps
Barium	137-1	220020	224945	221510	222158	1.14	cps
Beryllium	9-1	43862	44169	43188	43740	1.15	cps
Bismuth	209-1	19230953	19267416	19076820	19191730	0.53	cps
Bismuth	209-2	14168518	14249956	14090348	14169607	0.56	cps
Bromine	81-1	19570	20458	20862	20296	3.26	cps
Bromine	81-2	613	627	713	651	8.34	cps
Cadmium	108-1	12549	12459	12442	12483	0.46	cps
Cadmium	106-1	20979	20464	21269	20904	1.95	cps
Cadmium	111-1	135807	137676	138392	137292	0.97	cps
Calcium	43-1	6457391	6465563	6522689	6481881	0.55	cps
Calcium	44-1	102884918	104772895	104460832	104039548	0.97	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	401344	401402	399035	400594	0.34	cps
Cobalt	59-2	337749	339687	337752	338396	0.33	cps
Copper	63-2	311381	306696	305982	308020	0.95	cps
Dysprosium	156-1	107	113	97	106	7.94	cps
Dysprosium	156-2	60	87	73	73	18.18	cps
Erbium	164-1	293	267	230	263	12.08	cps
Erbium	164-2	137	143	143	141	2.73	cps
Gadolinium	160-1	200	230	290	240	19.10	cps
Gadolinium	160-2	1183	1153	1103	1147	3.52	cps
Holmium	165-1	34605997	34327124	34606797	34513306	0.47	cps
Holmium	165-2	22599091	22499659	22485418	22528056	0.27	cps
Indium	115-1	28560471	28593997	28607844	28587437	0.09	cps
Indium	115-2	9784457	9774114	9755335	9771302	0.15	cps
Iron	56-2	934959906	931400999	923040173	929800359	0.66	cps
Iron	57-2	23333150	22850297	23182554	23122000	1.07	cps
Iron	54-2	51632253	50606516	50760046	50999605	1.08	cps
Krypton	83-1	303	313	327	314	3.72	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : ICSAB001 Instrumnet Name : P7
Client Sample ID : ICSAB001 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:03:18 DataFile Name : 017ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	450086	454437	459615	454713	1.05	cps
Lead	207-1	376693	377268	382802	378921	0.89	cps
Lead	208-1	1738286	1755218	1762751	1752085	0.72	cps
Lithium	6-1	2859134	2777707	2778368	2805070	1.67	cps
Magnesium	24-2	85428035	85546925	85288929	85421297	0.15	cps
Manganese	55-2	208696	209699	208363	208919	0.33	cps
Molybdenum	94-1	14441663	14463146	14634401	14513070	0.73	cps
Molybdenum	95-1	25440919	25613310	25637025	25563751	0.42	cps
Molybdenum	96-1	27250367	27648574	27781792	27560244	1.00	cps
Molybdenum	97-1	15663416	15973734	15980988	15872712	1.14	cps
Molybdenum	98-1	40055310	40963256	41229800	40749456	1.51	cps
Neodymium	150-1	130	120	133	128	5.43	cps
Neodymium	150-2	57	77	57	63	18.23	cps
Nickel	60-2	102152	103209	102041	102467	0.63	cps
Phosphorus	31-2	2620814	2598141	2652531	2623828	1.04	cps
Potassium	39-2	107152795	106310545	106538955	106667432	0.41	cps
Rhodium	103-1	25934562	26411488	26307464	26217838	0.96	cps
Rhodium	103-2	15714196	15543238	15818309	15691914	0.89	cps
Scandium	45-1	15666306	15728431	15579714	15658150	0.48	cps
Scandium	45-2	1384781	1357748	1350706	1364412	1.32	cps
Selenium	82-1	8213	8449	8265	8309	1.49	cps
Selenium	77-2	683	720	750	718	4.65	cps
Selenium	78-2	3087	3057	2987	3044	1.69	cps
Silicon	28-1	1472106	1493305	1489371	1484927	0.76	cps
Silver	107-1	610005	618814	614673	614497	0.72	cps
Silver	109-1	579329	583792	587020	583380	0.66	cps
Sodium	23-2	139654018	140956365	141428305	140679562	0.65	cps
Strontium	86-1	271095	272487	273560	272381	0.45	cps
Strontium	88-1	2452455	2445208	2483891	2460518	0.84	cps
Sulfur	34-1	8985379	9252924	9036148	9091484	1.56	cps
Terbium	159-1	35227494	35247002	35768683	35414393	0.87	cps
Terbium	159-2	22179731	22169384	22250012	22199709	0.20	cps
Thallium	203-1	449692	455778	459483	454984	1.09	cps
Thallium	205-1	1066679	1079865	1076299	1074281	0.63	cps
Tin	118-1	6708	6678	6568	6652	1.11	cps
Titanium	47-1	6131967	6193442	6274639	6200016	1.15	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

ICSAB001

Instrumnet Name :

P7

Client Sample ID :

ICSAB001

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:03:18

DataFile Name :

017ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	1007	1087	1070	1054	4.00	cps
Vanadium	51-2	170922	169457	171081	170487	0.53	cps
Yttrium	89-1	39327629	39120040	39116778	39188149	0.31	cps
Yttrium	89-2	9965575	9899552	10001815	9955647	0.52	cps
Zinc	66-2	61476	61636	61302	61471	0.27	cps
Zirconium	90-1	2250	2330	2477	2352	4.89	cps
Zirconium	91-1	493	590	567	550	9.17	cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :CCV001Instrumnet Name :P7

Client Sample ID :CCV001Dilution Factor :1

Date & Time Acquired :2024-11-18 06:06:18DataFile Name :018CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	26568295	26129237	26505160	26400897	0.90	cps
Antimony	121-1	13206782	13272360	13212210	13230451	0.28	cps
Arsenic	75-2	665148	661481	663038	663222	0.28	cps
Barium	135-1	15212969	15765387	15219602	15399320	2.06	cps
Barium	137-1	26414688	26647266	26112573	26391509	1.02	cps
Beryllium	9-1	1131963	1134239	1150858	1139020	0.91	cps
Bismuth	209-1	18653005	18930782	18880792	18821526	0.79	cps
Bismuth	209-2	13737377	13814402	13801061	13784280	0.30	cps
Bromine	81-1	17904	18111	17791	17935	0.91	cps
Bromine	81-2	130	143	137	137	4.88	cps
Cadmium	108-1	227334	233812	233670	231606	1.60	cps
Cadmium	106-1	333731	337258	333277	334755	0.65	cps
Cadmium	111-1	3222936	3237519	3226535	3228997	0.24	cps
Calcium	43-1	16111099	16162862	16179761	16151241	0.22	cps
Calcium	44-1	259698196	261913216	258404409	260005274	0.68	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	5141760	5110080	5119010	5123617	0.32	cps
Cobalt	59-2	8297773	8230666	8378029	8302156	0.89	cps
Copper	63-2	61623229	62038094	61300192	61653839	0.60	cps
Dysprosium	156-1	657	730	603	663	9.59	cps
Dysprosium	156-2	1053	993	990	1012	3.52	cps
Erbium	164-1	613	727	657	666	8.59	cps
Erbium	164-2	427	423	440	430	2.05	cps
Gadolinium	160-1	600	573	663	612	7.55	cps
Gadolinium	160-2	1357	1433	1527	1439	5.92	cps
Holmium	165-1	34669306	34791805	34687989	34716367	0.19	cps
Holmium	165-2	22676220	22444815	22546611	22555882	0.51	cps
Indium	115-1	28171504	28306122	28216275	28231300	0.24	cps
Indium	115-2	9568223	9488320	9514275	9523606	0.43	cps
Iron	56-2	1140428170	1150314650	1154739876	1148494232	0.64	cps
Iron	57-2	28456515	28726377	28729430	28637440	0.55	cps
Iron	54-2	62392362	62230234	62590572	62404390	0.29	cps
Krypton	83-1	323	357	360	347	5.85	cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :CCV001Instrumnet Name :P7

Client Sample ID :CCV001Dilution Factor :1

Date & Time Acquired :2024-11-18 06:06:18DataFile Name :018CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	43096263	43723144	43520664	43446690	0.74	cps
Lead	207-1	37564174	38154589	38582534	38100433	1.34	cps
Lead	208-1	171654996	173390036	175027494	173357509	0.97	cps
Lithium	6-1	2707828	2723705	2737362	2722965	0.54	cps
Magnesium	24-2	228927637	225335777	226573950	226945788	0.80	cps
Manganese	55-2	38841403	38500584	38834274	38725420	0.50	cps
Molybdenum	94-1	45304126	46036341	45834246	45724904	0.83	cps
Molybdenum	95-1	65301837	66956587	66353747	66204057	1.26	cps
Molybdenum	96-1	73015724	73379002	73019697	73138141	0.29	cps
Molybdenum	97-1	41047690	41303193	41612839	41321241	0.68	cps
Molybdenum	98-1	105202768	106441075	107115928	106253257	0.91	cps
Neodymium	150-1	790	833	800	808	2.81	cps
Neodymium	150-2	303	243	297	281	11.70	cps
Nickel	60-2	2120512	2132145	2131363	2128007	0.31	cps
Phosphorus	31-2	251011	249144	248617	249591	0.50	cps
Potassium	39-2	133387888	132667391	132882125	132979135	0.28	cps
Rhodium	103-1	25888208	25659351	25757147	25768235	0.45	cps
Rhodium	103-2	14994045	15022485	14820121	14945550	0.73	cps
Scandium	45-1	15968224	16002838	15831251	15934104	0.57	cps
Scandium	45-2	1350328	1342893	1377607	1356943	1.35	cps
Selenium	82-1	195549	197856	197067	196824	0.60	cps
Selenium	77-2	19490	19640	19740	19623	0.64	cps
Selenium	78-2	65263	65936	64218	65139	1.33	cps
Silicon	28-1	21074664	21217597	20761523	21017928	1.11	cps
Silver	107-1	16586959	16741157	16514917	16614344	0.70	cps
Silver	109-1	15615452	16017115	15746235	15792934	1.30	cps
Sodium	23-2	351011915	352052541	344727155	349263870	1.13	cps
Strontium	86-1	4106252	4195058	4075704	4125671	1.50	cps
Strontium	88-1	35358598	36215279	35876692	35816856	1.20	cps
Sulfur	34-1	1229468	1221647	1211202	1220772	0.75	cps
Terbium	159-1	35582770	35424031	35200904	35402568	0.54	cps
Terbium	159-2	22553167	22020051	22032931	22202050	1.37	cps
Thallium	203-1	11008099	11084957	10960269	11017775	0.57	cps
Thallium	205-1	25758556	26418304	25963769	26046876	1.30	cps
Tin	118-1	10461409	10576539	10518527	10518825	0.55	cps
Titanium	47-1	15439634	15618491	15487182	15515103	0.60	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

CCV001

Instrumnet Name :

P7

Client Sample ID :

CCV001

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:06:18

DataFile Name :

018CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	33018679	33370771	33773133	33387528	1.13	cps
Vanadium	51-2	4506853	4494105	4471263	4490740	0.40	cps
Yttrium	89-1	39241176	39325809	39408227	39325071	0.21	cps
Yttrium	89-2	9795660	9881278	9739059	9805332	0.73	cps
Zinc	66-2	9879276	9931095	9793549	9867973	0.70	cps
Zirconium	90-1	22064165	22128465	22527604	22240078	1.13	cps
Zirconium	91-1	4805711	4962484	4923110	4897101	1.67	cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :CCB001Instrumnet Name :P7

Client Sample ID :CCB001Dilution Factor :1

Date & Time Acquired :2024-11-18 06:09:00DataFile Name :019CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1857	1623	1623	1701	7.92	cps
Antimony	121-1	5064	5948	7159	6057	17.36	cps
Arsenic	75-2	50	47	57	51	9.96	cps
Barium	135-1	2270	1707	1220	1732	30.34	cps
Barium	137-1	3927	3130	2187	3081	28.27	cps
Beryllium	9-1	222	289	206	239	18.46	cps
Bismuth	209-1	20736265	20967695	20950171	20884710	0.62	cps
Bismuth	209-2	15641695	15920764	15950233	15837564	1.08	cps
Bromine	81-1	17521	17544	17107	17390	1.41	cps
Bromine	81-2	123	77	103	101	23.16	cps
Cadmium	108-1	83	50	47	60	33.79	cps
Cadmium	106-1	9923	10214	9837	9991	1.98	cps
Cadmium	111-1	7375	7571	7196	7381	2.54	cps
Calcium	43-1	3851	3427	2597	3292	19.37	cps
Calcium	44-1	83693	74525	64520	74246	12.92	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	5094	5031	4911	5012	1.86	cps
Cobalt	59-2	530	590	607	576	7.01	cps
Copper	63-2	5541	5048	4948	5179	6.14	cps
Dysprosium	156-1	33	40	20	31	32.73	cps
Dysprosium	156-2	13	10	13	12	15.73	cps
Erbium	164-1	177	157	143	159	10.56	cps
Erbium	164-2	70	107	110	96	23.23	cps
Gadolinium	160-1	150	117	107	124	18.23	cps
Gadolinium	160-2	1170	1220	1190	1193	2.11	cps
Holmium	165-1	34800212	34942424	35403477	35048704	0.90	cps
Holmium	165-2	23187165	23169495	23115107	23157255	0.16	cps
Indium	115-1	30060180	30720907	30817231	30532773	1.35	cps
Indium	115-2	10449372	10497301	10376574	10441082	0.58	cps
Iron	56-2	113293	110865	106759	110305	2.99	cps
Iron	57-2	3704	3737	3477	3639	3.89	cps
Iron	54-2	8673	8426	8239	8446	2.58	cps
Krypton	83-1	337	283	350	323	10.91	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : CCB001 Instrumnet Name : P7
Client Sample ID : CCB001 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:09:00 DataFile Name : 019CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	8910	6802	5618	7110	23.45	cps
Lead	207-1	7195	6118	4618	5977	21.66	cps
Lead	208-1	34057	27545	21533	27712	22.60	cps
Lithium	6-1	3093175	3083489	3015883	3064182	1.37	cps
Magnesium	24-2	11634	10670	9930	10745	7.95	cps
Manganese	55-2	2790	2557	2324	2557	9.13	cps
Molybdenum	94-1	7879	6742	5788	6803	15.39	cps
Molybdenum	95-1	10074	7725	6535	8111	22.20	cps
Molybdenum	96-1	11184	9183	7175	9181	21.83	cps
Molybdenum	97-1	6241	5211	4094	5182	20.73	cps
Molybdenum	98-1	16106	13199	10444	13250	21.37	cps
Neodymium	150-1	50	50	13	38	56.04	cps
Neodymium	150-2	7	13	27	16	65.47	cps
Nickel	60-2	607	617	663	629	4.81	cps
Phosphorus	31-2	520	450	427	466	10.43	cps
Potassium	39-2	101438	100398	97718	99851	1.92	cps
Rhodium	103-1	28860051	29068225	29126999	29018425	0.48	cps
Rhodium	103-2	17154168	17224470	17100497	17159712	0.36	cps
Scandium	45-1	16173235	16704674	16444139	16440683	1.62	cps
Scandium	45-2	1445655	1403781	1415361	1421599	1.52	cps
Selenium	82-1	718	740	614	691	9.72	cps
Selenium	77-2	3	10	13	9	57.30	cps
Selenium	78-2	543	550	527	540	2.23	cps
Silicon	28-1	1367468	1377906	1346372	1363915	1.18	cps
Silver	107-1	3267	2530	2030	2609	23.85	cps
Silver	109-1	3157	2510	1817	2495	26.87	cps
Sodium	23-2	77199	74502	69901	73867	5.00	cps
Strontium	86-1	1003	1180	960	1048	11.12	cps
Strontium	88-1	5931	4844	3510	4762	25.46	cps
Sulfur	34-1	265482	271994	273046	270174	1.52	cps
Terbium	159-1	35925038	35821315	36365249	36037201	0.80	cps
Terbium	159-2	23231805	23234171	22843422	23103133	0.97	cps
Thallium	203-1	3404	2857	2274	2845	19.87	cps
Thallium	205-1	7682	6515	5378	6525	17.66	cps
Tin	118-1	7509	7389	7402	7433	0.89	cps
Titanium	47-1	3817	3470	2754	3347	16.21	cps

LB Number :LB133504

Operator :Jaswal

Lab Sample ID :CCB001

Instrumnet Name :P7

Client Sample ID :CCB001

Dilution Factor :1

Date & Time Acquired :2024-11-18 06:09:00

DataFile Name :019CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	4511	3210	2167	3296	35.63	cps
Vanadium	51-2	227	223	230	227	1.47	cps
Yttrium	89-1	39933034	40683404	41261451	40625963	1.64	cps
Yttrium	89-2	10298446	10302065	10339380	10313297	0.22	cps
Zinc	66-2	4337	4304	4277	4306	0.70	cps
Zirconium	90-1	6612	6298	6241	6384	3.12	cps
Zirconium	91-1	1567	1423	1367	1452	7.10	cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :PB164950BLInstrumnet Name :P7

Client Sample ID :PBS950Dilution Factor :1

Date & Time Acquired :2024-11-18 06:25:27DataFile Name :024CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	250	357	243	283	22.45	cps
Antimony	121-1	377	473	860	570	44.87	cps
Arsenic	75-2	10	30	17	19	53.91	cps
Barium	135-1	70	93	73	79	16.00	cps
Barium	137-1	103	130	107	113	12.82	cps
Beryllium	9-1	61	56	50	56	10.00	cps
Bismuth	209-1	20837307	20377674	20377799	20530927	1.29	cps
Bismuth	209-2	15348683	15477926	15339484	15388698	0.50	cps
Bromine	81-1	17988	17357	18041	17795	2.14	cps
Bromine	81-2	100	140	137	126	17.68	cps
Cadmium	108-1	33	37	17	29	37.08	cps
Cadmium	106-1	10717	10297	10574	10529	2.03	cps
Cadmium	111-1	7522	7236	7420	7393	1.96	cps
Calcium	43-1	653	560	543	586	10.12	cps
Calcium	44-1	27215	26834	26640	26896	1.09	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4487	4351	4521	4453	2.02	cps
Cobalt	59-2	320	210	277	269	20.61	cps
Copper	63-2	1697	1853	1503	1685	10.41	cps
Dysprosium	156-1	17	27	30	24	28.38	cps
Dysprosium	156-2	3	7	10	7	50.03	cps
Erbium	164-1	130	90	163	128	28.74	cps
Erbium	164-2	73	97	120	97	24.14	cps
Gadolinium	160-1	120	137	150	136	11.09	cps
Gadolinium	160-2	1100	1343	1190	1211	10.16	cps
Holmium	165-1	35459354	34842760	34544805	34948973	1.33	cps
Holmium	165-2	22772774	22872035	22677116	22773975	0.43	cps
Indium	115-1	30951891	30741330	30133664	30608962	1.39	cps
Indium	115-2	10448607	10381195	10185097	10338300	1.32	cps
Iron	56-2	21819	21953	21676	21816	0.64	cps
Iron	57-2	1517	1640	1673	1610	5.13	cps
Iron	54-2	3791	3711	3650	3717	1.89	cps
Krypton	83-1	357	370	320	349	7.42	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : PB164950BL Instrumnet Name : P7
Client Sample ID : PBS950 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:25:27 DataFile Name : 024CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	963	937	917	939	2.49	cps
Lead	207-1	860	920	680	820	15.23	cps
Lead	208-1	3690	3667	3367	3575	5.04	cps
Lithium	6-1	3334467	3284285	3264166	3294306	1.10	cps
Magnesium	24-2	860	813	980	884	9.72	cps
Manganese	55-2	390	293	333	339	14.33	cps
Molybdenum	94-1	773	890	873	846	7.46	cps
Molybdenum	95-1	270	243	310	274	12.23	cps
Molybdenum	96-1	393	367	513	424	18.41	cps
Molybdenum	97-1	230	160	197	196	17.90	cps
Molybdenum	98-1	463	450	443	452	2.25	cps
Neodymium	150-1	7	17	7	10	57.72	cps
Neodymium	150-2	10	0	3	4	114.60	cps
Nickel	60-2	280	227	217	241	14.12	cps
Phosphorus	31-2	433	450	477	453	4.82	cps
Potassium	39-2	85290	86477	86035	85934	0.70	cps
Rhodium	103-1	29538623	29475002	28845347	29286324	1.31	cps
Rhodium	103-2	17023650	17098953	16709718	16944107	1.22	cps
Scandium	45-1	17179216	16934111	16832244	16981857	1.05	cps
Scandium	45-2	1444791	1409197	1413485	1422491	1.37	cps
Selenium	82-1	506	461	436	468	7.67	cps
Selenium	77-2	3	3	0	2	86.60	cps
Selenium	78-2	473	567	517	519	9.00	cps
Silicon	28-1	1407820	1395141	1406874	1403278	0.50	cps
Silver	107-1	370	333	317	340	8.03	cps
Silver	109-1	193	237	230	220	10.60	cps
Sodium	23-2	50212	49499	50710	50140	1.21	cps
Strontium	86-1	563	537	500	533	5.96	cps
Strontium	88-1	323	373	360	352	7.35	cps
Sulfur	34-1	318822	323185	324305	322104	0.90	cps
Terbium	159-1	36785848	35194765	35376844	35785819	2.43	cps
Terbium	159-2	22874460	22561636	22546632	22660909	0.82	cps
Thallium	203-1	707	717	703	709	0.98	cps
Thallium	205-1	1763	1767	1487	1672	9.61	cps
Tin	118-1	3814	3771	3941	3842	2.30	cps
Titanium	47-1	390	273	260	308	23.24	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

PB164950BL

Instrumnet Name :

P7

Client Sample ID :

PBS950

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:25:27

DataFile Name :

024CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	60	30	30	40	43.30	cps
Vanadium	51-2	17	10	33	20	60.08	cps
Yttrium	89-1	41493839	40888938	40931516	41104764	0.82	cps
Yttrium	89-2	10274026	10240574	10077228	10197276	1.03	cps
Zinc	66-2	647	643	620	637	2.28	cps
Zirconium	90-1	1953	2053	2007	2005	2.50	cps
Zirconium	91-1	400	383	443	409	7.57	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : PB164950BS Instrumnet Name : P7
Client Sample ID : LCS950 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:28:43 DataFile Name : 025LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	22557	22941	22537	22678	1.00	cps
Antimony	121-1	106924	110121	110205	109083	1.71	cps
Arsenic	75-2	3040	3174	3037	3084	2.53	cps
Barium	135-1	125077	127427	128134	126879	1.26	cps
Barium	137-1	217309	223488	223329	221375	1.59	cps
Beryllium	9-1	5118	5434	5496	5349	3.79	cps
Bismuth	209-1	19527004	20363314	20095172	19995163	2.14	cps
Bismuth	209-2	15296008	15331284	15469039	15365444	0.60	cps
Bromine	81-1	17537	17777	17774	17696	0.78	cps
Bromine	81-2	97	77	117	97	20.69	cps
Cadmium	108-1	993	990	1020	1001	1.64	cps
Cadmium	106-1	11521	11815	11218	11518	2.59	cps
Cadmium	111-1	21450	21481	21119	21350	0.94	cps
Calcium	43-1	70690	71364	71846	71300	0.81	cps
Calcium	44-1	1147026	1178887	1171932	1165948	1.44	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	50354	49872	50558	50261	0.70	cps
Cobalt	59-2	37026	36608	37453	37029	1.14	cps
Copper	63-2	58049	58561	57691	58100	0.75	cps
Dysprosium	156-1	27	30	57	38	43.52	cps
Dysprosium	156-2	20	13	13	16	24.76	cps
Erbium	164-1	93	133	150	126	23.20	cps
Erbium	164-2	97	120	107	108	10.86	cps
Gadolinium	160-1	140	130	140	137	4.22	cps
Gadolinium	160-2	1173	1147	1237	1186	3.90	cps
Holmium	165-1	33320902	34925074	34533349	34259775	2.44	cps
Holmium	165-2	22498171	22906082	22730092	22711449	0.90	cps
Indium	115-1	29047713	29980113	29827512	29618446	1.69	cps
Indium	115-2	10276697	10237097	10288824	10267539	0.26	cps
Iron	56-2	4275257	4282709	4276975	4278314	0.09	cps
Iron	57-2	106803	107971	108481	107752	0.80	cps
Iron	54-2	240080	235372	238486	237979	1.01	cps
Krypton	83-1	370	260	270	300	20.28	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : PB164950BS Instrumnet Name : P7
Client Sample ID : LCS950 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:28:43 DataFile Name : 025LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	37843	38725	38020	38196	1.22	cps
Lead	207-1	33364	34450	34320	34045	1.74	cps
Lead	208-1	151141	154571	154345	153352	1.25	cps
Lithium	6-1	3198226	3331340	3335625	3288397	2.38	cps
Magnesium	24-2	957966	961530	954363	957953	0.37	cps
Manganese	55-2	17337	17834	18455	17875	3.13	cps
Molybdenum	94-1	112417	114439	114852	113903	1.14	cps
Molybdenum	95-1	135091	138427	139491	137670	1.67	cps
Molybdenum	96-1	150472	154975	154123	153190	1.56	cps
Molybdenum	97-1	86226	86286	86802	86438	0.37	cps
Molybdenum	98-1	222084	222987	223645	222905	0.35	cps
Neodymium	150-1	13	10	27	17	52.93	cps
Neodymium	150-2	7	3	7	6	34.70	cps
Nickel	60-2	9516	10204	9800	9840	3.51	cps
Phosphorus	31-2	493	523	473	497	5.07	cps
Potassium	39-2	1289837	1287436	1302409	1293227	0.62	cps
Rhodium	103-1	27994293	29017641	28995621	28669185	2.04	cps
Rhodium	103-2	16885343	16753229	16619115	16752562	0.79	cps
Scandium	45-1	15925341	16521049	16624037	16356809	2.31	cps
Scandium	45-2	1438473	1399288	1421288	1419683	1.38	cps
Selenium	82-1	4974	5308	5194	5159	3.29	cps
Selenium	77-2	463	490	420	458	7.72	cps
Selenium	78-2	2047	2074	2087	2069	0.98	cps
Silicon	28-1	1615772	1643905	1626107	1628595	0.87	cps
Silver	107-1	69358	71780	73156	71431	2.69	cps
Silver	109-1	66431	69174	68665	68090	2.14	cps
Sodium	23-2	1656164	1649840	1654667	1653557	0.20	cps
Strontium	86-1	17641	18502	18031	18058	2.39	cps
Strontium	88-1	149410	152572	152794	151592	1.25	cps
Sulfur	34-1	330396	333497	331073	331655	0.49	cps
Terbium	159-1	34209703	36259324	36033063	35500696	3.17	cps
Terbium	159-2	22717654	22416471	22772258	22635461	0.85	cps
Thallium	203-1	47352	47897	47151	47467	0.81	cps
Thallium	205-1	111432	113038	114207	112892	1.23	cps
Tin	118-1	4547	4164	4314	4342	4.45	cps
Titanium	47-1	34142	33510	33691	33781	0.96	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

PB164950BS

Instrumnet Name :

P7

Client Sample ID :

LCS950

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:28:43

DataFile Name :

025LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	131771	134354	134069	133398	1.06	cps
Vanadium	51-2	96056	94530	95087	95224	0.81	cps
Yttrium	89-1	38974444	40000463	40283105	39752671	1.73	cps
Yttrium	89-2	10136045	10107370	9847386	10030267	1.59	cps
Zinc	66-2	22928	23555	23165	23216	1.37	cps
Zirconium	90-1	95699	96625	96950	96425	0.67	cps
Zirconium	91-1	21062	21416	21296	21258	0.85	cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :PB164951BLInstrumnet Name :P7

Client Sample ID :PBS951Dilution Factor :1

Date & Time Acquired :2024-11-18 06:31:54DataFile Name :026CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	350	337	313	333	5.57	cps
Antimony	121-1	187	300	417	301	38.19	cps
Arsenic	75-2	10	13	17	13	25.01	cps
Barium	135-1	110	67	93	90	24.28	cps
Barium	137-1	147	110	137	131	14.46	cps
Beryllium	9-1	33	50	67	50	33.34	cps
Bismuth	209-1	20071946	20131801	19900809	20034852	0.60	cps
Bismuth	209-2	15073861	15335676	14600700	15003412	2.48	cps
Bromine	81-1	17420	17581	17364	17455	0.64	cps
Bromine	81-2	93	103	57	84	29.10	cps
Cadmium	108-1	23	13	20	19	26.96	cps
Cadmium	106-1	10664	9947	10130	10247	3.64	cps
Cadmium	111-1	7492	6990	7104	7195	3.66	cps
Calcium	43-1	667	570	540	592	11.18	cps
Calcium	44-1	27428	26674	27415	27172	1.59	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4431	4331	4387	4383	1.14	cps
Cobalt	59-2	270	253	190	238	17.75	cps
Copper	63-2	1733	1563	1557	1618	6.19	cps
Dysprosium	156-1	13	20	13	16	24.76	cps
Dysprosium	156-2	7	3	13	8	65.47	cps
Erbium	164-1	100	157	123	127	22.48	cps
Erbium	164-2	107	90	73	90	18.52	cps
Gadolinium	160-1	100	147	147	131	20.55	cps
Gadolinium	160-2	1103	1207	1170	1160	4.52	cps
Holmium	165-1	34520024	34385054	33457795	34120958	1.69	cps
Holmium	165-2	22308437	22771096	21692875	22257469	2.43	cps
Indium	115-1	29809299	29663124	29526543	29666322	0.48	cps
Indium	115-2	10121223	10334491	9692718	10049477	3.25	cps
Iron	56-2	21853	21712	21419	21661	1.02	cps
Iron	57-2	1547	1613	1647	1602	3.18	cps
Iron	54-2	3590	3557	3587	3578	0.51	cps
Krypton	83-1	303	330	327	320	4.54	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : PB164951BL Instrumnet Name : P7
Client Sample ID : PBS951 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:31:54 DataFile Name : 026CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	813	747	693	751	8.00	cps
Lead	207-1	733	717	780	743	4.42	cps
Lead	208-1	3237	3170	2977	3128	4.32	cps
Lithium	6-1	3270313	3329056	3248485	3282618	1.27	cps
Magnesium	24-2	830	947	770	849	10.58	cps
Manganese	55-2	283	300	283	289	3.33	cps
Molybdenum	94-1	793	750	837	793	5.46	cps
Molybdenum	95-1	150	160	167	159	5.28	cps
Molybdenum	96-1	313	370	327	337	8.80	cps
Molybdenum	97-1	123	123	140	129	7.46	cps
Molybdenum	98-1	197	273	280	250	18.52	cps
Neodymium	150-1	13	7	30	17	72.11	cps
Neodymium	150-2	0	10	10	7	86.60	cps
Nickel	60-2	183	200	253	212	17.23	cps
Phosphorus	31-2	470	440	527	479	9.19	cps
Potassium	39-2	85310	85723	84251	85095	0.89	cps
Rhodium	103-1	28678125	28729042	28170796	28525988	1.08	cps
Rhodium	103-2	16671592	16827830	15920841	16473421	2.94	cps
Scandium	45-1	16447068	16489909	16391391	16442789	0.30	cps
Scandium	45-2	1396692	1426501	1357170	1393454	2.50	cps
Selenium	82-1	537	470	408	472	13.73	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	470	520	523	504	5.92	cps
Silicon	28-1	1389340	1371548	1390709	1383865	0.77	cps
Silver	107-1	453	377	347	392	14.02	cps
Silver	109-1	300	307	243	283	12.28	cps
Sodium	23-2	49426	48717	48914	49019	0.75	cps
Strontium	86-1	467	550	503	507	8.24	cps
Strontium	88-1	383	357	353	364	4.51	cps
Sulfur	34-1	321745	325969	323651	323789	0.65	cps
Terbium	159-1	35610184	35469378	35309229	35462930	0.42	cps
Terbium	159-2	22345381	22439453	21253724	22012852	2.99	cps
Thallium	203-1	573	540	567	560	3.15	cps
Thallium	205-1	1207	1230	1190	1209	1.66	cps
Tin	118-1	3530	3561	3591	3560	0.84	cps
Titanium	47-1	260	277	327	288	12.05	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

PB164951BL

Instrumnet Name :

P7

Client Sample ID :

PBS951

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:31:54

DataFile Name :

026CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	43	43	33	40	14.43	cps
Vanadium	51-2	43	30	7	27	69.58	cps
Yttrium	89-1	39885992	40543828	39839888	40089902	0.98	cps
Yttrium	89-2	9974672	10168226	9587418	9910105	2.98	cps
Zinc	66-2	583	663	683	643	8.23	cps
Zirconium	90-1	1813	1923	1930	1889	3.47	cps
Zirconium	91-1	363	360	400	374	5.93	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : PB164951BS Instrumnet Name : P7
Client Sample ID : LCS951 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:35:11 DataFile Name : 027LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	22507	22887	22323	22572	1.27	cps
Antimony	121-1	110521	109926	111085	110511	0.52	cps
Arsenic	75-2	3020	3087	3014	3040	1.33	cps
Barium	135-1	129832	129483	129610	129642	0.14	cps
Barium	137-1	222084	223811	227170	224355	1.15	cps
Beryllium	9-1	5284	5079	5440	5268	3.44	cps
Bismuth	209-1	19832005	20262105	19972839	20022316	1.10	cps
Bismuth	209-2	15135735	14889779	15131719	15052411	0.94	cps
Bromine	81-1	16576	16997	16039	16537	2.90	cps
Bromine	81-2	97	93	103	98	5.21	cps
Cadmium	108-1	1143	1060	1073	1092	4.10	cps
Cadmium	106-1	12115	11628	11648	11797	2.34	cps
Cadmium	111-1	21894	21428	21322	21548	1.41	cps
Calcium	43-1	74317	71973	72418	72903	1.71	cps
Calcium	44-1	1179671	1170949	1173901	1174840	0.38	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	50949	49337	51013	50433	1.88	cps
Cobalt	59-2	37209	36855	37681	37248	1.11	cps
Copper	63-2	58936	57366	57456	57919	1.52	cps
Dysprosium	156-1	27	33	40	33	20.00	cps
Dysprosium	156-2	10	27	20	19	44.42	cps
Erbium	164-1	220	137	113	157	35.79	cps
Erbium	164-2	63	67	83	71	15.07	cps
Gadolinium	160-1	130	133	177	147	17.75	cps
Gadolinium	160-2	980	1113	1090	1061	6.71	cps
Holmium	165-1	33693129	34162229	34035080	33963479	0.71	cps
Holmium	165-2	22326585	22059780	22092091	22159485	0.66	cps
Indium	115-1	29481843	29032864	29659406	29391371	1.10	cps
Indium	115-2	10017837	9892956	10040596	9983797	0.80	cps
Iron	56-2	4286359	4298503	4321167	4302010	0.41	cps
Iron	57-2	107504	108444	108380	108109	0.49	cps
Iron	54-2	239661	238681	238250	238864	0.30	cps
Krypton	83-1	317	323	297	312	4.45	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : PB164951BS Instrumnet Name : P7
Client Sample ID : LCS951 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:35:11 DataFile Name : 027LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	39588	40173	38722	39494	1.85	cps
Lead	207-1	34571	35353	34457	34793	1.40	cps
Lead	208-1	157052	159288	157603	157981	0.74	cps
Lithium	6-1	3250455	3230585	3198075	3226371	0.82	cps
Magnesium	24-2	969457	963318	964817	965864	0.33	cps
Manganese	55-2	17567	17283	17477	17442	0.83	cps
Molybdenum	94-1	114805	115554	116489	115616	0.73	cps
Molybdenum	95-1	139207	139991	140375	139858	0.43	cps
Molybdenum	96-1	155483	158360	156086	156643	0.97	cps
Molybdenum	97-1	87148	86212	87067	86809	0.60	cps
Molybdenum	98-1	223941	226500	226856	225766	0.70	cps
Neodymium	150-1	20	27	13	20	33.35	cps
Neodymium	150-2	3	7	3	4	43.40	cps
Nickel	60-2	9960	9553	9493	9669	2.63	cps
Phosphorus	31-2	540	487	557	528	6.93	cps
Potassium	39-2	1304866	1290001	1318032	1304300	1.08	cps
Rhodium	103-1	28493380	28408057	28210007	28370481	0.51	cps
Rhodium	103-2	16373327	16303937	16414031	16363765	0.34	cps
Scandium	45-1	16347471	16346924	16312492	16335629	0.12	cps
Scandium	45-2	1394105	1380103	1391166	1388458	0.53	cps
Selenium	82-1	5039	4991	5008	5013	0.48	cps
Selenium	77-2	467	403	503	458	11.05	cps
Selenium	78-2	2130	2027	2013	2057	3.11	cps
Silicon	28-1	1650808	1643805	1638995	1644536	0.36	cps
Silver	107-1	72202	73337	72259	72599	0.88	cps
Silver	109-1	68823	70661	69566	69683	1.33	cps
Sodium	23-2	1661354	1639070	1666848	1655757	0.89	cps
Strontium	86-1	18375	18111	18445	18310	0.96	cps
Strontium	88-1	154694	154889	153782	154455	0.38	cps
Sulfur	34-1	327947	328305	324836	327029	0.58	cps
Terbium	159-1	34868309	34876004	34927379	34890564	0.09	cps
Terbium	159-2	22211388	21951158	21918392	22026979	0.73	cps
Thallium	203-1	48101	49048	48369	48506	1.01	cps
Thallium	205-1	114158	115673	115381	115070	0.70	cps
Tin	118-1	3931	4087	4021	4013	1.96	cps
Titanium	47-1	33861	34239	34700	34267	1.23	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

PB164951BS

Instrumnet Name :

P7

Client Sample ID :

LCS951

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:35:11

DataFile Name :

027LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	135559	135830	136214	135867	0.24	cps
Vanadium	51-2	97173	96026	95791	96330	0.77	cps
Yttrium	89-1	39861488	39557111	39426993	39615197	0.56	cps
Yttrium	89-2	9959625	9883984	9830008	9891206	0.66	cps
Zinc	66-2	22891	23485	23529	23302	1.53	cps
Zirconium	90-1	98836	98088	97729	98218	0.58	cps
Zirconium	91-1	21589	22057	21910	21852	1.09	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-01 Instrumnet Name : P7
Client Sample ID : MH2GN9 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:38:23 DataFile Name : 028SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	8079437	8105556	8007057	8064017	0.63	cps
Antimony	121-1	22761	22972	23753	23162	2.26	cps
Arsenic	75-2	24290	24574	24173	24346	0.85	cps
Barium	135-1	4983999	4853550	4837944	4891831	1.64	cps
Barium	137-1	8470359	8278058	8330679	8359699	1.19	cps
Beryllium	9-1	5140	5384	5318	5281	2.39	cps
Bismuth	209-1	20224623	20251387	20180834	20218948	0.18	cps
Bismuth	209-2	14987886	15022268	14996752	15002302	0.12	cps
Bromine	81-1	29703	30064	30428	30065	1.21	cps
Bromine	81-2	3187	3237	3207	3210	0.78	cps
Cadmium	108-1	3590	3644	3607	3614	0.76	cps
Cadmium	106-1	15835	16279	16099	16071	1.39	cps
Cadmium	111-1	58979	59764	58854	59199	0.83	cps
Calcium	43-1	10684882	10568808	10691190	10648293	0.65	cps
Calcium	44-1	173225224	170001291	171845177	171690564	0.94	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	229396	229598	228486	229160	0.26	cps
Cobalt	59-2	216884	214478	215688	215683	0.56	cps
Copper	63-2	1351091	1342643	1349193	1347642	0.33	cps
Dysprosium	156-1	241391	240930	241740	241354	0.17	cps
Dysprosium	156-2	189636	190369	190106	190037	0.20	cps
Erbium	164-1	220946	224560	223168	222891	0.82	cps
Erbium	164-2	147624	147025	144428	146359	1.16	cps
Gadolinium	160-1	237077	236084	239839	237667	0.82	cps
Gadolinium	160-2	163145	164666	163745	163852	0.47	cps
Holmium	165-1	34876236	34823980	34849166	34849794	0.07	cps
Holmium	165-2	23022785	22812215	22720826	22851942	0.68	cps
Indium	115-1	29497493	29712093	29382918	29530834	0.57	cps
Indium	115-2	10056945	9918265	10024711	9999973	0.73	cps
Iron	56-2	137482425	136311918	135759268	136517870	0.64	cps
Iron	57-2	3522450	3635584	3563300	3573778	1.60	cps
Iron	54-2	7477159	7463832	7407255	7449415	0.50	cps
Krypton	83-1	640	637	593	623	4.18	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-01 Instrumnet Name : P7
Client Sample ID : MH2GN9 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:38:23 DataFile Name : 028SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	11928058	12055710	12037077	12006948	0.57	cps
Lead	207-1	10162033	10246845	10284078	10230985	0.61	cps
Lead	208-1	46677821	47165770	46963678	46935756	0.52	cps
Lithium	6-1	3349435	3234979	3281417	3288610	1.75	cps
Magnesium	24-2	7950995	7983462	7955016	7963158	0.22	cps
Manganese	55-2	8776465	8566968	8577322	8640252	1.37	cps
Molybdenum	94-1	67411	67019	67883	67438	0.64	cps
Molybdenum	95-1	12669	13036	12199	12634	3.32	cps
Molybdenum	96-1	25315	23940	24330	24528	2.89	cps
Molybdenum	97-1	7772	7302	7675	7583	3.27	cps
Molybdenum	98-1	19874	19984	19857	19905	0.35	cps
Neodymium	150-1	395672	397182	398215	397023	0.32	cps
Neodymium	150-2	222025	224353	224055	223478	0.57	cps
Nickel	60-2	266367	263094	263978	264479	0.64	cps
Phosphorus	31-2	114683	113931	112429	113681	1.01	cps
Potassium	39-2	7489647	7479686	7543311	7504215	0.46	cps
Rhodium	103-1	27047616	27368796	27505015	27307142	0.86	cps
Rhodium	103-2	16114503	16022164	15992618	16043095	0.40	cps
Scandium	45-1	16821396	16851232	16698381	16790337	0.48	cps
Scandium	45-2	1388260	1363736	1387408	1379801	1.01	cps
Selenium	82-1	1272	1254	1231	1253	1.64	cps
Selenium	77-2	707	797	810	771	7.29	cps
Selenium	78-2	1163	1200	1173	1179	1.61	cps
Silicon	28-1	88920259	89226252	89242945	89129819	0.20	cps
Silver	107-1	47400	47872	48293	47855	0.93	cps
Silver	109-1	46438	46050	46233	46240	0.42	cps
Sodium	23-2	1149172	1144110	1141335	1144872	0.35	cps
Strontium	86-1	4803638	4733838	4763395	4766957	0.73	cps
Strontium	88-1	41743853	41663296	41511595	41639581	0.28	cps
Sulfur	34-1	400585	401029	395628	399080	0.75	cps
Terbium	159-1	35522964	35904367	35388147	35605159	0.75	cps
Terbium	159-2	22775450	22515914	22289425	22526929	1.08	cps
Thallium	203-1	9640	9974	10147	9920	2.60	cps
Thallium	205-1	23734	24085	24011	23943	0.77	cps
Tin	118-1	38277	38050	37495	37941	1.06	cps
Titanium	47-1	594916	589879	585768	590188	0.78	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-01

Instrumnet Name :

P7

Client Sample ID :

MH2GN9

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:38:23

DataFile Name :

028SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	252640	254105	252541	253095	0.35	cps
Vanadium	51-2	453577	452792	453450	453273	0.09	cps
Yttrium	89-1	43595019	43602613	43437148	43544927	0.21	cps
Yttrium	89-2	10861192	10767275	10727939	10785468	0.63	cps
Zinc	66-2	1414272	1414105	1423154	1417177	0.37	cps
Zirconium	90-1	166451	167368	166971	166930	0.28	cps
Zirconium	91-1	37214	36338	36903	36818	1.21	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-02 Instrumnet Name : P7
Client Sample ID : MH2GN9D Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:41:25 DataFile Name : 029SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	8108225	8104576	8059446	8090749	0.34	cps
Antimony	121-1	23289	24535	23432	23752	2.87	cps
Arsenic	75-2	25749	25205	24664	25206	2.15	cps
Barium	135-1	4849792	4885426	4919991	4885069	0.72	cps
Barium	137-1	8249794	8437729	8437360	8374961	1.29	cps
Beryllium	9-1	5190	5162	5329	5227	1.71	cps
Bismuth	209-1	20700406	20375426	20548541	20541457	0.79	cps
Bismuth	209-2	15116567	15112634	15135319	15121506	0.08	cps
Bromine	81-1	30074	31757	30512	30781	2.84	cps
Bromine	81-2	3374	3514	3597	3495	3.23	cps
Cadmium	108-1	3327	3580	3620	3509	4.53	cps
Cadmium	106-1	16122	16056	16473	16217	1.38	cps
Cadmium	111-1	59398	60030	61026	60151	1.36	cps
Calcium	43-1	10537023	10832416	10843223	10737554	1.62	cps
Calcium	44-1	170858344	173393597	174603124	172951689	1.10	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	233645	232684	229900	232076	0.84	cps
Cobalt	59-2	219123	218112	218992	218742	0.25	cps
Copper	63-2	1365575	1367626	1363722	1365641	0.14	cps
Dysprosium	156-1	241956	248596	246213	245588	1.37	cps
Dysprosium	156-2	193495	194660	195670	194608	0.56	cps
Erbium	164-1	220943	228823	227263	225676	1.85	cps
Erbium	164-2	149140	149241	147664	148681	0.59	cps
Gadolinium	160-1	236467	243654	244607	241576	1.84	cps
Gadolinium	160-2	168985	166246	168938	168056	0.93	cps
Holmium	165-1	35429941	34824419	35433312	35229224	1.00	cps
Holmium	165-2	22819630	22931359	23165720	22972236	0.77	cps
Indium	115-1	29749579	29178150	29883315	29603681	1.27	cps
Indium	115-2	10133468	10093779	10226812	10151353	0.67	cps
Iron	56-2	138145438	137714988	137998651	137953026	0.16	cps
Iron	57-2	3667540	3612874	3566014	3615476	1.41	cps
Iron	54-2	7608660	7448863	7515541	7524355	1.07	cps
Krypton	83-1	540	630	633	601	8.81	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-02 Instrumnet Name : P7
Client Sample ID : MH2GN9D Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:41:25 DataFile Name : 029SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	12143799	12314629	12182674	12213701	0.73	cps
Lead	207-1	10252575	10507055	10439662	10399764	1.27	cps
Lead	208-1	47512075	48335508	47683996	47843860	0.91	cps
Lithium	6-1	3392053	3283982	3323883	3333306	1.64	cps
Magnesium	24-2	7893673	8064963	8003190	7987275	1.09	cps
Manganese	55-2	8967745	8895143	8863600	8908829	0.60	cps
Molybdenum	94-1	65961	67204	68064	67076	1.58	cps
Molybdenum	95-1	12606	12963	12886	12818	1.47	cps
Molybdenum	96-1	24070	24497	24661	24409	1.25	cps
Molybdenum	97-1	7679	7896	7999	7858	2.08	cps
Molybdenum	98-1	20057	20254	20561	20291	1.25	cps
Neodymium	150-1	394051	402118	407703	401291	1.71	cps
Neodymium	150-2	228513	227328	228608	228150	0.31	cps
Nickel	60-2	273062	269675	272152	271629	0.65	cps
Phosphorus	31-2	115065	115965	114659	115230	0.58	cps
Potassium	39-2	7726533	7562517	7561262	7616771	1.25	cps
Rhodium	103-1	27998380	27395218	27146220	27513273	1.59	cps
Rhodium	103-2	16261302	16027287	16110784	16133124	0.74	cps
Scandium	45-1	16879218	16543989	16560596	16661268	1.13	cps
Scandium	45-2	1391061	1393564	1410836	1398487	0.77	cps
Selenium	82-1	1507	1289	1369	1388	7.96	cps
Selenium	77-2	777	647	773	732	10.12	cps
Selenium	78-2	1237	1293	1197	1242	3.91	cps
Silicon	28-1	86710769	89099509	88531059	88113779	1.42	cps
Silver	107-1	48604	48895	49635	49045	1.08	cps
Silver	109-1	45511	47682	47069	46754	2.39	cps
Sodium	23-2	1168835	1158252	1136153	1154413	1.44	cps
Strontium	86-1	4736421	4854635	4825446	4805501	1.28	cps
Strontium	88-1	41026667	42207259	41831212	41688379	1.45	cps
Sulfur	34-1	391976	395331	396818	394708	0.63	cps
Terbium	159-1	36544961	35583069	36109052	36079028	1.33	cps
Terbium	159-2	23020658	22885689	22778716	22895021	0.53	cps
Thallium	203-1	9737	10638	9790	10055	5.03	cps
Thallium	205-1	23657	24058	23924	23880	0.85	cps
Tin	118-1	37422	39330	38455	38402	2.49	cps
Titanium	47-1	580110	586834	585197	584047	0.60	cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4805-02Instrumnet Name :P7

Client Sample ID :MH2GN9DDilution Factor :1

Date & Time Acquired :2024-11-18 06:41:25DataFile Name :029SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	251239	260306	260301	257282	2.03	cps
Vanadium	51-2	463583	460023	457027	460211	0.71	cps
Yttrium	89-1	43688594	43446149	43739326	43624690	0.36	cps
Yttrium	89-2	11002252	11022434	10868576	10964421	0.76	cps
Zinc	66-2	1436211	1421301	1440069	1432527	0.69	cps
Zirconium	90-1	162127	167230	168700	166019	2.08	cps
Zirconium	91-1	35971	36940	37608	36839	2.23	cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4805-01LX5Instrumnet Name :P7

Client Sample ID :MH2GN9LDilution Factor :5

Date & Time Acquired :2024-11-18 06:44:24DataFile Name :030SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1756675	1803227	1771103	1777002	1.34	cps
Antimony	121-1	5398	5151	5371	5307	2.55	cps
Arsenic	75-2	5254	5378	5398	5343	1.45	cps
Barium	135-1	1030011	1039064	1028043	1032373	0.57	cps
Barium	137-1	1820657	1811267	1820605	1817510	0.30	cps
Beryllium	9-1	1211	1189	1356	1252	7.23	cps
Bismuth	209-1	18660248	21008818	20723091	20130719	6.37	cps
Bismuth	209-2	15468019	15582277	15219628	15423308	1.20	cps
Bromine	81-1	19967	20364	20017	20116	1.08	cps
Bromine	81-2	907	800	737	814	10.55	cps
Cadmium	108-1	767	790	787	781	1.62	cps
Cadmium	106-1	10677	11782	11058	11172	5.02	cps
Cadmium	111-1	17785	18922	18194	18300	3.15	cps
Calcium	43-1	2315312	2265346	2300480	2293712	1.12	cps
Calcium	44-1	37216458	36790754	36937263	36981491	0.58	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	54642	54337	54876	54618	0.49	cps
Cobalt	59-2	48786	48294	47993	48358	0.83	cps
Copper	63-2	307857	305741	307861	307153	0.40	cps
Dysprosium	156-1	52805	54472	52799	53359	1.81	cps
Dysprosium	156-2	42063	41585	42591	42080	1.20	cps
Erbium	164-1	49450	48721	47537	48570	1.99	cps
Erbium	164-2	31519	32428	32194	32047	1.47	cps
Gadolinium	160-1	51722	52996	52384	52367	1.22	cps
Gadolinium	160-2	37403	37687	37387	37492	0.45	cps
Holmium	165-1	31930430	35039376	34717709	33895839	5.04	cps
Holmium	165-2	22885855	23055268	22662742	22867955	0.86	cps
Indium	115-1	27117139	30071457	29837011	29008536	5.66	cps
Indium	115-2	10222051	10234119	10062298	10172823	0.94	cps
Iron	56-2	30488576	30130219	30167297	30262031	0.65	cps
Iron	57-2	786830	787070	780421	784774	0.48	cps
Iron	54-2	1659989	1660907	1672688	1664528	0.43	cps
Krypton	83-1	420	413	410	414	1.23	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-01LX5 Instrumnet Name : P7
Client Sample ID : MH2GN9L Dilution Factor : 5
Date & Time Acquired : 2024-11-18 06:44:24 DataFile Name : 030SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2667400	2679536	2646302	2664413	0.63	cps
Lead	207-1	2291937	2309151	2265933	2289007	0.95	cps
Lead	208-1	10439503	10541422	10417196	10466040	0.63	cps
Lithium	6-1	3057765	3285724	3278397	3207296	4.04	cps
Magnesium	24-2	1750027	1778278	1751719	1760008	0.90	cps
Manganese	55-2	1952172	1929050	1962638	1947953	0.88	cps
Molybdenum	94-1	14891	15398	14924	15071	1.88	cps
Molybdenum	95-1	2890	2770	2887	2849	2.40	cps
Molybdenum	96-1	5701	5581	5801	5694	1.94	cps
Molybdenum	97-1	1820	1847	1743	1803	2.97	cps
Molybdenum	98-1	4531	4724	4828	4694	3.21	cps
Neodymium	150-1	87959	86708	86969	87212	0.76	cps
Neodymium	150-2	49473	50400	48516	49463	1.90	cps
Nickel	60-2	60123	59842	59170	59712	0.82	cps
Phosphorus	31-2	25451	25017	25732	25400	1.42	cps
Potassium	39-2	1690459	1728155	1693255	1703956	1.23	cps
Rhodium	103-1	25548010	28600331	28001926	27383423	5.91	cps
Rhodium	103-2	16659118	16577059	16484509	16573562	0.53	cps
Scandium	45-1	14896279	16427883	16328314	15884159	5.40	cps
Scandium	45-2	1382208	1386390	1378971	1382523	0.27	cps
Selenium	82-1	690	668	669	676	1.82	cps
Selenium	77-2	173	147	180	167	10.58	cps
Selenium	78-2	647	667	730	681	6.39	cps
Silicon	28-1	20024050	20454141	20553291	20343827	1.38	cps
Silver	107-1	10681	11081	10971	10911	1.90	cps
Silver	109-1	10387	10457	10534	10459	0.70	cps
Sodium	23-2	269929	270631	269298	269953	0.25	cps
Strontium	86-1	991944	1009373	999861	1000392	0.87	cps
Strontium	88-1	9062224	9046153	8935288	9014555	0.77	cps
Sulfur	34-1	316737	320189	319662	318863	0.58	cps
Terbium	159-1	32819773	35985199	35772569	34859180	5.08	cps
Terbium	159-2	22845300	22721578	22709073	22758650	0.33	cps
Thallium	203-1	2440	2480	2497	2472	1.18	cps
Thallium	205-1	5928	5795	6025	5916	1.95	cps
Tin	118-1	12365	12740	12486	12530	1.53	cps
Titanium	47-1	126748	128745	127417	127637	0.80	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-01LX5

Instrumnet Name :

P7

Client Sample ID :

MH2GN9L

Dilution Factor :

5

Date & Time Acquired :

2024-11-18 06:44:24

DataFile Name :

030SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	54384	55609	55930	55308	1.47	cps
Vanadium	51-2	99656	99179	100082	99639	0.45	cps
Yttrium	89-1	37306608	41008693	40255231	39523511	4.95	cps
Yttrium	89-2	10300516	10301185	9985953	10195885	1.78	cps
Zinc	66-2	326033	323756	322411	324067	0.57	cps
Zirconium	90-1	36174	37267	38037	37159	2.52	cps
Zirconium	91-1	8076	8396	8132	8201	2.08	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-03 Instrumnet Name : P7
Client Sample ID : MH2GN9S Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:47:29 DataFile Name : 031SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	8204300	8055564	8146478	8135448	0.92	cps
Antimony	121-1	544612	551105	550391	548703	0.65	cps
Arsenic	75-2	35837	35536	36261	35878	1.02	cps
Barium	135-1	7424004	7442797	7377720	7414840	0.45	cps
Barium	137-1	12657477	12917269	12795333	12790027	1.02	cps
Beryllium	9-1	29551	30358	29662	29857	1.47	cps
Bismuth	209-1	21439836	20799055	20498051	20912314	2.30	cps
Bismuth	209-2	15258089	15154279	15216922	15209763	0.34	cps
Bromine	81-1	30795	32676	33141	32204	3.86	cps
Bromine	81-2	3384	3490	3477	3450	1.68	cps
Cadmium	108-1	8326	8232	8116	8225	1.28	cps
Cadmium	106-1	22808	22341	22267	22472	1.31	cps
Cadmium	111-1	128453	129767	131780	130000	1.29	cps
Calcium	43-1	10662715	10727473	10702861	10697683	0.31	cps
Calcium	44-1	170873197	173945744	173187717	172668886	0.93	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	651449	651055	651277	651261	0.03	cps
Cobalt	59-2	1947322	1972095	1977347	1965588	0.82	cps
Copper	63-2	2054070	2016902	2048715	2039896	0.98	cps
Dysprosium	156-1	244979	246704	249571	247085	0.94	cps
Dysprosium	156-2	197429	195563	193909	195634	0.90	cps
Erbium	164-1	225063	227307	228322	226897	0.73	cps
Erbium	164-2	154321	150609	148833	151254	1.85	cps
Gadolinium	160-1	237437	247230	241328	241999	2.04	cps
Gadolinium	160-2	167312	166632	166506	166817	0.26	cps
Holmium	165-1	37057059	35862479	35540486	36153342	2.21	cps
Holmium	165-2	23824289	22977854	23277830	23359991	1.84	cps
Indium	115-1	31055928	30277885	29467639	30267151	2.62	cps
Indium	115-2	10272663	10119651	10249914	10214076	0.81	cps
Iron	56-2	134663035	135142945	137097988	135634656	0.95	cps
Iron	57-2	3457940	3501948	3558040	3505976	1.43	cps
Iron	54-2	7454811	7337549	7301859	7364740	1.09	cps
Krypton	83-1	613	720	663	666	8.02	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-03 Instrumnet Name : P7
Client Sample ID : MH2GN9S Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:47:29 DataFile Name : 031SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	12196272	12120132	12244693	12187032	0.52	cps
Lead	207-1	10375376	10359718	10349267	10361454	0.13	cps
Lead	208-1	47738986	47568207	47635400	47647531	0.18	cps
Lithium	6-1	3383752	3271699	3310886	3322112	1.71	cps
Magnesium	24-2	7879579	7677110	7806603	7787764	1.32	cps
Manganese	55-2	9612981	9477124	9611248	9567118	0.81	cps
Molybdenum	94-1	68406	67936	68087	68143	0.35	cps
Molybdenum	95-1	12769	13063	12809	12880	1.24	cps
Molybdenum	96-1	24941	24965	25095	25000	0.33	cps
Molybdenum	97-1	8186	7889	7739	7938	2.87	cps
Molybdenum	98-1	20257	20792	20892	20647	1.65	cps
Neodymium	150-1	397544	407940	403052	402845	1.29	cps
Neodymium	150-2	229360	230908	225760	228676	1.15	cps
Nickel	60-2	718284	716949	700032	711755	1.43	cps
Phosphorus	31-2	112513	115666	114047	114076	1.38	cps
Potassium	39-2	7733713	7649883	7465663	7616420	1.80	cps
Rhodium	103-1	29023869	27908375	27911481	28281242	2.27	cps
Rhodium	103-2	16517775	16263864	16387872	16389837	0.77	cps
Scandium	45-1	17344679	16865344	16606464	16938829	2.21	cps
Scandium	45-2	1499235	1438365	1411030	1449543	3.11	cps
Selenium	82-1	9829	9817	9797	9814	0.16	cps
Selenium	77-2	1633	1517	1613	1588	3.93	cps
Selenium	78-2	4114	3877	4017	4003	2.97	cps
Silicon	28-1	83996339	85587680	84631835	84738618	0.95	cps
Silver	107-1	383840	391920	395295	390352	1.51	cps
Silver	109-1	367469	371812	373867	371049	0.88	cps
Sodium	23-2	1128103	1137574	1154710	1140129	1.18	cps
Strontium	86-1	4782720	4792668	4794882	4790090	0.14	cps
Strontium	88-1	41998308	41891307	41641742	41843785	0.44	cps
Sulfur	34-1	397120	397745	394917	396594	0.37	cps
Terbium	159-1	37636392	36854558	36291097	36927349	1.83	cps
Terbium	159-2	23591873	22751002	22740318	23027731	2.12	cps
Thallium	203-1	238039	243522	241597	241053	1.15	cps
Thallium	205-1	570097	581532	576112	575914	0.99	cps
Tin	118-1	38769	39380	39725	39291	1.23	cps
Titanium	47-1	568305	575117	577171	573531	0.81	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-03

Instrumnet Name :

P7

Client Sample ID :

MH2GN9S

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:47:29

DataFile Name :

031SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	254177	259242	257379	256933	1.00	cps
Vanadium	51-2	1458940	1411499	1404444	1424961	2.08	cps
Yttrium	89-1	45135101	44403094	43614223	44384139	1.71	cps
Yttrium	89-2	11265367	11122528	11026021	11137972	1.08	cps
Zinc	66-2	1687786	1680575	1704574	1690978	0.73	cps
Zirconium	90-1	165667	167490	169688	167615	1.20	cps
Zirconium	91-1	37294	37662	37718	37558	0.61	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-04 Instrumnet Name : P7
Client Sample ID : MH2GP0 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:50:23 DataFile Name : 032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	8193828	8123763	8170309	8162634	0.44	cps
Antimony	121-1	22448	22838	22241	22509	1.35	cps
Arsenic	75-2	20741	20661	20464	20622	0.69	cps
Barium	135-1	5153343	5158742	5082923	5131669	0.82	cps
Barium	137-1	8865631	8759668	8790825	8805375	0.62	cps
Beryllium	9-1	5368	5018	5218	5201	3.38	cps
Bismuth	209-1	20687253	20378361	20765963	20610526	0.99	cps
Bismuth	209-2	15199857	15075734	15125204	15133598	0.41	cps
Bromine	81-1	29850	30274	30338	30154	0.88	cps
Bromine	81-2	3047	3087	2920	3018	2.88	cps
Cadmium	108-1	3764	3864	3727	3785	1.87	cps
Cadmium	106-1	16536	16843	16530	16636	1.08	cps
Cadmium	111-1	61793	62989	62263	62348	0.97	cps
Calcium	43-1	10812546	10700835	10580546	10697976	1.08	cps
Calcium	44-1	171053177	172169977	170285844	171169666	0.55	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	302843	301033	300719	301532	0.38	cps
Cobalt	59-2	213723	211918	213487	213043	0.46	cps
Copper	63-2	1396374	1390849	1390506	1392576	0.24	cps
Dysprosium	156-1	274536	275406	269542	273161	1.16	cps
Dysprosium	156-2	215389	215685	214701	215258	0.23	cps
Erbium	164-1	243843	243642	243840	243775	0.05	cps
Erbium	164-2	158784	157109	158050	157981	0.53	cps
Gadolinium	160-1	264073	268345	262830	265083	1.09	cps
Gadolinium	160-2	181853	182807	180568	181743	0.62	cps
Holmium	165-1	35752199	35585664	35211019	35516294	0.78	cps
Holmium	165-2	23205199	22862122	22819020	22962114	0.92	cps
Indium	115-1	30194793	29977160	30073800	30081918	0.36	cps
Indium	115-2	10202224	10053210	10080490	10111974	0.78	cps
Iron	56-2	138710621	140374395	140265855	139783623	0.67	cps
Iron	57-2	3636657	3663661	3596620	3632313	0.93	cps
Iron	54-2	7739842	7435810	7649248	7608300	2.05	cps
Krypton	83-1	740	670	743	718	5.77	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-04 Instrumnet Name : P7
Client Sample ID : MH2GP0 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:50:23 DataFile Name : 032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	13422018	13594269	13599595	13538627	0.75	cps
Lead	207-1	11583676	11584347	11582752	11583592	0.01	cps
Lead	208-1	53322320	53633319	53425319	53460319	0.30	cps
Lithium	6-1	3309143	3340355	3279945	3309814	0.91	cps
Magnesium	24-2	8406944	8425345	8472101	8434796	0.40	cps
Manganese	55-2	10098510	9972434	10136986	10069310	0.85	cps
Molybdenum	94-1	76247	75999	77674	76640	1.18	cps
Molybdenum	95-1	18298	18662	17647	18203	2.82	cps
Molybdenum	96-1	31631	32650	32539	32273	1.73	cps
Molybdenum	97-1	11341	11351	11311	11334	0.18	cps
Molybdenum	98-1	29109	29450	28685	29081	1.32	cps
Neodymium	150-1	449579	453238	452078	451632	0.41	cps
Neodymium	150-2	254267	252714	250999	252660	0.65	cps
Nickel	60-2	888604	883615	892845	888355	0.52	cps
Phosphorus	31-2	139832	140000	141723	140518	0.74	cps
Potassium	39-2	8974371	8930222	8925175	8943256	0.30	cps
Rhodium	103-1	28114351	27823652	27731101	27889702	0.72	cps
Rhodium	103-2	16402768	16239441	16167647	16269952	0.74	cps
Scandium	45-1	16637084	16798175	16514630	16649963	0.85	cps
Scandium	45-2	1401618	1429065	1399492	1410058	1.17	cps
Selenium	82-1	1391	1415	1291	1366	4.81	cps
Selenium	77-2	890	913	953	919	3.49	cps
Selenium	78-2	1290	1337	1260	1296	2.98	cps
Silicon	28-1	107985925	109756818	107566128	108436291	1.07	cps
Silver	107-1	49909	50380	50621	50303	0.72	cps
Silver	109-1	47745	48170	48160	48025	0.50	cps
Sodium	23-2	1296666	1283639	1324801	1301702	1.62	cps
Strontium	86-1	5035536	5076266	5018543	5043448	0.59	cps
Strontium	88-1	44260031	43627836	44403744	44097204	0.94	cps
Sulfur	34-1	405942	410271	411521	409245	0.72	cps
Terbium	159-1	36739213	36843871	36318979	36634021	0.76	cps
Terbium	159-2	22950601	22826279	22917647	22898176	0.28	cps
Thallium	203-1	9924	10050	10181	10052	1.28	cps
Thallium	205-1	24208	23437	23978	23874	1.66	cps
Tin	118-1	46093	49161	45803	47019	3.96	cps
Titanium	47-1	647597	648861	645135	647197	0.29	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-04

Instrumnet Name :

P7

Client Sample ID :

MH2GP0

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:50:23

DataFile Name :

032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	270642	271728	271313	271228	0.20	cps
Vanadium	51-2	417900	417070	418337	417769	0.15	cps
Yttrium	89-1	44681809	44281071	43951006	44304629	0.83	cps
Yttrium	89-2	11087104	11063906	10870923	11007311	1.08	cps
Zinc	66-2	1755212	1768065	1750602	1757960	0.51	cps
Zirconium	90-1	181801	181783	182080	181888	0.09	cps
Zirconium	91-1	40422	41248	40235	40635	1.33	cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4805-05Instrumnet Name :P7

Client Sample ID :MH2GP1Dilution Factor :1

Date & Time Acquired :2024-11-18 06:53:23DataFile Name :033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	7388555	7545216	7475506	7469759	1.05	cps
Antimony	121-1	24033	24561	24728	24441	1.48	cps
Arsenic	75-2	24984	25025	24951	24987	0.15	cps
Barium	135-1	5085687	5063835	5029030	5059517	0.56	cps
Barium	137-1	8670363	8720847	8617520	8669577	0.60	cps
Beryllium	9-1	5273	5251	5373	5299	1.23	cps
Bismuth	209-1	20901324	20681154	20822572	20801684	0.54	cps
Bismuth	209-2	15269764	15253177	15259899	15260947	0.05	cps
Bromine	81-1	30304	31340	31220	30955	1.83	cps
Bromine	81-2	3144	3154	3457	3252	5.48	cps
Cadmium	108-1	4004	3597	3967	3856	5.84	cps
Cadmium	106-1	17057	16643	16880	16860	1.23	cps
Cadmium	111-1	63371	63888	62377	63212	1.22	cps
Calcium	43-1	11437183	11451920	11376127	11421743	0.35	cps
Calcium	44-1	181996851	186559384	185605977	184720737	1.30	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	207098	208792	206297	207396	0.61	cps
Cobalt	59-2	208433	207967	206267	207556	0.55	cps
Copper	63-2	1330655	1327916	1316304	1324959	0.58	cps
Dysprosium	156-1	263540	265127	263968	264212	0.31	cps
Dysprosium	156-2	207174	206446	205768	206463	0.34	cps
Erbium	164-1	239246	241178	238890	239771	0.51	cps
Erbium	164-2	157312	156398	157827	157179	0.46	cps
Gadolinium	160-1	257853	255825	255941	256540	0.44	cps
Gadolinium	160-2	176602	177165	177212	176993	0.19	cps
Holmium	165-1	35916977	35655817	35573559	35715451	0.50	cps
Holmium	165-2	23433269	23302230	23209240	23314913	0.48	cps
Indium	115-1	30123495	30174954	30133083	30143844	0.09	cps
Indium	115-2	10191478	10109545	9958657	10086560	1.17	cps
Iron	56-2	114663825	113424488	111610932	113233082	1.36	cps
Iron	57-2	2995543	3006200	2962943	2988229	0.75	cps
Iron	54-2	6170377	6116539	6024104	6103674	1.21	cps
Krypton	83-1	647	663	707	672	4.61	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-05 Instrumnet Name : P7
Client Sample ID : MH2GP1 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:53:23 DataFile Name : 033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	12365076	12131391	12244087	12246851	0.95	cps
Lead	207-1	10528546	10376551	10435108	10446735	0.73	cps
Lead	208-1	48706368	48070772	48492400	48423180	0.67	cps
Lithium	6-1	3324695	3324673	3291741	3313703	0.57	cps
Magnesium	24-2	7188694	7313189	7376978	7292954	1.31	cps
Manganese	55-2	9039961	8889292	8648888	8859380	2.23	cps
Molybdenum	94-1	62205	61780	61719	61901	0.43	cps
Molybdenum	95-1	11565	12005	11955	11842	2.04	cps
Molybdenum	96-1	22985	22938	22938	22954	0.12	cps
Molybdenum	97-1	7299	7359	6935	7197	3.18	cps
Molybdenum	98-1	18305	18195	18252	18250	0.30	cps
Neodymium	150-1	433259	432122	431081	432154	0.25	cps
Neodymium	150-2	244069	243892	241885	243282	0.50	cps
Nickel	60-2	277366	276870	274189	276141	0.62	cps
Phosphorus	31-2	122856	122610	123621	123029	0.43	cps
Potassium	39-2	7327602	7397044	7353813	7359487	0.48	cps
Rhodium	103-1	28507115	27913006	28029085	28149735	1.12	cps
Rhodium	103-2	16306516	16054306	16181596	16180806	0.78	cps
Scandium	45-1	17193370	16881110	16946261	17006914	0.97	cps
Scandium	45-2	1451665	1422206	1433484	1435785	1.04	cps
Selenium	82-1	1408	1331	1292	1344	4.38	cps
Selenium	77-2	903	870	903	892	2.16	cps
Selenium	78-2	1297	1203	1203	1235	4.37	cps
Silicon	28-1	105494738	105419805	104068495	104994346	0.76	cps
Silver	107-1	48079	48504	48400	48328	0.46	cps
Silver	109-1	46461	46314	46374	46383	0.16	cps
Sodium	23-2	1119571	1155228	1183394	1152731	2.77	cps
Strontium	86-1	5137042	5130080	5030520	5099214	1.17	cps
Strontium	88-1	44361703	44238389	44483796	44361296	0.28	cps
Sulfur	34-1	391409	390195	392226	391277	0.26	cps
Terbium	159-1	36627223	36771374	36646240	36681612	0.21	cps
Terbium	159-2	23041388	23174591	23136362	23117447	0.30	cps
Thallium	203-1	8489	8583	8233	8435	2.15	cps
Thallium	205-1	19691	20075	19681	19816	1.13	cps
Tin	118-1	36363	36800	37128	36764	1.04	cps
Titanium	47-1	465080	465794	467079	465984	0.22	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-05 Instrumnet Name : P7
Client Sample ID : MH2GP1 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:53:23 DataFile Name : 033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	255555	254832	256098	255495	0.25	cps
Vanadium	51-2	436664	433601	433317	434527	0.43	cps
Yttrium	89-1	44782946	44930724	44495104	44736258	0.50	cps
Yttrium	89-2	11214928	11071258	11043529	11109905	0.83	cps
Zinc	66-2	1453002	1444332	1452461	1449932	0.33	cps
Zirconium	90-1	152185	152937	153553	152892	0.45	cps
Zirconium	91-1	34487	34444	34885	34605	0.70	cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4805-06Instrumnet Name :P7

Client Sample ID :MH2GP2Dilution Factor :1

Date & Time Acquired :2024-11-18 06:56:21DataFile Name :034SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	9310504	9320540	9294149	9308398	0.14	cps
Antimony	121-1	25513	25486	25777	25592	0.63	cps
Arsenic	75-2	28684	27853	28481	28339	1.53	cps
Barium	135-1	5549223	5578703	5591048	5572991	0.39	cps
Barium	137-1	9628592	9461698	9400122	9496804	1.24	cps
Beryllium	9-1	6118	6240	5451	5936	7.15	cps
Bismuth	209-1	20810709	20634369	20696743	20713940	0.43	cps
Bismuth	209-2	13193663	14959083	15233114	14461953	7.65	cps
Bromine	81-1	34470	35787	36178	35478	2.52	cps
Bromine	81-2	3991	3851	4397	4079	6.96	cps
Cadmium	108-1	4104	3817	4167	4029	4.63	cps
Cadmium	106-1	17774	17154	17033	17320	2.30	cps
Cadmium	111-1	65925	66247	65359	65844	0.68	cps
Calcium	43-1	13115403	13035882	13055644	13068976	0.32	cps
Calcium	44-1	207695624	209731910	208439770	208622435	0.49	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	239269	236652	236099	237340	0.71	cps
Cobalt	59-2	251423	253358	250553	251778	0.57	cps
Copper	63-2	1397659	1370540	1369497	1379232	1.16	cps
Dysprosium	156-1	288486	291473	287861	289273	0.67	cps
Dysprosium	156-2	226748	225563	225309	225873	0.34	cps
Erbium	164-1	264989	270580	264819	266796	1.23	cps
Erbium	164-2	174496	169583	172056	172045	1.43	cps
Gadolinium	160-1	282616	282552	285230	283466	0.54	cps
Gadolinium	160-2	197246	195823	194937	196002	0.59	cps
Holmium	165-1	36431089	36025334	36009339	36155254	0.66	cps
Holmium	165-2	20460566	23016685	23456068	22311106	7.25	cps
Indium	115-1	30577060	30534614	30441762	30517812	0.23	cps
Indium	115-2	9008568	10065049	10320118	9797912	7.10	cps
Iron	56-2	155561971	154211838	152252761	154008857	1.08	cps
Iron	57-2	4075256	3981442	4001300	4019333	1.23	cps
Iron	54-2	8532972	8438818	8436445	8469412	0.65	cps
Krypton	83-1	693	787	733	738	6.35	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-06 Instrumnet Name : P7
Client Sample ID : MH2GP2 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:56:21 DataFile Name : 034SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	14272702	14394380	14263719	14310267	0.51	cps
Lead	207-1	12252206	12297814	12309755	12286592	0.25	cps
Lead	208-1	56360812	56613576	56639472	56537953	0.27	cps
Lithium	6-1	3269458	3349153	3344251	3320954	1.34	cps
Magnesium	24-2	8696796	8559418	8603402	8619872	0.81	cps
Manganese	55-2	10129495	10070172	9948585	10049417	0.92	cps
Molybdenum	94-1	72106	73104	72823	72678	0.71	cps
Molybdenum	95-1	19186	19153	18535	18958	1.93	cps
Molybdenum	96-1	31865	31420	31270	31518	0.98	cps
Molybdenum	97-1	11745	11468	11468	11560	1.38	cps
Molybdenum	98-1	29874	29964	29600	29813	0.64	cps
Neodymium	150-1	472390	476703	471871	473655	0.56	cps
Neodymium	150-2	268252	262318	263613	264727	1.18	cps
Nickel	60-2	376373	366845	369881	371033	1.31	cps
Phosphorus	31-2	127304	124599	125762	125888	1.08	cps
Potassium	39-2	7100542	6905497	6988962	6998334	1.40	cps
Rhodium	103-1	28568242	28055807	27799860	28141303	1.39	cps
Rhodium	103-2	14382005	16314359	16476194	15724186	7.41	cps
Scandium	45-1	17007390	17284853	17227928	17173390	0.85	cps
Scandium	45-2	1230438	1410694	1419699	1353610	7.89	cps
Selenium	82-1	1396	1304	1272	1324	4.86	cps
Selenium	77-2	867	867	1090	941	13.70	cps
Selenium	78-2	1360	1323	1280	1321	3.03	cps
Silicon	28-1	110431992	110224095	109587975	110081354	0.40	cps
Silver	107-1	47297	47969	47895	47720	0.77	cps
Silver	109-1	44628	46618	45759	45668	2.19	cps
Sodium	23-2	1494778	1458695	1482130	1478534	1.24	cps
Strontium	86-1	5904330	5878967	5786972	5856756	1.05	cps
Strontium	88-1	50388614	51025993	51141093	50851900	0.80	cps
Sulfur	34-1	613790	604862	605619	608090	0.81	cps
Terbium	159-1	37472357	37170669	36934114	37192380	0.73	cps
Terbium	159-2	20535917	22813153	23763326	22370799	7.41	cps
Thallium	203-1	10497	10557	10334	10463	1.11	cps
Thallium	205-1	24966	24849	24405	24740	1.20	cps
Tin	118-1	39775	39835	40173	39928	0.54	cps
Titanium	47-1	555789	564364	560897	560350	0.77	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-06 Instrumnet Name : P7
Client Sample ID : MH2GP2 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:56:21 DataFile Name : 034SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	348898	344717	344417	346011	0.72	cps
Vanadium	51-2	548071	541990	536563	542208	1.06	cps
Yttrium	89-1	45582689	45155206	45306861	45348252	0.48	cps
Yttrium	89-2	9829340	11083974	11189024	10700779	7.07	cps
Zinc	66-2	1575805	1488813	1490236	1518284	3.28	cps
Zirconium	90-1	168841	172693	171093	170876	1.13	cps
Zirconium	91-1	37247	38417	38300	37988	1.70	cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4805-07Instrumnet Name :P7

Client Sample ID :MH2GP3Dilution Factor :1

Date & Time Acquired :2024-11-18 06:59:23DataFile Name :035SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	8910938	8791072	8776161	8826057	0.84	cps
Antimony	121-1	29403	29206	28007	28872	2.62	cps
Arsenic	75-2	25439	25976	26293	25903	1.67	cps
Barium	135-1	4977569	4922607	4883638	4927938	0.96	cps
Barium	137-1	8431132	8554488	8342398	8442673	1.26	cps
Beryllium	9-1	5579	5618	5546	5581	0.65	cps
Bismuth	209-1	21450949	20674516	20818160	20981208	1.97	cps
Bismuth	209-2	15452681	15171469	15294718	15306289	0.92	cps
Bromine	81-1	33869	34400	34741	34337	1.28	cps
Bromine	81-2	3500	3484	3630	3538	2.27	cps
Cadmium	108-1	3494	3387	3681	3520	4.22	cps
Cadmium	106-1	17137	16650	16503	16763	1.98	cps
Cadmium	111-1	58432	59019	58252	58568	0.68	cps
Calcium	43-1	10708467	10813978	10723555	10748667	0.53	cps
Calcium	44-1	174076804	173711857	174252244	174013635	0.16	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	247828	250829	244880	247846	1.20	cps
Cobalt	59-2	213795	218301	215211	215769	1.07	cps
Copper	63-2	1807233	1737690	1768245	1771056	1.97	cps
Dysprosium	156-1	246403	240895	242140	243146	1.19	cps
Dysprosium	156-2	192781	189871	189980	190877	0.86	cps
Erbium	164-1	220377	221040	218712	220043	0.54	cps
Erbium	164-2	144279	141363	142629	142757	1.02	cps
Gadolinium	160-1	237731	238579	237202	237837	0.29	cps
Gadolinium	160-2	162608	163742	161313	162554	0.75	cps
Holmium	165-1	37860091	35920221	35751704	36510672	3.21	cps
Holmium	165-2	23394418	23151746	23318300	23288155	0.53	cps
Indium	115-1	31469430	30514302	30543403	30842378	1.76	cps
Indium	115-2	10221879	10213782	10241812	10225824	0.14	cps
Iron	56-2	156905958	154941408	154093924	155313763	0.93	cps
Iron	57-2	3995672	4077801	4066807	4046760	1.10	cps
Iron	54-2	8466247	8405182	8441237	8437556	0.36	cps
Krypton	83-1	633	650	710	664	6.07	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-07 Instrumnet Name : P7
Client Sample ID : MH2GP3 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 06:59:23 DataFile Name : 035SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	17074418	17137063	17072454	17094645	0.21	cps
Lead	207-1	14556353	14493284	14336986	14462208	0.78	cps
Lead	208-1	67235545	67375269	66953807	67188207	0.32	cps
Lithium	6-1	3378308	3300908	3204980	3294732	2.64	cps
Magnesium	24-2	7140571	6957739	7071641	7056650	1.31	cps
Manganese	55-2	8890670	8565823	8553286	8669926	2.21	cps
Molybdenum	94-1	76123	77199	76706	76676	0.70	cps
Molybdenum	95-1	24133	25011	23773	24306	2.62	cps
Molybdenum	96-1	38136	37852	39182	38390	1.82	cps
Molybdenum	97-1	15181	15091	15211	15161	0.41	cps
Molybdenum	98-1	38775	39584	38795	39051	1.18	cps
Neodymium	150-1	401794	404753	400031	402193	0.59	cps
Neodymium	150-2	226589	223128	224043	224587	0.80	cps
Nickel	60-2	585280	580486	581747	582505	0.43	cps
Phosphorus	31-2	108182	106380	105755	106772	1.18	cps
Potassium	39-2	5363843	5212528	5190474	5255615	1.80	cps
Rhodium	103-1	29484673	28283908	27964800	28577793	2.80	cps
Rhodium	103-2	16454456	16442402	16439436	16445431	0.05	cps
Scandium	45-1	17734717	17203040	16876121	17271293	2.51	cps
Scandium	45-2	1431834	1405449	1402967	1413417	1.13	cps
Selenium	82-1	1467	1296	1158	1307	11.84	cps
Selenium	77-2	847	757	897	833	8.51	cps
Selenium	78-2	1310	1187	1250	1249	4.94	cps
Silicon	28-1	105873928	103335165	103622285	104277126	1.33	cps
Silver	107-1	49069	49648	49454	49390	0.60	cps
Silver	109-1	46381	47073	47738	47064	1.44	cps
Sodium	23-2	1667764	1626335	1669473	1654524	1.48	cps
Strontium	86-1	5378266	5328243	5346696	5351068	0.47	cps
Strontium	88-1	45823308	46386936	46126789	46112344	0.61	cps
Sulfur	34-1	1168692	980125	984572	1044463	10.30	cps
Terbium	159-1	38175070	37101677	36738985	37338578	2.00	cps
Terbium	159-2	23217815	23052710	22795653	23022060	0.92	cps
Thallium	203-1	10574	10511	10581	10555	0.37	cps
Thallium	205-1	24556	25103	25023	24894	1.19	cps
Tin	118-1	45632	45522	45294	45483	0.38	cps
Titanium	47-1	676892	681596	674354	677614	0.54	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-07

Instrumnet Name :

P7

Client Sample ID :

MH2GP3

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 06:59:23

DataFile Name :

035SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	300939	307675	305433	304682	1.13	cps
Vanadium	51-2	486215	485068	488196	486493	0.33	cps
Yttrium	89-1	46160808	44513281	44840349	45171479	1.93	cps
Yttrium	89-2	11060255	10983652	11034107	11026004	0.35	cps
Zinc	66-2	1767763	1703393	1742072	1737743	1.86	cps
Zirconium	90-1	171556	174675	172506	172912	0.92	cps
Zirconium	91-1	38136	39029	38754	38640	1.18	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-08 Instrumnet Name : P7
Client Sample ID : MH2GP4 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:02:21 DataFile Name : 036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	7692127	7932689	7868303	7831040	1.59	cps
Antimony	121-1	25149	25192	25059	25133	0.27	cps
Arsenic	75-2	19716	19984	19773	19824	0.71	cps
Barium	135-1	5300467	5237712	5143652	5227277	1.51	cps
Barium	137-1	9032985	9024510	8843060	8966852	1.20	cps
Beryllium	9-1	5390	5218	5284	5297	1.64	cps
Bismuth	209-1	20583921	20312200	20603651	20499924	0.79	cps
Bismuth	209-2	15142852	15329036	15127161	15199683	0.74	cps
Bromine	81-1	30020	30956	30475	30484	1.53	cps
Bromine	81-2	2977	2960	2787	2908	3.62	cps
Cadmium	108-1	3971	3937	3974	3961	0.51	cps
Cadmium	106-1	17564	16893	16670	17042	2.73	cps
Cadmium	111-1	63746	64133	63175	63685	0.76	cps
Calcium	43-1	11020259	10898430	10838063	10918917	0.85	cps
Calcium	44-1	176982691	174882271	174185897	175350286	0.83	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	227363	230384	225918	227889	1.00	cps
Cobalt	59-2	212537	211854	212406	212266	0.17	cps
Copper	63-2	1221569	1209367	1204030	1211656	0.74	cps
Dysprosium	156-1	261825	261399	262029	261751	0.12	cps
Dysprosium	156-2	203937	204214	203188	203780	0.26	cps
Erbium	164-1	241543	238883	239422	239949	0.59	cps
Erbium	164-2	155424	154655	154328	154802	0.36	cps
Gadolinium	160-1	259468	256704	257187	257787	0.57	cps
Gadolinium	160-2	175366	177230	175563	176053	0.58	cps
Holmium	165-1	35499669	35566314	35559337	35541774	0.10	cps
Holmium	165-2	23470079	22817133	23418858	23235357	1.56	cps
Indium	115-1	30457993	30308733	30094019	30286915	0.60	cps
Indium	115-2	10209604	10246379	10195739	10217241	0.26	cps
Iron	56-2	128975421	127569591	130073305	128872773	0.97	cps
Iron	57-2	3393383	3423009	3404792	3407061	0.44	cps
Iron	54-2	7061312	6992534	7066043	7039963	0.58	cps
Krypton	83-1	717	767	720	734	3.81	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-08 Instrumnet Name : P7
Client Sample ID : MH2GP4 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:02:21 DataFile Name : 036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	15796930	15627959	15657371	15694087	0.58	cps
Lead	207-1	13655401	13432341	13485986	13524576	0.86	cps
Lead	208-1	62788544	61758309	61872889	62139914	0.91	cps
Lithium	6-1	3210131	3228583	3273116	3237277	1.00	cps
Magnesium	24-2	8045105	8141388	8226155	8137549	1.11	cps
Manganese	55-2	10234847	10048287	10194375	10159170	0.97	cps
Molybdenum	94-1	77695	78499	78656	78283	0.66	cps
Molybdenum	95-1	13553	13526	13356	13479	0.79	cps
Molybdenum	96-1	27245	27847	27115	27402	1.42	cps
Molybdenum	97-1	8222	8646	8212	8360	2.96	cps
Molybdenum	98-1	22020	21419	21533	21657	1.47	cps
Neodymium	150-1	432106	426406	425364	427959	0.85	cps
Neodymium	150-2	239332	239947	234149	237809	1.34	cps
Nickel	60-2	159788	159323	158996	159369	0.25	cps
Phosphorus	31-2	155254	154828	154811	154965	0.16	cps
Potassium	39-2	8760997	8785292	8810882	8785724	0.28	cps
Rhodium	103-1	28074405	28164374	27873268	28037349	0.53	cps
Rhodium	103-2	16291884	16233546	16255635	16260355	0.18	cps
Scandium	45-1	16757605	16938175	16927006	16874262	0.60	cps
Scandium	45-2	1431638	1399302	1415075	1415338	1.14	cps
Selenium	82-1	1272	1373	1288	1311	4.14	cps
Selenium	77-2	910	757	823	830	9.26	cps
Selenium	78-2	1290	1247	1223	1253	2.70	cps
Silicon	28-1	106911982	106489435	105033122	106144846	0.93	cps
Silver	107-1	49942	50287	49892	50040	0.43	cps
Silver	109-1	47611	47792	47156	47520	0.69	cps
Sodium	23-2	1208831	1244740	1252305	1235292	1.88	cps
Strontium	86-1	5152995	5139491	5065312	5119266	0.92	cps
Strontium	88-1	44821424	44911856	44478613	44737298	0.51	cps
Sulfur	34-1	409668	411462	410829	410653	0.22	cps
Terbium	159-1	36896637	36318170	36482378	36565728	0.82	cps
Terbium	159-2	22902062	22983348	22799221	22894877	0.40	cps
Thallium	203-1	8980	8673	8566	8740	2.46	cps
Thallium	205-1	21180	20879	20993	21017	0.72	cps
Tin	118-1	52060	52659	51946	52222	0.73	cps
Titanium	47-1	561921	574568	566935	567808	1.12	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-08

Instrumnet Name :

P7

Client Sample ID :

MH2GP4

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:02:21

DataFile Name :

036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	247885	248703	248669	248419	0.19	cps
Vanadium	51-2	408579	409237	406577	408131	0.34	cps
Yttrium	89-1	44498036	44791913	44451884	44580611	0.41	cps
Yttrium	89-2	10975484	11069563	11067151	11037399	0.49	cps
Zinc	66-2	1720297	1704566	1733372	1719412	0.84	cps
Zirconium	90-1	192550	195200	197586	195112	1.29	cps
Zirconium	91-1	43193	43849	43120	43387	0.92	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-09 Instrumnet Name : P7
Client Sample ID : MH2GP5 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:05:20 DataFile Name : 037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	7968682	8325473	8155139	8149765	2.19	cps
Antimony	121-1	27747	27590	28639	27992	2.02	cps
Arsenic	75-2	27051	27325	26340	26906	1.89	cps
Barium	135-1	5929423	5934674	5908953	5924350	0.23	cps
Barium	137-1	10182429	10216368	10023015	10140604	1.02	cps
Beryllium	9-1	5851	5935	5912	5899	0.73	cps
Bismuth	209-1	20813165	20298734	20302085	20471328	1.45	cps
Bismuth	209-2	14878374	14986721	14765906	14877000	0.74	cps
Bromine	81-1	32659	33124	33311	33031	1.02	cps
Bromine	81-2	3374	3707	3497	3526	4.78	cps
Cadmium	108-1	4371	4611	4554	4512	2.78	cps
Cadmium	106-1	18125	17414	17601	17713	2.08	cps
Cadmium	111-1	71566	71493	71041	71367	0.40	cps
Calcium	43-1	12947755	13065140	12720781	12911225	1.36	cps
Calcium	44-1	207702690	208538937	205480764	207240797	0.76	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	207975	204281	205737	205998	0.90	cps
Cobalt	59-2	236475	232816	235384	234891	0.80	cps
Copper	63-2	1686609	1694349	1652632	1677863	1.32	cps
Dysprosium	156-1	274835	279831	281677	278781	1.27	cps
Dysprosium	156-2	217634	214849	218568	217017	0.89	cps
Erbium	164-1	260847	260327	261873	261016	0.30	cps
Erbium	164-2	169346	170884	168162	169464	0.81	cps
Gadolinium	160-1	274444	277948	275556	275982	0.65	cps
Gadolinium	160-2	191172	190622	188291	190028	0.80	cps
Holmium	165-1	36285430	35825208	35686355	35932331	0.87	cps
Holmium	165-2	22879450	22740863	22675611	22765308	0.46	cps
Indium	115-1	31218329	30059716	29896592	30391546	2.37	cps
Indium	115-2	10242643	10091300	9960684	10098209	1.40	cps
Iron	56-2	122449748	120399085	123112692	121987175	1.16	cps
Iron	57-2	3252909	3213439	3288085	3251478	1.15	cps
Iron	54-2	6657817	6665622	6670353	6664597	0.09	cps
Krypton	83-1	707	607	777	697	12.26	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-09 Instrumnet Name : P7
Client Sample ID : MH2GP5 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:05:20 DataFile Name : 037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	16381571	16160294	16077386	16206417	0.97	cps
Lead	207-1	13859636	13782799	13675823	13772752	0.67	cps
Lead	208-1	63600939	63476602	63115782	63397774	0.40	cps
Lithium	6-1	3330874	3275508	3237219	3281200	1.44	cps
Magnesium	24-2	8211177	8225439	8063141	8166586	1.10	cps
Manganese	55-2	10294078	10008496	10291106	10197893	1.61	cps
Molybdenum	94-1	86252	86587	87499	86779	0.74	cps
Molybdenum	95-1	13269	13530	13076	13292	1.71	cps
Molybdenum	96-1	28281	28812	28738	28610	1.01	cps
Molybdenum	97-1	8523	8326	8553	8467	1.46	cps
Molybdenum	98-1	20725	21035	21229	20996	1.21	cps
Neodymium	150-1	449394	444412	446181	446662	0.57	cps
Neodymium	150-2	252329	251004	249668	251000	0.53	cps
Nickel	60-2	340134	338243	341181	339852	0.44	cps
Phosphorus	31-2	145958	146413	147184	146518	0.42	cps
Potassium	39-2	8395174	8400654	8317513	8371114	0.56	cps
Rhodium	103-1	28835241	27374849	28053982	28088024	2.60	cps
Rhodium	103-2	16001321	16123802	15980758	16035294	0.48	cps
Scandium	45-1	17570431	16845332	17015659	17143807	2.21	cps
Scandium	45-2	1409651	1408826	1408503	1408993	0.04	cps
Selenium	82-1	1316	1470	1253	1346	8.29	cps
Selenium	77-2	867	983	837	896	8.65	cps
Selenium	78-2	1280	1377	1257	1305	4.88	cps
Silicon	28-1	106198128	105867245	107875368	106646914	1.01	cps
Silver	107-1	52782	53920	53769	53490	1.16	cps
Silver	109-1	50130	49959	50651	50247	0.72	cps
Sodium	23-2	1369742	1366867	1392533	1376381	1.02	cps
Strontium	86-1	5890743	5919612	5903072	5904476	0.25	cps
Strontium	88-1	52136498	51792226	51143653	51690792	0.98	cps
Sulfur	34-1	406170	407830	406331	406777	0.23	cps
Terbium	159-1	37662533	36373792	36251590	36762638	2.13	cps
Terbium	159-2	22950470	22698745	22722366	22790527	0.61	cps
Thallium	203-1	9650	9563	9393	9536	1.37	cps
Thallium	205-1	22585	22502	22288	22459	0.68	cps
Tin	118-1	53428	54456	54058	53981	0.96	cps
Titanium	47-1	525453	524598	523667	524573	0.17	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-09

Instrumnet Name :

P7

Client Sample ID :

MH2GP5

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:05:20

DataFile Name :

037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	292350	292824	292065	292413	0.13	cps
Vanadium	51-2	469049	461710	468227	466329	0.86	cps
Yttrium	89-1	46532151	44888369	44518283	45312934	2.37	cps
Yttrium	89-2	11061379	11022075	11100994	11061483	0.36	cps
Zinc	66-2	1785877	1785168	1777884	1782976	0.25	cps
Zirconium	90-1	215658	220984	219305	218649	1.25	cps
Zirconium	91-1	47898	48838	48440	48392	0.97	cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4805-10Instrumnet Name :P7

Client Sample ID :MH2GP6Dilution Factor :1

Date & Time Acquired :2024-11-18 07:08:17DataFile Name :038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	7823772	7785397	7647828	7752332	1.19	cps
Antimony	121-1	25700	25890	25152	25581	1.50	cps
Arsenic	75-2	23609	23802	24046	23819	0.92	cps
Barium	135-1	5407645	5295234	5336728	5346536	1.06	cps
Barium	137-1	9238866	9151034	9001055	9130318	1.32	cps
Beryllium	9-1	6023	5779	5379	5727	5.68	cps
Bismuth	209-1	20233613	20392783	20199232	20275210	0.51	cps
Bismuth	209-2	14782951	14568546	14796624	14716040	0.87	cps
Bromine	81-1	32466	33578	34353	33466	2.84	cps
Bromine	81-2	3907	3721	3797	3808	2.46	cps
Cadmium	108-1	3744	3510	3484	3579	4.00	cps
Cadmium	106-1	16483	15885	16249	16206	1.86	cps
Cadmium	111-1	60432	58893	59360	59561	1.32	cps
Calcium	43-1	13162911	13222427	13004921	13130086	0.86	cps
Calcium	44-1	210360497	212131364	212265104	211585655	0.50	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	195139	192076	192094	193103	0.91	cps
Cobalt	59-2	222326	220158	220066	220850	0.58	cps
Copper	63-2	1390176	1396959	1378644	1388593	0.67	cps
Dysprosium	156-1	264678	262570	263845	263698	0.40	cps
Dysprosium	156-2	204098	205823	205666	205195	0.46	cps
Erbium	164-1	243831	245581	246802	245405	0.61	cps
Erbium	164-2	160429	161161	159650	160413	0.47	cps
Gadolinium	160-1	260358	261088	262791	261412	0.48	cps
Gadolinium	160-2	181347	180058	178910	180105	0.68	cps
Holmium	165-1	35073441	35271181	35154190	35166271	0.28	cps
Holmium	165-2	22787014	22590799	22404591	22594135	0.85	cps
Indium	115-1	30195470	29921407	29538644	29885174	1.10	cps
Indium	115-2	10061263	9807869	9946679	9938604	1.28	cps
Iron	56-2	121555005	119599658	118193485	119782716	1.41	cps
Iron	57-2	3233572	3169231	3191956	3198253	1.02	cps
Iron	54-2	6582908	6552482	6572609	6569333	0.24	cps
Krypton	83-1	590	690	707	662	9.53	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-10 Instrumnet Name : P7
Client Sample ID : MH2GP6 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:08:17 DataFile Name : 038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	11817701	11850789	11700493	11789661	0.67	cps
Lead	207-1	10035328	10049684	10039295	10041436	0.07	cps
Lead	208-1	46369007	46428483	46179145	46325545	0.28	cps
Lithium	6-1	3278019	3196549	3182004	3218857	1.61	cps
Magnesium	24-2	7491363	7510505	7517402	7506423	0.18	cps
Manganese	55-2	8660217	8557543	8609778	8609179	0.60	cps
Molybdenum	94-1	73530	74498	74706	74245	0.85	cps
Molybdenum	95-1	21803	21312	20755	21290	2.46	cps
Molybdenum	96-1	34992	33766	34567	34442	1.81	cps
Molybdenum	97-1	12993	13056	13086	13045	0.37	cps
Molybdenum	98-1	34327	33913	34527	34256	0.92	cps
Neodymium	150-1	430974	430947	428030	429984	0.39	cps
Neodymium	150-2	241555	241002	239454	240670	0.45	cps
Nickel	60-2	474671	471030	467345	471015	0.78	cps
Phosphorus	31-2	117363	117439	118199	117667	0.39	cps
Potassium	39-2	6481651	6416433	6440809	6446298	0.51	cps
Rhodium	103-1	27482365	27255613	27283175	27340384	0.45	cps
Rhodium	103-2	15950317	15786149	15919894	15885453	0.55	cps
Scandium	45-1	16402279	16707070	16630652	16580001	0.96	cps
Scandium	45-2	1396991	1391589	1397165	1395248	0.23	cps
Selenium	82-1	1484	1313	1190	1329	11.13	cps
Selenium	77-2	850	847	833	843	1.05	cps
Selenium	78-2	1303	1330	1230	1288	4.02	cps
Silicon	28-1	99360572	99705669	99502579	99522940	0.17	cps
Silver	107-1	42064	42348	43053	42489	1.20	cps
Silver	109-1	40242	40928	41155	40775	1.16	cps
Sodium	23-2	1423286	1430515	1420897	1424900	0.35	cps
Strontium	86-1	5688889	5597734	5644921	5643848	0.81	cps
Strontium	88-1	49126943	49795549	48625843	49182778	1.19	cps
Sulfur	34-1	595181	597816	602213	598403	0.59	cps
Terbium	159-1	35679718	35756699	35878794	35771737	0.28	cps
Terbium	159-2	22803314	22526560	22329834	22553236	1.05	cps
Thallium	203-1	8763	8910	9036	8903	1.54	cps
Thallium	205-1	21581	21384	21133	21366	1.05	cps
Tin	118-1	34755	36616	36623	35998	2.99	cps
Titanium	47-1	485604	491056	490748	489136	0.63	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-10

Instrumnet Name :

P7

Client Sample ID :

MH2GP6

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:08:17

DataFile Name :

038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	319330	317434	315914	317560	0.54	cps
Vanadium	51-2	472275	468188	468891	469784	0.47	cps
Yttrium	89-1	44280438	44545539	44007393	44277790	0.61	cps
Yttrium	89-2	11066580	10701464	10915656	10894567	1.68	cps
Zinc	66-2	1253736	1272138	1252734	1259536	0.87	cps
Zirconium	90-1	168585	170949	168467	169334	0.83	cps
Zirconium	91-1	37337	38043	37688	37689	0.94	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-11 Instrumnet Name : P7
Client Sample ID : MH2GP7 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:11:18 DataFile Name : 039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	9243245	9352488	9282941	9292891	0.60	cps
Antimony	121-1	34311	34739	34341	34463	0.69	cps
Arsenic	75-2	30628	31079	30622	30776	0.85	cps
Barium	135-1	6243772	6280106	6289668	6271182	0.39	cps
Barium	137-1	10659194	10819952	10721452	10733533	0.76	cps
Beryllium	9-1	6062	6557	6312	6311	3.92	cps
Bismuth	209-1	20167306	19062710	19617828	19615948	2.82	cps
Bismuth	209-2	15092092	15019000	14736477	14949190	1.26	cps
Bromine	81-1	40796	41020	41706	41174	1.15	cps
Bromine	81-2	5058	5071	5281	5137	2.44	cps
Cadmium	108-1	5648	5825	5628	5700	1.90	cps
Cadmium	106-1	19480	18742	18665	18962	2.37	cps
Cadmium	111-1	88787	88207	88945	88646	0.44	cps
Calcium	43-1	15303551	15312952	15345371	15320625	0.14	cps
Calcium	44-1	246800836	247284810	245011043	246365563	0.49	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	340478	341826	343280	341862	0.41	cps
Cobalt	59-2	239942	240568	236522	239011	0.91	cps
Copper	63-2	1977703	1997131	1993670	1989502	0.52	cps
Dysprosium	156-1	274961	277141	275351	275818	0.42	cps
Dysprosium	156-2	217263	219241	220004	218836	0.65	cps
Erbium	164-1	251356	253220	252038	252204	0.37	cps
Erbium	164-2	165299	165895	165120	165438	0.25	cps
Gadolinium	160-1	270135	271353	268862	270116	0.46	cps
Gadolinium	160-2	188682	186950	184376	186669	1.16	cps
Holmium	165-1	35206842	33430917	33868434	34168731	2.71	cps
Holmium	165-2	23142215	22736574	22921026	22933272	0.89	cps
Indium	115-1	29739489	27988637	28792876	28840334	3.04	cps
Indium	115-2	10226344	10123390	10133977	10161237	0.56	cps
Iron	56-2	157060614	157748034	154813144	156540598	0.98	cps
Iron	57-2	4177718	4204552	4164837	4182369	0.48	cps
Iron	54-2	8543377	8655117	8515857	8571450	0.86	cps
Krypton	83-1	730	740	693	721	3.41	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-11 Instrumnet Name : P7
Client Sample ID : MH2GP7 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:11:18 DataFile Name : 039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	17274137	17596204	17555972	17475438	1.00	cps
Lead	207-1	14739410	14880051	14821914	14813792	0.48	cps
Lead	208-1	68451880	69016526	68489911	68652773	0.46	cps
Lithium	6-1	3242446	3068468	3052440	3121118	3.38	cps
Magnesium	24-2	7816128	7692973	7741486	7750196	0.80	cps
Manganese	55-2	9841762	10011854	9753667	9869095	1.33	cps
Molybdenum	94-1	125468	124988	123713	124723	0.73	cps
Molybdenum	95-1	38046	38430	38066	38181	0.57	cps
Molybdenum	96-1	60116	59534	59694	59781	0.50	cps
Molybdenum	97-1	24451	23789	23763	24001	1.62	cps
Molybdenum	98-1	62188	62088	62098	62125	0.09	cps
Neodymium	150-1	452829	456992	457493	455772	0.56	cps
Neodymium	150-2	256057	255682	256575	256105	0.18	cps
Nickel	60-2	827066	829519	818551	825045	0.70	cps
Phosphorus	31-2	119210	121787	119183	120060	1.25	cps
Potassium	39-2	5961557	5956064	5957940	5958521	0.05	cps
Rhodium	103-1	27416517	25933703	26674874	26675031	2.78	cps
Rhodium	103-2	16107836	16118434	15934194	16053488	0.64	cps
Scandium	45-1	16740999	15832863	16177355	16250405	2.82	cps
Scandium	45-2	1412683	1435629	1408616	1418976	1.03	cps
Selenium	82-1	2006	1811	1771	1863	6.75	cps
Selenium	77-2	933	990	967	963	2.96	cps
Selenium	78-2	1477	1460	1473	1470	0.60	cps
Silicon	28-1	102439152	102055768	101082885	101859268	0.69	cps
Silver	107-1	62966	63826	62959	63250	0.79	cps
Silver	109-1	59404	60040	59789	59745	0.54	cps
Sodium	23-2	2301133	2336542	2340071	2325915	0.93	cps
Strontium	86-1	6566490	6576622	6502510	6548540	0.61	cps
Strontium	88-1	57189194	57804352	57074206	57355917	0.68	cps
Sulfur	34-1	1268025	1286325	1261667	1272006	1.01	cps
Terbium	159-1	36092343	34129804	35344507	35188884	2.81	cps
Terbium	159-2	22767018	22814712	23010650	22864127	0.56	cps
Thallium	203-1	11789	11692	11735	11738	0.41	cps
Thallium	205-1	28500	28781	28423	28568	0.66	cps
Tin	118-1	91716	93481	91693	92296	1.11	cps
Titanium	47-1	732006	740215	737172	736464	0.56	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-11

Instrumnet Name :

P7

Client Sample ID :

MH2GP7

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:11:18

DataFile Name :

039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	395830	397391	395932	396384	0.22	cps
Vanadium	51-2	532201	534540	534996	533912	0.28	cps
Yttrium	89-1	44635883	42375549	43201538	43404323	2.64	cps
Yttrium	89-2	11140379	11094179	10971670	11068743	0.79	cps
Zinc	66-2	3599490	3664693	3597460	3620547	1.06	cps
Zirconium	90-1	281379	284045	283496	282973	0.50	cps
Zirconium	91-1	62710	63102	62984	62932	0.32	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-12 Instrumnet Name : P7
Client Sample ID : MH2GP8 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:14:13 DataFile Name : 040SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	7540205	7646575	7509047	7565276	0.95	cps
Antimony	121-1	20418	21349	21102	20956	2.30	cps
Arsenic	75-2	20100	20087	20534	20241	1.26	cps
Barium	135-1	5014732	4978214	4982728	4991891	0.40	cps
Barium	137-1	8473510	8752722	8450497	8558910	1.97	cps
Beryllium	9-1	5179	5173	5162	5171	0.16	cps
Bismuth	209-1	21099600	20817973	20547167	20821580	1.33	cps
Bismuth	209-2	15345811	15355385	15273594	15324930	0.29	cps
Bromine	81-1	28040	29049	29292	28794	2.31	cps
Bromine	81-2	3114	2880	3017	3004	3.90	cps
Cadmium	108-1	4167	4107	4021	4098	1.80	cps
Cadmium	106-1	17554	17053	16459	17022	3.22	cps
Cadmium	111-1	65639	66010	65277	65642	0.56	cps
Calcium	43-1	10798065	10631336	10716072	10715158	0.78	cps
Calcium	44-1	172472397	172219744	169572701	171421614	0.94	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	215122	217010	215721	215951	0.45	cps
Cobalt	59-2	204362	203821	204521	204235	0.18	cps
Copper	63-2	1260465	1263267	1259227	1260986	0.16	cps
Dysprosium	156-1	255756	255109	254789	255218	0.19	cps
Dysprosium	156-2	199771	198090	201630	199831	0.89	cps
Erbium	164-1	234622	233876	235896	234798	0.44	cps
Erbium	164-2	152229	150572	152738	151846	0.75	cps
Gadolinium	160-1	251320	251079	249277	250559	0.45	cps
Gadolinium	160-2	173287	173935	172882	173368	0.31	cps
Holmium	165-1	36073601	35847344	35661821	35860922	0.58	cps
Holmium	165-2	23553631	23413062	23254000	23406898	0.64	cps
Indium	115-1	30717904	30613729	29956344	30429326	1.36	cps
Indium	115-2	10387504	10200903	10191371	10259926	1.08	cps
Iron	56-2	121650855	121444168	120510825	121201949	0.50	cps
Iron	57-2	3216828	3170397	3194072	3193766	0.73	cps
Iron	54-2	6645434	6621778	6595246	6620819	0.38	cps
Krypton	83-1	647	643	627	639	1.68	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-12 Instrumnet Name : P7
Client Sample ID : MH2GP8 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:14:13 DataFile Name : 040SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	13297749	13437434	13314878	13350020	0.57	cps
Lead	207-1	11385864	11494099	11547807	11475923	0.72	cps
Lead	208-1	52692460	53028157	52926012	52882210	0.33	cps
Lithium	6-1	3277564	3272813	3249264	3266547	0.46	cps
Magnesium	24-2	8101855	8031272	7906985	8013371	1.23	cps
Manganese	55-2	9876601	9878025	9861109	9871911	0.10	cps
Molybdenum	94-1	62004	62854	63373	62744	1.10	cps
Molybdenum	95-1	10871	11001	10924	10932	0.60	cps
Molybdenum	96-1	22264	22107	21963	22111	0.68	cps
Molybdenum	97-1	6552	6722	6902	6725	2.60	cps
Molybdenum	98-1	17818	17267	17194	17426	1.96	cps
Neodymium	150-1	414893	418306	419961	417720	0.62	cps
Neodymium	150-2	235430	234825	234004	234753	0.30	cps
Nickel	60-2	148382	149123	149224	148910	0.31	cps
Phosphorus	31-2	144121	142247	140421	142263	1.30	cps
Potassium	39-2	8484592	8445005	8376994	8435530	0.65	cps
Rhodium	103-1	28006574	27939919	27417410	27787968	1.16	cps
Rhodium	103-2	16336746	16194579	16293621	16274982	0.45	cps
Scandium	45-1	17095454	16824564	16787034	16902350	1.00	cps
Scandium	45-2	1423788	1424558	1389817	1412721	1.40	cps
Selenium	82-1	1409	1377	1388	1391	1.18	cps
Selenium	77-2	830	837	827	831	0.61	cps
Selenium	78-2	1180	1310	1293	1261	5.61	cps
Silicon	28-1	99844292	99317139	100101842	99754424	0.40	cps
Silver	107-1	47344	48089	48133	47855	0.93	cps
Silver	109-1	44301	46143	46297	45580	2.44	cps
Sodium	23-2	1256892	1251515	1254424	1254277	0.21	cps
Strontium	86-1	4936211	4964679	4955050	4951980	0.29	cps
Strontium	88-1	43281416	43273578	43229089	43261361	0.07	cps
Sulfur	34-1	404764	401466	406333	404187	0.61	cps
Terbium	159-1	37058773	36999550	36238540	36765621	1.24	cps
Terbium	159-2	23350965	23192336	23320020	23287774	0.36	cps
Thallium	203-1	8446	8780	8796	8674	2.28	cps
Thallium	205-1	19908	19991	20469	20123	1.50	cps
Tin	118-1	101602	103404	100233	101746	1.56	cps
Titanium	47-1	519916	515554	511281	515584	0.84	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-12

Instrumnet Name :

P7

Client Sample ID :

MH2GP8

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:14:13

DataFile Name :

040SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	224853	224132	224344	224443	0.17	cps
Vanadium	51-2	403315	403175	404084	403525	0.12	cps
Yttrium	89-1	44750114	44171556	44213551	44378407	0.73	cps
Yttrium	89-2	11045925	11039992	10993612	11026510	0.26	cps
Zinc	66-2	1755000	1768363	1723292	1748885	1.32	cps
Zirconium	90-1	157558	156305	156090	156651	0.51	cps
Zirconium	91-1	34975	35483	34835	35097	0.97	cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :P4805-13Instrumnet Name :P7

Client Sample ID :MH2GP9Dilution Factor :1

Date & Time Acquired :2024-11-18 07:17:13DataFile Name :041SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	8006090	8113672	8039509	8053090	0.68	cps
Antimony	121-1	32139	32086	31588	31938	0.95	cps
Arsenic	75-2	27526	27085	26454	27021	1.99	cps
Barium	135-1	5525436	5486578	5519080	5510365	0.38	cps
Barium	137-1	9342470	9404562	9480842	9409291	0.74	cps
Beryllium	9-1	5584	5829	5840	5751	2.51	cps
Bismuth	209-1	21003386	20492681	20781427	20759165	1.23	cps
Bismuth	209-2	15459819	15380900	15269036	15369918	0.62	cps
Bromine	81-1	31520	31931	32836	32096	2.10	cps
Bromine	81-2	3640	3727	3590	3653	1.89	cps
Cadmium	108-1	3921	4251	4284	4152	4.84	cps
Cadmium	106-1	17764	17681	17638	17694	0.36	cps
Cadmium	111-1	68664	68963	67681	68436	0.98	cps
Calcium	43-1	12358442	12442394	12312083	12370973	0.53	cps
Calcium	44-1	195656850	198880557	197168330	197235246	0.82	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	243743	245723	241904	243790	0.78	cps
Cobalt	59-2	225016	225421	225652	225363	0.14	cps
Copper	63-2	1439770	1441048	1445060	1441959	0.19	cps
Dysprosium	156-1	266390	270174	269304	268623	0.74	cps
Dysprosium	156-2	211782	210433	212305	211507	0.46	cps
Erbium	164-1	244312	248021	247841	246725	0.85	cps
Erbium	164-2	160443	162337	162175	161652	0.65	cps
Gadolinium	160-1	262146	265591	262090	263276	0.76	cps
Gadolinium	160-2	181969	184639	183198	183269	0.73	cps
Holmium	165-1	36679991	36035778	35832934	36182901	1.22	cps
Holmium	165-2	23105728	23054201	23256307	23138745	0.45	cps
Indium	115-1	30665814	30052820	30216426	30311686	1.05	cps
Indium	115-2	10326381	10032515	10271134	10210010	1.53	cps
Iron	56-2	120672878	120531195	118496645	119900239	1.02	cps
Iron	57-2	3205266	3206477	3204883	3205542	0.03	cps
Iron	54-2	6553365	6492269	6476950	6507528	0.62	cps
Krypton	83-1	667	770	650	696	9.35	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-13 Instrumnet Name : P7
Client Sample ID : MH2GP9 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:17:13 DataFile Name : 041SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	14549794	14551026	14660443	14587088	0.44	cps
Lead	207-1	12346212	12513004	12629529	12496248	1.14	cps
Lead	208-1	57043345	57584509	57910195	57512683	0.76	cps
Lithium	6-1	3441629	3330084	3386219	3385978	1.65	cps
Magnesium	24-2	7614257	7689694	7591342	7631764	0.67	cps
Manganese	55-2	9775552	9801522	9565916	9714330	1.33	cps
Molybdenum	94-1	62581	62653	61876	62370	0.69	cps
Molybdenum	95-1	12729	12956	12349	12678	2.42	cps
Molybdenum	96-1	23663	24187	23716	23855	1.21	cps
Molybdenum	97-1	7672	7715	8192	7860	3.67	cps
Molybdenum	98-1	20167	19860	20338	20122	1.20	cps
Neodymium	150-1	432802	439491	435153	435815	0.78	cps
Neodymium	150-2	248216	248080	248654	248317	0.12	cps
Nickel	60-2	348273	348878	344093	347081	0.75	cps
Phosphorus	31-2	127005	128040	127573	127539	0.41	cps
Potassium	39-2	7166043	7354137	7173588	7231256	1.47	cps
Rhodium	103-1	28489675	27774016	27775436	28013043	1.47	cps
Rhodium	103-2	16500388	16150313	16253934	16301545	1.10	cps
Scandium	45-1	17053342	16692790	17020395	16922176	1.18	cps
Scandium	45-2	1436414	1432602	1421269	1430095	0.55	cps
Selenium	82-1	1515	1333	1286	1378	8.78	cps
Selenium	77-2	863	953	900	906	5.00	cps
Selenium	78-2	1277	1267	1177	1240	4.44	cps
Silicon	28-1	103526295	106188675	107032902	105582624	1.73	cps
Silver	107-1	49136	49360	48360	48952	1.07	cps
Silver	109-1	45304	46738	46397	46147	1.62	cps
Sodium	23-2	1306110	1310721	1301596	1306143	0.35	cps
Strontium	86-1	5505286	5631082	5591359	5575909	1.15	cps
Strontium	88-1	47894738	48966726	47911546	48257670	1.27	cps
Sulfur	34-1	429433	428917	433723	430691	0.61	cps
Terbium	159-1	37492598	36793269	36322191	36869353	1.60	cps
Terbium	159-2	23375656	23107576	23297055	23260096	0.59	cps
Thallium	203-1	8656	8696	8506	8619	1.16	cps
Thallium	205-1	20673	20312	20475	20487	0.88	cps
Tin	118-1	31768	33035	32126	32310	2.02	cps
Titanium	47-1	455963	470254	461636	462617	1.56	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-13

Instrumnet Name :

P7

Client Sample ID :

MH2GP9

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:17:13

DataFile Name :

041SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	291235	295796	299311	295448	1.37	cps
Vanadium	51-2	462431	464582	462081	463031	0.29	cps
Yttrium	89-1	45547528	44379261	44589619	44838803	1.39	cps
Yttrium	89-2	11174157	11146215	11055641	11125338	0.56	cps
Zinc	66-2	1637567	1663899	1642457	1647974	0.85	cps
Zirconium	90-1	149623	150559	152583	150922	1.00	cps
Zirconium	91-1	32967	33218	33669	33284	1.07	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-14 Instrumnet Name : P7
Client Sample ID : MH2GQ0 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:20:11 DataFile Name : 042SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	9922497	10096535	9883536	9967522	1.14	cps
Antimony	121-1	26364	27059	26541	26655	1.35	cps
Arsenic	75-2	25409	25465	25201	25358	0.55	cps
Barium	135-1	5226288	5240383	5267450	5244707	0.40	cps
Barium	137-1	8902186	9008314	9030295	8980265	0.76	cps
Beryllium	9-1	6413	5946	6474	6277	4.60	cps
Bismuth	209-1	20801968	21126553	20780865	20903128	0.93	cps
Bismuth	209-2	15299068	15455428	15323646	15359381	0.55	cps
Bromine	81-1	34066	34664	35493	34741	2.06	cps
Bromine	81-2	3887	4031	3847	3922	2.46	cps
Cadmium	108-1	3624	3721	3677	3674	1.32	cps
Cadmium	106-1	16887	16506	16590	16661	1.20	cps
Cadmium	111-1	59718	60180	59359	59753	0.69	cps
Calcium	43-1	12175706	12081649	12046326	12101227	0.55	cps
Calcium	44-1	196122930	195874924	195757017	195918290	0.10	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	239752	242526	238806	240361	0.80	cps
Cobalt	59-2	235314	236553	239008	236958	0.79	cps
Copper	63-2	1178554	1178502	1180773	1179276	0.11	cps
Dysprosium	156-1	262084	259662	264833	262193	0.99	cps
Dysprosium	156-2	206205	205041	206437	205894	0.36	cps
Erbium	164-1	241388	242977	240378	241581	0.54	cps
Erbium	164-2	158373	157015	157401	157596	0.44	cps
Gadolinium	160-1	253138	256977	258405	256173	1.06	cps
Gadolinium	160-2	176288	175349	176500	176046	0.35	cps
Holmium	165-1	35872887	36108124	36223264	36068092	0.50	cps
Holmium	165-2	23680611	23530394	23413290	23541432	0.57	cps
Indium	115-1	30380459	30512638	30222432	30371843	0.48	cps
Indium	115-2	10327822	10248186	10185546	10253852	0.70	cps
Iron	56-2	150980268	150538224	149529518	150349337	0.49	cps
Iron	57-2	3918910	3848926	3884792	3884209	0.90	cps
Iron	54-2	8279249	8256703	8169548	8235167	0.70	cps
Krypton	83-1	650	787	680	706	10.18	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-14 Instrumnet Name : P7
Client Sample ID : MH2GQ0 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:20:11 DataFile Name : 042SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	11911430	11851792	12063585	11942269	0.91	cps
Lead	207-1	10098964	10080200	10250056	10143073	0.92	cps
Lead	208-1	46719365	46929482	47037820	46895556	0.35	cps
Lithium	6-1	3449876	3343991	3351015	3381627	1.75	cps
Magnesium	24-2	8185164	8291207	8240209	8238860	0.64	cps
Manganese	55-2	9140577	9168946	9008651	9106058	0.94	cps
Molybdenum	94-1	76646	76592	76421	76553	0.15	cps
Molybdenum	95-1	17527	17694	18141	17788	1.79	cps
Molybdenum	96-1	31267	31180	31030	31159	0.39	cps
Molybdenum	97-1	11024	11058	11018	11033	0.19	cps
Molybdenum	98-1	28097	27887	28217	28067	0.60	cps
Neodymium	150-1	426765	431502	430098	429455	0.57	cps
Neodymium	150-2	240305	240202	237800	239436	0.59	cps
Nickel	60-2	445302	445590	441005	443966	0.58	cps
Phosphorus	31-2	105225	105688	105313	105409	0.23	cps
Potassium	39-2	6469719	6552618	6526056	6516131	0.65	cps
Rhodium	103-1	28279855	27902866	27591828	27924850	1.23	cps
Rhodium	103-2	16385731	15969424	16267267	16207474	1.32	cps
Scandium	45-1	17060167	16993699	16739274	16931047	1.00	cps
Scandium	45-2	1421841	1442084	1434899	1432941	0.72	cps
Selenium	82-1	1465	1306	1288	1353	7.20	cps
Selenium	77-2	813	907	813	844	6.38	cps
Selenium	78-2	1200	1333	1263	1266	5.27	cps
Silicon	28-1	117600525	119083268	118138122	118273972	0.63	cps
Silver	107-1	44615	44388	45016	44673	0.71	cps
Silver	109-1	41406	41533	42024	41654	0.78	cps
Sodium	23-2	1699717	1691232	1670426	1687125	0.89	cps
Strontium	86-1	5533703	5517113	5523118	5524645	0.15	cps
Strontium	88-1	48559551	48383961	47736886	48226799	0.90	cps
Sulfur	34-1	580374	577823	576876	578358	0.31	cps
Terbium	159-1	36637834	36938639	36981151	36852541	0.51	cps
Terbium	159-2	23428476	23409961	23473522	23437320	0.14	cps
Thallium	203-1	11108	10884	11408	11134	2.36	cps
Thallium	205-1	26726	26426	26486	26546	0.60	cps
Tin	118-1	30449	31185	29858	30497	2.18	cps
Titanium	47-1	636913	633592	636733	635746	0.29	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-14

Instrumnet Name :

P7

Client Sample ID :

MH2GQ0

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:20:11

DataFile Name :

042SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	326898	330712	327355	328322	0.63	cps
Vanadium	51-2	494813	494201	493424	494146	0.14	cps
Yttrium	89-1	44988711	44271321	43786931	44348988	1.36	cps
Yttrium	89-2	11160300	10973659	11103455	11079138	0.86	cps
Zinc	66-2	1239475	1236468	1240413	1238785	0.17	cps
Zirconium	90-1	180751	184139	181214	182035	1.01	cps
Zirconium	91-1	40065	40165	40208	40146	0.18	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-15 Instrumnet Name : P7
Client Sample ID : MH2GQ1 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:23:14 DataFile Name : 043SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	10617192	10626507	10683457	10642385	0.34	cps
Antimony	121-1	28325	28361	28432	28372	0.19	cps
Arsenic	75-2	29306	30014	29686	29669	1.19	cps
Barium	135-1	5265460	5330408	5407350	5334406	1.33	cps
Barium	137-1	9130085	9292372	9289682	9237380	1.01	cps
Beryllium	9-1	6201	6707	6529	6479	3.96	cps
Bismuth	209-1	21431719	20799887	20668148	20966585	1.95	cps
Bismuth	209-2	15348288	15284104	15180647	15271013	0.55	cps
Bromine	81-1	36709	38460	38791	37987	2.95	cps
Bromine	81-2	4564	4474	4864	4634	4.41	cps
Cadmium	108-1	4191	4294	4181	4222	1.49	cps
Cadmium	106-1	17501	17931	17674	17702	1.22	cps
Cadmium	111-1	66208	67632	66979	66940	1.06	cps
Calcium	43-1	12476002	12873475	12540989	12630155	1.69	cps
Calcium	44-1	199146170	205688964	201547910	202127681	1.64	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	226834	226402	225416	226217	0.32	cps
Cobalt	59-2	237772	234047	234064	235294	0.91	cps
Copper	63-2	1406313	1407850	1398500	1404221	0.36	cps
Dysprosium	156-1	254901	260832	257557	257763	1.15	cps
Dysprosium	156-2	203914	205498	204788	204733	0.39	cps
Erbium	164-1	232590	238475	236108	235724	1.26	cps
Erbium	164-2	154251	153715	154490	154152	0.26	cps
Gadolinium	160-1	246708	251197	252466	250124	1.21	cps
Gadolinium	160-2	174343	173263	172974	173527	0.42	cps
Holmium	165-1	37390394	35934804	35741560	36355586	2.48	cps
Holmium	165-2	23368283	23152146	23100695	23207042	0.61	cps
Indium	115-1	31168205	30168833	30378615	30571885	1.72	cps
Indium	115-2	10273119	10392184	10203144	10289482	0.93	cps
Iron	56-2	161972778	163572021	162534894	162693231	0.50	cps
Iron	57-2	4242780	4260782	4275119	4259560	0.38	cps
Iron	54-2	9009367	8816877	8949686	8925310	1.10	cps
Krypton	83-1	747	697	720	721	3.47	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4805-15 Instrumnet Name : P7
Client Sample ID : MH2GQ1 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:23:14 DataFile Name : 043SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	13418132	13824800	13697356	13646763	1.52	cps
Lead	207-1	11517102	11774646	11611254	11634334	1.12	cps
Lead	208-1	52931862	54232541	53797988	53654130	1.23	cps
Lithium	6-1	3463165	3332952	3442744	3412954	2.05	cps
Magnesium	24-2	7864446	7916979	7981627	7921017	0.74	cps
Manganese	55-2	9235513	9192254	9128443	9185403	0.59	cps
Molybdenum	94-1	88707	91101	90749	90186	1.43	cps
Molybdenum	95-1	22100	23385	22731	22739	2.83	cps
Molybdenum	96-1	37712	38417	39955	38695	2.96	cps
Molybdenum	97-1	14581	14290	14224	14365	1.32	cps
Molybdenum	98-1	37130	37191	36893	37071	0.42	cps
Neodymium	150-1	415818	429351	428023	424397	1.76	cps
Neodymium	150-2	240462	238543	238798	239268	0.44	cps
Nickel	60-2	449193	444960	444982	446378	0.55	cps
Phosphorus	31-2	107897	107991	107078	107655	0.47	cps
Potassium	39-2	5577865	5667431	5612498	5619265	0.80	cps
Rhodium	103-1	28986637	28027121	28115003	28376254	1.87	cps
Rhodium	103-2	16196105	16253021	16255460	16234862	0.21	cps
Scandium	45-1	17573654	16997987	16820990	17130877	2.30	cps
Scandium	45-2	1421421	1407215	1417783	1415473	0.52	cps
Selenium	82-1	1435	1666	1455	1519	8.44	cps
Selenium	77-2	917	763	893	858	9.63	cps
Selenium	78-2	1283	1297	1257	1279	1.59	cps
Silicon	28-1	107369022	109806208	111070045	109415092	1.72	cps
Silver	107-1	63163	65614	64643	64473	1.91	cps
Silver	109-1	59823	62260	62390	61491	2.35	cps
Sodium	23-2	2355810	2391292	2345272	2364125	1.02	cps
Strontium	86-1	5712877	5806733	5671996	5730536	1.21	cps
Strontium	88-1	49799051	50636998	50386008	50274019	0.86	cps
Sulfur	34-1	943599	961896	961458	955651	1.09	cps
Terbium	159-1	38409895	37014893	36735151	37386646	2.40	cps
Terbium	159-2	23573340	22895171	23298783	23255765	1.47	cps
Thallium	203-1	12269	12743	12392	12468	1.97	cps
Thallium	205-1	28867	29753	29138	29253	1.55	cps
Tin	118-1	46491	47277	46605	46791	0.91	cps
Titanium	47-1	765403	783934	777911	775749	1.22	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4805-15

Instrumnet Name :

P7

Client Sample ID :

MH2GQ1

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:23:14

DataFile Name :

043SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	350009	358314	356353	354892	1.22	cps
Vanadium	51-2	551298	550281	549594	550391	0.16	cps
Yttrium	89-1	46003084	45338926	44578633	45306881	1.57	cps
Yttrium	89-2	11058429	11113807	10997085	11056440	0.53	cps
Zinc	66-2	1358170	1354044	1359311	1357175	0.20	cps
Zirconium	90-1	208723	216326	212444	212498	1.79	cps
Zirconium	91-1	46958	48403	48593	47985	1.86	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4806-01 Instrumnet Name : P7
Client Sample ID : MH2GT6 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:26:15 DataFile Name : 044SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4417924	4350692	4404715	4391110	0.81	cps
Antimony	121-1	166916	164020	166917	165951	1.01	cps
Arsenic	75-2	24110	23859	24247	24072	0.82	cps
Barium	135-1	8392090	8413758	8462344	8422731	0.43	cps
Barium	137-1	14459866	14521884	14576865	14519539	0.40	cps
Beryllium	9-1	4534	4551	4795	4627	3.16	cps
Bismuth	209-1	21327617	21207428	20972627	21169224	0.85	cps
Bismuth	209-2	15982388	15735454	15842427	15853423	0.78	cps
Bromine	81-1	51637	53342	55276	53418	3.41	cps
Bromine	81-2	7409	7319	7539	7422	1.49	cps
Cadmium	108-1	4277	4144	3961	4127	3.85	cps
Cadmium	106-1	16750	16850	16489	16696	1.11	cps
Cadmium	111-1	62266	62600	62643	62503	0.33	cps
Calcium	43-1	6878166	6850717	6911922	6880268	0.45	cps
Calcium	44-1	109453718	109904112	111006015	110121282	0.73	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	457453	455992	453235	455560	0.47	cps
Cobalt	59-2	240999	243870	241889	242253	0.61	cps
Copper	63-2	2048903	1980564	2029589	2019685	1.74	cps
Dysprosium	156-1	164902	166146	165435	165494	0.38	cps
Dysprosium	156-2	138845	139474	140367	139562	0.55	cps
Erbium	164-1	132992	133722	136653	134456	1.44	cps
Erbium	164-2	88350	89709	89320	89126	0.79	cps
Gadolinium	160-1	146500	146644	148292	147146	0.68	cps
Gadolinium	160-2	102021	102763	100719	101834	1.02	cps
Holmium	165-1	36343664	36431833	36190648	36322048	0.34	cps
Holmium	165-2	23894002	23630246	23996409	23840219	0.79	cps
Indium	115-1	30826372	30670300	30627607	30708093	0.34	cps
Indium	115-2	10373341	10390515	10500537	10421464	0.66	cps
Iron	56-2	107793772	108527968	106895382	107739041	0.76	cps
Iron	57-2	2747822	2812164	2773399	2777795	1.17	cps
Iron	54-2	5879581	5917233	5903633	5900149	0.32	cps
Krypton	83-1	480	537	493	503	5.89	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : P4806-01 Instrumnet Name : P7
Client Sample ID : MH2GT6 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:26:15 DataFile Name : 044SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	120427468	122079152	121309238	121271953	0.68	cps
Lead	207-1	97688532	100131862	99328959	99049784	1.26	cps
Lead	208-1	459796410	464237123	465427046	463153526	0.64	cps
Lithium	6-1	3443350	3380484	3357594	3393809	1.31	cps
Magnesium	24-2	6752797	6670698	6668226	6697240	0.72	cps
Manganese	55-2	5756051	5904754	5830573	5830459	1.28	cps
Molybdenum	94-1	56713	57415	57760	57296	0.93	cps
Molybdenum	95-1	32583	33702	33622	33302	1.87	cps
Molybdenum	96-1	42421	43123	42435	42660	0.94	cps
Molybdenum	97-1	20922	20928	20975	20942	0.14	cps
Molybdenum	98-1	52450	53916	54120	53495	1.70	cps
Neodymium	150-1	279834	284530	283833	282732	0.90	cps
Neodymium	150-2	158806	159635	158614	159019	0.34	cps
Nickel	60-2	78846	78658	78524	78676	0.21	cps
Phosphorus	31-2	81056	83332	81066	81818	1.60	cps
Potassium	39-2	8645584	8789327	8652805	8695906	0.93	cps
Rhodium	103-1	28568753	29011780	28732499	28771011	0.78	cps
Rhodium	103-2	16660083	16768370	16947838	16792097	0.87	cps
Scandium	45-1	16785184	16906335	16930776	16874098	0.46	cps
Scandium	45-2	1452402	1432767	1453123	1446097	0.80	cps
Selenium	82-1	1311	1357	1459	1376	5.47	cps
Selenium	77-2	550	520	590	553	6.35	cps
Selenium	78-2	1117	990	1170	1092	8.47	cps
Silicon	28-1	75004049	74728282	75465114	75065815	0.50	cps
Silver	107-1	45297	46554	46625	46159	1.62	cps
Silver	109-1	41900	43569	44424	43298	2.96	cps
Sodium	23-2	42603691	42496978	42438709	42513126	0.20	cps
Strontium	86-1	3879034	3881450	3927413	3895966	0.70	cps
Strontium	88-1	33686431	34021916	34087671	33932006	0.63	cps
Sulfur	34-1	1514386	1481222	1504030	1499879	1.13	cps
Terbium	159-1	37344785	37324132	37185857	37284925	0.23	cps
Terbium	159-2	23896624	23793050	23598576	23762750	0.64	cps
Thallium	203-1	7059	7212	6728	7000	3.53	cps
Thallium	205-1	16393	16670	15919	16328	2.33	cps
Tin	118-1	387142	388023	391039	388734	0.53	cps
Titanium	47-1	212977	214332	213982	213764	0.33	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

P4806-01

Instrumnet Name :

P7

Client Sample ID :

MH2GT6

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:26:15

DataFile Name :

044SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	320126	320724	325816	322222	0.97	cps
Vanadium	51-2	119330	119650	120281	119754	0.40	cps
Yttrium	89-1	42749909	43425496	43306684	43160697	0.84	cps
Yttrium	89-2	10688308	10715630	10789592	10731177	0.49	cps
Zinc	66-2	3626345	3573013	3662353	3620570	1.24	cps
Zirconium	90-1	104897	105741	107363	106000	1.18	cps
Zirconium	91-1	22754	23252	24090	23365	2.89	cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :CCV002Instrumnet Name :P7

Client Sample ID :CCV002Dilution Factor :1

Date & Time Acquired :2024-11-18 07:29:12DataFile Name :045CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	27409942	27210944	27000710	27207199	0.75	cps
Antimony	121-1	12287548	12935054	12863556	12695386	2.80	cps
Arsenic	75-2	684764	686042	682543	684449	0.26	cps
Barium	135-1	14683122	15376952	15433222	15164432	2.75	cps
Barium	137-1	25473206	26396613	26285233	26051684	1.93	cps
Beryllium	9-1	1178792	1234359	1251447	1221533	3.11	cps
Bismuth	209-1	19602427	18860250	18593607	19018761	2.75	cps
Bismuth	209-2	13706492	13878357	13791759	13792202	0.62	cps
Bromine	81-1	18619	18889	18842	18783	0.77	cps
Bromine	81-2	267	327	307	300	10.18	cps
Cadmium	108-1	236482	249720	249630	245277	3.11	cps
Cadmium	106-1	341884	356963	356609	351819	2.45	cps
Cadmium	111-1	3311836	3453492	3500340	3421889	2.87	cps
Calcium	43-1	15523826	16260430	16378180	16054145	2.88	cps
Calcium	44-1	249703176	263138209	264735156	259192181	3.19	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	5108158	5185927	5202879	5165654	0.98	cps
Cobalt	59-2	8328398	8295437	8344936	8322924	0.30	cps
Copper	63-2	62661446	62821322	62286466	62589745	0.44	cps
Dysprosium	156-1	653	657	670	660	1.34	cps
Dysprosium	156-2	997	1050	1053	1033	3.08	cps
Erbium	164-1	710	650	750	703	7.16	cps
Erbium	164-2	487	497	460	481	3.94	cps
Gadolinium	160-1	607	637	557	600	6.74	cps
Gadolinium	160-2	1503	1517	1553	1525	1.70	cps
Holmium	165-1	35660506	34831266	34704746	35065506	1.48	cps
Holmium	165-2	22394660	22377216	22403447	22391774	0.06	cps
Indium	115-1	29131871	28058119	27756858	28315616	2.55	cps
Indium	115-2	9616971	9527283	9582730	9575661	0.47	cps
Iron	56-2	1166588543	1160550969	1163420116	1163519876	0.26	cps
Iron	57-2	29479002	29119525	29023001	29207176	0.82	cps
Iron	54-2	63011269	63926519	64199136	63712308	0.98	cps
Krypton	83-1	327	353	337	339	3.98	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : CCV002 Instrumnet Name : P7
Client Sample ID : CCV002 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:29:12 DataFile Name : 045CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	42291572	43835024	43499458	43208685	1.88	cps
Lead	207-1	36603638	38379619	37863924	37615727	2.43	cps
Lead	208-1	166245262	174181628	172548590	170991827	2.45	cps
Lithium	6-1	3208865	3150500	3147762	3169043	1.09	cps
Magnesium	24-2	234480430	234373730	230029143	232961101	1.09	cps
Manganese	55-2	39040463	39204170	39326933	39190522	0.37	cps
Molybdenum	94-1	43539633	45669853	46199271	45136252	3.12	cps
Molybdenum	95-1	63326809	66761316	67151784	65746636	3.20	cps
Molybdenum	96-1	69657927	73353364	73373826	72128372	2.97	cps
Molybdenum	97-1	39330489	41453772	41419867	40734709	2.99	cps
Molybdenum	98-1	102001472	106251348	106127225	104793348	2.31	cps
Neodymium	150-1	850	990	970	937	8.08	cps
Neodymium	150-2	217	290	287	264	15.66	cps
Nickel	60-2	2129117	2120877	2112676	2120890	0.39	cps
Phosphorus	31-2	257507	260325	254934	257589	1.05	cps
Potassium	39-2	136641455	138327905	134067181	136345514	1.57	cps
Rhodium	103-1	26888747	25748585	25376596	26004643	3.03	cps
Rhodium	103-2	15098349	15053329	14980851	15044176	0.39	cps
Scandium	45-1	16625789	15958681	15941667	16175379	2.41	cps
Scandium	45-2	1363821	1397426	1373638	1378295	1.25	cps
Selenium	82-1	191456	200883	201408	197916	2.83	cps
Selenium	77-2	20194	20017	20227	20146	0.56	cps
Selenium	78-2	66592	67593	65738	66641	1.39	cps
Silicon	28-1	21180215	21906516	22311581	21799438	2.63	cps
Silver	107-1	16202115	16964800	16731356	16632757	2.35	cps
Silver	109-1	15506586	16185837	16302945	15998456	2.69	cps
Sodium	23-2	366700595	364030928	361376621	364036048	0.73	cps
Strontium	86-1	3903056	4116853	4140791	4053567	3.23	cps
Strontium	88-1	33961356	35892430	35706776	35186854	3.03	cps
Sulfur	34-1	1290745	1313041	1321811	1308532	1.22	cps
Terbium	159-1	36404284	35612890	35009699	35675625	1.96	cps
Terbium	159-2	22154061	22382634	22139961	22225552	0.61	cps
Thallium	203-1	10558448	11164064	11121960	10948157	3.09	cps
Thallium	205-1	25345365	26430268	26347413	26041015	2.32	cps
Tin	118-1	9990904	10411176	10479633	10293905	2.57	cps
Titanium	47-1	14904708	15766391	15620588	15430562	2.99	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

CCV002

Instrumnet Name :

P7

Client Sample ID :

CCV002

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:29:12

DataFile Name :

045CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	31883245	32971719	33239891	32698285	2.20	cps
Vanadium	51-2	4603819	4588977	4571014	4587937	0.36	cps
Yttrium	89-1	40511301	39519489	38545377	39525389	2.49	cps
Yttrium	89-2	9887147	9864422	9753177	9834915	0.73	cps
Zinc	66-2	10079565	10097853	9918243	10031887	0.99	cps
Zirconium	90-1	21245476	22611462	22287456	22048131	3.24	cps
Zirconium	91-1	4731174	4983167	5007691	4907344	3.12	cps

LB Number :LB133504Operator :Jaswal

Lab Sample ID :CCB002Instrumnet Name :P7

Client Sample ID :CCB002Dilution Factor :1

Date & Time Acquired :2024-11-18 07:31:52DataFile Name :046CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	643	547	433	541	19.43	cps
Antimony	121-1	4454	5004	6492	5317	19.83	cps
Arsenic	75-2	33	40	7	27	66.13	cps
Barium	135-1	1363	893	493	917	47.51	cps
Barium	137-1	2570	1473	1030	1691	46.88	cps
Beryllium	9-1	178	239	117	178	34.38	cps
Bismuth	209-1	20202333	20446791	20376030	20341718	0.62	cps
Bismuth	209-2	15450704	15335801	15450329	15412278	0.43	cps
Bromine	81-1	16603	16666	16713	16661	0.33	cps
Bromine	81-2	197	190	193	193	1.72	cps
Cadmium	108-1	50	30	37	39	26.18	cps
Cadmium	106-1	10674	10290	9930	10298	3.61	cps
Cadmium	111-1	7900	7469	7105	7491	5.31	cps
Calcium	43-1	1930	1357	1037	1441	31.41	cps
Calcium	44-1	52855	42917	37346	44373	17.71	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4431	4274	4291	4332	1.99	cps
Cobalt	59-2	373	337	310	340	9.35	cps
Copper	63-2	2760	2720	2490	2657	5.49	cps
Dysprosium	156-1	27	40	27	31	24.74	cps
Dysprosium	156-2	10	17	20	16	32.73	cps
Erbium	164-1	123	157	130	137	12.91	cps
Erbium	164-2	63	100	73	79	24.03	cps
Gadolinium	160-1	140	133	180	151	16.70	cps
Gadolinium	160-2	1150	1183	1180	1171	1.57	cps
Holmium	165-1	34076790	34051340	34140557	34089563	0.13	cps
Holmium	165-2	22515766	22627648	22564682	22569365	0.25	cps
Indium	115-1	29132430	29482381	29628655	29414489	0.87	cps
Indium	115-2	10174621	10115068	10016132	10101940	0.79	cps
Iron	56-2	44439	39913	36648	40333	9.70	cps
Iron	57-2	2104	1743	1830	1892	9.93	cps
Iron	54-2	4991	4517	4397	4635	6.77	cps
Krypton	83-1	310	303	333	316	4.99	cps

LB Number : LB133504 Operator : Jaswal
Lab Sample ID : CCB002 Instrumnet Name : P7
Client Sample ID : CCB002 Dilution Factor : 1
Date & Time Acquired : 2024-11-18 07:31:52 DataFile Name : 046CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	5591	4244	3257	4364	26.85	cps
Lead	207-1	5014	3614	2880	3836	28.26	cps
Lead	208-1	22811	16678	12642	17377	29.47	cps
Lithium	6-1	3312401	3431867	3367432	3370567	1.77	cps
Magnesium	24-2	4704	3767	3380	3951	17.23	cps
Manganese	55-2	1077	810	817	901	16.88	cps
Molybdenum	94-1	5414	4177	3777	4456	19.15	cps
Molybdenum	95-1	6755	4607	3837	5067	29.84	cps
Molybdenum	96-1	7595	4964	4507	5689	29.30	cps
Molybdenum	97-1	4294	3027	2580	3300	26.94	cps
Molybdenum	98-1	10898	7405	6085	8129	30.59	cps
Neodymium	150-1	43	20	7	23	79.53	cps
Neodymium	150-2	3	7	7	6	34.70	cps
Nickel	60-2	223	227	190	213	9.51	cps
Phosphorus	31-2	490	547	520	519	5.46	cps
Potassium	39-2	88026	87848	87449	87774	0.34	cps
Rhodium	103-1	28094599	27890952	27656780	27880777	0.79	cps
Rhodium	103-2	16651871	16312674	16309534	16424693	1.20	cps
Scandium	45-1	15755562	15945017	15913121	15871233	0.64	cps
Scandium	45-2	1364366	1353337	1394595	1370766	1.56	cps
Selenium	82-1	549	523	521	531	2.99	cps
Selenium	77-2	3	0	0	1	173.21	cps
Selenium	78-2	503	490	450	481	5.77	cps
Silicon	28-1	1326476	1312522	1295493	1311497	1.18	cps
Silver	107-1	2367	1670	1233	1757	32.54	cps
Silver	109-1	2200	1467	1107	1591	35.02	cps
Sodium	23-2	59166	58584	56323	58024	2.59	cps
Strontium	86-1	853	797	603	751	17.45	cps
Strontium	88-1	3327	2160	1397	2295	42.37	cps
Sulfur	34-1	299510	299655	299248	299471	0.07	cps
Terbium	159-1	35026559	35079659	34985943	35030720	0.13	cps
Terbium	159-2	22583023	22558876	22494921	22545606	0.20	cps
Thallium	203-1	1663	1100	957	1240	30.13	cps
Thallium	205-1	4011	2827	2067	2968	33.00	cps
Tin	118-1	4774	4728	4494	4665	3.22	cps
Titanium	47-1	1637	1133	810	1193	34.91	cps

LB Number :

LB133504

Operator :

Jaswal

Lab Sample ID :

CCB002

Instrumnet Name :

P7

Client Sample ID :

CCB002

Dilution Factor :

1

Date & Time Acquired :

2024-11-18 07:31:52

DataFile Name :

046CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	2907	1823	1223	1985	43.00	cps
Vanadium	51-2	90	70	60	73	20.83	cps
Yttrium	89-1	38849136	39096990	38578959	38841695	0.67	cps
Yttrium	89-2	9847223	9777988	9740771	9788661	0.55	cps
Zinc	66-2	737	820	740	766	6.16	cps
Zirconium	90-1	4531	4027	3954	4171	7.53	cps
Zirconium	91-1	960	807	883	883	8.68	cps

Prep Standard - Chemical Standard Summary

Order ID : P4805
Test : Metals CLP MS FULL

Prepbatch ID : PB164950,
Sequence ID/Qc Batch ID: LB133504,

Standard ID :
MP82128,MP83014,MP83016,MP83032,MP83033,MP83034,MP83035,MP83036,MP83037,MP83038,MP83039,MP83041,MP83042,MP83043,MP83044,MP83046,MP83047,MP83048,MP83049,MP83050,MP83122,

Chemical ID :
M5192,M5288,M5289,M5294,M5304,M5390,M5476,M5498,M5513,M5515,M5519,M5658,M5698,M5739,M5751,M5769,M5798,M5799,M5800,M5801,M5802,M5806,M5815,M5816,M5817,M5818,M5819,M5820,M5873,M5874,M5961,M5962,M5976,M5978,M5981,M5982,M5983,M5993,M5999,M6021,M6023,M6025,M6028,M6030,M6033,M6040,M6055,M6095,M6115,M6116,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>
641	1:4 HCL	MP82128	09/03/2024	02/08/2025	Janvi Patel	None	None	Sarabjit Jaswal
								09/03/2024

FROM 1500.00000ml of W3112 + 500.00000ml of M6040 = 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>
1122	ICPMS CALIB BLANK(S0/ICB/CCB)	MP83014	11/02/2024	11/25/2024	Sarabjit Jaswal	None	None	Mohan Bera
								11/04/2024

FROM 25.00000ml of M6095 + 4925.00000ml of W3112 + 50.00000ml of M6115 = Final Quantity: 5000.000 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>
2902	S8 ICPMS	MP83016	11/02/2024	11/25/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024
FROM 1.00000ml of M6033 + 2.50000ml of M5288 + 2.50000ml of M5515 + 5.00000ml of M5498 + 5.00000ml of M5769 + 5.00000ml of M5806 + 79.00000ml of MP83014 = 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>
3947	S7(SFAM,6020,200.8)	MP83032	11/02/2024	11/25/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024
FROM 0.40000ml of M5513 + 1.00000ml of M5799 + 1.00000ml of M5818 + 1.00000ml of M5981 + 1.00000ml of M5983 + 1.90000ml of M6033 + 10.00000ml of M6115 + 2.00000ml of M5815 + 2.00000ml of M5817 + 2.50000ml of M5476 + 4.00000ml of M5390 + 4.90000ml of M5515 + 4.90000ml of M5519 + 5.00000ml of M6095 + 50.00000ml of M5304 + 832.80000ml of W3112 + 9.00000ml of M5698 + 9.00000ml of M5819 + 9.00000ml of M5976 + 9.00000ml of M5978 + 9.90000ml of M5498 + 9.90000ml of M5751 + 9.90000ml of M5769 + 9.90000ml of M5806 = 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>
3948	S6(SFAM,6020,200.8)	MP83033	11/02/2024	11/25/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.50000ml of M6095 + 1.00000ml of M6115 + 48.50000ml of W3112 + 50.00000ml of MP83032 = 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)	MP83034	11/02/2024	11/25/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.50000ml of M6095 + 1.00000ml of M6115 + 86.00000ml of W3112 + 12.50000ml of MP83032 = 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)	MP83035	11/02/2024	11/25/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.50000ml of M6095 + 1.00000ml of M6115 + 73.50000ml of W3112 + 25.00000ml of MP83032 = 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>
3951	S3(SFAM, 6020,200.8)	MP83036	11/02/2024	11/25/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.50000ml of M6095 + 1.00000ml of M6115 + 88.50000ml of W3112 + 10.00000ml of MP83033 = 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>
3955	S2CONC(SFAM,6020,200.8)	MP83037	11/02/2024	11/25/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.05000ml of M5698 + 0.05000ml of M5798 + 0.05000ml of M5800 + 0.05000ml of M5801 + 0.05000ml of M5961 + 0.05000ml of M5981 + 0.05000ml of M5982 + 0.05000ml of M5983 + 0.05000ml of M6023 + 0.05000ml of M6025 + 0.05000ml of M6028 + 0.05000ml of M6030 + 0.10000ml of M5658 + 0.10000ml of M5751 + 0.10000ml of M5802 + 0.10000ml of M6033 + 0.25000ml of M5515 + 0.25000ml of M5799 + 0.25000ml of M5819 + 0.25000ml of M5962 + 0.25000ml of M5976 + 0.25000ml of M5978 + 0.25000ml of M6021 + 0.50000ml of M5390 + 0.50000ml of M5818 + 1.25000ml of M5815 + 1.25000ml of M5817 + 2.50000ml of M5498 + 2.50000ml of M5519 + 2.50000ml of M5769 + 2.50000ml of M5806 + 2.50000ml of M6095 + 226.25000ml of W3112 + 5.00000ml of M6115 = 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)	MP83038	11/02/2024	11/25/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.50000ml of M6095 + 1.00000ml of M6115 + 98.00000ml of W3112 + 0.50000ml of MP83037 = 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)	MP83039	11/02/2024	11/25/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.50000ml of M6095 + 1.00000ml of M6115 + 88.50000ml of W3112 + 10.00000ml of MP83038 = 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>
3958	ICV(SFAM)	MP83041	11/02/2024	11/25/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 2.00000ml of M5294 + 98.00000ml of MP83014 = 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>
3961	CCV	MP83042	11/02/2024	11/25/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.20000ml of M5513 + 0.50000ml of M5799 + 0.50000ml of M5818 + 0.50000ml of M5981 + 0.50000ml of M5983 + 1.00000ml of M5815 + 1.00000ml of M5817 + 1.25000ml of M5476 + 10.00000ml of M6115 + 12.45000ml of M5515 + 12.45000ml of M5519 + 2.00000ml of M5390 + 24.95000ml of M5498 + 24.95000ml of M5769 + 24.95000ml of M5806 + 25.00000ml of M5304 + 4.50000ml of M5698 + 4.50000ml of M5751 + 4.50000ml of M5819 + 4.95000ml of M6033 + 5.00000ml of M5976 + 5.00000ml of M5978 + 5.00000ml of M6095 + 823.45000ml of W3112 = 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>
1142	ICSA ICPMS	MP83043	11/02/2024	11/25/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 10.00000ml of M5873 + 90.00000ml of MP83014 = 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	MP83044	11/02/2024	11/25/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 10.00000ml of M5873 + 10.00000ml of M5874 + 80.00000ml of MP83014 = 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>
3964	CONC.LCSS SPIKE	MP83046	11/02/2024	11/25/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.25000ml of M5698 + 0.25000ml of M5798 + 0.25000ml of M5800 + 0.25000ml of M5801 + 0.25000ml of M5961 + 0.25000ml of M5981 + 0.25000ml of M5982 + 0.25000ml of M5983 + 0.25000ml of M6023 + 0.25000ml of M6025 + 0.25000ml of M6028 + 0.25000ml of M6030 + 0.50000ml of M5289 + 0.50000ml of M5658 + 0.50000ml of M5751 + 0.50000ml of M5802 + 1.25000ml of M5192 + 1.25000ml of M5799 + 1.25000ml of M5819 + 1.25000ml of M5962 + 1.25000ml of M6021 + 12.50000ml of M5498 + 12.50000ml of M5769 + 12.50000ml of M5806 + 12.52000ml of M5519 + 156.23000ml of W3112 + 2.50000ml of M5390 + 2.50000ml of M5818 + 5.00000ml of M5515 + 5.00000ml of M6095 + 5.00000ml of M6115 + 6.25000ml of M5816 + 6.25000ml of M5820 = 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>
870	ICPMS SPIKE SOL.B	MP83047	11/02/2024	11/25/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.45000ml of M5962 + 5.00000ml of M5993 + 5.00000ml of M5999 + 39.55000ml of MP83014 = Final Quantity: 50.000 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	MP83048	11/02/2024	11/25/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.01000ml of M5769 + 9.99000ml of MP83014 = 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	MP83049	11/02/2024	11/25/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 2.00000ml of M6055 + 2.00000ml of MP83048 + 98.00000ml of MP83014 = 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>
3903	ISS 3PPM	MP83050	11/02/2024	11/25/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 5.00000ml of M6115 + 75.00000ml of M5739 + 170.00000ml of MP83014 = 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>
169	1:1HNO3	MP83122	11/07/2024	12/06/2024	Janvi Patel	None	None	Sarabjit Jaswal
FROM 1000.00000ml of M6116 + 1000.00000ml of W3112 = Final Quantity: 2000.000 ml								
11/07/2024								

CHEMICAL RECEIPT LOG BOOK

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	051722	05/17/2025	07/01/2022 / bin	06/17/2022 / jaswal	M5192

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	071122	07/11/2025	09/01/2022 / jaswal	07/21/2022 / jaswal	M5288

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Aluminum (Al) 10,000PPM	070622	07/06/2025	09/02/2022 / jaswal	07/12/2022 / jaswal	M5289

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-1 / ICV (ICP/ICPMS) STOCK SOLN	ICV-1014	01/01/2025	12/13/2023 / bin	02/20/2020 / bin	M5294

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	08/07/2024 / jaswal	04/01/2022 / jaswal	M5304

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	072122	07/21/2025	08/07/2024 / jaswal	09/18/2022 / bin	M5390

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57138 / Sr, 10000 PPM, 125 ml	082922	08/09/2025	07/29/2024 / jaswal	03/16/2023 / jaswal	M5476

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Ca, 10000 PPM, 500 ml	031523	03/15/2026	08/15/2023 / jaswal	03/17/2023 / bin	M5498

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	061522	06/15/2025	03/19/2023 / bin	03/17/2023 / bin	M5513

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	092122	09/21/2025	08/01/2024 / Jaswal	03/17/2023 / bin	M5515

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57119 / Potassium (K) 10,000PPM	120822	12/08/2025	01/08/2024 / bin	03/17/2023 / bin	M5519

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

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	102623	10/26/2026	04/18/2024 / jaswal	10/27/2023 / jaswal	M5698

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	6020ISS / 6020ISS, 10 ug/ml, Bi, Ho, In, 6Li, Rh, Sc, TB, Y	T2-MEB709511	09/03/2026	08/07/2024 / jaswal	04/11/2022 / jaswal	M5739

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	071723	07/17/2026	10/01/2024 / Jaswal	08/25/2023 / jaswal	M5751

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	091823	09/18/2026	05/24/2024 / Jaswal	01/03/2024 / bin	M5769

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

CHEMICAL RECEIPT LOG BOOK

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

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	120523	12/05/2026	08/07/2024 / jaswal	01/03/2024 / jaswal	M5802

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	122223	12/22/2026	08/01/2024 / Jaswal	01/03/2024 / jaswal	M5806

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.	57016 / S, 1000 PPM, 125 ml	122923	12/29/2026	05/20/2024 / Jaswal	02/09/2024 / jaswal	M5816

CHEMICAL RECEIPT LOG BOOK

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 #
Absolute Standards, Inc.	57014 / Si, 1000 PPM, 125 ml	122023	12/20/2026	03/06/2024 / jaswal	02/09/2024 / jaswal	M5818

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	111623	11/16/2026	03/20/2024 / jaswal	02/09/2024 / jaswal	M5819

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57015 / P, 1000 PPM, 125 ml	091123	09/11/2026	05/01/2024 / jaswal	02/09/2024 / jaswal	M5820

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART A / ICSA (ICPMS) STOCK SOLN	CP-MS ICSA-0803	04/30/2025	04/17/2024 / jaswal	07/14/2022 / jaswal	M5873

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	04/30/2025	04/17/2024 / jaswal	07/14/2022 / jaswal	M5874

CHEMICAL RECEIPT LOG BOOK

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	041124	04/11/2027	07/02/2024 / Jaswal	06/11/2024 / Jaswal	M5961

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	CGMO1-1 / MOLYBDENUM 125mL 1000ug/mL	T2-MO720876	07/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5976

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	06/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5978

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

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	031524	03/15/2027	07/01/2024 / Jaswal	06/11/2024 / Jaswal	M5982

CHEMICAL RECEIPT LOG BOOK

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	07/29/2024 / Jaswal	06/11/2024 / Jaswal	M5983

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-SPK-4 / SOIL/WATER SPIKE SOLN 4, 125mL	V2-MEB742036	03/12/2029	10/04/2024 / Jaswal	02/22/2024 / Jaswal	M5993

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-SPK-1 / SOIL/WATER SPIKE SOLN 1, 125mL	T2-MEB721963	07/27/2027	09/04/2024 / Jaswal	02/22/2024 / kareem	M5999

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	06/12/2027	08/05/2024 / Jaswal	08/05/2024 / Jaswal	M6025

CHEMICAL RECEIPT LOG BOOK

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	01/25/2019 / Jaswal	M6028

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.	58113 / Al, 10000 PPM, 500 ml	011623	01/16/2026	08/07/2024 / Jaswal	01/03/2024 / Jaswal	M6033

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)	24D1562005	02/08/2025	08/09/2024 / jaswal	08/01/2024 / Janvi	M6040

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 #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)		03/17/2029	10/26/2024 / Janvi	10/21/2024 / Janvi	M6095

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)	24B1362001	05/04/2025	11/02/2024 / Janvi	09/29/2024 / Eman	M6115

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)	24B1362001	05/03/2025	11/04/2024 / Janvi	09/29/2024 / Eman	M6116

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 / lwona	07/03/2024 / lwona	W3112

Certificate of Analysis

R: 02/22/24 M5991 M5992 M5993 M5994 M5995

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: CLPP-SPK-4

Lot Number: V2-MEB742036

Matrix: 3% (v/v) HNO₃

Value / Analyte(s):

- 100 µg/mL ea:
- Antimony,
- 50 µg/mL ea:
- Cadmium, Thallium,
- 40 µg/mL ea:
- Arsenic,
- 20 µg/mL ea:
- Lead,
- 10 µg/mL ea:
- Selenium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	100.0 ± 0.7 µg/mL	Arsenic, As	40.00 ± 0.26 µg/mL
Cadmium, Cd	50.00 ± 0.22 µg/mL	Lead, Pb	20.00 ± 0.09 µg/mL
Selenium, Se	10.00 ± 0.04 µg/mL	Thallium, Tl	50.00 ± 0.22 µg/mL

Density: 1.016 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
Cd	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	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:

$$w_i = (1/u_{\text{char } i}^2) / (\sum (1/u_{\text{char } i}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (z) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{ITS}}^2 + u_{\text{TS}}^2)^{1/2}$$

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

$$\text{CRM/RM Expanded Uncertainty } (z) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{ITS}}^2 + u_{\text{TS}}^2)^{1/2}$$

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>. 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; info@inorganicventures.com;
www.inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 12, 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 12, 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 Approved By:

Joseph Burns
Custom VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57048
070124
Cadmium (Cd)

Solvent: 24002546 Nitric Acid

R: 815/24

Lot #

2% 40.0 Nitric Acid (mL)

Expiration Date:

070127

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

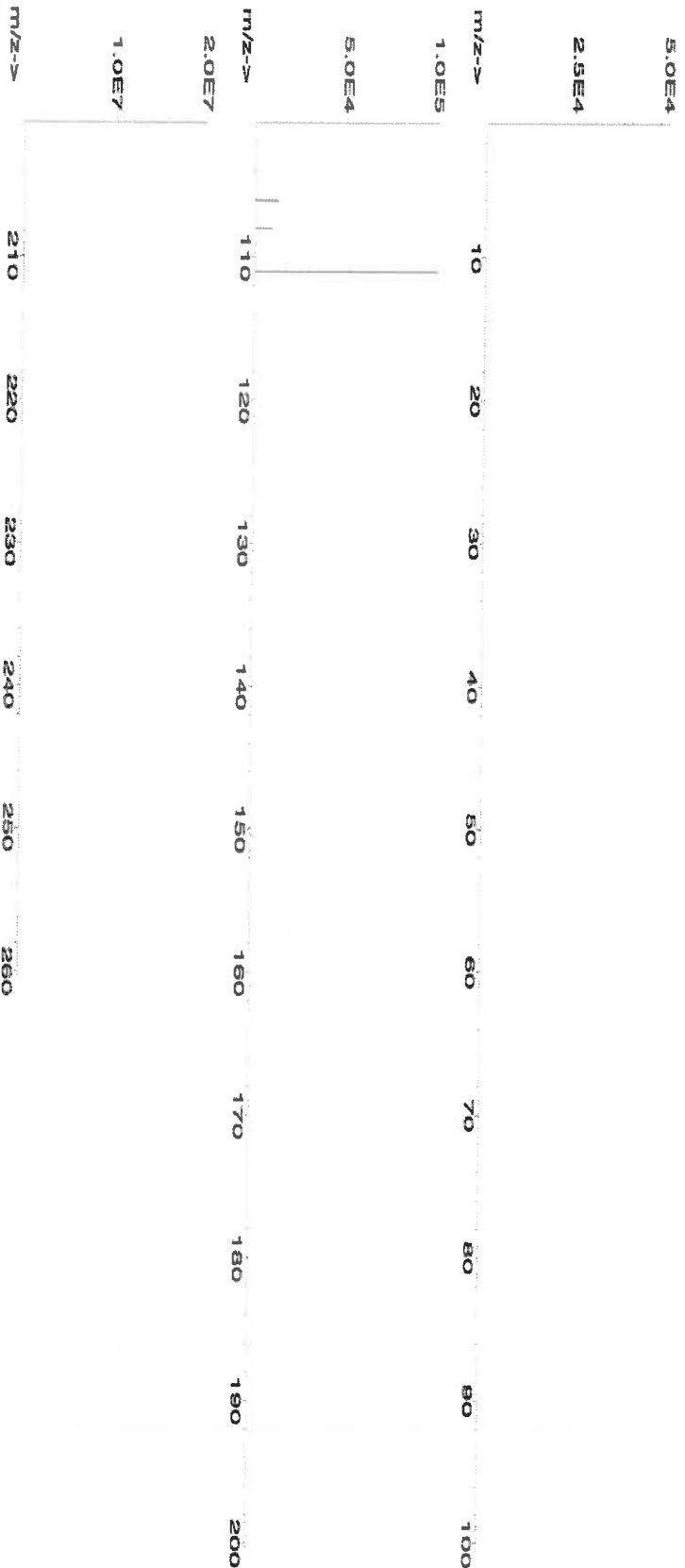
<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
Reviewed By:	<i>Pedro L. Rentas</i>
	Pedro L. Rentas
	070124

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
------------	-----------------------	------------	-----------------	-----------	-------------------	-------------------	----------------------	----------------------------------	------	----------------	------	----------

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 orl-rat 60.2mg/kg 3108

[1] Spectrum No.1 [12.514 sec]:\$8148.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

323

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).



CERTIFIED WEIGHT REPORT:

Part Number: 57182
Lot Number: 110923
Description: Lead (Pb)
Solvent: 24002546 Nitric Acid
Lot #

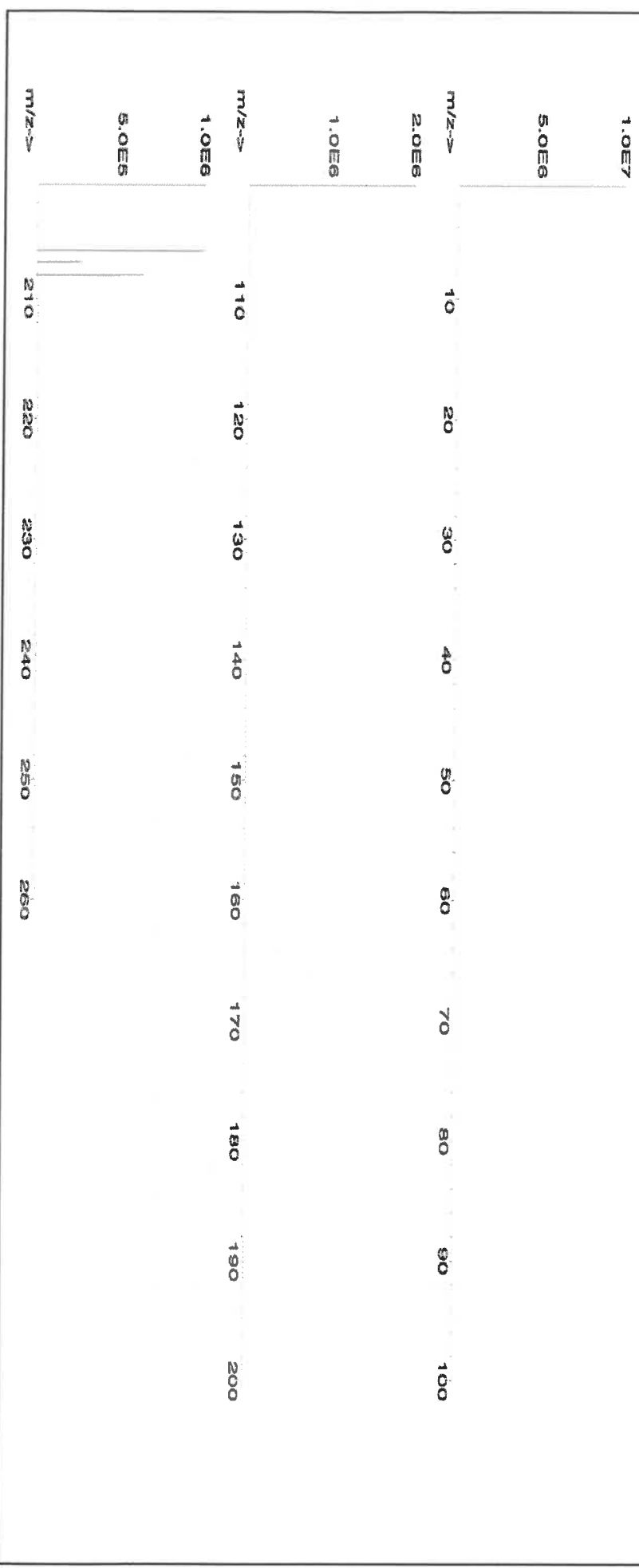
Expiration Date: 110926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

<i>Lawrence Barry</i>	
Formulated By:	Lawrence Barry
110923	
<i>Pedro L. Rentas</i>	
Reviewed By:	Pedro L. Rentas
110923	

SDS Information									
Compound	Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded
RM#	Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	+/- (µg/mL)

1. Lead(II) nitrate (Pb) IN029 PED122016A1 10000 99.999 0.10 62.5 32.0006 32.0040 10001.1 20.0 10099-74-8 0.05 mg/m3 Inverse rat 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):

325

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	T	<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).
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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 WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57042
051722
Molybdenum (Mo)

Lot #
Solvent:

MKB08597V Ammonium hydroxide

0.5% **15.0** **Ammonium hydroxide**

Expiration Date:

051725

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Volume shown below was diluted to (mL):

3000.41

5E-05 **Balance Uncertainty**

0.058 **Flask Uncertainty**

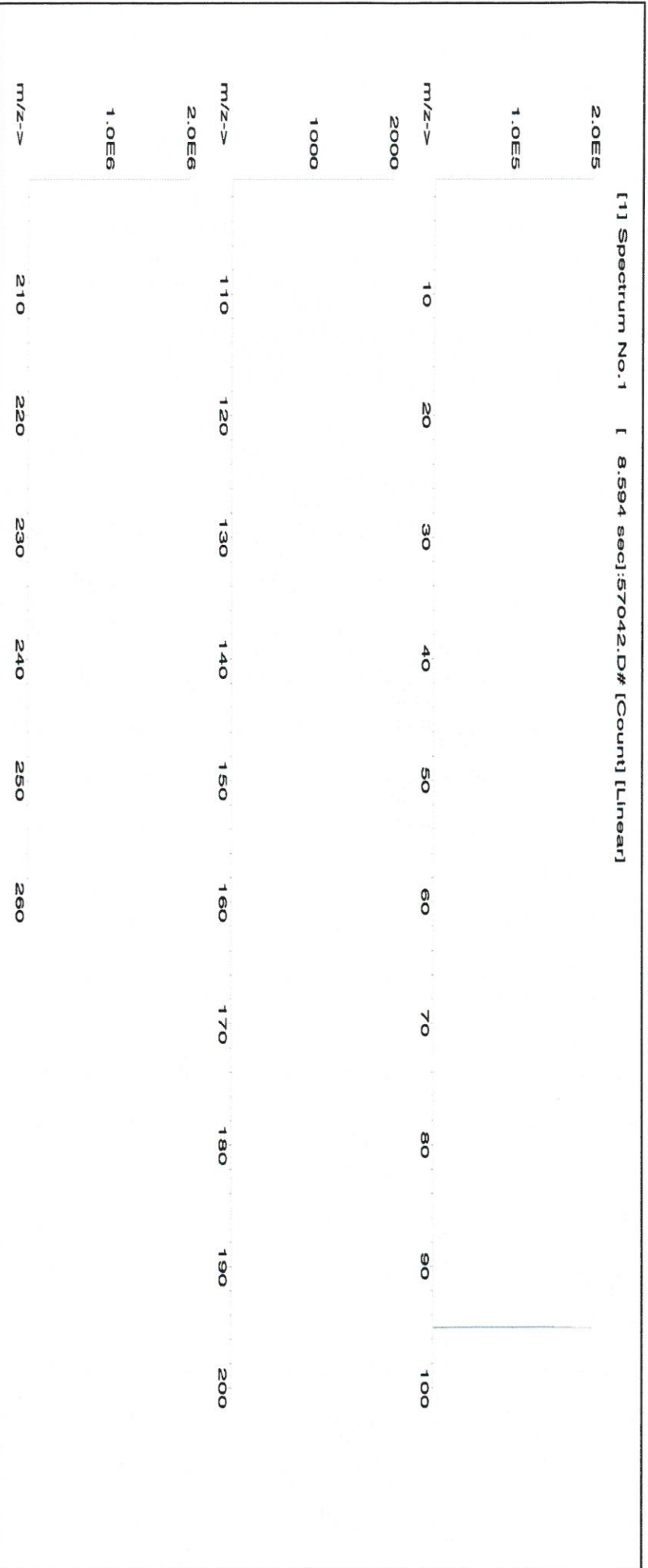
Formulated By:	Lawrence Barry
	051722
Reviewed By:	Pedro L. Rentas
	051722

326

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)	SDS Information (Solvent Safety Info. On Attached pg.)	NIST SRM
-------------	------------	-----------------	-------------------	--------------------------	-----------------------	-----------------------	---------------------	----------------------------------	--	----------

1. Ammonium molybdate (Mo) 58142 022222 0.1000 300.0 0.084 1000 10001.0 1000.0 2.1 13106-76-8 5 mg(Mo)/m3 or-rat 333 mg/kg 3134





Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

327

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	T	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: 58119
Lot Number: 071122
Description: Potassium (K)

Solvent: 20510011 Nitric Acid
Lot #

Expiration Date: 071125
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

<i>Lawrence Barry</i>	
Formulated By:	Lawrence Barry
	071122
<i>Pedro L. Rentas</i>	
Reviewed By:	Pedro L. Rentas
	071122

Compound

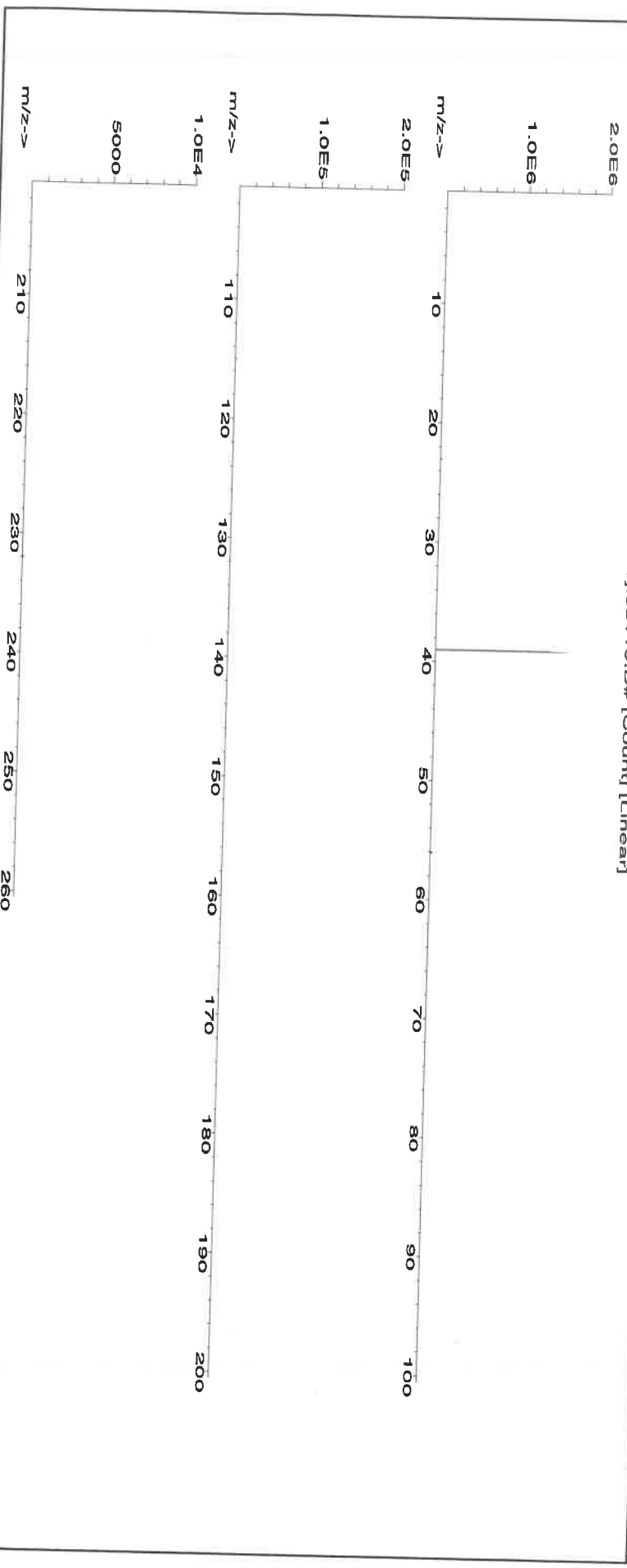
1. Potassium nitrate (K)

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
IN034	KD022021A1	10000	99.999	0.10	37.6	53.1925	53.1934	10000.2	20.0	7757-79-1	5 mg/m3	or-rat 3015 mg/kg	3141a

SDS Information

(Solvent Safety Info. On Attached pg.)
CAS#
OSHA PEL (TWA)

[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	<0.02	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).
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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).



M5289 R: 07/12/22
Certified Reference Material CRM

34



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58113
Lot Number: 070622
Description: Aluminum (Al)

Lot #
Solvent: 20370011 Nitric Acid

Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

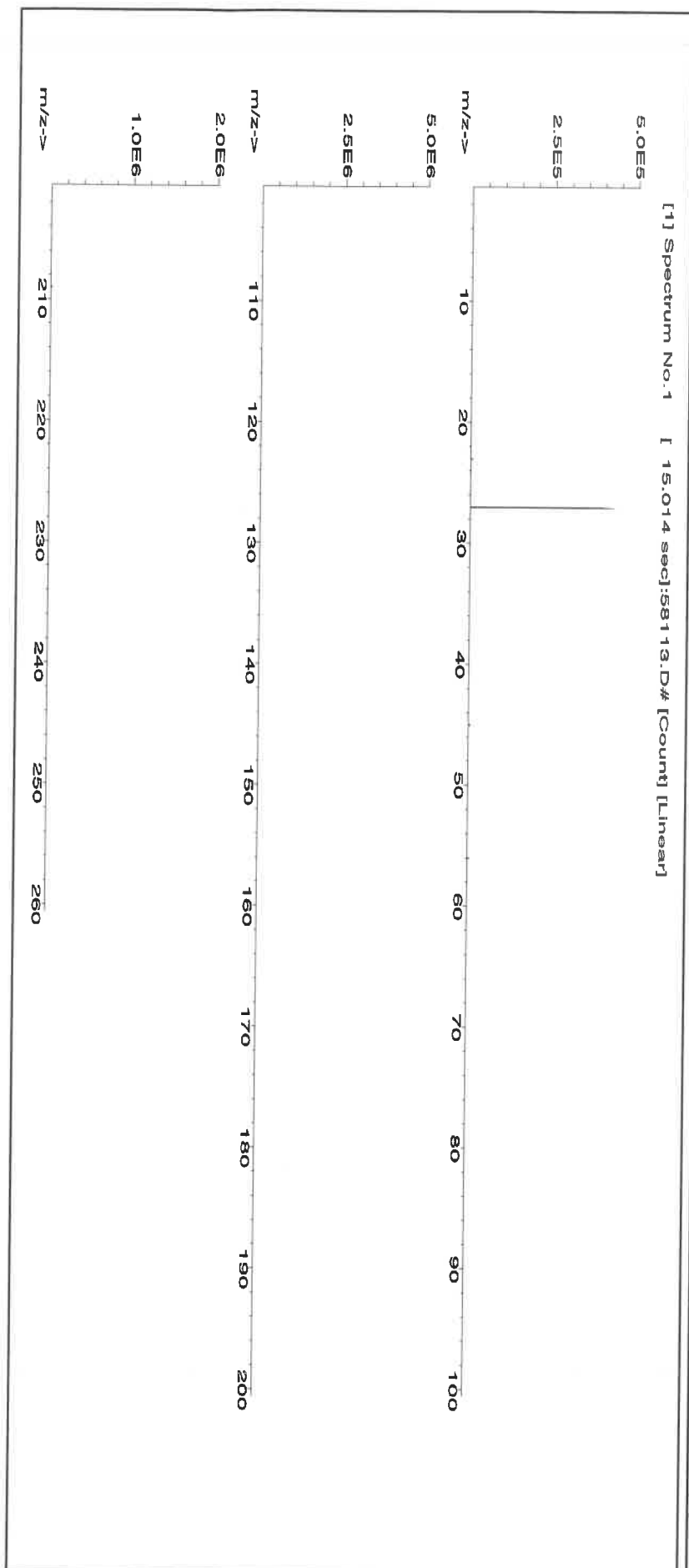
2% 40.0 (mL) Nitric Acid

Weight shown below was diluted to (mL): 2000.02 0.058 Balance Uncertainty
5E-05 Flask Uncertainty

Formulated By:	Lawrence Barry
	070622
Reviewed By:	Pedro L. Renteria
	070622

Compound	SDS Information										NIST SRM	
	Solvent Safety Info. On Attached pg.)							Expanded Uncertainty		CAS#		
	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	+/- (µg/mL)			
RM#											OSHA PEL (TWA)	LD50

1. Aluminum nitrate nonahydrate (Al) IN022 ALD012021A1 10000 99.999 0.10 7.10 281.6956 281.6977 10000.1 20.0 7784-27-2 2 mg/m3 or-tal 3671 mg/kg 3101a





Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	T	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	Ru	<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	Sr	<0.02	S	<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	Ta	<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).



R: 4/20/21

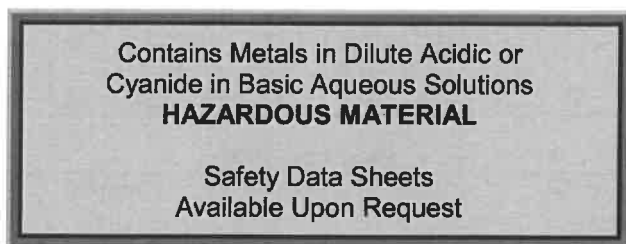
Instructions for QATS Reference Material: *Inorganic ICV Solutions*

QATS LABORATORY INORGANIC REFERENCE MATERIAL
INITIAL CALIBRATION VERIFICATION SOLUTIONS
(ICV1, ICV5, AND ICV6)

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.



M5291
M15292
M15293
M15294
M15295

(A) SAMPLE DESCRIPTION

Enclosed is a set of one (1) or more Aqueous Inorganic Reference Materials containing various analyte concentrations. ICV1 and ICV5 are in a matrix of dilute nitric acid. ICV6 is in a matrix of dilute basic solution. **For the reference material source in reporting ICVs use "USEPA". For the reference material lot number for the ICV1, ICV5, and ICV6 solutions use "ICV1-1014", "ICV5-0415", and "ICV6-0400", respectively.**

(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

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP, AA, and Cyanide colorimetric instruments, and are to be used with the CLP SOWs and revisions. The values for each element in the ICVs are listed below in µg/L (ppb) for the resulting solution(s) after the dilution of the concentrate(s) according to the following instructions. Use Class 'A' glassware to prepare the solution(s).

ICV1-1014 For ICP-AES analysis, use a 10-fold dilution by pipetting 10 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.





Instructions for QATS Reference Material: *Inorganic ICV Solutions*

- ICV1-1014** For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.
- ICV5-0415** For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.
- ICV6-0400** For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS

ICV1-1014		
Element	Concentration (µg/L) (after 10-fold dilution)	Concentration (µg/L) (after 50-fold dilution)
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	Concentration (µg/L) (after 100-fold dilution)	Analyte	Concentration (µg/L) (after 100-fold dilution)
Hg	4.0	CN ⁻	99



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





R-09/18/22 (RH)
Certified Reference Material CRM

MS387 - MS389 - MS390 - MS391 - MS392



CERTIFIED WEIGHT REPORT:

Part Number: **57056**
Lot Number: **072122**
Description: **Barium (Ba)**

Solvent: **20510011 Nitric Acid**

Lot #

Expiration Date: **072125**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test Number: **6UTB**

2% **40.0 (mL)** **Nitric Acid**

Weight shown below was diluted to (mL): **2000.02** **0.058** **Flask Uncertainty**

<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
Reviewed By:	<i>Pedro L. Rentes</i>
	Pedro L. Rentes
	072122

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)	NIST SRM
1. Barium nitrate (Ba)	IN023 BA022019A1	1000	99.999	0.10	52.3	3.82417	3.82426	1000.0	2.0
									10022-31-8
									0.5 mg/m3
									or 1st 355 mg/kg
									31046

[1] Spectrum No. 1 [12.514 sec]:58156.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	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.02	Er	<0.2	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	T	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	<0.02	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	<0.2	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:

Ben. L. R.

* 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.

Null Standards should be stored with caps tight and under appropriate laboratory conditions.

Uncertainty References: 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: 58120
Lot Number: 031523
Description: Calcium (Ca)

Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 3000.41

Solvent: 21110221 Nitric Acid

2% 60.0 Nitric Acid (mL)

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito 031523
<i>Pedro L. Rentas</i>	
Reviewed By:	Pedro L. Rentas 031523

SDS Information

Expanded Uncertainty
Actual Conc. (µg/mL) 10001.4
Target Weight (g) 75.1990
Actual Weight (g) 75.2093
CAS# OSHA PEL (TWA) LD50
NIST SRM

1. Calcium carbonate (Ca) IN014 CAD072022A1 10000 99.999 0.10 39.9 75.1990 10001.4 20.0 471-34-1 5 mg/m3 or-rat >2000mg/kg 3109a

[1] Spectrum No.1 [12.514 sec]:58120.D# [Count] [Linear]



340



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	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	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	<0.01	Cr	<0.02	Ga	<0.2	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	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	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 WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57182
061522
Lead (Pb)

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

061525
Ambient (20 °C)
10000
6UTB

Weight shown below was diluted to (mL):

2000.02

5E-05 Balance Uncertainty

0.058 Flask Uncertainty

Solvent: Nitric Acid

2% Nitric Acid
40.0 (mL)

Lot #

20510011

Nitric Acid

Formulated By: Giovanni Esposito

Reviewed By: Pedro L. Rentas

061522

061522

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)	SDS Information (Solvent Safety Info. On Attached pg.)	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD12201641	10000	99.999	0.10	82.5	32.0006	32.0041	10001.1	20.0	10098-74-8 0.05 mg/m3 inh-via-rat 88 mg/kg	3128

[1] Spectrum No. 1 [17.284 sec]:58182.D# [Count] [Linear]



342



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	<0.02	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	<0.2	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	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.

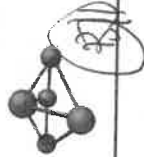
Certified by:

[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



MS54-MS55 R:03/17/22

CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

58126
092122
Iron (Fe)

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

092125
Ambient (20 °C)
10000
6UTB

Weight shown below was diluted to (mL):

5000.1

Solvent: 20510011 Nitric Acid

7.0% 350.0 Nitric Acid
(mL)

5E-05 Balance Uncertainty
0.12 Flask Uncertainty

Formulated By:	Giovanni Esposito	092122
Reviewed By:	Pedro L. Rentas	092122

Expanded
Uncertainty

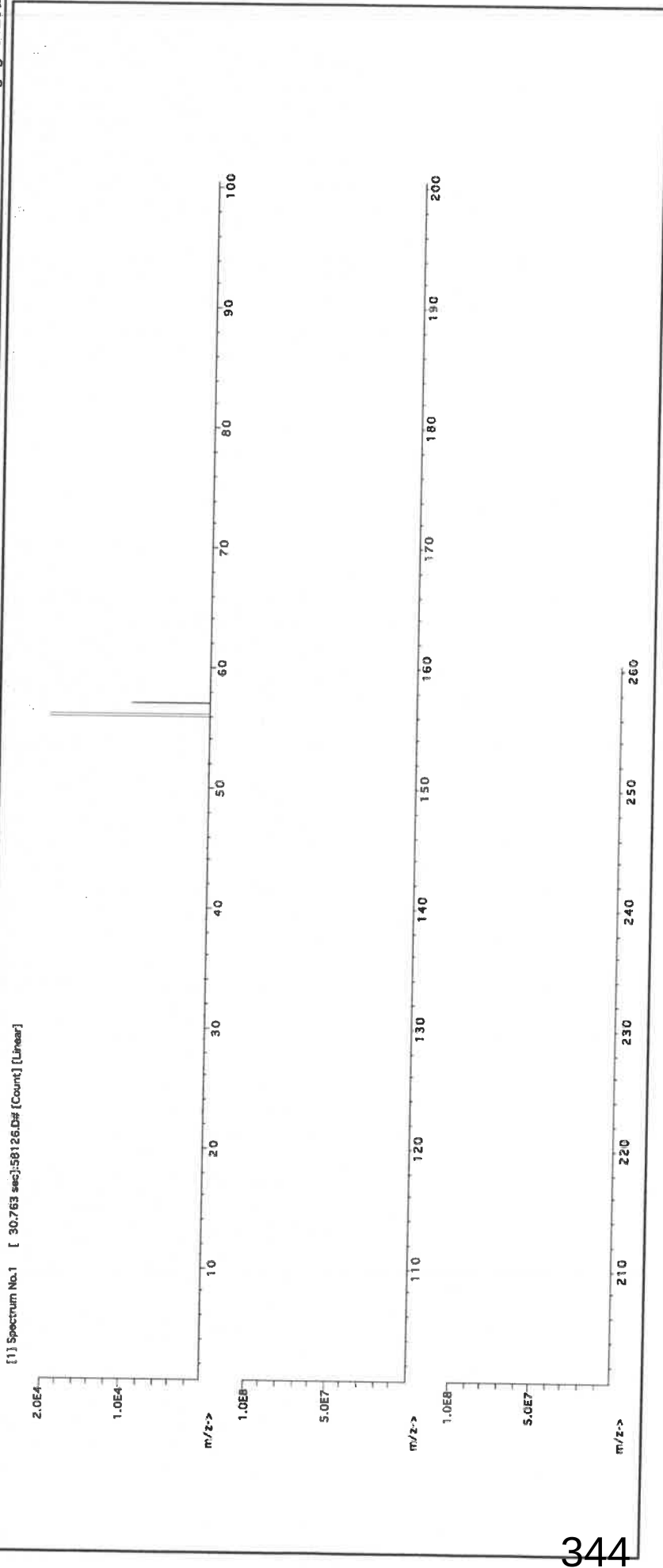
SDS Information

(Solvent Safety Info. On Attached pg.)
LD50 OSHA PEL (TWA)

NIST
SRM

Actual Conc. (µg/mL) 10001.5
Actual Weight (g) 50.0111
Target Weight (g) 50.0034
Assay (%) 100.0
Purity (%) 99.985
Nominal Conc. (µg/mL) 10000
Lot Number 2224912-500
RM# IN346

1. Iron (Fe) 30.763 sec] 58126.D# [Count] [Linear] 5 mg/m3 7439-88-6 20.0 orl-rat 7500mg/kg 3126a



344



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	<0.10	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	La	<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	<0.02	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	<0.05	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	<0.10	Ge	<0.10	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.05
B	<0.02	Cu	<0.10	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:

Bar P. Jha

- * 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).

345



Certified Reference Material CRM

CERTIFIED WEIGHT REPORT:

Part Number: **58119**
Lot Number: **120822**
Description: **Potassium (K)**

Solvent: 20510011 Nitric Acid

Lot #

Giovanni Esposito

Formulated By: Giovanni Esposito 120822

Expiration Date: 120825
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

2% 60.0 (mL) Nitric Acid

Pedro L. Rantas

Reviewed By: Pedro L. Rantas 120822

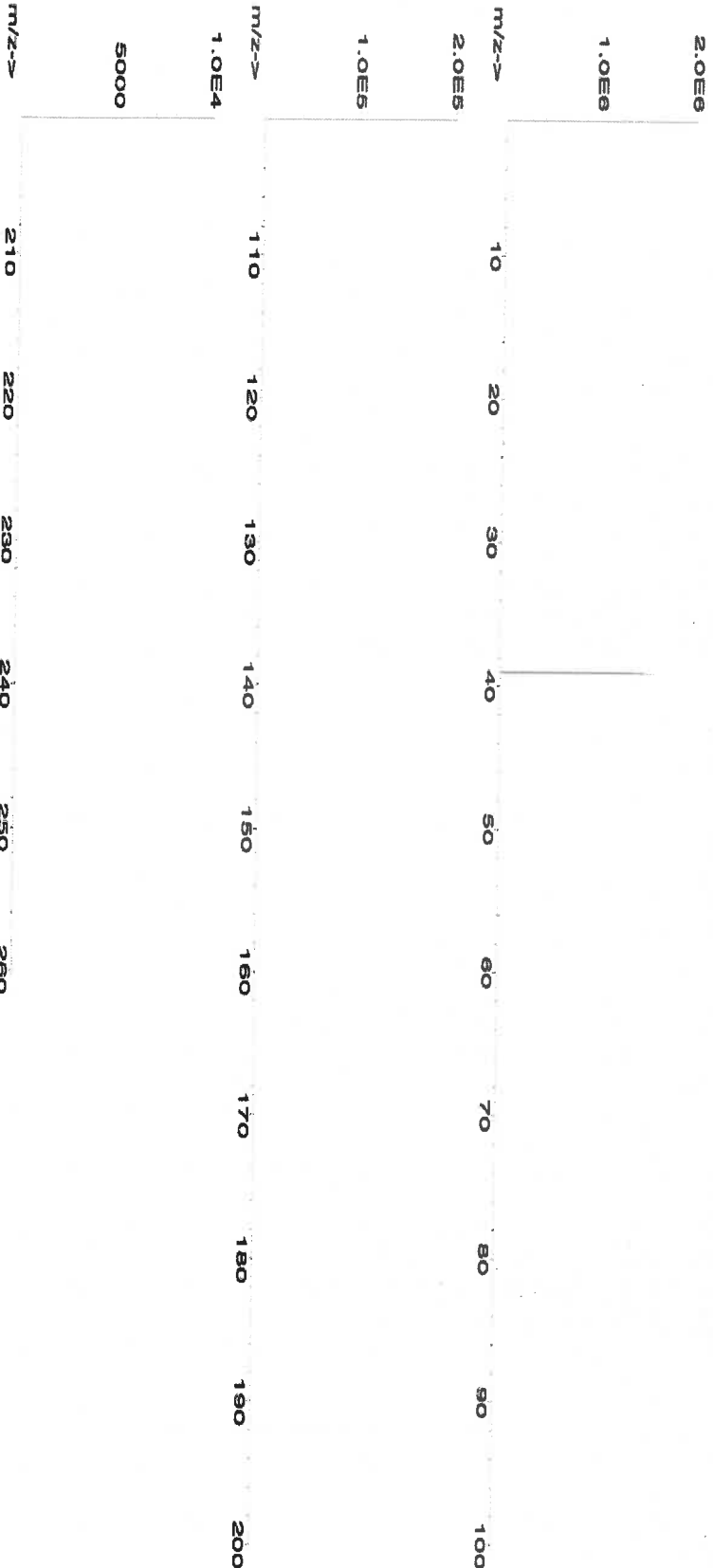
Weight shown below was diluted to (mL): 3000.4 0.06 Flask Uncertainty

Compound

Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded	SDS Information	NIST
RM#	Number	Conc. (µg/mL)	(%)	Purity (%)	Weight (g)	Weight (g)	Conc. (µg/mL)	+/- (µg/mL)	(Solvent Safety Info. On Attached pg.)	SRM

1. Potassium nitrate (K) IN034 KD022021A1 10000 99.989 0.10 37.6 79.7990 79.8075 10001.1 20.0 7757-79-1 5 mg/m3 or/air 3015 mg/kg 3141a

[1] Spectrum No.1 [35.763 sec]:58119.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

347

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	<0.02	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.
- * 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: 58024
Lot Number: 060523
Description: Chromium (Cr)

Lot #
21110221
Solvent: Nitric Acid

2.0%

40.0 (mL)
Nitric Acid

Formulated By:	Lawrence Barry
	060523
Reviewed By:	Pedro L. Ruelas
	060523

348

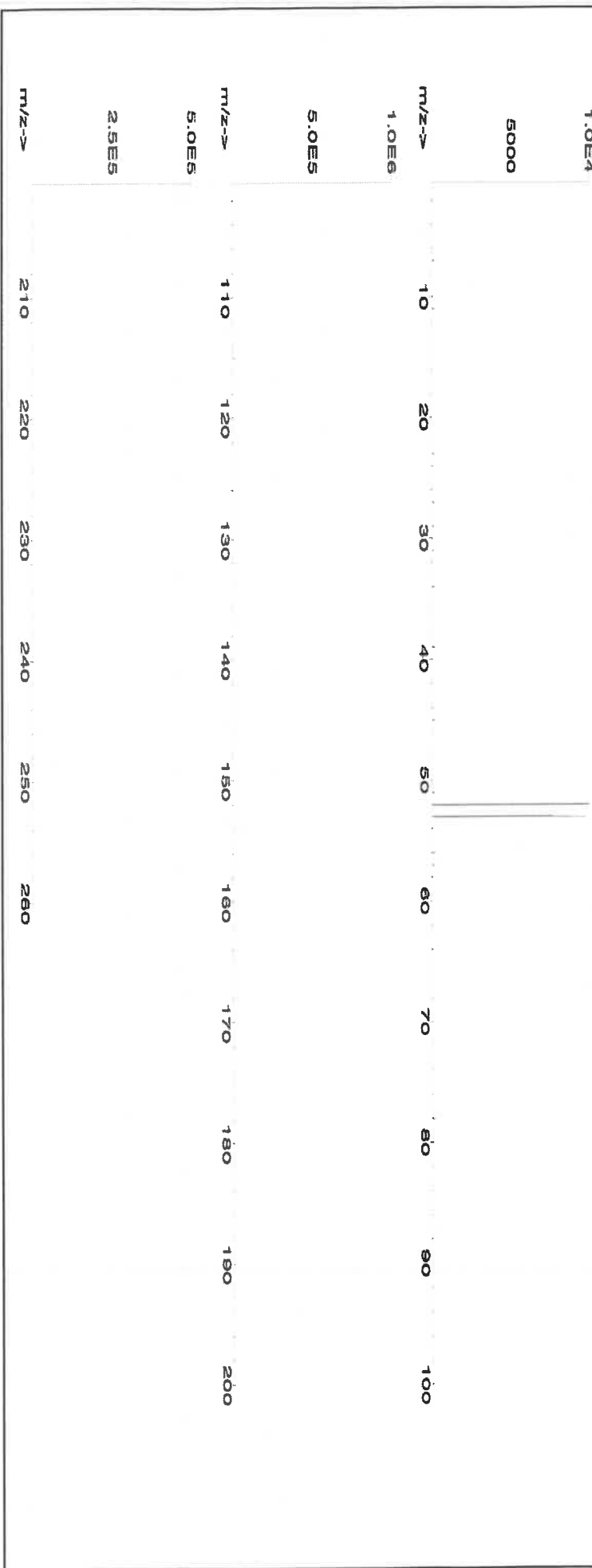
Expiration Date: 060526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Volume shown below was diluted to (mL): 2000.02 0.058 Balance Uncertainty
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
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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]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

349

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 WEIGHT REPORT:

Part Number:
Lot Number:
Description:

58025
102623
Manganese (Mn)

Lot #
Solvent:

24002546
Nitric Acid

Expiration Date:

102626

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Volume shown below was diluted to (mL):

3000.41

5E-05

Balance Uncertainty

0.058

Flask Uncertainty

2.0%

60.0

(mL)

Nitric Acid

Formulated By:

Benson Chan

102623

Reviewed By:

Pedro L. Ruelas

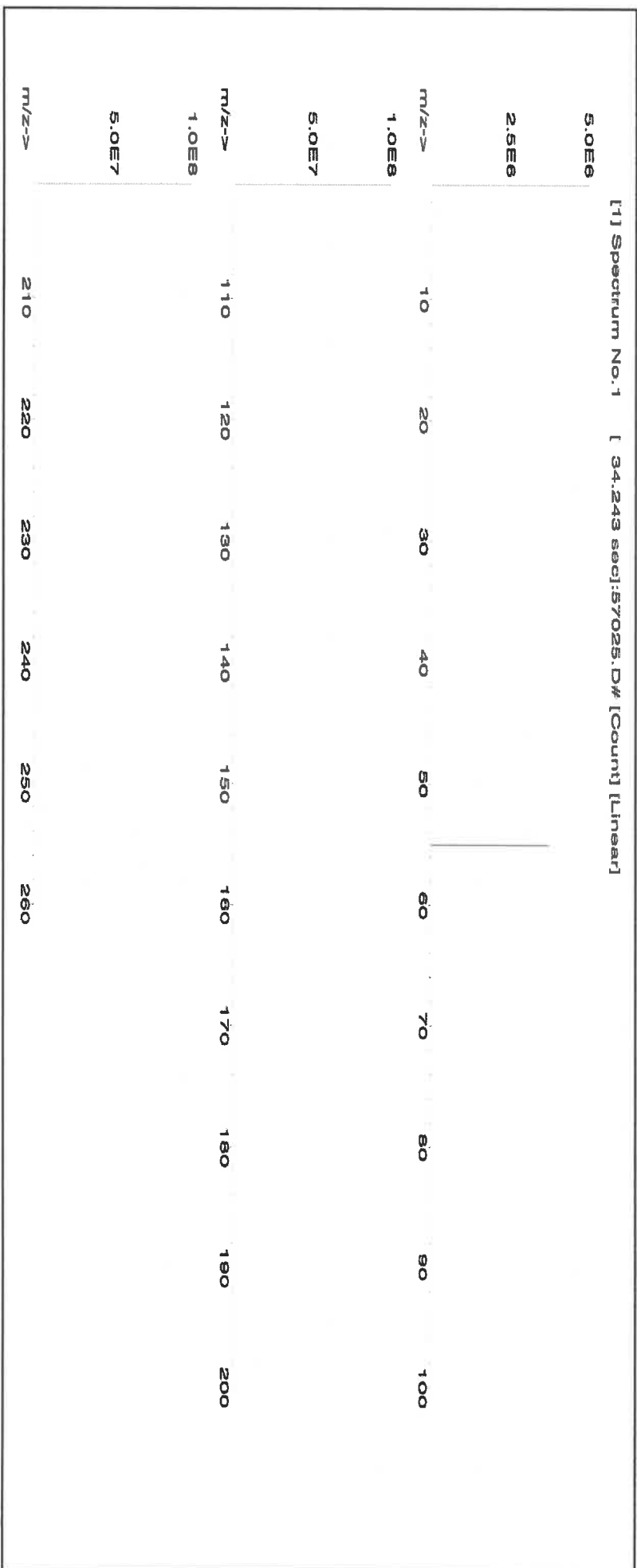
102623

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	NIST SRM
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1. Manganese(II) nitrate tetrahydrate (Mn) 58125 071123 0.1000 300.0 0.084 1000 10000.1 1000.0 2.1 20694-39-7 5 mg/m3 or-rel >300mg/kg 3132

[1] Spectrum No.1 [34.243 sec]:57025.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	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 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: **58029**
Lot Number: **071723**
Description: **Copper (Cu)**

Lot #: **2110221**
Solvent: **Nitric Acid**

Expiration Date: **071726**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**

2.0%
40.0 (mL)
Nitric Acid

Formulated By:	Benson Chan	071723
Reviewed By:	Pedro L. Ruelas	071723

NIST Test Number: **6UTB**
Volume shown below was diluted to (mL): **2000.02**
Balance Uncertainty: **5E-05**
Flask Uncertainty: **0.058**

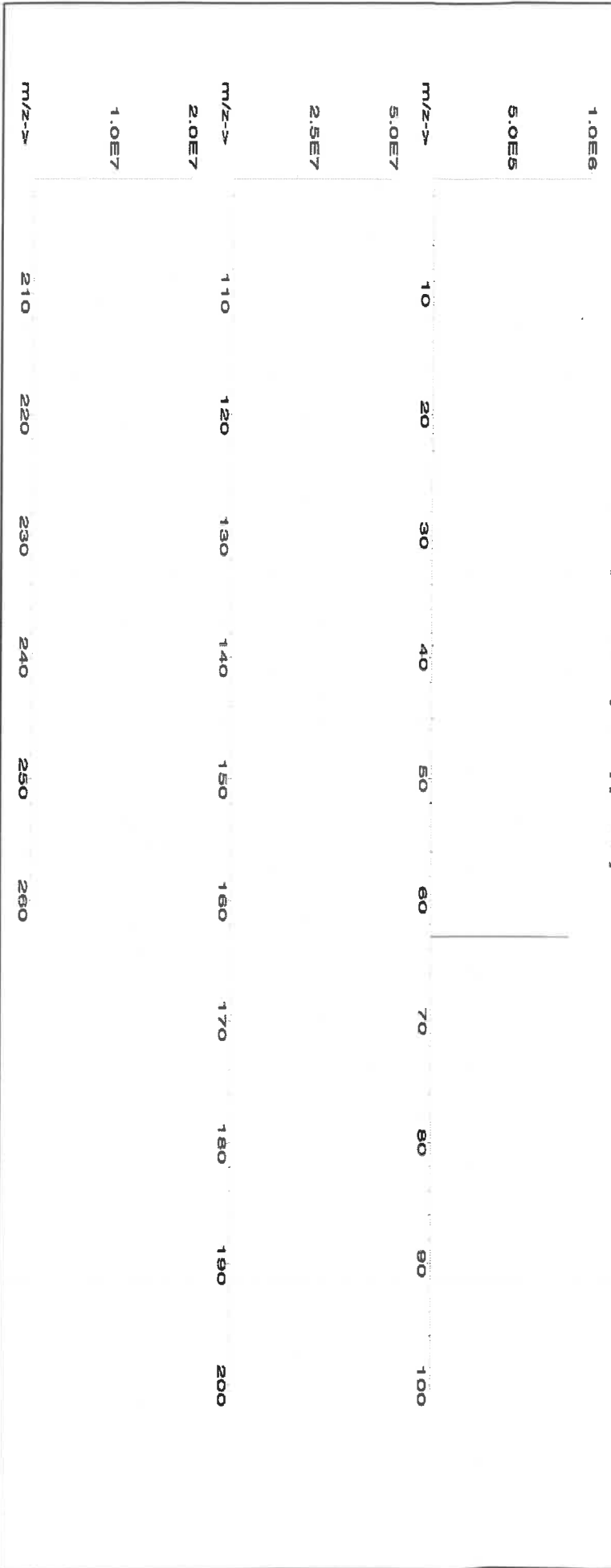
Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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SDS Information

(Solvent Safety Info. On Attached pg.)

1. Copper(II) nitrate trihydrate (Cu) 58129 022723 0.1000 200.0 0.084 1000 10000.5 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 (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	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	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	La	<0.2	Hg	<0.2	P	<0.02	Sr	<0.02	S	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	Pb	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	Ta	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02			Nd	<0.02	K	<0.2	Sc	<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).



M5768 M5769
Certified Reference Material CRM
R: 1/13/24



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 091823
Description: Magnesium (Mg)

Solvent: 24002546 Nitric Acid

Lot #

Expiration Date: 091826

2% 40.0 (mL) Nitric Acid

Recommended Storage: Ambient (20 °C)

10000 M5768 M5769

NIST Test Number: 6UTB

5E-05 Balance Uncertainty

BP R: 1/13/24

Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

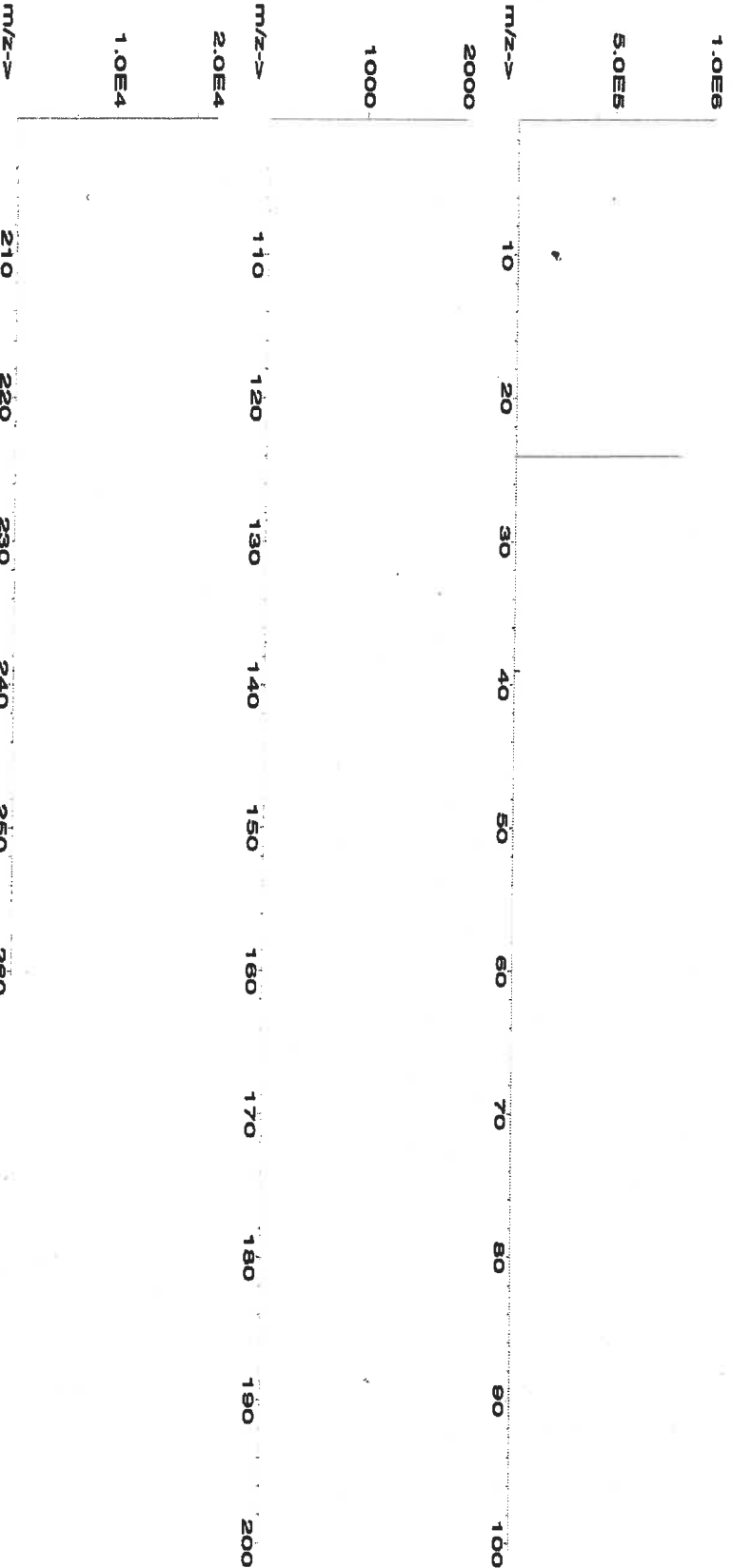
Formulated By: <i>Lawrence Barry</i>		091823
Reviewed By: <i>Pedro L. Rentas</i>		091823

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. Magnesium nitrate hexahydrate (Mg) IN030 M500222A1 10000 99.999 0.10 8.51 234.9118 234.9126 10000.0 20.0 13446-18-9 NA or-rat 5440 mg/kg 3131a

[1] Spectrum No. 1 [19.923 sec]:58112.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	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	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: 57004
Lot Number: 102523
Description: Beryllium (Be)

Lot # 24002546
Solvent: Nitric Acid

Expiration Date:

102526

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Volume shown below was diluted to (mL): 2000.02

Balance Uncertainty 5E-05
Flask Uncertainty 0.058

2.0%

40.0 (mL)

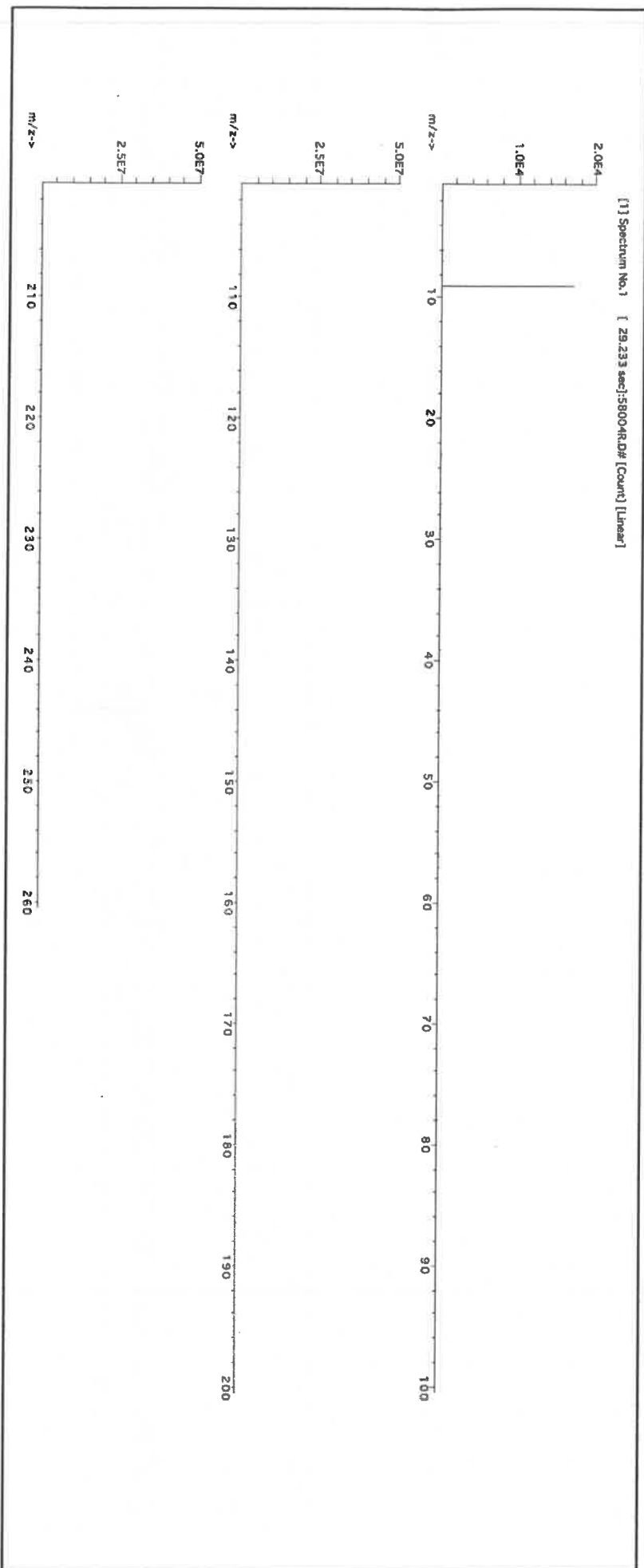
Nitric Acid

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 Inj/mg-rat 3.16mg/kg NA





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	La	<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	<0.2	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	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).

357



Certified Reference Material CRM

CERTIFIED WEIGHT REPORT:

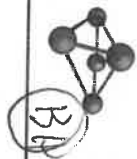
Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

Solvents: 21110221 Nitric Acid
22D0562008 Hydrochloric acid

Lot #

R-02509124

M599



358

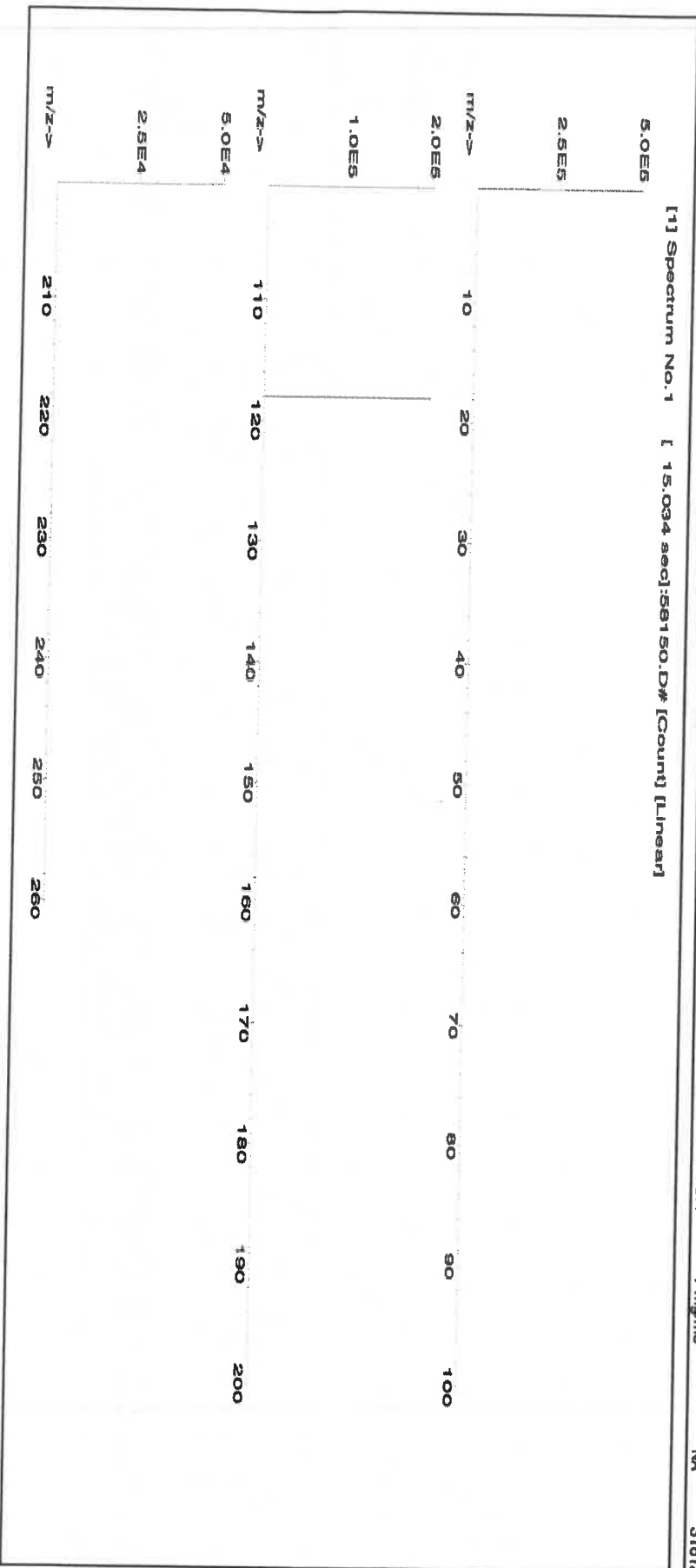
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By: Benson Chan	
071123	
Reviewed By: Pedro L. Rientas	
071123	

SDS Information														NIST			
Compound		Lot		Nominal		Purity		Uncertainty		Assay		Target			Actual		Expanded
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)	(%)

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):

359

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	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	<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	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	Tl	<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.
- * 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 (54)

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

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Lot # 24002546
Solvent: Nitric Acid

2.0% Nitric Acid
40.0 (mL)

Formulated By:	Lawrence Barry
Reviewed By:	Pedro L. Rentas

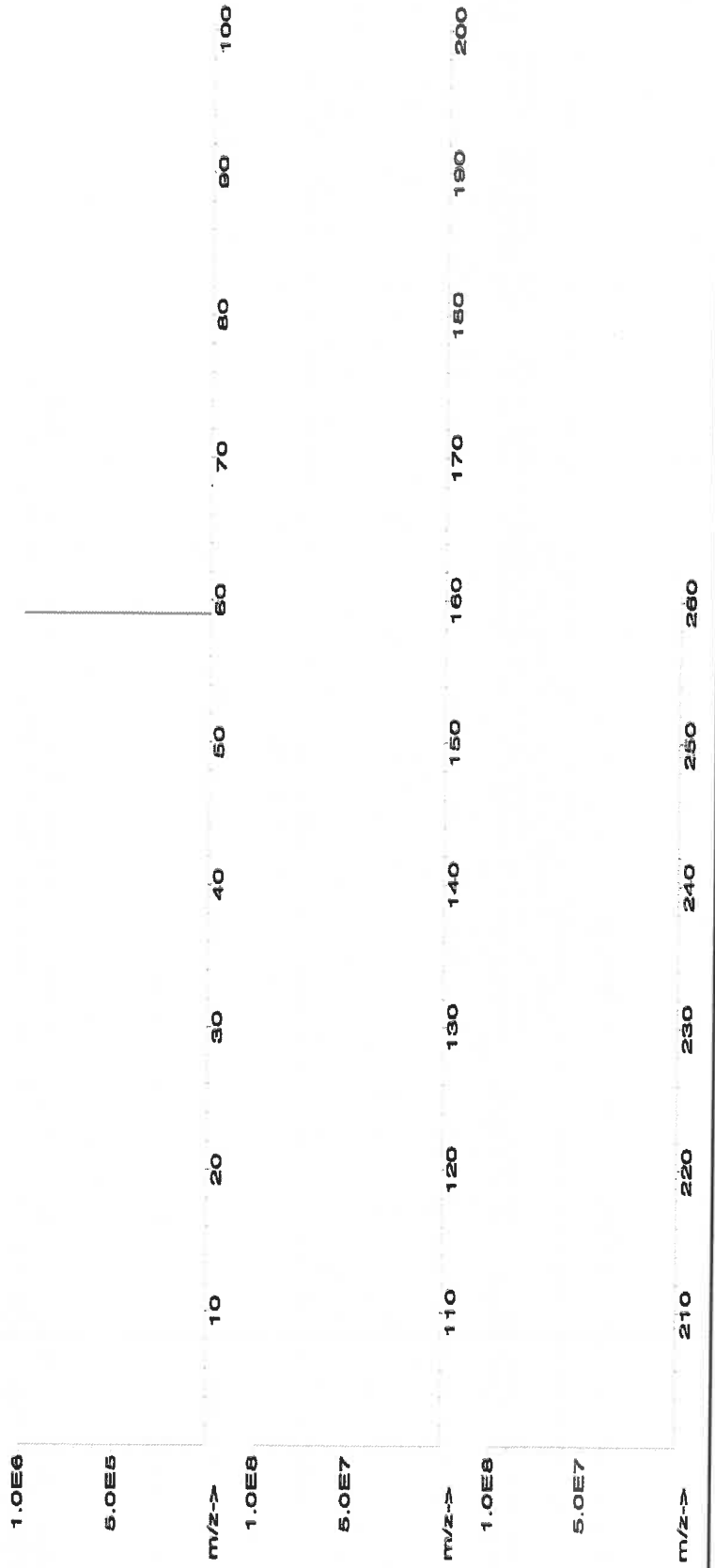
SDS Information

Expanded Uncertainty +/- (µg/mL)
Final Conc. (µg/mL)
Initial Conc. (µg/mL)
Nominal Conc. (µg/mL)
Pipette (mL)
Dilution Factor

(Solvent Safety Info. On Attached pg.)
CAS#
OSHA PEL (TWA)
LD50
NIST
SRM

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 or-rat 691 mg/kg 3113

[1] Spectrum No.1 [34.243 sec]:58027.D# [Count] [Linear]



360



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	<0.02	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.
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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 WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57033
111323
Arsenic (As)

Lot #
Solvent:

24002546
Nitric Acid

2.0%
80.0 (mL)

Nitric Acid

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):

111326
Ambient (20 °C)
1000

NIST Test Number:
Volume shown below was diluted to (mL):

6UTB
4000.0

5E-05
Balance Uncertainty

0.06
Flask Uncertainty

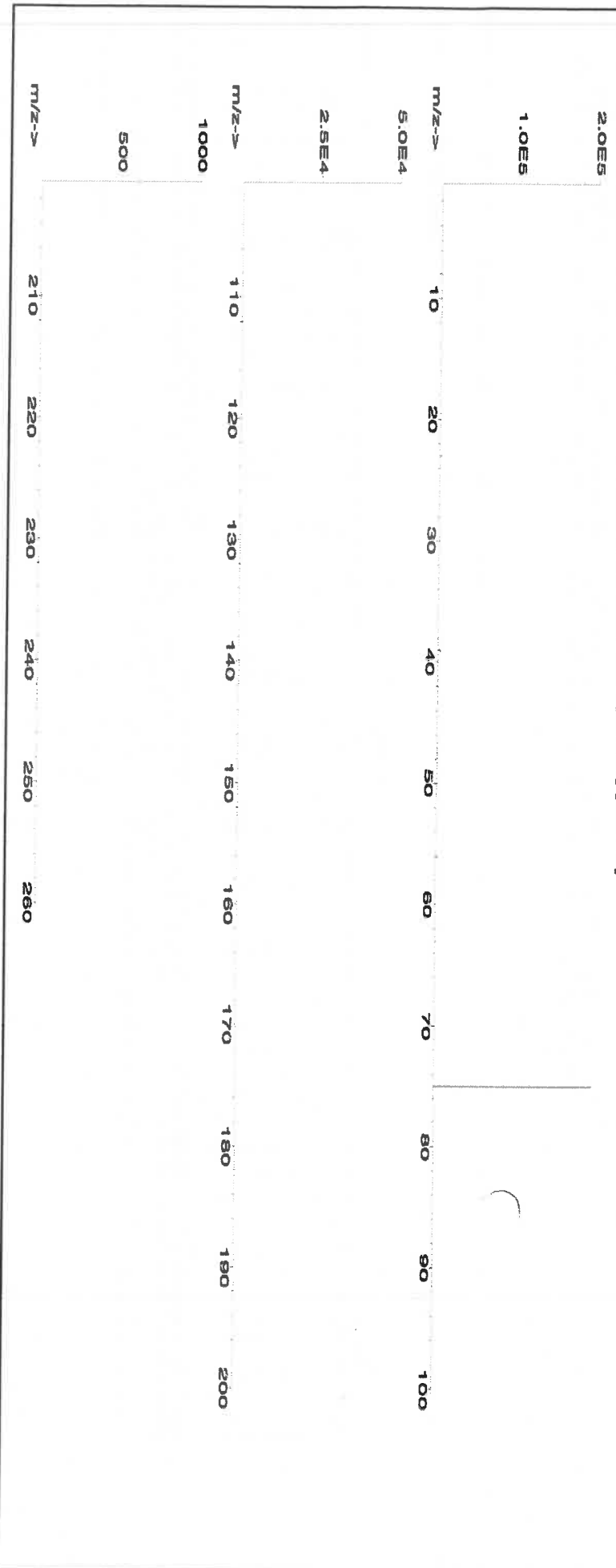
Formulated By:	Lawrence Barry
Reviewed By:	Pedro L. Rendas
	111323

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-rat 500 mg/kg	3103a
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[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	Te	<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	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	Tl ₂	<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	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	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: 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

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. 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 ($\mu\text{g/mL}$)

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	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.
- * 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: 57016
Lot Number: 122923
Description: Sulfur (S)

Lot #

ASTM Type 1 Water

Solvent: 122923

Formulated By:	Benson Chan
Reviewed By:	Pedro L. Rentas

366

Expiration Date: 122926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6L7B
Weight shown below was diluted to (mL): 4000.0
SE-05 Balance Uncertainty
0.06 Flask Uncertainty

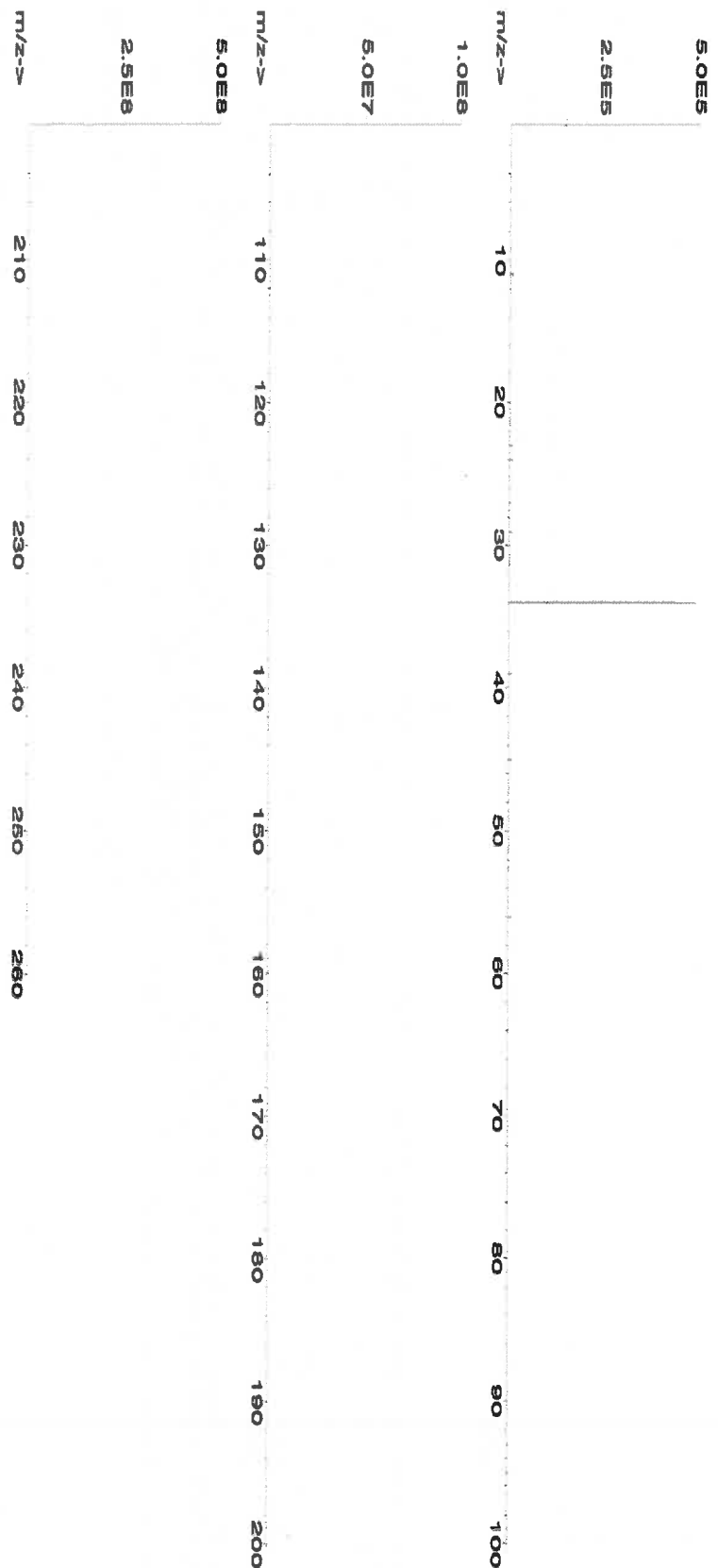
Compound

RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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SDS Information

1. Ammonium sulfate (S) IN117 SLBR225V 1000 99.9 0.10 24.3 16.4979 16.4980 1000.0 2.0 7783-20-2 NA 0.01-0.1 4250mg/kg 3181

[1] Spectrum No. 1 [33.603 sec]:57016.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

367

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	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	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Ru	<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	S	<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	Ta	<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	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.
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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 WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57116
071123
Sulfur (S)

Lot #
Solvent: 071123
ASTM Type 1 Water

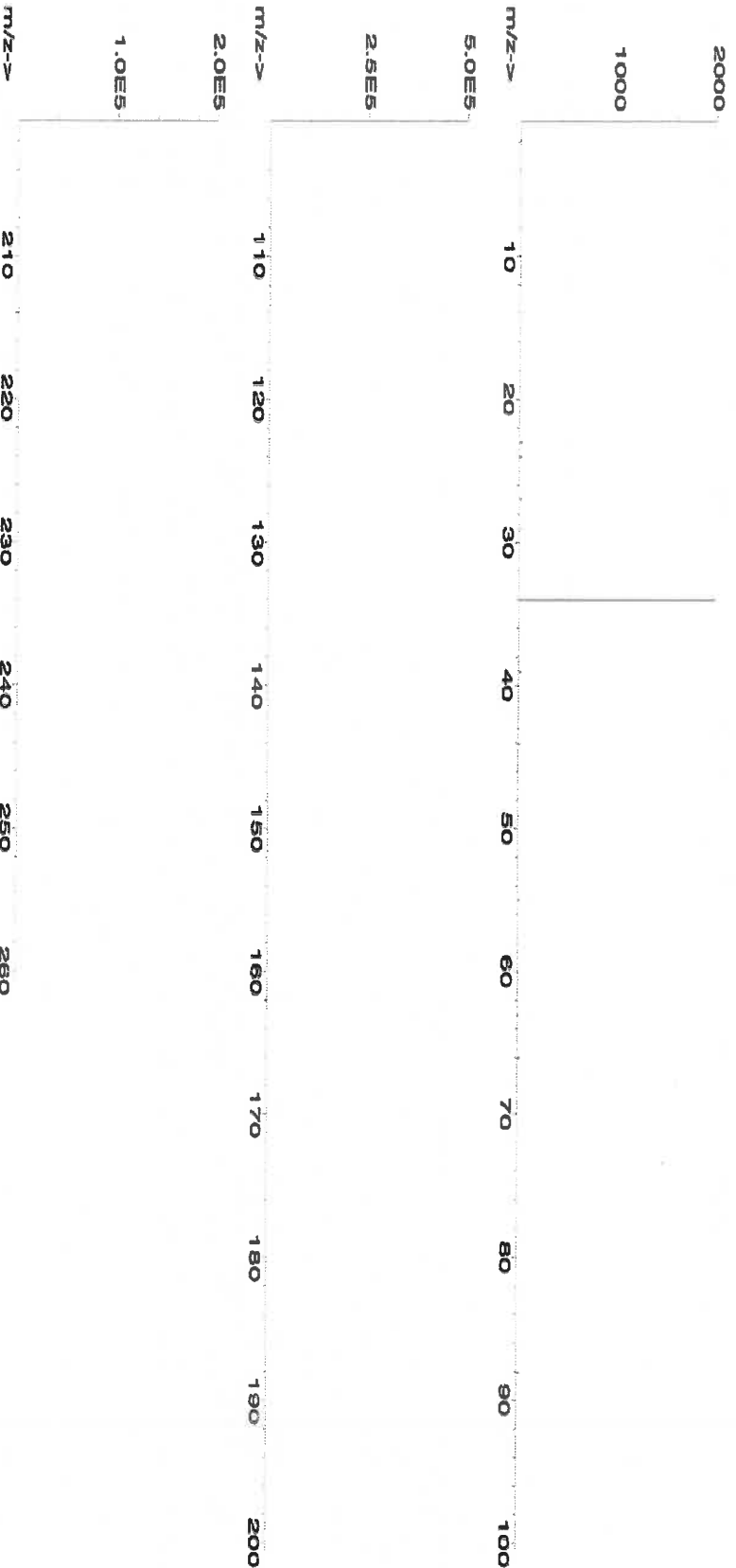
368

Formulated By:	Lawrence Barry
071123	
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 Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)
Ammonium sulfate (S)	IN117 SLBR7225V	10000	99.9	0.10	24.3	82.4675	82.4692	10000.1	20.0
						7763-20-2	NA	oralal 4250mg/kg	3181

[1] Spectrum No. 1 [24.004 sec]:58116.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	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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- * 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: **57014**
Lot Number: **122023**
Description: **Silicon (Si)**

Solvent: **24002546 Nitric Acid**

Lot #

Formulated By: **Aleah O Brady**

122023

2% 40.0 (mL) Nitric Acid

Reviewed By: **Pedro L. Rentas**

122023

Expiration Date: **122026**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test Number: **6UTB**

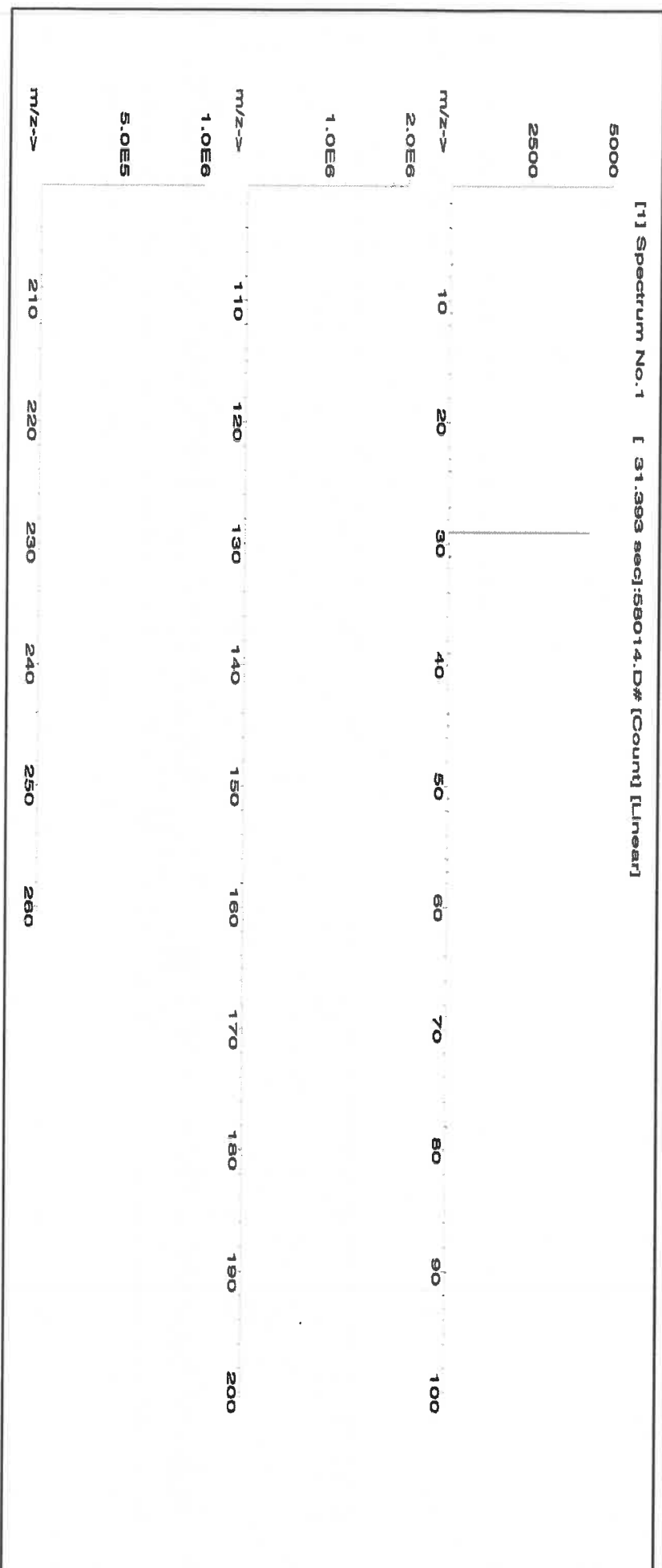
Weight shown below was diluted to (mL): **1999.48** 5E-05 Balance Uncertainty 0.058 Flask Uncertainty

Compound

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. Ammonium hexafluorosilicate (Si) IN009 S1D08022A1 1000 99.999 0.10 14.4 13.8854 13.8855 1000.0 2.0 18919-19-0 2.5 mg/m3 off-mus 70 mg/kg NA

[1] Spectrum No. 1 [31.393 sec; 158014.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	T	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Ru	<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	<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	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 WEIGHT REPORT:

Part Number: 58030
Lot Number: 111623
Description: Zinc (Zn)

Solvent: 24002546 Nitric Acid

Lot # R: 02109124 MS819

Expiration Date: 111626

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 1000

NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 3000.4

5E-05 Balance Uncertainty

0.06 Flask Uncertainty

2% 60.0 (mL) Nitric Acid

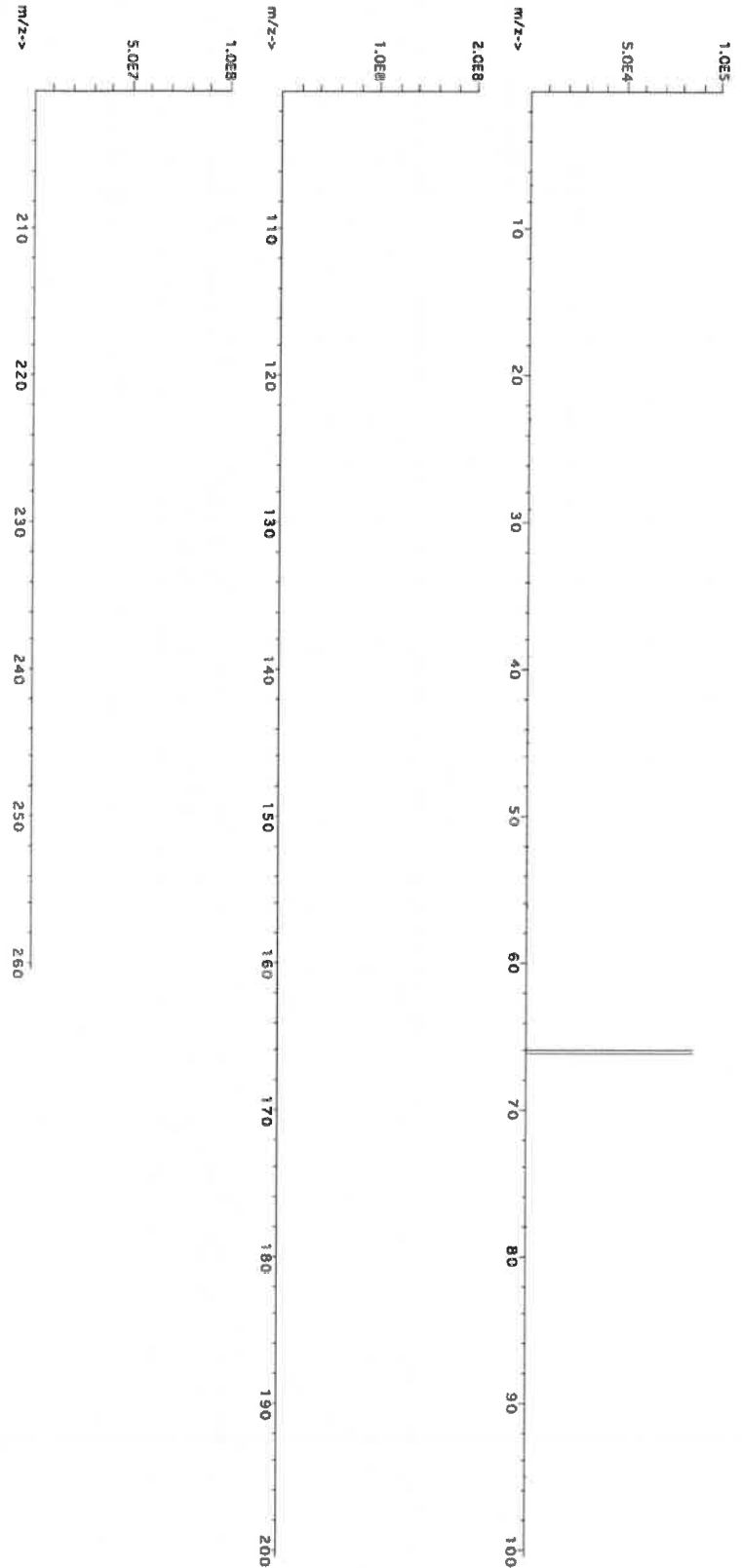
Formulated By:	Benson Chan
Reviewed By:	Pedro L. Reintias
111623	

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
									OSHA PEL (TWA)	
									LDSO	

1. Zinc nitrate hexahydrate (Zn) IN016 ZNE03021A1 1000 99.999 0.10 24.3 12.3475 12.3502 1000.2 2.0 10196-16-6 1 mg/mL 3168 on-rat 1190mg/kg

[1] Spectrum No.1 [31.103 sec]58130.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	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).



CERTIFIED WEIGHT REPORT:

Part Number: 57015
Lot Number: 091123
Description: Phosphorous (P)

Solvent: 24002546 Nitric Acid

Lot #

Formulated By: Lawrence Barry
Reviewed By: Pedro L. Rentas

091123

2% 40.0 (mL) Nitric Acid

Expiration Date: 091126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6LUTB

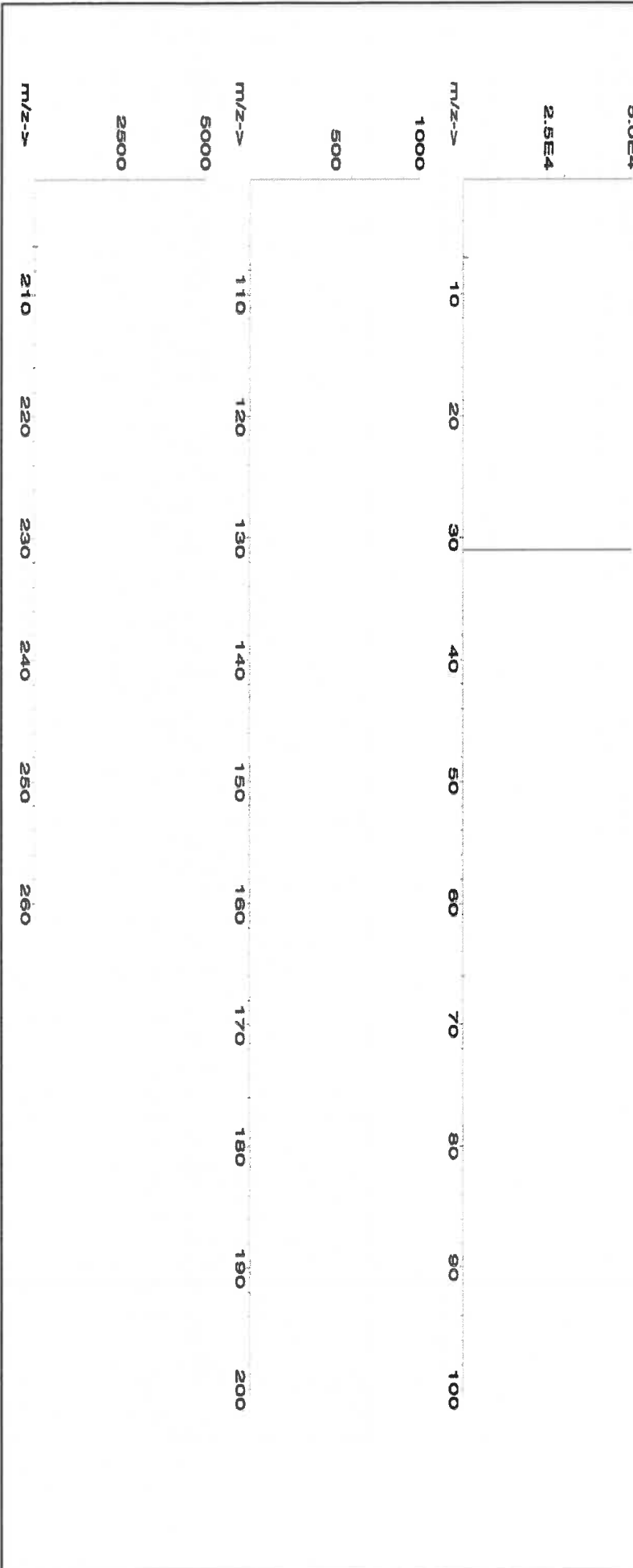
Weight shown below was diluted to (mL): 2000.02
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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. Ammonium dihydrogen phosphate (P) IN008 PVO62019A1 1000 99.999 0.10 27.5 7.2729 7.2730 1000.0 2.0 7722-76-1 5 mg/m3 xH-rat >2000mg/kg 3186

[1] Spectrum No.1 [12.074 sec]:58115.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	<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	Sa	<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.
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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:

MS961 R-1 6/11/24

Part Number:

57028

Lot Number:

041124

Description:

Nickel (NI)

Solvent: 24002546 Nitric Acid

Lot #

Expiration Date:

041127

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

2% 5.0 (mL) Nitric Acid

NIST Test Number:

6UTB

Weight shown below was diluted to (mL):

249.85

5E-05 Balance Uncertainty
0.002 Flask Uncertainty

Formulated By:	Brian Geddes	041124
Reviewed By:	Pedro L. Rentas	041124

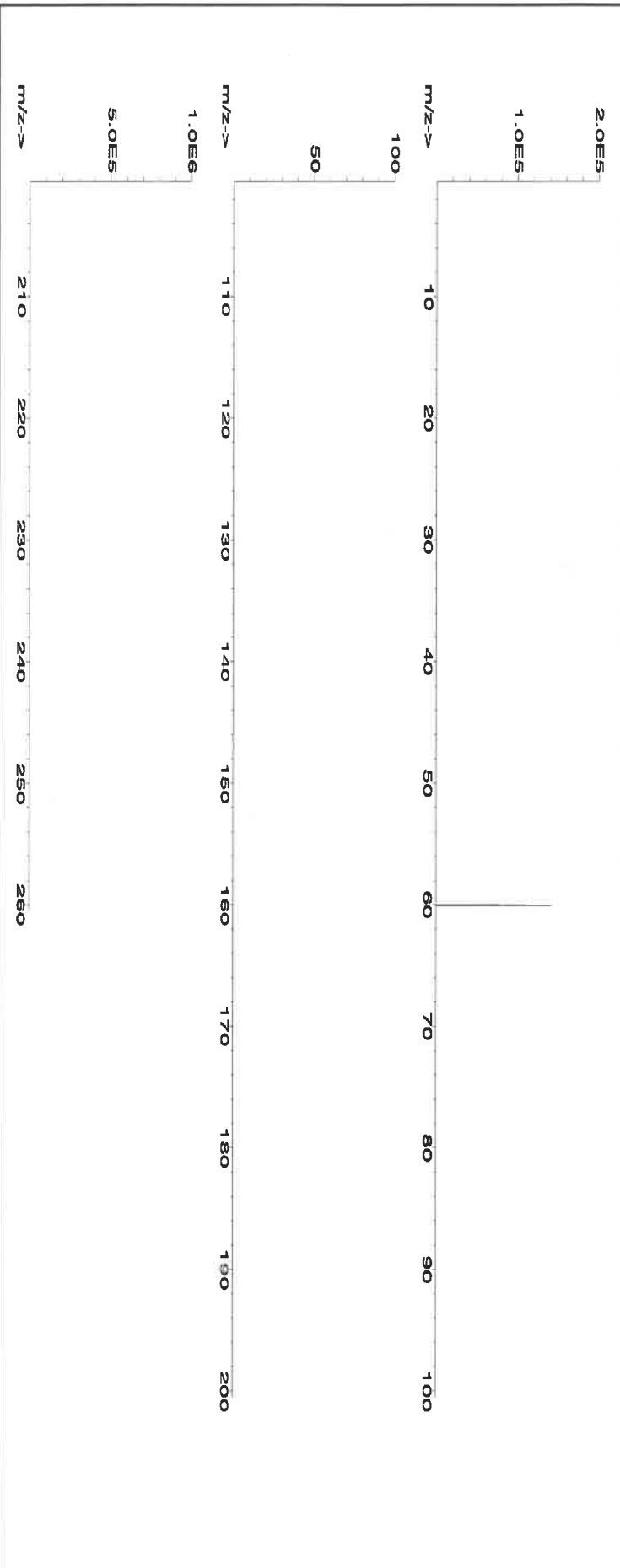
SDS Information

Compound

RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay	Target Weight (g)	(Solvent Safety Info. On Attached pg.)			NIST	
							Actual Weight (g)	Actual Conc. (µg/mL)	Uncertainty +/- (µg/mL)		
								CAS#	OSHA PEL (TWA)	LD50	SRM

1. Nickel(II) nitrate hexahydrate (NI) IN033 NIM052023A1 1000 99.999 0.10 20.2 1.2369 1.2369 1000.0 2.0 13478-00-7 1 mg/m3 or-rat 1620 mg/kg 3136

[1] Spectrum No.1 [12.374 sec]:58128.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	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	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	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	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	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	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	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
M5962 **R10614124**



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

Expiration Date: 060627

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 1000

NIST Test Number: 6LUTB

Volume shown below was diluted to (mL): 2000.07

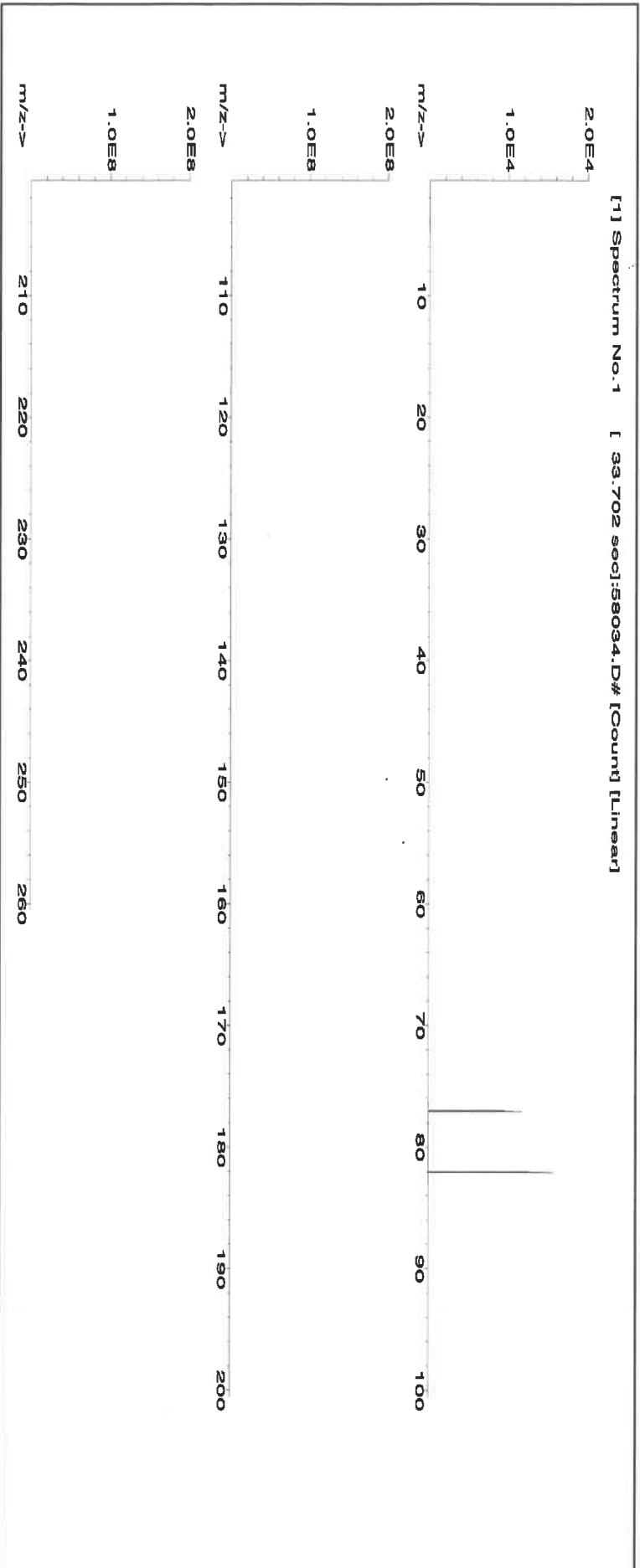
SE-05 Balance Uncertainty
0.100 Flask Uncertainty

Formulated By:	Benson Chan
	060624
Reviewed By:	Pedro L. Rantas
	060624

SDS Information

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)	(Solvent Safety Info. On Attached pg.)	CAS#	OSHA PEL (TWA)	LDSO	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
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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

379

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	<0.02	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	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Sr	<0.02	S	<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	Ta	<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			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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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: CGMO1
Lot Number: T2-MO720876
Matrix: H2O
tr. NH4OH
Value / Analyte(s): 1 000 µg/mL ea:
Molybdenum
Starting Material: Ammonium Molybdate
Starting Material Lot#: 2361
Starting Material Purity: 99.9893%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 7 µg/mL
Density: 1.000 g/mL (measured at 20 ± 4 °C)
Assay Information:

Assay Method #1 **998 ± 4 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

- 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	<	0.000590	M	Eu	<	0.000300	M	Na		0.000879	M	Se	<	0.008000	M	Zn		0.000598
M	Al		0.000563	M	Fe	<	0.006500	M	Nb	<	0.029000	i	Si	<		M	Zr	<	0.001800
M	As	<	0.002100	M	Ga	<	0.000300	i	Nd	<		M	Sm	<	0.000300				
M	Au	<	0.000300	M	Gd	<	0.000300	M	Ni	<	0.008000	M	Sn	<	0.008900				
M	B	<	0.003300	M	Ge	<	0.000300	M	Os	<	0.000590	M	Sr		0.000175				
M	Ba		0.001689	M	Hf	<	0.001800	i	P	<		M	Ta	<	0.004200				
M	Be	<	0.000890	M	Hg	<	0.003300	M	Pb	<	0.000300	M	Tb	<	0.000300				
M	Bi	<	0.000890	M	Ho	<	0.000300	M	Pd	<	0.001800	M	Te	<	0.021000				
O	Ca		0.006334	M	In	<	0.032000	M	Pr	<	0.013000	M	Th	<	0.000300				
O	Cd	<	0.026000	M	Ir	<	0.000300	M	Pt	<	0.000300	O	Ti	<	0.032000				
M	Ce	<	0.008300	M	K		0.130213	M	Rb		0.004575	M	Tl		0.001266				
M	Co		0.000598	M	La	<	0.000300	M	Re	<	0.000300	M	Tm	<	0.000300				
M	Cr		0.000527	O	Li		0.000059	M	Rh	<	0.000300	M	U	<	0.005300				
M	Cs		0.000527	M	Lu	<	0.000300	M	Ru	<	0.079000	M	V	<	0.000890				
M	Cu		0.002252	M	Mg		0.000563	i	S	<		M	W		0.087982				
M	Dy	<	0.000300	M	Mn	<	0.005900	M	Sb		0.001513	M	Y	<	0.000300				
M	Er	<	0.000300	s	Mo	<		M	Sc	<	0.001200	M	Yb	<	0.000300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 95.94 +6 6,7,8,9

[MoO₄]-2(chemical form as received)

Chemical Compatibility -Mo is received in a NH₄OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO₄]-2 is soluble in concentrated HCl [MoOCl₅]-2, dilute HF / HNO₃ [MoOF₅]-2 and basic media [MoO₄]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO₄]-2 chemical form.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF₅]-2 for months in 1% HNO₃ / LDPE container. 1-10,000 ppm single element solutions as the [MoO₄]-2 chemically stable for years in 1% NH₄OH in a LDPE container.

Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO₃ or hot dilute HCl); Oxide (soluble in HF or NH₄OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 95 amu	3 ppt	n/a	40Ar39K16O,79Br16O,190Os2+,190Pt2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.569.6799; 540.585.3030, Fax: 540.585.3012; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 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

- July 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

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation



Certificate Approved By:

Michael Booth
Director, Technical



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Certificate of Analysis



Refine your results. Redefine your industry.

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

R: 2/22/24

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: 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 Information:

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:

$$X_{CRM/RM} = 2(w) / (w_1 + w_2)$$

w_1 = the weighting factors for each method calculated using the inverse square of the variance

$$w_1 = (1/u_{CRM/RM}^2) / (1/u_{CRM/RM}^2 + 1/u_{CRM/RM}^2)$$

$$u_{CRM/RM}^2 = (u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2) / 5$$

$$u_{CRM/RM} = 2 \sqrt{(u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2) / 5}$$

$$u_{CRM/RM} = 2 \sqrt{(u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2) / 5}$$

$$u_{CRM/RM} = 2 \sqrt{(u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2) / 5}$$

$$u_{CRM/RM} = 2 \sqrt{(u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2) / 5}$$

$$u_{CRM/RM} = 2 \sqrt{(u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2) / 5}$$

$$u_{CRM/RM} = 2 \sqrt{(u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2) / 5}$$

$$u_{CRM/RM} = 2 \sqrt{(u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2) / 5}$$

$$u_{CRM/RM} = 2 \sqrt{(u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2) / 5}$$

$$u_{CRM/RM} = 2 \sqrt{(u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2) / 5}$$

$$u_{CRM/RM} = 2 \sqrt{(u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2) / 5}$$

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$$u_{CRM/RM} = 2 \sqrt{(u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2) / 5}$$

$$u_{CRM/RM} = 2 \sqrt{(u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2) / 5}$$

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$$u_{CRM/RM} = 2 \sqrt{(u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2) / 5}$$

$$u_{CRM/RM} = 2 \sqrt{(u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2) / 5}$$

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$$u_{CRM/RM} = 2 \sqrt{(u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2 + u_{CRM/RM}^2) / 5}$$

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 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	<	0.00096		
O B	<	0.008929	M Ge	<	0.002146	M Os	<	0.000269	O Sr	<	0.00096		
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 Th	<	0.001341		
O Ca	<	0.000676	M In	<	0.002683	M Pr	<	0.000268	M Tl	<	0.053663		
M Cd	<	0.000268	M Ir	<	0.000269	M Pt	<	0.000536	S Ti	<			
M Co	<	0.000268	M K	<	0.001172	M Rb	<	0.000268	M Tl	<	0.000268		
M Cr	<	0.000752	O Li	<	0.002268	M Re	<	0.000268	M Tm	<	0.000268		
M Cs	<	0.000268	M Lu	<	0.000268	M Rh	<	0.000268	M U	<	0.000268		
O Cu	<	0.010890	O Mg	<	0.005445	I S	<	0.006976	M Y	<	0.002146		
M Dy	<	0.000268	O Mn	<	0.003267	M Sb	<	0.004900	M Yb	<	0.000536		
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

- 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: 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 unless they are fluorinated). 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); K₂SiO₃ - no KF if silica not present); Organic Matrices (Dry ash at 450°C 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.	Order	Interferences (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.00028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.00034 µg/mL	1	W, Mo, Co

HAZARDOUS INFORMATION

HF Note: This standard should not be prepared or stored in glass.

8.0

HOMOGENEITY

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.
- 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, Chesapeake, VA 24073, USA. Telephone: 800.868.6786; 540.565.3030; Fax: 540.565.3012; info@inorganicventures.com

11.0

CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

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

Certificate Approved By:

Thomas Kozlikowski
Manager, Quality Control

TD9784

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 #

24002546

Solvent:

Nitric Acid
2.0% Nitric Acid
40.0 (mL)

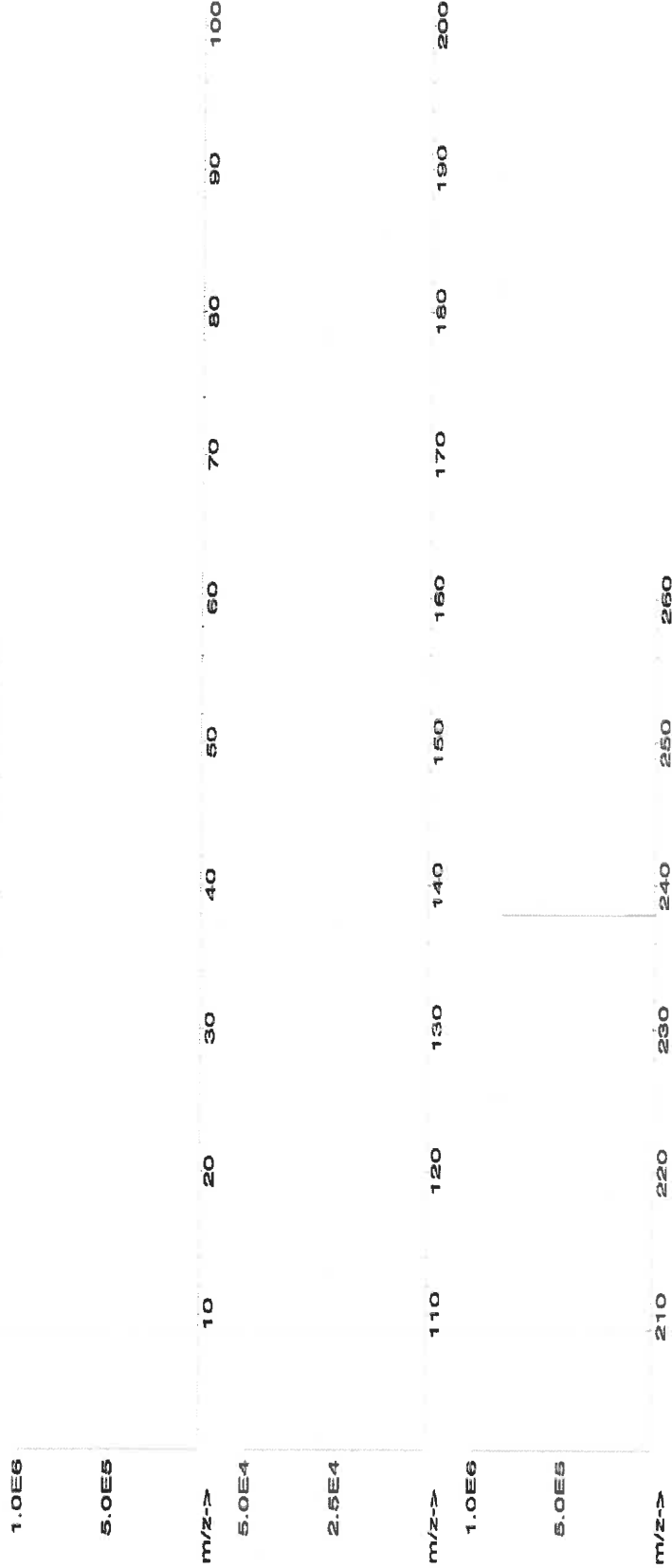
<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
<i>Pedro L. Rentas</i>	
Reviewed By:	Pedro L. Rentas

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	3164
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[1] Spectrum No.1 [23.254 sec]:57092.D# [Count] [Linear]



388



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	<0.02	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	<0.02	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:

- * 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).

389

7236 673 3.67



Certified Reference Material CRM



45982 R: 6/11/24

CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57038
031524
Strontium (Sr)

Solvent: 24002546 Nitric Acid

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

031527
Ambient (20 °C)
1000
6UTB
5E-05 Balance Uncertainty
0.100 Flask Uncertainty

Weight shown below was diluted to (mL): 2000.07

Lot #

2% 40.0 Nitric Acid
(mL)

Formulated By:	Benson Chan	031524
Reviewed By:	Pedro L. Rentas	031524

SDS Information

Expanded

Uncertainty

(Solvent Safety Info. On Attached pg.)

+/- (µg/mL)

LD50

CAS#

OSHA PEL (TWA)

Actual

Conc. (µg/mL)

Actual

Weight (g)

Target

Weight (g)

Assay

(%)

Purity (%)

(%)

Nominal

Conc. (µg/mL)

Lot

Number

RM#

IN017

SR202018A1

1000

89.997

0.10

41.2

4.85470

4.85502

1000.1

2.0

10042-76-9

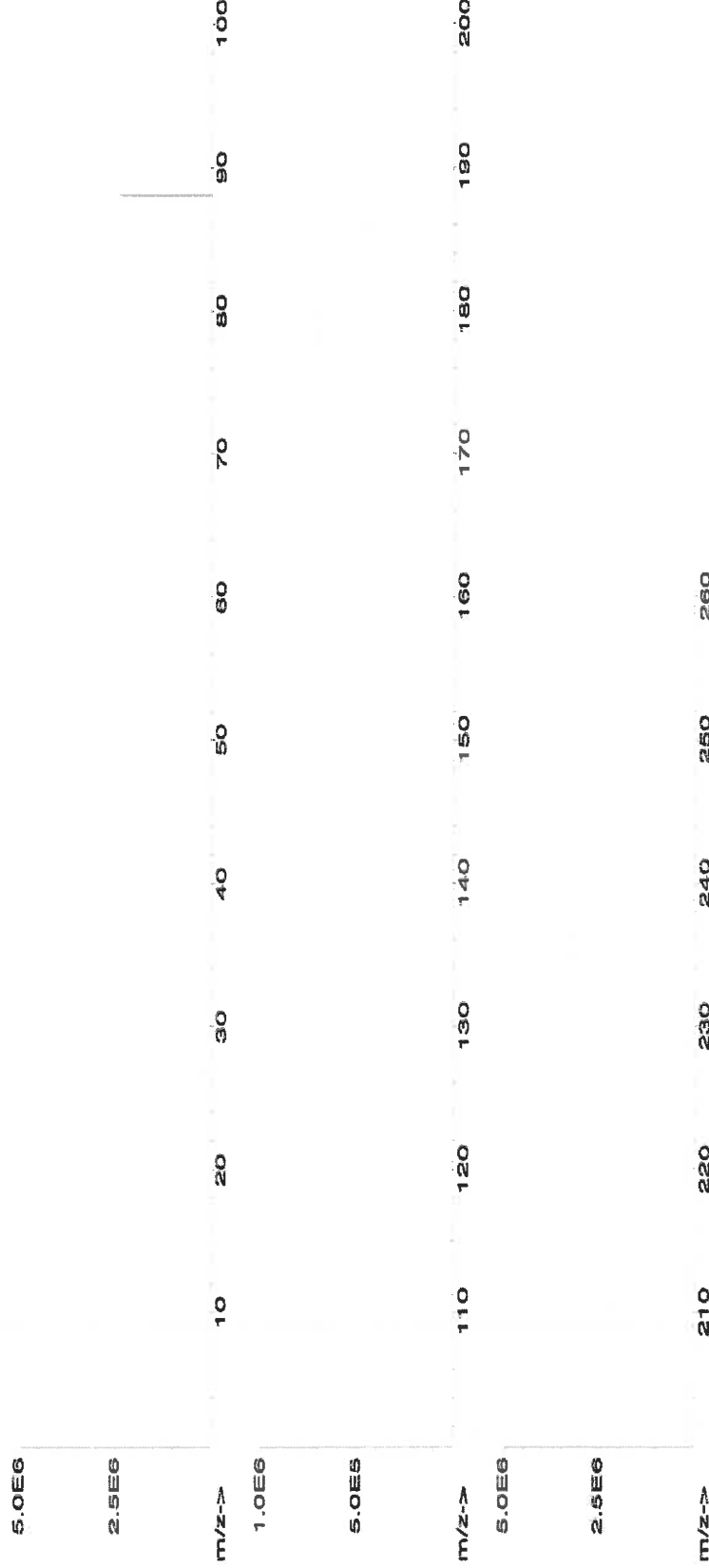
NA

orl-rat >2000mg/kg

3153a

1. Strontium nitrate (Sr)

[1] Spectrum No.1 [14.495 sec]:58136.D# [Count] [Linear]



390



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	<0.02	Os	<0.01	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	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.02	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.2	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	Tl	<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).

391

2024 JUN 7 10:01 AM



145983

R: 6/11/24



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57040
071423
Zirconium (Zr)

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

071426
Ambient (20 °C)
1000
6UTB

Volume shown below was diluted to (mL): 2000.02

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Lot # Solvent:
21110221 Nitric Acid

2.0% Nitric Acid
40.0 (mL)

Formulated By:	Benson Chan
Reviewed By:	Pedro L. Rentas

Expanded
Uncertainty
+/- (µg/mL)

Final
Conc. (µg/mL)

SDS Information
(Solvent Safety Info. On Attached pg.)

CAS# OSHA PEL (TWA) LD50

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. Zirconyl chloride octahydrate (Zr)	58140	070621	0.1000	200.0	0.084	1000	10000.3	1000.0	2.2	13520-92-8	NA	NA	NA

[1] Spectrum No.1 [41.153 sec]:57040.D# [Count] [Linear]

1.OE6

5.OE5

m/z-->

1.OE8

5.OE7

m/z-->

1.OE8

5.OE7

m/z-->

392



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	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	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.2	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	<0.02	Sc	<0.2	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 ($\pm$) 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).

393



Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

R: 2/22/2024
M5999

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: CLPP-SPK-1
Lot Number: T2-MEB721963
Matrix: 7% (v/v) HNO₃
Value / Analyte(s):
2 000 µg/mL ea: Aluminum, Barium,
1 000 µg/mL ea: Iron,
500 µg/mL ea: Manganese, Nickel,
Vanadium, Zinc,
Cobalt,
250 µg/mL ea: Copper,
200 µg/mL ea: Chromium,
50 µg/mL ea: Beryllium, Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	2 000 ± 7 µg/mL	Barium, Ba	2 000 ± 9 µg/mL
Beryllium, Be	50.00 ± 0.26 µg/mL	Chromium, Cr	200.0 ± 1.1 µg/mL
Cobalt, Co	500.0 ± 2.4 µg/mL	Copper, Cu	250.0 ± 1.0 µg/mL
Iron, Fe	1 000 ± 4 µg/mL	Manganese, Mn	500.0 ± 2.0 µg/mL
Nickel, Ni	500.0 ± 2.2 µg/mL	Silver, Ag	50.00 ± 0.22 µg/mL
Vanadium, V	500.0 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.070 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
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
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
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC 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:

$$w_i = (1/u_{\text{char } i}^2) / (\sum (1/u_{\text{char } i}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{tts}}^2 + u_{\text{ts}}^2)^{1/2}$$

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_{tts} = 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

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{tts}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{tts} = 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

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

July 27, 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

- July 27, 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

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





Certified Reference Material CRM
R: 01/03/24 M6033



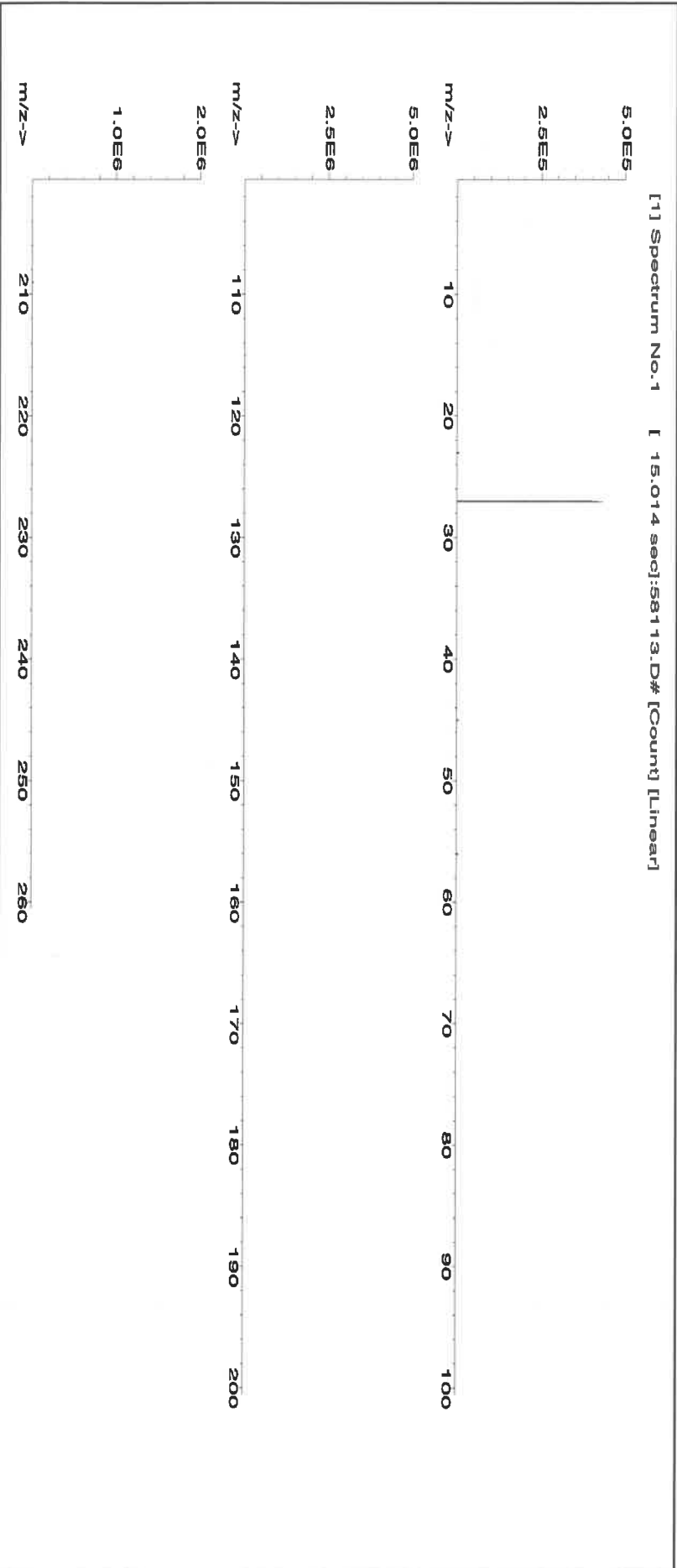
CERTIFIED WEIGHT REPORT:

Part Number: 58113
Lot Number: 011623
Description: Aluminum (Al)
Expiration Date: 011626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6LUTB
Weight shown below was diluted to (mL): 2000.02
Solvent: 20510011 Nitric Acid
Lot #
2% 40.0 (mL) Nitric Acid
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
Reviewed By:	<i>Pedro L. Rentas</i>
	Pedro L. Rentas
	011623

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. Aluminum nitrate nonahydrate (Al) IN022 ALUM12021A1 10000 99.999 0.10 7.30 273.9779 274.0078 10001.1 20.0 7784-27-2 2 mg/m3 or rat 3671 mg/kg 3101a



Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

 **avantor™**



Material No.: 9530-33
Batch No.: 24D1562005
Manufactured Date: 2024-03-18
Retest Date: 2029-03-17
Revision No.: 0

Received! — 08/01/2024
pater
m6039
m6040

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid–base titrn)	36.5 – 38.0 %	37.6 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.192
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	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	2.2 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	31.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	0.2 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	< 0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	3 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

 **avantorsm**



Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	2.2 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	0.2 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 1.0 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	< 0.3 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.0 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	< 0.4 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	< 0.1 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.: 24D1562005

Test	Specification	Result
------	---------------	--------

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 Croak
Director Quality Operations, Bioscience Production

401

Revised 8/19/24, M60055

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, $X_{CRM/RM}$, 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:

$$w_i = (1/u_{char i}^2) / (\sum (1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{ts}^2 + u_{ts}^2)^{1/2}$$

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_{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, $X_{CRM/RM}$, 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

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{ts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{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



Hydrochloric Acid, 36.5–38.0%

BAKER INSTRA-ANALYZED® Reagent

For Trace Metal Analysis

 **avantor™**



M6094
M6095

metdig
10/21/24

Material No.: 9530-33
Batch No.: 24D1562005
Manufactured Date: 2024-03-18
Retest Date: 2029-03-17
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.6 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.192
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	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	2.2 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	31.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	0.2 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	< 0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	3 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

 **avantorsm**



Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	2.2 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	0.2 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 1.0 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	< 0.3 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.0 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	< 0.4 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	< 0.1 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.: 24D1562005

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 Croak
Director Quality Operations, Bioscience Production

408

Nitric Acid 69%
CMOS

avantor™



Receive:
9/29/24
met dig

Material No.: 9606-03
Batch No.: 24B1362001
Manufactured Date: 2024-01-25
Retest Date: 2029-01-23
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO ₃)	69.0 – 70.0 %	69.6 %
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	< 0.2 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	< 50 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 >>>

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 10 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	3 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	1 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

 **avantor™**

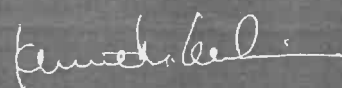


Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result
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For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC



Ken Koehnlein
Sr. Manager, Quality Assurance

411

Nitric Acid 69%
CMOS

avantor™



Receive:
9/29/24
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Material No.: 9606-03
Batch No.: 24B1362001
Manufactured Date: 2024-01-25
Retest Date: 2029-01-23
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO ₃)	69.0 – 70.0 %	69.6 %
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	< 0.2 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	< 50 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 >>>

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 10 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	3 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	1 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

 **avantor™**

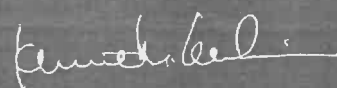


Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result
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For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC



Ken Koehnlein
Sr. Manager, Quality Assurance

414



CERTIFIED WEIGHT REPORT:

Part Number: 58111
Lot Number: 122223
Description: Sodium (Na)

Solvent: 24002546 Nitric Acid

Lot #

2% 60.0 (mL) Nitric Acid

Expiration Date: 122226

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): 3000.4 0.06 Flask Uncertainty

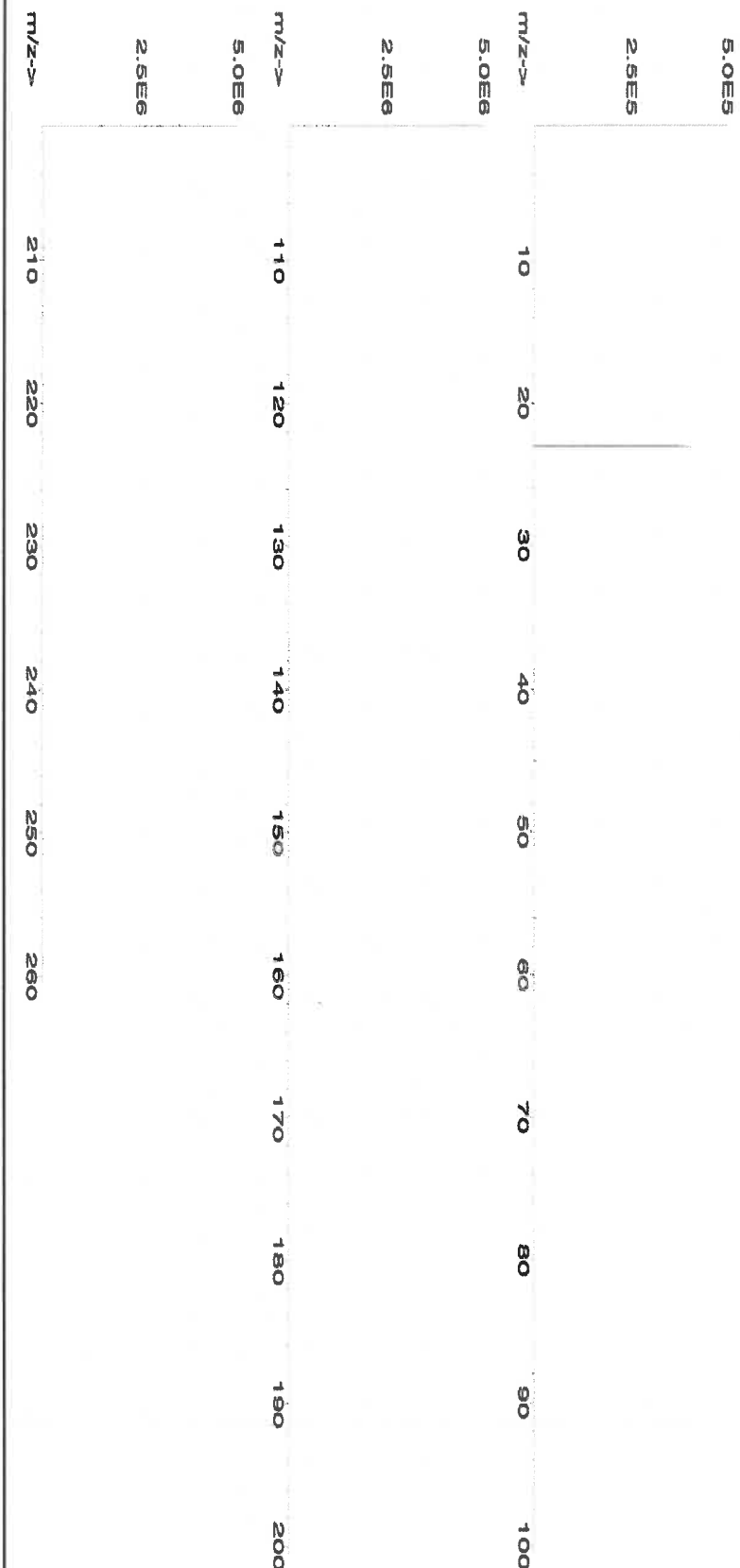
<i>Aleah O Brady</i>	
Formulated By:	Aleah O Brady
	122223
<i>Pedro L Rentas</i>	
Reviewed By:	Pedro L Rentas
	122223

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. Sodium nitrate (Na)	IND36 NAV01201511	10000	99.999	0.10	26.9	111.5406	111.5479	10000.7	20.0	7631-99-4	5 mg/m3	or-tat 3430 mg/kg	3152a
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[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	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	<0.02	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).

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: 6020ISS
Lot Number: S2-MEB709511
Matrix: 7% (v/v) HNO₃
Value / Analyte(s): 10 µg/mL ea:
Bismuth, Holmium,
Indium, 6-Lithium,
Rhodium, Scandium,
Terbium, Yttrium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
6-Lithium, Li6	10.00 ± 0.03 µg/mL	Bismuth, Bi	10.00 ± 0.05 µg/mL
Holmium, Ho	10.00 ± 0.05 µg/mL	Indium, In	10.00 ± 0.04 µg/mL
Rhodium, Rh	10.00 ± 0.07 µg/mL	Scandium, Sc	10.00 ± 0.04 µg/mL
Terbium, Tb	10.00 ± 0.04 µg/mL	Yttrium, Y	10.00 ± 0.04 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Bi	ICP Assay	3106	180815
Bi	Calculated		See Sec. 4.2
Ho	ICP Assay	3123a	090408
Ho	EDTA	928	928
In	ICP Assay	3124a	110516
In	EDTA	928	928
In	Calculated		See Sec. 4.2
Li6	Gravimetric		See Sec. 4.2
Rh	ICP Assay	3144	070619
Sc	ICP Assay	3148a	100701
Sc	EDTA	928	928
Tb	ICP Assay	3157a	100518
Tb	EDTA	928	928
Tb	Calculated		See Sec. 4.2
Y	ICP Assay	3167a	120314
Y	EDTA	928	928
Y	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

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Lithium Li6	95.6 ± 0.3
Lithium Li7	4.4 ± 0.1

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 03, 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 03, 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





**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 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 ± 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.



**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 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
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 2700 Chandler Avenue - Building C
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(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 ± 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.



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57051
120523
Antimony (Sb)

Lot #
Solvent:

24002546 Nitric Acid

2.0% 60.0 Nitric Acid (mL)

Expiration Date:

120526

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6U7B

Volume shown below was diluted to (mL):

3000.41

5E-05 Balance Uncertainty

0.058 Flask Uncertainty

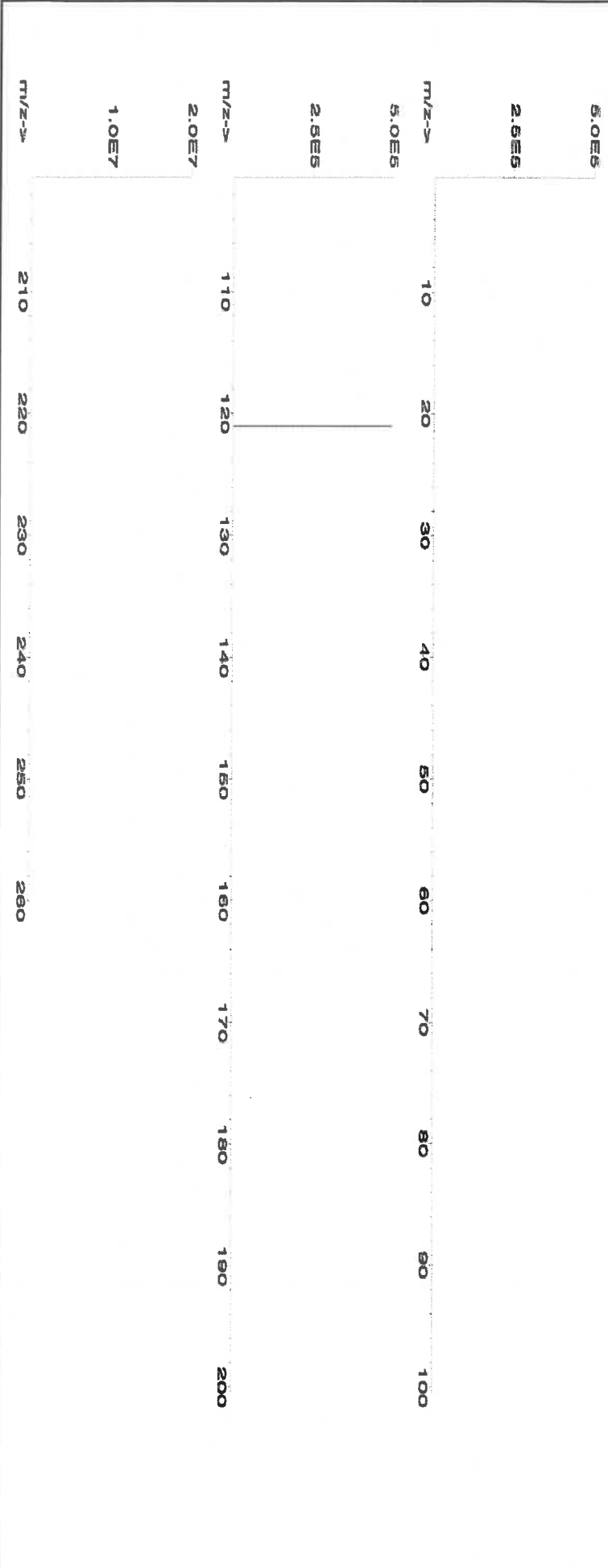
Formulated By:	Lawrence Barry	120523
Reviewed By:	Pedro L. Renteria	120523

SDS Information

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
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1. Antimony (Sb)	58151	100923	0.1000	300.0	0.084	1000	10001.4	1000.0	2.1	7440-36-0	0.5 mg/m3	or-rel 7000 mg/kg	3102a
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[1] Spectrum No.1 [17.964 sec]:58051.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	T	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).



M6030



CERTIFIED WEIGHT REPORT:

Part Number: **57047**
Lot Number: **122823**
Description: **Silver (Ag)**

Solvent: 24002546 Nitric Acid
Lot #

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

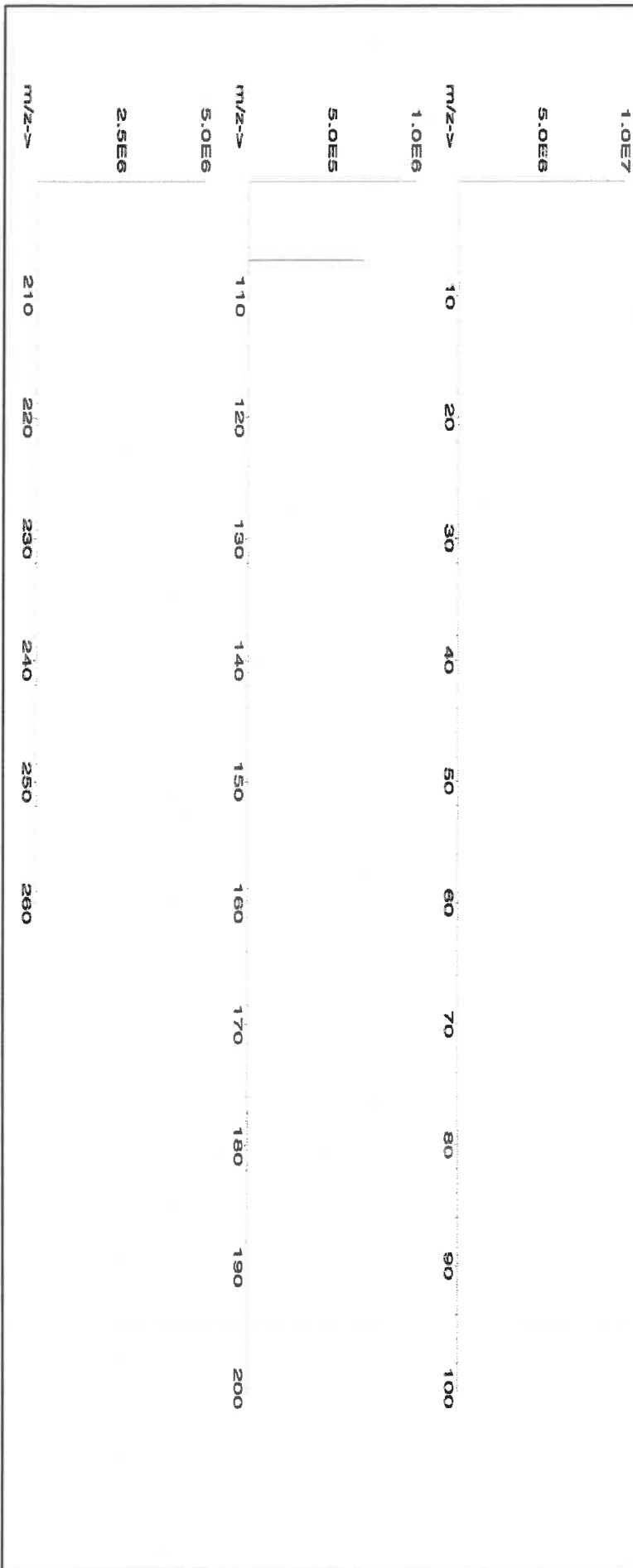
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan
Reviewed By:	Pedro L. Rentas
	122823

SDS Information									
Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)

1. Silver nitrate (Ag) IN035 J0612AGA1 1000.0 99.9996 0.10 63.7 6.27992 6.27998 1000.0 2.0 7761-88-8 10 µg/mL NA 3151

[1] Spectrum No. 1 [14.044 sec]:58147.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

428

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).



Certified Reference Material CRM



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
<https://AbsoluteStandards.com>

CERTIFIED WEIGHT REPORT:

Part Number: 56138
Lot Number: 082922
Description: Strontium (Sr)

Solvent: 20510011 Nitric Acid

Lot #

Expiration Date: 082925

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 10000

NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 1000.12

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

2% 20.0 (mL) Nitric Acid

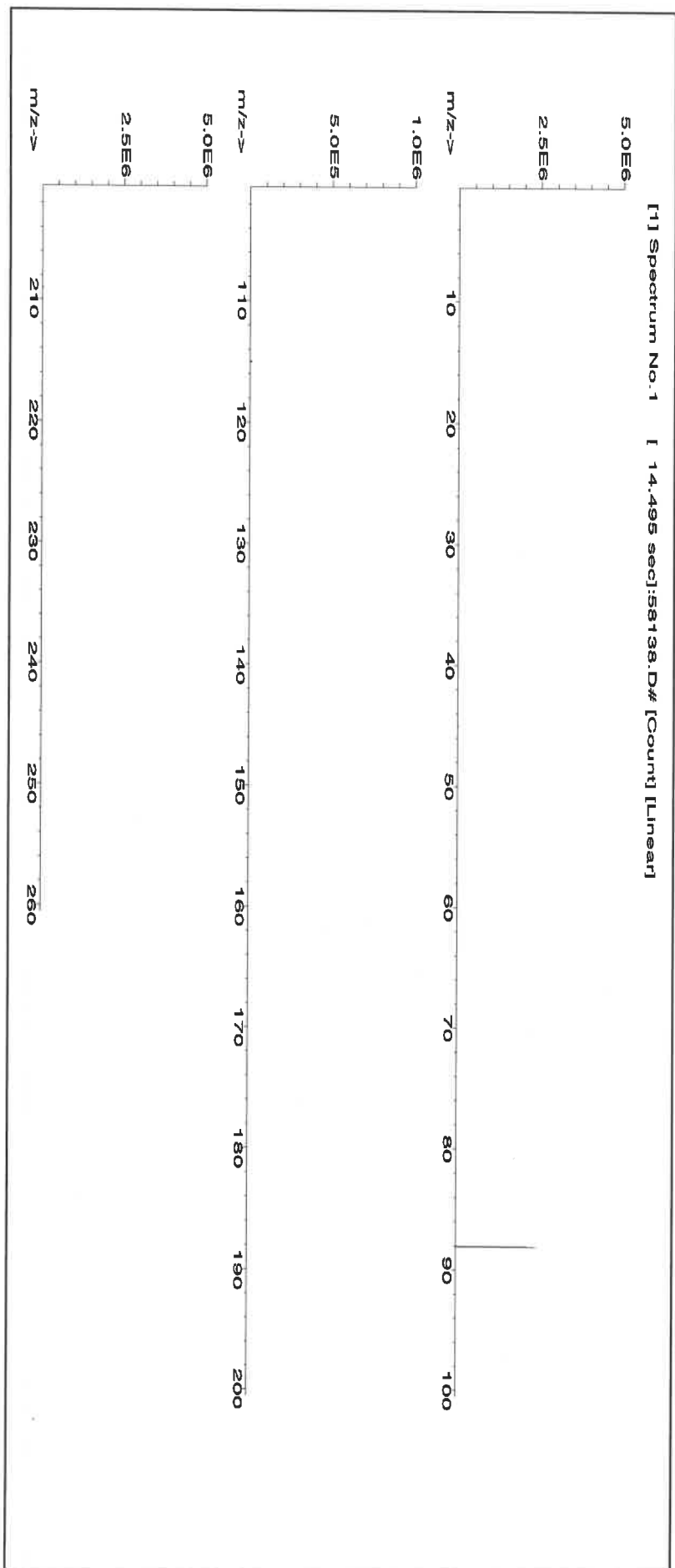
Formulated By:	Lawrence Barry	082922
Reviewed By:	Pedro L. Renteria	082922

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. Strontium nitrate (Sr) IN017 SR2022018A1 10000 99.997 0.10 41.2 24.2756 24.2758 10000.1 20.0 10042-76-9 NA or-rat >2000mg/kg 3153a

[1] Spectrum No. 1 [14.495 sec]:56138.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	<0.01	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.
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- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
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- * 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: 57081
Lot Number: 062724
Description: Thallium (TI)

Lot #

Solvent: 24002546 Nitric Acid

2% 40.0 Nitric Acid (mL)

Expiration Date:

062727

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Weight shown below was diluted to (mL): 2000.1

5E-05 Balance Uncertainty
0.10 Flask Uncertainty

<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
	062724
Reviewed By:	<i>Pedro L. Rendas</i>
	Pedro L. Rendas
	062724

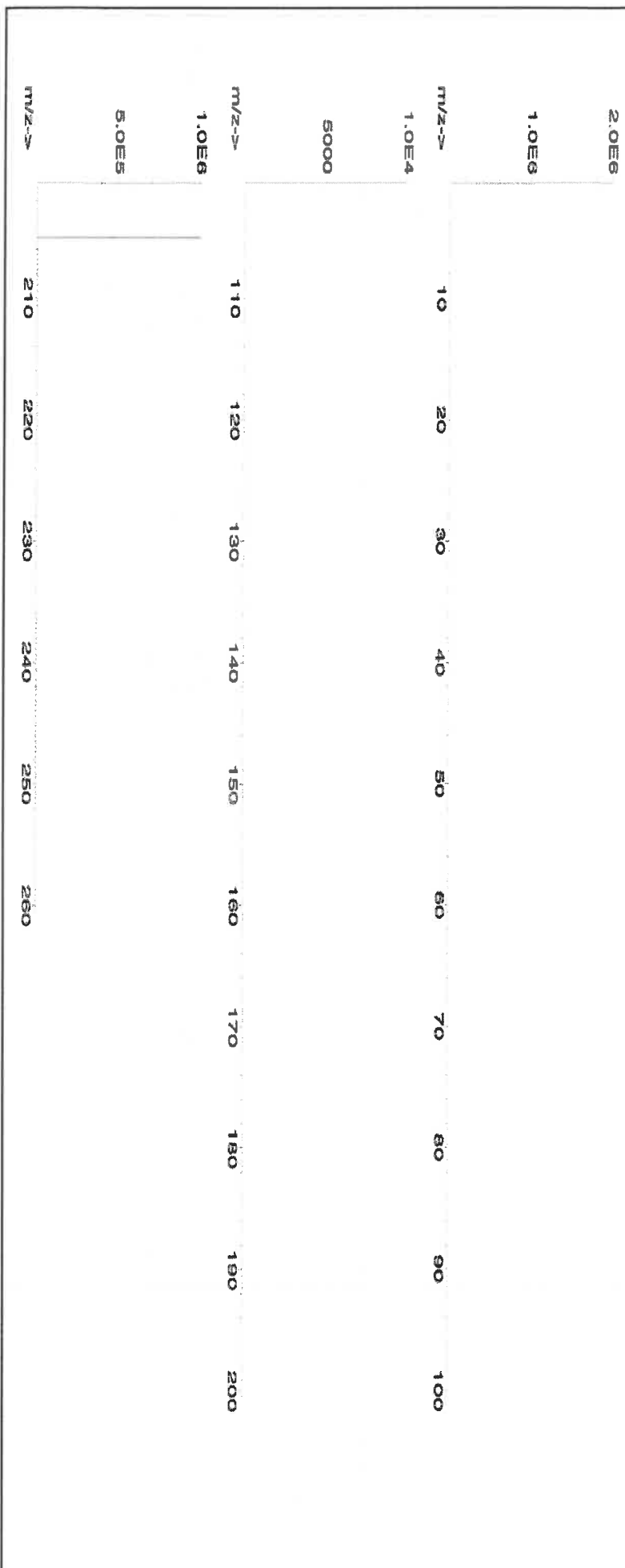
431

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
----------	------------	-----------------------	------------	-----------------	-----------	-------------------	-------------------	----------------------	----------------------------------	------	----------------	------	----------

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 orl-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):

432

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:

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Certified Reference Material CRM

M6021



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57023
062424
Vanadium (V)

Lot #
Solvent:

24002546

Nitric Acid

2.0%

40.0
(mL)

Nitric Acid

Aleah O'Brady

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

Aleah O'Brady	
Formulated By:	Aleah O'Brady
Reviewed By:	Pedro L. Rantas
	062424

SDS Information									
(Solvent Safety Info. On Attached pg.)									
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)
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	not rat 58.1mg/kg
									3165

[1] Spectrum No.1 [34.243 sec]:58023.D# [Count] [Linear]

m/z-->	10	20	30	40	50	60	70	80	90	100
2.0E6										
1.0E6										
m/z-->	10	20	30	40	50	60	70	80	90	100
2.0E7										
1.0E7										
m/z-->	110	120	130	140	150	160	170	180	190	200
5.0E6										
2.5E6										
m/z-->	210	220	230	240	250	260				



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

434

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	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Ru	<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	Sr	<0.02	S	<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	Ta	<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		<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.

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SOP ID : M200.8-Trace Elements-22, MSFAM01.1-Metals ICPMS-2

SDG No : MH2GN9

Start Digest Date: 11/13/2024 Time : 13:00 Temp : 95 °C

Matrix : SOIL

End Digest Date: 11/13/2024 Time : 15:10 Temp : 95 °C

Pipette ID: ICP A

Digestion tube ID: M6054

Balance ID : M SC-2

Block thermometer ID: MET-DIG. #5

Filter paper ID : N/A

Dig Technician Signature: *sgp*

pH Strip ID : N/A

Supervisor Signature: *SJ*

Hood ID : #3

Temp : 1. 95°C 2. N/A

Block ID: 1. HOT BLOCK #5 2. N/A

Standard Name	MLS USED	STD REF. # FROM LOG
LCSS	1.00	MP83046
Spike Sol. B	1.00	MP83047
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
1:1 HNO3	4.00	MP83122
1:4 HCl Solution	10.00	MP82128
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 #5 CELL #34 : 95 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
11/13/24 15:20	<i>sgp Met dig</i>	<i>SJ (Metals lab)</i>
	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
P4805-01	MH2GN9	N/A	2.10	500	Gray	Yellow	Medium	N/A	N/A	1
P4805-02	MH2GN9D	N/A	2.08	500	Gray	Yellow	Medium	N/A	N/A	2
P4805-03	MH2GN9S	N/A	2.16	500	Gray	Yellow	Medium	N/A	MP83047	3
P4805-04	MH2GP0	N/A	2.22	500	Gray	Yellow	Medium	N/A	N/A	4
P4805-05	MH2GP1	N/A	2.13	500	Gray	Yellow	Medium	N/A	N/A	5
P4805-06	MH2GP2	N/A	2.38	500	Gray	Yellow	Medium	N/A	N/A	6
P4805-07	MH2GP3	N/A	2.00	500	Gray	Yellow	Medium	N/A	N/A	7
P4805-08	MH2GP4	N/A	2.39	500	Gray	Yellow	Medium	N/A	N/A	8
P4805-09	MH2GP5	N/A	2.40	500	Gray	Yellow	Medium	N/A	N/A	9
P4805-10	MH2GP6	N/A	2.19	500	Gray	Yellow	Medium	N/A	N/A	10
P4805-11	MH2GP7	N/A	2.10	500	Gray	Yellow	Medium	N/A	N/A	11
P4805-12	MH2GP8	N/A	2.23	500	Gray	Yellow	Medium	N/A	N/A	12
P4805-13	MH2GP9	N/A	2.25	500	Gray	Yellow	Medium	N/A	N/A	13
P4805-14	MH2GQ0	N/A	2.10	500	Gray	Yellow	Medium	N/A	N/A	14
P4805-15	MH2GQ1	N/A	2.14	500	Gray	Yellow	Medium	N/A	N/A	15
PB164950BL	PBS950	N/A	1.00	500	Colorless	Yellow	Medium	N/A	N/A	16
PB164950BS	LCS950	N/A	1.00	500	Colorless	Yellow	Medium	N/A	MP83046	17

Instrument ID: P7

Daily Analysis Runlog For Sequence/QC Batch ID # LB133504

Review By	Sarabjit Jaswal	Review On	11/19/2024 1:15:49 AM
Supervise By	Mohan Bera	Supervise On	11/19/2024 1:25:53 AM
STD. NAME	STD REF.#		
ICAL Standard	MP83014,MP83039,MP83038,MP83036,MP83034,MP83035,MP83033,MP83032,MP83016		
ICV Standard	MP83041		
CCV Standard	MP83042		
ICSA Standard	MP83043,MP83044		
CRI Standard			
LCS Standard	MP83046		
Chk Standard	MP83050,MP83049		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	TUNE	TUNE001	TUNE	11/18/24 03:52		Jaswal	OK
2	S00	S0	CAL1	11/18/24 04:31		Jaswal	OK
3	S02	S02	CAL3	11/18/24 04:38		Jaswal	OK
4	S03	S03	CAL4	11/18/24 04:41		Jaswal	OK
5	S04	S04	CAL5	11/18/24 04:44		Jaswal	OK
6	S05	S05	CAL6	11/18/24 04:47		Jaswal	OK
7	S06	S06	CAL7	11/18/24 04:49		Jaswal	OK
8	S07	S07	CAL8	11/18/24 04:52		Jaswal	OK
9	S08	S08	CAL9	11/18/24 04:55		Jaswal	OK
10	ICV001	ICV001	ICV	11/18/24 05:53	Inst. paused for calibration review	Jaswal	OK
11	ICB001	ICB001	ICB	11/18/24 05:57		Jaswal	OK
12	ICSA001	ICSA001	ICSA	11/18/24 06:00		Jaswal	OK
13	ICSAB001	ICSAB001	ICSAB	11/18/24 06:03		Jaswal	OK
14	CCV001	CCV001	CCV	11/18/24 06:06		Jaswal	OK
15	CCB001	CCB001	CCB	11/18/24 06:09		Jaswal	OK
16	PB164950BL	PBS950	MB	11/18/24 06:25		Jaswal	OK
17	PB164950BS	LCS950	LCS	11/18/24 06:28		Jaswal	OK
18	PB164951BL	PBS951	MB	11/18/24 06:31		Jaswal	OK

Instrument ID: P7

Daily Analysis Runlog For Sequence/QC Batch ID # LB133504

Review By	Sarabjit Jaswal	Review On	11/19/2024 1:15:49 AM
Supervise By	Mohan Bera	Supervise On	11/19/2024 1:25:53 AM
STD. NAME	STD REF.#		
ICAL Standard	MP83014,MP83039,MP83038,MP83036,MP83034,MP83035,MP83033,MP83032,MP83016		
ICV Standard	MP83041		
CCV Standard	MP83042		
ICSA Standard	MP83043,MP83044		
CRI Standard			
LCS Standard	MP83046		
Chk Standard	MP83050,MP83049		

19	PB164951BS	LCS951	LCS	11/18/24 06:35		Jaswal	OK
20	P4805-01	MH2GN9	SAM	11/18/24 06:38		Jaswal	OK
21	P4805-02	MH2GN9D	DUP	11/18/24 06:41		Jaswal	OK
22	P4805-01L	MH2GN9L	SD	11/18/24 06:44		Jaswal	OK
23	P4805-03	MH2GN9S	MS	11/18/24 06:47		Jaswal	OK
24	P4805-04	MH2GP0	SAM	11/18/24 06:50		Jaswal	OK
25	P4805-05	MH2GP1	SAM	11/18/24 06:53		Jaswal	OK
26	P4805-06	MH2GP2	SAM	11/18/24 06:56		Jaswal	OK
27	P4805-07	MH2GP3	SAM	11/18/24 06:59		Jaswal	OK
28	P4805-08	MH2GP4	SAM	11/18/24 07:02		Jaswal	OK
29	P4805-09	MH2GP5	SAM	11/18/24 07:05		Jaswal	OK
30	P4805-10	MH2GP6	SAM	11/18/24 07:08		Jaswal	OK
31	P4805-11	MH2GP7	SAM	11/18/24 07:11		Jaswal	OK
32	P4805-12	MH2GP8	SAM	11/18/24 07:14		Jaswal	OK
33	P4805-13	MH2GP9	SAM	11/18/24 07:17		Jaswal	OK
34	P4805-14	MH2GQ0	SAM	11/18/24 07:20		Jaswal	OK
35	P4805-15	MH2GQ1	SAM	11/18/24 07:23		Jaswal	OK
36	P4806-01	MH2GT6	SAM	11/18/24 07:26	Pb High	Jaswal	Dilution
37	CCV002	CCV002	CCV	11/18/24 07:29		Jaswal	OK
38	CCB002	CCB002	CCB	11/18/24 07:31		Jaswal	OK

Instrument ID: P7

Daily Analysis Runlog For Sequence/QC Batch ID # LB133504

Review By	Sarabjit Jaswal	Review On	11/19/2024 1:15:49 AM
Supervise By	Mohan Bera	Supervise On	11/19/2024 1:25:53 AM

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ICV Standard	MP83041
CCV Standard	MP83042
ICSA Standard	MP83043,MP83044
CRI Standard	
LCS Standard	MP83046
Chk Standard	MP83050,MP83049

39	P4806-02	MH2GT7	SAM	11/18/24 07:35		Jaswal	OK
40	P4806-03	MH2GT8	SAM	11/18/24 07:38		Jaswal	OK
41	P4806-04	MH2GT9	SAM	11/18/24 07:41		Jaswal	OK
42	P4806-05	MH2GT9D	DUP	11/18/24 07:43		Jaswal	OK
43	P4806-04L	MH2GT9L	SD	11/18/24 07:46		Jaswal	OK
44	P4806-06	MH2GT9S	MS	11/18/24 07:49	MS Fail For Mn(291.64ppb)	Jaswal	OK
45	P4806-07	MH2GW0	SAM	11/18/24 07:52		Jaswal	OK
46	P4806-08	MH2GW1	SAM	11/18/24 07:55		Jaswal	OK
47	P4806-09	MH2GW2	SAM	11/18/24 07:58		Jaswal	OK
48	P4806-10	MH2GW3	SAM	11/18/24 08:01		Jaswal	OK
49	P4806-11	MH2GW4	SAM	11/18/24 08:05		Jaswal	OK
50	P4806-01DL	MH2GT6	SAM	11/18/24 08:37	2X For Pb	Jaswal	Confirms
51	CCV003	CCV003	CCV	11/18/24 08:40		Jaswal	OK
52	CCB003	CCB003	CCB	11/18/24 08:43		Jaswal	OK

ORIGIN ID:BCA (303) 994-3853
MARK WOOD
PACIFIC WESTERN TECHNOLOGIES
3000 YOUNGFIELD ST

WHEATBRIDGE, CO 80215
UNITED STATES US

SHIP DATE: 07NOV24
ACTWGT: 20.00 LB
CAD: 252853097/INET4535
DIMS: 12X9X9 IN

BILL SENDER

TO SOHIL JODHANI

ALLIANCE TECHNICAL GROUP LLC
284 SHEFFIELD STREET

11-11-24
7:05
3-4-5

MOUNTAINSIDE NJ 07092

(908) 789-9900

REF: EN-SE-038-004-044-221

PO:

DEPT:

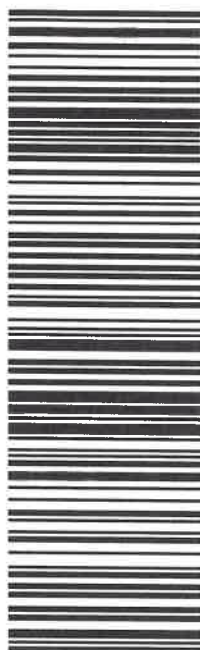


TRK# 7798 1235 3467
0201

FRI - 08 NOV 8:00A
FIRST OVERNIGHT
DSR AHS
07092

N1 KBCA

NJ-US EWR



After printing this label:

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2. Place label in shipping pouch and affix it to your shipment.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Login Summary Report

Order ID :	P4805	Order Date :	11/11/2024 7:05:00 AM	Project Mgr :	Deepak
Client :	USEPA CLP SMO	Project :	51822	Report Type :	USEPA CLP
Contact :	Anita Kapadia	Receive Date :	11/11/2024 7:05:00 AM	EDD Type :	EPA CLP
Date Sign Off :	11/12/2024 9:46:52 AM				

Sample ID	Client ID	Matrix	Sampling Date	Test	Test Group	Method	TAT Days	Fax Due Date	HC Due Date
P4805-07	MH2GP3	Solid	11/01/2024						
				Percent Solids		Chemtech -SOP	10	11/25/2024	11/25/2024
P4805-08	MH2GP4	Solid	11/01/2024						
				Metals CLP MS FULL		SFAM_MS	10	11/25/2024	11/25/2024
				Percent Solids		Chemtech -SOP	10	11/25/2024	11/25/2024
P4805-09	MH2GP5	Solid	11/01/2024						
				Metals CLP MS FULL		SFAM_MS	10	11/25/2024	11/25/2024
				Percent Solids		Chemtech -SOP	10	11/25/2024	11/25/2024
P4805-10	MH2GP6	Solid	11/01/2024						
				Metals CLP MS FULL		SFAM_MS	10	11/25/2024	11/25/2024
				Percent Solids		Chemtech -SOP	10	11/25/2024	11/25/2024
P4805-11	MH2GP7	Solid	11/01/2024						
				Metals CLP MS FULL		SFAM_MS	10	11/25/2024	11/25/2024
				Percent Solids		Chemtech -SOP	10	11/25/2024	11/25/2024
P4805-12	MH2GP8	Solid	11/01/2024						
				Metals CLP MS FULL		SFAM_MS	10	11/25/2024	11/25/2024
				Percent Solids		Chemtech -SOP	10	11/25/2024	11/25/2024
P4805-13	MH2GP9	Solid	11/01/2024						
				Metals CLP MS FULL		SFAM_MS	10	11/25/2024	11/25/2024
				Percent Solids		Chemtech -SOP	10	11/25/2024	11/25/2024
P4805-14	MH2GQ0	Solid	11/01/2024						
				Metals CLP MS FULL		SFAM_MS	10	11/25/2024	11/25/2024
				Percent Solids		Chemtech -SOP	10	11/25/2024	11/25/2024
P4805-15	MH2GQ1	Solid	11/01/2024						
				Metals CLP MS FULL		SFAM_MS	10	11/25/2024	11/25/2024
				Percent Solids		Chemtech -SOP	10	11/25/2024	11/25/2024
P4805-07	MH2GP3	Solid	11/01/2024						
				Metals CLP MS FULL		SFAM_MS	10	11/25/2024	11/25/2024
P4805-06	MH2GP2	Solid	11/01/2024						
				Percent Solids		Chemtech -SOP	10	11/25/2024	11/25/2024

				Metals CLP MS FULL	SFAM_MS	10	11/25/2024	11/25/2024
P4805-05	MH2GP1	Solid	11/01/2024					
				Percent Solids	Chemtech -SOP	10	11/25/2024	11/25/2024
				Metals CLP MS FULL	SFAM_MS	10	11/25/2024	11/25/2024
P4805-04	MH2GP0	Solid	11/01/2024					
				Percent Solids	Chemtech -SOP	10	11/25/2024	11/25/2024
				Metals CLP MS FULL	SFAM_MS	10	11/25/2024	11/25/2024
P4805-03	MH2GN9S	Solid	11/01/2024					
				Percent Solids	Chemtech -SOP	10	11/25/2024	11/25/2024
				Metals CLP MS FULL	SFAM_MS	10	11/25/2024	11/25/2024
P4805-02	MH2GN9D	Solid	11/01/2024					
				Percent Solids	Chemtech -SOP	10	11/25/2024	11/25/2024
				Metals CLP MS FULL	SFAM_MS	10	11/25/2024	11/25/2024
P4805-01	MH2GN9	Solid	11/01/2024					
				Percent Solids	Chemtech -SOP	10	11/25/2024	11/25/2024
				Metals CLP MS FULL	SFAM_MS	10	11/25/2024	11/25/2024

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB164950

WorkList ID : 185407

Department : Digestion

Date : 11-13-2024 12:40:16

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4805-01	MH2GN9	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	A11	11/01/2024	SFAM_MS
P4805-02	MH2GN9D	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	A11	11/01/2024	SFAM_MS
P4805-03	MH2GN9S	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	A11	11/01/2024	SFAM_MS
P4805-04	MH2GP0	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	A11	11/01/2024	SFAM_MS
P4805-05	MH2GP1	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	A11	11/01/2024	SFAM_MS
P4805-06	MH2GP2	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	A11	11/01/2024	SFAM_MS
P4805-07	MH2GP3	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	A11	11/01/2024	SFAM_MS
P4805-08	MH2GP4	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	A11	11/01/2024	SFAM_MS
P4805-09	MH2GP5	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	A11	11/01/2024	SFAM_MS
P4805-10	MH2GP6	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	A11	11/01/2024	SFAM_MS
P4805-11	MH2GP7	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	A11	11/01/2024	SFAM_MS
P4805-12	MH2GP8	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	A11	11/01/2024	SFAM_MS
P4805-13	MH2GP9	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	A11	11/01/2024	SFAM_MS
P4805-14	MH2GQ0	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	A11	11/01/2024	SFAM_MS
P4805-15	MH2GQ1	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	A11	11/01/2024	SFAM_MS

Date/Time

11/13/24 12:42

Raw Sample Received by:

Raw Sample Relinquished by:

gpg (Met dig)
CP 8

Date/Time

11/13/24

Raw Sample Received by:

Raw Sample Relinquished by:

gpg (Met dig)
CP 8