SDG COVER PAGE

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

Lab Code: ACE Case No.: 51900 MA No.: SDG No.: ME2946

SOW No. : SFAM01.1

EPA Sample No.	Lab Sample Id	Analysis Method ICP-AES	ICP-MS	Mercury	Cyanide
ME2946	Q1163-01	X	X	X	
ME2947	Q1163-02	X	X	X	
ME2947D	Q1163-03	X	X	X	
ME2947S	Q1163-04	X	X	X	

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 COC (LAB COPY)
DateShipped: 1/21/2025
CarrierName: UPS
AirbillNo: 1Z93947Y0119867065

CHAIN OF CUSTODY RECORD

Case #: 51847
Cooler #: 1

No: 5-012125-165238-0320
Lab: Alliance Technical Group LLC
Lab Contact: Mohammad Ahmed
Lab Phone: 908-789-8900

2

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
IDW-25-100	E2946	Soil/	Composite	ARO+PEST(14), TCLP VOA+SVOA(14)	5154, 5157 (2)	IDW-25-100	01/21/2025 16:40	51900
IDW-25-101	E2947	Soil/	Composite	ARO+PEST(14), TCLP VOA+SVOA(14)	5150, 5153 (2)	IDW-25-101	01/21/2025 16:50	
IDW-25-100	ME2946	Soil/	Composite	ICP-AES/MS+HG(14), TCLP ICP-AES+Hg(14)	5155, 5156 (2)	IDW-25-100	01/21/2025 16:40	
IDW-25-101	ME2947	Soil/	Composite	ICP-AES/MS+HG(14), TCLP ICP-AES+Hg(14)	5151, 5152 (2)	IDW-25-101	01/21/2025 16:50	

Special Instructions: Please return cooler with enclosed airbill ASAP (1Z93947Y0302843395).

Shipment for Case Complete? N
Samples Transferred From Chain of Custody #

Analysis Key: ARO+PEST=Aroclors + Pesticides, TCLP VOA+SVOA=TCLP VOA+TCLP SVOA, ICP-AES/MS+HG=ICP-AES/MS (5-10, 11+)+HG, TCLP ICP-AES+Hg=TCLP ICP-AES (5-10 Metals) + TCLP Mercury

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Fedex	1/21/25 18:30		1/22/25 16:30	2.1
				1-22-25 11:05	Custody Seal Intact
					Temp Blank Present

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page 1 of 1
Received By (Print Name) Cassandra Rocha		Log-in Date 1/22/2025
Received By (Signature)		
Case Number 51900	SDG No. ME2946	MA No. N/A

Remarks:	
1. Custody Seal (s)	Present, Intact
2. Custody Seal Nos.	n/a
3. Traffic Reports/Chain Of Custody Records	Present
4. Airbill	Present
5. Airbill No. and Shipping Container ID No.	1Z93947Y0119867065 1
6. Shipping Container Temperature Indicator Bottle	Present
7. Shipping Container Temperature	2.1 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	01/22/2025
12.Time Received	11:05

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	ME2946	N/A	5155	Q1163-01	Intact
2	ME2947	N/A	5151	Q1163-02	Intact
3	ME2947D	N/A	5151	Q1163-03	Intact
4	ME2947S	N/A	5151	Q1163-04	Intact
5	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A
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	Logbook No. N/A
Date 1/24/25	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.	**51900**	SDG NO.	**ME2946**
MA NO.		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: FROM	PAGE NOs: TO	CHECK LAB	CHECK REGION
1 . SDG Cover Page	1	1	✓	
2 . Traffic Report/Chain of Custody Record(s)	2	2	✓	
3 . Sample Log-In Sheet (DC-1)	3	3	✓	
4 . CSF Inventory Sheet (DC-2)	4	6	✓	
5 . SDG Narrative	7	11	✓	
6 . Communication Logs	12	17	✓	
7 . Percent Solids Log	18	19	✓	
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	20	21	✓	
9 . Instrument raw data by instrument in analysis order	22	307	✓	
Other Data				
10 . Standard and Reagent Preparation Logs	308	449	✓	
11 . Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	450	451	✓	
12 . Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	452	459	✓	
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	460	461	✓	
18 . Instrument raw data by instrument in analysis order	462	1005	✓	
Other Data				
19 . Standard and Reagent Preparation Logs	1006	1138	✓	
20 . Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	1139	1140	✓	
21 . Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	1141	1145	✓	
22 . Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	

	PAGE NOs: FROM	TO	CHECK LAB	REGION
23. Extraction Logs for TCLP and SPLP	NA	NA	✓	
24. Raw GPC Data	NA	NA	✓	
25. Raw Florisil Data	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	1146	1147	✓	
27. Instrument raw data by instrument in analysis order	1148	1149	✓	
Other Data				
28. Standard and Reagent Preparation Logs	NA	NA	✓	
29. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	NA	NA	✓	
30. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	1150	1151	✓	
31. Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	
32. Extraction Logs for TCLP and SPLP	NA	NA	✓	
33. Raw GPC Data	NA	NA	✓	
34. Raw Florisil Data	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	NA	NA	✓	
36. Instrument raw data by instrument in analysis order	NA	NA	✓	
Other Data				
37. Standard and Reagent Preparation Logs	NA	NA	✓	
38. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	NA	NA	✓	
39. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	NA	NA	✓	
40. Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	
41. Extraction Logs for TCLP and SPLP	NA	NA	✓	
42. Raw GPC Data	NA	NA	✓	
43. Raw Florisil Data	NA	NA	✓	

	PAGE NOs: FROM	TO	CHECK LAB	REGION
Additional				
44. EPA Shipping/Receiving Documents				
Airbill (No. of Shipments 1)	1152	1152	✓	
Sample Tags	NA	NA	✓	
Sample Log-In Sheet (Lab)	1153	1153	✓	
45. Misc. Shipping/Receiving Records (list all individual records)				
	NA	NA	✓	
46. Internal Lab Sample Transfer Records and Tracking Sheets (describe or list)				
	1154	1156	✓	
47. Other Records and related Communication Logs (describe or list)				
	NA	NA	✓	

48. Comments:

Completed by:
(CLP Lab) _____ (Signature) Nimisha Pandya, Document Control Officer (Print Name & Title) _____ (Date)

Audited by:
(EPA) _____ (Signature) _____ (Print Name & Title) _____ (Date)

284 Sheffield Street
Mountainside, NJ 07092

SDG NARRATIVE

USEPA
SDG # ME2946
CASE # 51900
CONTRACT # 68HERH20D0011
SOW# SFAM01.1
LAB NAME: Alliance Technical Group, LLC
LAB CODE: ACE
LAB ORDER ID # Q1163

A. Number of Samples and Date of Receipt

02 Soil samples were delivered to the laboratory intact on 01/22/2024

B. Parameter

Test requested for Metals CLP CLP12= Aluminum, Calcium , Iron, Magnesium , Potassium , Sodium & Mercury.

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

C. Cooler Temp

Indicator Bottle**: Presence/**Absence

Cooler: 2.1^{o}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 samples for Case 51847 are scheduled with a 21-day TAT, but the COC lists a 14-day TAT.

Issue 3: TCLP analyses are listed on the COC but are not scheduled for Case 51847.

Issue 4: SDGs E2946, E2947, ME2946 and ME2947 require Laboratory QC for soil samples, but a sample was not designated on the COC. The laboratory selected samples E2947 and ME2947 for Laboratory QC for ARO, PEST, TCLP VOA, TCLP SVOA, ICP-MS, ICP-AES, Hg, TCLP ICP-AES, TCLP Hg analysis. The laboratory confirmed these samples are not blank, rinsate or PT samples.

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 5, the correct Case number is 51900. Please note the issue in the SDG Narrative and proceed with the analysis of the samples.

Resolution 3: Per Region 5, the correct Case number is 51900. Please note the issue in the SDG Narrative and proceed with the analysis of the samples.

Resolution 4: Per SOW, SFAM01.1 Exhibit A, Section 5.5.4.1, the laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

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-AES Soil Sample:

Conversion of Results from mg/L or ppm to mg/kg (Dry Weight Basis):

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

Where,

C = Instrument value in ppm (The average of all replicate exposures)
Vf = Final digestion volume (mL)
W = Initial aliquot amount (g) (Sample amount taken in prep)
S = % Solids / 100 (Fraction of Percent Solids)
DF = Dilution Factor

Example Calculation For Sample ME2946 For Aluminum:

If C = 68.79401 ppm
Vf = 100 ml
W = 1.39 g
S = 0.908 (90.8/100)
DF = 1

$$\text{Concentration (mg/kg)} = 68.79401 \times \frac{100}{1.39 \times 0.908} \times 1$$

$$= 5450.6710 \text{ mg/kg}$$

$$= 5500 \text{ mg/kg (Reported Result with Signification)}$$

Calculation for ICP-MS Soil Sample:

Conversion of Results from µg /L or ppb to mg/kg :

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

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 ME2946 For Arsenic:

If C = 17.89 ppb
Vf = 500 ml
W = 1.16 g
S = 0.908 (90.8/100)
DF = 1

$$\text{Concentration (mg/kg)} = 17.89 \times \frac{500}{1.16 \times 0.908} \times 1 / 1000$$

$$= 8.4925 \text{ mg/kg}$$

$$= 8.5 \text{ mg/kg (Reported Result with Signification)}$$

Calculation for Hg Soil Sample:

Conversion of Results from µg /L or ppb to mg/kg :

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

Where,

C = Instrument response in µg/L from the calibration curve.
Vf = Final prepared (absorbing solution) 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 ME2946 :

If C = 1.1373 ppb
Vf = 100 mL
W = 0.51g
S = 0.908 (90.8/100)
DF = 1

$$\text{Concentration (mg/kg)} = 1.1373 \times \frac{100}{0.51 \times 0.908} \times 1 / 1000$$

= 0.24559 mg/kg

= 0.25 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 except for Selenium, Zinc. Duplicate sample did meet requirements. Serial Dilution did meet requirements.

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.

Internal Standard Association for ICP-MS analysis.

Target Analyte	Associated Internal Standard
Antimony	159Tb
Arsenic	89Y
Barium	159Tb
Beryllium	6Li
Cadmium	159Tb
Chromium	45Sc

284 Sheffield Street
Mountainside, NJ 07092

Cobalt	45Sc
Copper	45Sc
Lead	209Bi
Manganese	45Sc
Nickel	45Sc
Selenium	89Y
Silver	159Tb
Thallium	209Bi
Titanium	45Sc
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

From: Zafar, Tasmia (NE) <Tasmia.Zafar@gdit.com>
Sent: Thursday, January 23, 2025 11:51 AM
To: Deepak Parmar; Sohil Jodhani; Mohammad Ahmed
Cc: R5RSCC
Subject: Task Area SST | Region 05 | Case 51900 | Lab ACE | Issue Discrepancies with tags, jars, and/or COC | FINAL
Attachments: 51847-COC.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,

Issue 1: The samples for Case 51847 are scheduled with a 21-day TAT, but the COC lists a 14-day TAT.
Resolution 1: Per Region 5, the correct Case number is 51900. Please note the issue in the SDG Narrative and proceed with the analysis of the samples.

Issue 2: TCLP analyses are listed on the COC but are not scheduled for Case 51847.
Resolution 2: Per Region 5, the correct Case number is 51900. Please note the issue in the SDG Narrative and proceed with the analysis of the samples.

Please note that the laboratory may contact the appropriate CLP PM should any defects need to be waived for this issue.

Best Regards,
Tasmia Zafar
Associate Environmental Analyst
CLP QSS Coordinator – EPA Regions 5 & 6

T: (919) 768-4086
tasmia.zafar@gdit.com
15036 Conference Center Drive
Chantilly, VA 20151
www.gdit.com

Leave Alert: None

This electronic message transmission contains information from GDIT that may be attorney-client privileged, proprietary or confidential. The information in this message is intended only for use by the individual(s) to whom it is addressed. If you believe you have received this message in error, please contact me immediately and be aware that any use, disclosure, copying or distribution of the contents of this message is strictly prohibited. NOTE: Regardless of content, this email shall not operate to bind GDIT to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of email for such purpose.

From: R5RSCC <R5RSCC@epa.gov>
Sent: Thursday, January 23, 2025 10:10 AM
To: Zafar, Tasmia (NE) <Tasmia.Zafar@gdit.com>
Subject: FW: Tas Area SST | Region 05 | Case 51847 | 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 Tasmia,

The COC is labeled with the incorrect Case #. The client confirmed that these samples are associated with Case # 51900, NOT 51847.

Thanks,

Darcie D. Tone-Pah-Hote

Regional Sample Control Coordinator
LSASD-SQAB
U.S. EPA Region 5
77 W Jackson Blvd
Chicago, IL 60604
Cubicle #: 06078
Phone #: 312-886-4298

From: Hares, Sarah M CIV USARMY CELRB (USA) <Sarah.M.Hares@usace.army.mil>
Sent: Thursday, January 23, 2025 8:57 AM
To: R5RSCC <R5RSCC@epa.gov>
Cc: Green, Nilia <Green.Nilia@epa.gov>
Subject: RE: Tas Area SST | Region 05 | Case 51847 | 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.

Hi Darcie,

Yes these samples are the soil IDW samples associated with Case #51900.

Thank you,

Sarah Hares
Environmental Engineer
U.S. Army Corps of Engineers
Buffalo District

From: R5RSCC <R5RSCC@epa.gov>
Sent: Thursday, January 23, 2025 9:44 AM

To: Hares, Sarah M CIV USARMY CELRB (USA) <Sarah.M.Hares@usace.army.mil>
Cc: Green, Nilia <Green.Nilia@epa.gov>
Subject: [Non-DoD Source] FW: Tas Area SST | Region 05 | Case 51847 | Lab ACE | Issue Discrepancies with tags, jars, and/or COC
Importance: High

Good morning,
Please see the issue below. The lab received samples and a COC for Case # 51847, but to my knowledge, that case sampling was completed. Was this set of samples supposed to be for Case # 51900?

Thanks,

Darcie D. Tone-Pah-Hote

Regional Sample Control Coordinator
LSASD-SQAB
U.S. EPA Region 5
77 W Jackson Blvd
Chicago, IL 60604
Cubicle #: 06078
Phone #: 312-886-4298

From: Zafar, Tasmia (NE) <Tasmia.Zafar@gdit.com>
Sent: Wednesday, January 22, 2025 4:16 PM
To: R5RSCC <R5RSCC@epa.gov>
Subject: Tas Area SST | Region 05 | Case 51847 | 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 afternoon,

Please advise on the below issues.

Issue 1: The samples for Case 51847 are scheduled with a 21-day TAT, but the COC lists a 14-day TAT.

Issue 2: TCLP analyses are listed on the COC but are not scheduled for Case 51847.

Best Regards,
Tasmia Zafar
Associate Environmental Analyst
CLP QSS Coordinator – EPA Regions 5 & 6

T: (919) 768-4086
tasmia.zafar@gdit.com
15036 Conference Center Drive
Chantilly, VA 20151
www.gdit.com

GENERAL DYNAMICS
information technology

Leave Alert: None

This electronic message transmission contains information from GDIT that may be attorney-client privileged, proprietary or confidential. The information in this message is intended only for use by the individual(s) to whom it is addressed. If you believe you have received this message in error, please contact me immediately and be aware that any use, disclosure, copying or distribution of the contents of this message is strictly prohibited. NOTE: Regardless of content, this email shall not operate to bind GDIT to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of email for such purpose.

From: Deepak Parmar <Deepak.Parmar@alliancetg.com>
Sent: Wednesday, January 22, 2025 12:27 PM
To: Zafar, Tasmia (NE) <Tasmia.Zafar@gdit.com>
Cc: Sohil Jodhani <Sohil.Jodhani@AllianceTG.com>
Subject: Region 05 | Case 51847 | 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 afternoon,

Issue 1: As per ASR 21 days TAT scheduled, however on COC 14 days TAT mentioned there for lab would like to confirm they should proceed with analysis ?

Issue 2: TCLP VOA+SVOA,TCLP ICP-AES+HG is not schedule for this but on COC mentioned all analysis there for lab would like to confirm they should proceed with analysis ?

Please see attachment for your reference.

Thanks & Regards,

Alliance TECHNICAL GROUP

Deepak Parmar
QA/QC
An Alliance Technical Group Company
Main: 908-789-8900
Direct: 908-728-3154
Address: 284 Sheffield St, Ste 1, Mountainside, NJ 07092
www.alliancetg.com AST AEM AAS

From: Zafar, Tasmia (NE) <Tasmia.Zafar@gdit.com>
Sent: Thursday, January 23, 2025 4:47 PM
To: Deepak Parmar; Sohil Jodhani; Mohammad Ahmed
Cc: R5RSCC; Bauer, Heather E; Johnson, Matthew; Helen Britz; Moody, Brett; vargas.magda@epa.gov; patel.bhavita@epa.gov; Gambrah, Derrick
Subject: Task Area SST | Region 05 | Case 51900 | Lab ACE | Issue Insufficient/inappropriate designation of laboratory QC | FINAL
Attachments: SKM_95825012311460.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 afternoon,

Issue: SDGs E2946, E2947, ME2946 and ME2947 require Laboratory QC for soil samples, but a sample was not designated on the COC. The laboratory selected samples E2947 and ME2947 for Laboratory QC for ARO, PEST, TCLP VOA, TCLP SVOA, ICP-MS, ICP-AES, Hg, TCLP ICP-AES, TCLP Hg analysis. The laboratory confirmed these samples are not blank, rinsate or PT samples.
Resolution: Per SOW, SFAM01.1 Exhibit A, Section 5.5.4.1, the laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

Please note that the laboratory may contact the appropriate CLP PM should any defects need to be waived for this issue.

Best Regards,
Tasmia Zafar
Associate Environmental Analyst
CLP QSS Coordinator – EPA Regions 5 & 6

T: (919) 768-4086
tasmia.zafar@gdit.com
15036 Conference Center Drive
Chantilly, VA 20151
www.gdit.com

GENERAL DYNAMICS
Information Technology

Leave Alert: None

This electronic message transmission contains information from GDIT that may be attorney-client privileged, proprietary or confidential. The information in this message is intended only for use by the individual(s) to whom it is addressed. If you believe you have received this message in error, please contact me immediately and be aware that any use, disclosure, copying or distribution of the contents of this message is strictly prohibited. NOTE: Regardless of content, this email shall not operate to bind GDIT to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of email for such purpose.

From: Deepak Parmar <Deepak.Parmar@alliancetg.com>
Sent: Thursday, January 23, 2025 12:43 PM

To: Zafar, Tasmia (NE) <Tasmia.Zafar@gdit.com>
Cc: Sohil Jodhani <Sohil.Jodhani@AllianceTG.com>
Subject: Region 05 | Case 51900 | Lab ACE | Issue Discrepancies with tags, jars, and/or COC/QC

This Message Is From an External Sender

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

Good morning,

Issue 1 : four SDGs E2946, E2947, ME2946 and ME2947 is open without lab QC for soil samples. However, a sample was not designated for Laboratory QC. Lab like to use samples E2947 and ME2947 for Lab QC for PCB,PEST, TCLP VOA, TCLP SVOA and ICP-MS,ICP-AES and HG,TCLP ICP-AES and TCLP-HG . these samples are not blanks, rinsates or PE samples. Also, please confirm that the any SEDD defect associated to Lab QC will be considered Invalid.

Please see attachment for your reference.

Thanks & Regards,

Deepak Parmar
QA/QC
An Alliance Technical Group Company
Main: 908-789-8900
Direct: 908-728-3154
Address: 284 Sheffield St, Ste 1, Mountainside, NJ 07092
www.alliancetg.com

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 1/27/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 13:50
In Date: 01/24/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 07:50
Out Date: 01/25/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB134395

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
Q1161-01	E2946	1	1.12	8.77	9.89	9.08	90.8	
Q1161-02	E2947	2	1.16	8.81	9.97	8.98	88.8	
Q1161-03	E2947MS	3	1.16	8.81	9.97	8.98	88.8	
Q1161-04	E2947MSD	4	1.16	8.81	9.97	8.98	88.8	
Q1163-01	ME2946	5	1.12	8.77	9.89	9.08	90.8	
Q1163-02	ME2947	6	1.16	8.81	9.97	8.98	88.8	
Q1163-03	ME2947D	7	1.16	8.81	9.97	8.98	88.8	
Q1163-04	ME2947S	8	1.16	8.81	9.97	8.98	88.8	

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

WORKLIST(Hardcopy Internal Chain)

VB 134395

WorkList Name : %1-q1162 **WorkList ID :** 187132 **Department :** Wet-Chemistry **Date :** 01-24-2025 10:04:35

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1161-01	E2946	Solid	Percent Solids	Cool 4 deg C	USEP04	C31	01/21/2025	Chemtech -SO
Q1161-02	E2947	Solid	Percent Solids	Cool 4 deg C	USEP04	C31	01/21/2025	Chemtech -SO
Q1161-03	E2947MS	Solid	Percent Solids	Cool 4 deg C	USEP04	C31	01/21/2025	Chemtech -SO
Q1161-04	E2947MSD	Solid	Percent Solids	Cool 4 deg C	USEP04	C31	01/21/2025	Chemtech -SO
Q1163-01	ME2946	Solid	Percent Solids	Cool 4 deg C	USEP01	C31	01/21/2025	Chemtech -SO
Q1163-02	ME2947	Solid	Percent Solids	Cool 4 deg C	USEP01	C31	01/21/2025	Chemtech -SO
Q1163-03	ME2947D	Solid	Percent Solids	Cool 4 deg C	USEP01	C31	01/21/2025	Chemtech -SO
Q1163-04	ME2947S	Solid	Percent Solids	Cool 4 deg C	USEP01	C31	01/21/2025	Chemtech -SO

19

Date/Time 01/24/25 13:10

Raw Sample Received by:

Raw Sample Relinquished by: SM

Date/Time 01/24/25 1410

Raw Sample Received by: SM

Raw Sample Relinquished by:

EPA SAMPLE NO.

ME2946

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51900 MA No. : SDG No.: ME2946

Matrix: SOIL Lab Sample ID: Q1163-01

% Solids: 90.8 Date Received: 01/22/2025

Analytical Method: ICP_AES

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
7429-90-5	Aluminum	5500		01/27/2025	1934
7440-70-2	Calcium	54000		01/27/2025	1934
7439-89-6	Iron	200000	D	01/28/2025	2025
7439-95-4	Magnesium	13000		01/27/2025	1934
7440-09-7	Potassium	560		01/27/2025	1934
7440-23-5	Sodium	140	J	01/27/2025	1934

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

Comments:

EPA SAMPLE NO.

ME2947

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51900 MA No. : SDG No.: ME2946

Matrix: SOIL Lab Sample ID: Q1163-02

% Solids: 88.8 Date Received: 01/22/2025

Analytical Method: ICP_AES

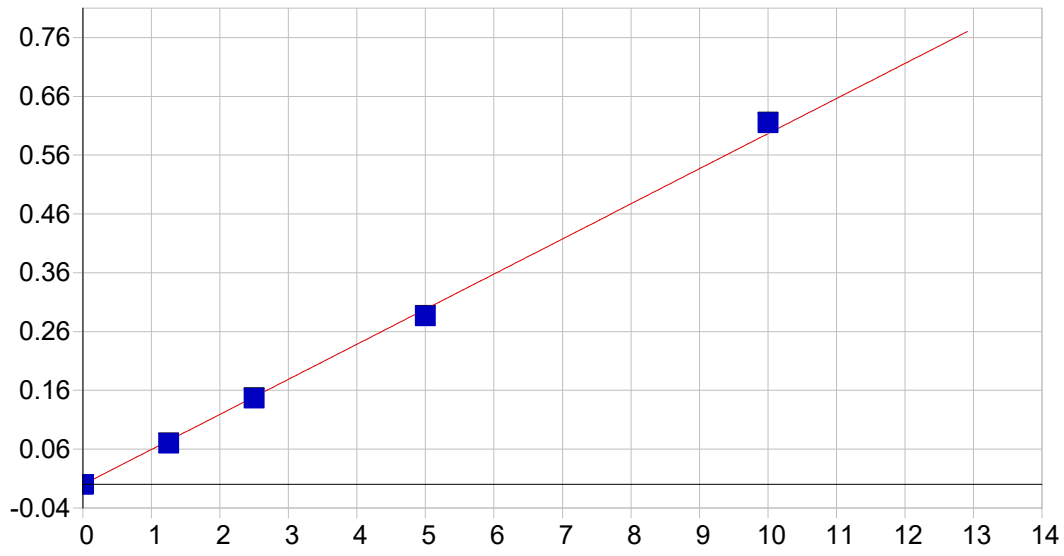
Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	7200		01/27/2025	1938
7440-70-2	Calcium	85000	D	01/28/2025	2029
7439-89-6	Iron	43000		01/27/2025	1938
7439-95-4	Magnesium	19000		01/27/2025	1938
7440-09-7	Potassium	1000		01/27/2025	1938
7440-23-5	Sodium	84	J	01/27/2025	1938

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

Comments:

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

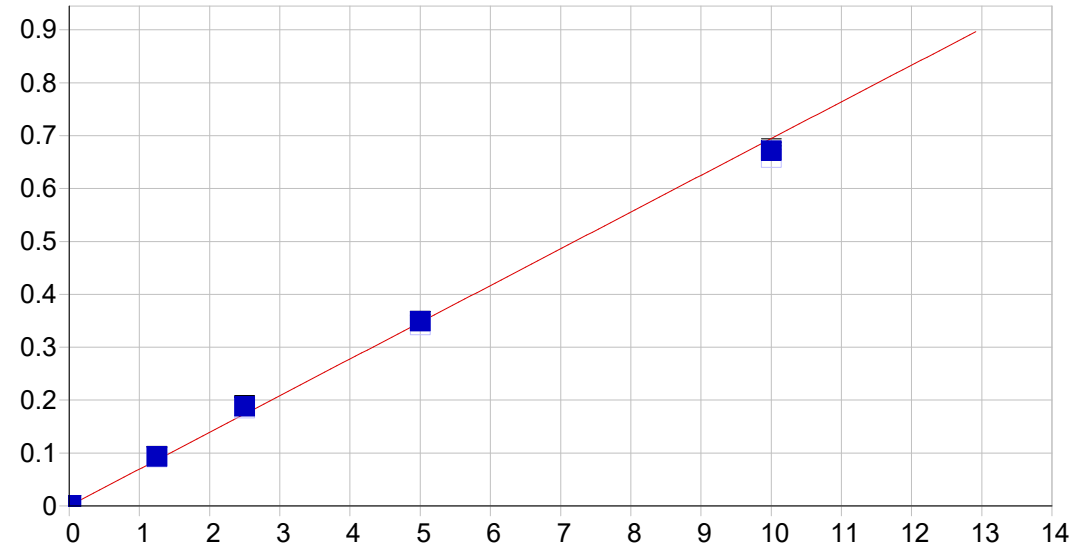


As 189.042 {479}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000095	Re-Slope:	1.000000
A1 (Gain):	0.059662	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999390	Status:	OK.
Std Error of Est:	0.000035		
Predicted MDL:	0.002457		
Predicted MQL:	0.008189		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00009	.000	1
S1	.01000	.01029	.000	2.88	.00052	.000	1
S3	2.5000	2.4575	-.042	-1.70	.14626	.001	1
S4	5.0000	4.8008	-.199	-3.98	.28580	.001	1
S5	10.000	10.314	.314	3.14	.61422	.001	1
S2	1.2500	1.1769	-.073	-5.85	.06999	.000	1



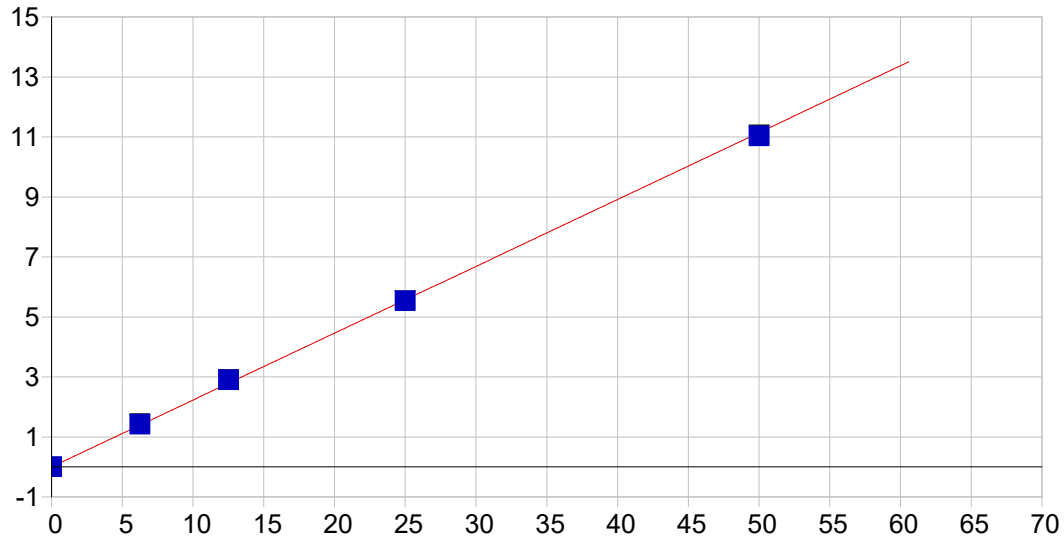
Tl 190.856 {477}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000071	Re-Slope:	1.000000
A1 (Gain):	0.069429	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999038	Status:	OK.
Std Error of Est:	0.000079		
Predicted MDL:	0.001848		
Predicted MQL:	0.006160		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00007	.000	1
S1	.02500	.02747	.002	9.87	.00190	.000	1
S3	2.5000	2.7049	.205	8.19	.18451	.002	1
S4	5.0000	5.0228	.023	.457	.34209	.000	1
S5	10.000	9.6755	-.325	-3.25	.65840	.003	1
S2	1.2500	1.3445	.094	7.56	.09174	.000	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



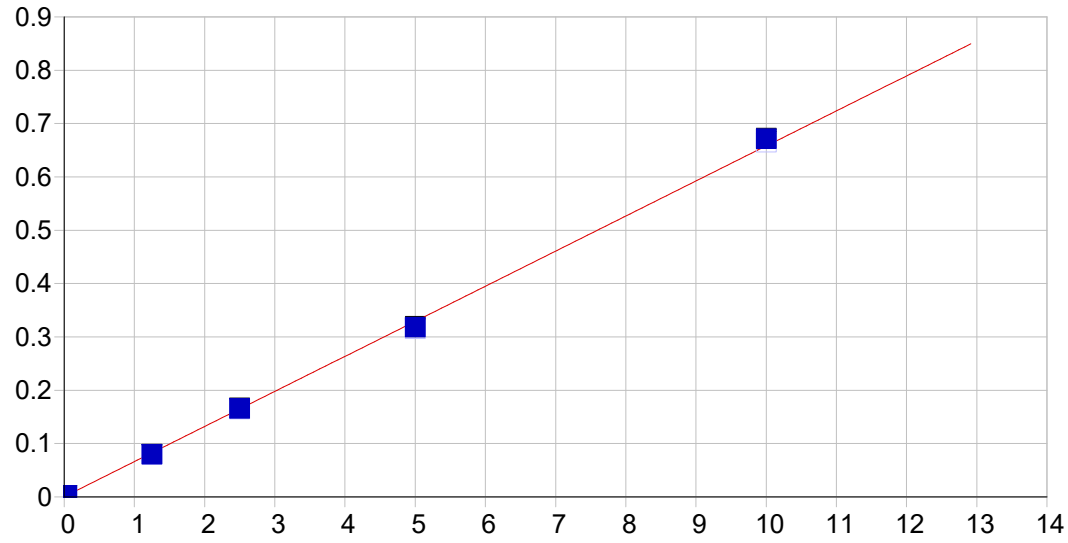
Pb 220.353 {453}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000310	Re-Slope:	1.000000
A1 (Gain):	0.222865	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999836	Status:	OK.
Std Error of Est:	0.000151		
Predicted MDL:	0.001400		
Predicted MQL:	0.004666		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00031	.000	1
S1	.01000	.01088	.001	8.83	.00210	.000	1
S3	12.500	13.016	.516	4.13	2.8982	.013	1
S4	25.000	24.860	-.140	-.561	5.5354	.014	1
S5	50.000	49.483	-.517	-1.03	11.018	.036	1
S2	6.2500	6.3902	.140	2.24	1.4227	.004	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



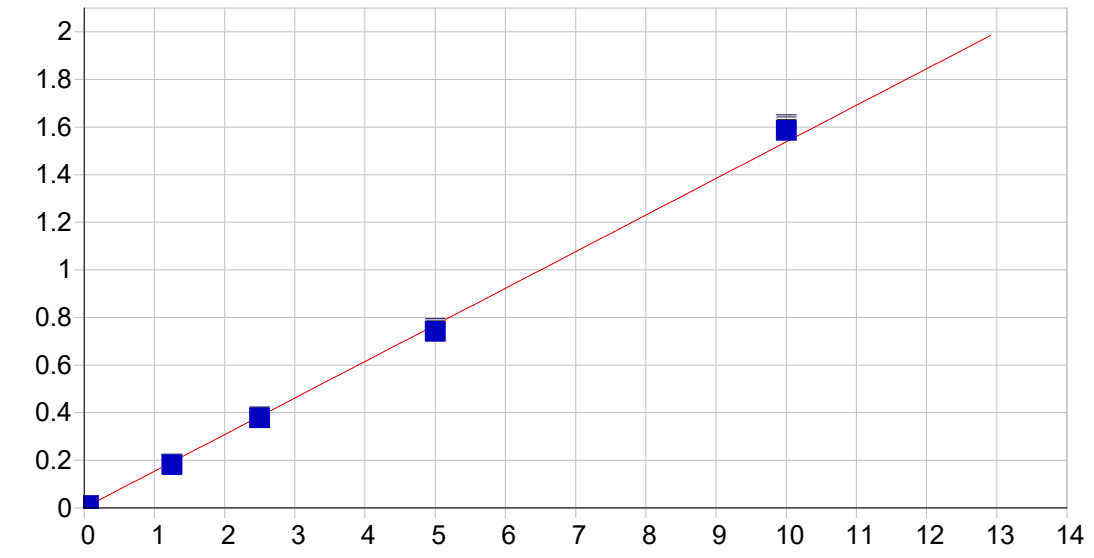
Se 196.090 {472}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000360	Re-Slope:	1.000000
A1 (Gain):	0.065763	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999690	Status:	OK.
Std Error of Est:	0.000051		
Predicted MDL:	0.002760		
Predicted MQL:	0.009200		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00036	.000	1
S1	.03500	.03109	-.004	-11.2	.00240	.000	1
S3	2.5000	2.5131	.013	.524	.16411	.001	1
S4	5.0000	4.8339	-.166	-3.32	.31522	.001	1
S5	10.000	10.200	.200	2.00	.66505	.002	1
S2	1.2500	1.2075	-.043	-3.40	.07901	.000	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



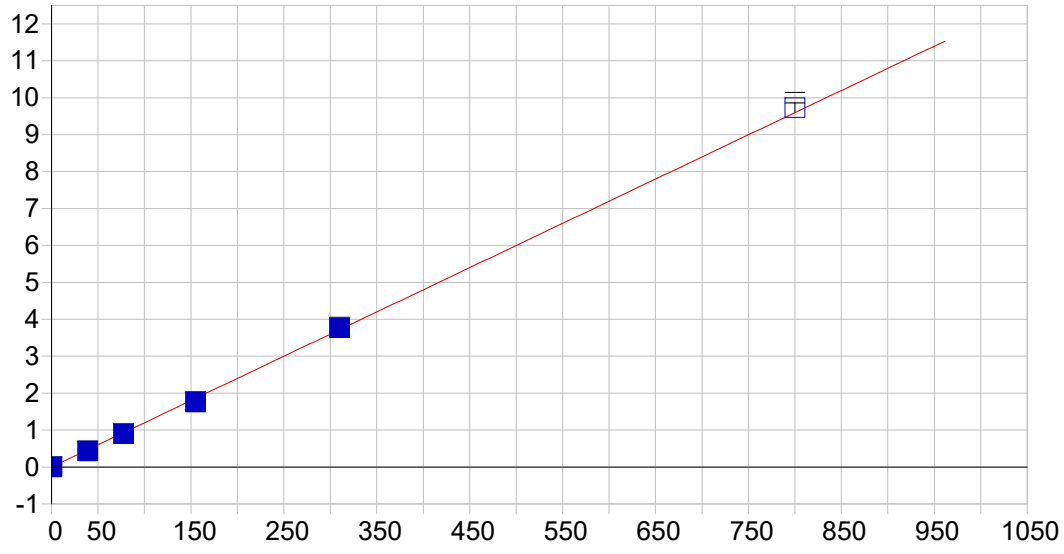
Sb 206.833 {463}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000341	Re-Slope:	1.000000
A1 (Gain):	0.153719	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999434	Status:	OK.
Std Error of Est:	0.000216		
Predicted MDL:	0.001476		
Predicted MQL:	0.004920		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00034	.000	1
S1	.06000	.05582	-.004	-6.96	.00890	.000	1
S3	2.5000	2.4541	-.046	-1.83	.38272	.001	1
S4	5.0000	4.8153	-.185	-3.69	.75080	.002	1
S5	10.000	10.309	.309	3.09	1.6055	.004	1
S2	1.2500	1.1759	-.074	-5.93	.18366	.001	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

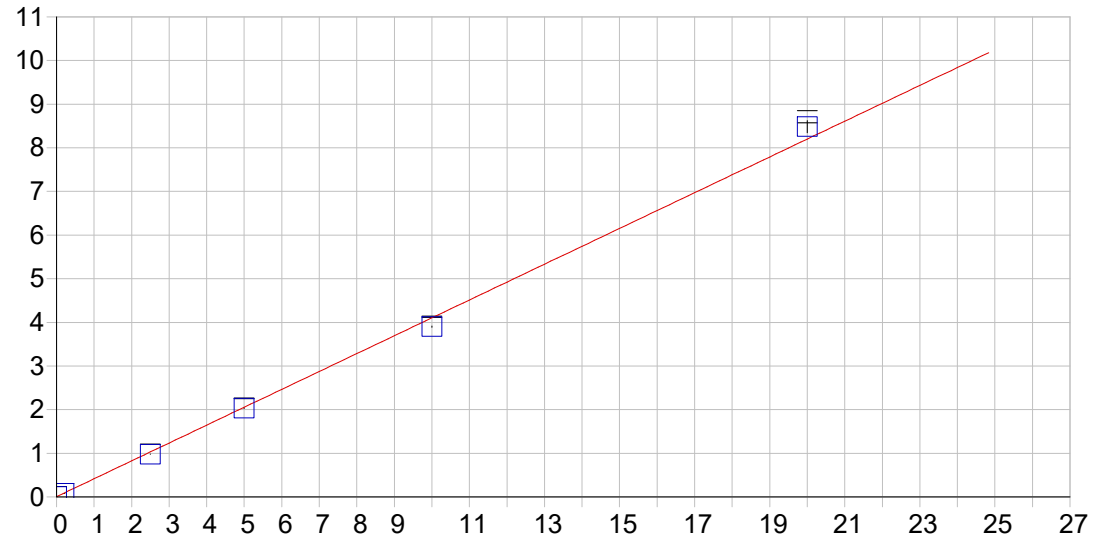


Al 396.152 { 85}

Date of Fit: 1/27/2025 1:59:51 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset):	-0.000040	Re-Slope:	1.000000
A1 (Gain):	0.011994	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999605	Status:	OK.
Std Error of Est:	0.000210		
Predicted MDL:	0.008158		
Predicted MQL:	0.027193		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00005	.000	.000	-.00004	.000	1
S1	.20000	.17715	-.023	-11.4	.00209	.000	1
S3	77.500	74.572	-2.93	-3.78	.89546	.002	1
S4	155.00	146.15	-8.85	-5.71	1.7551	.012	1
S5	310.00	313.76	3.76	1.21	3.7675	.018	1
S2	38.750	35.516	-3.23	-8.35	.42648	.002	1
S6	800.00	811.28	11.3	1.41	9.7303	.144	1



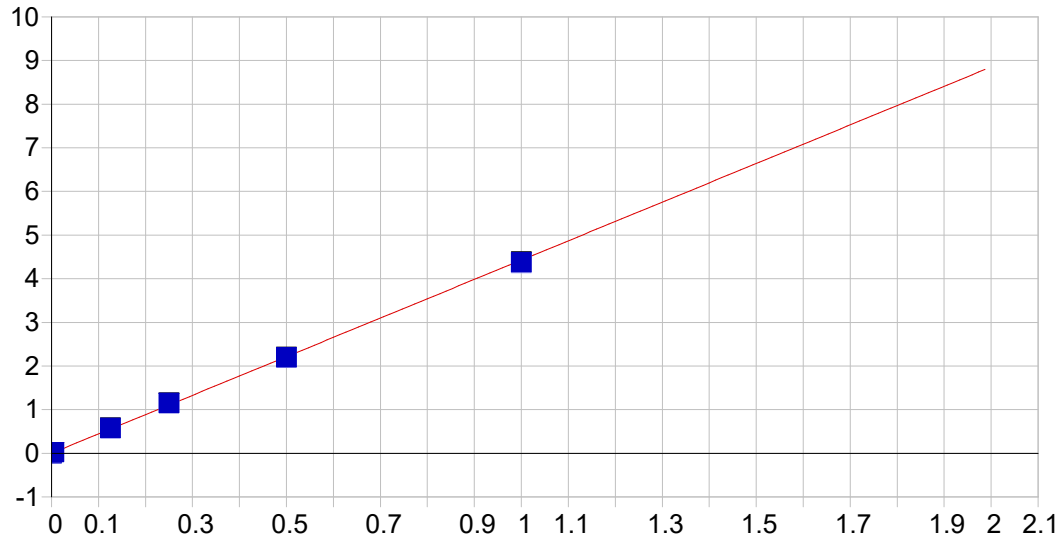
Ba 493.409 { 68}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.006465	Re-Slope:	1.000000
A1 (Gain):	0.409719	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999252	Status:	OK.
Std Error of Est:	0.001685		
Predicted MDL:	0.000826		
Predicted MQL:	0.002752		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00003	.000	.000	.00648	.000	1
S1	.20000	.18702	-.013	-6.49	.08309	.000	1
S3	5.0000	4.9434	-.057	-1.13	2.0319	.008	1
S4	10.000	9.5043	-.496	-4.96	3.9006	.015	1
S5	20.000	20.692	.692	3.46	8.4844	.137	1
S2	2.5000	2.3732	-.127	-5.07	.97881	.006	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



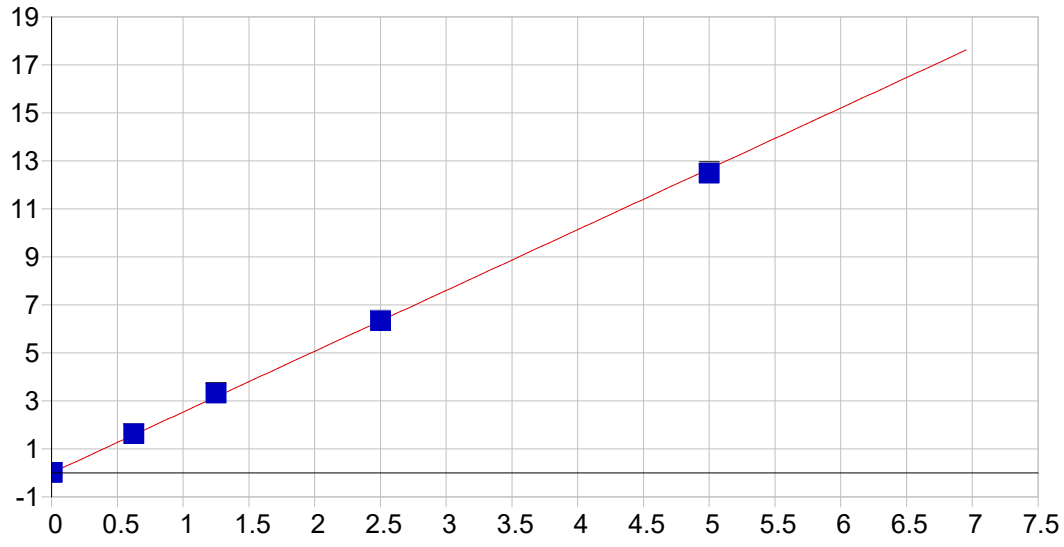
Be 234.861 {144}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000041	Re-Slope:	1.000000
A1 (Gain):	4.426662	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999796	Status:	OK.
Std Error of Est:	0.000334		
Predicted MDL:	0.000074		
Predicted MQL:	0.000247		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00004	.000	1
S1	.00500	.00531	.000	6.13	.02350	.000	1
S3	.25000	.25983	.010	3.93	1.1452	.003	1
S4	.50000	.49669	-.003	-.662	2.1888	.005	1
S5	1.0000	.98825	-.012	-1.18	4.3548	.017	1
S2	.12500	.12993	.005	3.94	.57269	.001	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



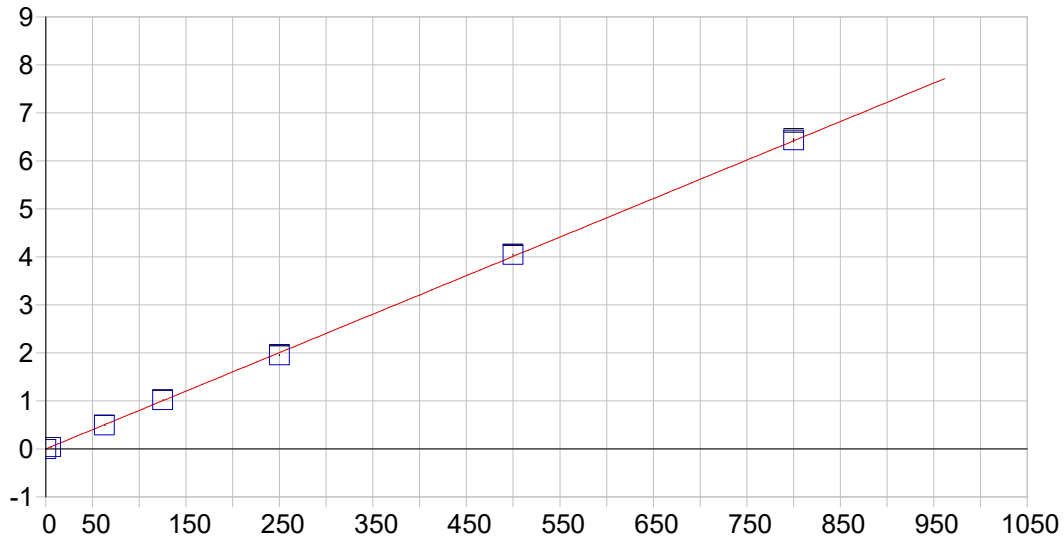
Cd 214.438 {457}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000032	Re-Slope:	1.000000
A1 (Gain):	2.534050	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999759	Status:	OK.
Std Error of Est:	0.000467		
Predicted MDL:	0.000077		
Predicted MQL:	0.000258		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00003	.000	1
S1	.00500	.00511	.000	2.14	.01292	.000	1
S3	1.2500	1.3100	.060	4.80	3.3259	.021	1
S4	2.5000	2.4996	-.000	-.016	6.3466	.016	1
S5	5.0000	4.9232	-.077	-1.54	12.501	.041	1
S2	.62500	.64206	.017	2.73	1.6301	.004	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



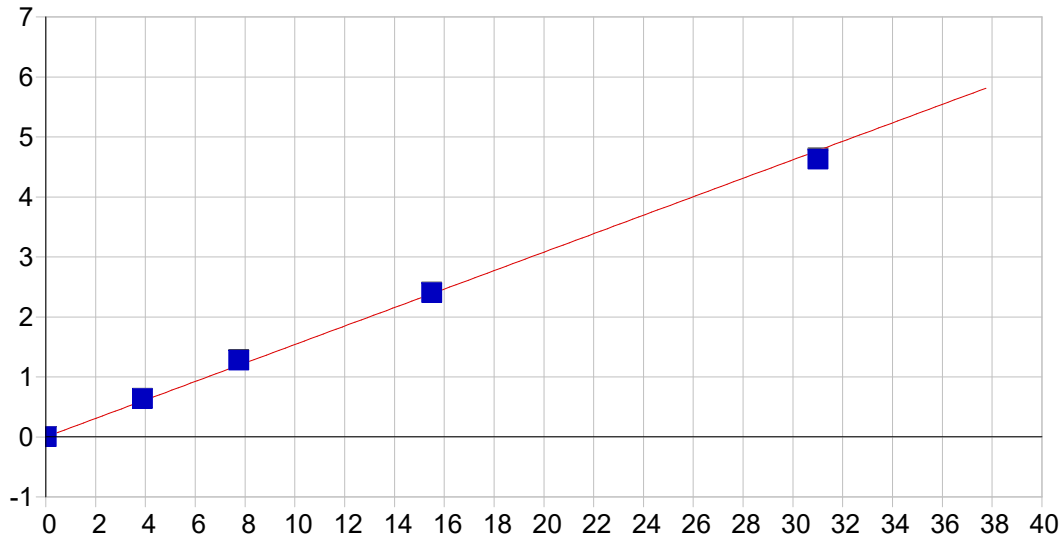
Ca 373.690 { 90}

Date of Fit: 1/27/2025 1:59:51 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset):	0.000014	Re-Slope:	1.000000
A1 (Gain):	0.008023	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999920	Status:	OK.
Std Error of Est:	0.000355		
Predicted MDL:	0.009472		
Predicted MQL:	0.031572		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00014	.000	.000	.00002	.000	1
S2	62.500	61.418	-1.08	-1.73	.49276	.001	1
S3	125.00	127.08	2.08	1.66	1.0196	.002	1
S4	250.00	243.18	-6.82	-2.73	1.9510	.013	1
S5	500.00	504.32	4.32	.864	4.0461	.014	1
S1	5.0000	4.9509	-.049	-.982	.03973	.000	1
S6	800.00	801.55	1.55	.194	6.4307	.037	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



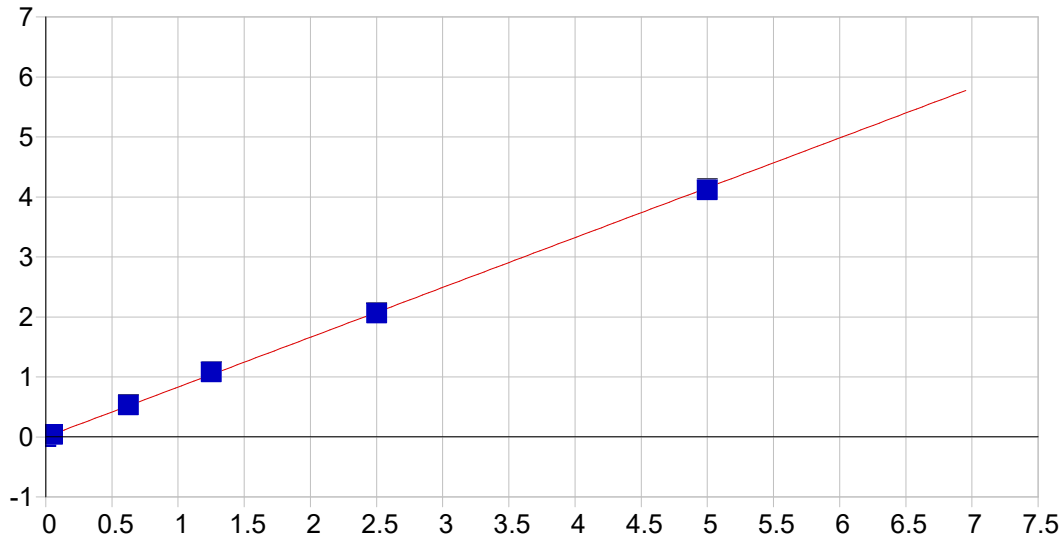
Cr 267.716 {126}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000008	Re-Slope:	1.000000
A1 (Gain):	0.153956	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999231	Status:	OK.
Std Error of Est:	0.000178		
Predicted MDL:	0.000420		
Predicted MQL:	0.001401		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00001	.000	1
S1	.01000	.01133	.001	13.3	.00174	.000	1
S3	7.7500	8.3114	.561	7.24	1.2799	.003	1
S4	15.500	15.589	.089	.575	2.4006	.010	1
S5	31.000	30.068	-.932	-3.01	4.6304	.015	1
S2	3.8750	4.1548	.280	7.22	.63980	.001	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



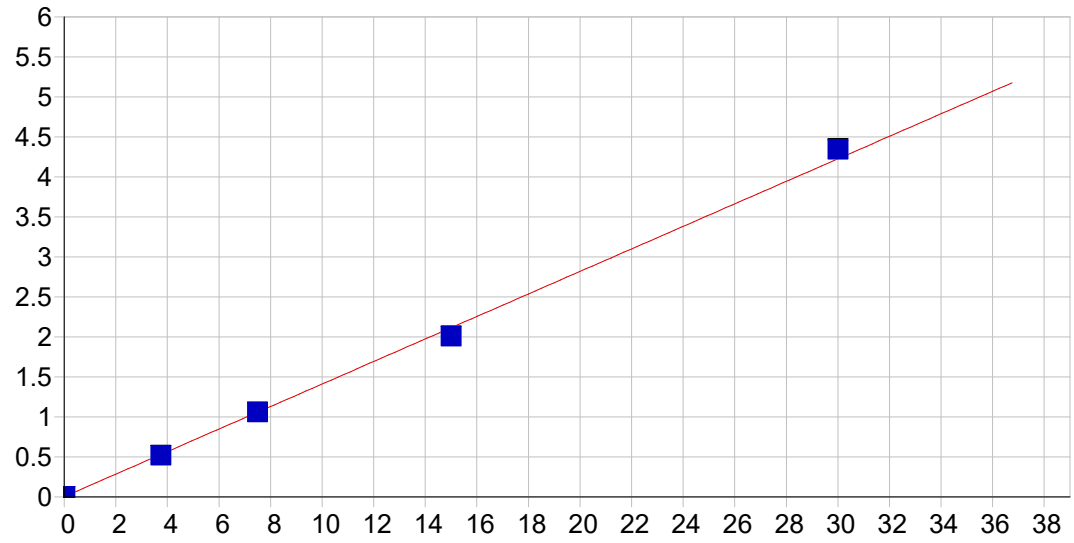
Co 228.616 {448}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000003	Re-Slope:	1.000000
A1 (Gain):	0.830442	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999855	Status:	OK.
Std Error of Est:	0.000377		
Predicted MDL:	0.000260		
Predicted MQL:	0.000866		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00000	.000	1
S1	.05000	.04980	-.000	-.394	.04151	.000	1
S3	1.2500	1.2993	.049	3.95	1.0830	.005	1
S4	2.5000	2.4817	-.018	-.733	2.0688	.005	1
S5	5.0000	4.9559	-.044	-.882	4.1314	.012	1
S2	.62500	.63828	.013	2.12	.53202	.002	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



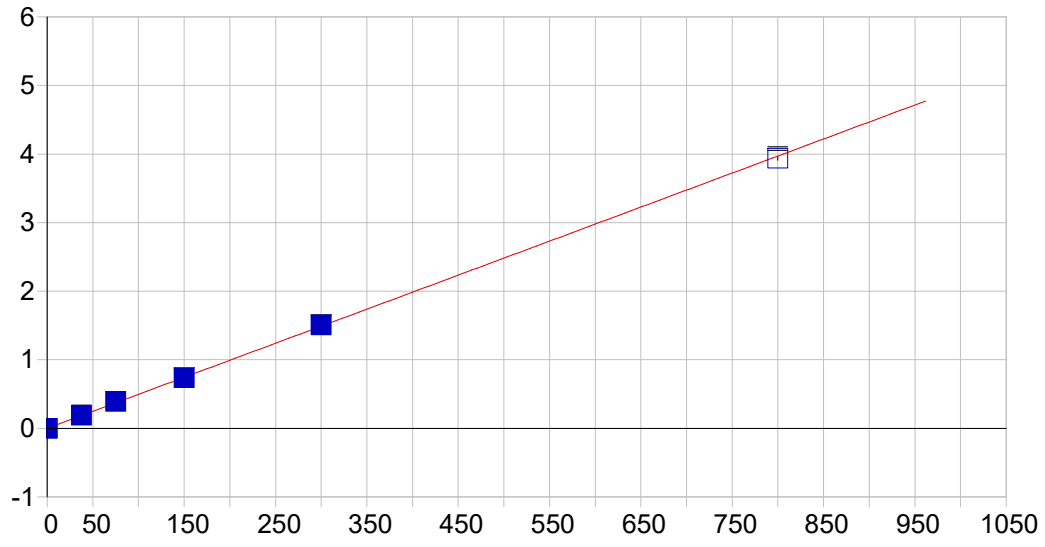
Cu 324.754 {104}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003692	Re-Slope:	1.000000
A1 (Gain):	0.140741	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999418	Status:	OK.
Std Error of Est:	0.000220		
Predicted MDL:	0.002482		
Predicted MQL:	0.008273		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00369	.000	1
S1	.02500	.02924	.004	17.0	.00781	.000	1
S3	7.5000	7.4981	-.002	-.025	1.0589	.002	1
S4	15.000	14.239	-.761	-5.07	2.0075	.005	1
S5	30.000	30.849	.849	2.83	4.3450	.011	1
S2	3.7500	3.6594	-.091	-2.42	.51866	.003	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



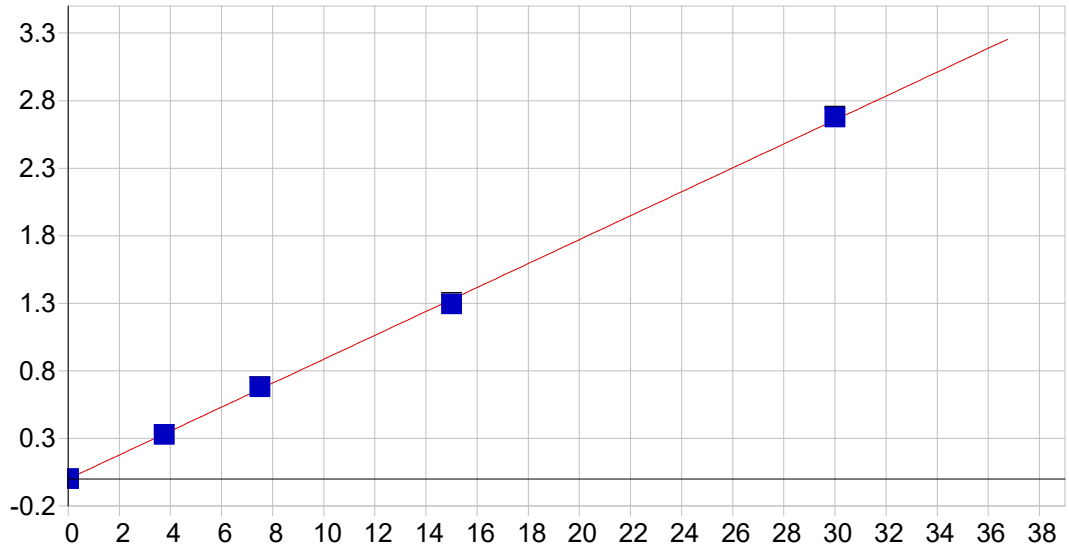
Fe 259.837 {130}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.004964	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999886	Status:	OK.
Std Error of Est:	0.000033		
Predicted MDL:	0.006491		
Predicted MQL:	0.021637		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00000	.000	1
S1	.10000	.10574	.006	5.74	.00051	.000	1
S3	75.000	78.612	3.61	4.82	.38984	.001	1
S4	150.00	148.70	-1.30	-.866	.73738	.004	1
S5	300.00	303.79	3.79	1.26	1.5065	.009	1
S2	37.500	38.315	.815	2.17	.19000	.001	1
S6	800.00	793.08	-6.92	-.865	3.9368	.026	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

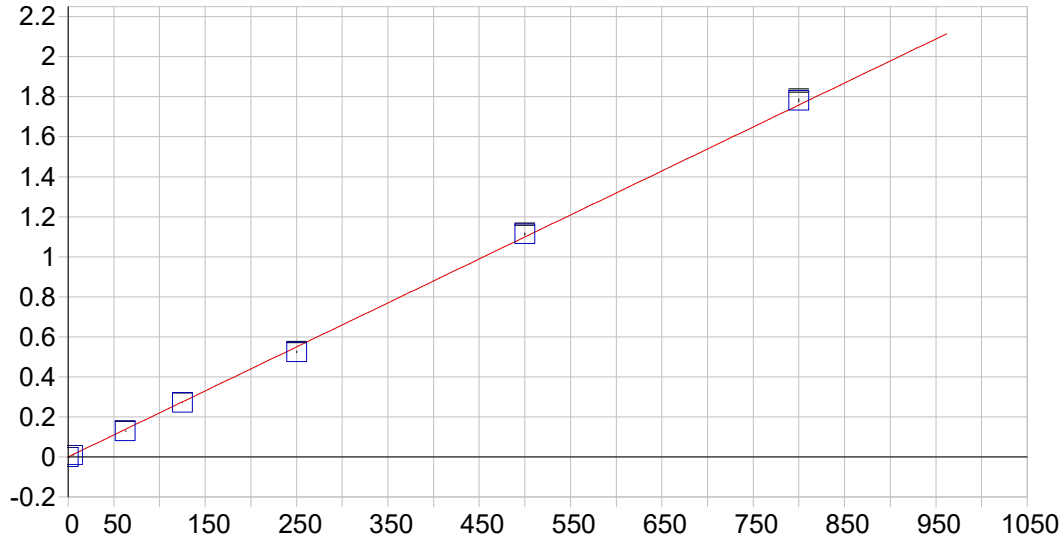


Mn 257.610 {131}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000006	Re-Slope:	1.000000
A1 (Gain):	0.088554	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999851	Status:	OK.
Std Error of Est:	0.000054		
Predicted MDL:	0.000347		
Predicted MQL:	0.001158		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00001	.000	1
S1	.01500	.01530	.000	2.01	.00135	.000	1
S3	7.5000	7.6812	.181	2.42	.67974	.001	1
S4	15.000	14.615	-.385	-2.56	1.2933	.010	1
S5	30.000	30.247	.247	.824	2.6767	.007	1
S2	3.7500	3.7060	-.044	-1.17	.32795	.001	1



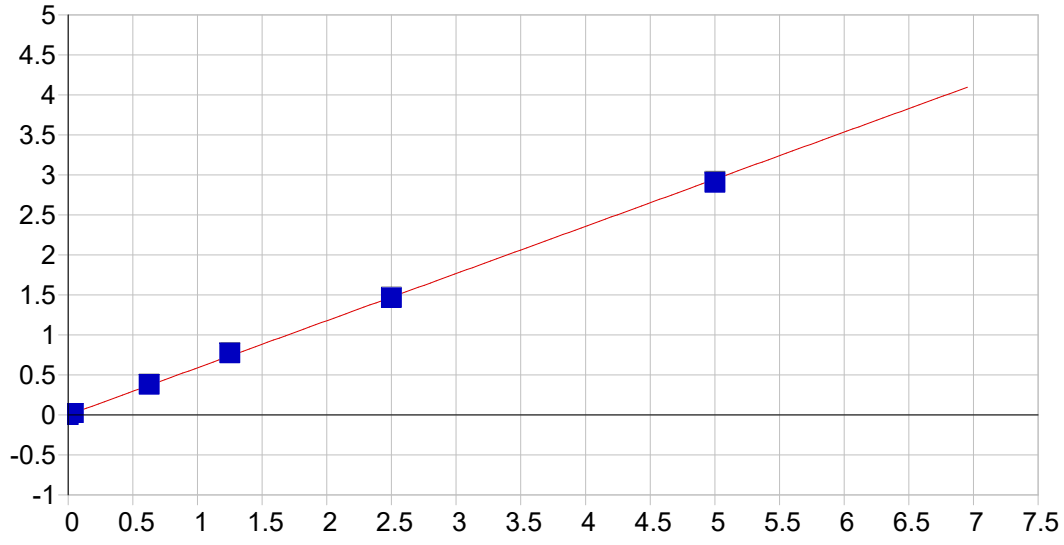
Mg 279.079 {121}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000033	Re-Slope:	1.000000
A1 (Gain):	0.002199	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999715	Status:	OK.
Std Error of Est:	0.000183		
Predicted MDL:	0.017983		
Predicted MQL:	0.059944		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00099	.001	.000	-.00003	.000	1
S2	62.500	59.083	-3.42	-5.47	.12986	.000	1
S3	125.00	123.55	-1.45	-1.16	.27159	.001	1
S4	250.00	238.70	-11.3	-4.52	.52476	.003	1
S5	500.00	506.65	6.65	1.33	1.1139	.005	1
S1	5.0000	4.4331	-.567	-11.3	.00971	.000	1
S6	800.00	810.08	10.1	1.26	1.7809	.008	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



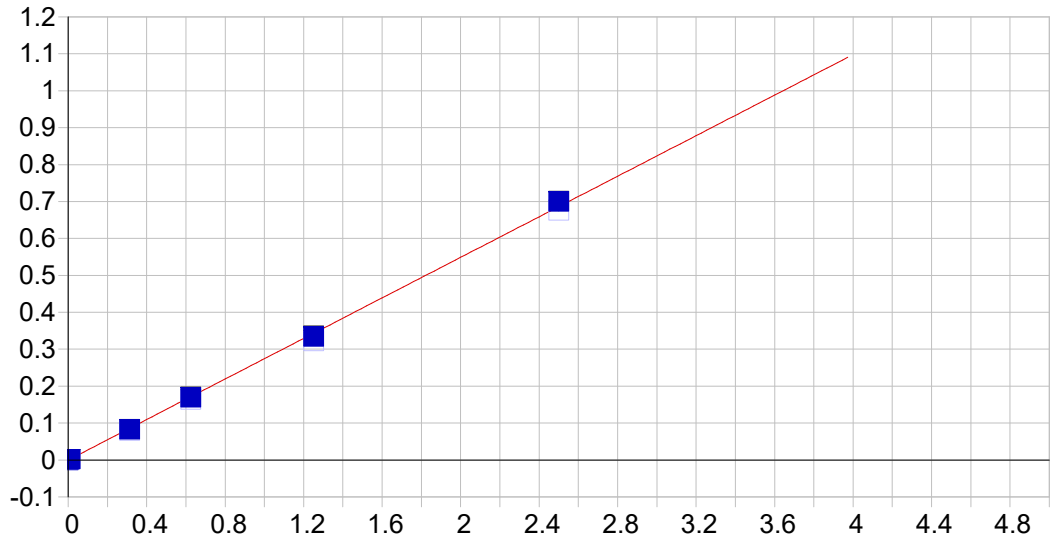
Ni 231.604 {446}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000339	Re-Slope:	1.000000
A1 (Gain):	0.589180	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999743	Status:	OK.
Std Error of Est:	0.000318		
Predicted MDL:	0.000410		
Predicted MQL:	0.001366		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00034	.000	1
S1	.04000	.04087	.001	2.18	.02377	.000	1
S3	1.2500	1.3120	.062	4.96	.77441	.004	1
S4	2.5000	2.4868	-.013	-.526	1.4683	.004	1
S5	5.0000	4.9294	-.071	-1.41	2.9108	.009	1
S2	.62500	.64589	.021	3.34	.38107	.001	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



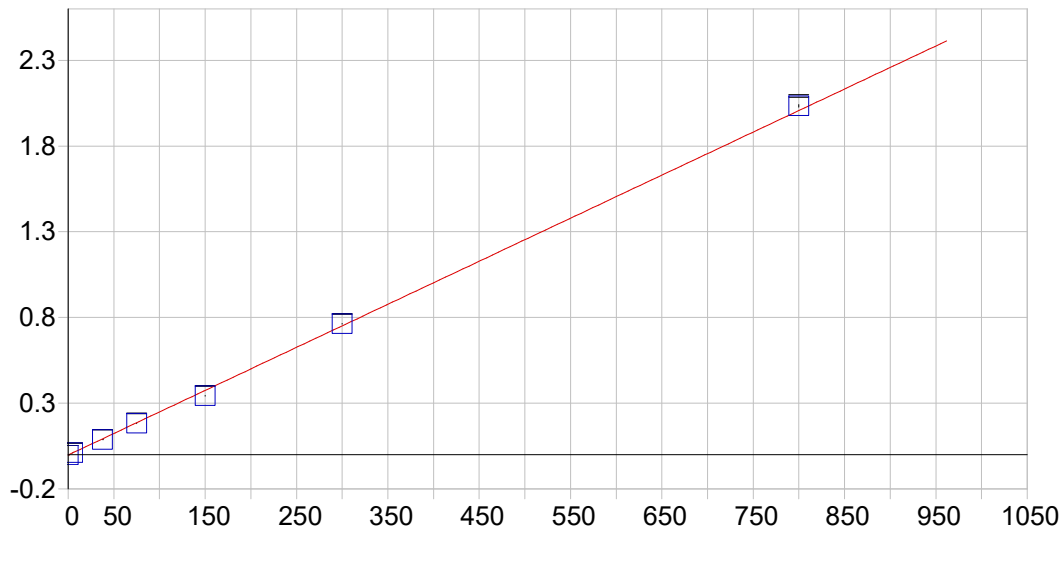
Ag 328.068 {103}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000242	Re-Slope:	1.000000
A1 (Gain):	0.274548	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999741	Status:	OK.
Std Error of Est:	0.000051		
Predicted MDL:	0.000381		
Predicted MQL:	0.001269		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00024	.000	1
S1	.01000	.00961	-.000	-3.85	.00238	.000	1
S3	.62500	.61931	-.006	-.911	.16374	.000	1
S4	1.2500	1.2174	-.033	-2.61	.32190	.002	1
S5	2.5000	2.5495	.049	1.98	.67553	.001	1
S2	.31250	.30169	-.011	-3.46	.07956	.000	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



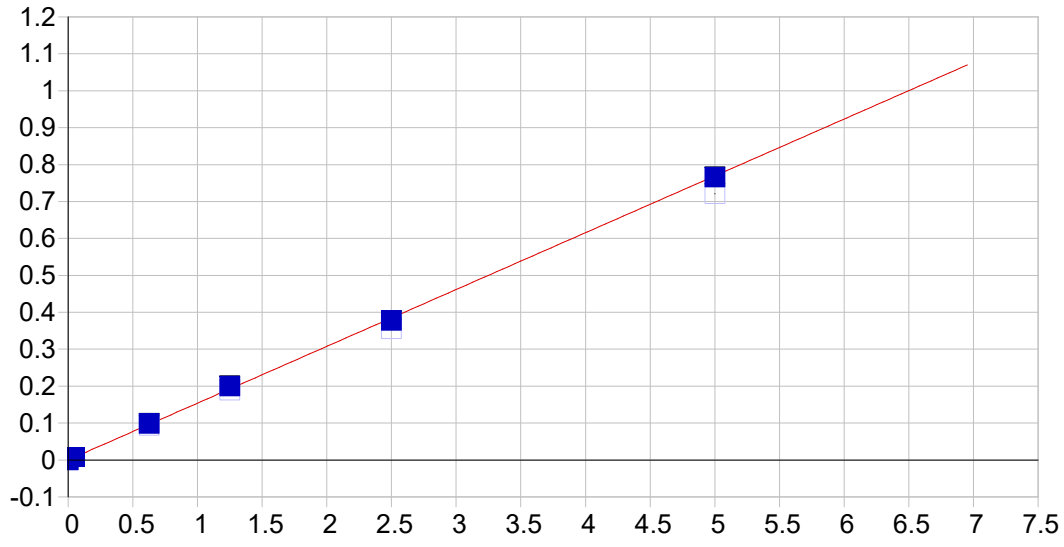
Na 818.326 { 41}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.002157	Re-Slope:	1.000000
A1 (Gain):	0.002512	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999515	Status:	OK.
Std Error of Est:	0.000242		
Predicted MDL:	0.411716		
Predicted MQL:	1.372387		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00066	.001	.000	-.00216	.001	1
S2	37.500	35.728	-1.77	-4.73	.08758	.000	1
S3	75.000	73.637	-1.36	-1.82	.18279	.001	1
S4	150.00	137.76	-12.2	-8.16	.34384	.002	1
S5	300.00	304.59	4.59	1.53	.76285	.002	1
S1	5.0000	4.9289	-.071	-1.42	.01022	.001	1
S6	800.00	810.86	10.9	1.36	2.0344	.008	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



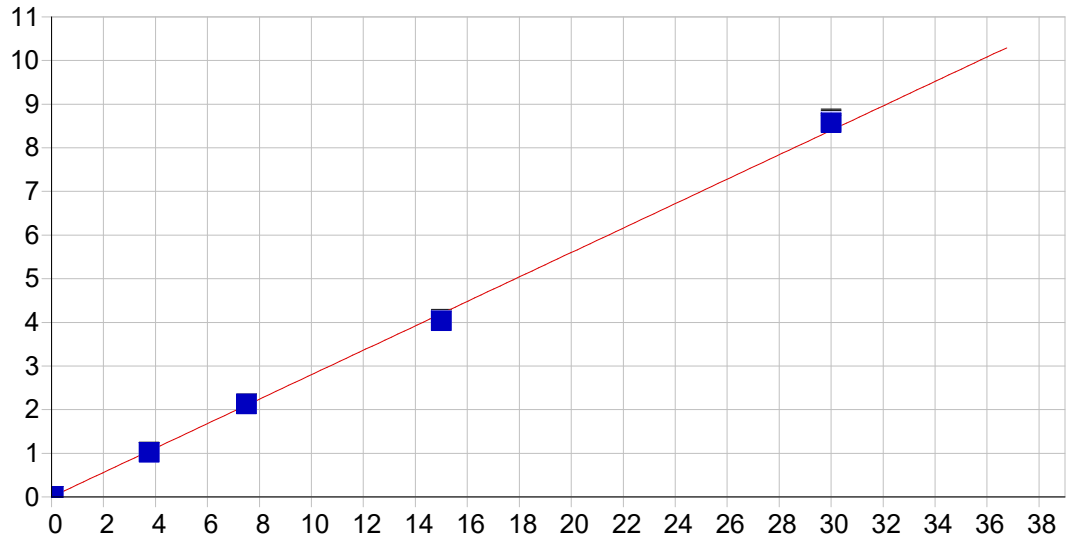
V 292.402 {115}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000019	Re-Slope:	1.000000
A1 (Gain):	0.153878	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999774	Status:	OK.
Std Error of Est:	0.000082		
Predicted MDL:	0.001978		
Predicted MQL:	0.006595		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00002	.000	1
S1	.05000	.05375	.004	7.51	.00827	.000	1
S3	1.2500	1.3009	.051	4.07	.18895	.001	1
S4	2.5000	2.4512	-.049	-1.95	.35471	.000	1
S5	5.0000	4.9784	-.022	-.433	.72108	.001	1
S2	.62500	.64053	.016	2.48	.09296	.000	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



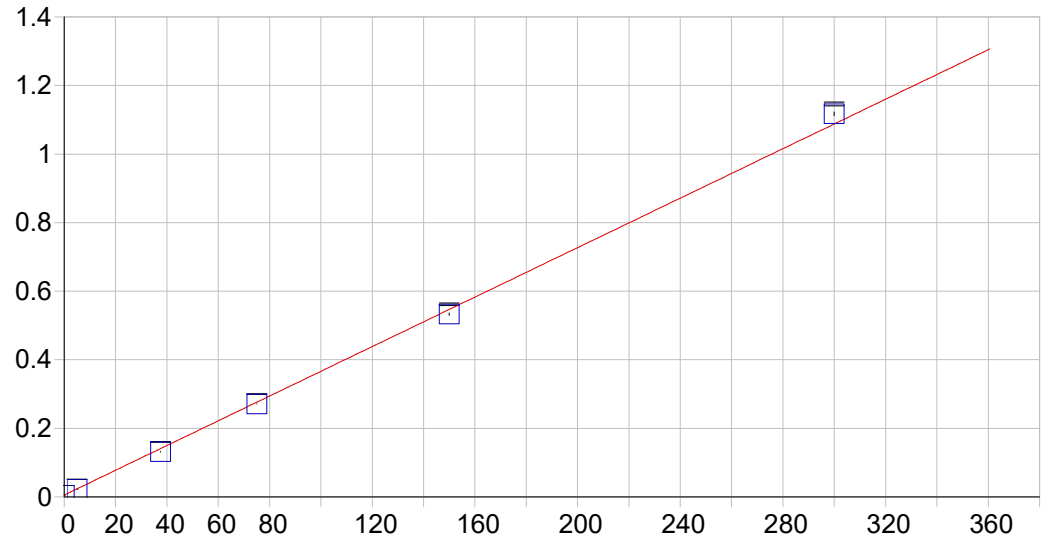
Zn 213.856 {158}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000350	Re-Slope:	1.000000
A1 (Gain):	0.280008	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999642	Status:	OK.
Std Error of Est:	0.000535		
Predicted MDL:	0.001750		
Predicted MQL:	0.005832		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00035	.000	1
S1	.06000	.05876	-.001	-2.06	.01690	.000	1
S3	7.5000	7.5956	.096	1.27	2.1351	.007	1
S4	15.000	14.411	-.589	-3.92	4.0515	.020	1
S5	30.000	30.613	.613	2.04	8.6039	.055	1
S2	3.7500	3.6312	-.119	-3.17	1.0211	.004	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



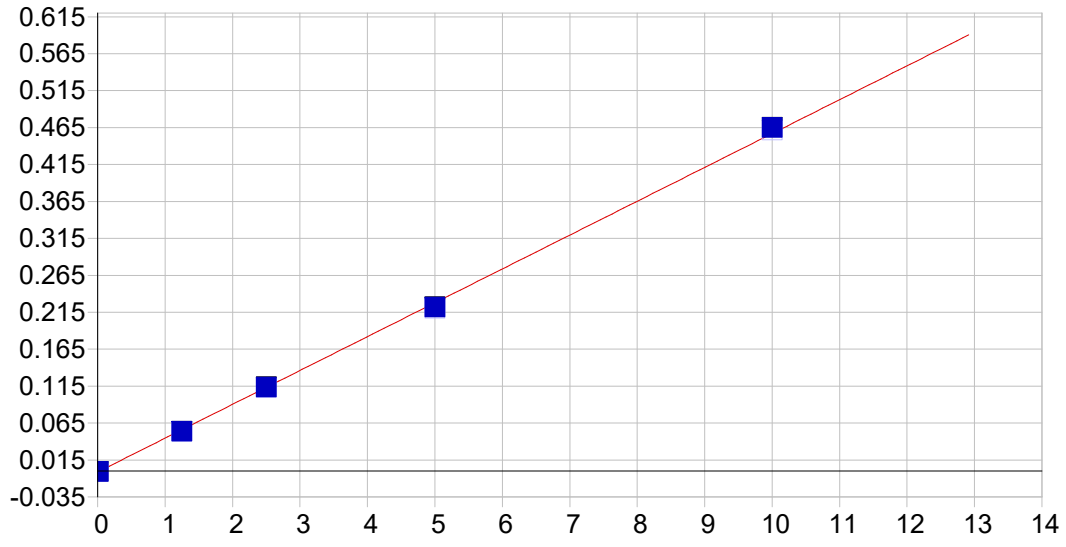
K 769.896 { 44}

Date of Fit: 1/27/2025 1:59:51 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset):	0.005618	Re-Slope:	1.000000
A1 (Gain):	0.003607	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999515	Status:	OK.
Std Error of Est:	0.000232		
Predicted MDL:	0.050504		
Predicted MQL:	0.168346		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00086	.001	.000	.00562	.000	1
S2	37.500	34.965	-2.54	-6.76	.13174	.001	1
S3	75.000	73.605	-1.39	-1.86	.27112	.001	1
S4	150.00	146.23	-3.77	-2.51	.53308	.004	1
S5	300.00	308.14	8.14	2.71	1.1171	.006	1
S1	5.0000	4.5657	-.434	-8.69	.02209	.000	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



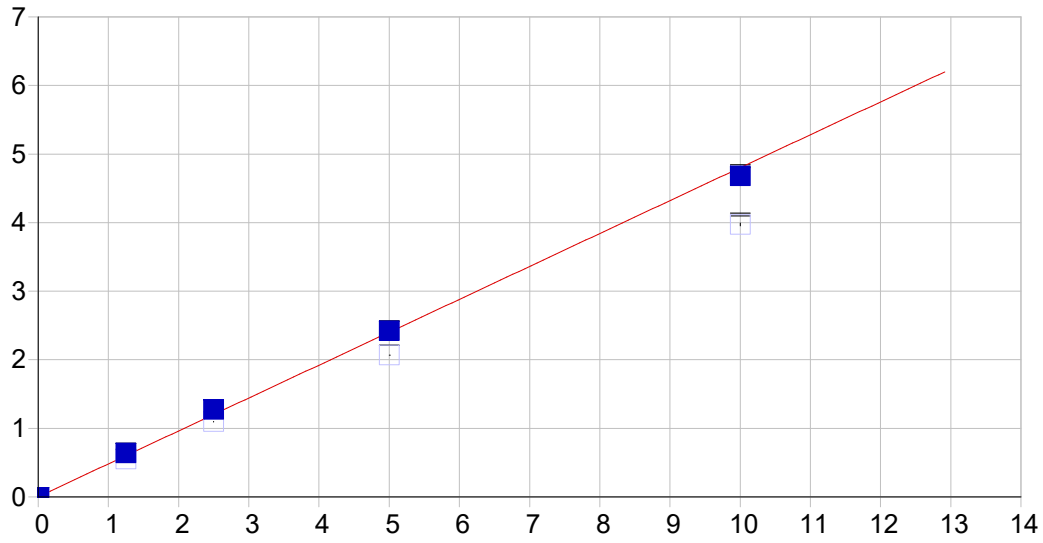
P 177.495 {490}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001331	Re-Slope:	1.000000
A1 (Gain):	0.045827	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999766	Status:	OK.
Std Error of Est:	0.000017		
Predicted MDL:	0.002255		
Predicted MQL:	0.007517		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00133	.000	1
S1	.01000	.00894	-.001	-10.6	-.00092	.000	1
S3	2.5000	2.5075	.007	.299	.11276	.000	1
S4	5.0000	4.8696	-.130	-2.61	.22019	.001	1
S5	10.000	10.175	.175	1.75	.46168	.000	1
S2	1.2500	1.1992	-.051	-4.06	.05322	.000	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



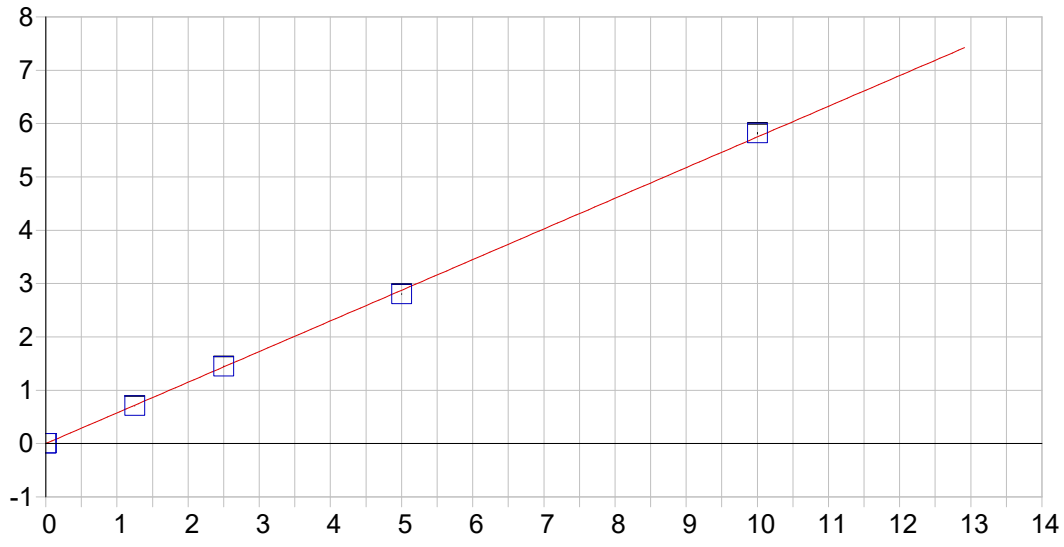
B 249.678 {135}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002008	Re-Slope:	1.000000
A1 (Gain):	0.479883	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998901	Status:	OK.
Std Error of Est:	0.000322		
Predicted MDL:	0.000728		
Predicted MQL:	0.002426		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00201	.000	1
S1	.01000	.00009	-.010	-99.1	.00181	.000	1
S3	2.5000	2.6489	.149	5.96	1.0967	.003	1
S4	5.0000	5.0390	.039	.780	2.0672	.002	1
S5	10.000	9.7469	-.253	-2.53	3.9735	.021	1
S2	1.2500	1.3261	.076	6.09	.55015	.002	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



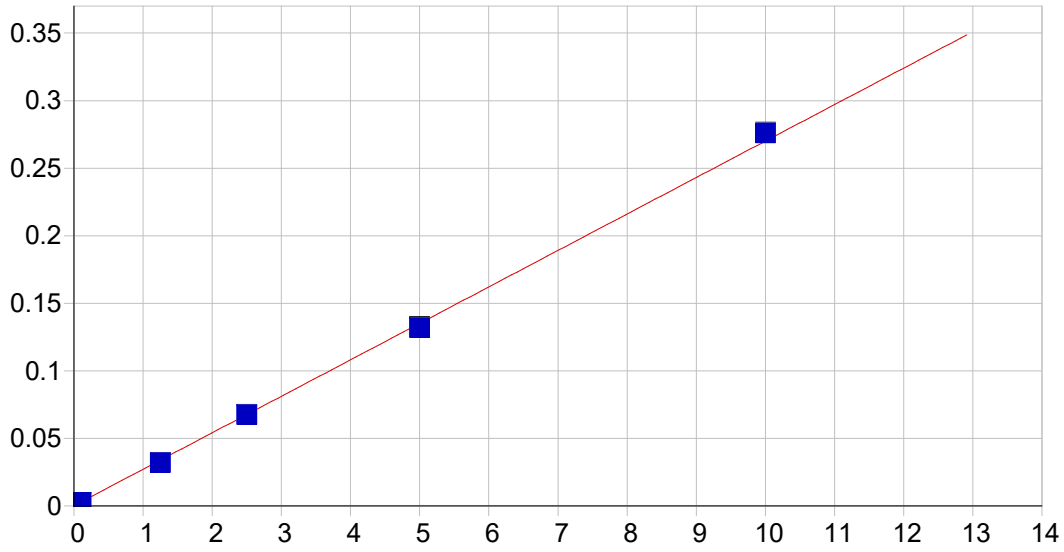
Mo 202.030 {467}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000108	Re-Slope:	1.000000
A1 (Gain):	0.574900	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999867	Status:	OK.
Std Error of Est:	0.000157		
Predicted MDL:	0.000337		
Predicted MQL:	0.001122		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00011	.000	1
S1	.01000	.01039	.000	3.91	.00608	.000	1
S3	2.5000	2.5197	.020	.789	1.4487	.005	1
S4	5.0000	4.8758	-.124	-2.48	2.8032	.007	1
S5	10.000	10.122	.122	1.22	5.8192	.012	1
S2	1.2500	1.2322	-.018	-1.42	.70850	.002	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



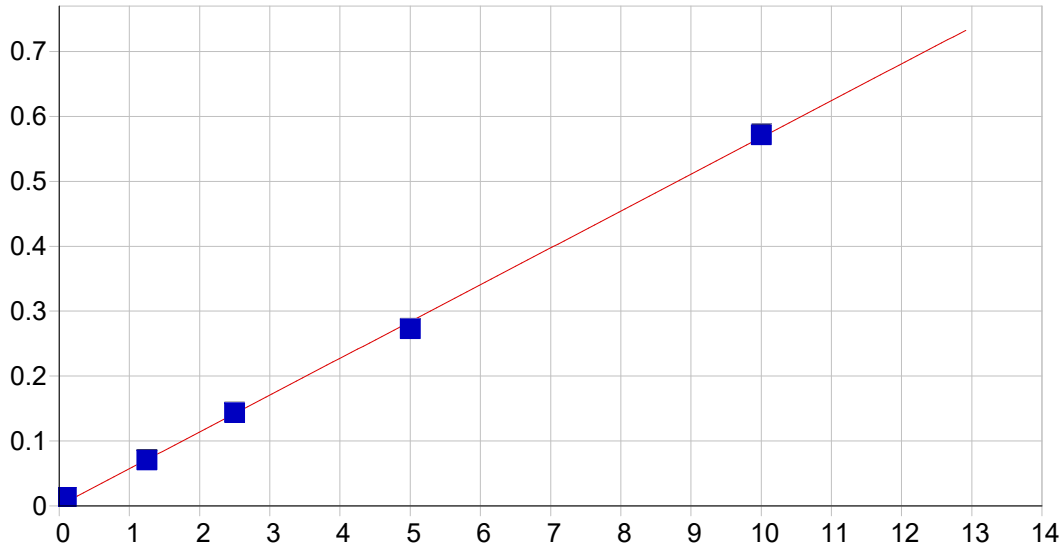
S 182.034 {485}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000163	Re-Slope:	1.000000
A1 (Gain):	0.026990	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999634	Status:	OK.
Std Error of Est:	0.000039		
Predicted MDL:	0.003823		
Predicted MQL:	0.012744		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	.00016	.000	1
S1	.10000	.08619	-.014	-13.8	.00249	.000	1
S3	2.5000	2.4922	-.008	-.310	.06751	.000	1
S4	5.0000	4.8784	-.122	-2.43	.13200	.001	1
S5	10.000	10.216	.216	2.16	.27624	.001	1
S2	1.2500	1.1769	-.073	-5.85	.03197	.000	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



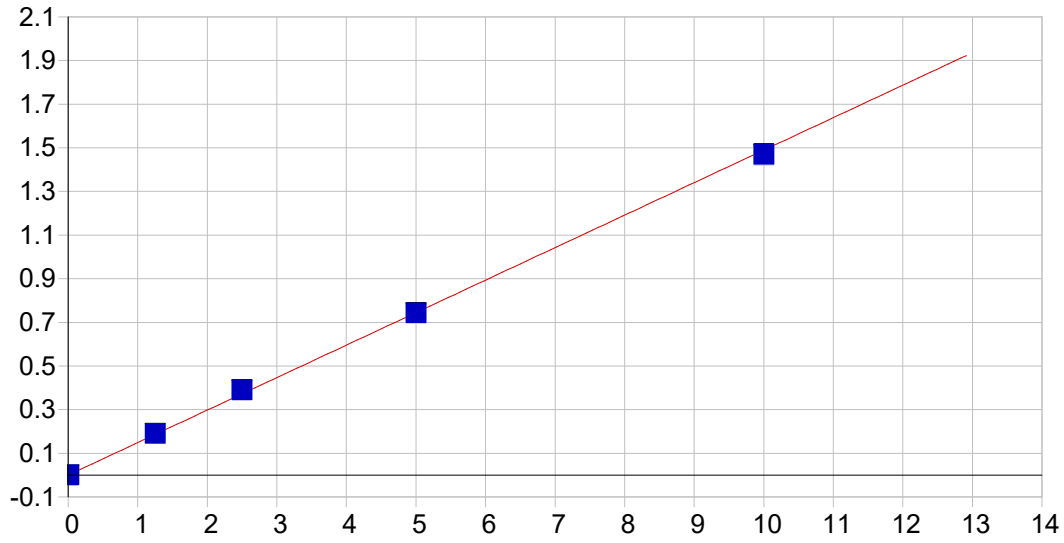
Si 251.611 {134}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000497	Re-Slope:	1.000000
A1 (Gain):	0.056705	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.995170	Status:	OK.
Std Error of Est:	0.000298		
Predicted MDL:	0.003364		
Predicted MQL:	0.011213		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00013	-.000	.000	.00049	.000	1
S1	.10000	.23234	.132	132.	.01367	.000	1
S3	2.5000	2.5216	.022	.865	.14391	.001	1
S4	5.0000	4.7964	-.204	-4.07	.27333	.000	1
S5	10.000	10.068	.068	.679	.57310	.001	1
S2	1.2500	1.2320	-.018	-1.44	.07057	.000	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

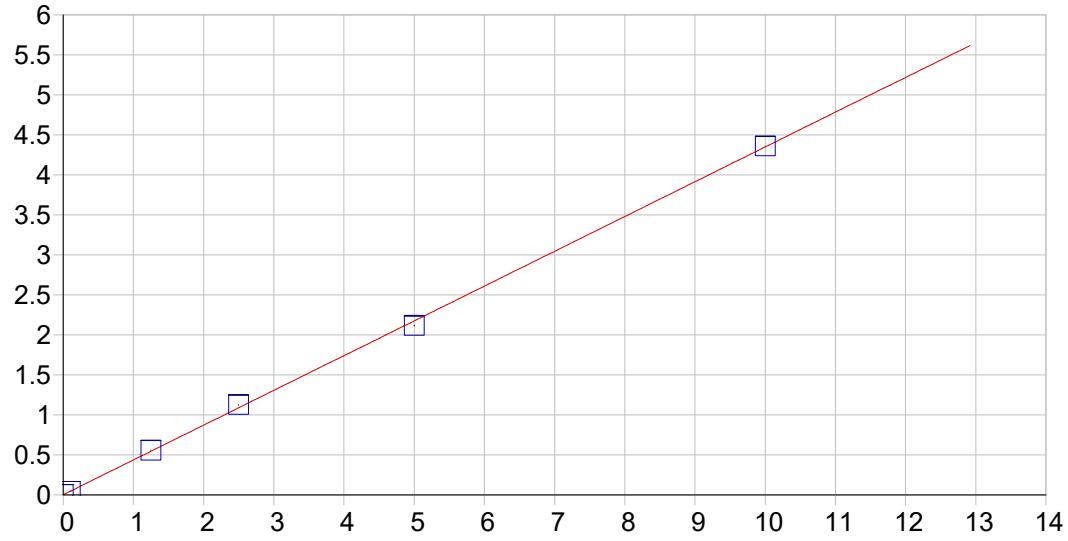


Sn 189.989 {478}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000104	Re-Slope:	1.000000
A1 (Gain):	0.148914	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999776	Status:	OK.
Std Error of Est:	0.000044		
Predicted MDL:	0.000799		
Predicted MQL:	0.002662		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00010	.000	1
S1	.00700	.00739	.000	5.52	.00116	.000	1
S3	2.5000	2.6191	.119	4.76	.38897	.002	1
S4	5.0000	4.9869	-.013	-.262	.74042	.002	1
S5	10.000	9.8631	-.137	-1.37	1.4642	.005	1
S2	1.2500	1.2805	.030	2.44	.19021	.001	1



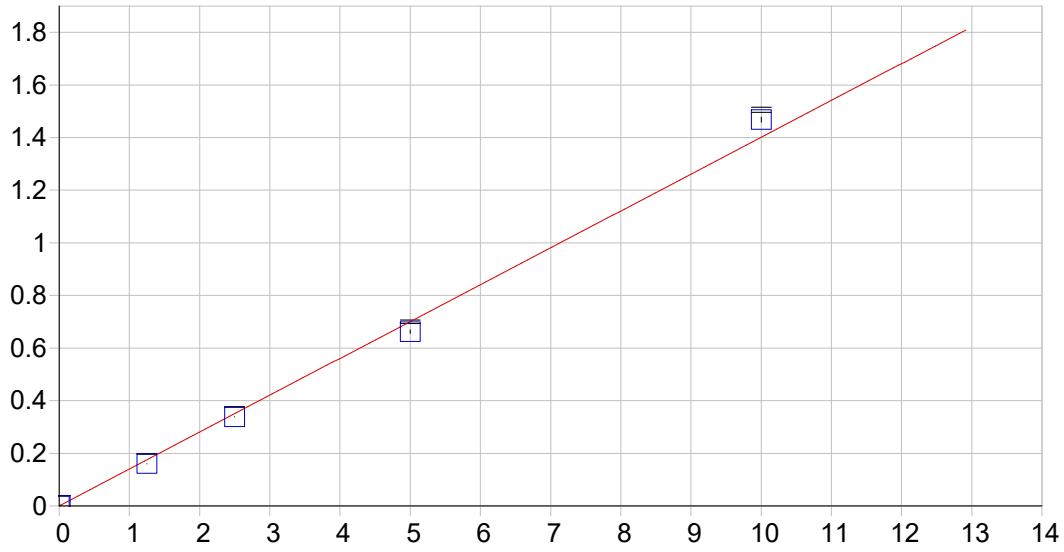
Ti 336.121 {100}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002398	Re-Slope:	1.000000
A1 (Gain):	0.434672	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999794	Status:	OK.
Std Error of Est:	0.000469		
Predicted MDL:	0.000930		
Predicted MQL:	0.003101		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00239	.000	1
S1	.10000	.10479	.005	4.79	.04795	.000	1
S3	2.5000	2.5878	.088	3.51	1.1273	.003	1
S4	5.0000	4.8600	-.140	-2.80	2.1149	.004	1
S5	10.000	10.023	.023	.227	4.3590	.002	1
S2	1.2500	1.2747	.025	1.97	.55645	.002	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



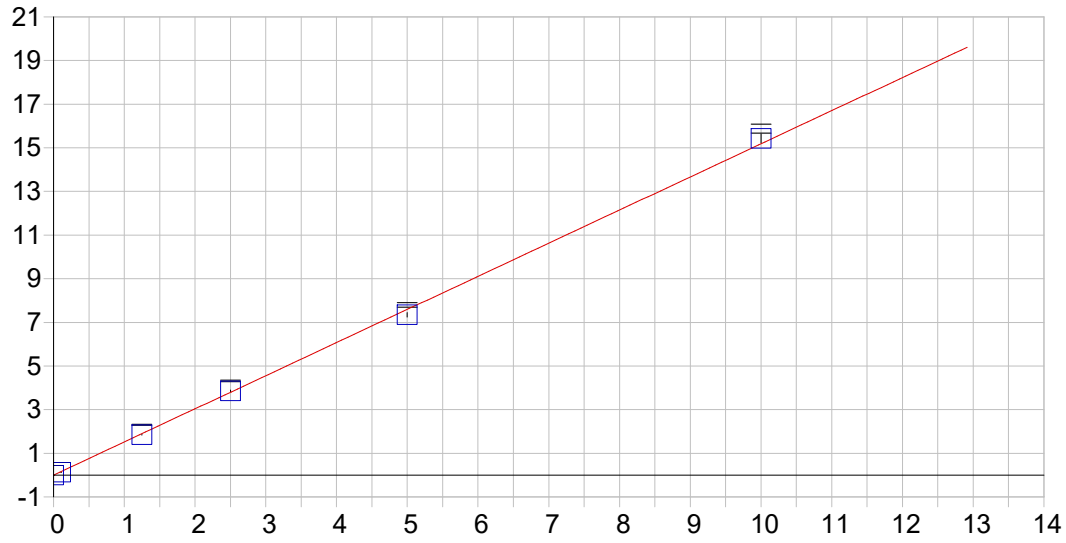
Li 670.784 { 50}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000594	Re-Slope:	1.000000
A1 (Gain):	0.140049	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998631	Status:	OK.
Std Error of Est:	0.000151		
Predicted MDL:	0.001300		
Predicted MQL:	0.004334		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00059	.000	1
S5	10.000	10.478	.478	4.78	1.4681	.009	1
S4	5.0000	4.7224	-.278	-5.55	.66196	.007	1
S3	2.5000	2.4128	-.087	-3.49	.33850	.001	1
S1	.01500	.01364	-.001	-9.09	.00250	.000	1
S2	1.2500	1.1379	-.112	-8.97	.15996	.001	1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



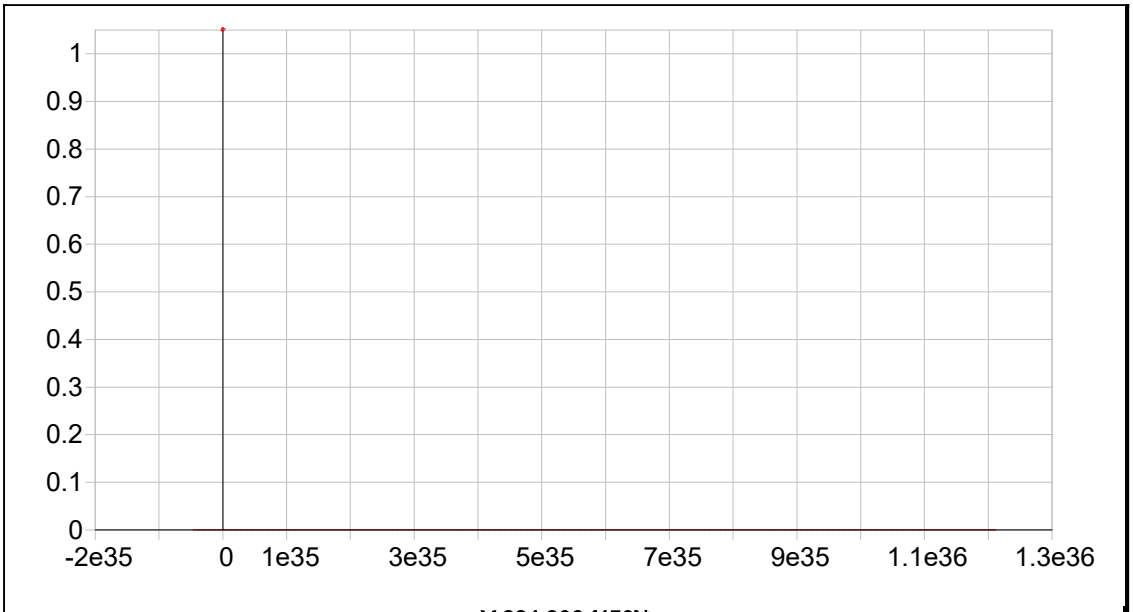
Sr 407.771 { 83}

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000018	Re-Slope:	1.000000
A1 (Gain):	1.518358	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999713	Status:	OK.
Std Error of Est:	0.001934		
Predicted MDL:	0.000064		
Predicted MQL:	0.000213		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00004	.000	1
S1	.10000	.08751	-.012	-12.5	.13288	.001	1
S3	2.5000	2.5407	.041	1.63	3.8577	.039	1
S4	5.0000	4.8403	-.160	-3.19	7.3493	.103	1
S5	10.000	10.164	.164	1.64	15.432	.206	1
S2	1.2500	1.2179	-.032	-2.57	1.8492	.025	1

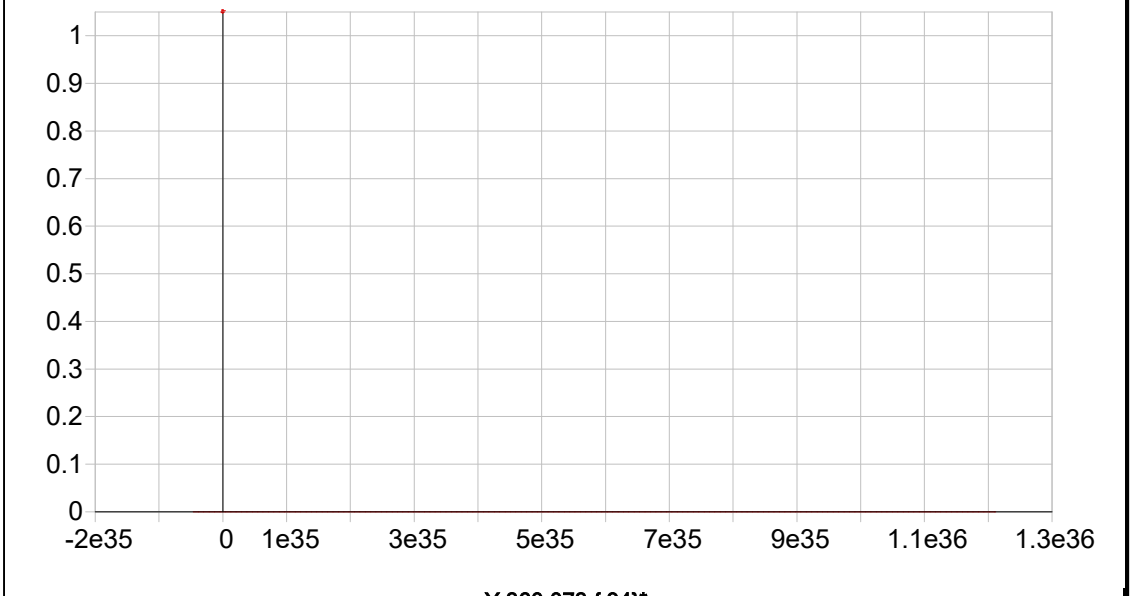
Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



Y 224.306 {450}*

Date of Fit:	1/27/2025 1:59:51	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



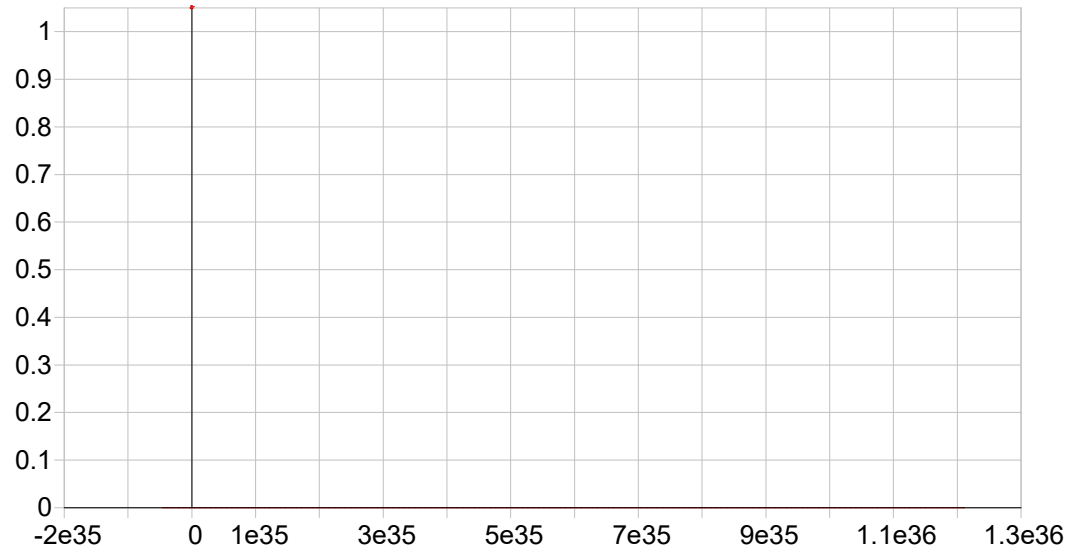
Y 360.073 { 94}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000	Status:	Warning	Zero Gain	
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



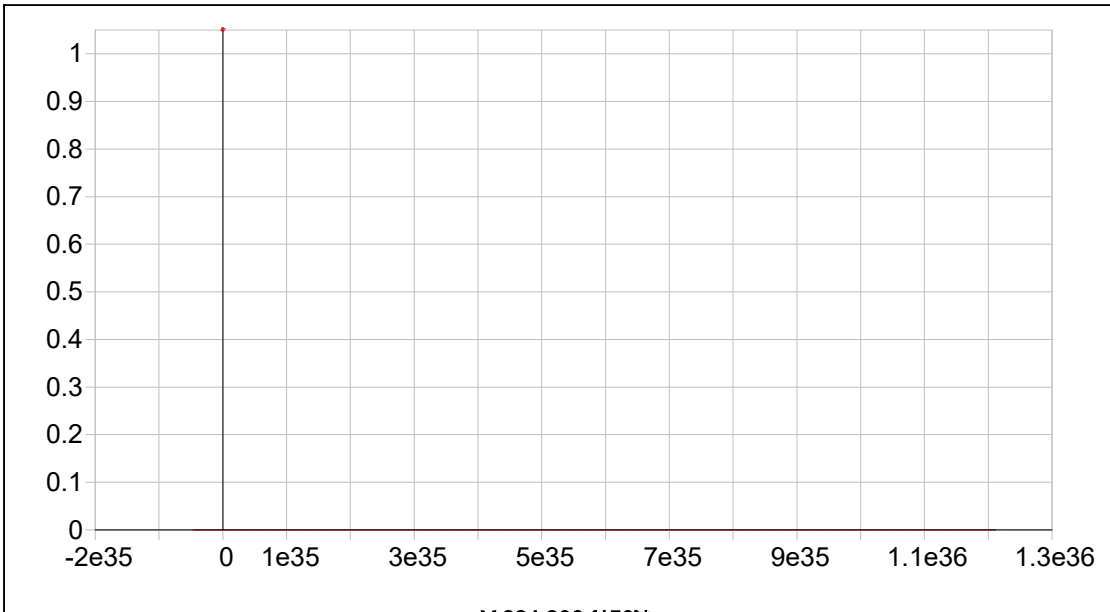
Y 371.030 { 91}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.000000	Status:	Warning Zero Gain
Std Error of Est:	0.000000		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis

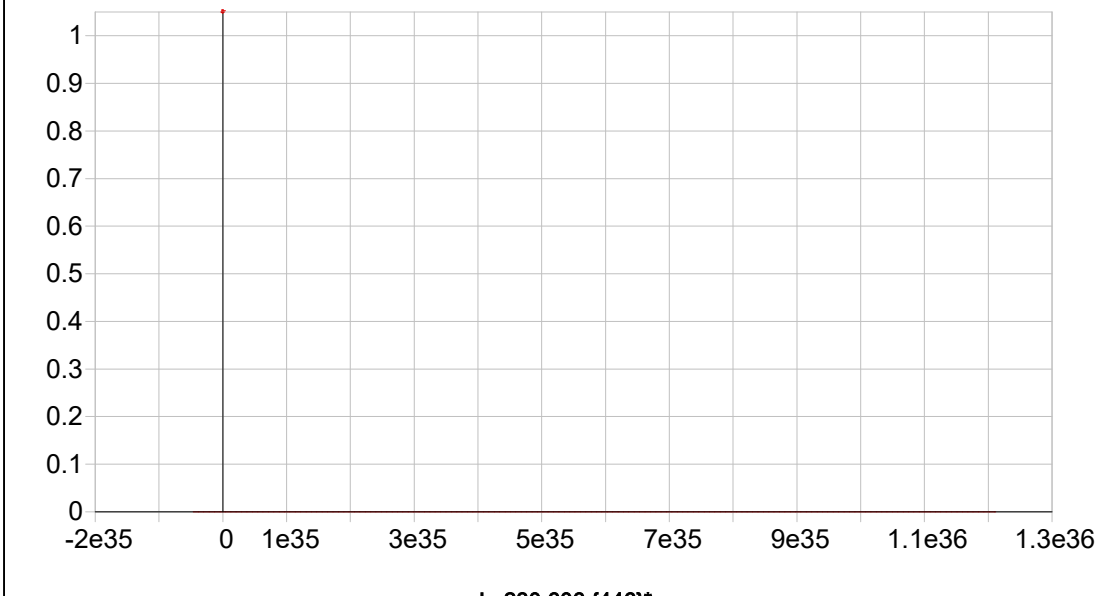
Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4



Y 224.306 {150}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



In 230.606 {446}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

A2 (Curvature):		0.000000					
n (Exponent):		1.000000					
Correlation:		0.000000		Status:	Warning	Zero Gain	
Std Error of Est:		0.000000					
Predicted MDL:		n/a					
Predicted MQL:		n/a					
Std. Name	**Stated Conc.**	**Found Conc.**	**Difference**	**% Diff.**	**(S)IR**	**Std Dev**	**Emphasis**

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: S0 Acquired: 1/27/2025 14:23:39 Type: Cal
Method: EPA SFAM01.0(v56) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00009**	**.00007**	**-.00031**	**.00036**	**.00034**	**-.00004**	**.00648**	**.00004**
Stddev	.00009	.00001	.00007	.00006	.00014	.00013	.00023	.00016
%RSD	98.992	20.708	23.596	15.946	41.468	325.66	3.5651	427.59
#1	-.00001	.00006	-.00039	.00041	.00046	.00007	.00642	-.00013
#2	-.00020	.00009	-.00028	.00030	.00038	-.00000	.00673	.00020
#3	-.00007	.00006	-.00026	.00037	.00018	-.00018	.00628	.00004

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00003**	**.00002**	**-.00001**	**-.00000**	**.00369**	**-.00000**	**-.00001**	**-.00003**
Stddev	.00012	.00002	.00001	.00007	.00007	.00001	.00004	.00004
%RSD	356.51	152.65	172.95	1514.4	1.9402	2914.3	600.91	114.57
#1	.00007	-.00001	-.00002	.00007	.00377	-.00000	.00004	-.00003
#2	-.00016	.00002	.00001	-.00002	.00363	.00002	-.00002	.00000
#3	-.00001	.00003	-.00001	-.00006	.00368	-.00001	-.00003	-.00007

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00034**	**-.00024**	**-.00216**	**.00002**	**.00035**	**.00562**	**-.00133**	**.00201**
Stddev	.00018	.00002	.00078	.00014	.00029	.00006	.00006	.00021
%RSD	51.843	9.0647	36.208	787.77	82.517	1.1126	4.2043	10.266
#1	-.00014	-.00024	-.00126	-.00014	.00068	.00557	-.00135	.00203
#2	-.00043	-.00022	-.00256	.00009	.00024	.00560	-.00127	.00221
#3	-.00046	-.00026	-.00265	.00011	.00014	.00569	-.00138	.00180

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00011**	**.00016**	**.00049**	**.00010**	**.00239**	**.00059**	**.00004**
Stddev	.00014	.00004	.00006	.00013	.00011	.00014	.00004
%RSD	130.31	21.427	12.633	123.40	4.6816	23.748	100.19
#1	.00014	.00013	.00056	.00012	.00250	.00053	.00007
#2	-.00005	.00020	.00046	-.00003	.00228	.00050	-.00001
#3	.00023	.00016	.00045	.00022	.00240	.00076	.00006

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: S0 Acquired: 1/27/2025 14:23:39 Type: Cal
Method: EPA SFAM01.0(v56) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S0 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3721.3	77141.	10941.	2574.2	4698.6
Stddev	4.9	412.	38.	15.0	4.0
%RSD	.13119	.53411	.34829	.58186	.08615
#1	3722.6	76665.	10933.	2557.2	4699.0
#2	3725.5	77385.	10907.	2580.1	4702.4
#3	3716.0	77373.	10982.	2585.3	4694.4

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: S1 Acquired: 1/27/2025 14:27:55 Type: Cal
Method: EPA SFAM01.0(v56) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00052**	**.00190**	**.00210**	**.00240**	**.00890**	**.00209**	**.08309**	**.02350**
Stddev	.00007	.00009	.00016	.00018	.00008	.00005	.00045	.00019
%RSD	12.945	4.7803	7.6163	7.5152	.89797	2.3760	.54737	.82349
#1	.00053	.00197	.00215	.00259	.00883	.00204	.08342	.02329
#2	.00045	.00194	.00192	.00238	.00889	.00208	.08327	.02366
#3	.00058	.00180	.00223	.00223	.00899	.00214	.08257	.02357

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.01292**	**.03973**	**.00174**	**.04151**	**.00781**	**.00051**	**.00135**	**.00971**
Stddev	.00006	.00008	.00003	.00031	.00008	.00002	.00002	.00004
%RSD	.49572	.21208	1.9312	.74433	.99954	3.0568	1.5932	.44953
#1	.01287	.03983	.00175	.04145	.00772	.00053	.00137	.00968
#2	.01289	.03970	.00176	.04124	.00788	.00050	.00134	.00976
#3	.01299	.03967	.00170	.04185	.00782	.00052	.00133	.00970

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.02377**	**.00238**	**.01022**	**.00827**	**.01690**	**.02209**	**-.00092**	**.00181**
Stddev	.00011	.00004	.00057	.00031	.00029	.00014	.00008	.00017
%RSD	.46023	1.8549	5.5395	3.7022	1.6864	.65111	9.0244	9.2530
#1	.02382	.00243	.00996	.00858	.01668	.02225	-.00098	.00162
#2	.02364	.00234	.00984	.00797	.01680	.02198	-.00096	.00187
#3	.02384	.00237	.01087	.00827	.01723	.02203	-.00083	.00194

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00608**	**.00249**	**.01367**	**.00116**	**.04795**	**.00250**	**.13288**
Stddev	.00012	.00014	.00010	.00010	.00029	.00016	.00116
%RSD	1.9889	5.7832	.75431	9.0330	.60796	6.4551	.87243
#1	.00602	.00252	.01371	.00127	.04819	.00234	.13404
#2	.00601	.00233	.01356	.00106	.04802	.00251	.13289
#3	.00622	.00261	.01375	.00114	.04762	.00266	.13172

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: S1 Acquired: 1/27/2025 14:27:55 Type: Cal
Method: EPA SFAM01.0(v56) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S01 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3608.8	74781.	11122.	2485.3	4475.5
Stddev	10.9	95.	43.	6.9	10.5
%RSD	.30306	.12766	.38471	.27731	.23468
#1	3600.2	74890.	11171.	2478.9	4466.1
#2	3621.1	74713.	11107.	2484.4	4486.9
#3	3605.2	74739.	11089.	2492.6	4473.4

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: S2 Acquired: 1/27/2025 14:32:08 Type: Cal
Method: EPA SFAM01.0(v56) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.06999	.09174	1.4227	.07901	.18366	.42648	.97881	.57269
Stddev	.00049	.00015	.0043	.00022	.00055	.00168	.00593	.00096
%RSD	.70044	.16698	.30216	.28250	.30047	.39280	.60573	.16766
#1	.06979	.09178	1.4202	.07926	.18340	.42736	.98428	.57309
#2	.06963	.09186	1.4202	.07883	.18329	.42754	.97964	.57160
#3	.07055	.09157	1.4276	.07894	.18430	.42455	.97251	.57338

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.6301	.49276	.63980	.53202	.51866	.19000	.32795	.12986
Stddev	.0040	.00134	.00059	.00154	.00264	.00069	.00086	.00025
%RSD	.24463	.27255	.09190	.29023	.50959	.36342	.26083	.19265
#1	1.6294	.49329	.63992	.53128	.52134	.19000	.32824	.12999
#2	1.6265	.49376	.64033	.53099	.51860	.19069	.32861	.13003
#3	1.6344	.49123	.63917	.53380	.51605	.18931	.32698	.12958

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.38107	.07956	.08758	.09296	1.0211	.13174	.05322	.55015
Stddev	.00100	.00016	.00045	.00045	.0041	.00066	.00007	.00202
%RSD	.26192	.20462	.51297	.47873	.39940	.49969	.12618	.36799
#1	.38075	.07968	.08707	.09274	1.0198	.13202	.05316	.54983
#2	.38027	.07938	.08774	.09266	1.0256	.13222	.05321	.54830
#3	.38219	.07962	.08793	.09347	1.0178	.13099	.05329	.55231

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.70850	.03197	.07057	.19021	.55645	.15996	1.8492
Stddev	.00157	.00013	.00043	.00083	.00197	.00109	.0249
%RSD	.22139	.41849	.61128	.43489	.35436	.67914	1.3466
#1	.70795	.03194	.07027	.18957	.55677	.16120	1.8315
#2	.70729	.03212	.07106	.18992	.55825	.15950	1.8384
#3	.71027	.03186	.07038	.19114	.55434	.15918	1.8777

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: S2 Acquired: 1/27/2025 14:32:08 Type: Cal
Method: EPA SFAM01.0(v56) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S02 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3402.2**	**71247.**	**11035.**	**2344.1**	**4008.7**
Stddev	6.9	252.	19.	9.3	6.0
%RSD	.20303	.35357	.17140	.39675	.14891
#1	3403.3	71187.	11049.	2343.3	4013.6
#2	3408.5	71030.	11014.	2335.2	4010.3
#3	3394.8	71523.	11043.	2353.7	4002.0

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: S3 Acquired: 1/27/2025 14:36:11 Type: Cal
Method: EPA SFAM01.0(v56) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.14626	.18451	2.8982	.16411	.38272	.89546	2.0319	1.1452
Stddev	.00084	.00180	.0127	.00093	.00146	.00194	.0080	.0030
%RSD	.57208	.97649	.43951	.56961	.38140	.21675	.39400	.25991
#1	.14572	.18407	2.8957	.16379	.38341	.89401	2.0319	1.1454
#2	.14583	.18297	2.8869	.16338	.38104	.89766	2.0239	1.1422
#3	.14722	.18649	2.9120	.16517	.38370	.89469	2.0399	1.1481

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.3259	1.0196	1.2799	1.0830	1.0589	.38984	.67974	.27159
Stddev	.0208	.0016	.0031	.0052	.0019	.00119	.00102	.00077
%RSD	.62671	.15480	.23829	.47984	.18148	.30541	.15051	.28365
#1	3.3201	1.0178	1.2764	1.0820	1.0605	.38865	.67855	.27070
#2	3.3086	1.0202	1.2809	1.0783	1.0568	.39103	.68030	.27202
#3	3.3491	1.0207	1.2823	1.0886	1.0594	.38985	.68035	.27205

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.77441	.16374	.18279	.18895	2.1351	.27112	.11276	1.0967
Stddev	.00441	.00035	.00120	.00086	.0067	.00066	.00029	.0026
%RSD	.56965	.21179	.65809	.45626	.31244	.24170	.26084	.23818
#1	.77290	.16341	.18199	.18852	2.1414	.27074	.11261	1.0946
#2	.77095	.16410	.18221	.18994	2.1281	.27188	.11257	1.0960
#3	.77938	.16372	.18418	.18839	2.1357	.27075	.11310	1.0996

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.4487	.06751	.14391	.38897	1.1273	.33850	3.8577
Stddev	.0053	.00032	.00066	.00174	.0026	.00063	.0389
%RSD	.36788	.47831	.46069	.44845	.22762	.18598	1.0082
#1	1.4478	.06732	.14413	.38810	1.1249	.33901	3.8163
#2	1.4439	.06734	.14317	.38784	1.1270	.33869	3.8636
#3	1.4544	.06789	.14444	.39098	1.1300	.33780	3.8934

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: S3 Acquired: 1/27/2025 14:36:11 Type: Cal
Method: EPA SFAM01.0(v56) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S03 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3245.2	69389.	10947.	2265.9	3791.4
Stddev	6.4	181.	33.	3.4	9.6
%RSD	.19820	.26100	.30296	.14817	.25231
#1	3245.3	69598.	10970.	2264.1	3792.3
#2	3251.6	69281.	10962.	2263.9	3800.5
#3	3238.8	69288.	10909.	2269.8	3781.5

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: S4 Acquired: 1/27/2025 14:40:20 Type: Cal
Method: EPA SFAM01.0(v56) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.28580**	**.34209**	**5.5354**	**.31522**	**.75080**	**1.7551**	**3.9006**	**2.1888**
Stddev	.00113	.00028	.0143	.00149	.00236	.0117	.0153	.0047
%RSD	.39707	.08166	.25774	.47241	.31425	.66489	.39237	.21323
#1	.28647	.34192	5.5434	.31580	.75250	1.7630	3.9182	2.1857
#2	.28449	.34194	5.5189	.31353	.74811	1.7417	3.8912	2.1941
#3	.28644	.34241	5.5438	.31633	.75181	1.7605	3.8922	2.1865

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6.3466**	**1.9510**	**2.4006**	**2.0688**	**2.0075**	**.73738**	**1.2933**	**.52476**
Stddev	.0159	.0126	.0104	.0045	.0048	.00430	.0104	.00278
%RSD	.25091	.64504	.43457	.21920	.23939	.58319	.80713	.52966
#1	6.3550	1.9594	2.4092	2.0722	2.0126	.73995	1.3004	.52655
#2	6.3283	1.9365	2.3890	2.0636	2.0030	.73242	1.2813	.52156
#3	6.3566	1.9570	2.4037	2.0705	2.0071	.73978	1.2982	.52618

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.4683**	**.32190**	**.34384**	**.35471**	**4.0515**	**.53308**	**.22019**	**2.0672**
Stddev	.0044	.00214	.00193	.00024	.0197	.00383	.00058	.0018
%RSD	.30071	.66483	.56221	.06636	.48658	.71833	.26533	.08849
#1	1.4717	.32308	.34409	.35445	4.0699	.53585	.22042	2.0666
#2	1.4633	.31943	.34563	.35477	4.0307	.52871	.21953	2.0692
#3	1.4699	.32319	.34179	.35491	4.0538	.53469	.22063	2.0657

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2.8032**	**.13200**	**.27333**	**.74042**	**2.1149**	**.66196**	**7.3493**
Stddev	.0069	.00053	.00039	.00242	.0042	.00682	.1034
%RSD	.24512	.40080	.14409	.32633	.19833	1.0298	1.4069
#1	2.8067	.13253	.27377	.74199	2.1196	.66662	7.3167
#2	2.7953	.13147	.27302	.73764	2.1114	.65414	7.2662
#3	2.8076	.13201	.27319	.74163	2.1137	.66512	7.4651

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: S4 Acquired: 1/27/2025 14:40:20 Type: Cal
Method: EPA SFAM01.0(v56) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S04 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3053.6	66585.	10684.	2171.8	3563.6
Stddev	6.7	285.	36.	5.4	8.5
%RSD	.21983	.42832	.33826	.24854	.23879
#1	3051.1	66349.	10681.	2165.5	3558.6
#2	3061.2	66902.	10649.	2174.7	3573.5
#3	3048.6	66503.	10721.	2175.1	3558.8

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: S5 Acquired: 1/27/2025 14:44:24 Type: Cal
Method: EPA SFAM01.0(v56) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.61422**	**.65840**	**11.018**	**.66505**	**1.6055**	**3.7675**	**8.4844**	**4.3548**
Stddev	.00084	.00328	.036	.00155	.0042	.0182	.1367	.0173
%RSD	.13731	.49778	.32769	.23261	.26125	.48293	1.6108	.39722
#1	.61368	.65536	11.032	.66357	1.6027	3.7710	8.5342	4.3414
#2	.61379	.65797	10.977	.66492	1.6035	3.7478	8.3298	4.3743
#3	.61519	.66187	11.045	.66666	1.6103	3.7837	8.5892	4.3486

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**12.501**	**4.0461**	**4.6304**	**4.1314**	**4.3450**	**1.5065**	**2.6767**	**1.1139**
Stddev	.041	.0144	.0151	.0121	.0107	.0088	.0072	.0053
%RSD	.32608	.35540	.32555	.29160	.24686	.58360	.26733	.47786
#1	12.503	4.0598	4.6364	4.1352	4.3358	1.5151	2.6714	1.1187
#2	12.459	4.0474	4.6416	4.1179	4.3425	1.4975	2.6848	1.1082
#3	12.540	4.0311	4.6133	4.1411	4.3568	1.5068	2.6737	1.1146

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2.9108**	**.67553**	**.76285**	**.72108**	**8.6039**	**1.1171**	**.46168**	**3.9735**
Stddev	.0086	.00069	.00203	.00060	.0555	.0060	.00037	.0206
%RSD	.29409	.10209	.26565	.08386	.64456	.53475	.07972	.51773
#1	2.9144	.67529	.76117	.72133	8.6382	1.1222	.46187	3.9534
#2	2.9011	.67499	.76228	.72040	8.5399	1.1106	.46125	3.9945
#3	2.9170	.67631	.76510	.72153	8.6336	1.1185	.46191	3.9726

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5.8192**	**.27624**	**.57310**	**1.4642**	**4.3590**	**1.4681**	**15.432**
Stddev	.0124	.00053	.00085	.0051	.0016	.0095	.206
%RSD	.21242	.19249	.14789	.35099	.03650	.64487	1.3318
#1	5.8112	.27624	.57223	1.4658	4.3582	1.4716	15.602
#2	5.8129	.27571	.57314	1.4585	4.3580	1.4573	15.490
#3	5.8334	.27678	.57392	1.4684	4.3608	1.4753	15.204

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: S5 Acquired: 1/27/2025 14:44:24 Type: Cal
Method: EPA SFAM01.0(v56) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S05 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2711.8	63463.	10454.	2066.7	3262.4
Stddev	5.2	203.	40.	12.6	7.9
%RSD	.19081	.31934	.38586	.61172	.24204
#1	2715.1	63229.	10453.	2053.2	3261.3
#2	2714.5	63568.	10414.	2078.2	3270.8
#3	2705.8	63590.	10494.	2068.7	3255.1

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: S6 Acquired: 1/27/2025 14:48:59 Type: Cal
Method: EPA SFAM01.0(v56) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S06 Custom ID2: Custom ID3:
Comment:

Elem	Al3961	Ca3736	Fe2598	Mg2790	Na8183
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**9.7303**	**6.4307**	**3.9368**	**1.7809**	**2.0344**
Stddev	.1439	.0367	.0258	.0083	.0081
%RSD	1.4785	.57019	.65535	.46546	.39768
#1	9.7072	6.4327	3.9087	1.7726	2.0342
#2	9.5994	6.3931	3.9421	1.7809	2.0264
#3	9.8843	6.4663	3.9595	1.7892	2.0426

Int. Std.	Y_3600	Y_3710
Units	Cts/S	Cts/S
Avg	**59621.**	**10065.**
Stddev	202.	74.
%RSD	.33883	.73435
#1	59774.	9980.5
#2	59698.	10099.
#3	59392.	10116.

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: ICV003 Acquired: 1/27/2025 15:41:59 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV003 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9268194**	**1.079328**	**1.012936**	**.9539148**	**1.025221**	**2.487107**
Stddev	.0036777	.005877	.000404	.0013201	.003029	.016441
%RSD	.3968092	.5445195	.0398446	.1383903	.2954529	.6610406
#1	.9270146	1.075816	1.012530	.9528703	1.021725	2.473938
#2	.9230480	1.086113	1.013337	.9534757	1.027068	2.505534
#3	.9303957	1.076056	1.012942	.9553986	1.026869	2.481850

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5138612**	**.5108384**	**.5008677**	**9.544351**	**.5664082**	**.5016677**
Stddev	.0016271	.0007536	.0005825	.010181	.0019084	.0002766
%RSD	.3166368	.1475239	.1163065	.1066680	.3369322	.0551449
#1	.5123908	.5099695	.5013425	9.536093	.5642494	.5019179
#2	.5156092	.5112313	.5002176	9.555726	.5678707	.5013707
#3	.5135836	.5113144	.5010429	9.541234	.5671046	.5017147

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4975535**	**10.03601**	**.4897166**	**5.966106**	**.5106198**	**.2346933**
Stddev	.0037554	.02693	.0013586	.041378	.0009282	.0007654
%RSD	.7547670	.2683606	.2774184	.6935528	.1817722	.3261089
#1	.5013085	10.00877	.4881526	5.989458	.5112191	.2342847
#2	.4937978	10.06263	.4903939	5.990528	.5095507	.2355762
#3	.4975542	10.03662	.4906035	5.918330	.5110896	.2342189

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.23930**	**.5033207**	**.9719463**	**9.576793**	F **.0031986**	F **.0417262**
Stddev	.28515	.0028168	.0035653	.094688	.0010260	.0001652
%RSD	2.784859	.5596352	.3668161	.9887256	32.07459	.3959791
#1	10.34695	.5047458	.9696371	9.576546	.0027411	.0416065
#2	9.91600	.5000761	.9701492	9.671604	.0043737	.0419147
#3	10.45495	.5051401	.9760524	9.482228	.0024810	.0416574

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: ICV003 Acquired: 1/27/2025 15:41:59 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV003 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.000526	F .0035762	F -.001806	F .0001571	F -.001084	F .0004090
Stddev	.000043	.0019492	.000691	.0005499	.000397	.0013689
%RSD	8.186578	54.50289	38.27061	350.1518	36.66506	334.6759
#1	-.000478	.0013448	-.001501	-.000399	-.001417	.0017183
#2	-.000563	.0044375	-.002597	.000701	-.001190	.0005215
#3	-.000535	.0049464	-.001320	.000169	-.000644	-.001013

Elem	Sr4077
Units	ppm
Avg	F .0011221
Stddev	.0000143
%RSD	1.278112
#1	.0011357
#2	.0011071
#3	.0011235

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3607.403	74343.97	11244.17	2450.872	4435.499
Stddev	4.825	122.40	8.10	1.994	5.311
%RSD	.1337529	.1646373	.0720624	.0813469	.1197400
#1	3612.593	74454.85	11246.80	2448.614	4431.042
#2	3606.564	74212.63	11250.62	2451.612	4441.375
#3	3603.053	74364.44	11235.07	2452.389	4434.079

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: ICB003 Acquired: 1/27/2025 15:45:56 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB003 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008965**	**.0007413**	**.0001810**	**-.000761**	**.0004518**	**.0095554**	**-.002458**
Stddev	.0008502	.0010532	.0005983	.001852	.0006579	.0027009	.000218
%RSD	94.82789	142.0851	330.6057	243.3800	145.6246	28.26578	8.872469
#1	.0014925	-.000158	.0007818	.000517	.0005030	.0071201	-.002223
#2	-.000077	.001900	-.000415	.000085	-.000230	.0124603	-.002498
#3	.001274	.000482	.000176	-.002885	.001083	.0090857	-.002654

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000009**	**-.000018**	**.0077181**	**.0000843**	**.0000042**	**.0011649**	**.0053115**
Stddev	.000087	.000059	.0038883	.0003430	.0002699	.0016597	.0018910
%RSD	964.1065	321.3854	50.37812	406.9291	6463.498	142.4739	35.60243
#1	.000044	.000045	.0040433	.0004344	-.000097	.0030013	.0071417
#2	-.000109	-.000030	.0117894	.0000695	-.000201	.0007218	.0033651
#3	.000039	-.000070	.0073217	-.000251	.000310	-.000228	.0054277

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000506**	**-.012748**	**.0001415**	**-.000319**	**.0431904**	**-.000499**	**.0002598**
Stddev	.0001894	.009890	.0002080	.000170	.1997997	.002363	.0007708
%RSD	374.7125	77.57912	147.0655	53.28983	462.6020	473.6773	296.6780
#1	.0000816	-.001328	-.000051	-.000125	-.006975	.002217	-.000627
#2	.0002225	-.018468	.000362	-.000390	-.126746	-.002083	.000772
#3	-.000152	-.018448	.000114	-.000442	.263292	-.001631	.000634

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.137754**	**-.000456**	**-.000781**	**.0004223**	**-.001718**	**-.001545**	**.0005172**
Stddev	.011066	.001336	.000390	.0001292	.002902	.001428	.0005590
%RSD	8.032964	292.6814	49.98969	30.58574	168.9466	92.41084	108.0946
#1	-.142207	-.000878	-.001212	.0003105	.000141	-.000071	.0011297
#2	-.125156	-.001531	-.000451	.0005638	-.000232	-.001643	.0003875
#3	-.145900	.001039	-.000680	.0003927	-.005062	-.002922	.0000344

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: ICB003 Acquired: 1/27/2025 15:45:56 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB003 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0007881	-.001043	.0000239
Stddev	.0004265	.000388	.0000374
%RSD	54.11917	37.22026	156.0228
#1	.0011805	-.001402	.0000251
#2	.0008498	-.001096	.0000607
#3	.0003341	-.000631	-.000014

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3587.037	75359.44	10979.58	2471.211	4501.347
Stddev	5.986	76.31	49.29	12.971	5.941
%RSD	.1668753	.1012663	.4489030	.5248984	.1319748
#1	3590.968	75332.65	10995.96	2478.130	4506.565
#2	3580.148	75445.54	10924.19	2456.247	4494.882
#3	3589.996	75300.14	11018.60	2479.256	4502.594

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: ICSA003 Acquired: 1/27/2025 15:56:30 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA003 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008332**	**.0019135**	**.0054677**	**.0200191**	**.0069128**	**224.9219**
Stddev	.0021578	.0006698	.0013166	.0006985	.0009632	1.5235
%RSD	258.9784	35.00276	24.08021	3.489249	13.93310	.6773515
#1	.0033197	.0011473	.0061675	.0194753	.0069287	224.2694
#2	-.000549	.0022057	.0062867	.0197751	.0078680	223.8333
#3	-.000271	.0023876	.0039490	.0208069	.0059418	226.6630

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0079114**	**-.000704**	**.0005059**	**240.1774**	**.0598314**	**.0008650**
Stddev	.0010199	.000015	.0000947	1.3583	.0005113	.0002977
%RSD	12.89204	2.159878	18.72470	.5655377	.8545223	34.42024
#1	.0080498	-.000718	.0005626	238.9588	.0603057	.0005864
#2	.0088550	-.000688	.0003966	239.9315	.0592898	.0011787
#3	.0068293	-.000705	.0005587	241.6418	.0598987	.0008299

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.007643**	**98.70624**	**.0099967**	**233.1837**	**.0030492**	**-.001155**
Stddev	.001806	.68818	.0001777	1.3583	.0002908	.000514
%RSD	23.63399	.6972006	1.777336	.5825166	9.535827	44.54493
#1	-.005571	98.22936	.0098980	232.2472	.0027367	-.000938
#2	-.008883	98.39419	.0102018	232.5622	.0030992	-.001742
#3	-.008476	99.49516	.0098902	234.7415	.0033118	-.000785

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.437481**	**-.006219**	**-.009572**	**-.104753**	**.0040572**	F **.4115306**
Stddev	.442460	.001361	.002259	.029624	.0004122	.0037103
%RSD	101.1380	21.88895	23.60059	28.28004	10.16035	.9015936
#1	-.812233	-.005859	-.008897	-.100545	.0035854	.4092660
#2	.050630	-.005074	-.007727	-.077458	.0043476	.4095132
#3	-.550840	-.007724	-.012092	-.136257	.0042386	.4158125

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: ICSA003 Acquired: 1/27/2025 15:56:30 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA003 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000630	.0184330	.0033632	-.003177	-.002776	.0050316
Stddev	.000052	.0071957	.0018756	.000659	.000673	.0006052
%RSD	8.318534	39.03694	55.76902	20.75754	24.24558	12.02891
#1	-.000690	.0206295	.0037216	-.003096	-.002700	.0053030
#2	-.000595	.0103950	.0050336	-.002561	-.002144	.0054538
#3	-.000604	.0242744	.0013342	-.003873	-.003483	.0043382

Elem	Sr4077
Units	ppm
Avg	.0902908
Stddev	.0005857
%RSD	.6487207
#1	.0897310
#2	.0902420
#3	.0908994

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3319.126	68087.90	10715.90	2309.467	3747.999
Stddev	6.489	114.35	52.74	5.539	8.174
%RSD	.1955095	.1679498	.4921557	.2398414	.2180991
#1	3326.619	68158.99	10710.36	2308.385	3756.479
#2	3315.444	68148.74	10666.15	2304.548	3740.169
#3	3315.315	67955.99	10771.19	2315.467	3747.350

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: ICSAB003 Acquired: 1/27/2025 16:01:16 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB003 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0976883**	**.1102426**	**.0575089**	**.0643529**	**.5629873**	**233.0849**
Stddev	.0034526	.0014409	.0017930	.0039875	.0013113	.5378
%RSD	3.534314	1.306995	3.117839	6.196297	.2329164	.2307233
#1	.0963757	.1118592	.0557536	.0608170	.5616332	233.5284
#2	.1016048	.1090937	.0574356	.0635669	.5630774	233.2395
#3	.0950846	.1097750	.0593374	.0686749	.5642512	232.4867

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4944284**	**.5163196**	**1.018637**	**246.0646**	**.6147760**	**.5115692**
Stddev	.0018489	.0023077	.002769	.5286	.0020814	.0010141
%RSD	.3739396	.4469513	.2717962	.2148192	.3385709	.1982389
#1	.4962536	.5139367	1.017108	245.9041	.6126866	.5104024
#2	.4944749	.5164783	1.016969	245.6349	.6147921	.5120665
#3	.4925567	.5185439	1.021833	246.6549	.6168494	.5122387

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4874980**	**101.9497**	**.5098181**	**239.3722**	**1.023512**	**.2040284**
Stddev	.0028075	.0995	.0005996	.6962	.002576	.0010920
%RSD	.5758964	.0976343	.1176209	.2908304	.2516465	.5352245
#1	.4849502	102.0267	.5092815	238.9622	1.020581	.2051830
#2	.4870358	101.8373	.5097074	238.9784	1.024542	.2038901
#3	.4905078	101.9850	.5104654	240.1760	1.025414	.2030122

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.538449**	**.4883120**	**.9731382**	**-.333603**	**.0054921**	F **.4263345**
Stddev	.257399	.0017105	.0108594	.041952	.0035009	.0009798
%RSD	47.80380	.3502825	1.115917	12.57555	63.74436	.2298277
#1	-.830204	.4896811	.9851528	-.381587	.0014846	.4274655
#2	-.343441	.4863946	.9640221	-.303853	.0079556	.4257943
#3	-.441703	.4888604	.9702399	-.315368	.0070362	.4257436

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: ICSAB003 Acquired: 1/27/2025 16:01:16 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB003 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000345**	**.0182632**	**-.000782**	**-.003199**	**-.003958**	**.0059729**
Stddev	.000105	.0059853	.001983	.001615	.000385	.0003247
%RSD	30.54911	32.77222	253.7488	50.49538	9.722520	5.435427
#1	-.000261	.0189484	.001334	-.002986	-.003595	.0062678
#2	-.000463	.0238763	-.001080	-.001701	-.004361	.0056250
#3	-.000311	.0119648	-.002599	-.004911	-.003917	.0060259

Elem	Sr4077
Units	ppm
Avg	**.0916935**
Stddev	.0000850
%RSD	.0926876
#1	.0917029
#2	.0916042
#3	.0917734

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3269.239**	**67487.32**	**10790.51**	**2244.903**	**3725.423**
Stddev	4.144	187.94	52.39	7.727	8.559
%RSD	.1267532	.2784772	.4855581	.3442214	.2297373
#1	3273.053	67609.28	10828.93	2236.735	3732.962
#2	3269.835	67581.80	10811.78	2252.098	3727.185
#3	3264.830	67270.89	10730.82	2245.875	3716.120

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: CCV021 Acquired: 1/27/2025 16:10:42 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV021 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.247377**	**5.035009**	**25.83331**	**5.244305**	**5.258986**	**403.6074**
Stddev	.019788	.018661	.06789	.009859	.015989	5.5892
%RSD	.3770933	.3706258	.2628153	.1879939	.3040390	1.384813
#1	5.231176	5.017067	25.80165	5.238012	5.254742	402.0050
#2	5.241525	5.054314	25.78703	5.239236	5.245546	409.8227
#3	5.269430	5.033645	25.91125	5.255667	5.276669	398.9943

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.912933**	**.5337179**	**2.606693**	**402.6336**	**16.23518**	**2.607961**
Stddev	.088502	.0009603	.003626	2.1912	.04532	.005374
%RSD	.8927946	.1799332	.1391004	.5442089	.2791773	.2060663
#1	9.916769	.5331971	2.603991	402.3945	16.24172	2.604958
#2	9.999455	.5348261	2.605274	404.9345	16.27688	2.604759
#3	9.822575	.5331304	2.610814	400.5718	16.18694	2.614165

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.72845**	**407.3363**	**14.97760**	**399.6196**	**2.605308**	**1.340373**
Stddev	.05236	.7099	.03974	1.1442	.008465	.002669
%RSD	.3555323	.1742679	.2653196	.2863209	.3248965	.1991125
#1	14.69115	407.5141	14.96391	399.5059	2.602383	1.342502
#2	14.78832	407.9404	15.02238	400.8164	2.598695	1.341238
#3	14.70589	406.5545	14.94652	398.5365	2.614848	1.337379

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**384.5646**	**2.514594**	**15.29756**	**159.3561**	**5.307222**	F **6.273370**
Stddev	2.1134	.010542	.03079	.1424	.013777	.011893
%RSD	.5495603	.4192382	.2012976	.0893765	.2595897	.1895773
#1	382.8799	2.505585	15.33310	159.4506	5.296940	6.262618
#2	386.9359	2.526188	15.27898	159.4253	5.301849	6.286145
#3	383.8779	2.512010	15.28059	159.1923	5.322876	6.271349

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: CCV021 Acquired: 1/27/2025 16:10:42 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV021 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.111177**	**5.337638**	**4.770677**	**5.218744**	**5.001700**	**5.019914**
Stddev	.011153	.008687	.018360	.008869	.014360	.007362
%RSD	.2182100	.1627483	.3848445	.1699507	.2871038	.1466601
#1	5.103810	5.327904	4.769514	5.219682	4.999300	5.023971
#2	5.105711	5.344603	4.789591	5.209444	5.017109	5.024355
#3	5.124008	5.340408	4.752927	5.227108	4.988691	5.011416

Elem	Sr4077
Units	ppm
Avg	**5.006941**
Stddev	.027015
%RSD	.5395558
#1	5.030959
#2	4.977694
#3	5.012171

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2819.142**	**62661.27**	**10087.71**	**2017.870**	**3252.446**
Stddev	7.076	203.20	42.13	5.860	6.431
%RSD	.2509942	.3242758	.4176850	.2904170	.1977397
#1	2821.757	62566.29	10084.22	2011.530	3254.903
#2	2824.539	62522.95	10047.42	2023.088	3257.286
#3	2811.131	62894.56	10131.48	2018.993	3245.148

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: CCB021 Acquired: 1/27/2025 16:14:59 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB021 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000240**	**.0002790**	**.0017592**	**-.000893**	**.0008431**	**.0039258**	**.0007473**
Stddev	.000879	.0007821	.0006710	.001433	.0009156	.0008733	.0002446
%RSD	365.4732	280.3640	38.14375	160.5431	108.5972	22.24577	32.73223
#1	.000711	.0003364	.0018781	-.002517	.0001107	.0029898	.0006869
#2	-.000409	.0010308	.0010366	-.000356	.0005489	.0047189	.0010164
#3	-.001023	-.000530	.0023628	.000195	.0018695	.0040687	.0005385

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000076**	**.0000199**	**.0097190**	**.0002771**	**.0000192**	**-.000888**	**.0096743**
Stddev	.000025	.0000294	.0059402	.0001956	.0002774	.001065	.0042439
%RSD	32.61273	147.6864	61.11933	70.60548	1446.458	119.8381	43.86771
#1	-.000058	.0000081	.0044118	.0004571	-.000290	-.001318	.0119023
#2	-.000067	.0000534	.0086095	.0003052	.000245	.000324	.0047804
#3	-.000105	-.000002	.0161358	.0000689	.000103	-.001671	.0123402

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001748**	**-.018069**	**-.000023**	**-.000099**	**.0479992**	**.0004691**	**.0003386**
Stddev	.0000801	.009409	.000093	.000078	.0474877	.0009046	.0010801
%RSD	45.80385	52.07001	407.8628	78.54391	98.93426	192.8232	319.0232
#1	.0002426	-.015457	.000025	-.000188	.1024950	.0013194	.0012255
#2	.0000865	-.028507	-.000130	-.000067	.0260184	-.000481	.0006546
#3	.0001955	-.010242	.000036	-.000043	.0154843	.000569	-.000864

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0689899**	**.0007276**	**.0031957**	**.0003724**	**-.000084**	**.0002979**	**.0002368**
Stddev	.0327522	.0005464	.0004544	.0003805	.002627	.0023676	.0007130
%RSD	47.47394	75.09454	14.21803	102.1678	3131.081	794.6583	301.0318
#1	.0341189	.0001134	.0037006	-.000058	-.000440	.0010287	-.000221
#2	.0991029	.0009096	.0030665	.000663	-.002515	.0022141	-.000127
#3	.0737480	.0011597	.0028199	.000512	.002703	-.002349	.001058

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: CCB021 Acquired: 1/27/2025 16:14:59 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB021 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000204	.0002154	.0000720
Stddev	.000300	.0004162	.0000280
%RSD	147.0522	193.2214	38.87164
#1	-.000155	.0002608	.0000419
#2	-.000526	-.000222	.0000767
#3	.000068	.000607	.0000973

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3690.812	75557.42	11181.15	2532.458	4640.577
Stddev	10.126	306.60	101.94	16.100	5.080
%RSD	.2743567	.4057839	.9117476	.6357350	.1094706
#1	3698.779	75362.68	11094.48	2529.985	4640.441
#2	3694.241	75398.73	11155.49	2517.738	4645.724
#3	3679.417	75910.83	11293.47	2549.651	4635.566

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1106-01DLX2 Acquired: 1/27/2025 16:19:09 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8G3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001871**	**-.001071**	**.0030862**	**-.008672**	**.0009223**	**-.137540**
Stddev	.002764	.002676	.0005973	.001402	.0011066	.006925
%RSD	147.6776	249.9592	19.35302	16.17118	119.9753	5.035109
#1	.000036	.000656	.0036614	-.008467	.0006992	-.129787
#2	-.000610	.000286	.0024691	-.010165	-.000056	-.143111
#3	-.005041	-.004154	.0031282	-.007383	.002123	-.139723

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1096313**	**.0000008**	**-.000081**	**522.2007**	**.1250440**	**-.001130**
Stddev	.0009902	.0000348	.000001	2.8420	.0004822	.000115
%RSD	.9032193	4473.689	1.484374	.5442290	.3856149	10.21092
#1	.1099157	.0000310	-.000080	523.5069	.1250837	-.001024
#2	.1085300	.0000086	-.000083	518.9405	.1245432	-.001253
#3	.1104481	-.000037	-.000081	524.1548	.1255051	-.001114

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001462**	**.0074229**	**.0004559**	**.0155994**	**-.000473**	**-.000675**
Stddev	.001145	.0044260	.0000357	.0178105	.000341	.000332
%RSD	78.31914	59.62625	7.835522	114.1742	72.10715	49.22786
#1	-.000969	.0124926	.0004379	.0338911	-.000842	-.000340
#2	-.000646	.0054483	.0004971	.0145943	-.000170	-.000680
#3	-.002770	.0043279	.0004328	-.001687	-.000406	-.001005

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.18763**	**-.000263**	**.0177900**	**56.27371**	**-.002708**	**.0259589**
Stddev	.25285	.000769	.0031812	.36109	.001061	.0011546
%RSD	1.917308	292.2133	17.88178	.6416701	39.19262	4.447589
#1	13.01954	-.000674	.0178167	56.33760	-.001608	.0260759
#2	13.47841	-.000740	.0209577	55.88494	-.003726	.0270505
#3	13.06493	.000624	.0145955	56.59859	-.002791	.0247503

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1106-01DLX2 Acquired: 1/27/2025 16:19:09 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8G3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0922617	F 123.5439	.0844550	-.003562	-.015946	.1352333
Stddev	.0004247	.2640	.0023689	.000232	.000668	.0006820
%RSD	.4603109	.2136568	2.804964	6.513970	4.189379	.5043109
#1	.0917756	123.2619	.0818698	-.003408	-.016079	.1358757
#2	.0924486	123.5849	.0865217	-.003450	-.015221	.1345176
#3	.0925609	123.7850	.0849736	-.003829	-.016538	.1353065

Elem	Sr4077
Units	ppm
Avg	2.609138
Stddev	.021437
%RSD	.8216290
#1	2.586212
#2	2.612515
#3	2.628686

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3292.852	69482.23	10377.93	2320.423	3792.576
Stddev	13.238	381.90	37.74	6.702	11.513
%RSD	.4020292	.5496343	.3636287	.2888085	.3035798
#1	3308.053	69470.81	10403.28	2318.972	3805.861
#2	3286.648	69869.71	10334.56	2327.731	3786.378
#3	3283.855	69106.17	10395.96	2314.566	3785.490

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1106-02DLX2 Acquired: 1/27/2025 16:23:32 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8G5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040213	.0034701	.0127578	.0075141	.0040239	30.02319
Stddev	.0019886	.0010105	.0008136	.0016958	.0005879	.13712
%RSD	49.45223	29.11911	6.377400	22.56850	14.61041	.4567023
#1	.0022106	.0023089	.0126242	.0087038	.0038240	30.11996
#2	.0037037	.0039519	.0120193	.0082661	.0035620	30.08333
#3	.0061496	.0041495	.0136300	.0055723	.0046857	29.86628

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0368667	.0069503	.0047413	76.77702	.2047697	.2994923
Stddev	.0005268	.0001912	.0000834	.15736	.0009317	.0005317
%RSD	1.428827	2.750438	1.759667	.2049538	.4550173	.1775447
#1	.0363245	.0069577	.0047210	76.92572	.2050937	.2996489
#2	.0368990	.0067556	.0046699	76.79309	.2037192	.2988999
#3	.0373765	.0071377	.0048330	76.61224	.2054962	.2999282

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6014398	75.83876	16.48684	24.66050	.1138826	-.000369
Stddev	.0012387	.25188	.05339	.06355	.0005768	.000176
%RSD	.2059629	.3321229	.3238510	.2577084	.5064702	47.76793
#1	.6021431	76.07169	16.51405	24.71928	.1134540	-.000198
#2	.6000094	75.87314	16.52115	24.59306	.1136554	-.000551
#3	.6021667	75.57147	16.42533	24.66917	.1145384	-.000359

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.727452	.2146035	.6237325	4.386278	1.532138	.6440730
Stddev	.421141	.0023784	.0052419	.063672	.004807	.0014898
%RSD	5.449937	1.108281	.8404071	1.451620	.3137597	.2313021
#1	8.192109	.2171566	.6292212	4.446446	1.526801	.6456448
#2	7.619345	.2142035	.6231981	4.392788	1.533486	.6438923
#3	7.370903	.2124505	.6187783	4.319602	1.536128	.6426818

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1106-02DLX2 Acquired: 1/27/2025 16:23:32 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8G5 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022023	F 202.6793	F 13.18894	-.000486	.0006017	.0297822
Stddev	.0003349	.4070	.01345	.000641	.0006920	.0003959
%RSD	15.20495	.2008132	.1019849	132.0815	115.0102	1.329444
#1	.0018557	202.3328	13.17342	-.001224	.0007909	.0293381
#2	.0022273	202.5776	13.19724	-.000169	-.000165	.0299103
#3	.0025240	203.1275	13.19615	-.000064	.001179	.0300982

Elem	Sr4077
Units	ppm
Avg	.5119958
Stddev	.0030156
%RSD	.5889811
#1	.5135558
#2	.5139118
#3	.5085198

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3966.383	84162.42	11975.70	2756.612	4189.398
Stddev	11.636	68.18	58.58	2.439	12.542
%RSD	.2933703	.0810076	.4891890	.0884778	.2993759
#1	3975.612	84110.91	12012.98	2754.291	4195.084
#2	3970.225	84239.73	12005.94	2759.154	4198.090
#3	3953.312	84136.62	11908.17	2756.391	4175.020

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1106-07DLX2 Acquired: 1/27/2025 16:27:29 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8H1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0765547	-.007371	.0101642	.0437739	.0236069	7.258971
Stddev	.0022352	.001444	.0024278	.0011102	.0011332	.028874
%RSD	2.919812	19.59397	23.88580	2.536308	4.800361	.3977706
#1	.0786102	-.005727	.0077369	.0426457	.0230087	7.250235
#2	.0741751	-.007951	.0101631	.0438108	.0249139	7.235474
#3	.0768786	-.008436	.0125925	.0448652	.0228982	7.291205

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0513011	.0039154	.0056602	60.85525	.0492562	.3535934
Stddev	.0005609	.0002408	.0001082	.03489	.0003343	.0006770
%RSD	1.093397	6.150129	1.910976	.0573294	.6785928	.1914510
#1	.0510566	.0041468	.0057806	60.88187	.0490958	.3529025
#2	.0509040	.0039334	.0056287	60.81575	.0496404	.3536223
#3	.0519428	.0036662	.0055712	60.86812	.0490324	.3542555

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009171	306.5822	18.82885	17.54589	.0940428	.0012567
Stddev	.000936	.1289	.03667	.01330	.0005437	.0008006
%RSD	10.20411	.0420333	.1947456	.0757819	.5781751	63.70693
#1	-.008091	306.4344	18.86191	17.54276	.0943622	.0008951
#2	-.009671	306.6710	18.78941	17.56047	.0934150	.0007007
#3	-.009750	306.6413	18.83523	17.53444	.0943512	.0021742

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.748085	.3968887	.4734223	2.854195	.3303186	1.553936
Stddev	.229886	.0024936	.0070826	.042190	.0010931	.001669
%RSD	6.133417	.6282736	1.496039	1.478181	.3309139	.1073743
#1	3.996679	.3985377	.4770234	2.817343	.3293845	1.554790
#2	3.704399	.3981084	.4652628	2.900216	.3300506	1.555004
#3	3.543177	.3940201	.4779808	2.845026	.3315208	1.552013

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1106-07DLX2 Acquired: 1/27/2025 16:27:29 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8H1 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003715	F 191.2106	4.509870	-.000277	-.000797	.0029586
Stddev	.000361	.3568	.008763	.000379	.000787	.0007551
%RSD	9.708998	.1866150	.1942976	137.0270	98.72948	25.52068
#1	-.003734	191.2549	4.505096	-.000433	.000030	.0038287
#2	-.003344	190.8338	4.519983	.000156	-.001537	.0025716
#3	-.004065	191.5433	4.504531	-.000553	-.000885	.0024755

Elem	Sr4077
Units	ppm
Avg	.5081389
Stddev	.0015674
%RSD	.3084605
#1	.5096678
#2	.5065357
#3	.5082131

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3740.447	77854.06	11928.67	2557.659	4218.931
Stddev	13.682	229.78	56.84	3.681	13.870
%RSD	.3657742	.2951412	.4765135	.1439084	.3287631
#1	3754.800	77887.88	11941.90	2554.541	4231.700
#2	3738.988	77609.25	11866.39	2561.719	4220.920
#3	3727.554	78065.06	11977.74	2556.717	4204.174

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1106-12DLX2 Acquired: 1/27/2025 16:31:28 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8H6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0033932**	**.0046568**	**.0061094**	**.0007923**	**-.000234**	**34.49029**
Stddev	.0023400	.0003692	.0015152	.0008397	.001975	.23009
%RSD	68.96097	7.927845	24.80111	105.9906	842.5493	.6671264
#1	.0006942	.0050708	.0066647	.0011199	.001465	34.23203
#2	.0046327	.0043618	.0072686	.0014187	-.002402	34.56540
#3	.0048527	.0045377	.0043949	-.000162	.000233	34.67345

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0429292**	**.0092938**	**.0039972**	**124.1793**	**.0217645**	**.3746265**
Stddev	.0005916	.0000630	.0000300	.4599	.0001318	.0006695
%RSD	1.378099	.6776033	.7518933	.3703424	.6057791	.1787057
#1	.0431233	.0093080	.0040091	123.6571	.0218493	.3743495
#2	.0422649	.0092250	.0039631	124.5239	.0218315	.3741399
#3	.0433993	.0093485	.0040196	124.3570	.0216126	.3753900

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8261859**	**36.60855**	**29.54168**	**30.52424**	**.1044800**	**.0032825**
Stddev	.0011335	.12533	.29967	.09323	.0002706	.0001973
%RSD	.1371901	.3423585	1.014407	.3054455	.2589642	6.009848
#1	.8251606	36.46660	29.37197	30.41775	.1042447	.0031775
#2	.8274030	36.70394	29.36538	30.56380	.1047757	.0031599
#3	.8259942	36.65511	29.88769	30.59117	.1044197	.0035100

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.88668**	**.1492915**	**1.123658**	**12.51410**	**4.962538**	**.4269650**
Stddev	.23901	.0010405	.006799	.11301	.009519	.0006203
%RSD	1.721180	.6969507	.6051118	.9030802	.1918184	.1452859
#1	13.65929	.1491025	1.117482	12.38502	4.965667	.4274693
#2	13.86490	.1483585	1.130944	12.59523	4.951848	.4262723
#3	14.13583	.1504136	1.122548	12.56205	4.970098	.4271532

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1106-12DLX2 Acquired: 1/27/2025 16:31:28 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8H6 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000897	F 226.2879	F 16.59609	-.001728	-.002615	.0308780
Stddev	.000281	.0461	.04745	.000538	.000149	.0002590
%RSD	31.37630	.0203604	.2859251	31.10310	5.686860	.8386527
#1	-.001173	226.3068	16.64826	-.001412	-.002756	.0305929
#2	-.000907	226.2354	16.58452	-.001424	-.002630	.0309425
#3	-.000610	226.3216	16.55549	-.002349	-.002459	.0310986

Elem	Sr4077
Units	ppm
Avg	.6979582
Stddev	.0037697
%RSD	.5401034
#1	.6937754
#2	.7010930
#3	.6990063

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3975.070	83843.82	13030.79	2763.387	4005.833
Stddev	1.519	388.15	41.50	6.033	.412
%RSD	.0382028	.4629461	.3184464	.2183273	.0102762
#1	3974.028	84237.58	13003.08	2768.494	4005.792
#2	3974.370	83832.36	13078.50	2756.730	4006.264
#3	3976.813	83461.53	13010.80	2764.937	4005.444

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1045-17DLX2 Acquired: 1/27/2025 16:39:31 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: GCQ12 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0221622	-.003568	.5047582	-.002136	.0100102	14.59530
Stddev	.0018003	.000697	.0010083	.004792	.0005898	.06943
%RSD	8.123368	19.53768	.1997627	224.3641	5.892011	.4757280
#1	.0204450	-.004093	.5036082	.000207	.0105792	14.67345
#2	.0240354	-.003833	.5051758	-.007648	.0100497	14.57177
#3	.0220061	-.002777	.5054906	.001034	.0094016	14.54070

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.98728	.0019890	.0034838	F 906.0691	.0522391	.0243162
Stddev	.14036	.0000785	.0000421	7.9233	.0002950	.0004460
%RSD	.7392081	3.948276	1.208736	.8744746	.5646355	1.834349
#1	18.98675	.0019551	.0035276	904.0242	.0525783	.0244169
#2	19.12790	.0019331	.0034800	899.3687	.0520970	.0247033
#3	18.84719	.0020787	.0034437	914.8145	.0520422	.0238284

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.202630	63.78684	7.411170	459.5242	.0282611	-.000391
Stddev	.006199	.28654	.024115	1.2357	.0006157	.000316
%RSD	.5154605	.4492166	.3253822	.2689141	2.178442	80.78744
#1	1.207922	64.10439	7.438886	460.8338	.0287015	-.000085
#2	1.195810	63.70854	7.394990	459.3601	.0275576	-.000371
#3	1.204159	63.54759	7.399634	458.3788	.0285242	-.000716

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -1.21669	.0728870	.7639608	1.597042	1.678404	.2882971
Stddev	.05847	.0002159	.0083913	.046310	.002908	.0012750
%RSD	4.805811	.2962653	1.098396	2.899744	.1732619	.4422369
#1	-1.27679	.0730845	.7550303	1.621808	1.676576	.2890939
#2	-1.15999	.0726564	.7651706	1.543614	1.681757	.2889708
#3	-1.21330	.0729200	.7716816	1.625702	1.676878	.2868267

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1045-17DLX2 Acquired: 1/27/2025 16:39:31 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: GCQ12 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014713	6.443462	5.708219	-.001184	.3076573	.0276306
Stddev	.0000920	.004112	.016460	.000017	.0021794	.0004775
%RSD	6.255516	.0638127	.2883506	1.410870	.7083937	1.728330
#1	.0015403	6.447573	5.689354	-.001197	.3096275	.0274336
#2	.0015069	6.443465	5.719652	-.001189	.3080282	.0281751
#3	.0013668	6.439349	5.715651	-.001165	.3053162	.0272830

Elem	Sr4077
Units	ppm
Avg	.3989473
Stddev	.0019730
%RSD	.4945455
#1	.4012175
#2	.3979776
#3	.3976469

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3126.716	66020.81	10636.49	2166.701	3414.465
Stddev	2.733	80.85	39.66	11.464	5.444
%RSD	.0874072	.1224682	.3728349	.5291104	.1594378
#1	3123.671	65927.57	10678.15	2171.936	3408.307
#2	3128.955	66071.61	10632.10	2174.614	3418.637
#3	3127.522	66063.24	10599.20	2153.554	3416.452

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: PB166225TB Acquired: 1/27/2025 16:43:49 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LEB225 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010425**	**.0013899**	**.0006659**	**-.000616**	**-.001122**	**-.002431**	**.0041765**
Stddev	.0010358	.0005279	.0003721	.001087	.000746	.007445	.0008370
%RSD	99.35564	37.97937	55.88445	176.4421	66.50573	306.2388	20.04122
#1	.0003438	.0019965	.0007529	-.001598	-.001856	-.008757	.0050291
#2	.0005512	.0011382	.0002580	.000552	-.001147	.005773	.0041442
#3	.0022326	.0010350	.0009868	-.000802	-.000364	-.004309	.0033560

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000031**	**.0000408**	**.0191408**	**-.000068**	**-.000049**	**-.001684**	**.0097478**
Stddev	.000051	.0000607	.0110816	.000241	.000041	.000600	.0043964
%RSD	164.2834	149.0309	57.89510	357.2788	82.58917	35.61057	45.10099
#1	-.000070	.0000923	.0304511	-.000307	-.000032	-.001177	.0132161
#2	-.000049	-.000026	.0083030	.000175	-.000020	-.002345	.0112241
#3	.000026	.000056	.0186683	-.000071	-.000096	-.001529	.0048033

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0017155**	**.0018228**	**.0001478**	**-.000129**	**-.171517**	**.0003380**	**.0014895**
Stddev	.0001351	.0095514	.0002484	.000422	.391376	.0009110	.0014100
%RSD	7.873417	523.9997	168.0029	328.1876	228.1850	269.5213	94.66141
#1	.0018634	-.004693	.0002941	-.000613	-.612298	.0003915	-.000054
#2	.0016847	.012787	.0002883	.000160	-.037496	.0012211	.002710
#3	.0015986	-.002625	-.000139	.000067	.135242	-.000599	.001812

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-1.43935**	**.0014230**	**-.001665**	**.0000709**	**7.549383**	**-.001865**	**-.000140**
Stddev	.02563	.0007661	.000729	.0002335	.010912	.003302	.000109
%RSD	1.780927	53.83860	43.79692	329.5988	.1445385	177.0168	78.07670
#1	-1.46828	.0022875	-.001223	-.000157	7.561151	.001740	-.000023
#2	-1.43030	.0008280	-.002507	.000310	7.547400	-.002595	-.000239
#3	-1.41947	.0011537	-.001265	.000059	7.539599	-.004741	-.000157

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: PB166225TB Acquired: 1/27/2025 16:43:49 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LEB225 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0010247	-.002276	-.000014
Stddev	.0002770	.001172	.000008
%RSD	27.03123	51.50718	52.48912
#1	.0010203	-.003089	-.000023
#2	.0007499	-.000932	-.000009
#3	.0013039	-.002808	-.000011

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3815.796	79421.72	11486.41	2670.094	4838.271
Stddev	17.913	538.06	69.37	15.303	14.903
%RSD	.4694406	.6774712	.6039401	.5731163	.3080199
#1	3834.858	78822.23	11565.65	2658.646	4854.874
#2	3813.219	79862.77	11456.98	2687.475	4833.885
#3	3799.311	79580.17	11436.61	2664.163	4826.053

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-01 Acquired: 1/27/2025 16:47:57 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8F5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0060448**	**.0050903**	**.0109529**	**.0047741**	**.0002074**	**77.99161**
Stddev	.0020790	.0003040	.0013435	.0016701	.0011297	.47931
%RSD	34.39287	5.971580	12.26631	34.98357	544.7990	.6145650
#1	.0082447	.0052638	.0115859	.0028948	-.000130	78.30807
#2	.0041128	.0047393	.0094098	.0060887	-.000715	77.44015
#3	.0057768	.0052677	.0118630	.0053387	.001467	78.22661

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0943564**	**.0034820**	**.0121082**	**93.30189**	**.0583490**	**1.490300**
Stddev	.0011167	.0001043	.0000284	.33712	.0002815	.002560
%RSD	1.183434	2.996657	.2343524	.3613257	.4825291	.1717450
#1	.0956075	.0033693	.0121393	93.64214	.0586741	1.487351
#2	.0934606	.0035015	.0121013	92.96798	.0581857	1.491943
#3	.0940012	.0035752	.0120839	93.29554	.0581871	1.491607

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8522279**	**47.26364**	**11.83362**	**46.82327**	**.7991922**	**.0003580**
Stddev	.0005327	.13160	.05604	.12298	.0015810	.0002125
%RSD	.0625119	.2784288	.4735913	.2626433	.1978186	59.36746
#1	.8528102	47.35589	11.88838	46.96441	.7974634	.0005751
#2	.8521086	47.11295	11.77637	46.76626	.7995486	.0003486
#3	.8517650	47.32208	11.83611	46.73914	.8005645	.0001503

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.305030**	**.1471073**	**1.035040**	**9.769803**	**4.615478**	**.6530935**
Stddev	.255728	.0020456	.006641	.081928	.008949	.0028691
%RSD	4.055942	1.390566	.6416469	.8385851	.1938835	.4393146
#1	6.079594	.1468367	1.034931	9.782437	4.620512	.6535967
#2	6.582918	.1492748	1.028454	9.682291	4.620776	.6556778
#3	6.252578	.1452104	1.041735	9.844680	4.605146	.6500061

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-01 Acquired: 1/27/2025 16:47:57 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8F5 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000538	F 327.7085	F 28.08739	-.002787	.0956077	.1101415
Stddev	.000247	.5630	.12764	.001455	.0003903	.0011923
%RSD	45.94328	.1717987	.4544558	52.20403	.4082674	1.082541
#1	-.000271	327.2385	28.17352	-.002364	.0959875	.1111506
#2	-.000759	328.3325	28.14791	-.004407	.0956281	.1088258
#3	-.000584	327.5546	27.94075	-.001591	.0952076	.1104480

Elem	Sr4077
Units	ppm
Avg	.3989891
Stddev	.0030409
%RSD	.7621518
#1	.4010249
#2	.3954935
#3	.4004488

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4380.197	91004.34	14095.90	3041.527	4135.943
Stddev	13.553	92.09	82.61	17.068	10.361
%RSD	.3094191	.1011939	.5860753	.5611506	.2505007
#1	4393.689	90917.66	14103.04	3055.849	4147.883
#2	4380.319	91101.02	14009.95	3046.090	4130.623
#3	4366.584	90994.34	14174.72	3022.641	4129.324

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-02 Acquired: 1/27/2025 16:56:08 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8F7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0146953**	**.0072248**	**.0088653**	**-.003959**	**-.003280**	**32.01960**
Stddev	.0011960	.0009187	.0010527	.000727	.000788	.20203
%RSD	8.138760	12.71578	11.87384	18.35634	24.04128	.6309524
#1	.0154020	.0062729	.0089186	-.003441	-.002811	31.97911
#2	.0133144	.0072954	.0077871	-.004790	-.004190	31.84087
#3	.0153694	.0081062	.0098904	-.003646	-.002838	32.23880

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0394623**	**.0026067**	**.0016662**	**54.41217**	**.0293643**	**.1098856**
Stddev	.0005846	.0000199	.0000761	.32742	.0003179	.0002392
%RSD	1.481376	.7651375	4.565057	.6017358	1.082426	.2176906
#1	.0398189	.0026268	.0017488	54.44298	.0290969	.1101490
#2	.0387877	.0025869	.0016508	54.07043	.0292802	.1096819
#3	.0397804	.0026063	.0015991	54.72309	.0297157	.1098259

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1203837**	**11.50054**	**2.237321**	**23.99326**	**.1030756**	**-.002314**
Stddev	.0003464	.07753	.010144	.18445	.0005389	.000063
%RSD	.2877549	.6741274	.4533944	.7687730	.5228178	2.722136
#1	.1199937	11.50316	2.237865	24.03815	.1036880	-.002386
#2	.1205015	11.42174	2.226915	23.79051	.1028655	-.002284
#3	.1206559	11.57673	2.247181	24.15113	.1026735	-.002272

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.780586**	**.0234275**	**.5252356**	**13.52778**	**.6660636**	**.3095265**
Stddev	.177834	.0004196	.0021782	.12495	.0008540	.0020473
%RSD	6.395551	1.791124	.4147049	.9236865	.1282235	.6614314
#1	2.576558	.0229817	.5270634	13.49922	.6654154	.3106181
#2	2.902709	.0238148	.5228254	13.41958	.6670314	.3107966
#3	2.862489	.0234859	.5258181	13.66454	.6657441	.3071647

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-02 Acquired: 1/27/2025 16:56:08 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8F7 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001577	F 320.3987	F 11.05320	-.002038	.0120930	.0234766
Stddev	.0001738	.2985	.05481	.001249	.0000875	.0007521
%RSD	110.1595	.0931642	.4958897	61.27886	.7232231	3.203746
#1	.0000656	320.7324	11.10429	-.002982	.0121489	.0226280
#2	.0003582	320.3065	11.06001	-.002510	.0121378	.0240609
#3	.0000494	320.1571	10.99530	-.000622	.0119922	.0237410

Elem	Sr4077
Units	ppm
Avg	.2763597
Stddev	.0016163
%RSD	.5848446
#1	.2763826
#2	.2747321
#3	.2779644

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7597.578	159977.2	24561.43	5246.753	4129.489
Stddev	19.721	548.3	137.67	34.345	9.273
%RSD	.2595737	.3427189	.5605233	.6545931	.2245650
#1	7620.349	160032.9	24478.10	5237.933	4139.534
#2	7585.984	160495.4	24485.85	5284.648	4127.677
#3	7586.401	159403.1	24720.34	5217.679	4121.255

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1105-01DLX5 Acquired: 1/27/2025 17:00:07 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8G3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0656971	.0001636	.0698264	.0006272	.0057649	23.05545
Stddev	.0038691	.0007090	.0018252	.0013550	.0019793	.10822
%RSD	5.889318	433.4070	2.613943	216.0247	34.33386	.4694002
#1	.0692397	.0005807	.0698381	-.000367	.0039624	23.16519
#2	.0662833	.0005651	.0716458	.002171	.0054492	22.94881
#3	.0615684	-.000655	.0679954	.000078	.0078831	23.05235

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2357544	.0009555	.0030419	553.2820	.0797812	.0113204
Stddev	.0013556	.0000443	.0000403	2.2756	.0001595	.0002174
%RSD	.5750148	4.639231	1.323916	.4112882	.1998890	1.920023
#1	.2365787	.0009856	.0030026	550.6623	.0799370	.0114542
#2	.2341898	.0009764	.0030399	554.4156	.0796183	.0110696
#3	.2364947	.0009046	.0030831	554.7681	.0797884	.0114374

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0731189	31.92654	1.064574	7.207608	.0301768	-.000609
Stddev	.0021673	.12517	.006641	.039268	.0000614	.000415
%RSD	2.964093	.3920639	.6238461	.5448101	.2035442	68.10831
#1	.0750303	32.06313	1.068409	7.246843	.0302378	-.001015
#2	.0735621	31.81731	1.056906	7.168308	.0301778	-.000626
#3	.0707642	31.89917	1.068408	7.207673	.0301149	-.000186

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3461497	.1261801	.4939139	6.325316	.5918018	.1650954
Stddev	.0677551	.0011234	.0011058	.053945	.0036404	.0005611
%RSD	19.57392	.8902807	.2238856	.8528501	.6151415	.3398498
#1	.3345839	.1249765	.4950878	6.345309	.5879339	.1650628
#2	.2849220	.1272008	.4928919	6.264228	.5951613	.1645514
#3	.4189432	.1263631	.4937621	6.366410	.5923101	.1656721

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1105-01DLX5 Acquired: 1/27/2025 17:00:07 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8G3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0926339	F 12.18106	1.885746	.0040527	1.346987	.0309748
Stddev	.0003166	.03607	.006763	.0008172	.003486	.0007464
%RSD	.3417974	.2961211	.3586245	20.16390	.2588273	2.409826
#1	.0926814	12.19142	1.881104	.0037955	1.344718	.0309472
#2	.0922962	12.14094	1.882629	.0049676	1.345240	.0317347
#3	.0929241	12.21081	1.893505	.0033951	1.351001	.0302426

Elem	Sr4077
Units	ppm
Avg	.5863565
Stddev	.0050921
%RSD	.8684353
#1	.5915014
#2	.5813189
#3	.5862492

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3319.201	69850.79	10945.93	2311.046	3712.855
Stddev	3.366	205.63	76.54	5.135	6.362
%RSD	.1014023	.2943799	.6992610	.2221891	.1713559
#1	3315.451	69951.69	11033.55	2313.371	3705.510
#2	3321.960	69986.48	10912.18	2305.160	3716.439
#3	3320.193	69614.20	10892.07	2314.608	3716.618

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-03 Acquired: 1/27/2025 17:04:17 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8F7D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0152263**	**.0054877**	**.0074558**	**-.002623**	**-.003462**	**31.74589**
Stddev	.0015723	.0006744	.0018942	.000432	.000841	.08404
%RSD	10.32620	12.28864	25.40574	16.46064	24.30105	.2647124
#1	.0144038	.0057737	.0075108	-.002493	-.004357	31.69793
#2	.0142358	.0047175	.0093220	-.003105	-.003341	31.84292
#3	.0170392	.0059720	.0055348	-.002271	-.002688	31.69682

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0410652**	**.0026765**	**.0016509**	**54.55599**	**.0291932**	**.1091885**
Stddev	.0003593	.0000425	.0000343	.17085	.0001008	.0001778
%RSD	.8749177	1.586545	2.078986	.3131589	.3451618	.1628289
#1	.0414687	.0027198	.0016202	54.65499	.0292951	.1093322
#2	.0409470	.0026350	.0016445	54.65426	.0291907	.1089897
#3	.0407799	.0026746	.0016879	54.35871	.0290936	.1092435

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1222387**	**11.44020**	**2.271326**	**24.11338**	**.1017429**	**-.002560**
Stddev	.0007545	.02061	.007946	.06782	.0004882	.000180
%RSD	.6172579	.1801372	.3498290	.2812648	.4798204	7.028492
#1	.1228597	11.42995	2.278380	24.16140	.1022993	-.002767
#2	.1213990	11.46392	2.272881	24.14295	.1013864	-.002471
#3	.1224574	11.42672	2.262718	24.03580	.1015430	-.002441

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.993151**	**.0245857**	**.5220601**	**13.29924**	**.6864713**	**.3123202**
Stddev	.208066	.0006501	.0042167	.08781	.0032009	.0011700
%RSD	6.951414	2.644084	.8076996	.6602837	.4662847	.3746296
#1	2.768918	.0238979	.5262359	13.22340	.6900884	.3120533
#2	3.030561	.0246693	.5178037	13.39544	.6840043	.3113066
#3	3.179975	.0251899	.5221407	13.27887	.6853213	.3136006

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-03 Acquired: 1/27/2025 17:04:17 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8F7D Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000714	F 321.7125	F 11.40273	-.001358	.0116570	.0239460
Stddev	.0000408	1.0756	.04116	.000388	.0003529	.0002275
%RSD	57.15944	.3343459	.3609461	28.58299	3.027142	.9500525
#1	.0000998	322.5493	11.45016	-.001803	.0112547	.0238840
#2	.0000898	320.4993	11.37633	-.001187	.0119143	.0241981
#3	.0000246	322.0891	11.38172	-.001085	.0118020	.0237560

Elem	Sr4077
Units	ppm
Avg	.2785562
Stddev	.0010410
%RSD	.3737124
#1	.2784354
#2	.2796523
#3	.2775808

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7633.366	160162.5	24234.49	5379.271	4140.956
Stddev	11.566	74.0	82.18	26.985	9.335
%RSD	.1515190	.0462248	.3390916	.5016507	.2254363
#1	7646.688	160092.5	24156.22	5349.900	4150.403
#2	7627.515	160154.9	24320.08	5402.969	4140.726
#3	7625.894	160240.0	24227.17	5384.944	4131.737

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-02LX5 Acquired: 1/27/2025 17:08:16 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8F7L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0052004**	**.0008728**	**.0024617**	**-.002073**	**-.001698**	**10.57208**
Stddev	.0015544	.0006597	.0017661	.000749	.000419	.05116
%RSD	29.88908	75.58023	71.74420	36.10319	24.66358	.4839095
#1	.0069199	.0010885	.0006126	-.001224	-.001899	10.52067
#2	.0047865	.0001323	.0026414	-.002637	-.001979	10.62298
#3	.0038950	.0013977	.0041310	-.002358	-.001217	10.57260

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0122575**	**.0009101**	**.0002418**	**18.20564**	**.0099149**	**.0213033**
Stddev	.0008015	.0000562	.0000662	.10482	.0000388	.0001014
%RSD	6.538551	6.173710	27.40004	.5757756	.3914376	.4757493
#1	.0120106	.0009479	.0002822	18.08516	.0098880	.0212579
#2	.0131533	.0008455	.0001653	18.27593	.0099594	.0212326
#3	.0116084	.0009369	.0002779	18.25583	.0098972	.0214195

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0426056**	**3.900429**	**.7636094**	**7.936518**	**.0201207**	**-.001125**
Stddev	.0009304	.021865	.0049122	.034016	.0004661	.000133
%RSD	2.183748	.5605879	.6432833	.4285966	2.316494	11.80679
#1	.0431653	3.875749	.7580854	7.897264	.0202672	-.001270
#2	.0431199	3.917382	.7674865	7.957324	.0195989	-.001009
#3	.0415316	3.908156	.7652563	7.954967	.0204959	-.001096

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7899448**	**.0084408**	**.1734866**	**4.250642**	**.1288588**	**.1120423**
Stddev	.1757672	.0012575	.0035375	.044590	.0012643	.0016504
%RSD	22.25057	14.89777	2.039055	1.049007	.9811662	1.473060
#1	.6024390	.0071436	.1697325	4.233932	.1294548	.1138827
#2	.9509680	.0085246	.1767578	4.216822	.1297150	.1106935
#3	.8164274	.0096544	.1739696	4.301173	.1274067	.1115508

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-02LX5 Acquired: 1/27/2025 17:08:16 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8F7L Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002004	F 61.55930	3.888666	-.000660	.0043662	.0079643
Stddev	.0003422	.10074	.001119	.000373	.0003962	.0009854
%RSD	170.7360	.1636423	.0287828	56.60599	9.074269	12.37271
#1	-.000182	61.47419	3.888250	-.000336	.0048232	.0068283
#2	.000478	61.53319	3.889934	-.001068	.0041546	.0085886
#3	.000305	61.67052	3.887815	-.000574	.0041206	.0084759

Elem	Sr4077
Units	ppm
Avg	.0914938
Stddev	.0005927
%RSD	.6477625
#1	.0908124
#2	.0917796
#3	.0918893

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4529.693	93399.80	13616.40	3112.835	4496.200
Stddev	6.441	175.94	81.74	18.706	1.990
%RSD	.1421853	.1883722	.6003409	.6009370	.0442530
#1	4523.787	93544.90	13532.41	3133.262	4494.653
#2	4528.731	93450.41	13695.69	3108.702	4495.504
#3	4536.560	93204.11	13621.10	3096.541	4498.445

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-04 Acquired: 1/27/2025 17:12:18 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8F7S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0313922	.0528880	.0276423	.0423731	.0383515	33.47322
Stddev	.0004567	.0011993	.0014590	.0011370	.0001345	.15224
%RSD	1.454746	2.267611	5.278252	2.683230	.3506104	.4548004
#1	.0308795	.0525535	.0289325	.0432302	.0383080	33.29936
#2	.0317553	.0542190	.0279354	.0410833	.0382441	33.53765
#3	.0315418	.0518914	.0260590	.0428059	.0385023	33.58264

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9068185	.0261158	.0516259	55.55499	.1290278	.5995280
Stddev	.0065448	.0000744	.0000718	.21717	.0002632	.0003301
%RSD	.7217322	.2850422	.1391495	.3909171	.2039629	.0550631
#1	.8993203	.0261994	.0517055	55.31925	.1293292	.5998868
#2	.9113843	.0260918	.0516064	55.74692	.1289107	.5992373
#3	.9097509	.0260564	.0515659	55.59880	.1288435	.5994598

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2370482	12.17516	2.531310	24.51287	.5992398	.0153733
Stddev	.0009556	.04105	.013259	.05268	.0018094	.0000545
%RSD	.4031226	.3371209	.5237831	.2149105	.3019419	.3542126
#1	.2360077	12.13088	2.519590	24.48553	.5977888	.0154345
#2	.2372501	12.18267	2.545700	24.57360	.5986634	.0153549
#3	.2378866	12.21193	2.528638	24.47949	.6012671	.0153304

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.730885	.2512766	.7589184	13.66786	.6565574	.3093127
Stddev	.135791	.0003638	.0059688	.06052	.0045831	.0008817
%RSD	4.972415	.1447684	.7864908	.4427939	.6980496	.2850382
#1	2.575643	.2512550	.7520264	13.59838	.6548193	.3102082
#2	2.789423	.2516507	.7624104	13.70904	.6617553	.3084455
#3	2.827589	.2509241	.7623184	13.69618	.6530976	.3092844

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-04 Acquired: 1/27/2025 17:12:18 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8F7S Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001299	F 312.2732	F 11.27596	-.002844	.0112634	.0250535
Stddev	.0001539	.3386	.01853	.001653	.0001897	.0006125
%RSD	118.5316	.1084339	.1643265	58.12501	1.684113	2.444717
#1	.0000505	312.5714	11.28613	-.004602	.0114257	.0250458
#2	.0000318	311.9051	11.28718	-.001320	.0110549	.0256697
#3	.0003072	312.3432	11.25458	-.002610	.0113096	.0244448

Elem	Sr4077
Units	ppm
Avg	.2850887
Stddev	.0015318
%RSD	.5373211
#1	.2835999
#2	.2866602
#3	.2850059

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7660.760	158822.1	24707.24	5241.464	4201.707
Stddev	12.862	282.7	68.37	20.668	5.656
%RSD	.1678999	.1780176	.2767069	.3943198	.1346080
#1	7670.811	159137.7	24629.83	5265.230	4206.404
#2	7665.204	158591.9	24759.37	5231.465	4203.290
#3	7646.265	158736.7	24732.53	5227.697	4195.429

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-05 Acquired: 1/27/2025 17:16:13 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8F8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0051659	.0080284	.0045420	-.002454	-.001698	52.58885
Stddev	.0013046	.0016762	.0018105	.002368	.001464	.18162
%RSD	25.25360	20.87857	39.86051	96.49439	86.18673	.3453650
#1	.0039481	.0068748	.0024622	-.004235	-.000059	52.79854
#2	.0050070	.0072594	.0057654	-.003359	-.002164	52.48734
#3	.0065427	.0099512	.0053984	.000233	-.002873	52.48068

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0537353	.0024195	.0050992	92.31056	.0301248	.3219934
Stddev	.0006727	.0000520	.0001156	.39285	.0003151	.0010091
%RSD	1.251956	2.148719	2.267699	.4255745	1.045861	.3133772
#1	.0544578	.0023846	.0050009	92.76398	.0297802	.3211286
#2	.0536210	.0023946	.0050700	92.09571	.0303981	.3217497
#3	.0531269	.0024792	.0052266	92.07199	.0301960	.3231020

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1971299	17.96318	5.633731	35.89504	.3134176	-.001314
Stddev	.0009113	.07113	.027801	.17203	.0004718	.000052
%RSD	.4622903	.3959935	.4934697	.4792453	.1505436	3.952799
#1	.1978885	18.04468	5.662826	36.04204	.3133635	-.001274
#2	.1961190	17.93129	5.607437	35.93723	.3129751	-.001373
#3	.1973823	17.91357	5.630929	35.70584	.3139141	-.001295

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.769775	.0021921	.7399914	6.727267	.2123960	.3886646
Stddev	.200345	.0007401	.0046028	.067824	.0030088	.0003792
%RSD	5.314518	33.76389	.6220058	1.008200	1.416621	.0975606
#1	4.000039	.0029891	.7394904	6.802008	.2106336	.3890740
#2	3.673939	.0015264	.7356597	6.669637	.2106842	.3885943
#3	3.635348	.0020608	.7448242	6.710155	.2158702	.3883255

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-05 Acquired: 1/27/2025 17:16:13 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8F8 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000400	F 328.4756	F 20.15239	-.001986	.0111241	.0523991
Stddev	.000352	.5327	.07429	.000887	.0001244	.0002973
%RSD	88.08178	.1621650	.3686608	44.67055	1.118182	.5673217
#1	-.000786	329.0106	20.23551	-.002482	.0110647	.0524136
#2	-.000319	328.4709	20.09246	-.000962	.0110407	.0520948
#3	-.000095	327.9453	20.12921	-.002514	.0112671	.0526888

Elem	Sr4077
Units	ppm
Avg	.5205397
Stddev	.0029637
%RSD	.5693589
#1	.5236052
#2	.5176895
#3	.5203245

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6111.966	131382.3	20364.95	4240.821	4045.383
Stddev	11.896	153.1	33.86	14.595	7.324
%RSD	.1946405	.1165641	.1662813	.3441558	.1810538
#1	6099.767	131207.2	20372.75	4254.454	4042.335
#2	6123.535	131491.5	20327.87	4242.585	4053.739
#3	6112.597	131448.2	20394.24	4225.425	4040.074

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-06 Acquired: 1/27/2025 17:20:10 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8E3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0649583	.0037192	.5889364	-.001837	.0015253	28.92558
Stddev	.0041580	.0035359	.0008769	.000489	.0013519	.08115
%RSD	6.401062	95.07320	.1489025	26.64546	88.63401	.2805576
#1	.0617158	-.000274	.5895694	-.001682	.0003683	28.83332
#2	.0696461	.004978	.5879355	-.002385	.0011963	28.98594
#3	.0635128	.006453	.5893044	-.001444	.0030114	28.95748

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0733786	.0086223	.0206620	120.2955	.0338231	.3450497
Stddev	.0008762	.0000251	.0001289	.2437	.0003528	.0006772
%RSD	1.194017	.2914176	.6238548	.2025673	1.043035	.1962723
#1	.0724304	.0085951	.0206044	120.1896	.0342282	.3448035
#2	.0735473	.0086272	.0205720	120.1228	.0335837	.3445300
#3	.0741582	.0086446	.0208097	120.5742	.0336574	.3458156

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.320301	33.57976	17.26317	45.75559	.3821590	.0013749
Stddev	.005230	.11140	.03529	.12171	.0002421	.0001981
%RSD	.3961051	.3317569	.2044146	.2660018	.0633465	14.40791
#1	1.325939	33.45508	17.24751	45.64541	.3820190	.0013524
#2	1.315608	33.61466	17.23842	45.73512	.3820194	.0015833
#3	1.319357	33.66953	17.30358	45.88624	.3824385	.0011891

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.304636	.0431899	3.381917	6.733963	.3025923	1.153607
Stddev	.315688	.0007789	.020876	.037241	.0009047	.003698
%RSD	3.392799	1.803476	.6172933	.5530284	.2989687	.3205809
#1	9.013940	.0424227	3.392210	6.695508	.3035740	1.157812
#2	9.640459	.0431670	3.357892	6.769857	.3024105	1.150862
#3	9.259510	.0439800	3.395647	6.736526	.3017923	1.152147

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-06 Acquired: 1/27/2025 17:20:10 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8E3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001662	F 337.0246	F 10.12680	-.002645	.0048544	.0177647
Stddev	.000226	.4403	.01746	.000511	.0007995	.0005693
%RSD	13.60881	.1306328	.1724001	19.32172	16.46933	3.204734
#1	-.001831	336.5190	10.14692	-.003164	.0040605	.0175797
#2	-.001750	337.2317	10.11779	-.002143	.0056593	.0184035
#3	-.001405	337.3232	10.11569	-.002627	.0048434	.0173108

Elem	Sr4077
Units	ppm
Avg	.8780764
Stddev	.0050601
%RSD	.5762692
#1	.8836022
#2	.8769576
#3	.8736693

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4059.311	90445.88	13685.08	2868.480	4067.723
Stddev	8.012	204.94	36.07	14.512	7.561
%RSD	.1973798	.2265901	.2635866	.5059092	.1858812
#1	4067.318	90564.17	13647.15	2856.353	4076.009
#2	4059.323	90564.24	13718.96	2884.558	4065.962
#3	4051.293	90209.23	13689.13	2864.528	4061.198

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-07 Acquired: 1/27/2025 17:24:13 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8E4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0237312	.0005166	.0138606	.0130153	.0059713	71.97623
Stddev	.0014283	.0032539	.0010037	.0015973	.0006709	.38087
%RSD	6.018807	629.8127	7.241633	12.27270	11.23594	.5291641
#1	.0227159	.0033416	.0133310	.0137158	.0053303	71.84652
#2	.0231132	.0012495	.0150182	.0111874	.0059149	71.67716
#3	.0253645	-.003041	.0132325	.0141428	.0066686	72.40502

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0846911	.0065217	.0051412	85.73584	.0890874	.2521792
Stddev	.0004743	.0000868	.0000939	.30832	.0002761	.0010670
%RSD	.5600794	1.330728	1.825441	.3596155	.3098866	.4231133
#1	.0841631	.0065020	.0051593	85.58854	.0892749	.2532244
#2	.0850812	.0066166	.0052247	85.52880	.0892169	.2510916
#3	.0848291	.0064464	.0050396	86.09018	.0887704	.2522217

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3590273	110.5699	8.184525	71.45542	.3879786	-.000062
Stddev	.0015901	.4301	.035627	.23757	.0013897	.000204
%RSD	.4428811	.3889669	.4353018	.3324741	.3581946	327.4755
#1	.3586456	110.4290	8.152942	71.42745	.3895735	-.000100
#2	.3576628	110.2279	8.177488	71.23307	.3870271	.000158
#3	.3607734	111.0528	8.223147	71.70574	.3873353	-.000246

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.18044	.0943229	1.985829	2.998007	.2204876	1.686733
Stddev	.14762	.0010972	.010041	.036916	.0033437	.004697
%RSD	.9724260	1.163209	.5056114	1.231342	1.516509	.2784399
#1	15.09212	.0939365	1.974474	3.022204	.2213310	1.690078
#2	15.35086	.0955610	1.993531	2.955517	.2168029	1.688757
#3	15.09834	.0934711	1.989483	3.016299	.2233288	1.681363

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-07 Acquired: 1/27/2025 17:24:13 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8E4 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001592	F 613.0205	F 26.69356	-.001363	.0186545	.0596581
Stddev	.000137	1.4544	.03138	.000996	.0007644	.0013183
%RSD	8.579628	.2372549	.1175579	73.01530	4.097599	2.209757
#1	-.001691	613.9802	26.70277	-.000697	.0190570	.0581394
#2	-.001437	611.3471	26.71930	-.002508	.0177730	.0603281
#3	-.001650	613.7341	26.65860	-.000886	.0191336	.0605068

Elem	Sr4077
Units	ppm
Avg	.6343842
Stddev	.0039636
%RSD	.6247918
#1	.6318053
#2	.6323993
#3	.6389481

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4675.119	96939.80	15473.21	3178.663	4130.867
Stddev	9.613	41.16	84.41	13.120	12.544
%RSD	.2056272	.0424578	.5455400	.4127569	.3036681
#1	4666.493	96952.24	15434.40	3185.366	4117.446
#2	4685.483	96973.30	15415.19	3163.545	4142.296
#3	4673.380	96893.85	15570.05	3187.077	4132.858

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-08 Acquired: 1/27/2025 17:28:09 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8E5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0101751	.0028440	.0067236	-.001021	.0002590	36.48779
Stddev	.0014887	.0021977	.0013575	.001316	.0009535	.07613
%RSD	14.63032	77.27734	20.18958	128.9135	368.0623	.2086438
#1	.0086824	.0038045	.0056805	-.002502	.0008233	36.40369
#2	.0116597	.0003295	.0062319	-.000575	.0007956	36.50770
#3	.0101833	.0043979	.0082583	.000015	-.000842	36.55199

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1109657	.0025176	.0005600	143.2165	.0362005	.0253966
Stddev	.0006193	.0001029	.0000884	.1895	.0003035	.0003764
%RSD	.5580869	4.087787	15.79378	.1322936	.8382805	1.482066
#1	.1111282	.0025534	.0006621	143.3746	.0365198	.0250546
#2	.1102814	.0025979	.0005126	143.0065	.0361657	.0253354
#3	.1114876	.0024016	.0005054	143.2685	.0359159	.0257998

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1640946	28.21181	2.597806	109.7811	.2058504	-.000421
Stddev	.0011429	.02164	.003564	.1136	.0004195	.000296
%RSD	.6964962	.0766976	.1372084	.1035203	.2037960	70.34235
#1	.1641050	28.19109	2.601564	109.9003	.2053890	-.000347
#2	.1629465	28.21007	2.594473	109.6739	.2059534	-.000747
#3	.1652322	28.23426	2.597382	109.7690	.2062089	-.000169

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.76384	.0747643	1.588113	1.619744	.0625102	1.319696
Stddev	.03896	.0004597	.005582	.042123	.0004703	.002255
%RSD	.2193235	.6149100	.3514828	2.600603	.7524215	.1708746
#1	17.77759	.0743936	1.582262	1.649378	.0627423	1.318265
#2	17.79406	.0752787	1.588697	1.638329	.0628193	1.322295
#3	17.71987	.0746206	1.593380	1.571525	.0619689	1.318527

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-08 Acquired: 1/27/2025 17:28:09 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8E5 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000871	F 348.3328	F 20.59377	-.004148	.0082838	.0549839
Stddev	.000059	.5863	.07179	.000238	.0008198	.0004466
%RSD	6.795040	.1683040	.3486125	5.726807	9.896904	.8122537
#1	-.000893	347.8682	20.66992	-.003886	.0091737	.0548696
#2	-.000915	348.1387	20.58408	-.004350	.0075592	.0546055
#3	-.000804	348.9915	20.52732	-.004208	.0081185	.0554765

Elem	Sr4077
Units	ppm
Avg	.9591637
Stddev	.0020144
%RSD	.2100160
#1	.9601093
#2	.9568504
#3	.9605313

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3540.759	76154.68	11466.55	2500.913	4060.067
Stddev	11.904	46.56	35.52	3.711	14.490
%RSD	.3362060	.0611373	.3097439	.1483697	.3569022
#1	3549.796	76168.29	11453.29	2504.523	4071.968
#2	3545.209	76102.84	11439.57	2501.106	4064.302
#3	3527.270	76192.93	11506.79	2497.110	4043.931

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-09 Acquired: 1/27/2025 17:32:09 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8E6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2679724**	**.0024836**	**.1150756**	**.0032574**	**.0011077**	**9.270709**
Stddev	.0004943	.0004461	.0004512	.0014604	.0008812	.040387
%RSD	.1844641	17.96302	.3921007	44.83127	79.55164	.4356367
#1	.2674639	.0019743	.1147790	.0016133	.0014358	9.238525
#2	.2680020	.0028055	.1155949	.0044040	.0017779	9.257575
#3	.2684512	.0026708	.1148530	.0037550	.0001095	9.316028

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0820676**	**.0009172**	**.0068778**	**56.66956**	**.0354074**	**.0281982**
Stddev	.0009516	.0000043	.0000258	.18427	.0000934	.0001640
%RSD	1.159527	.4723792	.3749884	.3251733	.2637751	.5816993
#1	.0810194	.0009179	.0068500	56.49216	.0353061	.0283758
#2	.0823061	.0009125	.0068824	56.65650	.0354261	.0280524
#3	.0828772	.0009211	.0069009	56.86001	.0354901	.0281663

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8418186**	**21.56944**	**.3878933**	**7.256366**	**.2139934**	**-.000621**
Stddev	.0031331	.10124	.0010691	.030561	.0010451	.000180
%RSD	.3721804	.4693794	.2756103	.4211607	.4883877	29.04399
#1	.8404958	21.46848	.3870426	7.240414	.2130425	-.000425
#2	.8453961	21.56890	.3875440	7.237081	.2138253	-.000781
#3	.8395639	21.67096	.3890934	7.291602	.2151123	-.000658

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.662496**	**.0322170**	**.7986590**	**3.277232**	F **23.30781**	**.6869935**
Stddev	.295624	.0005633	.0026440	.041991	.06591	.0033704
%RSD	4.437137	1.748560	.3310604	1.281301	.2827694	.4906036
#1	6.895980	.0328653	.7957788	3.271273	23.23253	.6908549
#2	6.761409	.0318465	.7992219	3.238539	23.33581	.6854839
#3	6.330098	.0319392	.8009763	3.321885	23.35510	.6846419

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-09 Acquired: 1/27/2025 17:32:09 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8E6 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013176	F 345.7872	4.860927	-.002182	.0060003	.0126905
Stddev	.0001393	1.0829	.012771	.000989	.0005115	.0006194
%RSD	10.57383	.3131714	.2627315	45.30860	8.525159	4.881034
#1	.0012651	344.5600	4.870521	-.003230	.0056946	.0131280
#2	.0014755	346.1930	4.865829	-.002053	.0065908	.0129617
#3	.0012121	346.6086	4.846431	-.001265	.0057154	.0119817

Elem	Sr4077
Units	ppm
Avg	.5899891
Stddev	.0024087
%RSD	.4082630
#1	.5872327
#2	.5910457
#3	.5916890

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3936.968	84671.35	12817.56	2811.068	4396.985
Stddev	10.473	113.96	71.15	10.773	11.298
%RSD	.2660212	.1345911	.5550893	.3832403	.2569450
#1	3948.038	84595.25	12738.03	2814.575	4409.520
#2	3935.650	84802.37	12839.46	2819.651	4393.849
#3	3927.216	84616.42	12875.17	2798.979	4387.587

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-10 Acquired: 1/27/2025 17:36:09 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8E7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.036306**	**.0001567**	**.1072746**	**.0026781**	**.0037340**	**24.69129**
Stddev	.005469	.0010509	.0015764	.0018464	.0004640	.03177
%RSD	.5276916	670.7230	1.469504	68.94653	12.42784	.1286741
#1	1.031313	-.000619	.1088880	.0030831	.0032773	24.68658
#2	1.035456	.001353	.1071978	.0006628	.0037196	24.66213
#3	1.042150	-.000264	.1057380	.0042884	.0042050	24.72515

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0635124**	**.0082794**	**.0126491**	**132.2111**	**.0833354**	**.0866976**
Stddev	.0003074	.0001177	.0001298	.3282	.0001827	.0003485
%RSD	.4840189	1.422029	1.025902	.2482589	.2192709	.4019505
#1	.0632270	.0082721	.0127989	132.2909	.0831531	.0869092
#2	.0638379	.0084006	.0125770	132.4921	.0835186	.0862954
#3	.0634723	.0081654	.0125712	131.8504	.0833346	.0868883

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0776568**	**54.51224**	**1.104892**	**21.19798**	**1.460985**	**-.002625**
Stddev	.0022067	.05869	.005648	.02836	.002534	.000172
%RSD	2.841583	.1076691	.5111674	.1337996	.1734315	6.559085
#1	.0790841	54.47650	1.109314	21.17630	1.462010	-.002823
#2	.0751152	54.48025	1.106832	21.23008	1.458099	-.002543
#3	.0787712	54.57998	1.098530	21.18757	1.462846	-.002509

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.938383**	**.0599271**	**1.579983**	**3.572895**	F **63.73352**	**.7046771**
Stddev	.047178	.0010489	.012695	.015517	.01933	.0014343
%RSD	.7944585	1.750279	.8034721	.4342839	.0303254	.2035372
#1	5.912839	.0587242	1.573885	3.581262	63.71717	.7059346
#2	5.909486	.0604065	1.594576	3.554990	63.72853	.7049818
#3	5.992825	.0606507	1.571487	3.582432	63.75485	.7031150

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-10 Acquired: 1/27/2025 17:36:09 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8E7 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000255	F 342.9296	F 11.67344	-.002807	.0003494	.0467821
Stddev	.000325	.6410	.08983	.000128	.0003567	.0012359
%RSD	127.6202	.1869329	.7695454	4.567565	102.0949	2.641785
#1	.000011	342.4598	11.73254	-.002953	.0007581	.0454386
#2	-.000618	342.6690	11.71770	-.002709	.0001011	.0478705
#3	-.000159	343.6599	11.57006	-.002761	.0001888	.0470371

Elem	Sr4077
Units	ppm
Avg	.8514446
Stddev	.0117614
%RSD	1.381351
#1	.8546171
#2	.8612944
#3	.8384223

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4896.774	102650.4	15394.56	3337.967	4200.743
Stddev	7.107	297.0	71.72	15.555	5.865
%RSD	.1451361	.2893298	.4658468	.4660085	.1396211
#1	4903.529	102858.6	15395.36	3355.548	4196.619
#2	4897.432	102310.3	15322.45	3325.992	4207.458
#3	4889.361	102782.4	15465.87	3332.361	4198.153

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-11 Acquired: 1/27/2025 17:40:14 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8E8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0114080**	**.0041858**	**.0657403**	**.0118900**	**.0039465**	**44.93761**
Stddev	.0011816	.0013853	.0012297	.0015387	.0003305	.17998
%RSD	10.35769	33.09621	1.870580	12.94122	8.375507	.4005100
#1	.0101156	.0027532	.0661082	.0108530	.0039202	44.73146
#2	.0124329	.0042857	.0643686	.0136580	.0042893	45.01789
#3	.0116756	.0055185	.0667441	.0111591	.0036299	45.06348

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0737391**	**.0059673**	**.0250555**	**77.81420**	**.1606986**	**.0379511**
Stddev	.0005584	.0001140	.0000930	.17215	.0006200	.0003401
%RSD	.7572618	1.911146	.3712243	.2212346	.3858170	.8960872
#1	.0742371	.0060092	.0249600	77.77104	.1603897	.0381167
#2	.0738446	.0060543	.0250607	78.00383	.1614124	.0375600
#3	.0731354	.0058382	.0251458	77.66774	.1602937	.0381767

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0524678**	**84.48269**	**1.085738**	**23.18435**	**.2487825**	**-.001511**
Stddev	.0013903	.23369	.001339	.07782	.0006324	.000348
%RSD	2.649753	.2766187	.1233365	.3356456	.2541869	23.05572
#1	.0519732	84.27322	1.087221	23.18863	.2495031	-.001395
#2	.0513924	84.73475	1.085378	23.25994	.2483202	-.001235
#3	.0540377	84.44010	1.084616	23.10448	.2485241	-.001902

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.153134**	**.1245943**	**2.064897**	**11.07030**	F **30.36292**	**.8363844**
Stddev	.250344	.0002896	.006383	.07064	.04597	.0014060
%RSD	4.858083	.2324383	.3091387	.6381373	.1514152	.1681069
#1	5.037545	.1248920	2.059555	10.99063	30.38810	.8372633
#2	5.440387	.1243135	2.063170	11.12531	30.30986	.8371272
#3	4.981470	.1245775	2.071966	11.09497	30.39081	.8347628

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-11 Acquired: 1/27/2025 17:40:14 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8E8 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012894	F 330.4668	F 19.77319	-.002149	.0096765	.0473262
Stddev	.0003265	.5046	.09423	.001547	.0006276	.0006338
%RSD	25.32209	.1527022	.4765521	72.02242	6.485528	1.339157
#1	.0010486	330.2642	19.88183	-.001770	.0103582	.0480304
#2	.0016610	330.0949	19.72408	-.000825	.0091228	.0468017
#3	.0011585	331.0412	19.71365	-.003850	.0095485	.0471464

Elem	Sr4077
Units	ppm
Avg	.2913034
Stddev	.0011583
%RSD	.3976208
#1	.2905534
#2	.2907195
#3	.2926375

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4246.851	88730.18	13844.74	2895.281	4274.823
Stddev	5.189	320.41	64.80	7.522	3.643
%RSD	.1221848	.3611038	.4680226	.2598175	.0852231
#1	4245.650	88942.67	13804.97	2903.542	4274.952
#2	4252.535	88361.64	13809.73	2893.477	4278.399
#3	4242.367	88886.22	13919.51	2888.825	4271.116

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-12 Acquired: 1/27/2025 17:44:11 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8D1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0069505**	**.0028762**	**.0101157**	**-.000179**	**-.002359**	**78.54679**
Stddev	.0023363	.0025393	.0028328	.001672	.000777	.33624
%RSD	33.61414	88.28476	28.00373	934.8931	32.93581	.4280706
#1	.0092189	.0036668	.0097674	-.000311	-.003169	78.86909
#2	.0070807	.0049262	.0131066	.001555	-.001620	78.19816
#3	.0045517	.0000357	.0074732	-.001780	-.002289	78.57312

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0854820**	**.0040633**	**.0091428**	**167.7603**	**.0802023**	**.8256059**
Stddev	.0004683	.0000505	.0001293	.3204	.0003465	.0018114
%RSD	.5478242	1.243643	1.414628	.1909669	.4320066	.2194060
#1	.0859985	.0041170	.0092379	168.1260	.0798703	.8236344
#2	.0853622	.0040560	.0089955	167.5290	.0805616	.8259866
#3	.0850852	.0040168	.0091949	167.6260	.0801748	.8271967

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2695093**	**14.66318**	**13.55782**	**73.13506**	**.5911144**	**.0018053**
Stddev	.0008104	.00946	.02904	.13296	.0017342	.0002150
%RSD	.3006982	.0645406	.2142098	.1818059	.2933695	11.90760
#1	.2690318	14.66869	13.59081	73.26860	.5899096	.0015681
#2	.2690511	14.65225	13.54653	73.13389	.5903317	.0018605
#3	.2704450	14.66859	13.53612	73.00267	.5931019	.0019873

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.393821**	**.0098201**	**1.251488**	**5.304848**	**1.501797**	**.6307729**
Stddev	.210270	.0015896	.006359	.014143	.008339	.0019675
%RSD	2.843861	16.18711	.5080783	.2666036	.5552885	.3119173
#1	7.151050	.0105822	1.258610	5.300388	1.497777	.6285011
#2	7.512027	.0108851	1.249472	5.320683	1.496229	.6319229
#3	7.518386	.0079929	1.246381	5.293472	1.511385	.6318948

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-12 Acquired: 1/27/2025 17:44:11 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8D1 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000385**	F **363.6503**	F **34.89908**	**-.002668**	**-.001743**	**.1728548**
Stddev	.000111	.7229	.06300	.000657	.000620	.0020598
%RSD	28.73565	.1987857	.1805341	24.61445	35.59520	1.191610
#1	-.000504	363.1550	34.89786	-.003049	-.002458	.1751146
#2	-.000367	363.3160	34.96269	-.001910	-.001428	.1710826
#3	-.000285	364.4798	34.83670	-.003046	-.001343	.1723672

Elem	Sr4077
Units	ppm
Avg	**1.132124**
Stddev	.003733
%RSD	.3296977
#1	1.131723
#2	1.136040
#3	1.128607

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4216.196**	**90443.20**	**14372.87**	**2923.512**	**3992.914**
Stddev	8.777	136.88	81.74	12.048	13.397
%RSD	.2081644	.1513483	.5687063	.4121171	.3355312
#1	4224.629	90563.50	14444.30	2910.211	4004.355
#2	4216.846	90294.26	14283.73	2933.695	3996.211
#3	4207.112	90471.85	14390.58	2926.630	3978.176

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: CCV022 Acquired: 1/27/2025 17:57:23 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV022 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.927239**	**4.585303**	**24.24443**	**4.799041**	**4.838258**	**396.1362**
Stddev	.008675	.058521	.02554	.018675	.005590	6.3614
%RSD	.1760625	1.276272	.1053328	.3891468	.1155438	1.605874
#1	4.937225	4.652877	24.27386	4.810396	4.840449	403.4034
#2	4.922930	4.551443	24.22811	4.809240	4.831904	391.5760
#3	4.921563	4.551588	24.23133	4.777487	4.842420	393.4291

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.10107**	**.4860494**	**2.426584**	**401.8904**	**15.21873**	**2.431059**
Stddev	.04306	.0035858	.006067	2.3190	.12688	.002082
%RSD	.4262987	.7377333	.2500368	.5770334	.8336975	.0856560
#1	10.12369	.4867430	2.433337	403.9036	15.36089	2.432237
#2	10.05141	.4892376	2.424820	399.3547	15.17832	2.432285
#3	10.12810	.4821675	2.421593	402.4128	15.11698	2.428655

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.96209**	**402.3464**	**14.98204**	**393.8580**	**2.423222**	**1.267053**
Stddev	.10530	2.4413	.08366	2.4098	.001274	.010274
%RSD	.7037919	.6067661	.5583687	.6118468	.0525757	.8108917
#1	14.88812	405.0737	15.07528	396.6221	2.423673	1.278586
#2	15.08265	401.6003	14.95731	392.7534	2.424209	1.263698
#3	14.91549	400.3652	14.91355	392.1984	2.421784	1.258875

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**394.5294**	**2.436838**	**15.05304**	**154.8304**	**5.032598**	F **5.906798**
Stddev	3.0251	.012407	.08001	.7880	.011595	.032788
%RSD	.7667556	.5091602	.5315004	.5089571	.2303980	.5550872
#1	392.5425	2.431298	15.14514	155.7238	5.044957	5.916028
#2	398.0109	2.451050	15.01330	154.5331	5.021959	5.933981
#3	393.0350	2.428166	15.00069	154.2343	5.030880	5.870384

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: CCV022 Acquired: 1/27/2025 17:57:23 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV022 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.769774**	**4.945264**	F **3.116080**	**4.880760**	**4.946312**	**5.161619**
Stddev	.009066	.013581	.015077	.008337	.038046	.025375
%RSD	.1900710	.2746276	.4838585	.1708170	.7691809	.4916084
#1	4.780178	4.960732	3.116106	4.889115	4.931084	5.184791
#2	4.765574	4.939770	3.131144	4.880724	4.989613	5.165563
#3	4.763569	4.935291	3.100989	4.872440	4.918238	5.134503

Elem	Sr4077
Units	ppm
Avg	**4.824743**
Stddev	.015999
%RSD	.3316128
#1	4.807500
#2	4.827619
#3	4.839109

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2936.858**	**65065.92**	**10709.19**	**2121.625**	**3366.945**
Stddev	3.204	437.03	56.54	14.513	2.762
%RSD	.1090964	.6716681	.5279990	.6840590	.0820212
#1	2935.055	64562.55	10722.89	2104.895	3365.579
#2	2940.558	65286.57	10647.05	2130.834	3370.123
#3	2934.962	65348.63	10757.63	2129.145	3365.132

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: CCB022 Acquired: 1/27/2025 18:01:41 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB022 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005722	.0003532	.0008554	.0008276	.0001706	.0034339	-.002395
Stddev	.0009579	.0003024	.0011805	.0016708	.0017160	.0081677	.000508
%RSD	167.3887	85.60831	138.0004	201.8857	1005.937	237.8572	21.19724
#1	.0016658	.0001190	.0017567	.0022160	-.000444	-.005084	-.002905
#2	.0001688	.0006945	-.000481	-.001027	.002109	.011200	-.002390
#3	-.000118	.0002460	.001290	.001294	-.001153	.004186	-.001889

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000083	.0000509	.0072949	.0004607	-.000058	-.000698	.0054757
Stddev	.000025	.0000079	.0060509	.0002145	.000111	.000493	.0013887
%RSD	30.38888	15.54500	82.94712	46.55501	190.6103	70.56862	25.36041
#1	-.000097	.0000543	.0089015	.0003098	.000066	-.001209	.0045854
#2	-.000097	.0000565	.0006028	.0007062	-.000093	-.000660	.0070758
#3	-.000054	.0000419	.0123805	.0003661	-.000148	-.000226	.0047659

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001599	.0012677	-.000154	-.000681	-.231025	-.001817	.0000305
Stddev	.0001074	.0110158	.000374	.000325	.268275	.000362	.0018059
%RSD	67.17711	868.9694	242.4245	47.71457	116.1240	19.92451	5921.057
#1	.0000516	-.002192	-.000010	-.000347	.078681	-.001960	-.001884
#2	.0002663	.013598	.000126	-.000700	-.380092	-.001405	.001704
#3	.0001616	-.007603	-.000579	-.000996	-.391663	-.002086	.000272

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0300465	.0002984	.0063706	.0004121	.0121522	-.001977	.0006184
Stddev	.0102863	.0011686	.0006315	.0004525	.0023244	.000597	.0005800
%RSD	34.23475	391.6700	9.913266	109.8017	19.12692	30.18437	93.78338
#1	.0198449	-.000976	.0069104	.0002747	.0143160	-.001814	.0000117
#2	.0298790	.001320	.0065252	.0009174	.0124455	-.001479	.0011674
#3	.0404156	.000551	.0056761	.0000443	.0096952	-.002639	.0006763

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: CCB022 Acquired: 1/27/2025 18:01:41 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB022 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0000205	-.000108	.0000588
Stddev	.0007217	.000976	.0000467
%RSD	3516.252	901.2215	79.37170
#1	-.000812	.000252	.0000281
#2	.000407	.000636	.0000358
#3	.000467	-.001213	.0001126

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3720.159	77571.77	11431.70	2565.133	4713.809
Stddev	10.188	155.77	9.00	19.343	9.803
%RSD	.2738598	.2008111	.0787356	.7540863	.2079661
#1	3718.972	77644.47	11427.10	2576.528	4710.141
#2	3730.888	77392.94	11442.07	2542.799	4724.917
#3	3710.616	77677.91	11425.92	2576.072	4706.368

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-13 Acquired: 1/27/2025 18:05:49 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8D2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0218079**	**.0022105**	**.2063470**	**.0044802**	**-.000059**	**15.39725**
Stddev	.0005952	.0012405	.0007203	.0020484	.001014	.08517
%RSD	2.729332	56.11827	.3490903	45.72125	1719.969	.5531269
#1	.0222978	.0007990	.2071537	.0050430	-.000748	15.30741
#2	.0211454	.0031275	.2061193	.0022092	.001105	15.47680
#3	.0219803	.0027050	.2057681	.0061884	-.000534	15.40755

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0822107**	**.0030173**	**.0110307**	**60.31322**	**.0083907**	**.0609977**
Stddev	.0009872	.0000190	.0000480	.24666	.0003166	.0003213
%RSD	1.200846	.6286217	.4354331	.4089598	3.773654	.5267382
#1	.0815090	.0030386	.0110519	60.15610	.0087467	.0607955
#2	.0833395	.0030022	.0109757	60.59751	.0081408	.0613682
#3	.0817835	.0030112	.0110644	60.18605	.0082845	.0608294

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7297264**	**22.35151**	**.2731521**	**15.07962**	**.1241558**	**-.001011**
Stddev	.0048707	.08371	.0006624	.06755	.0003552	.000137
%RSD	.6674743	.3745048	.2425053	.4479790	.2860819	13.54308
#1	.7353114	22.29087	.2731699	15.09299	.1240368	-.001165
#2	.7275080	22.44701	.2738054	15.13950	.1245552	-.000901
#3	.7263598	22.31664	.2724810	15.00639	.1238754	-.000969

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.282435**	**.0102906**	**1.231145**	**4.781665**	F **17.40595**	**.6395184**
Stddev	.145462	.0005004	.008451	.061825	.04357	.0048378
%RSD	2.753701	4.862672	.6864313	1.292965	.2503069	.7564789
#1	5.449891	.0108431	1.226733	4.713955	17.42470	.6438897
#2	5.210027	.0098679	1.240889	4.795928	17.43701	.6343206
#3	5.187387	.0101607	1.225814	4.835112	17.35615	.6403448

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-13 Acquired: 1/27/2025 18:05:49 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8D2 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001375	F 318.8297	8.299502	-.002434	.0037568	.0295021
Stddev	.0002657	.1299	.046693	.000766	.0001352	.0005112
%RSD	193.2357	.0407290	.5625947	31.47040	3.597437	1.732818
#1	.0000324	318.9705	8.350439	-.002661	.0038545	.0300924
#2	-.000060	318.8039	8.258727	-.001580	.0036025	.0292016
#3	.000440	318.7146	8.289340	-.003062	.0038133	.0292124

Elem	Sr4077
Units	ppm
Avg	.3634763
Stddev	.0020926
%RSD	.5757140
#1	.3612795
#2	.3654462
#3	.3637031

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3971.866	83903.88	12920.73	2738.668	4489.841
Stddev	16.338	123.71	79.95	8.242	14.491
%RSD	.4113414	.1474469	.6187654	.3009413	.3227526
#1	3990.578	84040.48	12854.31	2743.643	4506.574
#2	3964.588	83799.37	13009.46	2743.206	4481.500
#3	3960.431	83871.79	12898.40	2729.154	4481.449

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-14 Acquired: 1/27/2025 18:09:47 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8D4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0129883	.0040969	.0119754	-.001047	-.000150	41.02401
Stddev	.0014683	.0010991	.0013694	.001623	.001819	.08291
%RSD	11.30500	26.82630	11.43490	155.0267	1210.711	.2021105
#1	.0146772	.0050761	.0116408	.000637	.000360	41.02588
#2	.0122723	.0029082	.0108043	-.002602	.001359	41.10597
#3	.0120153	.0043066	.0134810	-.001176	-.002170	40.94018

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0953616	.0053150	.0031493	118.0642	.0528001	.2276926
Stddev	.0003352	.0000925	.0000320	.1888	.0001144	.0002200
%RSD	.3515188	1.740846	1.017189	.1598787	.2166497	.0966193
#1	.0952891	.0054211	.0031618	118.2655	.0526809	.2276805
#2	.0957271	.0052729	.0031732	118.0360	.0528105	.2274788
#3	.0950685	.0052511	.0031129	117.8912	.0529090	.2279183

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2145257	32.64713	8.349551	94.67799	.4627882	.0006373
Stddev	.0016995	.06978	.007913	.14591	.0007219	.0002503
%RSD	.7922304	.2137427	.0947714	.1541097	.1559891	39.28200
#1	.2164757	32.70079	8.341340	94.84076	.4620145	.0004194
#2	.2133594	32.67235	8.357128	94.55896	.4629063	.0005817
#3	.2137422	32.56824	8.350185	94.63424	.4634437	.0009107

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.623759	.0198153	1.191274	2.111376	.6215360	.7123496
Stddev	.176401	.0013250	.006609	.050814	.0050119	.0049004
%RSD	3.136703	6.686650	.5548067	2.406657	.8063722	.6879235
#1	5.490837	.0211755	1.184830	2.163096	.6273233	.7149117
#2	5.823884	.0197421	1.190956	2.061520	.6186549	.7066992
#3	5.556556	.0185285	1.198037	2.109511	.6186299	.7154378

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-14 Acquired: 1/27/2025 18:09:47 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8D4 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000398	F 344.2602	F 18.20372	-.002662	.0033545	.0844205
Stddev	.000295	.5252	.06125	.000396	.0004477	.0004644
%RSD	74.26629	.1525629	.3364881	14.89639	13.34645	.5501412
#1	-.000060	344.0510	18.24554	-.002689	.0036995	.0845280
#2	-.000528	344.8578	18.13341	-.003044	.0035155	.0848217
#3	-.000605	343.8719	18.23221	-.002252	.0028486	.0839117

Elem	Sr4077
Units	ppm
Avg	.7002508
Stddev	.0018009
%RSD	.2571721
#1	.6988912
#2	.7022932
#3	.6995680

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3943.453	85672.91	13458.06	2757.149	4066.652
Stddev	18.642	207.71	79.16	5.675	10.890
%RSD	.4727292	.2424465	.5882231	.2058186	.2677840
#1	3964.140	85494.91	13404.40	2763.699	4079.225
#2	3938.261	85901.13	13548.98	2753.710	4060.482
#3	3927.957	85622.71	13420.79	2754.038	4060.248

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-15 Acquired: 1/27/2025 18:13:46 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8C3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0079218	.0034909	.0117135	-.000286	-.000526	79.09333
Stddev	.0014132	.0014719	.0023882	.003189	.001316	.65830
%RSD	17.83883	42.16485	20.38853	1116.349	249.9452	.8323089
#1	.0079339	.0046018	.0141358	.003392	.000207	79.74467
#2	.0093288	.0040494	.0093609	-.002286	-.002046	78.42828
#3	.0065026	.0018214	.0116439	-.001963	.000259	79.10702

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1020343	.0025927	.0066270	130.2663	.0769533	.5152044
Stddev	.0001165	.0000317	.0000967	.7015	.0002350	.0016079
%RSD	.1141989	1.222250	1.459138	.5385281	.3053467	.3120865
#1	.1021675	.0025607	.0065260	130.9807	.0769390	.5141718
#2	.1019510	.0026241	.0066362	129.5784	.0771951	.5143844
#3	.1019844	.0025932	.0067187	130.2397	.0767258	.5170569

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2482853	29.05583	9.671455	65.73241	.4336911	.0023038
Stddev	.0015344	.18134	.061859	.40997	.0011631	.0004320
%RSD	.6179975	.6241221	.6396057	.6236982	.2681981	18.75061
#1	.2470725	29.23514	9.740971	66.15338	.4328285	.0021029
#2	.2500103	28.87252	9.622478	65.33440	.4332308	.0020089
#3	.2477732	29.05983	9.650915	65.70945	.4350139	.0027996

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.884595	.0110342	1.276829	4.536592	1.646714	.6798226
Stddev	.259331	.0002605	.005937	.030680	.008061	.0043858
%RSD	3.766826	2.361216	.4649772	.6762829	.4895303	.6451442
#1	6.994087	.0108104	1.283371	4.544236	1.642873	.6755420
#2	6.588475	.0113202	1.271782	4.502813	1.641291	.6843066
#3	7.071222	.0109721	1.275336	4.562728	1.655977	.6796193

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-15 Acquired: 1/27/2025 18:13:46 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8C3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000519	F 354.8120	F 31.20367	-.002969	.0005461	.1769289
Stddev	.000174	1.4359	.07223	.000404	.0003610	.0012049
%RSD	33.50507	.4046831	.2314682	13.60894	66.10493	.6810236
#1	-.000555	353.3993	31.18351	-.003323	.0004891	.1783069
#2	-.000329	354.7666	31.28384	-.002529	.0002170	.1760734
#3	-.000671	356.2700	31.14368	-.003056	.0009322	.1764065

Elem	Sr4077
Units	ppm
Avg	.9033037
Stddev	.0091838
%RSD	1.016688
#1	.9133485
#2	.8953372
#3	.9012255

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4016.608	85570.96	13513.20	2804.364	4072.735
Stddev	11.807	91.40	108.37	5.863	10.756
%RSD	.2939504	.1068073	.8019902	.2090553	.2640932
#1	4027.475	85476.37	13619.77	2798.077	4082.308
#2	4018.305	85658.78	13403.10	2805.336	4074.802
#3	4004.045	85577.72	13516.73	2809.680	4061.096

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-17 Acquired: 1/27/2025 18:17:43 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8D5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0041927**	**-.004643**	**.0108053**	**.0185473**	**.0159180**	**.1464988**
Stddev	.0018536	.001520	.0011042	.0032384	.0018160	.0087925
%RSD	44.21019	32.72612	10.21879	17.46010	11.40824	6.001782
#1	.0023787	-.004497	.0095365	.0160357	.0166261	.1524931
#2	.0060835	-.003202	.0113309	.0174039	.0172732	.1505982
#3	.0041158	-.006231	.0115484	.0222023	.0138547	.1364052

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0777842**	**.0001191**	**.0050217**	**364.6004**	**-.001003**	**.0599431**
Stddev	.0000226	.0000909	.0000846	2.0725	.000536	.0002133
%RSD	.0290323	76.38610	1.684029	.5684396	53.42821	.3558085
#1	.0778097	.0000175	.0049445	363.8270	-.000398	.0601838
#2	.0777670	.0001467	.0051121	363.0257	-.001417	.0597774
#3	.0777758	.0001930	.0050086	366.9484	-.001195	.0598681

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.013093**	**201.1998**	**10.41929**	**100.3719**	**.0795656**	**-.003793**
Stddev	.001383	.5327	.03792	.1352	.0006326	.000047
%RSD	10.56534	.2647813	.3639795	.1346852	.7950276	1.251917
#1	-.012369	200.9865	10.45281	100.2838	.0795145	-.003769
#2	-.012223	200.8068	10.37813	100.3044	.0789602	-.003847
#3	-.014688	201.8062	10.42694	100.5275	.0802222	-.003762

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.927522**	**-.017498**	**.4102036**	**1.532265**	**.0057480**	**1.039566**
Stddev	.204511	.000759	.0042010	.039707	.0033431	.003192
%RSD	5.207132	4.335392	1.024115	2.591395	58.16067	.3070120
#1	3.936241	-.016812	.4147673	1.578081	.0021878	1.038345
#2	4.127534	-.017370	.4064979	1.510865	.0062360	1.037165
#3	3.718790	-.018313	.4093456	1.507848	.0088203	1.043187

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1136-17 Acquired: 1/27/2025 18:17:43 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8D5 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001668	F 376.1387	2.678027	-.003533	-.010704	.0113325
Stddev	.000335	1.2301	.012334	.000848	.000074	.0006542
%RSD	20.07307	.3270448	.4605646	23.99804	.6869743	5.773262
#1	-.002007	375.4730	2.689862	-.003611	-.010673	.0109812
#2	-.001658	375.3849	2.678970	-.002649	-.010651	.0120873
#3	-.001338	377.5583	2.665248	-.004339	-.010788	.0109288

Elem	Sr4077
Units	ppm
Avg	3.850540
Stddev	.038400
%RSD	.9972549
#1	3.857861
#2	3.809007
#3	3.884753

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3489.308	75365.86	11543.44	2434.497	3837.083
Stddev	11.925	347.47	21.00	9.392	13.107
%RSD	.3417540	.4610465	.1819455	.3857909	.3415815
#1	3502.905	75549.68	11565.33	2432.218	3852.216
#2	3484.388	75582.81	11541.53	2444.818	3829.315
#3	3480.630	74965.09	11523.46	2426.453	3829.719

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: PB166225BL Acquired: 1/27/2025 18:21:59 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBW225 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000623**	**.0005352**	**.0008322**	**.0013114**	**.0001719**	**-.000119**	**-.003365**
Stddev	.001272	.0006912	.0001620	.0015875	.0005950	.001599	.000592
%RSD	204.0651	129.1527	19.46529	121.0538	346.0423	1343.159	17.58660
#1	-.002080	-.000241	.0009753	.0003872	-.000402	.000515	-.002713
#2	-.000063	.000764	.0008650	.0031445	.000786	-.001937	-.003515
#3	.000272	.001083	.0006563	.0004026	.000132	.001066	-.003868

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000013**	**.0000011**	**.0075288**	**-.000103**	**.0001393**	**.0008206**	**.0035664**
Stddev	.000009	.0000321	.0017054	.000054	.0000742	.0010620	.0042617
%RSD	70.40643	2974.829	22.65102	52.62722	53.29549	129.4162	119.4958
#1	-.000011	.0000240	.0092286	-.000165	.0002177	-.000207	-.001221
#2	-.000006	.0000149	.0075400	-.000069	.0001299	.001914	.006946
#3	-.000024	-.000036	.0058179	-.000073	.0000701	.000755	.004975

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000071**	**.0013373**	**.0002350**	**-.000146**	**.1657949**	**.0000811**	**.0002356**
Stddev	.000294	.0092197	.0004424	.000099	.2263315	.0013124	.0004649
%RSD	411.7839	689.4341	188.2795	67.95640	136.5129	1617.873	197.3271
#1	.000122	.0103863	.0001843	-.000038	.0119731	.0015521	.0002658
#2	.000073	.0016697	-.000180	-.000168	.0597302	-.000970	-.000244
#3	-.000409	-.008044	.000701	-.000233	.4256815	-.000339	.000685

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.260876**	**.0012495**	**.0026252**	**.0001890**	**.0371799**	**-.002169**	**.0008306**
Stddev	.040015	.0021619	.0003609	.0000640	.0036812	.000693	.0002358
%RSD	15.33873	173.0220	13.74762	33.88274	9.901026	31.94046	28.38491
#1	-.305360	.0024806	.0030088	.0002503	.0413220	-.002140	.0008157
#2	-.249457	.0025147	.0022924	.0001943	.0359354	-.002876	.0010735
#3	-.227812	-.001247	.0025744	.0001225	.0342822	-.001492	.0006027

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: PB166225BL Acquired: 1/27/2025 18:21:59 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBW225 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0008117	-.001002	.0001151
Stddev	.0007696	.000334	.0000434
%RSD	94.82008	33.32943	37.72200
#1	.0012434	-.001290	.0000742
#2	.0012685	-.001081	.0001607
#3	-.000077	-.000636	.0001104

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3580.647	75253.79	10856.19	2459.633	4487.391
Stddev	22.160	93.58	24.71	4.304	38.169
%RSD	.6188722	.1243558	.2275677	.1750000	.8505906
#1	3555.851	75159.28	10836.03	2454.663	4443.524
#2	3587.576	75346.42	10848.79	2462.170	4505.632
#3	3598.514	75255.67	10883.75	2462.067	4513.018

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: PB166225BS Acquired: 1/27/2025 18:26:09 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS225 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0185689**	**.0525976**	**.0209437**	**.0646695**	**.1090086**	**.3736171**	**.3784682**
Stddev	.0030094	.0016518	.0012724	.0031029	.0009538	.0067394	.0102444
%RSD	16.20672	3.140395	6.075457	4.798146	.8749376	1.803823	2.706797
#1	.0197590	.0507247	.0223470	.0658456	.1079306	.3813329	.3898330
#2	.0208014	.0532213	.0206192	.0611505	.1097428	.3688823	.3699436
#3	.0151465	.0538467	.0198649	.0670125	.1093522	.3706359	.3756280

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0103090**	**.0101636**	**9.933772**	**.0218915**	**.0989978**	**.0543569**	**.2133373**
Stddev	.0001088	.0001411	.252902	.0006377	.0009608	.0007707	.0076814
%RSD	1.055178	1.388471	2.545877	2.912899	.9705002	1.417873	3.600590
#1	.0102039	.0100323	10.22523	.0226221	.0982802	.0547063	.2214377
#2	.0103018	.0101457	9.77229	.0214467	.0986239	.0534733	.2061579
#3	.0104211	.0103128	9.80380	.0216057	.1000893	.0548909	.2124165

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0304609**	**8.900605**	**.0810664**	**.0190965**	**9.475852**	**.1035723**	**.1175361**
Stddev	.0007721	.162163	.0008108	.0005338	.312641	.0022558	.0028979
%RSD	2.534663	1.821930	1.000139	2.795456	3.299339	2.177987	2.465505
#1	.0312404	9.086095	.0803988	.0197035	9.337120	.1020930	.1197691
#2	.0296964	8.830035	.0808318	.0187003	9.256585	.1024552	.1142614
#3	.0304458	8.785685	.0819686	.0188856	9.833852	.1061686	.1185778

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.237858**	**.0193891**	**.0022918**	**.0203635**	**.1964343**	**.4562112**	**.0144799**
Stddev	.236709	.0010240	.0004319	.0004503	.0046984	.0085886	.0006215
%RSD	2.562379	5.281546	18.84557	2.211515	2.391832	1.882601	4.292290
#1	9.511177	.0193672	.0018663	.0198447	.1910269	.4514677	.0151389
#2	9.103111	.0204239	.0027298	.0205925	.1987572	.4510405	.0139042
#3	9.099286	.0183762	.0022792	.0206534	.1995187	.4661255	.0143966

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: PB166225BS Acquired: 1/27/2025 18:26:09 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS225 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2072024	.0280845	.1786881
Stddev	.0022485	.0009741	.0042913
%RSD	1.085174	3.468492	2.401543
#1	.2066280	.0289221	.1835024
#2	.2052967	.0270155	.1752650
#3	.2096823	.0283157	.1772970

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3626.429	74409.76	11428.59	2453.117	4445.966
Stddev	18.895	1647.87	93.89	52.941	26.749
%RSD	.5210450	2.214583	.8215770	2.158114	.6016518
#1	3631.023	72528.31	11498.71	2393.640	4455.710
#2	3642.604	75104.36	11465.16	2470.622	4466.478
#3	3605.660	75596.60	11321.92	2495.088	4415.711

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-01 Acquired: 1/27/2025 18:30:12 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s 2.900808	kF -1.05253	k 1.986246	s .5507783	sF 28.47547	k 17.91555
Stddev	.091714	.00958	.007872	.0227655	.95201	.07725
%RSD	3.161679	.9099603	.3963126	4.133336	3.343276	.4311708
#1	s 2.848463	k -1.04384	k 1.985788	s .5301500	s 27.99546	k 17.89200
#2	s 2.847253	k -1.05096	k 1.978613	s .5469815	s 27.85901	k 18.00184
#3	s 3.006708	k -1.06280	k 1.994337	s .5752036	s 29.57193	k 17.85283

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3752152	k -.011689	k .0166001	88.01727	F 316.9976	F 114.5901
Stddev	.0016217	.000151	.0001565	.19787	1.2418	.6192
%RSD	.4322073	1.295276	.9430301	.2248055	.3917347	.5404037
#1	.3757795	k -.011833	k .0166808	87.95264	315.6101	114.7910
#2	.3764794	k -.011531	k .0164197	88.23937	318.0047	115.0839
#3	.3733867	k -.011702	k .0166998	87.85979	317.3780	113.8953

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k 3.125149	k 139.5769	k 2.166465	12.79844	F 96.79248	k -.029902
Stddev	.016956	.3593	.003891	.04258	.23599	.000350
%RSD	.5425790	.2574081	.1795885	.3326846	.2438129	1.170451
#1	k 3.134917	k 139.4204	k 2.164499	12.78361	96.52015	k -.029960
#2	k 3.134959	k 139.9879	k 2.170946	12.84646	96.92038	k -.029526
#3	k 3.105569	k 139.3225	k 2.163949	12.76527	96.93691	k -.030219

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	36.86520	k .1714895	k 4.842877	2.100792	k 3.046386	k .2076306
Stddev	.28075	.0093044	.028360	.019419	.019136	.0001832
%RSD	.7615698	5.425636	.5856021	.9243643	.6281470	.0882157
#1	37.18677	k .1607728	k 4.847734	2.123206	k 3.028632	k .2074415
#2	36.74006	k .1761885	k 4.868494	2.090129	k 3.043871	k .2078072
#3	36.66878	k .1775074	k 4.812401	2.089041	k 3.066655	k .2076431

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-01 Acquired: 1/27/2025 18:30:12 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ0 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	sF 360.9821	kF 168.7950	k 3.375686	.3358744	.3658211	.0208091
Stddev	10.8475	.4162	.005105	.0013353	.0022616	.0007197
%RSD	3.004987	.2465702	.1512394	.3975524	.6182261	3.458616
#1	s 355.2243	k 168.4479	k 3.370437	.3343631	.3682397	.0214690
#2	s 354.2277	k 168.6806	k 3.380635	.3363659	.3637588	.0209168
#3	s 373.4945	k 169.2564	k 3.375986	.3368943	.3654650	.0200417

Elem	Sr4077
Units	ppm
Avg	.7737799
Stddev	.0029965
%RSD	.3872574
#1	.7745113
#2	.7763431
#3	.7704854

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	^ *****	72997.45	11572.09	1980.348	3908.024
Stddev	-----	235.54	22.59	7.986	3.886
%RSD	-----	.3226630	.1952053	.4032500	.0994401
#1	^ -----	73149.45	11580.55	1982.592	3911.668
#2	^ -----	72726.13	11546.49	1971.480	3908.471
#3	^ -----	73116.76	11589.22	1986.971	3903.934

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-02 Acquired: 1/27/2025 18:34:26 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1107924	-.029082	2.885827	.0308061	.0608309	43.42664
Stddev	.0017403	.001474	.025662	.0032888	.0017955	.37201
%RSD	1.570754	5.069672	.8892402	10.67571	2.951622	.8566388
#1	.1090809	-.030426	2.857671	.0273377	.0598692	43.00126
#2	.1125600	-.027505	2.891907	.0338796	.0597212	43.58758
#3	.1107363	-.029317	2.907902	.0312010	.0629024	43.69108

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2877065	.0042921	.0076725	31.55529	26.31424	F 11.91319
Stddev	.0024256	.0000481	.0001404	.13028	.10626	.11788
%RSD	.8430794	1.120507	1.829248	.4128597	.4038021	.9894947
#1	.2851991	.0042735	.0076672	31.40765	26.20328	11.78292
#2	.2878793	.0042560	.0075349	31.60417	26.41507	11.94412
#3	.2900410	.0043466	.0078154	31.65407	26.32438	12.01251

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.266639	120.1486	.8712623	18.52408	F 11.50748	.0011576
Stddev	.008941	.7345	.0024140	.02487	.11504	.0001034
%RSD	.7058598	.6113147	.2770701	.1342677	.9997098	8.928771
#1	1.276635	119.3151	.8689481	18.49599	11.38010	.0011312
#2	1.259405	120.4295	.8710735	18.54331	11.53853	.0010700
#3	1.263878	120.7011	.8737651	18.53292	11.60381	.0012716

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	31.55221	.2653342	1.947634	9.463292	F 11.93254	.6557734
Stddev	.09093	.0019155	.007655	.116930	.12694	.0027071
%RSD	.2881936	.7219141	.3930438	1.235612	1.063772	.4128043
#1	31.63906	.2634159	1.953521	9.332048	11.78762	.6526932
#2	31.55988	.2672469	1.950400	9.501461	11.98602	.6568525
#3	31.45769	.2653399	1.938980	9.556368	12.02399	.6577744

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-02 Acquired: 1/27/2025 18:34:26 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ1 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.754979	F 105.4346	5.082301	.0911807	1.067668	.0710895
Stddev	.016167	.7817	.027982	.0010387	.002903	.0007556
%RSD	.9211860	.7413850	.5505850	1.139178	.2719345	1.062858
#1	1.736718	104.5507	5.114596	.0903003	1.071020	.0702217
#2	1.760753	105.7179	5.065242	.0923263	1.066054	.0714452
#3	1.767467	106.0351	5.067067	.0909156	1.065930	.0716015

Elem	Sr4077
Units	ppm
Avg	.4135445
Stddev	.0027549
%RSD	.6661708
#1	.4104992
#2	.4142708
#3	.4158636

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3403.305	79807.50	12109.42	2597.378	4172.774
Stddev	31.233	62.65	93.93	6.364	40.952
%RSD	.9177173	.0785035	.7756857	.2450057	.9814118
#1	3436.000	79878.08	12002.84	2594.072	4217.260
#2	3400.138	79785.97	12145.32	2593.347	4164.416
#3	3373.776	79758.45	12180.12	2604.714	4136.645

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-03 Acquired: 1/27/2025 18:38:28 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0828945	-.004345	1.567960	.0281109	.0213732	37.11711
Stddev	.0043395	.001055	.005914	.0012601	.0010590	.32680
%RSD	5.235001	24.27128	.3771557	4.482618	4.954738	.8804617
#1	.0829448	-.003398	1.574217	.0288413	.0212350	36.75390
#2	.0872086	-.005481	1.562462	.0288356	.0224945	37.21004
#3	.0785300	-.004156	1.567203	.0266559	.0203901	37.38737

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3236039	.0072655	.0152435	16.79408	1.845119	F 8.528199
Stddev	.0037358	.0001004	.0001576	.14261	.004878	.036148
%RSD	1.154428	1.381651	1.033693	.8491620	.2643797	.4238648
#1	.3193097	.0073711	.0154164	16.63639	1.839948	8.566598
#2	.3253956	.0071713	.0151081	16.83186	1.849640	8.494828
#3	.3261063	.0072541	.0152059	16.91400	1.845768	8.523172

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.188620	99.28287	.5477526	9.304021	F 5.133687	.0024866
Stddev	.003884	.75718	.0033695	.057084	.022117	.0002989
%RSD	.3267594	.7626453	.6151461	.6135390	.4308284	12.01900
#1	1.191763	98.52040	.5438663	9.246613	5.157583	.0027981
#2	1.184278	99.29357	.5495344	9.360775	5.113934	.0024595
#3	1.189818	100.0346	.5498571	9.304676	5.129544	.0022022

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.31914	.1535716	2.286873	2.813644	2.844984	.5091452
Stddev	.29200	.0016856	.027820	.097168	.015830	.0029872
%RSD	1.369673	1.097565	1.216499	3.453464	.5564237	.5867038
#1	21.55573	.1555132	2.254812	2.734597	2.860855	.5060994
#2	21.40890	.1524833	2.304641	2.784210	2.829195	.5092661
#3	20.99280	.1527184	2.301167	2.922127	2.844902	.5120701

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-03 Acquired: 1/27/2025 18:38:28 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ2 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1316058	F 60.40851	2.361144	.0784245	.6172808	.0332066
Stddev	.0006639	.28906	.013884	.0004956	.0032524	.0002601
%RSD	.5044885	.4785018	.5880169	.6319248	.5268864	.7832934
#1	.1323682	60.71560	2.376854	.0784259	.6191893	.0330609
#2	.1311546	60.14171	2.350519	.0779283	.6135254	.0330519
#3	.1312947	60.36821	2.356060	.0789194	.6191276	.0335068

Elem	Sr4077
Units	ppm
Avg	.1975145
Stddev	.0020596
%RSD	1.042748
#1	.1951621
#2	.1983879
#3	.1989934

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3861.479	82584.64	12858.22	2675.659	4205.128
Stddev	10.310	249.09	130.40	19.236	16.151
%RSD	.2669847	.3016121	1.014135	.7189407	.3840774
#1	3850.861	82861.16	12707.93	2697.736	4189.167
#2	3871.450	82514.90	12925.43	2666.742	4221.462
#3	3862.124	82377.86	12941.30	2662.500	4204.754

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-04 Acquired: 1/27/2025 18:42:21 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0513198**	**-.000629**	**.5237729**	**.0194253**	**.0124175**	**35.65171**
Stddev	.0002776	.000603	.0041839	.0054014	.0017374	.10008
%RSD	.5408730	95.80961	.7988036	27.80586	13.99186	.2807132
#1	.0516150	.000023	.5261460	.0147329	.0106559	35.71672
#2	.0510641	-.000744	.5262308	.0253298	.0124669	35.70194
#3	.0512804	-.001166	.5189420	.0182133	.0141298	35.53646

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1136273**	**.0022595**	**.0026221**	**14.58903**	**.2201465**	**1.500838**
Stddev	.0006834	.0000327	.0000880	.03482	.0004002	.004444
%RSD	.6014270	1.448304	3.356305	.2386980	.1817928	.2961277
#1	.1129396	.0022858	.0025690	14.61255	.2197552	1.504223
#2	.1136360	.0022698	.0025736	14.60551	.2205551	1.502485
#3	.1143063	.0022229	.0027237	14.54903	.2201293	1.495805

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1737731**	**109.1590**	**.4931003**	**9.769327**	**.6503931**	**.0008161**
Stddev	.0013167	.2896	.0009593	.040347	.0020698	.0007576
%RSD	.7577109	.2652566	.1945500	.4129951	.3182427	92.82906
#1	.1730721	109.3049	.4931101	9.759104	.6515292	.0008702
#2	.1729553	109.3465	.4940546	9.813801	.6516460	.0015451
#3	.1752920	108.8255	.4921360	9.735074	.6480040	.0000329

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.23713**	**.1136370**	**.3775964**	**4.387295**	**1.692565**	**.5406279**
Stddev	.31362	.0010663	.0060613	.051739	.006254	.0009302
%RSD	1.630281	.9383219	1.605240	1.179285	.3694915	.1720684
#1	18.89062	.1124472	.3801262	4.428484	1.696661	.5402514
#2	19.50151	.1139576	.3706800	4.329224	1.695668	.5416874
#3	19.31927	.1145062	.3819831	4.404177	1.685366	.5399449

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-04 Acquired: 1/27/2025 18:42:21 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0395593	F 79.21304	4.326668	.0229890	.9192270	.0533192
Stddev	.0005081	.25685	.016214	.0011175	.0032224	.0007147
%RSD	1.284500	.3242515	.3747551	4.861258	.3505602	1.340347
#1	.0401364	79.44878	4.338209	.0233090	.9179835	.0526144
#2	.0391791	79.25102	4.308130	.0217463	.9168116	.0532999
#3	.0393623	78.93931	4.333664	.0239116	.9228859	.0540433

Elem	Sr4077
Units	ppm
Avg	.1252882
Stddev	.0001004
%RSD	.0801186
#1	.1253914
#2	.1251908
#3	.1252825

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3716.909	78004.70	12200.24	2526.186	4317.000
Stddev	3.333	85.43	24.70	4.112	8.229
%RSD	.0896641	.1095133	.2024704	.1627581	.1906156
#1	3717.645	77982.20	12204.86	2521.449	4314.059
#2	3713.269	77932.77	12222.31	2528.279	4310.646
#3	3719.812	78099.12	12173.56	2528.829	4326.295

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-05 Acquired: 1/27/2025 18:46:18 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0887587	-.003815	1.256959	.0354469	.0203947	74.63712
Stddev	.0007121	.002862	.002521	.0023605	.0009010	.11897
%RSD	.8022455	75.02293	.2005629	6.659274	4.417598	.1593932
#1	.0885262	-.001301	1.259207	.0331248	.0206197	74.52924
#2	.0895580	-.006929	1.257438	.0353720	.0211619	74.76471
#3	.0881920	-.003213	1.254233	.0378440	.0194026	74.61743

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2613228	.0066585	.0106948	22.29805	4.467221	F 5.539451
Stddev	.0009596	.0000694	.0000421	.06419	.006754	.006676
%RSD	.3671993	1.042575	.3934527	.2878868	.1511993	.1205225
#1	.2603182	.0067105	.0106491	22.23430	4.474725	5.542457
#2	.2622299	.0066854	.0107034	22.36267	4.465312	5.544095
#3	.2614202	.0065797	.0107320	22.29717	4.461627	5.531800

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5673546	176.8981	1.363929	30.31978	4.299666	.0025893
Stddev	.0030938	.3648	.003202	.14447	.006265	.0000930
%RSD	.5453058	.2062156	.2347744	.4764992	.1457118	3.593048
#1	.5700791	176.5004	1.360610	30.19258	4.301939	.0024865
#2	.5639912	177.2172	1.367000	30.28990	4.304477	.0026677
#3	.5679934	176.9766	1.364175	30.47686	4.292581	.0026136

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	45.33569	.2029770	2.028322	17.08317	8.100535	.8591426
Stddev	.29208	.0022968	.012421	.03695	.016852	.0019689
%RSD	.6442507	1.131542	.6123702	.2163046	.2080390	.2291667
#1	45.67292	.2003311	2.013980	17.04053	8.115342	.8569879
#2	45.16379	.2041438	2.035553	17.10311	8.104067	.8608478
#3	45.17034	.2044561	2.035434	17.10587	8.082197	.8595922

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-05 Acquired: 1/27/2025 18:46:18 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ4 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3978152	F 121.8718	5.933357	.0537031	1.537713	.1303187
Stddev	.0007691	.2516	.035397	.0008963	.007751	.0010375
%RSD	.1933378	.2064842	.5965704	1.669037	.5040552	.7961386
#1	.3974968	122.0991	5.966914	.0537624	1.546539	.1308607
#2	.3972563	121.9151	5.896370	.0527786	1.534582	.1309729
#3	.3986924	121.6014	5.936786	.0545683	1.532016	.1291224

Elem	Sr4077
Units	ppm
Avg	.2420323
Stddev	.0005141
%RSD	.2124197
#1	.2414815
#2	.2424995
#3	.2421158

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3907.762	84254.98	13356.31	2701.572	4103.706
Stddev	10.196	72.49	42.84	5.677	2.705
%RSD	.2609268	.0860420	.3207368	.2101339	.0659150
#1	3918.206	84338.19	13316.62	2708.099	4106.829
#2	3907.247	84205.42	13401.73	2697.780	4102.146
#3	3897.833	84221.35	13350.59	2698.838	4102.142

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-06 Acquired: 1/27/2025 18:50:12 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0758936**	**-.001625**	**.6278153**	**.0263370**	**.0212763**	**66.94854**
Stddev	.0016367	.002706	.0018563	.0036617	.0025127	.35037
%RSD	2.156622	166.4602	.2956676	13.90322	11.80970	.5233429
#1	.0754000	-.000433	.6256744	.0222337	.0241261	66.75774
#2	.0745605	.000279	.6289758	.0275055	.0193796	67.35290
#3	.0777203	-.004723	.6287956	.0292718	.0203234	66.73498

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2335204**	**.0050290**	**.0057691**	**12.08603**	**10.72783**	**3.313764**
Stddev	.0011446	.0000315	.0000628	.05035	.01388	.004510
%RSD	.4901358	.6269093	1.089241	.4165680	.1293960	.1361042
#1	.2329008	.0050645	.0057082	12.03638	10.71194	3.317409
#2	.2348412	.0050042	.0057654	12.13704	10.73759	3.308720
#3	.2328192	.0050183	.0058337	12.08467	10.73397	3.315163

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4254242**	**140.8663**	**1.181699**	**28.04811**	**3.049012**	**.0024285**
Stddev	.0023754	.6492	.002807	.07000	.002601	.0003627
%RSD	.5583659	.4608816	.2375662	.2495776	.0852969	14.93592
#1	.4275602	140.4035	1.180106	27.99312	3.046564	.0020204
#2	.4258464	141.6084	1.184940	28.12691	3.048731	.0027141
#3	.4228659	140.5869	1.180051	28.02430	3.051742	.0025510

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**43.36818**	**.1982497**	**1.202322**	**15.04062**	**3.986184**	**.6879979**
Stddev	.26469	.0028034	.007570	.09411	.006360	.0017970
%RSD	.6103430	1.414073	.6295914	.6257077	.1595498	.2611967
#1	43.62252	.1950230	1.194382	14.96563	3.992684	.6862402
#2	43.38781	.1996390	1.203126	15.14622	3.979975	.6898318
#3	43.09422	.2000872	1.209458	15.01000	3.985893	.6879216

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-06 Acquired: 1/27/2025 18:50:12 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ5 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3549858	F 87.68603	6.651267	.0358445	1.389649	.1160669
Stddev	.0011761	.06225	.035652	.0004993	.005818	.0002786
%RSD	.3313179	.0709923	.5360168	1.393079	.4186861	.2399947
#1	.3563177	87.69479	6.670719	.0362262	1.393242	.1160304
#2	.3540900	87.61987	6.672963	.0360278	1.392770	.1158084
#3	.3545498	87.74344	6.610121	.0352794	1.382936	.1163619

Elem	Sr4077
Units	ppm
Avg	.2344730
Stddev	.0007621
%RSD	.3250118
#1	.2337570
#2	.2352740
#3	.2343880

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3677.307	81613.01	12961.46	2639.032	4111.323
Stddev	7.681	193.77	55.70	12.274	2.926
%RSD	.2088666	.2374204	.4297090	.4650814	.0711694
#1	3675.023	81743.44	12906.92	2653.142	4112.666
#2	3671.028	81390.36	12959.21	2633.129	4107.966
#3	3685.871	81705.23	13018.25	2630.825	4113.336

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-07 Acquired: 1/27/2025 18:54:06 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0160958**	**-.001158**	**.2745051**	**.0097443**	**.0045347**	**28.97688**
Stddev	.0024044	.001497	.0015219	.0021515	.0009838	.14580
%RSD	14.93806	129.2583	.5544122	22.08002	21.69417	.5031488
#1	.0154435	.000526	.2751680	.0118921	.0038285	28.95353
#2	.0140848	-.001663	.2727642	.0075890	.0041172	28.84416
#3	.0187590	-.002338	.2755832	.0097519	.0056583	29.13294

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3099365**	**.0214913**	**.0092636**	**30.42619**	**.0915794**	**.1703208**
Stddev	.0008669	.0001238	.0001147	.14954	.0000973	.0005823
%RSD	.2796935	.5758313	1.237970	.4914734	.1062642	.3418634
#1	.3100586	.0213704	.0093300	30.48986	.0916015	.1705626
#2	.3090151	.0216178	.0091312	30.25535	.0914729	.1696565
#3	.3107359	.0214857	.0093296	30.53334	.0916637	.1707431

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1753573**	**51.50031**	**1.085514**	**14.61912**	**.2456831**	**.0003314**
Stddev	.0004585	.26098	.006890	.06058	.0006307	.0001290
%RSD	.2614548	.5067447	.6347637	.4144023	.2567246	38.92772
#1	.1756491	51.56146	1.090492	14.67468	.2462978	.0002211
#2	.1748289	51.21419	1.077649	14.55453	.2450375	.0002997
#3	.1755940	51.72528	1.088400	14.62815	.2457141	.0004732

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**48.64287**	**.0569178**	**.4519639**	**5.467896**	**6.042413**	**.2529071**
Stddev	.12353	.0004758	.0022605	.029247	.017002	.0012609
%RSD	.2539465	.8359001	.5001450	.5348868	.2813851	.4985556
#1	48.63009	.0564963	.4522977	5.468482	6.061728	.2531911
#2	48.52622	.0568236	.4495550	5.438361	6.035799	.2515284
#3	48.77228	.0574337	.4540389	5.496846	6.029710	.2540018

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-07 Acquired: 1/27/2025 18:54:06 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ6 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044542	F 19.01717	5.331130	.0437626	.2652369	.0192900
Stddev	.0003441	.03688	.012284	.0001407	.0006031	.0006201
%RSD	7.726131	.1939549	.2304277	.3214582	.2273821	3.214742
#1	.0048417	19.05955	5.339045	.0439178	.2645478	.0198178
#2	.0043368	18.99227	5.316978	.0437264	.2654942	.0186071
#3	.0041841	18.99970	5.337367	.0436435	.2656687	.0194452

Elem	Sr4077
Units	ppm
Avg	.3169615
Stddev	.0019789
%RSD	.6243481
#1	.3167210
#2	.3151138
#3	.3190497

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4873.225	104875.4	16585.51	3384.625	4125.338
Stddev	9.385	229.8	56.28	11.553	5.028
%RSD	.1925880	.2190792	.3393342	.3413390	.1218742
#1	4868.161	104627.3	16548.86	3375.258	4120.433
#2	4867.459	105080.9	16557.35	3397.535	4125.100
#3	4884.055	104917.9	16650.31	3381.083	4130.480

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-08 Acquired: 1/27/2025 18:58:02 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0762684**	**.0014393**	**.7580748**	**.0253209**	**.0059362**	**25.63936**
Stddev	.0003441	.0019059	.0011665	.0013653	.0008527	.12040
%RSD	.4511400	132.4246	.1538710	5.391856	14.36538	.4695900
#1	.0762097	.0031943	.7589986	.0238890	.0050179	25.77780
#2	.0759575	-.000588	.7567640	.0254657	.0067031	25.58118
#3	.0766381	.001712	.7584617	.0266080	.0060875	25.55909

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5175466**	**.0176600**	**.0075058**	**16.24432**	**.1707346**	**.2458559**
Stddev	.0043935	.0000587	.0000808	.05212	.0005790	.0003321
%RSD	.8489126	.3322518	1.076404	.3208623	.3391086	.1350824
#1	.5225101	.0175943	.0075757	16.30390	.1712429	.2457112
#2	.5159734	.0176787	.0074173	16.22187	.1708566	.2462358
#3	.5141563	.0177071	.0075244	16.20718	.1701044	.2456207

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2430461**	**51.17148**	**.3841331**	**11.66616**	**.2569313**	**.0002890**
Stddev	.0034915	.25146	.0042861	.05242	.0006564	.0000772
%RSD	1.436556	.4914081	1.115778	.4493729	.2554651	26.70928
#1	.2463117	51.46150	.3889742	11.71533	.2563661	.0003243
#2	.2434610	51.01429	.3808218	11.67216	.2567767	.0003422
#3	.2393658	51.03864	.3826034	11.61100	.2576512	.0002005

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**35.52005**	**.0858408**	**.5413282**	**5.259314**	**4.930691**	**.2647862**
Stddev	.26413	.0013324	.0051231	.055584	.003098	.0013080
%RSD	.7436166	1.552186	.9463965	1.056868	.0628361	.4939699
#1	35.57500	.0870979	.5470885	5.306339	4.927504	.2661400
#2	35.75239	.0844441	.5396141	5.273631	4.933693	.2635294
#3	35.23277	.0859805	.5372818	5.197972	4.930875	.2646891

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-08 Acquired: 1/27/2025 18:58:02 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ7 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0133872	F 41.57838	4.463615	.0190624	.7151061	.0185252
Stddev	.0002723	.04867	.015891	.0009659	.0037486	.0010561
%RSD	2.034186	.1170488	.3560074	5.066846	.5242041	5.700845
#1	.0135658	41.52270	4.474700	.0194581	.7183365	.0196899
#2	.0130738	41.59964	4.470737	.0197675	.7159861	.0182559
#3	.0135220	41.61280	4.445410	.0179615	.7109958	.0176299

Elem	Sr4077
Units	ppm
Avg	.3102727
Stddev	.0023469
%RSD	.7564062
#1	.3129150
#2	.3094729
#3	.3084303

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4299.088	91831.87	14424.83	2956.707	4243.047
Stddev	9.293	198.02	29.94	6.038	3.422
%RSD	.2161527	.2156326	.2075544	.2042146	.0806404
#1	4306.754	91612.45	14457.89	2950.047	4245.702
#2	4301.757	91997.29	14417.05	2958.251	4244.254
#3	4288.753	91885.87	14399.55	2961.823	4239.186

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-09 Acquired: 1/27/2025 19:01:57 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ7D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0769253**	**.0034966**	**.7559648**	**.0260618**	**.0054233**	**25.82483**
Stddev	.0017997	.0013330	.0027344	.0022606	.0008029	.16673
%RSD	2.339519	38.12312	.3617148	8.673925	14.80505	.6456195
#1	.0752774	.0019875	.7577560	.0271328	.0048627	25.66399
#2	.0766527	.0045135	.7528173	.0234647	.0063431	25.99688
#3	.0788457	.0039889	.7573210	.0275878	.0050641	25.81362

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5188818**	**.0175681**	**.0075353**	**16.22423**	**.1699403**	**.2459365**
Stddev	.0030683	.0000584	.0000648	.05521	.0001582	.0003033
%RSD	.5913275	.3321896	.8604947	.3403214	.0931097	.1233061
#1	.5162157	.0175712	.0074900	16.19398	.1700372	.2457608
#2	.5222356	.0175082	.0076096	16.28796	.1697577	.2457621
#3	.5181942	.0176248	.0075064	16.19075	.1700259	.2462867

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2345918**	**51.19346**	**.3845146**	**11.69990**	**.2573014**	**.0004577**
Stddev	.0022899	.25175	.0003344	.05657	.0002623	.0001119
%RSD	.9761364	.4917557	.0869709	.4834659	.1019328	24.45034
#1	.2340509	50.91144	.3849002	11.69141	.2575070	.0004957
#2	.2371038	51.39548	.3843400	11.76023	.2570060	.0005458
#3	.2326208	51.27348	.3843037	11.64806	.2573912	.0003318

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**35.51939**	**.0857176**	**.5396046**	**5.271787**	**4.909200**	**.2650126**
Stddev	.30735	.0006170	.0026315	.024207	.016950	.0014732
%RSD	.8653016	.7198190	.4876634	.4591744	.3452654	.5559102
#1	35.31229	.0854441	.5374666	5.247901	4.901627	.2634214
#2	35.87253	.0852847	.5425434	5.296302	4.897357	.2663293
#3	35.37335	.0864241	.5388037	5.271156	4.928616	.2652871

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-09 Acquired: 1/27/2025 19:01:57 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ7D Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0132973	F 41.50570	5.006735	.0194143	.7288295	.0189314
Stddev	.0001172	.12780	.025866	.0001986	.0055872	.0004779
%RSD	.8816883	.3079102	.5166260	1.022833	.7666006	2.524584
#1	.0131745	41.47584	4.978330	.0192383	.7239565	.0183803
#2	.0133095	41.39547	5.028934	.0196296	.7349276	.0192325
#3	.0134080	41.64578	5.012940	.0193751	.7276043	.0191814

Elem	Sr4077
Units	ppm
Avg	.3106060
Stddev	.0021805
%RSD	.7020182
#1	.3087406
#2	.3130032
#3	.3100741

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4297.715	91895.71	14543.53	2975.262	4245.104
Stddev	22.746	121.79	76.07	11.557	17.798
%RSD	.5292672	.1325313	.5230617	.3884292	.4192660
#1	4301.877	91766.15	14484.19	2963.846	4246.356
#2	4318.093	92007.87	14629.29	2974.987	4262.243
#3	4273.175	91913.10	14517.12	2986.954	4226.712

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-08LX5 Acquired: 1/27/2025 19:05:53 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ7L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0183215	.0016233	.1562835	.0066361	.0021017	5.813757	.1135360
Stddev	.0016658	.0012309	.0016812	.0012581	.0007304	.004477	.0010928
%RSD	9.092208	75.82618	1.075719	18.95800	34.75314	.0770033	.9624681
#1	.0173967	.0006640	.1563557	.0074854	.0029397	5.816756	.1122743
#2	.0173234	.0030113	.1545674	.0072321	.0017649	5.815905	.1141563
#3	.0202446	.0011947	.1579274	.0051908	.0016004	5.808611	.1141775

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043476	.0014586	3.709881	.0404108	.0493884	.0591074	11.75691
Stddev	.0000625	.0000938	.012976	.0002464	.0001076	.0007665	.02499
%RSD	1.436414	6.433259	.3497700	.6097962	.2178565	1.296833	.2125856
#1	.0043659	.0015576	3.711430	.0404217	.0495123	.0582236	11.73073
#2	.0042780	.0013710	3.696200	.0406516	.0493191	.0595919	11.78052
#3	.0043988	.0014471	3.722013	.0401591	.0493338	.0595065	11.75949

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0877011	2.638854	.0516309	-.000127	8.343853	.0202908	.1239131
Stddev	.0001750	.012127	.0001960	.000304	.250434	.0012497	.0018135
%RSD	.1994819	.4595699	.3796430	239.2859	3.001417	6.159139	1.463541
#1	.0875192	2.650525	.0516110	.000087	8.238250	.0214558	.1259047
#2	.0878682	2.639721	.0518362	-.000475	8.629792	.0204457	.1234778
#3	.0877159	2.626317	.0514457	.000007	8.163517	.0189708	.1223569

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.072871	.9993895	.0600495	.0031898	8.473208	1.135413	.0044953
Stddev	.020834	.0050438	.0002485	.0001371	.008380	.000924	.0003773
%RSD	1.941883	.5046902	.4137929	4.298296	.0988996	.0813666	8.393869
#1	1.066986	.9937930	.0600688	.0030322	8.464069	1.134637	.0044307
#2	1.055613	1.000791	.0597919	.0032555	8.475024	1.136435	.0041545
#3	1.096015	1.003584	.0602878	.0032818	8.480531	1.135168	.0049008

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-08LX5 Acquired: 1/27/2025 19:05:53 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ7L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1713136	.0041739	.0687818
Stddev	.0010617	.0006062	.0001455
%RSD	.6197319	14.52420	.2115321
#1	.1723141	.0037401	.0689498
#2	.1701998	.0039149	.0686965
#3	.1714269	.0048665	.0686990

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3810.103	81769.80	12166.22	2648.438	4466.002
Stddev	10.242	14.44	13.11	16.093	11.707
%RSD	.2688141	.0176611	.1077614	.6076312	.2621373
#1	3799.695	81753.40	12173.96	2638.202	4452.903
#2	3810.445	81775.37	12173.62	2640.125	4469.660
#3	3820.170	81780.63	12151.08	2666.987	4475.444

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-10 Acquired: 1/27/2025 19:09:55 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ7S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1339277**	**.1026208**	**.7745042**	**.1661957**	**.1455581**	**28.41242**
Stddev	.0005221	.0007588	.0021186	.0003630	.0012662	.01854
%RSD	.3898556	.7393905	.2735373	.2184179	.8698824	.0652699
#1	.1342806	.1034471	.7754324	.1657783	.1441555	28.42170
#2	.1333280	.1024601	.7760002	.1663714	.1466167	28.42450
#3	.1341747	.1019553	.7720799	.1664375	.1459023	28.39107

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.637436**	**.0950733**	**.1017736**	**16.25911**	**.5183211**	**1.191218**
Stddev	.013423	.0006535	.0000187	.03734	.0025162	.001130
%RSD	.3690368	.6873190	.0183867	.2296858	.4854481	.0948541
#1	3.632190	.0948465	.1017729	16.23597	.5183533	1.191915
#2	3.652690	.0945634	.1017927	16.23917	.5157890	1.191824
#3	3.627428	.0958099	.1017553	16.30219	.5208210	1.189914

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6428840**	**51.92037**	**1.161244**	**11.59006**	**1.210144**	**.0591598**
Stddev	.0008985	.03235	.002554	.07743	.001199	.0001947
%RSD	.1397567	.0622995	.2199118	.6680842	.0990585	.3290638
#1	.6438478	51.89672	1.158306	11.55135	1.210680	.0593709
#2	.6427345	51.90717	1.162927	11.53962	1.210981	.0589874
#3	.6420696	51.95723	1.162499	11.67921	1.208771	.0591212

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**37.12641**	**.9004768**	**1.288618**	**5.173423**	**4.876510**	**.2687201**
Stddev	.11082	.0024242	.006814	.017620	.015382	.0002880
%RSD	.2984939	.2692109	.5287502	.3405900	.3154389	.1071928
#1	36.99854	.9032042	1.281188	5.165830	4.858784	.2685739
#2	37.19464	.8996586	1.294575	5.193566	4.886359	.2690520
#3	37.18604	.8985676	1.290091	5.160871	4.884385	.2685346

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-10 Acquired: 1/27/2025 19:09:55 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ7S Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0126365	F 40.32393	5.901444	.0193608	.7599771	.0191091
Stddev	.0006480	.04079	.043884	.0006275	.0024225	.0007701
%RSD	5.128317	.1011680	.7436075	3.241307	.3187579	4.030094
#1	.0119129	40.28034	5.850959	.0193019	.7614311	.0182484
#2	.0128332	40.36118	5.922914	.0187648	.7571806	.0193456
#3	.0131634	40.33028	5.930459	.0200157	.7613196	.0197332

Elem	Sr4077
Units	ppm
Avg	.3072861
Stddev	.0009980
%RSD	.3247906
#1	.3071294
#2	.3083533
#3	.3063757

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4389.354	92517.36	14270.50	3044.232	4333.650
Stddev	2.706	608.22	100.87	21.438	.575
%RSD	.0616425	.6574097	.7068162	.7042109	.0132676
#1	4392.124	92848.01	14316.63	3065.448	4334.288
#2	4386.718	92888.64	14340.05	3044.670	4333.490
#3	4389.222	91815.44	14154.81	3022.579	4333.172

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-11 Acquired: 1/27/2025 19:13:47 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0B00 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1371115**	**-.007159**	**.9798147**	**.0604072**	**.0324829**	**26.87135**
Stddev	.0033768	.001783	.0024698	.0044332	.0023147	.15295
%RSD	2.462828	24.90229	.2520722	7.338834	7.125984	.5691854
#1	.1407689	-.009010	.9806871	.0602477	.0324011	27.03226
#2	.1364533	-.007013	.9770270	.0649180	.0302102	26.85393
#3	.1341122	-.005454	.9817299	.0560559	.0348375	26.72786

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7460745**	**.0041471**	**.0255657**	**37.97886**	**.1383036**	**.0706457**
Stddev	.0054043	.0000761	.0000943	.11119	.0003427	.0001186
%RSD	.7243703	1.834464	.3687755	.2927631	.2477607	.1678524
#1	.7518600	.0041157	.0256054	38.10275	.1385910	.0707770
#2	.7452072	.0042338	.0254580	37.94606	.1379244	.0705463
#3	.7411562	.0040917	.0256336	37.88775	.1383954	.0706140

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4005731**	**359.4077**	**1.228077**	**23.65972**	**.2272666**	**-.000793**
Stddev	.0027952	1.4378	.002976	.13693	.0006168	.000662
%RSD	.6978016	.4000588	.2423409	.5787484	.2713881	83.42702
#1	.3999063	360.9631	1.230855	23.80759	.2279713	-.000136
#2	.4036415	359.1329	1.228440	23.63427	.2268248	-.001459
#3	.3981716	358.1271	1.224936	23.53731	.2270037	-.000784

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**38.41468**	**.1215893**	**4.436435**	**6.627691**	F **19.34846**	**1.578505**
Stddev	.27939	.0012165	.015546	.072078	.03699	.008465
%RSD	.7273124	1.000511	.3504130	1.087531	.1911824	.5362975
#1	38.73615	.1213478	4.454057	6.702382	19.37959	1.587826
#2	38.27751	.1205117	4.430583	6.622146	19.35822	1.576397
#3	38.23039	.1229085	4.424664	6.558545	19.30757	1.571293

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-11 Acquired: 1/27/2025 19:13:47 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0B00 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0136625	F 74.48428	4.926083	3.228632	.7755144	.0360083
Stddev	.0002207	.10799	.003575	.002861	.0043932	.0010525
%RSD	1.615343	.1449831	.0725773	.0886161	.5664944	2.922964
#1	.0139128	74.60180	4.926127	3.227735	.7759490	.0372227
#2	.0134958	74.46164	4.922486	3.226327	.7796742	.0353599
#3	.0135788	74.38941	4.929636	3.231834	.7709200	.0354423

Elem	Sr4077
Units	ppm
Avg	.3096480
Stddev	.0019452
%RSD	.6282128
#1	.3117635
#2	.3092441
#3	.3079364

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3706.723	80214.10	12354.02	2611.569	4112.473
Stddev	7.030	94.78	29.21	4.703	4.347
%RSD	.1896587	.1181621	.2364489	.1800807	.1057007
#1	3714.629	80108.69	12386.46	2606.182	4107.681
#2	3701.173	80241.28	12345.81	2613.673	4113.576
#3	3704.368	80292.32	12329.80	2614.853	4116.163

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: CCV023 Acquired: 1/27/2025 19:21:58 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV023 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.008648**	**4.621067**	**24.30442**	**4.836545**	**4.887723**	**403.1535**
Stddev	.015598	.031475	.06413	.019075	.021906	3.2345
%RSD	.3114301	.6811128	.2638621	.3943887	.4481851	.8023036
#1	4.993762	4.592299	24.25520	4.817788	4.870404	400.7363
#2	5.007309	4.616218	24.28111	4.835926	4.880416	406.8278
#3	5.024872	4.654685	24.37694	4.855923	4.912348	401.8962

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.925218**	**.4788448**	**2.420897**	**405.8619**	**15.34153**	**2.418212**
Stddev	.163891	.0015954	.007264	1.3479	.05483	.006523
%RSD	1.651258	.3331801	.3000573	.3321087	.3574173	.2697247
#1	9.736040	.4771928	2.414577	404.8210	15.29878	2.413479
#2	10.01544	.4803769	2.419280	407.3845	15.40335	2.415505
#3	10.02417	.4789647	2.428833	405.3803	15.32247	2.425652

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.45309**	**407.7298**	**14.80126**	**398.7629**	**2.415123**	**1.254635**
Stddev	.02856	.7187	.03126	.4072	.006429	.001621
%RSD	.1975909	.1762768	.2112248	.1021050	.2661829	.1292059
#1	14.48529	408.2175	14.83732	399.1403	2.410601	1.256356
#2	14.43081	408.0674	14.78478	398.8169	2.412286	1.254413
#3	14.44317	406.9044	14.78169	398.3314	2.422482	1.253137

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**377.2276**	**2.390490**	**15.06274**	**154.6102**	**4.943449**	F **5.837398**
Stddev	1.2773	.005794	.05540	.3519	.015648	.001737
%RSD	.3385919	.2423909	.3677641	.2275777	.3165407	.0297514
#1	378.5058	2.396589	15.08724	154.9100	4.925919	5.838011
#2	375.9513	2.385057	15.10167	154.6978	4.956008	5.835439
#3	377.2258	2.389825	14.99932	154.2228	4.948419	5.838746

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: CCV023 Acquired: 1/27/2025 19:21:58 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV023 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.792162**	**4.890443**	F **2.518286**	**4.891494**	**4.833492**	**5.075464**
Stddev	.021531	.003443	.003883	.007883	.006526	.019360
%RSD	.4492898	.0704117	.1541949	.1611537	.1350224	.3814455
#1	4.769884	4.886916	2.522477	4.885724	4.839958	5.097580
#2	4.793742	4.890619	2.514811	4.888282	4.826907	5.067227
#3	4.812859	4.893796	2.517571	4.900476	4.833610	5.061584

Elem	Sr4077
Units	ppm
Avg	**4.695748**
Stddev	.039090
%RSD	.8324467
#1	4.705760
#2	4.652626
#3	4.728858

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2893.928**	**63732.11**	**10662.11**	**2048.358**	**3336.536**
Stddev	9.374	192.38	28.73	12.921	7.934
%RSD	.3239248	.3018511	.2694833	.6308126	.2378009
#1	2901.086	63840.10	10691.36	2047.267	3338.315
#2	2897.382	63510.00	10633.92	2036.017	3343.430
#3	2883.317	63846.22	10661.04	2061.790	3327.863

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: CCB023 Acquired: 1/27/2025 19:26:16 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB023 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001181**	**.0006702**	**.0022601**	**-.000047**	**-.000924**	**.0108340**	**-.000231**
Stddev	.001676	.0009652	.0006161	.000581	.001336	.0059688	.000665
%RSD	141.8848	144.0126	27.26032	1244.158	144.4599	55.09291	288.1232
#1	-.001970	-.000311	.0015743	.000374	-.001860	.0113365	-.000280
#2	-.002317	.000703	.0027670	.000196	-.001518	.0165357	-.000870
#3	.000744	.001619	.0024388	-.000710	.000605	.0046299	.000458

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000446**	**.0000444**	**.0064767**	**.0004219**	**-.000251**	**-.000828**	**.0165488**
Stddev	.0000260	.0001009	.0085163	.0002064	.000140	.001304	.0058505
%RSD	58.29272	227.0753	131.4909	48.92167	55.80852	157.4397	35.35283
#1	.0000700	.0000689	.0007217	.0003322	-.000141	-.000743	.0135583
#2	.0000456	-.000066	.0024486	.0002755	-.000408	.000431	.0127981
#3	.0000181	.000131	.0162598	.0006580	-.000203	-.002172	.0232901

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001883**	**-.001827**	**-.000154**	**-.000262**	**.2779442**	**-.000544**	**.0008709**
Stddev	.0000940	.010191	.000307	.000271	.4246571	.001064	.0014574
%RSD	49.91652	557.7130	199.5250	103.5411	152.7850	195.6227	167.3473
#1	.0002043	-.005142	-.000475	-.000474	-.107335	.000683	.0024685
#2	.0002733	-.009948	.000135	.000043	.207899	-.001107	.0005297
#3	.0000873	.009608	-.000121	-.000354	.733269	-.001207	-.000386

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0812839**	**.0006881**	**.0053732**	**.0006957**	**.0073695**	**-.001187**	**.0007498**
Stddev	.0595517	.0013600	.0005885	.0003965	.0030854	.000712	.0005698
%RSD	73.26387	197.6434	10.95346	56.99160	41.86748	59.97173	75.99646
#1	.0507496	.0001777	.0059371	.0003669	.0103224	-.001505	.0013722
#2	.1499097	.0022295	.0047627	.0005843	.0041667	-.001685	.0006235
#3	.0431923	-.000343	.0054198	.0011361	.0076195	-.000372	.0002538

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: CCB023 Acquired: 1/27/2025 19:26:16 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB023 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0011127	.0001217	.0001065
Stddev	.0006691	.0004483	.0000619
%RSD	60.13703	368.2657	58.06954
#1	.0015244	-.000381	.0001025
#2	.0003406	.000481	.0000468
#3	.0014731	.000266	.0001703

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3714.578	76897.24	11513.22	2536.835	4685.209
Stddev	2.806	225.48	49.09	17.471	1.730
%RSD	.0755477	.2932185	.4263627	.6886962	.0369331
#1	3714.691	76981.56	11536.67	2524.439	4687.183
#2	3717.326	76641.76	11546.19	2529.249	4683.955
#3	3711.717	77068.40	11456.81	2556.817	4684.490

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-12 Acquired: 1/27/2025 19:30:26 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0B01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0481784**	**.0001711**	**.4414277**	**.0162768**	**.0095664**	**47.48957**
Stddev	.0015515	.0028367	.0052274	.0016489	.0007393	.28046
%RSD	3.220302	1658.153	1.184200	10.13054	7.727591	.5905789
#1	.0487045	.0029154	.4353916	.0180842	.0091402	47.80597
#2	.0493985	.0003476	.4444499	.0158914	.0091390	47.39115
#3	.0464323	-.002750	.4444415	.0148546	.0104200	47.27157

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2283234**	**.0026150**	**.0046276**	**7.044954**	**.2454005**	**.0733015**
Stddev	.0018475	.0000143	.0001358	.035080	.0012304	.0011477
%RSD	.8091725	.5483212	2.934788	.4979445	.5013624	1.565776
#1	.2302813	.0026244	.0044915	7.067083	.2466800	.0719829
#2	.2280782	.0026220	.0046283	7.063272	.2452955	.0740765
#3	.2266108	.0025985	.0047631	7.004507	.2442260	.0738450

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3810478**	**92.77312**	**.4424163**	**13.60289**	**.1201436**	**.0021654**
Stddev	.0021223	.31404	.0029401	.06869	.0010853	.0002874
%RSD	.5569621	.3385039	.6645615	.5049917	.9033661	13.27329
#1	.3822765	93.12485	.4457496	13.66109	.1188918	.0024660
#2	.3822697	92.67365	.4413076	13.62045	.1207177	.0021368
#3	.3785972	92.52086	.4401917	13.52712	.1208214	.0018933

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**44.38362**	**.1537935**	**.8084750**	**7.374062**	**2.563812**	**.4561118**
Stddev	.15450	.0014903	.0049510	.053506	.031765	.0012017
%RSD	.3480921	.9690104	.6123918	.7255997	1.238977	.2634767
#1	44.32550	.1520926	.8122138	7.426948	2.527207	.4573712
#2	44.55875	.1544183	.8103510	7.375280	2.580087	.4559870
#3	44.26662	.1548697	.8028601	7.319957	2.584141	.4549774

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1151-12 Acquired: 1/27/2025 19:30:26 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0B01 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0187871	F 62.05840	5.243198	.0261074	.8123913	.0660628
Stddev	.0002450	.80515	.017791	.0016757	.0007545	.0016896
%RSD	1.304301	1.297401	.3393165	6.418428	.0928746	2.557632
#1	.0185912	61.13642	5.246664	.0247638	.8117282	.0677864
#2	.0187083	62.41579	5.259000	.0255734	.8132122	.0659927
#3	.0190619	62.62298	5.223929	.0279850	.8122334	.0644093

Elem	Sr4077
Units	ppm
Avg	.1300828
Stddev	.0012795
%RSD	.9836061
#1	.1313735
#2	.1300601
#3	.1288148

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3730.302	79256.60	12367.48	2600.274	4198.203
Stddev	43.358	146.27	38.70	6.294	49.581
%RSD	1.162327	.1845480	.3129358	.2420669	1.181015
#1	3779.364	79088.28	12410.87	2605.489	4253.171
#2	3714.405	79328.70	12355.06	2602.052	4184.583
#3	3697.135	79352.81	12336.51	2593.282	4156.855

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1163-01 Acquired: 1/27/2025 19:34:22 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2946 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1042699**	**-.128049**	**5.508688**	**.1690843**	**.1851631**	**68.79401**
Stddev	.0037504	.003811	.012274	.0110686	.0048023	.39139
%RSD	3.596822	2.976031	.2228044	6.546204	2.593569	.5689372
#1	.1077011	-.124239	5.502457	.1677601	.1815522	69.24580
#2	.1048423	-.131861	5.500780	.1807555	.1833239	68.57832
#3	.1002661	-.128047	5.522827	.1587374	.1906132	68.55790

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7791559**	**.0047180**	**.0911256**	**677.2669**	**4.848385**	**.1388398**
Stddev	.0039225	.0003337	.0004646	2.6763	.005011	.0007624
%RSD	.5034248	7.072574	.5098592	.3951614	.1033565	.5491052
#1	.7836829	.0043458	.0911756	675.3081	4.853986	.1385539
#2	.7767695	.0048177	.0906381	676.1763	4.846844	.1397038
#3	.7770152	.0049905	.0915632	680.3163	4.844326	.1382617

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5131712**	F **1998.852**	F **75.56418**	**169.1272**	**2.189279**	^ *****
Stddev	.0073478	13.100	.42186	.4345	.001411	-----
%RSD	1.431831	.6553534	.5582758	.2568861	.0644404	-----
#1	.5083219	1986.084	75.42738	169.4845	2.187811	^ -----
#2	.5095667	2012.260	76.03746	169.2536	2.189402	^ -----
#3	.5216252	1998.211	75.22770	168.6436	2.190625	^ -----

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.800338**	**.5094739**	**15.70207**	**7.118252**	**7.612564**	**8.337842**
Stddev	.412073	.0027775	.06932	.042111	.017976	.056806
%RSD	22.88867	.5451719	.4414425	.5915941	.2361363	.6813015
#1	1.559147	.5086149	15.73225	7.146568	7.596877	8.285168
#2	2.276144	.5072273	15.75119	7.069859	7.608637	8.398031
#3	1.565723	.5125794	15.62278	7.138328	7.632180	8.330325

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1163-01 Acquired: 1/27/2025 19:34:22 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2946 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0971056	F 11.99948	9.507232	.1100535	4.178698	.1402231
Stddev	.0005909	.00962	.021608	.0011026	.005831	.0004385
%RSD	.6085168	.0801575	.2272805	1.001898	.1395367	.3127227
#1	.0964664	11.98865	9.487661	.1109137	4.173356	.1405902
#2	.0976320	12.00276	9.530421	.1104363	4.184918	.1397375
#3	.0972185	12.00703	9.503614	.1088105	4.177819	.1403417

Elem	Sr4077
Units	ppm
Avg	.6783806
Stddev	.0042597
%RSD	.6279196
#1	.6830886
#2	.6772598
#3	.6747933

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2993.173	67276.99	10844.95	2063.405	3458.375
Stddev	10.005	100.90	49.84	8.586	6.319
%RSD	.3342743	.1499830	.4595752	.4161109	.1827040
#1	2992.119	67223.59	10900.13	2059.234	3453.367
#2	3003.664	67214.00	10803.20	2057.702	3465.474
#3	2983.736	67393.37	10831.53	2073.280	3456.284

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1163-02 Acquired: 1/27/2025 19:38:38 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0746377	-.019411	.9659339	.0552717	.0462035	80.69071
Stddev	.0041640	.006090	.0011769	.0065508	.0017436	.75654
%RSD	5.578904	31.37407	.1218442	11.85203	3.773694	.9375797
#1	.0698296	-.025314	.9645757	.0605889	.0481813	81.15866
#2	.0770268	-.013149	.9666525	.0479538	.0448884	79.81789
#3	.0770566	-.019771	.9665736	.0572723	.0455409	81.09557

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6574066	.0038659	.0193801	F 888.8159	5.372557	.1395831
Stddev	.0060449	.0000342	.0000468	3.5987	.027685	.0010423
%RSD	.9195073	.8852256	.2416483	.4048904	.5152961	.7467113
#1	.6621622	.0038567	.0194067	886.2616	5.380052	.1385633
#2	.6506040	.0038373	.0193261	887.2545	5.341897	.1395395
#3	.6594537	.0039038	.0194077	892.9316	5.395723	.1406465

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2664803	489.5933	22.44953	216.7917	2.819015	-.002660
Stddev	.0035586	2.0576	.17177	1.4597	.001983	.000680
%RSD	1.335408	.4202713	.7651325	.6733084	.0703374	25.56424
#1	.2682367	489.4280	22.55911	217.8371	2.818422	-.002778
#2	.2688192	487.6232	22.25157	215.1240	2.817397	-.001928
#3	.2623850	491.7285	22.53792	217.4139	2.821227	-.003273

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9485598	.2742583	2.660203	11.70779	5.400723	2.165908
Stddev	.2480010	.0005586	.016272	.17444	.022970	.010482
%RSD	26.14500	.2036815	.6116943	1.489935	.4253216	.4839405
#1	.6855989	.2748497	2.672985	11.79339	5.412910	2.165555
#2	.9818407	.2741857	2.641885	11.50709	5.374228	2.155607
#3	1.178240	.2737395	2.665739	11.82289	5.415033	2.176562

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1163-02 Acquired: 1/27/2025 19:38:38 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0980913	7.120568	6.392913	.0297586	1.776980	.1670473
Stddev	.0004708	.028442	.028664	.0009162	.006395	.0015550
%RSD	.4799404	.3994309	.4483762	3.078830	.3598827	.9308491
#1	.0981142	7.122833	6.371534	.0301299	1.783682	.1677550
#2	.0976094	7.091062	6.425485	.0304308	1.776311	.1652644
#3	.0985501	7.147810	6.381719	.0287150	1.770945	.1681225

Elem	Sr4077
Units	ppm
Avg	1.185499
Stddev	.002826
%RSD	.2384020
#1	1.182490
#2	1.185910
#3	1.188098

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3259.482	72510.08	11757.33	2319.022	3405.213
Stddev	5.643	421.63	45.08	10.935	3.857
%RSD	.1731313	.5814722	.3833982	.4715508	.1132543
#1	3260.247	72314.96	11770.36	2324.782	3401.526
#2	3264.703	72993.92	11707.18	2325.873	3409.220
#3	3253.495	72221.35	11794.47	2306.410	3404.893

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1163-03 Acquired: 1/27/2025 19:42:55 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0769327**	**-.020059**	**.9686592**	**.0548029**	**.0462518**	**81.68234**
Stddev	.0037242	.000774	.0043947	.0021400	.0022148	.33272
%RSD	4.840912	3.859237	.4536935	3.904941	4.788570	.4073360
#1	.0797049	-.020923	.9680526	.0524610	.0487239	82.05507
#2	.0783937	-.019428	.9645993	.0552910	.0455832	81.41531
#3	.0726994	-.019827	.9733257	.0566567	.0444484	81.57664

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6740935**	**.0038298**	**.0196740**	F **895.8859**	**5.360172**	**.1397466**
Stddev	.0030297	.0001559	.0000898	5.5837	.012592	.0003760
%RSD	.4494519	4.071562	.4562306	.6232631	.2349268	.2690542
#1	.6774047	.0038619	.0195715	901.8276	5.368412	.1393154
#2	.6714601	.0039671	.0197385	895.0829	5.366427	.1400062
#3	.6734157	.0036603	.0197122	890.7471	5.345676	.1399181

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2740179**	**493.7014**	**22.82466**	**220.0438**	**2.826918**	**.0001274**
Stddev	.0030252	1.3701	.07257	.1923	.003396	.0012297
%RSD	1.104028	.2775258	.3179380	.0873783	.1201211	965.3388
#1	.2715808	495.0599	22.90843	220.2656	2.823022	.0000110
#2	.2730692	492.3199	22.78088	219.9408	2.828485	-.001040
#3	.2774038	493.7244	22.78467	219.9250	2.829247	.001411

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7356500**	**.2810744**	**2.728869**	**11.76513**	**5.410554**	**2.180721**
Stddev	.1182567	.0022924	.005954	.03565	.015637	.007281
%RSD	16.07513	.8155796	.2181680	.3030165	.2890101	.3338597
#1	.7012322	.2835127	2.733166	11.80505	5.394652	2.188019
#2	.8672975	.2789631	2.722073	11.75385	5.411097	2.173458
#3	.6384202	.2807472	2.731367	11.73648	5.425912	2.180685

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1163-03 Acquired: 1/27/2025 19:42:55 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947D Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0982520	7.122397	6.560362	.0304705	1.828748	.1719432
Stddev	.0001389	.009543	.038056	.0004873	.015411	.0022100
%RSD	.1414065	.1339820	.5800959	1.599290	.8427212	1.285325
#1	.0980945	7.116597	6.588005	.0304214	1.836887	.1743799
#2	.0983040	7.117184	6.516957	.0300095	1.810974	.1700682
#3	.0983574	7.133411	6.576124	.0309805	1.838384	.1713815

Elem	Sr4077
Units	ppm
Avg	1.205794
Stddev	.012726
%RSD	1.055429
#1	1.201805
#2	1.220037
#3	1.195540

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3262.477	73848.84	11850.54	2320.521	3404.496
Stddev	2.685	297.41	24.27	8.136	3.603
%RSD	.0823037	.4027260	.2048190	.3506166	.1058365
#1	3261.046	73691.28	11844.31	2323.369	3408.129
#2	3260.810	73663.35	11877.32	2311.343	3404.435
#3	3265.574	74191.87	11830.00	2326.850	3400.923

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1163-02LX5 Acquired: 1/27/2025 19:47:14 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0174166	-.001518	.2072335	.0188841	.0081968	16.87573	.1422591
Stddev	.0010509	.001315	.0009951	.0018594	.0020189	.10704	.0007300
%RSD	6.033841	86.65222	.4801851	9.846405	24.63000	.6342771	.5131326
#1	.0167299	-.002903	.2080553	.0170868	.0089697	16.85027	.1429242
#2	.0168935	-.000286	.2075180	.0208000	.0097150	16.99321	.1423750
#3	.0186263	-.001364	.2061271	.0187656	.0059057	16.78373	.1414781

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008057	.0032437	199.8521	1.242110	.0283770	.0557774	112.4404
Stddev	.0000691	.0001113	1.1903	.002266	.0005792	.0019775	.4690
%RSD	8.576109	3.430485	.5956012	.1824640	2.041061	3.545368	.4171390
#1	.0008854	.0033434	199.4207	1.242514	.0280221	.0577580	112.3135
#2	.0007684	.0031237	201.1980	1.244147	.0280636	.0538030	112.9598
#3	.0007632	.0032640	198.9376	1.239668	.0290454	.0557712	112.0478

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.084091	47.13093	.5981617	.0007790	-.220285	.0635057	.5701035
Stddev	.039066	.36333	.0046819	.0003898	.101023	.0009757	.0052029
%RSD	.7683942	.7708941	.7827130	50.03782	45.86042	1.536386	.9126302
#1	5.080053	46.90692	.5959785	.0003298	-.143893	.0638579	.5743101
#2	5.125020	47.55014	.5949701	.0009789	-.334828	.0624028	.5717149
#3	5.047202	46.93574	.6035364	.0010282	-.182133	.0642564	.5642856

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.407741	1.062993	.5002345	.0213576	1.388442	1.433677	.0033651
Stddev	.068251	.009125	.0018122	.0005682	.007950	.007528	.0008082
%RSD	2.834634	.8584655	.3622787	2.660483	.5725837	.5251018	24.01716
#1	2.441931	1.058908	.5000832	.0207893	1.384429	1.427108	.0030470
#2	2.452140	1.056624	.5021177	.0219258	1.383299	1.441892	.0027644
#3	2.329153	1.073448	.4985027	.0213578	1.397599	1.432031	.0042840

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1163-02LX5 Acquired: 1/27/2025 19:47:14 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.4093648	.0341158	.2580134
Stddev	.0015905	.0012977	.0019378
%RSD	.3885238	3.803710	.7510441
#1	.4075413	.0326478	.2580711
#2	.4100869	.0345898	.2599217
#3	.4104661	.0351098	.2560474

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3440.546	73469.75	11460.23	2395.716	3970.580
Stddev	19.747	126.18	48.40	15.112	24.098
%RSD	.5739413	.1717498	.4223660	.6307951	.6069146
#1	3448.550	73535.07	11477.14	2380.823	3984.004
#2	3455.034	73324.29	11497.90	2395.286	3984.977
#3	3418.054	73549.88	11405.63	2411.038	3942.760

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1163-04 Acquired: 1/27/2025 19:51:15 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1495834**	**.0765470**	**1.007403**	**.2318924**	**.2235862**	**87.24203**
Stddev	.0025554	.0031341	.002446	.0043844	.0027983	.18425
%RSD	1.708379	4.094324	.2428012	1.890716	1.251547	.2111884
#1	.1481458	.0731718	1.008030	.2351829	.2219368	87.03916
#2	.1525339	.0771037	1.009475	.2335792	.2220046	87.28801
#3	.1480705	.0793654	1.004705	.2269151	.2268171	87.39894

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.459812**	**.0927290**	**.1162155**	F **922.6688**	**5.781490**	**1.117685**
Stddev	.007087	.0003921	.0001622	9.6686	.019853	.001224
%RSD	.1589042	.4228047	.1395929	1.047897	.3433958	.1095318
#1	4.453563	.0923730	.1160284	915.6053	5.763372	1.116426
#2	4.467512	.0926647	.1163166	918.7130	5.802713	1.117757
#3	4.458362	.0931492	.1163016	933.6880	5.778386	1.118871

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7332237**	**507.6303**	**24.39963**	**225.9886**	**3.787356**	**.0749165**
Stddev	.0040919	2.9329	.10799	1.1721	.003084	.0002904
%RSD	.5580644	.5777711	.4426037	.5186532	.0814378	.3876967
#1	.7373134	504.2613	24.27940	224.6352	3.784638	.0747093
#2	.7291296	509.0152	24.48841	226.6637	3.790708	.0747916
#3	.7332282	509.6143	24.43107	226.6669	3.786722	.0752485

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.045496**	**1.172618**	**3.684265**	**12.14729**	**5.440300**	**2.254478**
Stddev	.136178	.004738	.014293	.03203	.021248	.013061
%RSD	13.02518	.4040369	.3879567	.2636940	.3905602	.5793507
#1	.992382	1.167573	3.669200	12.17721	5.419769	2.239535
#2	.943880	1.173307	3.685958	12.11350	5.438931	2.260177
#3	1.200227	1.176973	3.697636	12.15117	5.462198	2.263721

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1163-04 Acquired: 1/27/2025 19:51:15 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947S Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0973091	7.099963	6.745373	.0317424	1.835852	.1768968
Stddev	.0005985	.021262	.029127	.0004488	.007990	.0012034
%RSD	.6151021	.2994639	.4318095	1.414048	.4352344	.6802875
#1	.0979862	7.091087	6.711748	.0313373	1.826738	.1755421
#2	.0970907	7.084577	6.762817	.0322250	1.841654	.1778421
#3	.0968505	7.124225	6.761553	.0316650	1.839163	.1773062

Elem	Sr4077
Units	ppm
Avg	1.244777
Stddev	.020664
%RSD	1.660043
#1	1.241539
#2	1.266869
#3	1.225923

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3241.192	71511.28	11793.21	2296.346	3382.917
Stddev	10.866	246.24	56.89	9.334	6.554
%RSD	.3352535	.3443403	.4824065	.4064618	.1937410
#1	3228.651	71793.80	11858.88	2306.666	3375.424
#2	3247.810	71397.77	11758.86	2293.875	3385.739
#3	3247.115	71342.27	11761.88	2288.496	3387.587

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: PB166229BL Acquired: 1/27/2025 19:55:31 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS229 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001881**	**.0003755**	**.0001183**	**-.000523**	**-.000747**	**-.000492**	**-.000430**
Stddev	.0025802	.0006974	.0005484	.002403	.000627	.006221	.000080
%RSD	1371.744	185.7212	463.4718	459.4435	83.82581	1264.986	18.65943
#1	.0031673	-.000213	.0007027	-.000698	-.000050	-.000755	-.000401
#2	-.001272	.001146	-.000385	.001963	-.001262	-.006577	-.000369
#3	-.001331	.000194	.000037	-.002834	-.000931	.005857	-.000521

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000027**	**.0000000**	**.0233346**	**.0002740**	**.0000098**	**-.000569**	**.0126157**
Stddev	.000046	.0000626	.0043313	.0001810	.0000245	.001179	.0044588
%RSD	168.5023	129641.6	18.56155	66.04262	249.4866	207.1788	35.34331
#1	.000001	-.000022	.0267812	.0002897	-.000015	.000279	.0173531
#2	-.000002	-.000049	.0247498	.0000857	.000010	-.000071	.0119930
#3	-.000080	.000071	.0184728	.0004466	.000034	-.001915	.0085010

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001508**	**-.001698**	**-.000160**	**-.000264**	**-.038518**	**-.001491**	**-.000396**
Stddev	.0004460	.001444	.000265	.000033	.228331	.000804	.001373
%RSD	295.7732	85.06451	165.3280	12.33654	592.7983	53.91140	346.3883
#1	.0003034	-.000032	-.000450	-.000281	.188129	-.000936	.001187
#2	-.000351	-.002465	.000069	-.000227	-.035185	-.001124	-.001122
#3	.000500	-.002596	-.000100	-.000285	-.268497	-.002413	-.001254

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0273456**	**.0007643**	**-.000510**	**.0001229**	**.0054703**	**-.001300**	**.0008880**
Stddev	.0105567	.0007988	.000733	.0002392	.0033868	.002614	.0005240
%RSD	38.60468	104.5186	143.8371	194.5714	61.91249	201.1134	59.01413
#1	.0155092	.0007941	.000301	.0003587	.0015784	.001647	.0004755
#2	.0357874	-.000049	-.000705	-.000120	.0077478	-.002205	.0007108
#3	.0307402	.001548	-.001125	.000130	.0070848	-.003342	.0014776

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: PB166229BL Acquired: 1/27/2025 19:55:31 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS229 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0002879	.0004256	.0000350
Stddev	.0006652	.0009986	.0000094
%RSD	231.0377	234.6316	26.87478
#1	.0005116	-.000235	.0000408
#2	-.000460	-.000063	.0000401
#3	.000812	.001574	.0000242

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3709.536	77676.81	11394.35	2608.484	4625.422
Stddev	8.727	183.39	45.94	13.031	14.900
%RSD	.2352672	.2360927	.4031970	.4995730	.3221316
#1	3717.673	77471.30	11343.00	2594.008	4641.382
#2	3710.617	77823.79	11408.49	2619.279	4623.005
#3	3700.319	77735.33	11431.55	2612.165	4611.878

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: PB166229BS Acquired: 1/27/2025 19:59:40 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS229 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0179848**	**.0518663**	**.0200718**	**.0618388**	**.1088943**	**.3571723**	**.3633301**
Stddev	.0021039	.0021825	.0014761	.0022516	.0007154	.0013084	.0023086
%RSD	11.69842	4.207925	7.354272	3.640997	.6569492	.3663194	.6353971
#1	.0204008	.0519109	.0211681	.0638191	.1096534	.3566327	.3608737
#2	.0165557	.0496619	.0183934	.0593897	.1082327	.3562200	.3636614
#3	.0169980	.0540262	.0206541	.0623075	.1087967	.3586642	.3654551

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0104307**	**.0100545**	**9.646732**	**.0215484**	**.0986767**	**.0527097**	**.2031249**
Stddev	.0000957	.0001288	.031182	.0002924	.0002610	.0017378	.0082256
%RSD	.9174859	1.280547	.3232433	1.357077	.2645461	3.296851	4.049545
#1	.0105165	.0099221	9.610779	.0218621	.0988221	.0525354	.1936356
#2	.0104482	.0100621	9.663016	.0212833	.0983754	.0545281	.2082254
#3	.0103275	.0101793	9.666402	.0214997	.0988327	.0510657	.2075136

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0295266**	**8.612928**	**.0807217**	**.0189191**	**9.645124**	**.1048541**	**.1134494**
Stddev	.0000507	.055468	.0002700	.0001694	.508876	.0002580	.0027823
%RSD	.1718125	.6440090	.3344506	.8952537	5.275994	.2460686	2.452457
#1	.0294939	8.572230	.0809877	.0189659	10.22504	.1050592	.1106268
#2	.0295009	8.590446	.0804479	.0187312	9.27313	.1045644	.1135318
#3	.0295851	8.676108	.0807294	.0190601	9.43721	.1049388	.1161896

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.981851**	**.0199527**	**.0004314**	**.0203661**	**.1739621**	**.4510150**	**.0149630**
Stddev	.031527	.0003722	.0001064	.0002495	.0042588	.0040506	.0001191
%RSD	.3510033	1.865204	24.65961	1.224872	2.448090	.8981149	.7959055
#1	8.949354	.0199384	.0003306	.0201568	.1719420	.4550244	.0149974
#2	9.012308	.0195879	.0004209	.0202994	.1710894	.4510964	.0148305
#3	8.983892	.0203318	.0005426	.0206421	.1788550	.4469243	.0150611

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: PB166229BS Acquired: 1/27/2025 19:59:40 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS229 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2043864	.0270219	.1722661
Stddev	.0005837	.0016253	.0009699
%RSD	.2856128	6.014619	.5630270
#1	.2037369	.0260070	.1711537
#2	.2048674	.0288965	.1727098
#3	.2045548	.0261624	.1729348

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3602.603	74551.84	11133.97	2469.331	4434.404
Stddev	8.442	89.22	44.38	5.477	3.207
%RSD	.2343434	.1196803	.3985814	.2217855	.0723227
#1	3601.412	74636.54	11085.45	2475.046	4434.890
#2	3611.578	74458.69	11143.95	2468.818	4437.341
#3	3594.820	74560.28	11172.51	2464.129	4430.982

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1181-01 Acquired: 1/27/2025 20:03:45 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH96 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0939114**	**-.007087**	**.2126002**	**.0469527**	**.0279553**	**139.5381**	**.9934291**
Stddev	.0014514	.003064	.0028809	.0016710	.0026824	.3238	.0043867
%RSD	1.545514	43.23326	1.355069	3.558963	9.595261	.2320161	.4415674
#1	.0952122	-.005392	.2133905	.0475999	.0298439	139.9026	.9975043
#2	.0941764	-.005244	.2150035	.0482033	.0291372	139.4277	.9939967
#3	.0923458	-.010623	.2094067	.0450548	.0248850	139.2840	.9887863

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0081183**	**.0072572**	**112.9316**	**.4666094**	**.1889078**	**.5420835**	**350.8989**
Stddev	.0002099	.0002697	.1235	.0004189	.0001327	.0030814	.4366
%RSD	2.586027	3.716879	.1093546	.0897684	.0702209	.5684280	.1244261
#1	.0078956	.0071532	113.0255	.4669460	.1888018	.5399950	351.4021
#2	.0083126	.0070549	112.9776	.4667420	.1888651	.5406331	350.6744
#3	.0081467	.0075634	112.7917	.4661403	.1890566	.5456225	350.6203

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.192808**	**104.9848**	**.4330188**	**-.002102**	**1.010145**	**.4233502**	**.7894297**
Stddev	.021191	.0562	.0004601	.000143	.162153	.0019855	.0045063
%RSD	.2946118	.0535205	.1062588	6.803843	16.05243	.4690007	.5708339
#1	7.209684	104.9439	.4325348	-.001937	.920119	.4240729	.7912348
#2	7.199716	104.9616	.4330712	-.002175	.912979	.4211046	.7843007
#3	7.169026	105.0489	.4334505	-.002194	1.197338	.4248731	.7927537

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.586414**	**5.013382**	**1.481858**	**.0001876**	**.3080043**	**2.319673**	**.0035308**
Stddev	.029772	.017915	.001899	.0002925	.0010130	.025119	.0006613
%RSD	.8301413	.3573468	.1281533	155.9071	.3288899	1.082874	18.72847
#1	3.562934	5.005431	1.484031	.0002316	.3087802	2.343918	.0041188
#2	3.619901	5.000818	1.481023	-.000124	.3068583	2.321339	.0036586
#3	3.576409	5.033896	1.480519	.000456	.3083745	2.293762	.0028150

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1181-01 Acquired: 1/27/2025 20:03:45 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH96 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3805651	.4488544	.5384410
Stddev	.0097996	.0033543	.0023246
%RSD	2.575010	.7472996	.4317268
#1	.3759565	.4503167	.5408706
#2	.3918194	.4512293	.5382143
#3	.3739194	.4450172	.5362380

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3899.445	82135.02	13002.26	2647.602	3988.436
Stddev	8.460	61.18	31.14	5.317	12.051
%RSD	.2169435	.0744872	.2395071	.2008390	.3021465
#1	3905.893	82150.98	13037.25	2645.455	3998.114
#2	3902.577	82067.44	12991.94	2653.658	3992.257
#3	3889.867	82186.63	12977.59	2643.695	3974.938

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1181-02 Acquired: 1/27/2025 20:07:39 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH97 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1063080	-.004502	.2035325	.0474489	.0248018	132.0917	1.149320
Stddev	.0039802	.001587	.0008110	.0014847	.0013912	.8056	.005969
%RSD	3.743976	35.26044	.3984748	3.129122	5.609285	.6098499	.5193246
#1	.1043687	-.002762	.2030343	.0481833	.0240318	132.3906	1.152937
#2	.1108861	-.005871	.2030948	.0457401	.0264078	131.1794	1.142431
#3	.1036692	-.004872	.2044683	.0484234	.0239659	132.7050	1.152593

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0076825	.0067364	47.09101	.4356010	.1655132	.3240630	332.0648
Stddev	.0001915	.0001359	.08271	.0007000	.0005179	.0009690	1.3548
%RSD	2.492319	2.017321	.1756357	.1606990	.3128837	.2990185	.4079939
#1	.0075565	.0065819	47.16604	.4348397	.1655801	.3234222	332.6232
#2	.0079029	.0067903	47.00232	.4357464	.1649651	.3251777	330.5200
#3	.0075882	.0068372	47.10466	.4362168	.1659943	.3235889	333.0511

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.143999	99.41224	.4206847	.0006737	1.113874	.4168549	.7656497
Stddev	.011640	.30369	.0001176	.0008745	.071990	.0043577	.0044412
%RSD	.1894581	.3054851	.0279521	129.8000	6.463061	1.045367	.5800627
#1	6.149830	99.45664	.4206050	.0010892	1.184680	.4142865	.7706167
#2	6.130596	99.08880	.4208197	-.000331	1.040755	.4218863	.7642714
#3	6.151571	99.69129	.4206293	.001263	1.116186	.4143919	.7620610

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.863813	4.388760	1.402132	.0064825	.1484923	1.941055	.0033111
Stddev	.058601	.006686	.008512	.0000674	.0025865	.008080	.0014359
%RSD	2.046271	.1523476	.6070697	1.039959	1.741806	.4162708	43.36512
#1	2.896129	4.381061	1.406111	.0064179	.1514772	1.950253	.0018675
#2	2.796168	4.393109	1.392359	.0065524	.1470870	1.935101	.0047390
#3	2.899141	4.392110	1.407925	.0064772	.1469127	1.937811	.0033267

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1181-02 Acquired: 1/27/2025 20:07:39 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH97 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3444037	.4506745	.2290210
Stddev	.0064798	.0021335	.0013465
%RSD	1.881439	.4734108	.5879265
#1	.3387263	.4513593	.2300296
#2	.3514629	.4482827	.2274920
#3	.3430219	.4523816	.2295414

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3877.615	82816.60	13127.37	2672.575	3968.838
Stddev	6.988	165.00	79.59	11.635	6.798
%RSD	.1802166	.1992379	.6062797	.4353594	.1712963
#1	3878.777	82849.93	13171.49	2659.151	3972.397
#2	3883.950	82962.39	13035.50	2679.771	3973.118
#3	3870.119	82637.48	13175.13	2678.802	3960.999

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1181-03 Acquired: 1/27/2025 20:11:34 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH98 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0594570	-.003708	.2380946	.0267865	.0133480	101.5299	.7967120
Stddev	.0008368	.003560	.0025419	.0003679	.0008646	.2765	.0036240
%RSD	1.407342	96.01095	1.067600	1.373383	6.477365	.2723283	.4548685
#1	.0596380	-.006248	.2406733	.0263849	.0140699	101.8399	.7990136
#2	.0585446	.000361	.2380194	.0271072	.0135842	101.3088	.7925346
#3	.0601886	-.005238	.2355912	.0268673	.0123898	101.4409	.7985878

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0087271	.0045086	40.98472	.2463832	.1656370	.2234585	186.8172
Stddev	.0000630	.0001001	.09173	.0005894	.0003974	.0007466	.3254
%RSD	.7214360	2.221162	.2238266	.2392125	.2399149	.3341210	.1741958
#1	.0087248	.0046198	41.08918	.2470500	.1656759	.2236669	187.1904
#2	.0086653	.0044255	40.91729	.2461679	.1652216	.2226298	186.6681
#3	.0087912	.0044806	40.94768	.2459317	.1660135	.2240787	186.5930

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.747136	60.11387	.3164648	.0005056	.5653445	.2387217	.8302923
Stddev	.018757	.08855	.0006663	.0003579	.1348592	.0010299	.0060355
%RSD	.2779949	.1473006	.2105451	70.77386	23.85434	.4314140	.7269153
#1	6.767416	60.15727	.3169144	.0001759	.4913474	.2378992	.8310624
#2	6.730411	60.17234	.3167806	.0004549	.7210036	.2398768	.8239087
#3	6.743581	60.01199	.3156993	.0008862	.4836826	.2383891	.8359058

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.395146	3.832188	.8020200	.0088022	1.905789	2.229716	.0063336
Stddev	.060974	.005102	.0020178	.0002398	.001080	.003593	.0002727
%RSD	.7263059	.1331368	.2515898	2.724616	.0566700	.1611384	4.305059
#1	8.457646	3.833584	.8043474	.0089002	1.905034	2.232406	.0066199
#2	8.391969	3.836446	.8009505	.0089775	1.905307	2.231107	.0060770
#3	8.335822	3.826533	.8007621	.0085289	1.907026	2.225636	.0063037

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1181-03 Acquired: 1/27/2025 20:11:34 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH98 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.380112	.2271257	.3842739
Stddev	.007726	.0011715	.0020802
%RSD	.5597799	.5157868	.5413397
#1	1.380029	.2284568	.3861546
#2	1.372429	.2262517	.3820395
#3	1.387879	.2266685	.3846276

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3941.084	83682.83	13338.77	2718.058	4006.944
Stddev	2.508	257.83	39.85	10.604	3.775
%RSD	.0636464	.3080995	.2987283	.3901373	.0942109
#1	3941.218	83568.01	13377.85	2730.276	4006.885
#2	3943.522	83502.35	13298.20	2711.261	4010.748
#3	3938.510	83978.12	13340.26	2712.636	4003.199

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1181-04 Acquired: 1/27/2025 20:15:32 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH99 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0200799	-.003410	.1864659	.0131714	.0061540	55.91947	.8393970
Stddev	.0013885	.001402	.0016753	.0025770	.0007546	.14242	.0038415
%RSD	6.914796	41.10621	.8984516	19.56491	12.26139	.2546824	.4576516
#1	.0214045	-.002659	.1883493	.0161451	.0066640	56.07792	.8429282
#2	.0201998	-.002545	.1851418	.0117772	.0065108	55.87833	.8399563
#3	.0186353	-.005028	.1859066	.0115919	.0052872	55.80215	.8353065

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0055423	.0018921	147.2953	.0965768	.0684555	.0679303	83.02641
Stddev	.0000290	.0000410	.5264	.0009186	.0002392	.0009924	.26297
%RSD	.5232477	2.165026	.3574036	.9511137	.3493600	1.460897	.3167308
#1	.0055252	.0019369	147.8789	.0975640	.0681990	.0670540	83.32795
#2	.0055758	.0018827	147.1510	.0964193	.0686723	.0677290	82.90668
#3	.0055260	.0018566	146.8561	.0957472	.0684953	.0690079	82.84462

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.150481	34.03924	.1207095	.0004693	.2941158	.1190171	.4421685
Stddev	.033512	.19853	.0007431	.0003329	.3674811	.0010665	.0017260
%RSD	.4686670	.5832291	.6156285	70.92752	124.9443	.8960971	.3903577
#1	7.184339	34.25436	.1200378	.0000850	.0686388	.1178810	.4441616
#2	7.149779	34.00028	.1215078	.0006668	.7181620	.1199967	.4411722
#3	7.117326	33.86309	.1205828	.0006561	.0955468	.1191735	.4411718

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.639639	4.302573	.3649393	.0026066	1.781936	3.422079	.0005869
Stddev	.072916	.020418	.0010369	.0001379	.002415	.034215	.0009045
%RSD	1.292911	.4745447	.2841159	5.289489	.1355153	.9998402	154.1159
#1	5.626843	4.325378	.3660846	.0024618	1.782906	3.405678	-.000450
#2	5.718106	4.296348	.3640645	.0026218	1.783715	3.461408	.001216
#3	5.573969	4.285992	.3646687	.0027363	1.779187	3.399153	.000995

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1181-04 Acquired: 1/27/2025 20:15:32 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH99 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.7930383	.1068352	.5293027
Stddev	.0068633	.0003017	.0024677
%RSD	.8654462	.2824318	.4662264
#1	.7923718	.1066732	.5316953
#2	.7865326	.1071833	.5294467
#3	.8002106	.1066490	.5267661

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3799.680	79659.95	12783.23	2590.756	4119.045
Stddev	13.967	311.57	32.88	12.701	9.555
%RSD	.3675837	.3911297	.2572097	.4902273	.2319799
#1	3814.400	79307.51	12753.99	2585.475	4129.502
#2	3786.613	79898.77	12818.82	2605.246	4110.769
#3	3798.027	79773.57	12776.88	2581.548	4116.865

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1181-05 Acquired: 1/27/2025 20:19:31 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH99D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0214750**	**-.001906**	**.1871264**	**.0136115**	**.0058315**	**54.41837**	**.8204843**
Stddev	.0013443	.003811	.0021391	.0023561	.0009519	.22932	.0052871
%RSD	6.259838	199.9709	1.143122	17.30929	16.32268	.4213998	.6443892
#1	.0201114	.002473	.1875073	.0162750	.0049182	54.18834	.8151576
#2	.0227992	-.003714	.1848224	.0127592	.0068177	54.41982	.8205643
#3	.0215145	-.004477	.1890494	.0118001	.0057586	54.64697	.8257310

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0055745**	**.0019698**	**144.3511**	**.0950647**	**.0686529**	**.0645843**	**81.09108**
Stddev	.0000567	.0000682	.5375	.0004614	.0002757	.0011098	.31476
%RSD	1.017911	3.461587	.3723478	.4853638	.4016051	1.718444	.3881619
#1	.0056225	.0020484	143.7456	.0948492	.0686754	.0641282	80.74509
#2	.0055890	.0019335	144.5363	.0955944	.0683666	.0637751	81.16764
#3	.0055119	.0019274	144.7716	.0947505	.0689166	.0658495	81.36050

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.003062**	**33.43994**	**.1215487**	**.0000087**	**.0301603**	**.1176644**	**.4220595**
Stddev	.033428	.02896	.0008217	.0000191	.2169931	.0002649	.0012409
%RSD	.4773370	.0866145	.6760314	219.2796	719.4656	.2251466	.2940169
#1	6.964692	33.41242	.1210293	.0000118	.2393445	.1175273	.4206331
#2	7.018611	33.47016	.1211207	.0000260	-.193878	.1174961	.4226555
#3	7.025884	33.43723	.1224960	-.000012	.045015	.1179698	.4228900

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.478146**	**4.371864**	**.3555199**	**.0026078**	**1.767936**	**3.104365**	**.0016692**
Stddev	.053286	.004786	.0017434	.0003444	.008051	.008290	.0002879
%RSD	.9727088	.1094760	.4903948	13.20702	.4553733	.2670353	17.24900
#1	5.416943	4.370814	.3540012	.0026134	1.773669	3.103049	.0019921
#2	5.514231	4.367690	.3551348	.0029494	1.758732	3.096812	.0014393
#3	5.503265	4.377088	.3574237	.0022606	1.771407	3.113234	.0015760

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1181-05 Acquired: 1/27/2025 20:19:31 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH99D Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.7664225	.1028728	.5198540
Stddev	.0071368	.0006150	.0027635
%RSD	.9311861	.5978408	.5315884
#1	.7654608	.1021909	.5170288
#2	.7739914	.1030420	.5199816
#3	.7598153	.1033855	.5225514

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3788.391	80151.47	12757.78	2622.871	4091.609
Stddev	3.784	185.08	46.83	19.229	4.811
%RSD	.0998820	.2309081	.3670826	.7331442	.1175740
#1	3790.426	80318.53	12721.18	2643.515	4089.452
#2	3790.722	79952.52	12741.60	2605.468	4097.121
#3	3784.025	80183.37	12810.55	2619.630	4088.255

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1181-04LX5 Acquired: 1/27/2025 20:23:30 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH99L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044017	.0004999	.0404138	.0032396	.0023464	11.55055	.1702938
Stddev	.0024275	.0019843	.0003094	.0033350	.0006806	.05646	.0005079
%RSD	55.14859	396.9492	.7655965	102.9443	29.00492	.4888450	.2982367
#1	.0071436	-.001790	.0401903	.0021157	.0028591	11.48640	.1701165
#2	.0035349	.001587	.0407669	.0069914	.0015742	11.57252	.1698984
#3	.0025266	.001703	.0402841	.0006118	.0026057	11.59272	.1708666

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013148	.0003715	30.81668	.0212997	.0141050	.0155549	17.72045
Stddev	.0000259	.0000495	.10594	.0002378	.0001962	.0022654	.04974
%RSD	1.969356	13.33845	.3437617	1.116221	1.391300	14.56380	.2807074
#1	.0013139	.0003293	30.70077	.0214561	.0138931	.0174242	17.66855
#2	.0013412	.0004260	30.84077	.0214170	.0142804	.0130356	17.76770
#3	.0012894	.0003590	30.90849	.0210262	.0141416	.0162050	17.72511

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.507300	7.164983	.0246753	-.000340	.0297654	.0266201	.0907285
Stddev	.007126	.041250	.0003037	.000103	.3339627	.0016384	.0013110
%RSD	.4727887	.5757126	1.230750	30.37185	1121.984	6.154639	1.445010
#1	1.499351	7.146169	.0243690	-.000221	-.241317	.0285089	.0896204
#2	1.509430	7.212285	.0249763	-.000398	-.072216	.0255825	.0903893
#3	1.513118	7.136494	.0246805	-.000401	.402829	.0257690	.0921758

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9951917	.8946960	.0761962	.0006104	.3569637	.8780260	-.000905
Stddev	.0577366	.0051510	.0003671	.0001553	.0067324	.0067852	.000478
%RSD	5.801557	.5757290	.4817851	25.44573	1.886009	.7727730	52.75014
#1	.9652647	.8888097	.0765739	.0007894	.3509958	.8788042	-.000790
#2	1.061748	.8983783	.0758407	.0005106	.3642619	.8843884	-.000496
#3	.958562	.8969000	.0761740	.0005313	.3556335	.8708852	-.001430

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1181-04LX5 Acquired: 1/27/2025 20:23:30 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH99L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1829571	.0213310	.1081228
Stddev	.0101935	.0009267	.0004856
%RSD	5.571548	4.344147	.4491532
#1	.1805421	.0202933	.1076314
#2	.1741879	.0220758	.1081347
#3	.1941413	.0216238	.1086024

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3705.624	77572.86	11822.02	2572.496	4406.004
Stddev	20.879	202.72	37.69	7.414	26.443
%RSD	.5634383	.2613234	.3188240	.2881981	.6001540
#1	3716.212	77632.53	11805.97	2580.159	4425.623
#2	3681.573	77739.04	11865.08	2571.970	4375.933
#3	3719.089	77347.00	11795.00	2565.359	4416.457

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1181-06 Acquired: 1/27/2025 20:27:34 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH99S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0899921**	**.1029019**	**.2222142**	**.1716790**	**.1670819**	**55.33943**	**4.111116**
Stddev	.0024293	.0014119	.0010663	.0014594	.0013427	.25019	.033286
%RSD	2.699512	1.372102	.4798541	.8500790	.8036401	.4521026	.8096564
#1	.0872776	.1013194	.2233104	.1719182	.1660412	55.53385	4.138407
#2	.0907365	.1040325	.2221517	.1701147	.1666069	55.42728	4.120908
#3	.0919620	.1033539	.2211806	.1730040	.1685975	55.05717	4.074032

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0952755**	**.0976600**	**138.2772**	**.4843646**	**1.026207**	**.4815202**	**79.20228**
Stddev	.0003951	.0002924	.4628	.0021418	.005296	.0007477	.29854
%RSD	.4146723	.2994509	.3347220	.4421810	.5161045	.1552746	.3769321
#1	.0948883	.0974263	138.7837	.4866192	1.024630	.4814990	79.47936
#2	.0952601	.0975658	138.1716	.4823572	1.021879	.4822783	79.24136
#3	.0956780	.0979880	137.8762	.4841174	1.032113	.4807834	78.88613

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.546714**	**31.88036**	**1.085608**	**.0669837**	**.4819015**	**.9945234**	**1.220042**
Stddev	.037353	.12206	.003683	.0004617	.1494627	.0029840	.014274
%RSD	.4949620	.3828700	.3392728	.6893148	31.01521	.3000394	1.169985
#1	7.589203	32.02037	1.082815	.0674045	.3101657	.9935298	1.234337
#2	7.531899	31.82434	1.084227	.0670569	.5825758	.9921631	1.205788
#3	7.519042	31.79636	1.089782	.0664898	.5529629	.9978775	1.220000

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.246308**	**4.342501**	**.3471174**	**.0018698**	**1.769392**	**3.235231**	**.0010390**
Stddev	.040934	.015612	.0009476	.0002762	.005132	.042184	.0000813
%RSD	.7802477	.3595129	.2729896	14.77157	.2900497	1.303898	7.823071
#1	5.286098	4.336581	.3467948	.0019006	1.766614	3.191939	.0011157
#2	5.204318	4.330715	.3463732	.0021293	1.766248	3.237543	.0009538
#3	5.248507	4.360207	.3481842	.0015795	1.775314	3.276212	.0010475

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: Q1181-06 Acquired: 1/27/2025 20:27:34 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH99S Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.7706772	.0977038	.4950986
Stddev	.0127470	.0011335	.0029403
%RSD	1.653998	1.160169	.5938713
#1	.7842561	.0988136	.4977517
#2	.7688066	.0965480	.4956066
#3	.7589688	.0977498	.4919374

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3788.788	80377.49	12365.87	2639.589	4099.287
Stddev	11.996	351.91	39.15	24.219	14.279
%RSD	.3166259	.4378235	.3165804	.9175349	.3483313
#1	3801.748	79983.95	12354.14	2612.843	4110.681
#2	3786.543	80661.92	12409.54	2660.037	4103.911
#3	3778.073	80486.61	12333.93	2645.886	4083.269

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: PB166278BL Acquired: 1/27/2025 20:31:30 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS278 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0012988**	**.0002190**	**.0005759**	**.0000414**	**.0003639**	**.0044383**	**-.001360**
Stddev	.0025974	.0022736	.0008252	.0024378	.0000829	.0073238	.000445
%RSD	199.9804	1038.440	143.2915	5889.716	22.78144	165.0150	32.69385
#1	.0032622	-.002081	-.000230	.0004526	.0003744	-.003334	-.001853
#2	.0022806	.000273	.000538	.0022474	.0004410	.011210	-.000991
#3	-.001646	.002465	.001419	-.002576	.0002762	.005439	-.001234

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000036**	**.0000516**	**.0235692**	**-.000023**	**-.000100**	**.0009972**	**.0039454**
Stddev	.000037	.0000690	.0061138	.000224	.000213	.0003674	.0032069
%RSD	104.9527	133.8850	25.93963	985.2124	213.7480	36.84031	81.28111
#1	-.000078	.0001313	.0165309	.000236	.000146	.0014147	.0029875
#2	-.000008	.0000117	.0266145	-.000168	-.000239	.0008540	.0013267
#3	-.000021	.0000117	.0275622	-.000136	-.000206	.0007230	.0075222

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000801**	**-.013044**	**.0001658**	**-.000601**	**-.068652**	**-.000856**	**.0005117**
Stddev	.0000381	.012329	.0003246	.000132	.360422	.001407	.0020379
%RSD	47.55842	94.52364	195.7685	21.92832	524.9982	164.2799	398.2226
#1	.0001184	-.001032	.0000541	-.000539	.181572	-.000839	.0028512
#2	.0000422	-.025667	-.000088	-.000512	-.481765	-.002272	-.000439
#3	.0000797	-.012432	.000531	-.000753	.094237	.000542	-.000877

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.102158**	**.0011182**	**-.002287**	**.0001755**	**.0016498**	**-.001315**	**.0005183**
Stddev	.038492	.0008618	.000488	.0002576	.0014916	.001897	.0006660
%RSD	37.67880	77.06558	21.32549	146.7731	90.40923	144.2330	128.4996
#1	-.131684	.0009092	-.002834	-.000102	.0032170	-.002318	.0005271
#2	-.116167	.0020653	-.002127	.000407	.0002475	-.002501	-.000152
#3	-.058624	.0003802	-.001899	.000221	.0014849	.000873	.001180

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: PB166278BL Acquired: 1/27/2025 20:31:30 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS278 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0008854	-.001743	.0000130
Stddev	.0003735	.000862	.0000559
%RSD	42.17847	49.42000	430.0408
#1	.0004814	-.000854	.0000147
#2	.0009570	-.002574	-.000044
#3	.0012180	-.001802	.000068

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3631.268	76657.22	11363.13	2553.599	4523.716
Stddev	11.035	149.68	30.53	15.020	12.231
%RSD	.3038793	.1952636	.2686873	.5881793	.2703785
#1	3618.623	76733.80	11367.03	2568.055	4511.404
#2	3636.229	76753.12	11391.52	2538.073	4523.881
#3	3638.952	76484.74	11330.83	2554.668	4535.864

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: PB166278BS Acquired: 1/27/2025 20:35:40 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS278 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0167677	.0492326	.0195535	.0612261	.1037857	.3528574	.3596474
Stddev	.0008345	.0019809	.0005598	.0022080	.0025335	.0059500	.0009985
%RSD	4.976590	4.023601	2.862694	3.606301	2.441070	1.686241	.2776436
#1	.0160635	.0471271	.0198503	.0588367	.1010820	.3463056	.3588110
#2	.0176894	.0510594	.0189079	.0631912	.1061050	.3579245	.3607529
#3	.0165503	.0495114	.0199024	.0616504	.1041701	.3543422	.3593784

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0100736	.0097591	9.465035	.0209935	.0950681	.0508109	.1992053
Stddev	.0000659	.0000565	.022543	.0002234	.0003669	.0021315	.0021106
%RSD	.6545693	.5785026	.2381713	1.063966	.3859473	4.195049	1.059525
#1	.0100960	.0097890	9.440112	.0210550	.0954433	.0517012	.1968088
#2	.0099993	.0096940	9.484003	.0207458	.0947101	.0483785	.2007874
#3	.0101253	.0097943	9.470989	.0211797	.0950509	.0523530	.2000197

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0287277	8.394785	.0778532	.0180817	9.449476	.1013330	.1135556
Stddev	.0003086	.012120	.0004035	.0002458	.136997	.0022575	.0018569
%RSD	1.074158	.1443715	.5182528	1.359358	1.449788	2.227760	1.635250
#1	.0286709	8.407221	.0782768	.0180705	9.352919	.0999447	.1154356
#2	.0284515	8.394127	.0774735	.0178417	9.389239	.1039378	.1135083
#3	.0290607	8.383008	.0778091	.0183329	9.606271	.1001165	.1117227

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.685582	.0187011	-.000747	.0195775	.1671118	.4435634	.0144614
Stddev	.053948	.0007526	.000027	.0000533	.0017234	.0016769	.0004121
%RSD	.6211220	4.024458	3.643148	.2723364	1.031296	.3780538	2.849808
#1	8.635573	.0194616	-.000723	.0195161	.1661664	.4419970	.0147589
#2	8.742753	.0179567	-.000776	.0196115	.1691010	.4453324	.0139910
#3	8.678421	.0186849	-.000741	.0196050	.1660679	.4433608	.0146344

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: PB166278BS Acquired: 1/27/2025 20:35:40 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS278 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1994975	.0257060	.1697550
Stddev	.0008590	.0006529	.0004187
%RSD	.4305805	2.539795	.2466218
#1	.2004688	.0256599	.1692907
#2	.1991863	.0250774	.1698702
#3	.1988376	.0263808	.1701039

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3709.215	76167.45	11466.33	2548.483	4547.343
Stddev	2.107	85.74	42.48	11.827	4.262
%RSD	.0568024	.1125712	.3704865	.4640809	.0937176
#1	3711.578	76079.75	11417.54	2535.395	4552.250
#2	3708.536	76251.09	11495.08	2558.403	4544.566
#3	3707.531	76171.50	11486.39	2551.652	4545.214

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: CCV024 Acquired: 1/27/2025 20:44:03 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV024 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.076451**	**4.685918**	**24.76731**	**4.914249**	**4.936508**	**400.1258**
Stddev	.030768	.031603	.13527	.029925	.035886	1.7042
%RSD	.6060935	.6744262	.5461584	.6089411	.7269583	.4259152
#1	5.054146	4.710115	24.66438	4.896726	4.918710	402.0537
#2	5.063654	4.650163	24.71703	4.897218	4.912999	398.8201
#3	5.111552	4.697476	24.92051	4.948802	4.977814	399.5038

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.984770**	**.4855554**	**2.468897**	**405.9339**	**15.33360**	**2.460881**
Stddev	.122482	.0034054	.011609	3.5691	.12956	.013213
%RSD	1.226687	.7013306	.4702232	.8792412	.8449713	.5369305
#1	9.881803	.4873351	2.459914	409.5868	15.41144	2.450790
#2	10.12022	.4877022	2.464771	405.7599	15.40532	2.456017
#3	9.95229	.4816290	2.482006	402.4548	15.18403	2.475837

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.84520**	**406.1306**	**14.96897**	**397.1613**	**2.462122**	**1.263065**
Stddev	.02304	.8537	.01599	1.0297	.013639	.008887
%RSD	.1552215	.2102142	.1068465	.2592541	.5539557	.7036178
#1	14.85074	406.4945	14.98197	397.5772	2.451999	1.266562
#2	14.81989	406.7421	14.97382	397.9181	2.456736	1.269671
#3	14.86496	405.1552	14.95111	395.9888	2.477632	1.252961

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**388.8349**	**2.438639**	**15.16706**	**154.4543**	**5.125846**	F **5.916366**
Stddev	.7748	.009256	.14159	.0703	.023479	.026864
%RSD	.1992496	.3795432	.9335607	.0455445	.4580494	.4540608
#1	388.8777	2.434409	15.28408	154.4845	5.117491	5.934209
#2	388.0396	2.449254	15.20744	154.5045	5.107687	5.929420
#3	389.5874	2.432254	15.00966	154.3739	5.152360	5.885470

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: CCV024 Acquired: 1/27/2025 20:44:03 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV024 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.834668**	**5.074521**	F **2.578418**	**4.993157**	**4.941555**	**5.099075**
Stddev	.031099	.020785	.010400	.014581	.000627	.002098
%RSD	.6432498	.4095902	.4033530	.2920147	.0126851	.0411525
#1	4.819729	5.066613	2.573714	4.985304	4.940867	5.097736
#2	4.813856	5.058850	2.571201	4.984186	4.942093	5.097997
#3	4.870417	5.098099	2.590339	5.009981	4.941705	5.101494

Elem	Sr4077
Units	ppm
Avg	**4.687316**
Stddev	.021346
%RSD	.4554086
#1	4.708483
#2	4.687672
#3	4.665794

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2861.665**	**63981.97**	**10565.10**	**2072.351**	**3275.021**
Stddev	20.354	347.22	44.80	26.999	18.815
%RSD	.7112683	.5426873	.4240677	1.302841	.5745114
#1	2870.650	63743.49	10530.30	2051.867	3285.968
#2	2875.981	63822.08	10549.35	2062.238	3285.800
#3	2838.365	64380.33	10615.65	2102.947	3253.295

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: CCB024 Acquired: 1/27/2025 20:48:21 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB024 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005800**	**.0005237**	**.0004773**	**-.000555**	**-.001292**	**.0114248**	**-.000369**
Stddev	.0008395	.0024446	.0015971	.001252	.000290	.0055928	.001253
%RSD	144.7409	466.8335	334.6316	225.5996	22.48211	48.95302	339.1541
#1	.0002489	.0030402	.0013170	-.000579	-.000963	.0061966	-.000961
#2	.0015346	-.001842	.0014792	.000709	-.001514	.0107559	-.001217
#3	-.000043	.000373	-.001364	-.001795	-.001399	.0173220	.001070

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000030**	**.0000245**	**.0158822**	**.0003444**	**.0000086**	**.0008209**	**.0113484**
Stddev	.000043	.0000369	.0029244	.0002122	.0000669	.0015629	.0028616
%RSD	144.7245	150.6772	18.41286	61.61799	777.9529	190.3746	25.21584
#1	-.000011	-.000000	.0150048	.0003634	-.000018	.0021171	.0142357
#2	-.000079	.000067	.0134970	.0001233	-.000041	-.000915	.0085132
#3	.000001	.000007	.0191448	.0005465	.000085	.001260	.0112965

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004439**	**.0052577**	**.0003115**	**-.000222**	**.0959274**	**-.000223**	**.0001042**
Stddev	.0003422	.0042966	.0004405	.000191	.0827206	.001188	.0015063
%RSD	77.08602	81.71879	141.4052	86.04998	86.23248	531.7375	1445.734
#1	.0002765	.0023399	.0000521	-.000266	.0657090	.000377	.0016370
#2	.0008377	.0032418	.0008201	-.000387	.0325647	-.001592	.0000496
#3	.0002177	.0101916	.0000623	-.000013	.1895084	.000545	-.001374

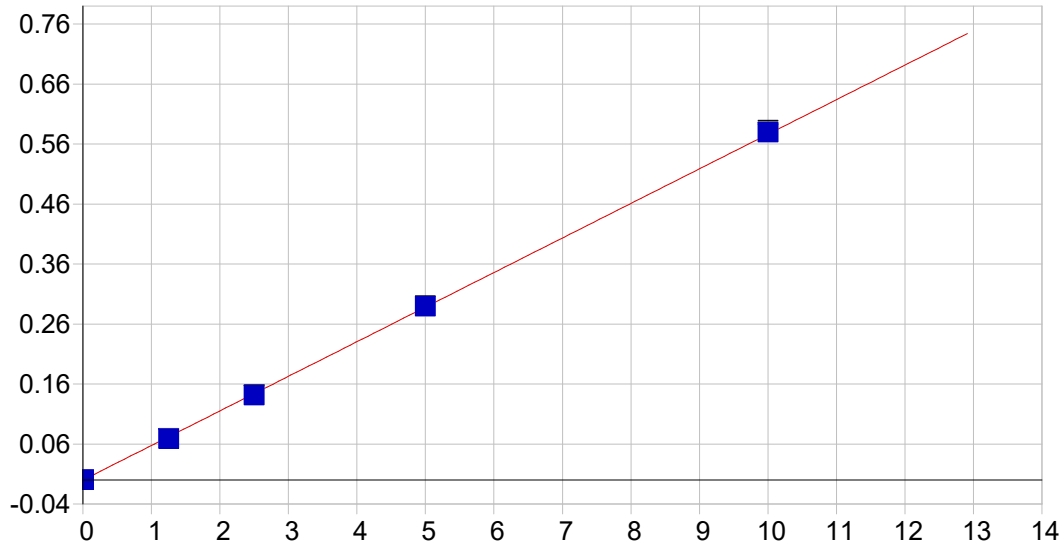
Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0938435**	**.0009977**	**.0049214**	**.0004466**	**.0014058**	**-.000571**	**.0002274**
Stddev	.0588181	.0013153	.0004843	.0001312	.0022905	.002964	.0008831
%RSD	62.67680	131.8294	9.840509	29.36983	162.9337	519.3730	388.4396
#1	.0358391	.0023999	.0047939	.0003520	.0026681	-.000725	-.000114
#2	.0922487	.0008017	.0045137	.0003915	.0027875	-.003454	.001230
#3	.1534429	-.000209	.0054567	.0005963	-.001238	.002468	-.000434

Reviewed By:kareem
On:1/28/2025 12:16:01 PM
Inst Id :P4

Sample Name: CCB024 Acquired: 1/27/2025 20:48:21 Type: Unk
Method: EPA SFAM01.0(v56) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB024 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0007615	-.000557	.0001559
Stddev	.0002630	.000543	.0000360
%RSD	34.54342	97.45740	23.06478
#1	.0006288	.000068	.0001973
#2	.0005912	-.000907	.0001330
#3	.0010645	-.000834	.0001373

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3652.915	76761.84	11342.60	2549.070	4557.907
Stddev	4.694	165.34	37.99	8.929	10.809
%RSD	.1285024	.2153883	.3349265	.3502730	.2371466
#1	3648.222	76578.93	11353.30	2542.153	4545.460
#2	3657.610	76900.66	11374.10	2559.149	4564.930
#3	3652.912	76805.93	11300.41	2545.908	4563.330



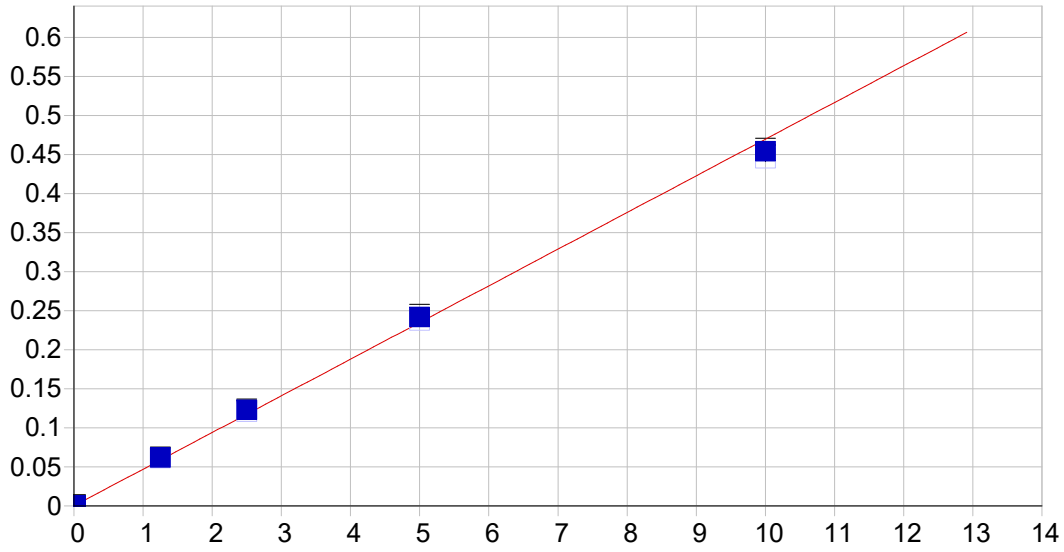
As 189.042 {479}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000123	Re-Slope:	1.000000
A1 (Gain):	0.057645	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999906	Status:	OK.
Std Error of Est:	0.000013		
Predicted MDL:	0.002522		
Predicted MQL:	0.008406		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00012	.000	1
S1	.01000	.00913	-.001	-8.70	.00040	.000	1
S3	2.5000	2.4565	-.043	-1.74	.14123	.001	1
S4	5.0000	5.0301	.030	.602	.28933	.000	1
S5	10.000	10.065	.065	.651	.57906	.003	1
S2	1.2500	1.1991	-.051	-4.07	.06887	.000	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4



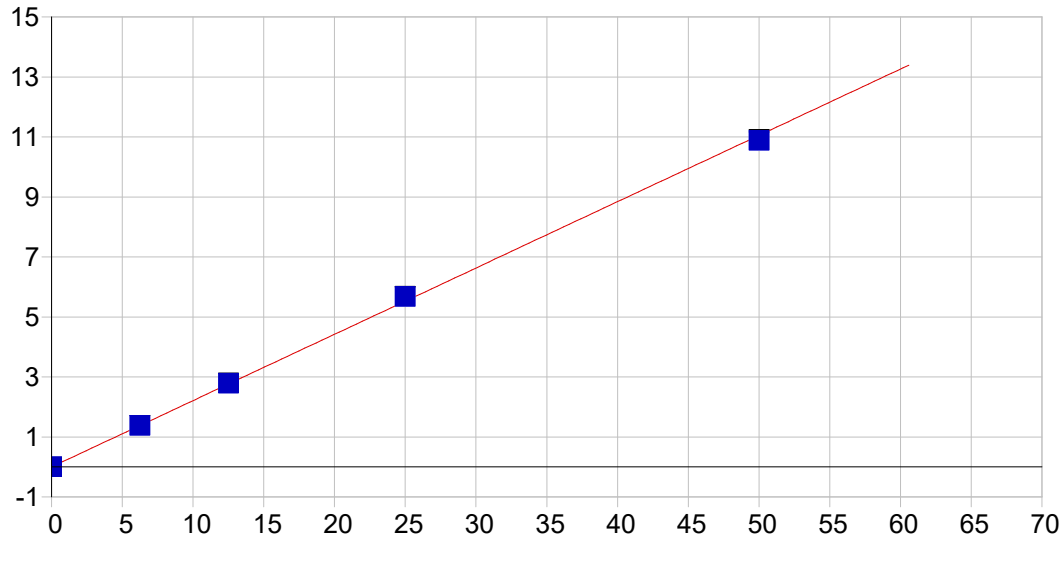
Tl 190.856 {477}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000069	Re-Slope:	1.000000
A1 (Gain):	0.046951	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999327	Status:	OK.
Std Error of Est:	0.000045		
Predicted MDL:	0.002553		
Predicted MQL:	0.008511		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00007	.000	1
S1	.02500	.02626	.001	5.03	.00125	.000	1
S3	2.5000	2.6125	.112	4.50	.12046	.001	1
S4	5.0000	5.1484	.148	2.97	.23725	.004	1
S5	10.000	9.6688	-.331	-3.31	.44496	.004	1
S2	1.2500	1.3190	.069	5.52	.06087	.001	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4



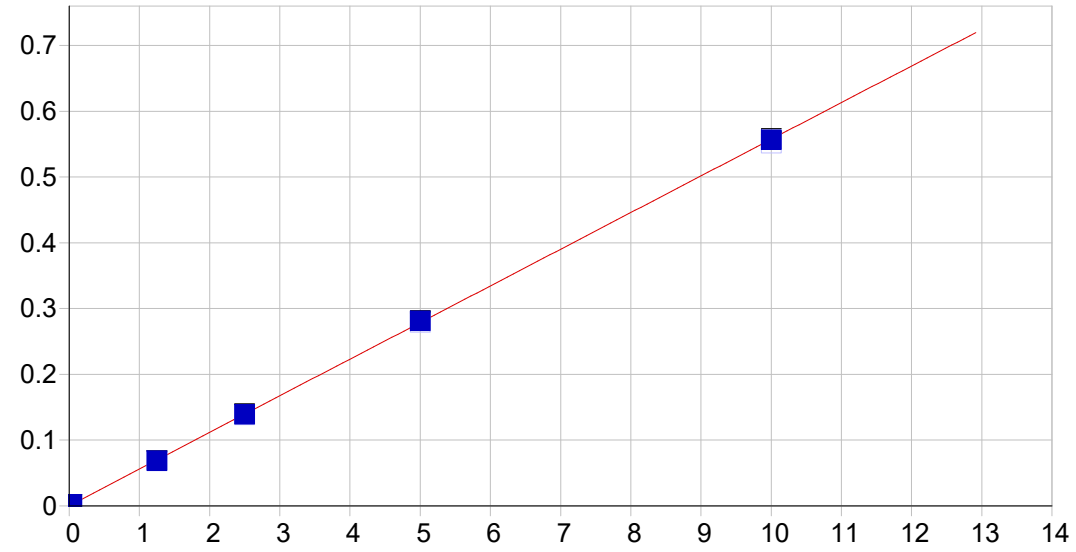
Pb 220.353 {453}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000254	Re-Slope:	1.000000
A1 (Gain):	0.221033	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999830	Status:	OK.
Std Error of Est:	0.000153		
Predicted MDL:	0.001381		
Predicted MQL:	0.004603		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00025	.000	1
S1	.01000	.01016	.000	1.60	.00198	.000	1
S3	12.500	12.604	.104	.831	2.7833	.007	1
S4	25.000	25.682	.682	2.73	5.6717	.008	1
S5	50.000	49.216	-.784	-1.57	10.869	.037	1
S2	6.2500	6.2481	-.002	-.030	1.3796	.003	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4



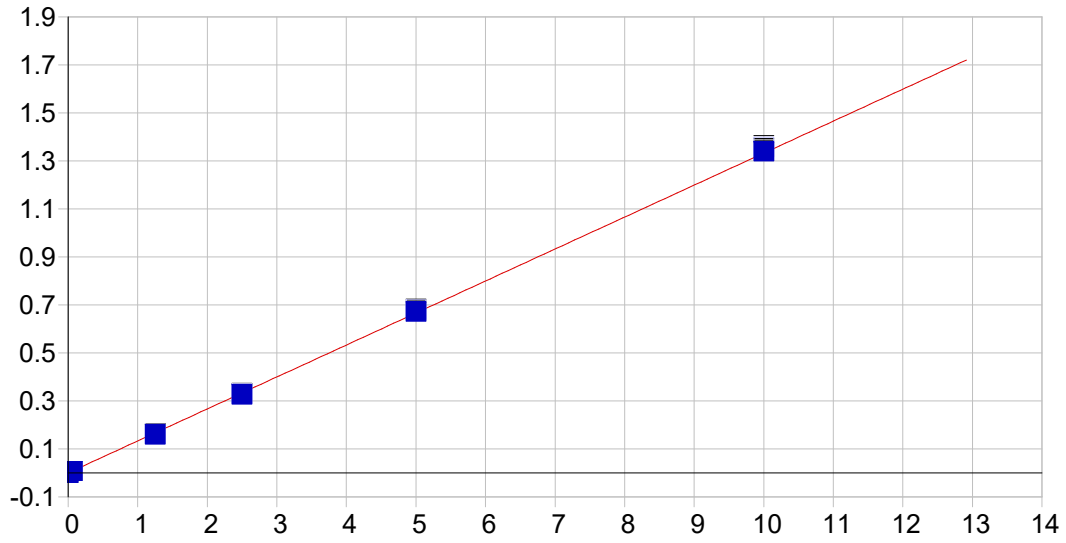
Se 196.090 {472}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000277	Re-Slope:	1.000000
A1 (Gain):	0.055715	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999980	Status:	OK.
Std Error of Est:	0.000011		
Predicted MDL:	0.003226		
Predicted MQL:	0.010752		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00028	.000	1
S1	.03500	.03419	-.001	-2.30	.00218	.000	1
S3	2.5000	2.4952	-.005	-.192	.13801	.001	1
S4	5.0000	5.0433	.043	.865	.27869	.001	1
S5	10.000	9.9822	-.018	-.178	.55130	.002	1
S2	1.2500	1.2302	-.020	-1.59	.06817	.000	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

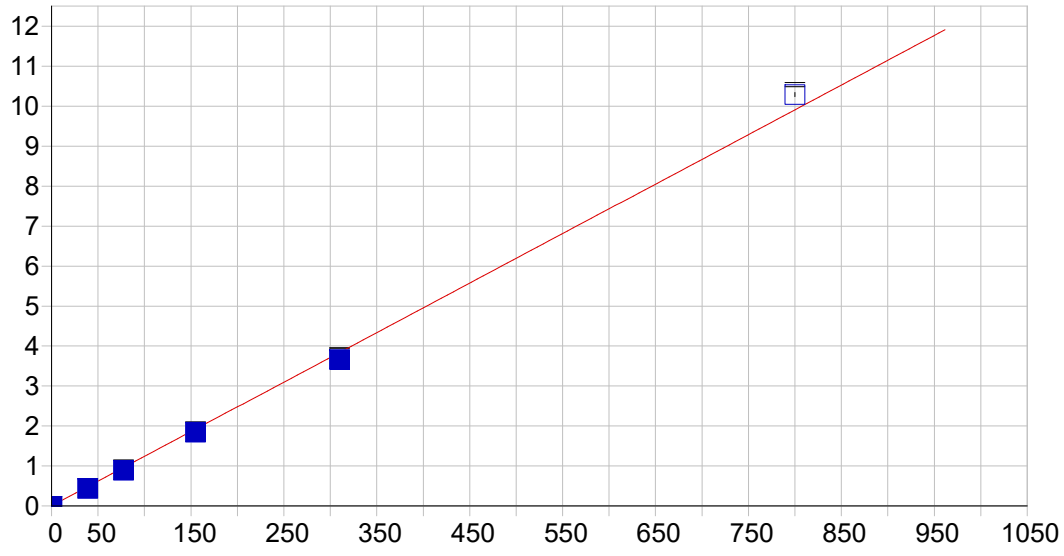


Sb 206.833 {463}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000093	Re-Slope:	1.000000
A1 (Gain):	0.133233	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999913	Status:	OK.
Std Error of Est:	0.000073		
Predicted MDL:	0.001635		
Predicted MQL:	0.005451		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00009	.000	1
S1	.06000	.05865	-.001	-2.26	.00789	.000	1
S3	2.5000	2.4518	-.048	-1.93	.33119	.001	1
S4	5.0000	5.0402	.040	.804	.68050	.002	1
S5	10.000	10.056	.056	.564	1.3577	.006	1
S2	1.2500	1.2030	-.047	-3.76	.16259	.000	1



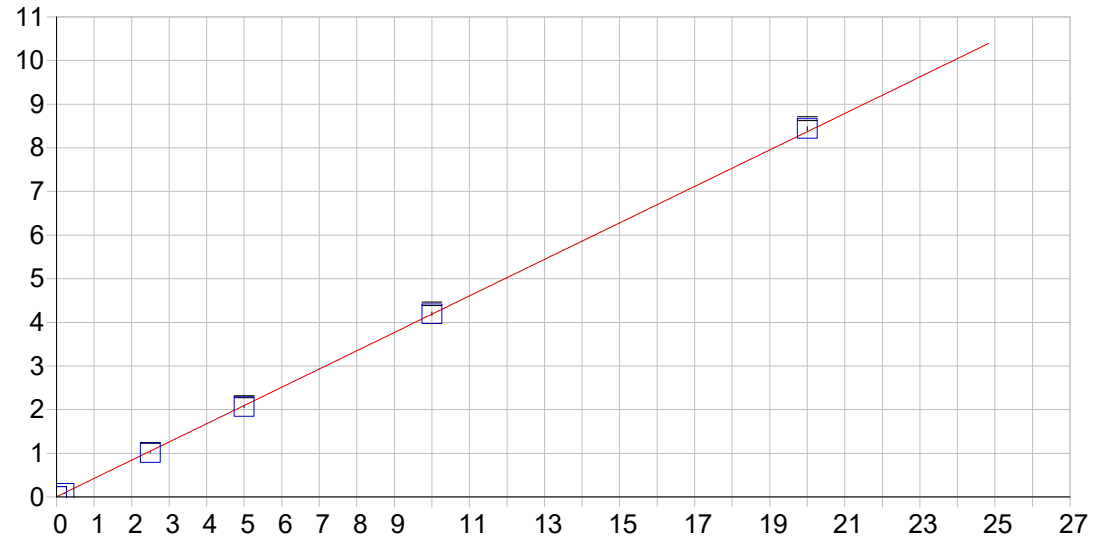
Al 396.152 { 85}

Date of Fit:	1/28/2025 18:27:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000104	Re-Slope:	1.000000
A1 (Gain):	0.012388	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998919	Status:	OK.
Std Error of Est:	0.000358		
Predicted MDL:	0.007305		
Predicted MQL:	0.024351		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00008	.000	.000	.00010	.000	1
S1	.20000	.16973	-.030	-15.1	.00221	.000	1
S3	77.500	71.899	-5.60	-7.23	.89191	.004	1
S4	155.00	148.78	-6.22	-4.02	1.8454	.006	1
S5	310.00	295.25	-14.8	-4.76	3.6621	.042	1
S2	38.750	34.592	-4.16	-10.7	.42919	.001	1
S6	800.00	830.80	30.8	3.85	10.292	.052	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4



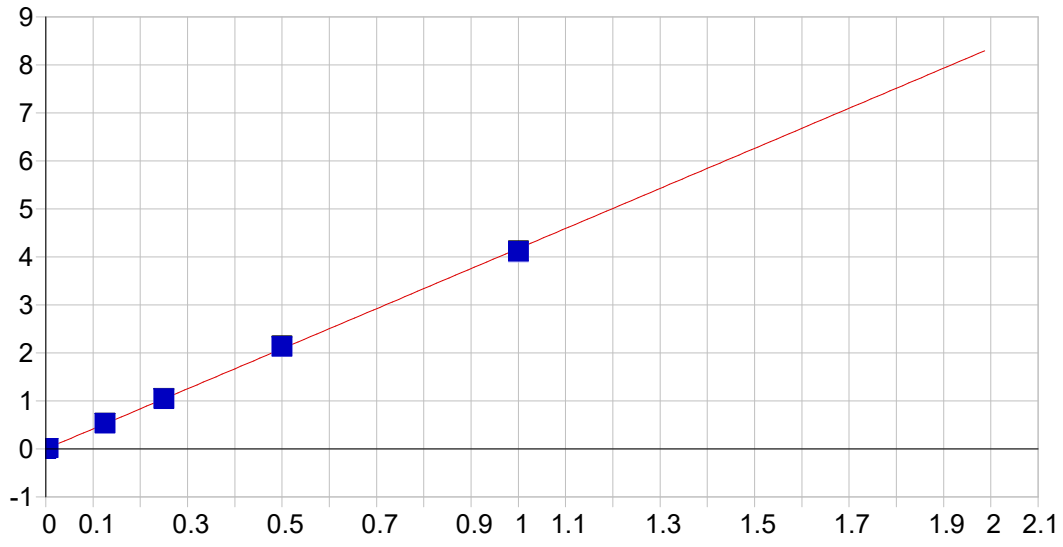
Ba 493.409 { 68}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004840	Re-Slope:	1.000000
A1 (Gain):	0.418269	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999895	Status:	OK.
Std Error of Est:	0.000643		
Predicted MDL:	0.000772		
Predicted MQL:	0.002574		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00003	.000	.000	.00485	.001	1
S1	.20000	.17814	-.022	-10.9	.07935	.000	1
S3	5.0000	4.9289	-.071	-1.42	2.0664	.020	1
S4	10.000	10.021	.021	.210	4.1963	.041	1
S5	20.000	20.161	.161	.804	8.4375	.044	1
S2	2.5000	2.4112	-.089	-3.55	1.0134	.005	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4



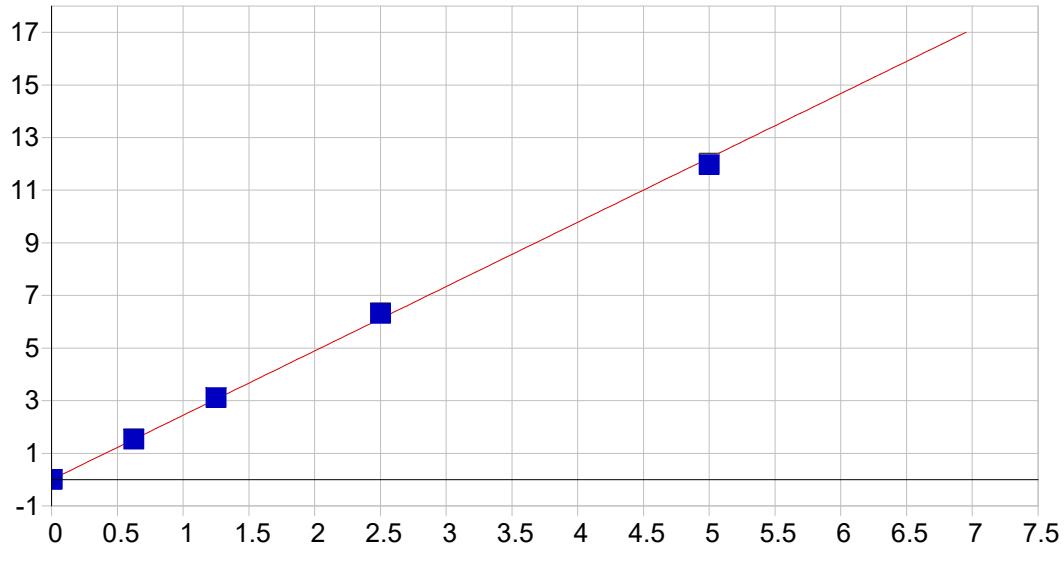
Be 234.861 {144}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000337	Re-Slope:	1.000000
A1 (Gain):	4.174532	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999841	Status:	OK.
Std Error of Est:	0.000279		
Predicted MDL:	0.000073		
Predicted MQL:	0.000245		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00034	.000	1
S1	.00500	.00538	.000	7.70	.02212	.000	1
S3	.25000	.25048	.000	.193	1.0406	.006	1
S4	.50000	.51140	.011	2.28	2.1251	.010	1
S5	1.0000	.98475	-.015	-1.52	4.0918	.016	1
S2	.12500	.12798	.003	2.39	.53158	.002	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

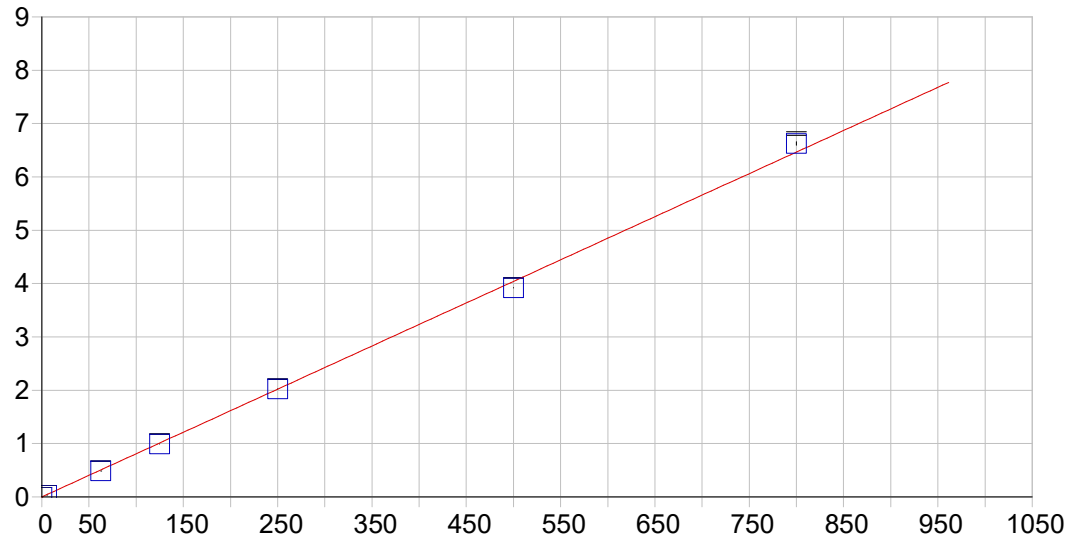


Cd 214.438 {457}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000010	Re-Slope:	1.000000
A1 (Gain):	2.445788	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999714	Status:	OK.
Std Error of Est:	0.000491		
Predicted MDL:	0.000079		
Predicted MQL:	0.000262		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00001	.000	1
S1	.00500	.00498	-.000	-.355	.01218	.000	1
S3	1.2500	1.2722	.022	1.78	3.1176	.009	1
S4	2.5000	2.5821	.082	3.28	6.3272	.012	1
S5	5.0000	4.8931	-.107	-2.14	11.992	.041	1
S2	.62500	.62769	.003	.430	1.5382	.004	1



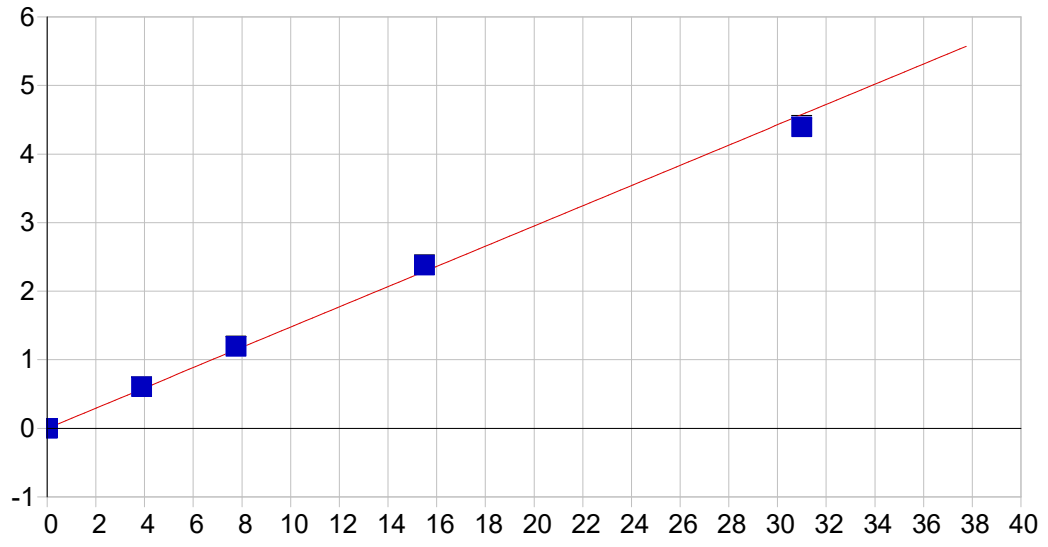
Ca 373.690 { 90}

Date of Fit:	1/28/2025 18:27:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000075	Re-Slope:	1.000000
A1 (Gain):	0.008083	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999688	Status:	OK.
Std Error of Est:	0.000705		
Predicted MDL:	0.008730		
Predicted MQL:	0.029099		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00072	.001	.000	.00008	.000	1
S2	62.500	60.143	-2.36	-3.77	.48620	.001	1
S3	125.00	122.84	-2.16	-1.73	.99295	.003	1
S4	250.00	250.36	.360	.144	2.0237	.007	1
S5	500.00	485.05	-15.0	-2.99	3.9207	.002	1
S1	5.0000	4.5741	-.426	-8.52	.03705	.000	1
S6	800.00	819.54	19.5	2.44	6.6243	.033	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4



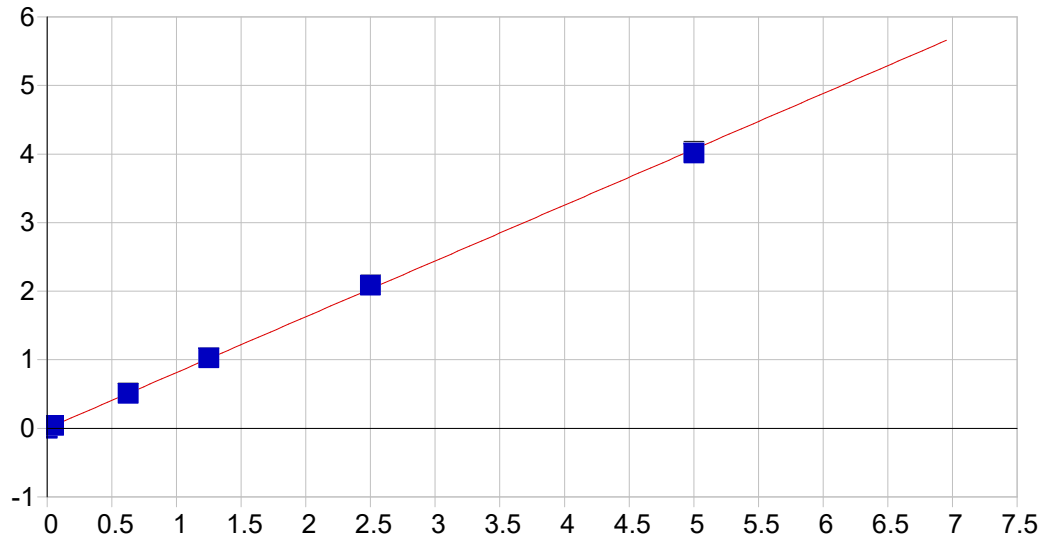
Cr 267.716 {126}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000005	Re-Slope:	1.000000
A1 (Gain):	0.147559	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999132	Status:	OK.
Std Error of Est:	0.000182		
Predicted MDL:	0.000409		
Predicted MQL:	0.001362		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00001	.000	1
S1	.01000	.01077	.001	7.68	.00158	.000	1
S3	7.7500	8.1000	.350	4.52	1.1955	.004	1
S4	15.500	16.121	.621	4.00	2.3793	.003	1
S5	31.000	29.797	-1.20	-3.88	4.3980	.021	1
S2	3.8750	4.1061	.231	5.96	.60603	.000	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4



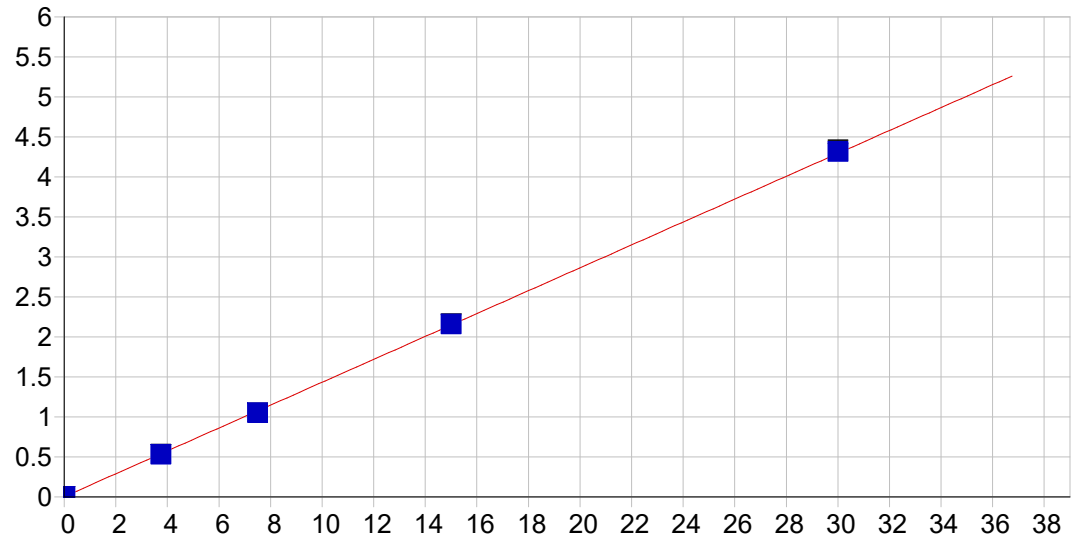
Co 228.616 {448}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000026	Re-Slope:	1.000000
A1 (Gain):	0.813681	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999863	Status:	OK.
Std Error of Est:	0.000359		
Predicted MDL:	0.000260		
Predicted MQL:	0.000867		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00003	.000	1
S1	.05000	.04917	-.001	-1.66	.04019	.000	1
S3	1.2500	1.2602	.010	.818	1.0293	.002	1
S4	2.5000	2.5612	.061	2.45	2.0918	.003	1
S5	5.0000	4.9291	-.071	-1.42	4.0262	.015	1
S2	.62500	.62523	.000	.037	.51070	.001	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4



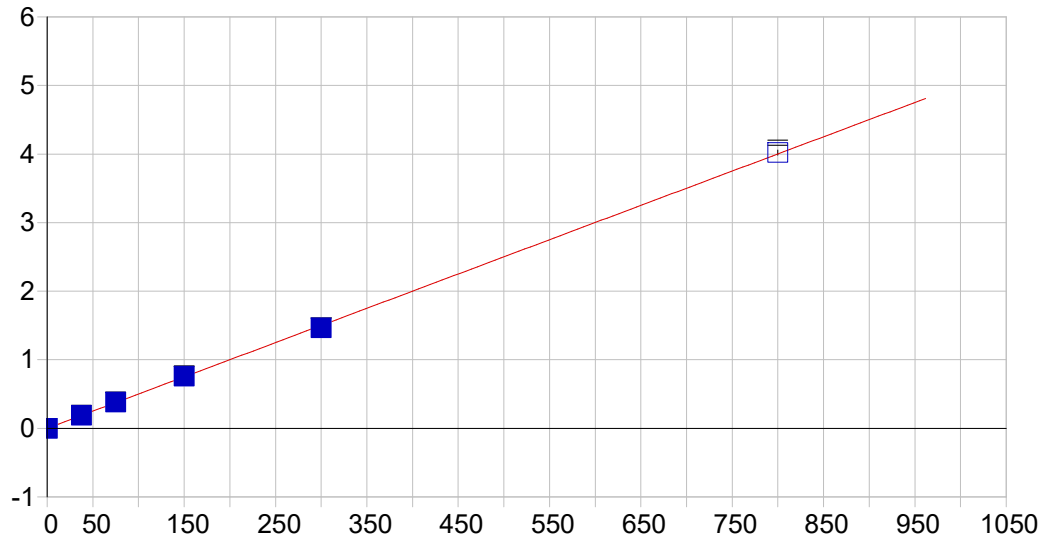
Cu 324.754 {104}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003050	Re-Slope:	1.000000
A1 (Gain):	0.143032	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999951	Status:	OK.
Std Error of Est:	0.000065		
Predicted MDL:	0.002277		
Predicted MQL:	0.007591		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00305	.000	1
S1	.02500	.02759	.003	10.4	.00700	.000	1
S3	7.5000	7.3368	-.163	-2.18	1.0523	.005	1
S4	15.000	15.069	.069	.459	2.1582	.005	1
S5	30.000	30.144	.144	.480	4.3142	.023	1
S2	3.7500	3.6978	-.052	-1.39	.53190	.001	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

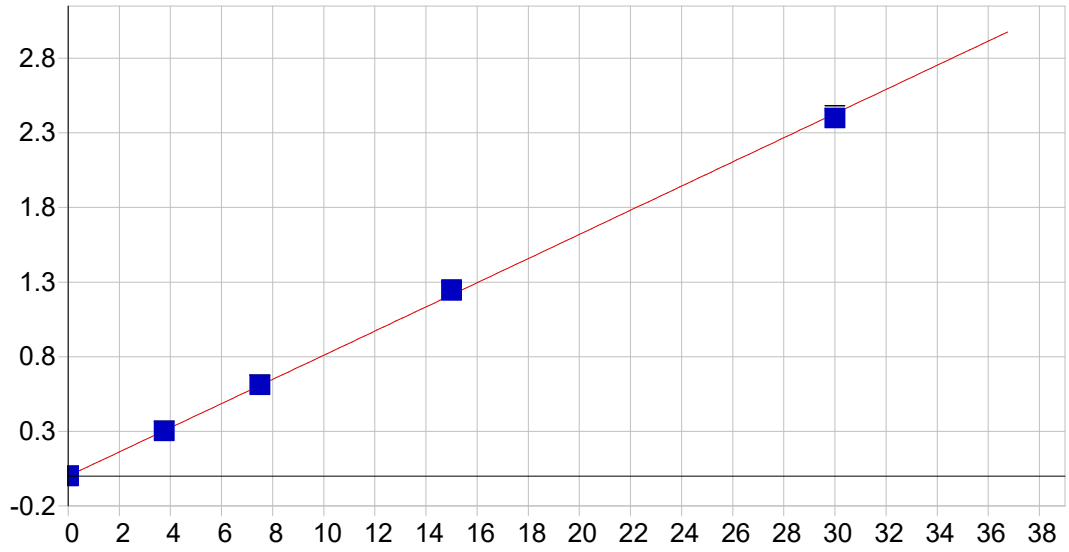


Fe 259.837 {130}

Date of Fit:	1/28/2025 18:27:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.005002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999916	Status:	OK.
Std Error of Est:	0.000028		
Predicted MDL:	0.006015		
Predicted MQL:	0.020050		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00000	.000	1
S1	.10000	.09914	-.001	-.860	.00049	.000	1
S3	75.000	76.060	1.06	1.41	.38008	.001	1
S4	150.00	151.95	1.95	1.30	.75932	.004	1
S5	300.00	292.91	-7.09	-2.36	1.4636	.004	1
S2	37.500	37.527	.027	.072	.18752	.001	1
S6	800.00	804.05	4.05	.506	4.0219	.039	1

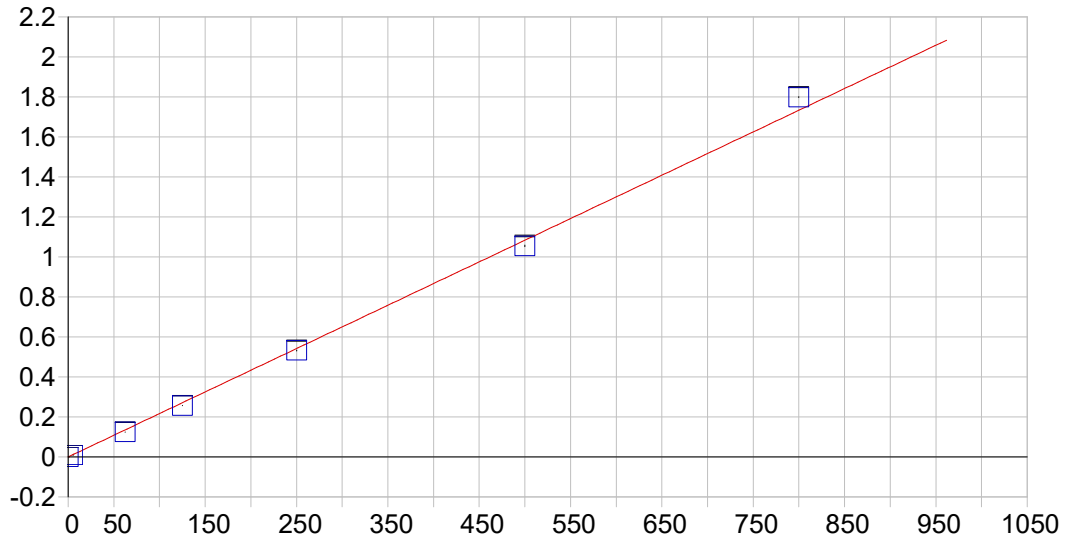


Mn 257.610 {131}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000016	Re-Slope:	1.000000
A1 (Gain):	0.080983	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999880	Status:	OK.
Std Error of Est:	0.000045		
Predicted MDL:	0.000358		
Predicted MQL:	0.001193		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00002	.000	1
S1	.01500	.01477	-.000	-1.54	.00118	.000	1
S3	7.5000	7.5445	.045	.594	.61055	.002	1
S4	15.000	15.356	.356	2.37	1.2427	.004	1
S5	30.000	29.632	-.368	-1.23	2.3980	.017	1
S2	3.7500	3.7181	-.032	-.852	.30087	.001	1



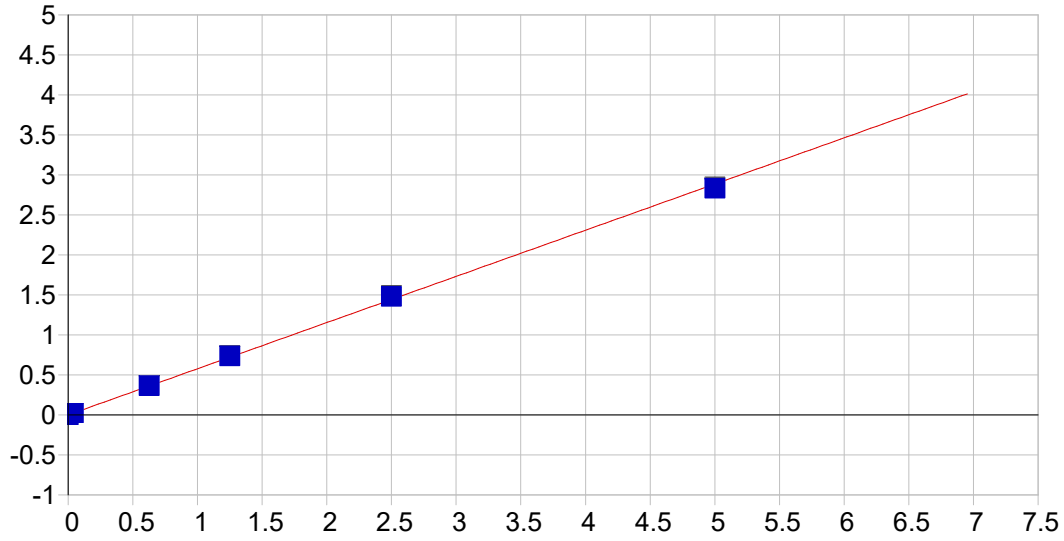
Mg 279.079 {121}

Date of Fit:	1/28/2025 18:27:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000022	Re-Slope:	1.000000
A1 (Gain):	0.002167	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999287	Status:	OK.
Std Error of Est:	0.000286		
Predicted MDL:	0.017002		
Predicted MQL:	0.056672		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00160	.002	.000	-.00002	.000	1
S2	62.500	57.390	-5.11	-8.18	.12433	.000	1
S3	125.00	118.40	-6.60	-5.28	.25651	.001	1
S4	250.00	245.62	-4.38	-1.75	.53217	.002	1
S5	500.00	486.84	-13.2	-2.63	1.0548	.004	1
S1	5.0000	4.1006	-.899	-18.0	.00886	.000	1
S6	800.00	830.16	30.2	3.77	1.7987	.002	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4



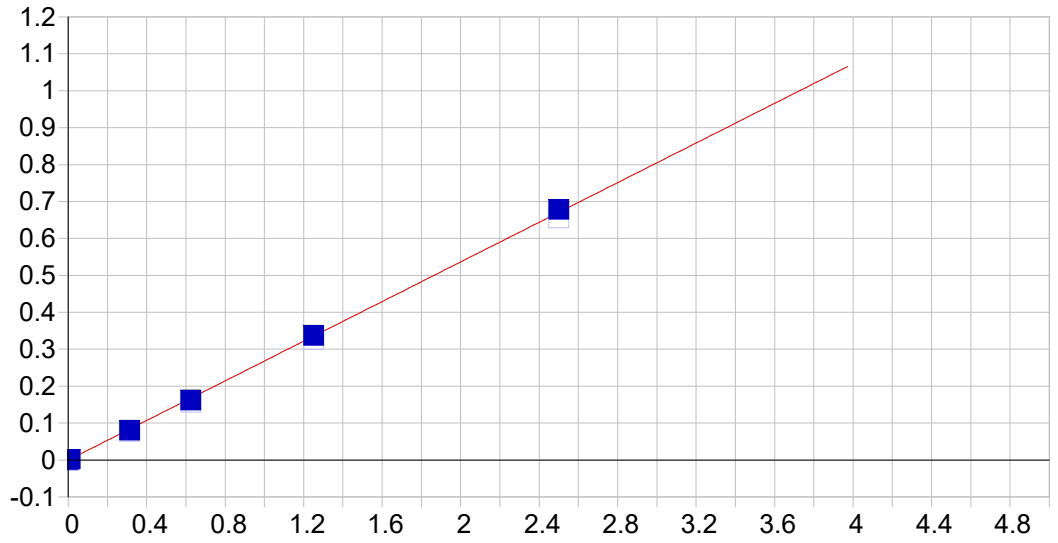
Ni 231.604 {446}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000227	Re-Slope:	1.000000
A1 (Gain):	0.577224	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999784	Status:	OK.
Std Error of Est:	0.000286		
Predicted MDL:	0.000410		
Predicted MQL:	0.001367		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00023	.000	1
S1	.04000	.04014	.000	.353	.02297	.000	1
S3	1.2500	1.2726	.023	1.81	.73602	.002	1
S4	2.5000	2.5667	.067	2.67	1.4847	.001	1
S5	5.0000	4.9041	-.096	-1.92	2.8373	.010	1
S2	.62500	.63150	.007	1.04	.36514	.001	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

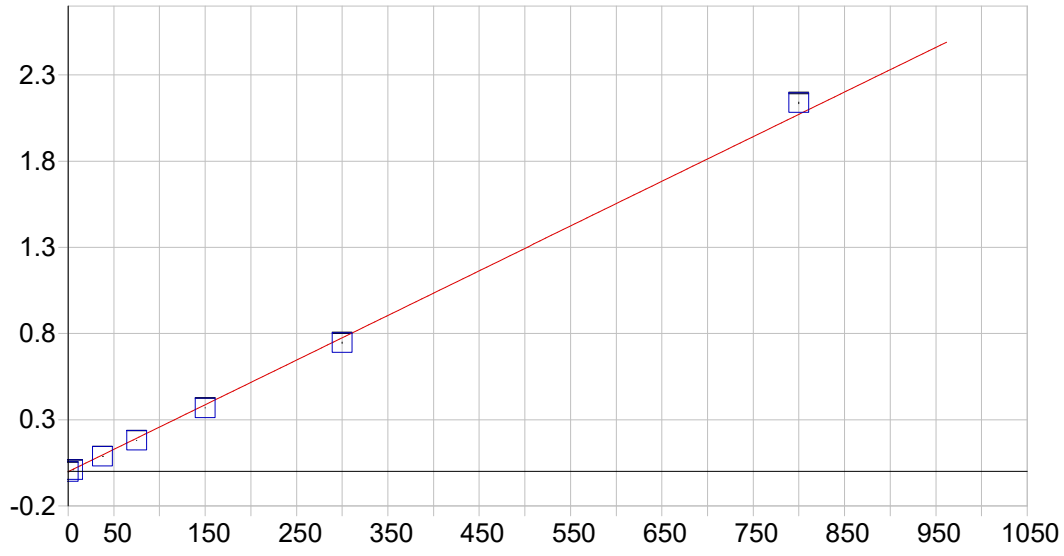


Ag 328.068 {103}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000386	Re-Slope:	1.000000
A1 (Gain):	0.268393	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999802	Status:	OK.
Std Error of Est:	0.000043		
Predicted MDL:	0.000364		
Predicted MQL:	0.001213		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00039	.000	1
S1	.01000	.00976	-.000	-2.44	.00221	.000	1
S3	.62500	.60310	-.022	-3.50	.15557	.000	1
S4	1.2500	1.2573	.007	.587	.32525	.000	1
S5	2.5000	2.5284	.028	1.14	.65458	.000	1
S2	.31250	.29890	-.014	-4.35	.07688	.000	1



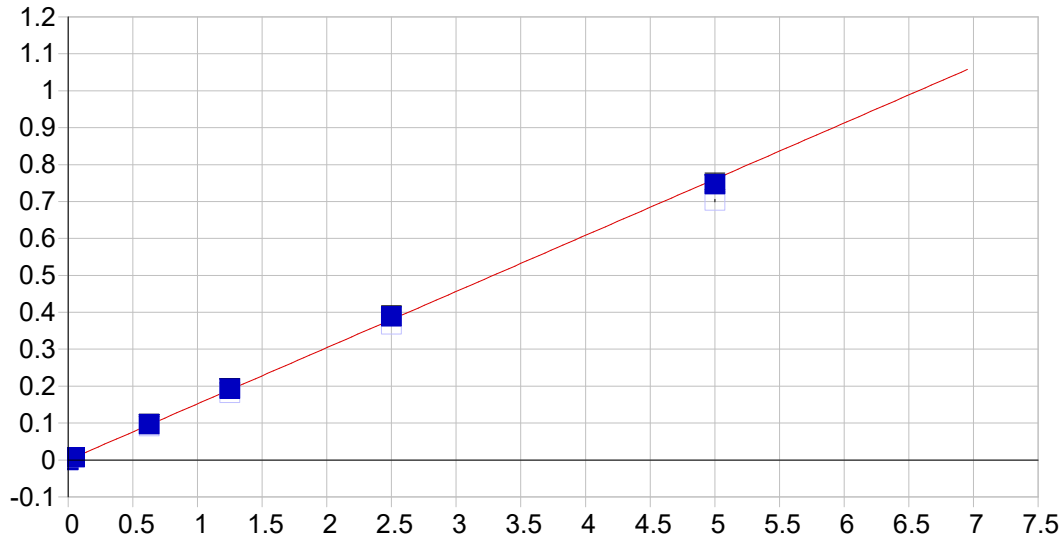
Na 818.326 { 41}

Date of Fit:	1/28/2025 18:27:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.002217	Re-Slope:	1.000000
A1 (Gain):	0.002593	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999234	Status:	OK.
Std Error of Est:	0.000314		
Predicted MDL:	0.366559		
Predicted MQL:	1.221865		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00142	.001	.000	-.00221	.001	1
S2	37.500	34.893	-2.61	-6.95	.08825	.000	1
S3	75.000	70.222	-4.78	-6.37	.17986	.001	1
S4	150.00	143.08	-6.92	-4.61	.36876	.001	1
S5	300.00	288.95	-11.1	-3.68	.74697	.004	1
S1	5.0000	4.5014	-.499	-9.97	.00945	.000	1
S6	800.00	825.86	25.9	3.23	2.1391	.005	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4



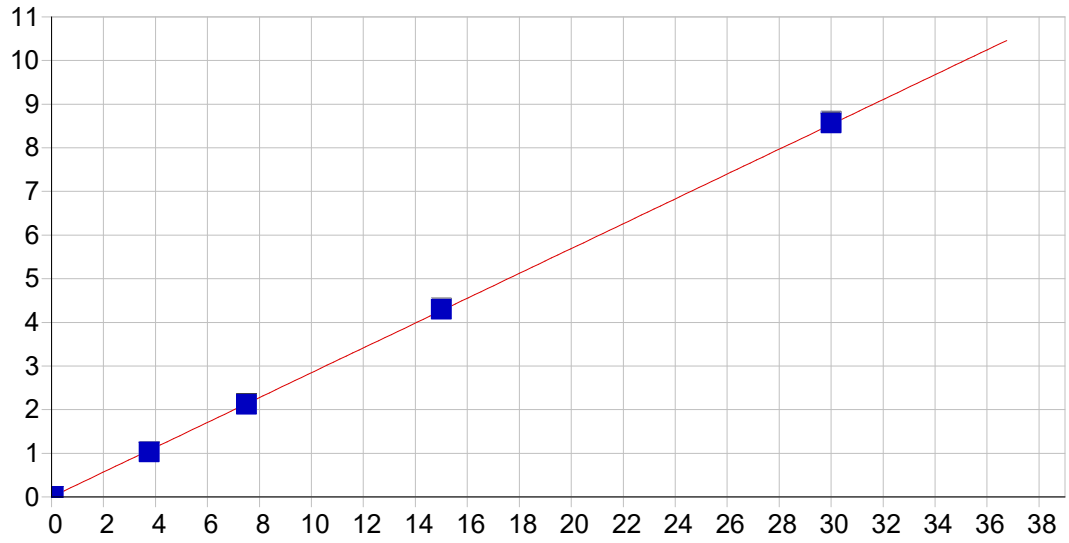
V 292.402 {115}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear
Weighting:	1/Conc		

A0 (Offset):	0.000020	Re-Slope:	1.000000
A1 (Gain):	0.152090	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999797	Status:	OK.
Std Error of Est:	0.000077		
Predicted MDL:	0.001839		
Predicted MQL:	0.006131		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00002	.000	1
S1	.05000	.05088	.001	1.76	.00774	.000	1
S3	1.2500	1.2665	.016	1.32	.18152	.000	1
S4	2.5000	2.5582	.058	2.33	.36685	.001	1
S5	5.0000	4.9118	-.088	-1.76	.70258	.003	1
S2	.62500	.63768	.013	2.03	.09145	.000	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4



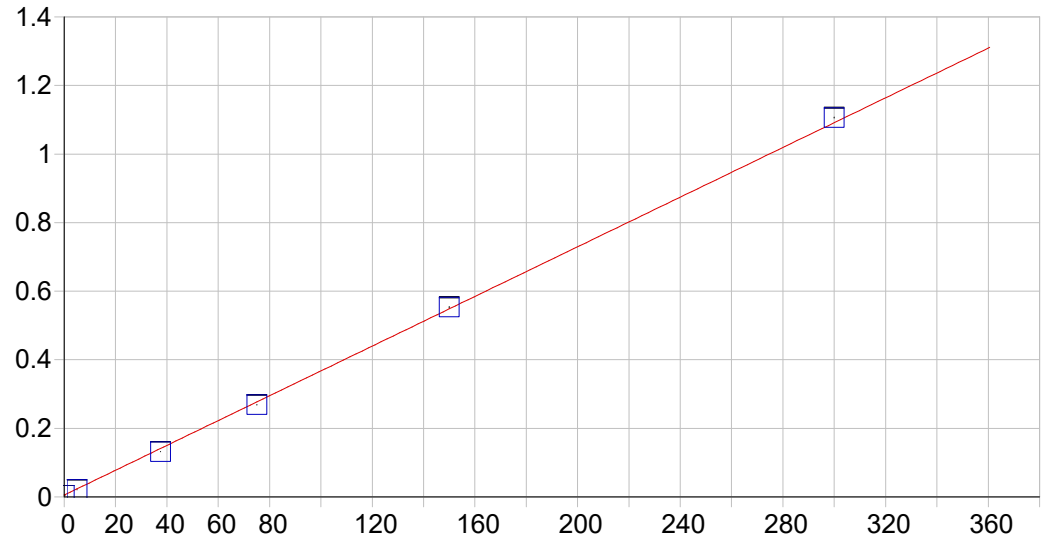
Zn 213.856 {158}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000507	Re-Slope:	1.000000
A1 (Gain):	0.284548	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999940	Status:	OK.
Std Error of Est:	0.000223		
Predicted MDL:	0.001677		
Predicted MQL:	0.005591		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00051	.000	1
S1	.06000	.05542	-.005	-7.63	.01638	.000	1
S3	7.5000	7.4493	-.051	-.676	2.1282	.012	1
S4	15.000	15.098	.098	.655	4.3128	.016	1
S5	30.000	30.096	.096	.321	8.5965	.014	1
S2	3.7500	3.6107	-.139	-3.71	1.0320	.002	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4



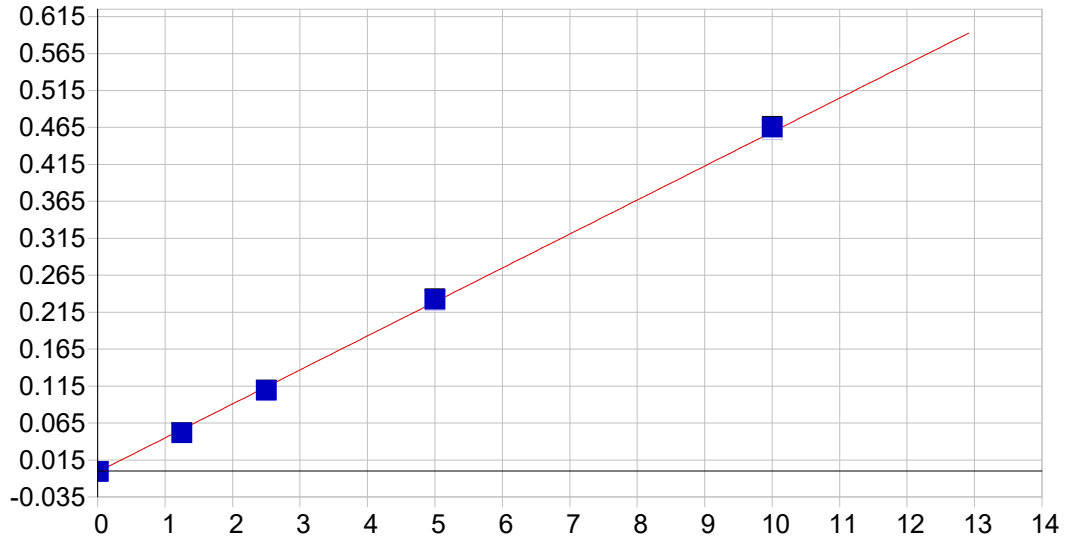
K 769.896 { 44}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.005394	Re-Slope:	1.000000
A1 (Gain):	0.003621	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999639	Status:	OK.
Std Error of Est:	0.000201		
Predicted MDL:	0.046730		
Predicted MQL:	0.155767		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00106	.001	.000	.00540	.000	1
S2	37.500	34.899	-2.60	-6.94	.13175	.000	1
S3	75.000	72.733	-2.27	-3.02	.26873	.001	1
S4	150.00	151.46	1.46	.971	.55376	.002	1
S5	300.00	304.09	4.09	1.36	1.1064	.001	1
S1	5.0000	4.3258	-.674	-13.5	.02106	.000	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

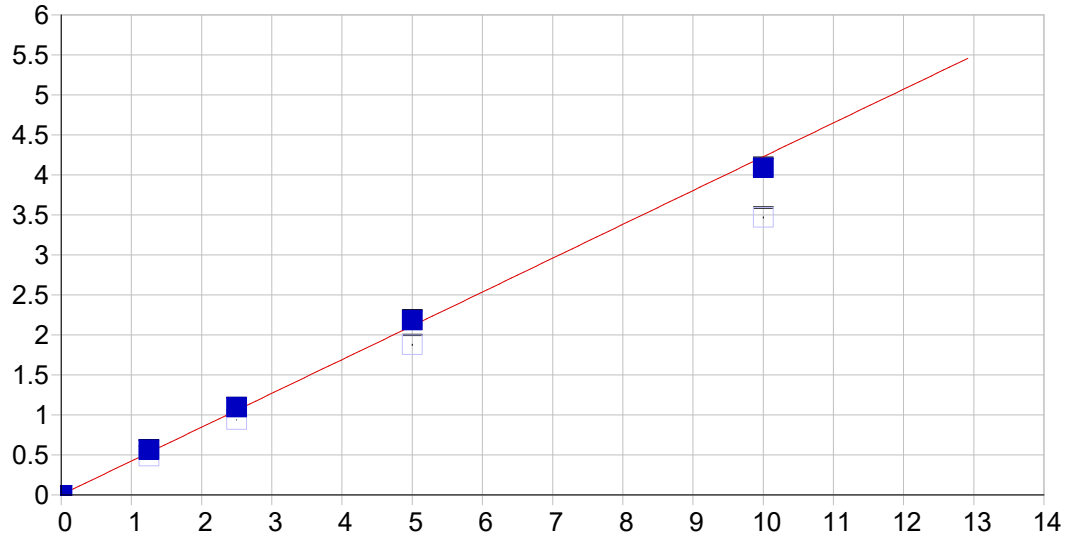


P 177.495 {490}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001129	Re-Slope:	1.000000
A1 (Gain):	0.045986	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999577	Status:	OK.
Std Error of Est:	0.000022		
Predicted MDL:	0.002209		
Predicted MQL:	0.007364		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00113	.000	1
S1	.01000	.00840	-.002	-16.0	-.00075	.000	1
S3	2.5000	2.3979	-.102	-4.09	.10832	.001	1
S4	5.0000	5.0701	.070	1.40	.23038	.001	1
S5	10.000	10.136	.136	1.36	.46170	.002	1
S2	1.2500	1.1476	-.102	-8.19	.05124	.000	1

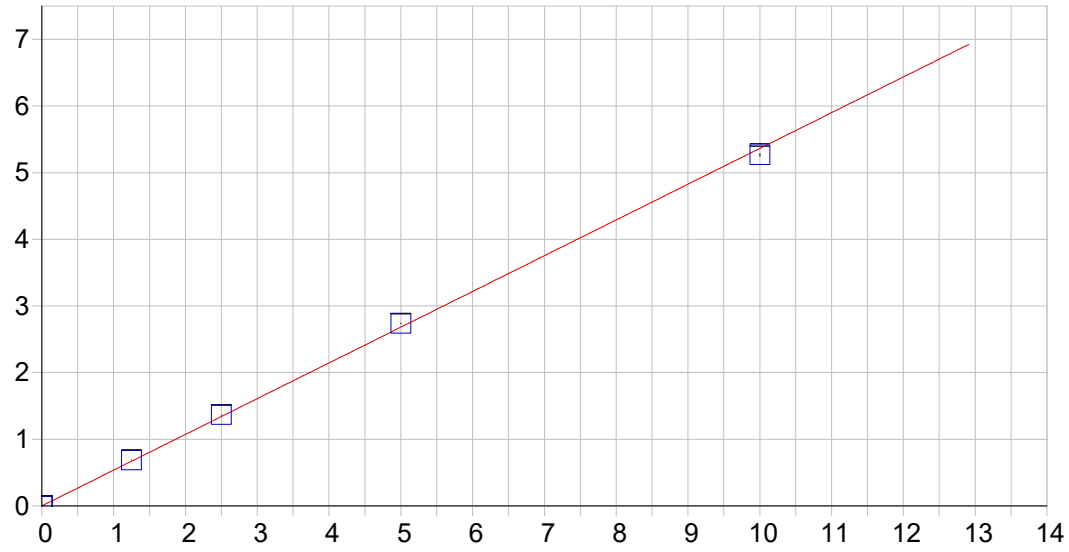


B 249.678 {135}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001154	Re-Slope:	1.000000
A1 (Gain):	0.422524	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998747	Status:	OK.
Std Error of Est:	0.000303		
Predicted MDL:	0.000767		
Predicted MQL:	0.002556		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00116	.000	1
S1	.01000	.00005	-.010	-99.5	.00096	.000	1
S3	2.5000	2.5868	.087	3.47	.93874	.002	1
S4	5.0000	5.1692	.169	3.38	1.8745	.008	1
S5	10.000	9.6753	-.325	-3.25	3.4677	.009	1
S2	1.2500	1.3298	.080	6.38	.48533	.003	1



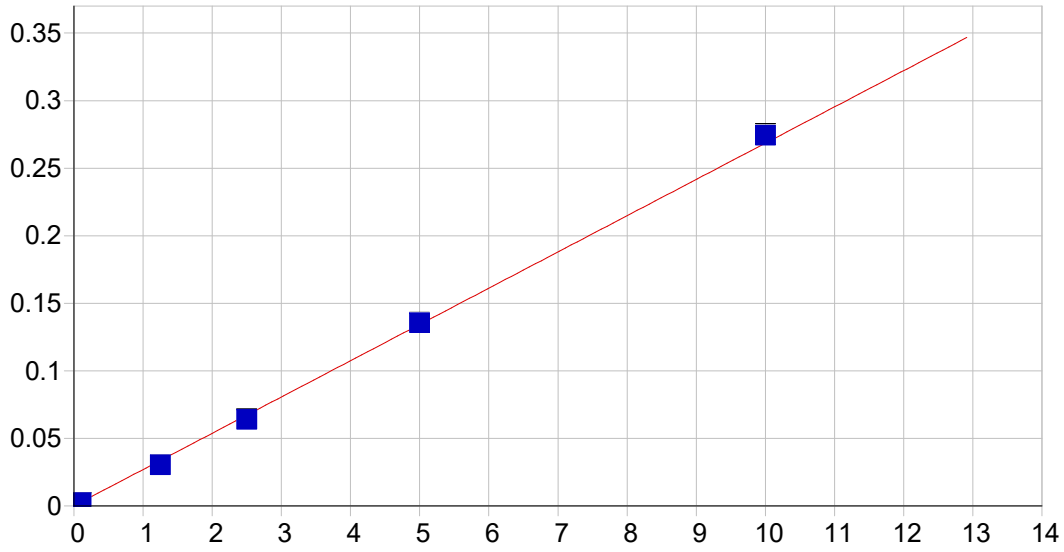
Mo 202.030 {467}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000139	Re-Slope:	1.000000
A1 (Gain):	0.536349	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999811	Status:	OK.
Std Error of Est:	0.000175		
Predicted MDL:	0.000357		
Predicted MQL:	0.001189		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00014	.000	1
S1	.01000	.01078	.001	7.82	.00592	.000	1
S3	2.5000	2.5467	.047	1.87	1.3661	.004	1
S4	5.0000	5.1015	.102	2.03	2.7363	.006	1
S5	10.000	9.8189	-.181	-1.81	5.2665	.020	1
S2	1.2500	1.2820	.032	2.56	.68776	.002	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4



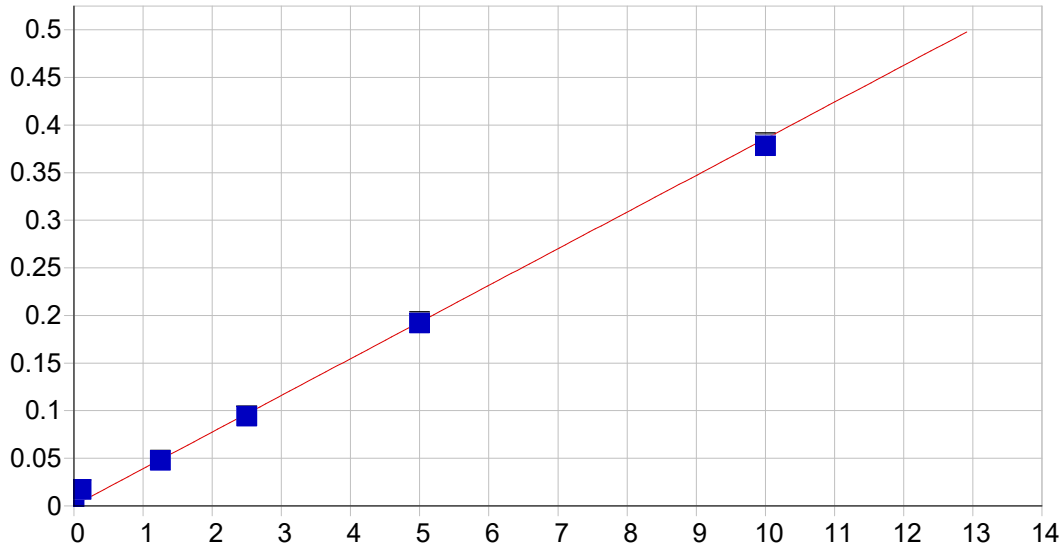
S 182.034 {485}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000106	Re-Slope:	1.000000
A1 (Gain):	0.026841	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999359	Status:	OK.
Std Error of Est:	0.000051		
Predicted MDL:	0.003826		
Predicted MQL:	0.012752		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00003	.000	.000	.00011	.000	1
S1	.10000	.08501	-.015	-15.0	.00239	.000	1
S3	2.5000	2.3816	-.118	-4.74	.06412	.000	1
S4	5.0000	5.0423	.042	.846	.13562	.000	1
S5	10.000	10.211	.211	2.11	.27453	.001	1
S2	1.2500	1.1297	-.120	-9.62	.03047	.000	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

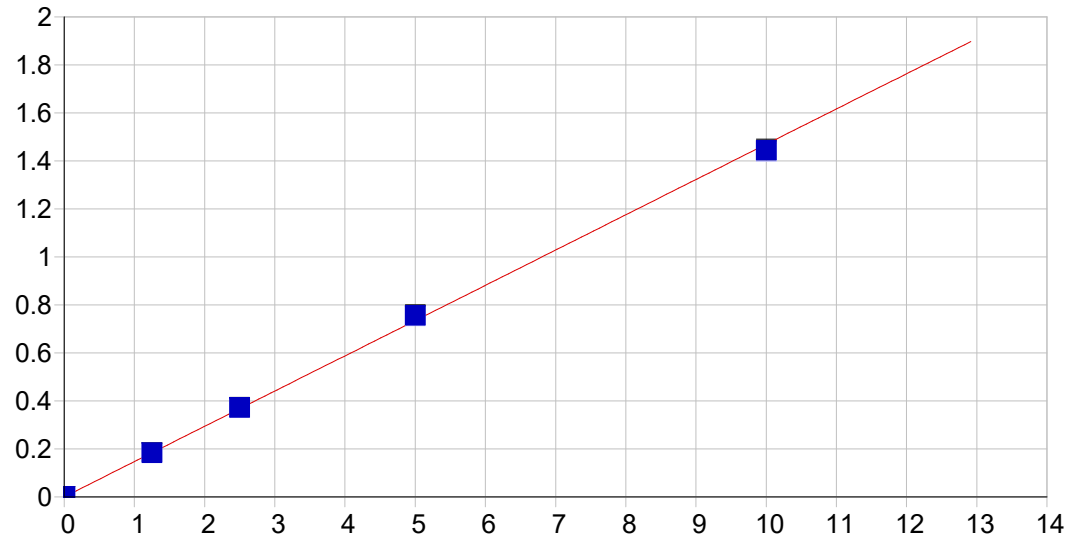


Si 251.611 {134}

Date of Fit:	1/28/2025 18:22:38	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000557	Re-Slope:	1.000000
A1 (Gain):	0.038508	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.972785	Status:	OK.
Std Error of Est:	0.000489		
Predicted MDL:	0.004864		
Predicted MQL:	0.016213		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00032	-.000	.000	.00054	.000	1
S1	.10000	.42682	.327	327.	.01699	.000	1
S3	2.5000	2.4303	-.070	-2.79	.09443	.000	1
S4	5.0000	4.9673	-.033	-.653	.19242	.001	1
S5	10.000	9.8052	-.195	-1.95	.37929	.002	1
S2	1.2500	1.2211	-.029	-2.31	.04772	.000	1

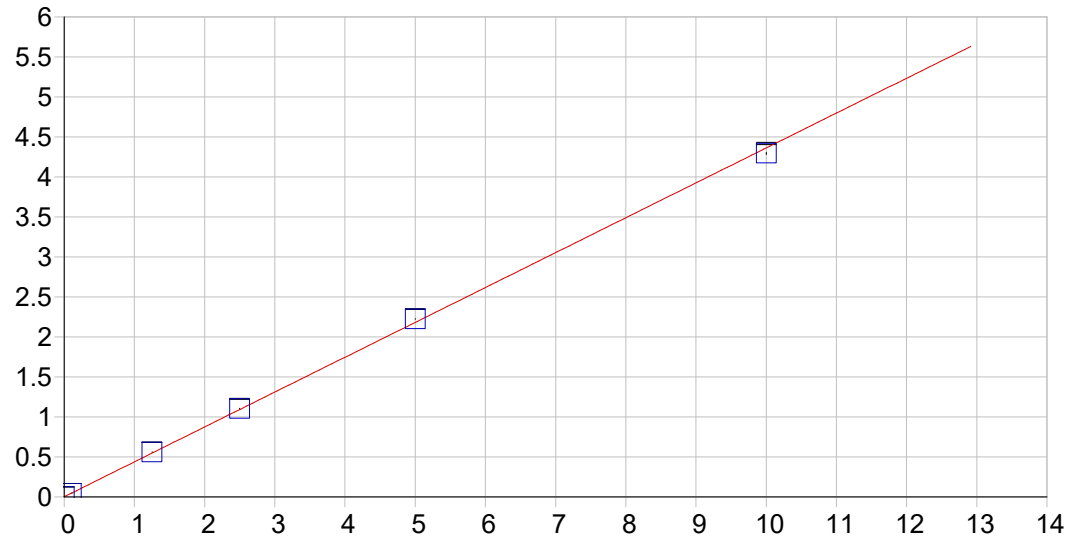


Sn 189.989 {478}

Date of Fit:	1/28/2025 18:22:39	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000162	Re-Slope:	1.000000
A1 (Gain):	0.146916	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999794	Status:	OK.
Std Error of Est:	0.000042		
Predicted MDL:	0.000799		
Predicted MQL:	0.002662		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00016	.000	1
S1	.00700	.00715	.000	2.07	.00117	.000	1
S3	2.5000	2.5344	.034	1.38	.37137	.001	1
S4	5.0000	5.1435	.144	2.87	.75355	.002	1
S5	10.000	9.8246	-.175	-1.75	1.4390	.005	1
S2	1.2500	1.2473	-.003	-.213	.18285	.001	1



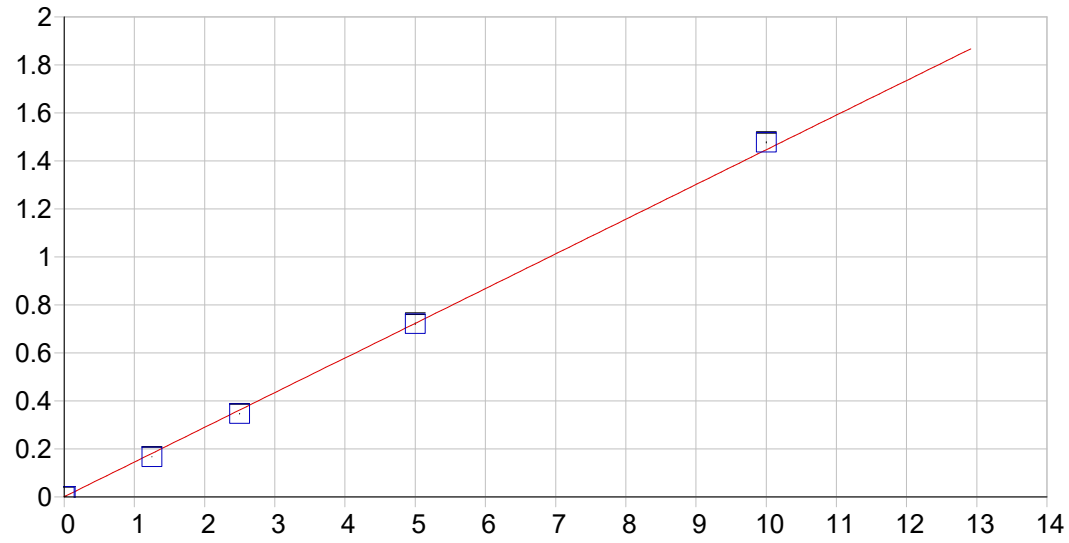
Ti 336.121 {100}

Date of Fit:	1/28/2025 18:22:39	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002092	Re-Slope:	1.000000
A1 (Gain):	0.435919	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999860	Status:	OK.
Std Error of Est:	0.000388		
Predicted MDL:	0.000857		
Predicted MQL:	0.002857		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00209	.000	1
S1	.10000	.10223	.002	2.23	.04665	.000	1
S3	2.5000	2.5257	.026	1.03	1.1031	.005	1
S4	5.0000	5.0947	.095	1.89	2.2230	.004	1
S5	10.000	9.8458	-.154	-1.54	4.2940	.014	1
S2	1.2500	1.2816	.032	2.52	.56074	.001	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4



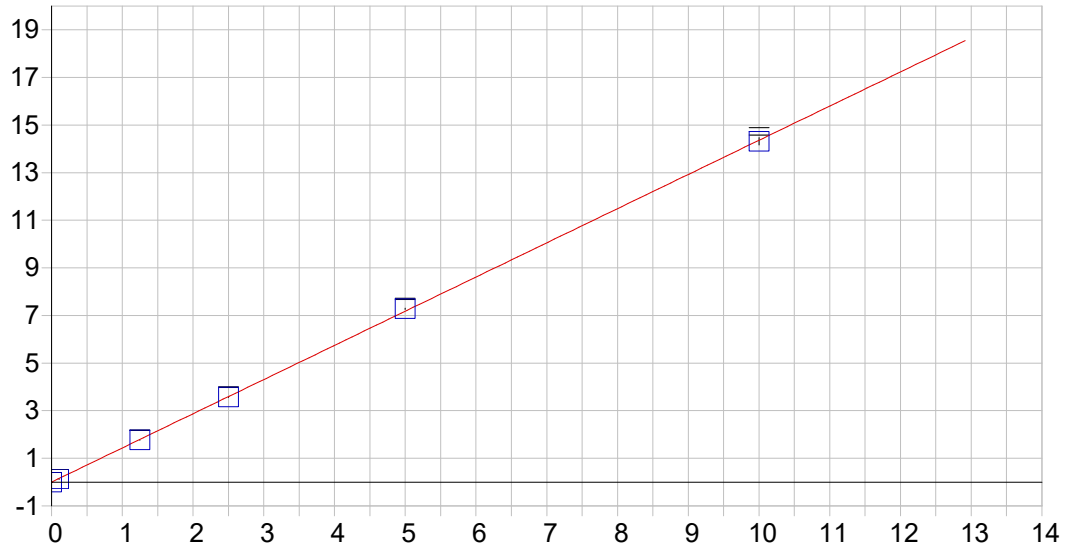
Li 670.784 { 50}

Date of Fit:	1/28/2025 18:22:39	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000705	Re-Slope:	1.000000
A1 (Gain):	0.144540	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999544	Status:	OK.
Std Error of Est:	0.000090		
Predicted MDL:	0.001169		
Predicted MQL:	0.003896		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00071	.000	1
S5	10.000	10.216	.216	2.16	1.4774	.002	1
S4	5.0000	4.9900	-.010	-.201	.72195	.003	1
S3	2.5000	2.3936	-.106	-4.26	.34668	.002	1
S1	.01500	.01339	-.002	-10.7	.00264	.000	1
S2	1.2500	1.1517	-.098	-7.86	.16718	.000	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4



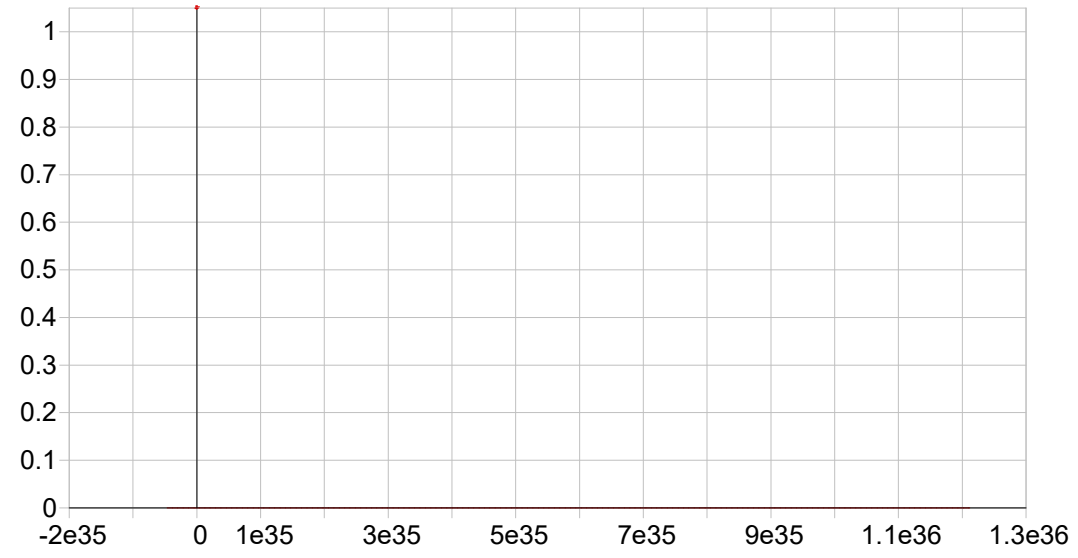
Sr 407.771 { 83}

Date of Fit:	1/28/2025 18:22:39	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000058	Re-Slope:	1.000000
A1 (Gain):	1.436114	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999935	Status:	OK.
Std Error of Est:	0.000869		
Predicted MDL:	0.000063		
Predicted MQL:	0.000209		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00007	.000	1
S1	.10000	.09068	-.009	-9.32	.13029	.001	1
S3	2.5000	2.4864	-.014	-.544	3.5708	.009	1
S4	5.0000	5.0743	.074	1.49	7.2873	.027	1
S5	10.000	9.9679	-.032	-.321	14.315	.154	1
S2	1.2500	1.2308	-.019	-1.54	1.7676	.005	1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

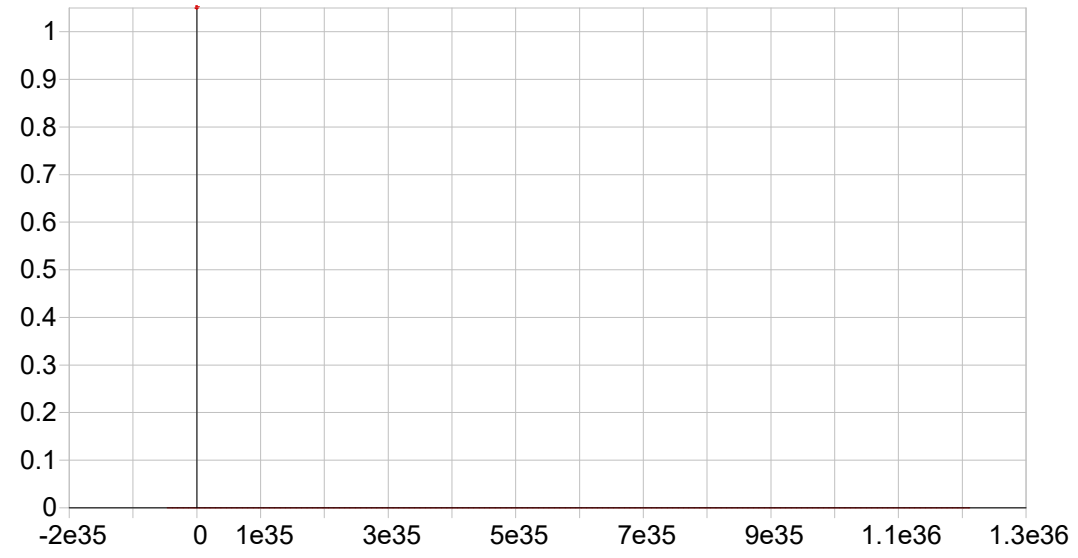


Y 224.306 {450}*

Date of Fit:	1/28/2025 17:56:48	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.000000	Status:	Warning Zero Gain
Std Error of Est:	0.000000		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



Y 360.073 { 94}*

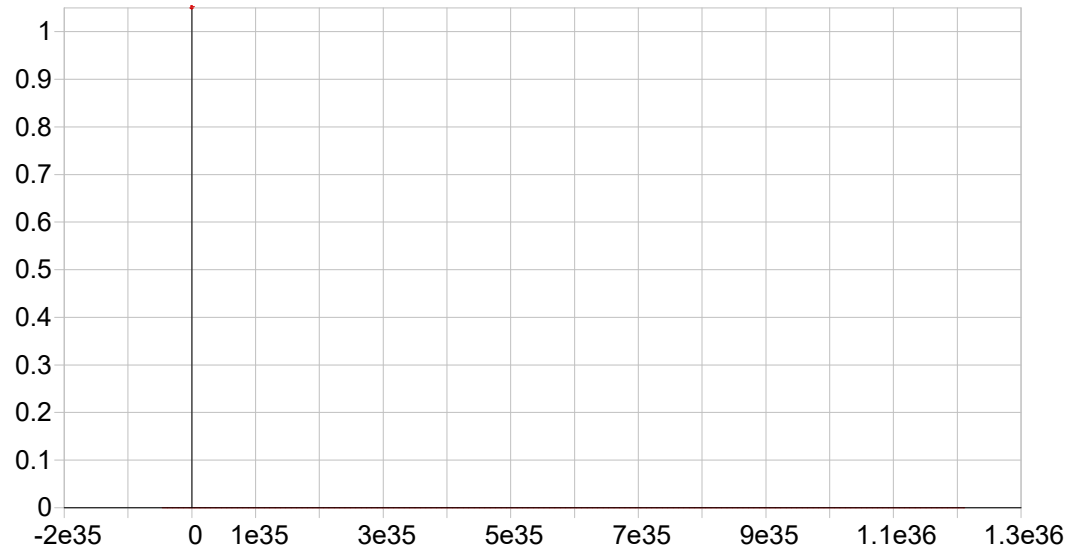
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.000000		Status:	Warning	Zero Gain	
Std Error of Est:	0.000000					
Predicted MDL:	n/a					
Predicted MQL:	n/a					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis

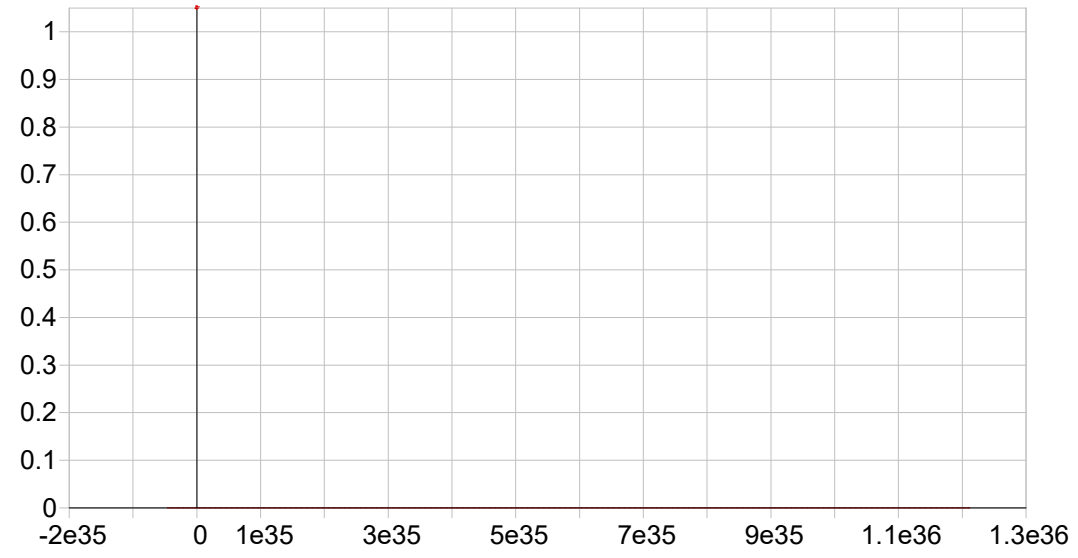


Y 371.030 { 91}*

Date of Fit:	<not fit>		Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):		0.000000		Re-Slope:	1.000000	
A1 (Gain):		0.000000		Y-int:	0.000000	
A2 (Curvature):		0.000000				
n (Exponent):		1.000000				
Correlation:		0.000000		Status:	Warning	Zero Gain
Std Error of Est:		0.000000				
Predicted MDL:		n/a				
Predicted MQL:		n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis

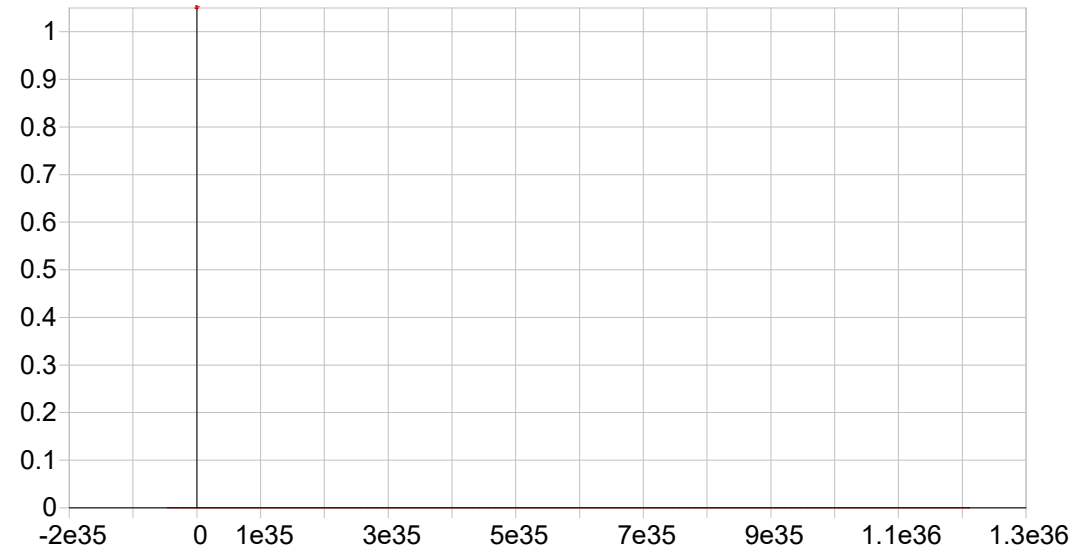
Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4



Y 224.306 {150}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



In 230.606 {446}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

A2 (Curvature):		0.000000					
n (Exponent):		1.000000					
Correlation:		0.000000		Status:	Warning	Zero Gain	
Std Error of Est:		0.000000					
Predicted MDL:		n/a					
Predicted MQL:		n/a					
Std. Name	**Stated Conc.**	**Found Conc.**	**Difference**	**% Diff.**	**(S)IR**	**Std Dev**	**Emphasis**

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: S0 Acquired: 1/28/2025 17:57:32 Type: Cal
Method: EPA SFAM01.0(v58) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00012**	**.00007**	**-.00025**	**.00028**	**.00009**	**.00010**	**.00485**	**-.00034**
Stddev	.00005	.00005	.00029	.00016	.00021	.00006	.00053	.00031
%RSD	42.311	78.909	112.80	58.690	223.32	53.853	10.943	90.942
#1	-.00009	.00004	-.00023	.00028	-.00006	.00013	.00536	.00002
#2	-.00018	.00003	-.00055	.00044	.00001	.00014	.00430	-.00049
#3	-.00010	.00013	.00002	.00012	.00033	.00004	.00489	-.00055

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00001**	**.00008**	**-.00001**	**.00003**	**.00305**	**.00000**	**-.00002**	**-.00002**
Stddev	.00008	.00000	.00001	.00022	.00024	.00003	.00002	.00004
%RSD	812.84	6.1856	251.14	846.03	8.0125	11648.	127.01	208.65
#1	-.00002	.00009	.00001	-.00021	.00331	-.00003	-.00000	-.00004
#2	.00007	.00008	-.00002	.00022	.00300	.00003	-.00000	-.00004
#3	-.00009	.00008	-.00001	.00007	.00283	-.00000	-.00004	.00003

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00023**	**-.00039**	**-.00221**	**.00002**	**.00051**	**.00540**	**-.00113**	**.00116**
Stddev	.00024	.00010	.00140	.00012	.00032	.00022	.00004	.00011
%RSD	103.47	26.273	63.400	583.89	63.480	4.0243	3.6183	9.3318
#1	-.00048	-.00047	-.00281	.00011	.00081	.00564	-.00109	.00107
#2	-.00020	-.00027	-.00061	-.00011	.00055	.00534	-.00112	.00113
#3	-.00001	-.00042	-.00322	.00006	.00017	.00521	-.00117	.00128

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00014**	**.00011**	**.00054**	**.00016**	**.00209**	**.00071**	**.00007**
Stddev	.00005	.00003	.00007	.00006	.00037	.00008	.00008
%RSD	35.639	28.266	13.131	38.810	17.481	11.336	112.35
#1	.00013	.00014	.00056	.00009	.00171	.00076	-.00002
#2	.00009	.00009	.00061	.00022	.00243	.00074	.00011
#3	.00019	.00009	.00047	.00017	.00213	.00061	.00013

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: S0 Acquired: 1/28/2025 17:57:32 Type: Cal
Method: EPA SFAM01.0(v58) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S0 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3666.6	79491.	11506.	2579.7	4657.4
Stddev	19.5	206.	55.	6.1	13.3
%RSD	.53205	.25917	.47422	.23555	.28528
#1	3686.4	79266.	11458.	2580.9	4672.0
#2	3665.9	79534.	11565.	2585.2	4654.2
#3	3647.4	79671.	11494.	2573.2	4646.0

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: S1 Acquired: 1/28/2025 18:01:45 Type: Cal
Method: EPA SFAM01.0(v58) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00040**	**.00125**	**.00198**	**.00218**	**.00789**	**.00221**	**.07935**	**.02212**
Stddev	.00014	.00015	.00026	.00026	.00017	.00003	.00048	.00026
%RSD	35.702	11.938	13.216	12.000	2.1006	1.5700	.60970	1.1552
#1	.00028	.00109	.00181	.00190	.00808	.00223	.07990	.02204
#2	.00037	.00128	.00228	.00242	.00777	.00223	.07899	.02240
#3	.00056	.00139	.00184	.00222	.00783	.00217	.07916	.02191

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.01218**	**.03705**	**.00158**	**.04019**	**.00700**	**.00049**	**.00118**	**.00886**
Stddev	.00010	.00016	.00000	.00016	.00006	.00001	.00002	.00005
%RSD	.81855	.42651	.24742	.40914	.89192	2.7317	1.8521	.60879
#1	.01209	.03723	.00158	.04001	.00706	.00048	.00117	.00881
#2	.01217	.03693	.00158	.04032	.00700	.00048	.00120	.00887
#3	.01229	.03698	.00159	.04025	.00693	.00050	.00116	.00891

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.02297**	**.00221**	**.00945**	**.00774**	**.01638**	**.02106**	**-.00075**	**.00096**
Stddev	.00026	.00009	.00027	.00008	.00018	.00013	.00004	.00007
%RSD	1.1466	4.1129	2.8138	1.0660	1.1162	.62685	5.5919	7.4352
#1	.02316	.00231	.00975	.00779	.01657	.02091	-.00071	.00095
#2	.02308	.00213	.00924	.00765	.01637	.02117	-.00074	.00104
#3	.02267	.00221	.00937	.00779	.01620	.02108	-.00079	.00089

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00592**	**.00239**	**.01699**	**.00117**	**.04665**	**.00264**	**.13029**
Stddev	.00012	.00005	.00011	.00003	.00032	.00005	.00098
%RSD	2.1060	2.0926	.64618	2.4235	.69324	1.9151	.74965
#1	.00597	.00244	.01704	.00115	.04683	.00264	.13129
#2	.00602	.00237	.01687	.00120	.04628	.00259	.13025
#3	.00578	.00235	.01707	.00115	.04685	.00269	.12933

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: S1 Acquired: 1/28/2025 18:01:45 Type: Cal
Method: EPA SFAM01.0(v58) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S01 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3676.6	79568.	11629.	2560.0	4590.8
Stddev	6.9	182.	29.	12.1	6.6
%RSD	.18706	.22852	.25202	.47366	.14343
#1	3682.9	79462.	11660.	2573.9	4595.4
#2	3669.3	79464.	11603.	2551.7	4583.3
#3	3677.6	79778.	11623.	2554.5	4593.8

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: S2 Acquired: 1/28/2025 18:05:59 Type: Cal
Method: EPA SFAM01.0(v58) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.06887**	**.06087**	**1.3796**	**.06817**	**.16259**	**.42919**	**1.0134**	**.53158**
Stddev	.00025	.00058	.0031	.00015	.00033	.00063	.0052	.00234
%RSD	.36781	.94658	.22785	.22442	.20603	.14688	.51553	.44080
#1	.06860	.06095	1.3771	.06809	.16243	.42855	1.0120	.53395
#2	.06910	.06025	1.3786	.06835	.16237	.42921	1.0090	.53154
#3	.06892	.06140	1.3831	.06808	.16298	.42981	1.0192	.52926

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.5382**	**.48620**	**.60603**	**.51070**	**.53190**	**.18752**	**.30087**	**.12433**
Stddev	.0044	.00143	.00037	.00145	.00140	.00065	.00125	.00044
%RSD	.28527	.29330	.06093	.28423	.26374	.34752	.41453	.35641
#1	1.5351	.48502	.60646	.50990	.53286	.18687	.29996	.12397
#2	1.5362	.48579	.60581	.50982	.53029	.18752	.30037	.12419
#3	1.5432	.48779	.60583	.51237	.53256	.18818	.30229	.12482

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.36514**	**.07688**	**.08825**	**.09145**	**1.0320**	**.13175**	**.05124**	**.48533**
Stddev	.00101	.00010	.00035	.00008	.0018	.00043	.00010	.00320
%RSD	.27754	.13449	.39375	.08512	.16989	.32402	.19377	.65876
#1	.36448	.07682	.08864	.09139	1.0306	.13126	.05119	.48847
#2	.36463	.07700	.08798	.09142	1.0314	.13203	.05117	.48546
#3	.36630	.07682	.08814	.09153	1.0339	.13197	.05135	.48208

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.68776**	**.03047**	**.04772**	**.18285**	**.56074**	**.16718**	**1.7676**
Stddev	.00176	.00004	.00023	.00089	.00078	.00044	.0051
%RSD	.25519	.13487	.48011	.48833	.13856	.26428	.29020
#1	.68604	.03043	.04751	.18213	.56085	.16722	1.7631
#2	.68770	.03052	.04769	.18257	.55992	.16672	1.7665
#3	.68955	.03047	.04797	.18385	.56147	.16760	1.7732

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: S2 Acquired: 1/28/2025 18:05:59 Type: Cal
Method: EPA SFAM01.0(v58) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S02 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3500.4**	**74522.**	**11596.**	**2407.1**	**4089.3**
Stddev	5.5	180.	20.	4.3	11.6
%RSD	.15807	.24199	.17084	.18040	.28397
#1	3506.0	74609.	11579.	2403.6	4093.8
#2	3500.2	74643.	11590.	2411.9	4097.9
#3	3494.9	74315.	11618.	2405.7	4076.1

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: S3 Acquired: 1/28/2025 18:09:58 Type: Cal
Method: EPA SFAM01.0(v58) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.14123	.12046	2.7833	.13801	.33119	.89191	2.0664	1.0406
Stddev	.00053	.00129	.0075	.00092	.00106	.00367	.0201	.0056
%RSD	.37423	1.0673	.26881	.67006	.32013	.41195	.97466	.54221
#1	.14074	.12006	2.7868	.13727	.33077	.88874	2.0432	1.0441
#2	.14116	.11942	2.7747	.13771	.33041	.89104	2.0774	1.0436
#3	.14179	.12190	2.7884	.13905	.33240	.89594	2.0787	1.0341

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.1176	.99295	1.1955	1.0293	1.0523	.38008	.61055	.25651
Stddev	.0094	.00271	.0043	.0021	.0052	.00144	.00223	.00077
%RSD	.30146	.27250	.36140	.20826	.49116	.37872	.36606	.30164
#1	3.1205	.99121	1.1944	1.0292	1.0561	.37929	.60989	.25601
#2	3.1071	.99157	1.2003	1.0272	1.0465	.37921	.60871	.25613
#3	3.1253	.99606	1.1919	1.0315	1.0545	.38174	.61304	.25740

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.73602	.15557	.17986	.18152	2.1282	.26873	.10832	.93874
Stddev	.00223	.00015	.00052	.00012	.0121	.00123	.00051	.00199
%RSD	.30270	.09393	.29131	.06355	.56735	.45673	.46674	.21154
#1	.73543	.15549	.18043	.18165	2.1363	.26765	.10817	.94024
#2	.73414	.15548	.17972	.18144	2.1143	.26848	.10790	.93951
#3	.73848	.15574	.17941	.18147	2.1340	.27007	.10888	.93649

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.3661	.06412	.09443	.37137	1.1031	.34668	3.5708
Stddev	.0043	.00029	.00020	.00108	.0054	.00165	.0088
%RSD	.31202	.45204	.21154	.29009	.48877	.47456	.24720
#1	1.3645	.06380	.09456	.37152	1.1048	.34542	3.5652
#2	1.3628	.06417	.09420	.37023	1.0971	.34606	3.5662
#3	1.3709	.06438	.09453	.37237	1.1075	.34854	3.5810

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: S3 Acquired: 1/28/2025 18:09:58 Type: Cal
Method: EPA SFAM01.0(v58) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S03 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3370.5	72565.	11622.	2309.4	3841.5
Stddev	7.1	188.	42.	7.8	10.3
%RSD	.21161	.25857	.35815	.33713	.26810
#1	3372.4	72732.	11593.	2300.5	3843.8
#2	3376.5	72362.	11604.	2314.6	3850.5
#3	3362.6	72601.	11670.	2313.2	3830.2

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: S4 Acquired: 1/28/2025 18:14:02 Type: Cal
Method: EPA SFAM01.0(v58) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.28933	.23725	5.6717	.27869	.68050	1.8454	4.1963	2.1251
Stddev	.00039	.00377	.0080	.00061	.00218	.0060	.0415	.0096
%RSD	.13638	1.5889	.14024	.22038	.32078	.32653	.98870	.45148
#1	.28937	.23352	5.6745	.27813	.68029	1.8523	4.2368	2.1151
#2	.28891	.23719	5.6627	.27860	.67843	1.8413	4.1982	2.1261
#3	.28970	.24106	5.6779	.27935	.68278	1.8426	4.1539	2.1342

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6.3272	2.0237	2.3793	2.0918	2.1582	.75932	1.2427	.53217
Stddev	.0122	.0073	.0033	.0027	.0052	.00351	.0044	.00227
%RSD	.19321	.35879	.13895	.13166	.23929	.46257	.35290	.42702
#1	6.3208	2.0321	2.3815	2.0923	2.1610	.76321	1.2478	.53479
#2	6.3196	2.0188	2.3755	2.0888	2.1522	.75836	1.2398	.53075
#3	6.3413	2.0202	2.3809	2.0943	2.1613	.75638	1.2406	.53097

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.4847	.32525	.36876	.36685	4.3128	.55376	.23038	1.8745
Stddev	.0014	.00026	.00119	.00110	.0161	.00199	.00125	.0081
%RSD	.09076	.08024	.32357	.29943	.37247	.36026	.54124	.43132
#1	1.4857	.32528	.36856	.36806	4.3298	.55603	.22941	1.8652
#2	1.4832	.32550	.36768	.36590	4.3106	.55228	.22995	1.8782
#3	1.4853	.32498	.37004	.36660	4.2979	.55296	.23179	1.8801

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.7363	.13562	.19242	.75355	2.2230	.72195	7.2873
Stddev	.0063	.00033	.00107	.00220	.0044	.00289	.0266
%RSD	.23098	.24276	.55381	.29212	.19717	.40003	.36501
#1	2.7326	.13527	.19202	.75114	2.2274	.72517	7.3029
#2	2.7328	.13567	.19161	.75405	2.2186	.71957	7.3024
#3	2.7436	.13592	.19363	.75545	2.2229	.72112	7.2566

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: S4 Acquired: 1/28/2025 18:14:02 Type: Cal
Method: EPA SFAM01.0(v58) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S04 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3160.3	68691.	11098.	2198.7	3516.8
Stddev	3.6	205.	33.	7.8	3.9
%RSD	.11365	.29794	.30033	.35634	.10997
#1	3159.8	68480.	11107.	2190.5	3517.1
#2	3164.1	68889.	11125.	2199.5	3520.6
#3	3156.9	68705.	11061.	2206.1	3512.8

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: S5 Acquired: 1/28/2025 18:18:04 Type: Cal
Method: EPA SFAM01.0(v58) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.57906**	**.44496**	**10.869**	**.55130**	**1.3577**	**3.6621**	**8.4375**	**4.0918**
Stddev	.00287	.00396	.037	.00198	.0057	.0419	.0442	.0159
%RSD	.49517	.88908	.34408	.35935	.42271	1.1454	.52408	.38758
#1	.57754	.44416	10.839	.55027	1.3535	3.6505	8.4715	4.0814
#2	.57727	.44146	10.856	.55004	1.3554	3.6272	8.4533	4.1100
#3	.58236	.44925	10.911	.55358	1.3643	3.7086	8.3875	4.0839

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**11.992**	**3.9207**	**4.3980**	**4.0262**	**4.3142**	**1.4636**	**2.3980**	**1.0548**
Stddev	.041	.0024	.0213	.0150	.0227	.0038	.0167	.0036
%RSD	.34468	.06228	.48429	.37193	.52723	.26096	.69815	.34162
#1	11.961	3.9216	4.3737	4.0128	4.2924	1.4603	2.3904	1.0517
#2	11.975	3.9225	4.4132	4.0235	4.3378	1.4628	2.3864	1.0539
#3	12.039	3.9179	4.4071	4.0424	4.3124	1.4678	2.4172	1.0588

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2.8373**	**.65458**	**.74697**	**.70258**	**8.5965**	**1.1064**	**.46170**	**3.4677**
Stddev	.0095	.00046	.00450	.00330	.0141	.0015	.00161	.0090
%RSD	.33586	.07041	.60215	.47025	.16453	.13289	.34842	.25832
#1	2.8296	.65419	.74346	.70056	8.6095	1.1057	.46087	3.4670
#2	2.8343	.65446	.75204	.70639	8.5986	1.1053	.46068	3.4769
#3	2.8480	.65508	.74539	.70078	8.5814	1.1080	.46356	3.4591

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5.2665**	**.27453**	**.37929**	**1.4390**	**4.2940**	**1.4774**	**14.315**
Stddev	.0202	.00122	.00208	.0054	.0143	.0024	.154
%RSD	.38297	.44491	.54939	.37330	.33333	.16054	1.0725
#1	5.2522	.27394	.37777	1.4359	4.2852	1.4746	14.140
#2	5.2578	.27372	.38167	1.4359	4.3106	1.4787	14.428
#3	5.2896	.27594	.37844	1.4452	4.2864	1.4788	14.377

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: S5 Acquired: 1/28/2025 18:18:04 Type: Cal
Method: EPA SFAM01.0(v58) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S05 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2934.5	66171.	10916.	2091.6	3230.4
Stddev	8.9	175.	48.	9.2	9.1
%RSD	.30396	.26395	.44090	.44173	.28179
#1	2941.6	66372.	10941.	2082.9	3236.8
#2	2937.4	66063.	10860.	2090.6	3234.4
#3	2924.5	66076.	10946.	2101.3	3220.0

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: S6 Acquired: 1/28/2025 18:22:39 Type: Cal
Method: EPA SFAM01.0(v58) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S06 Custom ID2: Custom ID3:
Comment:

Elem	Al3961	Ca3736	Fe2598	Mg2790	Na8183
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**10.292**	**6.6243**	**4.0219**	**1.7987**	**2.1391**
Stddev	.052	.0329	.0386	.0023	.0048
%RSD	.50141	.49712	.96023	.12547	.22539
#1	10.234	6.6044	3.9841	1.7973	2.1371
#2	10.307	6.6623	4.0205	1.7975	2.1356
#3	10.334	6.6062	4.0613	1.8013	2.1446

Int. Std.	Y_3600	Y_3710
Units	Cts/S	Cts/S
Avg	**60500.**	**10419.**
Stddev	116.	58.
%RSD	.19131	.55384
#1	60542.	10412.
#2	60588.	10480.
#3	60369.	10366.

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: ICV004 Acquired: 1/28/2025 19:08:21 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV004 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.024072**	**1.080656**	**.9815387**	**.9901187**	**1.052336**	**2.454092**
Stddev	.002816	.017991	.0026185	.0073205	.004353	.016395
%RSD	.2749579	1.664859	.2667783	.7393523	.4136151	.6680699
#1	1.021157	1.067994	.9795567	.9834615	1.050054	2.438892
#2	1.024282	1.072725	.9805521	.9889362	1.049599	2.471465
#3	1.026777	1.101251	.9845072	.9979584	1.057355	2.451919

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5627036**	**.5030200**	**.4920648**	**10.07143**	**.5475218**	**.4958866**
Stddev	.0027988	.0030089	.0017023	.02899	.0010018	.0010390
%RSD	.4973785	.5981653	.3459396	.2878105	.1829618	.2095336
#1	.5603289	.5057926	.4912732	10.04159	.5478532	.4953172
#2	.5657893	.5034469	.4909024	10.09948	.5483159	.4952567
#3	.5619924	.4998204	.4940186	10.07322	.5463964	.4970859

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4966123**	**9.576807**	**.5699108**	**6.035969**	**.5045477**	**.2289889**
Stddev	.0038909	.046879	.0038233	.016695	.0019185	.0002036
%RSD	.7834804	.4895081	.6708540	.2765993	.3802494	.0888963
#1	.4960086	9.522813	.5658833	6.022862	.5044961	.2288219
#2	.5007698	9.607149	.5734904	6.054766	.5026555	.2292157
#3	.4930586	9.600459	.5703586	6.030280	.5064916	.2289292

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.27528**	**.4987958**	**.9583374**	**9.582529**	**5.121295**	F **.0150007**
Stddev	.33611	.0025752	.0032669	.057136	.027320	.0009024
%RSD	3.271030	.5162804	.3408914	.5962523	.5334656	6.015566
#1	10.34105	.4993099	.9546471	9.557184	5.111495	.0150904
#2	9.91115	.5010752	.9608598	9.542449	5.100226	.0140568
#3	10.57364	.4960024	.9595053	9.647953	5.152164	.0158549

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: ICV004 Acquired: 1/28/2025 19:08:21 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV004 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.000409	F .0042013	F .0011405	F .0004284	F -.000379	4.960938
Stddev	.000347	.0010380	.0024441	.0005214	.000607	.021586
%RSD	84.83578	24.70679	214.3035	121.7039	160.2407	.4351186
#1	-.000155	.0053818	.0002670	.0006561	-.000289	4.936463
#2	-.000805	.0037907	.0039013	-.000168	-.001026	4.977261
#3	-.000268	.0034314	-.000747	.000797	.000178	4.969090

Elem	Sr4077
Units	ppm
Avg	F 5.749802
Stddev	.072098
%RSD	1.253917
#1	5.666704
#2	5.786972
#3	5.795730

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3601.369	77743.63	11749.69	2518.855	4370.579
Stddev	4.200	233.96	91.22	8.689	5.629
%RSD	.1166199	.3009415	.7763724	.3449484	.1288007
#1	3604.863	77652.95	11675.63	2510.167	4375.129
#2	3602.535	77568.59	11721.85	2527.544	4372.325
#3	3596.709	78009.36	11851.59	2518.855	4364.284

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: ICB004 Acquired: 1/28/2025 19:12:24 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB004 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001037**	**-.000310**	**.0001953**	**.0004497**	**.0008429**	**-.005442**	**-.000054**
Stddev	.001175	.000947	.0016006	.0008182	.0011130	.004174	.000553
%RSD	113.3000	305.5002	819.5513	181.9386	132.0505	76.70182	1031.516
#1	-.000678	-.001301	.0007556	-.000480	-.000298	-.009501	.000192
#2	-.002349	.000587	.0014404	.000769	.001926	-.005666	-.000687
#3	-.000084	-.000216	-.001610	.001060	.000900	-.001161	.000334

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000000**	**.0000330**	**.0007337**	**.0001013**	**-.000043**	**.0012971**	**.0038621**
Stddev	.0000317	.0000583	.0015360	.0002227	.000082	.0004690	.0017554
%RSD	88162.90	176.7051	209.3464	219.8600	187.8018	36.15962	45.45240
#1	-.000035	.0000725	.0024556	.0000549	-.000126	.0009279	.0022486
#2	.000026	.0000605	.0002410	-.000095	.000037	.0018249	.0057314
#3	.000009	-.000034	-.000495	.000344	-.000042	.0011385	.0036065

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001542**	**-.010209**	**-.000218**	**.0000320**	**-.032329**	**-.000149**	**.0002471**
Stddev	.0003528	.017599	.000408	.0002081	.276009	.002512	.0028320
%RSD	228.8774	172.3968	187.6664	650.0631	853.7476	1690.742	1146.131
#1	.0002289	-.030155	-.000477	-.000106	.276983	.000934	-.000780
#2	.0004637	.003132	-.000429	.000271	-.120463	.001641	.003449
#3	-.000230	-.003603	.000253	-.000069	-.253507	-.003021	-.001928

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0074191**	**-.000588**	**.0005080**	**-.000106**	**.0015043**	**.0015780**	**.0002664**
Stddev	.0242765	.001755	.0002954	.000129	.0034996	.0015981	.0006070
%RSD	327.2141	298.6133	58.13617	121.3110	232.6467	101.2788	227.8113
#1	.0227279	-.001097	.0002057	-.000132	.0039782	.0028209	.0007051
#2	.0201014	.001366	.0007958	.000034	-.002500	.0021377	.0005205
#3	-.020572	-.002032	.0005226	-.000220	.003034	-.000225	-.000426

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: ICB004 Acquired: 1/28/2025 19:12:24 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB004 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0002668	.0003494	.0000680
Stddev	.0006123	.0004222	.0000590
%RSD	229.4667	120.8557	86.79928
#1	.0008245	.0004349	.0001362
#2	.0003645	-.000109	.0000363
#3	-.000388	.000722	.0000316

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3671.244	79741.36	11699.87	2550.914	4687.856
Stddev	2.581	99.32	39.27	7.773	7.498
%RSD	.0702918	.1245556	.3356546	.3046995	.1599368
#1	3668.295	79765.82	11707.29	2559.660	4681.074
#2	3672.350	79632.09	11734.90	2544.795	4695.907
#3	3673.088	79826.16	11657.42	2548.289	4686.586

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: ICSA004 Acquired: 1/28/2025 19:29:00 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA004 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0017704**	**-.002500**	**.0036714**	**.0129850**	**.0049714**	**221.5081**
Stddev	.0035874	.003660	.0020899	.0009780	.0029588	1.4691
%RSD	202.6352	146.4048	56.92415	7.531863	59.51747	.6632342
#1	-.000201	.001128	.0015874	.0129574	.0016447	219.8127
#2	-.000399	-.006192	.0057671	.0120211	.0059603	222.3053
#3	.005911	-.002436	.0036596	.0139765	.0073090	222.4063

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0060213**	**-.000490**	**.0007857**	**233.6179**	**.0600327**	**.0008597**
Stddev	.0002571	.000065	.0001404	1.8097	.0003536	.0003236
%RSD	4.269739	13.21399	17.86802	.7746254	.5889934	37.64158
#1	.0058389	-.000415	.0008233	231.7889	.0596249	.0010111
#2	.0059097	-.000518	.0009034	233.6573	.0602205	.0004882
#3	.0063154	-.000535	.0006303	235.4076	.0602528	.0010799

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001608**	**97.35675**	**.0188906**	**228.9408**	**.0023882**	**-.001542**
Stddev	.001860	.76480	.0001758	1.9741	.0004680	.000494
%RSD	115.6623	.7855676	.9307195	.8622889	19.59577	32.04019
#1	-.002536	96.55301	.0189462	226.9489	.0027738	-.002106
#2	.000533	97.44173	.0186937	228.9769	.0018675	-.001336
#3	-.002820	98.07551	.0190319	230.8967	.0025234	-.001184

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.321340**	**-.005598**	**-.006593**	**-.072375**	**.0031917**	F **.1375005**
Stddev	.416916	.001562	.001087	.016214	.0034195	.0054265
%RSD	129.7427	27.90014	16.48461	22.40203	107.1400	3.946559
#1	-.506939	-.003795	-.006248	-.059586	.0007905	.1314191
#2	.156145	-.006452	-.007810	-.090611	.0071068	.1392336
#3	-.613228	-.006545	-.005720	-.066929	.0016777	.1418487

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: ICSA004 Acquired: 1/28/2025 19:29:00 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA004 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000649**	**.0255624**	**.0047724**	**-.003439**	**-.001973**	**.0042078**
Stddev	.000707	.0004087	.0015749	.001113	.000431	.0004693
%RSD	109.0771	1.598940	32.99986	32.37247	21.84313	11.15247
#1	-.000125	.0256363	.0037022	-.003999	-.001487	.0036841
#2	-.000367	.0259291	.0040342	-.002157	-.002126	.0045900
#3	-.001453	.0251217	.0065808	-.004162	-.002307	.0043494

Elem	Sr4077
Units	ppm
Avg	**.0976591**
Stddev	.0006434
%RSD	.6588367
#1	.0969463
#2	.0978342
#3	.0981969

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3248.292**	**70236.97**	**11267.08**	**2258.367**	**3705.150**
Stddev	11.295	412.54	49.05	8.462	5.299
%RSD	.3477131	.5873602	.4352952	.3747096	.1430135
#1	3247.993	70622.63	11214.30	2267.509	3702.067
#2	3259.734	70286.31	11275.69	2256.785	3711.269
#3	3237.151	69801.98	11311.25	2250.807	3702.115

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: ICSAB004 Acquired: 1/28/2025 19:33:14 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB004 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0984752**	**.1072255**	**.0536597**	**.0656287**	**.5929165**	**223.1824**
Stddev	.0029852	.0009894	.0005770	.0053840	.0013292	2.3654
%RSD	3.031383	.9227303	1.075223	8.203790	.2241743	1.059833
#1	.1011677	.1073922	.0535994	.0608889	.5919598	225.4878
#2	.0952651	.1081210	.0531153	.0714826	.5944342	223.2980
#3	.0989928	.1061634	.0542645	.0645144	.5923555	220.7613

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4982733**	**.5174900**	**1.013980**	**237.5935**	**.6108018**	**.5125355**
Stddev	.0012214	.0020423	.000844	1.0781	.0029668	.0007996
%RSD	.2451354	.3946557	.0832322	.4537731	.4857283	.1560172
#1	.4987483	.5159934	1.013006	238.6091	.6138452	.5118172
#2	.4968857	.5198166	1.014469	236.4621	.6079180	.5133971
#3	.4991859	.5166599	1.014465	237.7091	.6106423	.5123921

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4931073**	**98.54347**	**.5185856**	**232.4035**	**1.024002**	**.2019991**
Stddev	.0033599	.36492	.0015719	1.1830	.001561	.0005527
%RSD	.6813632	.3703115	.3031191	.5090314	.1524817	.2736112
#1	.4941519	98.86321	.5196438	233.6874	1.022222	.2015335
#2	.4958209	98.14593	.5167793	231.3577	1.025140	.2018538
#3	.4893493	98.62127	.5193336	232.1654	1.024645	.2026099

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.562431**	**.4917839**	**.9649070**	**-.240257**	**.0061078**	F **.1323241**
Stddev	.319505	.0024779	.0024072	.048050	.0021330	.0039637
%RSD	56.80781	.5038595	.2494734	19.99932	34.92309	2.995462
#1	-.841750	.4946000	.9672342	-.197607	.0076552	.1350299
#2	-.631504	.4899378	.9650597	-.292315	.0069936	.1277743
#3	-.214040	.4908137	.9624270	-.230850	.0036746	.1341680

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: ICSAB004 Acquired: 1/28/2025 19:33:14 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB004 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000946**	**.0214703**	**.0018220**	**-.004186**	**-.003214**	**.0045713**
Stddev	.000213	.0027344	.0007225	.001444	.000258	.0004014
%RSD	22.55359	12.73552	39.65152	34.50771	8.034094	8.780004
#1	-.000700	.0187727	.0018252	-.002681	-.003433	.0049526
#2	-.001070	.0242399	.0010980	-.004315	-.003280	.0046090
#3	-.001069	.0213982	.0025429	-.005561	-.002929	.0041525

Elem	Sr4077
Units	ppm
Avg	**.0986244**
Stddev	.0003287
%RSD	.3333314
#1	.0987391
#2	.0982536
#3	.0988804

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3274.309**	**70267.09**	**11201.28**	**2279.465**	**3714.032**
Stddev	7.441	237.49	38.57	6.907	4.905
%RSD	.2272637	.3379823	.3443161	.3029964	.1320650
#1	3269.066	69993.20	11209.55	2272.461	3715.672
#2	3282.826	70415.96	11159.25	2279.665	3717.907
#3	3271.036	70392.10	11235.04	2286.270	3708.517

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: CCV025 Acquired: 1/28/2025 19:37:18 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV025 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.118387**	**5.034869**	**25.59717**	**5.229792**	**5.249854**	**407.4405**
Stddev	.020649	.043953	.03798	.020641	.025647	.9915
%RSD	.4034223	.8729691	.1483789	.3946767	.4885191	.2433485
#1	5.108573	5.069821	25.57737	5.240854	5.236209	407.9164
#2	5.104475	4.985524	25.57318	5.205978	5.233913	406.3008
#3	5.142112	5.049261	25.64096	5.242544	5.279438	408.1043

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.76587**	**.5394792**	**2.625318**	**416.8475**	**16.38113**	**2.629880**
Stddev	.19483	.0016130	.004659	1.3311	.04356	.005863
%RSD	1.809729	.2989970	.1774484	.3193332	.2658977	.2229547
#1	10.58485	.5400304	2.629760	415.7126	16.40446	2.627776
#2	10.97207	.5376628	2.620469	416.5171	16.33088	2.625359
#3	10.74069	.5407443	2.625723	418.3127	16.40806	2.636505

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**16.19001**	**414.9626**	**16.24688**	**414.9139**	**2.619255**	**1.365174**
Stddev	.04347	.8136	.04025	.3680	.004748	.000305
%RSD	.2684750	.1960759	.2477604	.0886959	.1812603	.0223282
#1	16.23867	415.6266	16.27887	415.0088	2.615819	1.365428
#2	16.17633	415.2063	16.26008	415.2252	2.617274	1.365257
#3	16.15503	414.0550	16.20168	414.5078	2.624672	1.364836

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**428.0150**	**2.645803**	**16.07317**	**161.4269**	**5.357741**	F **5.628883**
Stddev	1.3217	.006953	.03898	.2729	.015766	.006153
%RSD	.3087928	.2627923	.2425247	.1690855	.2942698	.1093146
#1	429.3596	2.646561	16.03053	161.6887	5.358964	5.635399
#2	426.7175	2.638501	16.08199	161.4481	5.341398	5.623172
#3	427.9677	2.652345	16.10698	161.1441	5.372859	5.628078

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: CCV025 Acquired: 1/28/2025 19:37:18 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV025 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.200077	5.291973	F 7.594269	5.220972	5.323204	5.374206
Stddev	.015630	.011864	.016534	.006257	.019727	.015080
%RSD	.3005708	.2241914	.2177167	.1198358	.3705766	.2806021
#1	5.197406	5.297007	7.606397	5.224988	5.345434	5.385308
#2	5.185954	5.278422	7.600974	5.213763	5.307786	5.380272
#3	5.216870	5.300491	7.575436	5.224165	5.316392	5.357037

Elem	Sr4077
Units	ppm
Avg	F 5.619974
Stddev	.018621
%RSD	.3313308
#1	5.609255
#2	5.641475
#3	5.609192

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3000.040	65428.63	10603.61	2095.602	3274.195
Stddev	8.626	86.18	39.60	12.496	4.601
%RSD	.2875258	.1317173	.3734622	.5963108	.1405286
#1	3005.682	65392.43	10590.57	2104.617	3277.834
#2	3004.328	65527.01	10648.09	2100.852	3275.728
#3	2990.111	65366.46	10572.18	2081.337	3269.023

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: CCB025 Acquired: 1/28/2025 19:41:37 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB025 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0019137**	**-.000083**	**.0006243**	**.0007240**	**-.000469**	**.0037900**	**-.000454**
Stddev	.0008079	.001221	.0008699	.0012439	.000801	.0065336	.000863
%RSD	42.21798	1468.010	139.3375	171.8009	170.7863	172.3897	190.1486
#1	.0028380	-.001476	.0012698	-.000368	-.000254	-.003579	-.000294
#2	.0015608	.000426	-.000365	.000461	-.001356	.006073	-.001385
#3	.0013422	.000800	.000968	.002078	.000202	.008875	.000318

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000139**	**-.000018**	**.0010109**	**.0001979**	**-.000092**	**.0021652**	**.0098070**
Stddev	.0000967	.000057	.0030830	.0001717	.000177	.0009150	.0034248
%RSD	697.4076	319.7116	304.9882	86.72548	193.1154	42.25730	34.92139
#1	-.000004	-.000042	.0044394	.0001958	-.000147	.0021446	.0099104
#2	-.000073	-.000059	.0001266	.0003706	-.000235	.0030904	.0131789
#3	.000118	.000048	-.001533	.0000274	.000106	.0012608	.0063318

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002781**	**-.007657**	**-.000101**	**-.000081**	**-.038172**	**.0004309**	**-.000520**
Stddev	.0000488	.013290	.000130	.000118	.064028	.0028684	.001052
%RSD	17.56015	173.5656	128.5273	145.9789	167.7325	665.6527	202.1730
#1	.0002271	-.017348	-.000031	-.000000	-.029417	-.002494	-.001730
#2	.0002830	.007493	-.000251	-.000216	.021027	.003239	-.000014
#3	.0003244	-.013117	-.000021	-.000026	-.106127	.000548	.000183

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0046217**	**.0006761**	**.0037635**	**-.000013**	**-.000449**	**.0036685**	**.0001907**
Stddev	.0305312	.0013036	.0008744	.000309	.000498	.0036933	.0008775
%RSD	660.6060	192.8165	23.23467	2443.360	111.0329	100.6767	460.0838
#1	-.023561	.0019547	.0034935	.000121	.000125	.0079309	.0005808
#2	.037056	-.000651	.0030559	.000207	-.000777	.0014187	.0008055
#3	.000370	.000725	.0047411	-.000366	-.000694	.0016558	-.000814

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: CCB025 Acquired: 1/28/2025 19:41:37 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB025 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0001849	-.000352	.0000605
Stddev	.0004669	.001454	.0000711
%RSD	252.5298	412.7705	117.5467
#1	-.000307	.001299	.0001417
#2	.000239	-.000913	.0000088
#3	.000623	-.001443	.0000311

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3734.858	79917.57	11577.30	2580.528	4769.529
Stddev	8.371	175.54	105.71	14.315	11.384
%RSD	.2241264	.2196532	.9131062	.5547177	.2386876
#1	3742.094	79851.96	11505.07	2578.144	4780.085
#2	3736.789	80116.47	11698.63	2595.885	4771.037
#3	3725.690	79784.29	11528.19	2567.555	4757.466

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1136-02 Acquired: 1/28/2025 19:45:45 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8F7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0147780**	**.0069812**	**.0068284**	**-.003376**	**-.001624**	**33.81171**
Stddev	.0005629	.0008576	.0006384	.000902	.000872	.17705
%RSD	3.809333	12.28377	9.349771	26.70711	53.72408	.5236490
#1	.0142164	.0071950	.0061497	-.004294	-.002397	33.62962
#2	.0147754	.0060369	.0074170	-.003341	-.000678	33.82224
#3	.0153422	.0077115	.0069183	-.002492	-.001796	33.98326

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0410467**	**.0028413**	**.0016578**	**53.08451**	**.0332094**	**.1134061**
Stddev	.0003308	.0000433	.0000322	.11781	.0001827	.0006442
%RSD	.8059867	1.524955	1.940036	.2219258	.5500661	.5680038
#1	.0409200	.0028815	.0016693	52.94848	.0329989	.1127534
#2	.0407980	.0027954	.0016827	53.15215	.0333274	.1134235
#3	.0414222	.0028469	.0016215	53.15291	.0333018	.1140414

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1250833**	**13.09764**	**2.442305**	**24.74865**	**.1068792**	**-.002578**
Stddev	.0011669	.05456	.006388	.06552	.0002217	.000098
%RSD	.9328981	.4165267	.2615703	.2647573	.2074056	3.820053
#1	.1237421	13.03512	2.434951	24.67354	.1071243	-.002494
#2	.1256420	13.13561	2.446487	24.79408	.1066927	-.002686
#3	.1258659	13.12218	2.445475	24.77833	.1068206	-.002553

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.479239**	**.0247641**	**.5181907**	**12.91934**	**.5906014**	**.2939675**
Stddev	.108049	.0002136	.0028850	.07600	.0035165	.0001100
%RSD	4.358155	.8625757	.5567504	.5882696	.5954147	.0374341
#1	2.409450	.0246002	.5207099	12.84025	.5873207	.2938497
#2	2.424570	.0246864	.5188190	12.92595	.5901697	.2939851
#3	2.603698	.0250057	.5150434	12.99182	.5943139	.2940677

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1136-02 Acquired: 1/28/2025 19:45:45 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8F7 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001113	F 325.3368	F 22.74824	-.001405	.0134576	.0249069
Stddev	.0000381	.3611	.05435	.000787	.0003290	.0001612
%RSD	34.23355	.1109790	.2388983	56.04197	2.445005	.6472893
#1	.0000891	325.5031	22.80922	-.002119	.0130974	.0248633
#2	.0000895	324.9225	22.73057	-.001535	.0135330	.0250855
#3	.0001553	325.5847	22.70493	-.000561	.0137424	.0247720

Elem	Sr4077
Units	ppm
Avg	.2973897
Stddev	.0017260
%RSD	.5803752
#1	.2956431
#2	.2974318
#3	.2990943

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7553.949	164353.0	24800.55	5250.213	4243.696
Stddev	30.305	334.7	76.25	21.444	14.717
%RSD	.4011777	.2036189	.3074727	.4084340	.3468083
#1	7584.121	164674.1	24752.70	5236.826	4255.065
#2	7554.213	164006.3	24760.46	5238.867	4248.951
#3	7523.513	164378.7	24888.49	5274.946	4227.073

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1136-03 Acquired: 1/28/2025 19:49:44 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8F7D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0151549**	**.0065648**	**.0074004**	**-.004706**	**-.001385**	**34.72050**
Stddev	.0005877	.0009288	.0012188	.001143	.000603	.23862
%RSD	3.877934	14.14767	16.46952	24.29916	43.57525	.6872476
#1	.0144764	.0064606	.0062159	-.003765	-.002047	34.47433
#2	.0155056	.0056925	.0086508	-.004374	-.000866	34.95077
#3	.0154827	.0075413	.0073346	-.005979	-.001241	34.73638

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0425579**	**.0028050**	**.0015834**	**54.54164**	**.0333956**	**.1130793**
Stddev	.0004030	.0000554	.0001409	.23334	.0001359	.0005026
%RSD	.9470137	1.974231	8.895324	.4278146	.4069237	.4444969
#1	.0421952	.0028592	.0016924	54.28491	.0332987	.1133262
#2	.0429918	.0028071	.0016334	54.74080	.0333372	.1125009
#3	.0424869	.0027486	.0014244	54.59922	.0335509	.1134107

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1273432**	**13.42806**	**2.520961**	**25.50848**	**.1067633**	**-.002570**
Stddev	.0002995	.08941	.011886	.08916	.0007250	.000151
%RSD	.2352132	.6658636	.4715029	.3495343	.6790816	5.864099
#1	.1276313	13.33208	2.507857	25.42134	.1066232	-.002454
#2	.1270334	13.50900	2.531049	25.59953	.1061186	-.002740
#3	.1273649	13.44310	2.523978	25.50456	.1075482	-.002515

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.542568**	**.0249352**	**.5288804**	**13.21984**	**.5820108**	**.2940947**
Stddev	.041329	.0005237	.0031533	.09524	.0045604	.0013867
%RSD	1.625502	2.100306	.5962237	.7203980	.7835567	.4715205
#1	2.525063	.0248900	.5252461	13.13256	.5780340	.2954643
#2	2.512872	.0244356	.5308917	13.32142	.5810099	.2926915
#3	2.589769	.0254801	.5305032	13.20555	.5869885	.2941284

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1136-03 Acquired: 1/28/2025 19:49:44 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8F7D Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000420	F 320.3798	F 23.09086	-.002541	.0136097	.0260836
Stddev	.0001253	.1553	.03674	.000670	.0006286	.0001740
%RSD	297.8778	.0484885	.1591002	26.34812	4.618481	.6669719
#1	-.000058	320.4137	23.13288	-.002561	.0143279	.0260483
#2	.000183	320.2103	23.06481	-.001862	.0133420	.0262726
#3	.000002	320.5155	23.07489	-.003201	.0131594	.0259300

Elem	Sr4077
Units	ppm
Avg	.3071698
Stddev	.0025483
%RSD	.8295891
#1	.3043469
#2	.3093003
#3	.3078623

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7603.134	161980.4	24877.08	5200.427	4260.381
Stddev	30.353	107.4	166.00	4.146	11.448
%RSD	.3992185	.0662842	.6672679	.0797152	.2686985
#1	7637.278	161961.1	24706.58	5198.282	4271.882
#2	7592.915	162096.1	25038.18	5205.205	4260.273
#3	7579.209	161884.0	24886.49	5197.793	4248.988

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1136-02LX5 Acquired: 1/28/2025 19:53:42 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8F7L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0061676**	**.0031680**	**.0026969**	**-.002109**	**-.000624**	**11.77968**
Stddev	.0018760	.0001571	.0010787	.001471	.000490	.12082
%RSD	30.41712	4.957291	39.99864	69.73279	78.47322	1.025684
#1	.0083335	.0029942	.0021448	-.002876	-.000065	11.72811
#2	.0050534	.0032997	.0039400	-.000413	-.000978	11.91774
#3	.0051159	.0032101	.0020060	-.003038	-.000828	11.69321

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0162199**	**.0009920**	**.0002471**	**18.81616**	**.0118016**	**.0227751**
Stddev	.0006541	.0000255	.0000665	.09421	.0002899	.0000347
%RSD	4.032672	2.573051	26.92489	.5006862	2.456890	.1524458
#1	.0164583	.0009681	.0001822	18.73599	.0114787	.0227418
#2	.0154800	.0010189	.0003151	18.91992	.0120397	.0227722
#3	.0167213	.0009890	.0002438	18.79255	.0118865	.0228111

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0468268**	**4.718418**	**.8897972**	**8.660730**	**.0218343**	**-.000856**
Stddev	.0012120	.026330	.0052829	.028672	.0004246	.000064
%RSD	2.588181	.5580280	.5937155	.3310597	1.944672	7.449954
#1	.0454421	4.710181	.8856573	8.630719	.0213785	-.000911
#2	.0476949	4.747882	.8957471	8.663628	.0219056	-.000871
#3	.0473432	4.697191	.8879870	8.687843	.0222187	-.000786

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7568630**	**.0091844**	**.1799570**	**4.301281**	**.1154171**	**.1065679**
Stddev	.3122256	.0009987	.0022527	.044758	.0009630	.0009183
%RSD	41.25259	10.87433	1.251796	1.040570	.8343615	.8616986
#1	1.097422	.0084628	.1774526	4.274533	.1143424	.1075552
#2	.689049	.0103242	.1818179	4.352952	.1157074	.1057393
#3	.484117	.0087660	.1806006	4.276358	.1162016	.1064093

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1136-02LX5 Acquired: 1/28/2025 19:53:42 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8F7L Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000057	F 65.49333	8.229046	-.000948	.0056128	.0088958
Stddev	.000192	.18024	.029320	.000072	.0005797	.0008041
%RSD	333.6048	.2752023	.3563017	7.563344	10.32865	9.038934
#1	.000065	65.38461	8.225209	-.001028	.0050435	.0082660
#2	-.000278	65.39399	8.201833	-.000929	.0055925	.0086199
#3	.000041	65.70138	8.260095	-.000889	.0062024	.0098015

Elem	Sr4077
Units	ppm
Avg	.1045974
Stddev	.0013171
%RSD	1.259252
#1	.1039208
#2	.1061153
#3	.1037560

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4484.515	95841.91	14255.51	3114.470	4480.574
Stddev	11.733	185.84	166.92	8.228	4.751
%RSD	.2616315	.1939025	1.170905	.2641715	.1060408
#1	4488.300	95989.34	14214.23	3123.854	4484.120
#2	4493.889	95903.23	14439.20	3108.497	4482.427
#3	4471.357	95633.16	14113.11	3111.058	4475.176

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1136-04 Acquired: 1/28/2025 19:57:45 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8F7S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0352516**	**.0580033**	**.0286544**	**.0465898**	**.0453682**	**35.98168**
Stddev	.0006978	.0022432	.0015008	.0014407	.0012720	.29796
%RSD	1.979550	3.867300	5.237533	3.092219	2.803615	.8280977
#1	.0344578	.0561194	.0297511	.0469845	.0441495	35.64532
#2	.0355285	.0574057	.0269440	.0477920	.0452676	36.08720
#3	.0357685	.0604847	.0292681	.0449930	.0466874	36.21253

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9615274**	**.0277737**	**.0534311**	**55.32377**	**.1380373**	**.6239273**
Stddev	.0133308	.0003701	.0003113	.25439	.0004053	.0015238
%RSD	1.386416	1.332573	.5826921	.4598212	.2936436	.2442213
#1	.9461881	.0281956	.0536852	55.03900	.1384510	.6239536
#2	.9680840	.0276214	.0530838	55.40375	.1380199	.6223906
#3	.9703102	.0275040	.0535242	55.52856	.1376409	.6254378

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2529781**	**14.03462**	**2.845161**	**25.78346**	**.6242395**	**.0159009**
Stddev	.0017735	.09398	.018888	.04968	.0015137	.0001040
%RSD	.7010513	.6696481	.6638782	.1926661	.2424857	.6539159
#1	.2509336	13.93288	2.823499	25.72767	.6253267	.0157853
#2	.2541020	14.05278	2.853793	25.82290	.6225107	.0159868
#3	.2538986	14.11820	2.858191	25.79980	.6248811	.0159307

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.583270**	**.2691659**	**.7781836**	**13.12044**	**.6031810**	**.2936667**
Stddev	.146648	.0004904	.0080359	.15455	.0045107	.0015613
%RSD	5.676856	.1821967	1.032643	1.177931	.7478183	.5316709
#1	2.521964	.2692604	.7749202	12.94806	.6032870	.2954591
#2	2.750623	.2686352	.7873378	13.16662	.5986183	.2929388
#3	2.477222	.2696022	.7722928	13.24664	.6076378	.2926023

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1136-04 Acquired: 1/28/2025 19:57:45 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: YE8F7S Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000119**	F **330.8813**	F **23.79579**	**-.002187**	**.0131760**	**.0272457**
Stddev	.000251	.9827	.05948	.000498	.0002075	.0006184
%RSD	210.1684	.2969918	.2499688	22.76488	1.574871	2.269516
#1	-.000139	330.7629	23.85558	-.001852	.0132741	.0268345
#2	.000141	329.9632	23.79519	-.002759	.0133162	.0279568
#3	-.000360	331.9178	23.73662	-.001950	.0129376	.0269458

Elem	Sr4077
Units	ppm
Avg	**.3134672**
Stddev	.0038646
%RSD	1.232866
#1	.3090467
#2	.3151480
#3	.3162067

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**7461.474**	**162949.5**	**25001.48**	**5243.595**	**4165.726**
Stddev	29.489	21.8	215.57	15.488	18.613
%RSD	.3952190	.0133964	.8622255	.2953718	.4468062
#1	7490.847	162968.1	24756.50	5242.024	4176.746
#2	7461.706	162955.1	25085.80	5228.952	4176.197
#3	7431.870	162925.5	25162.15	5259.808	4144.236

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1151-01 Acquired: 1/28/2025 20:01:39 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7739310**	**-.716565**	**2.149432**	**.4322301**	**5.496121**	**14.20943**
Stddev	.0035123	.024018	.006217	.0080677	.028317	.03526
%RSD	.4538203	3.351868	.2892275	1.866527	.5152117	.2481247
#1	.7772865	-.731958	2.155764	.4319829	5.522180	14.24865
#2	.7702806	-.728848	2.143337	.4242889	5.465988	14.18038
#3	.7742260	-.688889	2.149195	.4404186	5.500197	14.19925

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3811330**	**.0414587**	**.0118606**	**87.07797**	F **322.2298**	F **117.7215**
Stddev	.0009213	.0002367	.0000572	.31534	.6719	.6667
%RSD	.2417324	.5709142	.4821676	.3621399	.2085031	.5662966
#1	.3821920	.0414573	.0118215	87.43886	322.0563	117.0907
#2	.3806909	.0412228	.0118341	86.93950	322.9714	117.6548
#3	.3805160	.0416961	.0119262	86.85556	321.6617	118.4190

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.327391**	**138.1456**	**2.253830**	**12.64228**	F **98.25901**	**.0086273**
Stddev	.005291	.3976	.001731	.09338	.64036	.0001617
%RSD	.1590252	.2877838	.0768099	.7386368	.6517055	1.874047
#1	3.325254	138.6046	2.255422	12.70343	97.94289	.0086609
#2	3.333417	137.9189	2.251987	12.68861	97.83818	.0084514
#3	3.323503	137.9132	2.254081	12.53479	98.99596	.0087695

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**36.46556**	**1.830980**	**5.068877**	**2.172824**	**3.131673**	**1.001341**
Stddev	.51616	.015232	.077075	.022853	.009992	.003178
%RSD	1.415483	.8319140	1.520563	1.051743	.3190543	.3173434
#1	36.10901	1.821054	5.140054	2.184262	3.141927	1.003477
#2	37.05745	1.823370	5.079560	2.146511	3.121966	.997689
#3	36.23021	1.848518	4.987018	2.187700	3.131125	1.002857

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1151-01 Acquired: 1/28/2025 20:01:39 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ0 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 97.59689	F 173.3436	7.123264	.3403215	.3812290	.0202916
Stddev	.29849	.7823	.005615	.0003477	.0023210	.0021982
%RSD	.3058441	.4513058	.0788234	.1021684	.6088218	10.83286
#1	97.58978	174.2354	7.125565	.3404131	.3827502	.0215395
#2	97.30202	172.7735	7.127363	.3399372	.3823792	.0177535
#3	97.89888	173.0217	7.116864	.3406142	.3785575	.0215817

Elem	Sr4077
Units	ppm
Avg	.8446854
Stddev	.0011904
%RSD	.1409254
#1	.8449794
#2	.8433756
#3	.8457013

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1920.251	74057.51	11657.61	1883.154	3827.234
Stddev	9.187	250.50	51.77	26.643	8.736
%RSD	.4784460	.3382563	.4440741	1.414784	.2282464
#1	1926.063	73852.76	11642.53	1856.095	3822.722
#2	1925.031	73982.95	11615.06	1884.006	3837.303
#3	1909.659	74336.83	11715.25	1909.360	3821.677

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1151-01DLX10 Acquired: 1/28/2025 20:05:56 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0691838	-.104911	.2144700	.0285724	.1133862	1.366862
Stddev	.0012502	.001935	.0014015	.0017878	.0107617	.022601
%RSD	1.807009	1.843973	.6534884	6.257093	9.491225	1.653495
#1	.0685296	-.105248	.2153976	.0289781	.1015707	1.391978
#2	.0683964	-.106655	.2128578	.0266167	.1159607	1.360443
#3	.0706253	-.102831	.2151547	.0301226	.1226272	1.348164

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0320396	.0020597	.0009941	8.186777	F 50.23631	F 12.33794
Stddev	.0002185	.0000868	.0000369	.075931	.68669	.05699
%RSD	.6820676	4.213724	3.716089	.9274800	1.366921	.4619167
#1	.0322884	.0019781	.0010356	8.274040	51.02710	12.29736
#2	.0318789	.0021509	.0009817	8.150519	49.89118	12.31336
#3	.0319515	.0020503	.0009649	8.135772	49.79064	12.40310

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3272525	13.14004	.2105533	1.183044	F 10.42881	.0006670
Stddev	.0017364	.09286	.0026093	.004264	.04736	.0001196
%RSD	.5305839	.7067005	1.239267	.3604313	.4540825	17.92507
#1	.3287016	13.24589	.2135221	1.186912	10.39731	.0005616
#2	.3253279	13.10195	.2095140	1.183749	10.40585	.0006425
#3	.3277279	13.07229	.2086238	1.178471	10.48326	.0007969

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.486633	.2137508	.3497255	-.000594	.2881732	.0898802
Stddev	.196833	.0053095	.0043454	.017243	.0026707	.0005731
%RSD	5.645361	2.483952	1.242503	2904.001	.9267749	.6376514
#1	3.701307	.2198744	.3547412	.018680	.2888652	.0893104
#2	3.314646	.2109459	.3473351	-.005905	.2852246	.0904566
#3	3.443947	.2104320	.3471001	-.014557	.2904298	.0898736

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1151-01DLX10 Acquired: 1/28/2025 20:05:56 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ0 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.510186	F 16.48000	.7541040	.0338500	.0407980	.0005958
Stddev	.016428	.03936	.0118915	.0006330	.0009102	.0004652
%RSD	.2523422	.2388137	1.576905	1.870118	2.231040	78.08553
#1	6.502099	16.46046	.7495817	.0332929	.0416232	.0000942
#2	6.499369	16.45423	.7675932	.0337188	.0398217	.0006802
#3	6.529089	16.52530	.7451370	.0345384	.0409493	.0010131

Elem	Sr4077
Units	ppm
Avg	.0740663
Stddev	.0008596
%RSD	1.160606
#1	.0750531
#2	.0736655
#3	.0734802

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3538.139	79071.80	11108.09	2520.067	4554.664
Stddev	8.437	551.26	16.86	20.027	16.118
%RSD	.2384578	.6971698	.1518164	.7947132	.3538863
#1	3541.457	78440.53	11104.49	2500.305	4561.943
#2	3544.412	79316.57	11093.33	2540.350	4565.859
#3	3528.547	79458.29	11126.47	2519.546	4536.190

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1151-02DLX2 Acquired: 1/28/2025 20:10:02 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0531038	-.033761	1.463034	.0241722	.0249779	22.08972
Stddev	.0005366	.001760	.001379	.0011329	.0023079	.13158
%RSD	1.010550	5.214489	.0942640	4.686681	9.239530	.5956843
#1	.0536197	-.033115	1.462909	.0228660	.0234415	22.22495
#2	.0531432	-.032415	1.461722	.0247634	.0276318	21.96212
#3	.0525486	-.035754	1.464472	.0248872	.0238606	22.08208

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1564410	.0023648	.0035690	16.58536	14.07433	F 6.016998
Stddev	.0010180	.0000624	.0000433	.06548	.05607	.005384
%RSD	.6507068	2.636843	1.213865	.3948021	.3983968	.0894815
#1	.1573978	.0024310	.0035192	16.65429	14.13477	6.023210
#2	.1565540	.0023072	.0035906	16.52399	14.02401	6.013674
#3	.1553712	.0023562	.0035973	16.57781	14.06422	6.014110

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7019743	62.35863	.4799384	9.681554	F 5.837373	.0002468
Stddev	.0082688	.24005	.0032749	.029665	.003823	.0002581
%RSD	1.177931	.3849510	.6823610	.3064115	.0654995	104.5782
#1	.7114678	62.60340	.4837198	9.714710	5.841787	.0002612
#2	.6981092	62.12359	.4780705	9.657523	5.835238	-.000018
#3	.6963458	62.34889	.4780248	9.672428	5.835093	.000497

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.56608	.1479695	1.039820	4.857974	5.894674	.1743887
Stddev	.33622	.0025779	.005177	.026026	.007719	.0003808
%RSD	1.914025	1.742147	.4978632	.5357444	.1309479	.2183885
#1	17.84280	.1509058	1.044068	4.872905	5.888362	.1747650
#2	17.19190	.1469238	1.034054	4.873095	5.903280	.1740035
#3	17.66355	.1460787	1.041339	4.827921	5.892381	.1743976

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1151-02DLX2 Acquired: 1/28/2025 20:10:02 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ1 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8897201	F 53.10561	6.344822	.0448655	.5879901	.0366947
Stddev	.0008922	.04646	.048376	.0002194	.0040206	.0021783
%RSD	.1002808	.0874910	.7624444	.4891273	.6837876	5.936372
#1	.8907445	53.08586	6.396958	.0448816	.5923709	.0361125
#2	.8893030	53.15868	6.336121	.0450764	.5844687	.0348666
#3	.8891129	53.07228	6.301388	.0446384	.5871306	.0391050

Elem	Sr4077
Units	ppm
Avg	.2354466
Stddev	.0014453
%RSD	.6138585
#1	.2371073
#2	.2347596
#3	.2344730

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3698.859	82563.65	12228.19	2612.282	4347.870
Stddev	7.485	87.37	48.21	5.791	7.073
%RSD	.2023639	.1058169	.3942133	.2216710	.1626775
#1	3691.463	82467.18	12172.83	2612.427	4340.231
#2	3698.682	82637.45	12260.89	2606.420	4349.185
#3	3706.430	82586.32	12250.85	2617.999	4354.193

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1151-03DLX2 Acquired: 1/28/2025 20:13:56 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0438953	-.005719	.8073661	.0201898	.0106556	18.71914
Stddev	.0025156	.003309	.0024370	.0017763	.0007415	.08134
%RSD	5.730798	57.86289	.3018473	8.797887	6.958579	.4345432
#1	.0419987	-.003416	.8066493	.0201042	.0112601	18.75787
#2	.0467489	-.009511	.8100811	.0220073	.0108786	18.62567
#3	.0429384	-.004230	.8053679	.0184579	.0098283	18.77389

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1800270	.0045485	.0078113	8.827675	1.001663	4.394044
Stddev	.0014404	.0000610	.0000708	.042474	.004208	.006398
%RSD	.8000724	1.340287	.9061321	.4811454	.4201404	.1456102
#1	.1816387	.0045603	.0078682	8.871296	1.003958	4.386869
#2	.1788654	.0044824	.0078335	8.786449	.996806	4.399156
#3	.1795769	.0046026	.0077320	8.825279	1.004225	4.396107

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6521810	50.44420	.2985998	4.778823	2.657837	.0002101
Stddev	.0048732	.18519	.0024551	.047723	.005221	.0001519
%RSD	.7472118	.3671204	.8222028	.9986319	.1964555	72.30113
#1	.6577922	50.53820	.3003150	4.756179	2.652140	.0002052
#2	.6497411	50.23086	.2957874	4.746637	2.662395	.0000607
#3	.6490097	50.56353	.2996969	4.833652	2.658976	.0003644

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.76120	.0848923	1.179939	1.458695	1.432556	.1209167
Stddev	.44268	.0004447	.011236	.044914	.004679	.0023038
%RSD	3.763902	.5238566	.9522701	3.079065	.3266337	1.905252
#1	12.15383	.0845089	1.192279	1.467621	1.436657	.1225765
#2	11.28143	.0853799	1.170298	1.409988	1.433553	.1182865
#3	11.84835	.0847882	1.177241	1.498476	1.427459	.1218870

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1151-03DLX2 Acquired: 1/28/2025 20:13:56 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ2 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0756595	F 30.99597	4.831500	.0387335	.3580009	.0156858
Stddev	.0000803	.06689	.017326	.0002571	.0016084	.0003325
%RSD	.1061012	.2157968	.3586050	.6637665	.4492641	2.119636
#1	.0756245	30.95805	4.851274	.0385874	.3594736	.0159721
#2	.0756027	31.07321	4.824246	.0385827	.3562846	.0157641
#3	.0757514	30.95667	4.818981	.0390303	.3582446	.0153212

Elem	Sr4077
Units	ppm
Avg	.1138087
Stddev	.0012632
%RSD	1.109966
#1	.1150778
#2	.1125514
#3	.1137969

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3842.257	84027.18	12402.84	2720.963	4393.871
Stddev	2.988	312.09	8.00	19.726	3.760
%RSD	.0777547	.3714183	.0645318	.7249587	.0855715
#1	3845.589	83774.36	12401.25	2708.820	4390.694
#2	3841.367	84375.99	12395.75	2743.724	4392.898
#3	3839.816	83931.18	12411.52	2710.347	4398.022

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1151-05DLX2 Acquired: 1/28/2025 20:17:52 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0476604	-.009210	.6583301	.0263107	.0100935	38.13962
Stddev	.0023137	.001360	.0014053	.0032861	.0005422	.24829
%RSD	4.854577	14.76801	.2134674	12.48943	5.371251	.6510035
#1	.0460670	-.008816	.6571019	.0298113	.0099624	37.85415
#2	.0503142	-.008090	.6580259	.0232925	.0096289	38.25941
#3	.0465998	-.010723	.6598627	.0258282	.0106892	38.30531

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1443100	.0042391	.0052857	12.19573	2.475532	2.885098
Stddev	.0003154	.0001658	.0000630	.03285	.011424	.002210
%RSD	.2185418	3.912365	1.192394	.2693281	.4614665	.0766047
#1	.1440256	.0043646	.0052896	12.15944	2.486683	2.883583
#2	.1442551	.0043015	.0053467	12.22343	2.476060	2.884077
#3	.1446492	.0040510	.0052209	12.20432	2.463853	2.887634

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3257633	92.81062	.7711747	16.04857	2.253386	-.000788
Stddev	.0011677	.35251	.0042075	.08226	.003656	.000355
%RSD	.3584484	.3798135	.5456013	.5125673	.1622581	45.08749
#1	.3261540	92.48775	.7664007	16.03064	2.252030	-.000741
#2	.3244504	93.18671	.7727804	16.13831	2.250601	-.000458
#3	.3266856	92.75739	.7743429	15.97675	2.257526	-.001164

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.41560	.1167141	1.085776	8.914875	4.186017	.1970575
Stddev	.21922	.0005494	.002836	.050710	.008800	.0031192
%RSD	.8298815	.4707277	.2611973	.5688234	.2102120	1.582877
#1	26.39400	.1171477	1.088089	8.857358	4.184980	.1934582
#2	26.64481	.1160963	1.086628	8.953141	4.177782	.1989711
#3	26.20797	.1168984	1.082612	8.934125	4.195290	.1987432

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1151-05DLX2 Acquired: 1/28/2025 20:17:52 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ4 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2275975	F 63.62164	7.396390	.0268989	.8851391	.0685070
Stddev	.0004777	.10097	.007000	.0005036	.0002347	.0011679
%RSD	.2098811	.1586989	.0946473	1.872301	.0265127	1.704720
#1	.2272814	63.66675	7.392498	.0274781	.8850450	.0679304
#2	.2281470	63.50598	7.404472	.0265646	.8849661	.0677396
#3	.2273641	63.69219	7.392200	.0266539	.8854062	.0698510

Elem	Sr4077
Units	ppm
Avg	.1397384
Stddev	.0012866
%RSD	.9207065
#1	.1383029
#2	.1401246
#3	.1407876

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3814.393	83522.17	12605.55	2682.667	4222.762
Stddev	9.738	318.81	110.06	15.071	2.541
%RSD	.2553065	.3817011	.8730695	.5618005	.0601834
#1	3805.398	83273.37	12498.28	2671.992	4221.359
#2	3813.046	83411.61	12600.16	2676.103	4221.232
#3	3824.735	83881.54	12718.19	2699.907	4225.696

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1151-08A Acquired: 1/28/2025 20:21:46 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ7A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1949449**	**-.003761**	**.7496662**	**.0829757**	**.1200381**	**25.23052**
Stddev	.0014885	.002120	.0030219	.0017451	.0015173	.07042
%RSD	.7635221	56.37487	.4030945	2.103093	1.264052	.2791076
#1	.1941451	-.002643	.7496154	.0833420	.1190635	25.21139
#2	.1940273	-.002433	.7466701	.0810766	.1217863	25.17164
#3	.1966623	-.006206	.7527132	.0845085	.1192644	25.30853

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5391496**	**.0491461**	**.0075753**	**16.15049**	**.1753735**	**.2491670**
Stddev	.0025519	.0001917	.0000485	.01183	.0005001	.0006389
%RSD	.4733173	.3900664	.6402186	.0732764	.2851483	.2564266
#1	.5410663	.0491262	.0075902	16.16292	.1759369	.2492271
#2	.5362530	.0493471	.0076146	16.13936	.1749823	.2485002
#3	.5401296	.0489652	.0075211	16.14919	.1752012	.2497738

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2906829**	**50.37873**	**.4652300**	**11.62153**	**.2592022**	**.0160628**
Stddev	.0012265	.16370	.0018432	.06709	.0007480	.0000733
%RSD	.4219216	.3249424	.3961862	.5773258	.2885628	.4559957
#1	.2898281	50.30415	.4668514	11.58921	.2600579	.0160254
#2	.2920881	50.26560	.4632253	11.57671	.2588758	.0160158
#3	.2901325	50.56644	.4656133	11.69867	.2586728	.0161472

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**37.36189**	**.0916937**	**.6211781**	**5.323312**	**4.841460**	**.1287036**
Stddev	.11605	.0008865	.0014063	.004782	.018835	.0008289
%RSD	.3106189	.9667550	.2263912	.0898256	.3890271	.6440382
#1	37.38872	.0923035	.6195688	5.318698	4.862588	.1294059
#2	37.46217	.0921008	.6221706	5.328245	4.835359	.1277893
#3	37.23477	.0906768	.6217948	5.322991	4.826432	.1289157

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1151-08A Acquired: 1/28/2025 20:21:46 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0AZ7A Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0152061	F 40.84521	F 11.92122	.0183772	.7661361	.0195291
Stddev	.0001130	.07386	.02784	.0005404	.0011429	.0001329
%RSD	.7432649	.1808306	.2335014	2.940831	.1491725	.6803819
#1	.0152167	40.93047	11.89980	.0181020	.7666529	.0196697
#2	.0153134	40.80060	11.95269	.0180298	.7669294	.0195120
#3	.0150882	40.80457	11.91119	.0189999	.7648262	.0194056

Elem	Sr4077
Units	ppm
Avg	.3462089
Stddev	.0009050
%RSD	.2613965
#1	.3468668
#2	.3451769
#3	.3465831

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4385.193	94860.55	14511.94	3052.110	4316.853
Stddev	8.964	288.57	64.01	9.354	10.419
%RSD	.2044142	.3042003	.4410787	.3064704	.2413649
#1	4389.665	95181.81	14559.02	3060.149	4318.801
#2	4391.042	94776.47	14439.06	3054.337	4326.160
#3	4374.873	94623.35	14537.74	3041.843	4305.596

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1163-01DLX5 Acquired: 1/28/2025 20:25:42 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2946 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0230190	-.047586	1.309760	.0980263	.0372681	14.19844	.1738094
Stddev	.0016104	.000220	.031057	.0010932	.0014023	.08228	.0007509
%RSD	6.996082	.4619502	2.371232	1.115241	3.762814	.5794953	.4320230
#1	.0235769	-.047344	1.331752	.0986858	.0359340	14.28626	.1746437
#2	.0212038	-.047773	1.323296	.0986288	.0387299	14.18594	.1731877
#3	.0242763	-.047642	1.274232	.0967644	.0371405	14.12313	.1735968

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009132	.0161275	155.9550	1.181418	.0301001	.1186301	494.7593
Stddev	.0001492	.0005826	.7576	.000792	.0004508	.0033496	4.2539
%RSD	16.34249	3.612235	.4857715	.0670600	1.497546	2.823596	.8597877
#1	.0010157	.0167117	156.7475	1.182315	.0305900	.1216389	494.8640
#2	.0007420	.0161240	155.8794	1.181126	.0300075	.1192306	498.9599
#3	.0009818	.0155466	155.2380	1.180813	.0297028	.1150208	490.4540

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.65143	38.28223	.5233839	-.007940	.5326866	.1250715	3.406324
Stddev	.08154	.25673	.0106535	.001118	.1700040	.0030591	.012940
%RSD	.4371733	.6706220	2.035508	14.08303	31.91445	2.445895	.3798734
#1	18.73958	38.57202	.5312077	-.008596	.7254277	.1283960	3.421155
#2	18.63602	38.19147	.5276932	-.006649	.4685574	.1244433	3.400473
#3	18.57870	38.08322	.5112507	-.008576	.4040746	.1223753	3.397343

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.440664	1.679022	.6901996	.0235503	2.660885	5.142029	.0213792
Stddev	.012175	.031440	.0205112	.0006905	.054368	.020320	.0012110
%RSD	.8451208	1.872537	2.971779	2.932214	2.043228	.3951651	5.664510
#1	1.446741	1.701600	.6816942	.0242316	2.699753	5.165098	.0219141
#2	1.448605	1.692354	.7135953	.0235685	2.684145	5.126784	.0222308
#3	1.426647	1.643113	.6753093	.0228508	2.598756	5.134206	.0199929

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1163-01DLX5 Acquired: 1/28/2025 20:25:42 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2946 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.018527	.0285799	.1608051
Stddev	.005442	.0013579	.0006703
%RSD	.5342844	4.751063	.4168600
#1	1.024703	.0298630	.1613852
#2	1.016440	.0287189	.1609589
#3	1.014438	.0271580	.1600713

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3437.864	74996.78	11417.65	2412.145	4019.364
Stddev	32.017	172.60	36.45	15.419	44.282
%RSD	.9313034	.2301484	.3192314	.6392122	1.101706
#1	3422.299	74913.16	11403.23	2396.724	3993.605
#2	3416.606	75195.27	11459.11	2427.561	3993.992
#3	3474.688	74881.91	11390.63	2412.150	4070.496

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1163-02DLX2 Acquired: 1/28/2025 20:29:47 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0403037**	**-.032461**	**.5069621**	**.0478654**	**.0247878**	**41.08907**	**.3561706**
Stddev	.0026909	.002274	.0041895	.0022519	.0013282	.19527	.0026343
%RSD	6.676600	7.005807	.8263900	4.704631	5.358439	.4752261	.7396253
#1	.0416575	-.034979	.5103590	.0493002	.0253360	41.30379	.3590946
#2	.0420488	-.030556	.5022808	.0490261	.0232732	41.04130	.3554348
#3	.0372047	-.031848	.5082466	.0452700	.0257543	40.92212	.3539825

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0024489**	**.0089594**	**481.4991**	**3.024579**	**.0731610**	**.1488691**	**264.1960**
Stddev	.0001824	.0002546	1.7471	.008909	.0004879	.0011563	1.4113
%RSD	7.447361	2.841874	.3628536	.2945676	.6668773	.7767358	.5342025
#1	.0023461	.0090473	482.1057	3.034261	.0727804	.1476065	265.6654
#2	.0026595	.0086725	479.5296	3.022751	.0729915	.1498766	264.0715
#3	.0023412	.0091584	482.8621	3.016726	.0737110	.1491240	262.8510

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.59126**	**115.2031**	**1.497198**	**-.002987**	**.3001402**	**.1600487**	**1.416878**
Stddev	.06578	.5681	.002685	.000289	.3505880	.0028128	.021753
%RSD	.5224519	.4931469	.1793664	9.664389	116.8081	1.757448	1.535242
#1	12.65275	115.7257	1.495431	-.002689	.0898909	.1616668	1.437744
#2	12.59914	115.2852	1.495875	-.003265	.1056679	.1568008	1.418555
#3	12.52190	114.5984	1.500288	-.003007	.7048619	.1616785	1.394336

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.101774**	**2.735378**	**.4138411**	**.0562970**	**3.599746**	**8.031717**	**.0135489**
Stddev	.023218	.005487	.0098435	.0001897	.005082	.007336	.0006469
%RSD	.3805142	.2005787	2.378582	.3369988	.1411843	.0913416	4.774377
#1	6.088045	2.729615	.4242260	.0562356	3.594334	8.039047	.0142824
#2	6.128581	2.735981	.4126499	.0561455	3.600486	8.031729	.0133042
#3	6.088695	2.740539	.4046473	.0565098	3.604418	8.024375	.0130600

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1163-02DLX2 Acquired: 1/28/2025 20:29:47 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.033336	.0862604	.6899371
Stddev	.001050	.0006515	.0046921
%RSD	.1016290	.7553252	.6800727
#1	1.033762	.0862390	.6948795
#2	1.034106	.0869224	.6893882
#3	1.032140	.0856198	.6855436

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3345.478	73711.18	11428.16	2350.171	3629.687
Stddev	2.480	148.13	31.27	11.138	4.389
%RSD	.0741448	.2009579	.2736441	.4739405	.1209119
#1	3346.301	73554.93	11463.90	2339.512	3632.285
#2	3347.443	73729.04	11405.83	2349.268	3632.155
#3	3342.691	73849.56	11414.76	2361.734	3624.619

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1163-03DLX2 Acquired: 1/28/2025 20:33:51 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0386066**	**-.033218**	**.5086281**	**.0472124**	**.0212862**	**41.43400**	**.3566515**
Stddev	.0028514	.001823	.0067464	.0016413	.0016786	.29555	.0036323
%RSD	7.385871	5.488982	1.326394	3.476460	7.885651	.7132936	1.018457
#1	.0397706	-.035233	.5106084	.0489540	.0227769	41.75170	.3607788
#2	.0353573	-.032739	.5141627	.0469892	.0194680	41.38310	.3539415
#3	.0406920	-.031683	.5011131	.0456942	.0216136	41.16722	.3552341

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0024464**	**.0089774**	**480.0761**	**3.035264**	**.0738443**	**.1503277**	**265.3192**
Stddev	.0001170	.0001366	2.8523	.001829	.0007696	.0011757	.9023
%RSD	4.783307	1.521851	.5941308	.0602578	1.042261	.7821216	.3400729
#1	.0025641	.0091274	477.7530	3.034835	.0747129	.1509344	266.3301
#2	.0024449	.0088601	479.2157	3.033688	.0735727	.1510762	265.0319
#3	.0023301	.0089447	483.2595	3.037270	.0732472	.1489726	264.5955

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.58472**	**115.1058**	**1.501591**	**-.003351**	**.4122832**	**.1567608**	**1.418735**
Stddev	.05787	.0830	.004600	.000221	.3215259	.0032186	.003429
%RSD	.4598243	.0720862	.3063106	6.597506	77.98665	2.053179	.2416731
#1	12.65027	115.1640	1.506156	-.003112	.4076438	.1531583	1.421928
#2	12.54071	115.1427	1.501660	-.003393	.0931021	.1577707	1.415111
#3	12.56319	115.0108	1.496957	-.003548	.7361037	.1593533	1.419164

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.184163**	**2.745271**	**.4217970**	**.0557916**	**3.604923**	**7.899746**	**.0133288**
Stddev	.025541	.005220	.0096674	.0008949	.015901	.023777	.0003966
%RSD	.4130007	.1901615	2.291946	1.603938	.4411011	.3009887	2.975441
#1	6.212912	2.750238	.4311794	.0567901	3.622080	7.914619	.0134018
#2	6.164093	2.745746	.4223437	.0550621	3.602009	7.872323	.0136839
#3	6.175483	2.739830	.4118678	.0555227	3.590680	7.912296	.0129008

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1163-03DLX2 Acquired: 1/28/2025 20:33:51 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947D Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.021377	.0868608	.6948646
Stddev	.003745	.0003421	.0054560
%RSD	.3666353	.3938454	.7851888
#1	1.017718	.0868233	.7010909
#2	1.021212	.0872201	.6925834
#3	1.025202	.0865390	.6909194

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3369.342	73774.13	11619.09	2361.807	3657.179
Stddev	9.569	59.79	80.09	9.660	10.706
%RSD	.2840091	.0810477	.6893141	.4089906	.2927308
#1	3363.086	73810.02	11702.81	2372.948	3644.949
#2	3380.357	73807.26	11611.26	2355.781	3664.856
#3	3364.582	73705.10	11543.20	2356.690	3661.732

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1163-02LDLX10 Acquired: 1/28/2025 20:37:54 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0087897**	**-.005105**	**.1026936**	**.0079043**	**.0047753**	**8.205280**	**.0724852**
Stddev	.0013124	.003048	.0020356	.0010623	.0005800	.036765	.0007170
%RSD	14.93123	59.70222	1.982161	13.43935	12.14567	.4480709	.9892235
#1	.0102560	-.008456	.1003569	.0089677	.0054402	8.247731	.0733096
#2	.0077253	-.002499	.1040818	.0068431	.0043738	8.183720	.0720065
#3	.0083877	-.004360	.1036420	.0079022	.0045118	8.184389	.0721394

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005796**	**.0015630**	**96.30148**	**.6431030**	**.0142420**	**.0321526**	**54.57928**
Stddev	.0001014	.0000269	.40359	.0040439	.0002695	.0016025	.26139
%RSD	17.49114	1.719264	.4190951	.6288096	1.892159	4.984055	.4789104
#1	.0004750	.0015391	96.73357	.6463632	.0140219	.0332492	54.84605
#2	.0005864	.0015577	95.93424	.6385778	.0141615	.0303136	54.32363
#3	.0006775	.0015921	96.23662	.6443680	.0145425	.0328952	54.56816

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.566455**	**22.95223**	**.3018716**	**-.000522**	**.3248051**	**.0325990**	**.2786759**
Stddev	.017842	.13565	.0013718	.000106	.3019873	.0008032	.0043662
%RSD	.6952034	.5910169	.4544443	20.20587	92.97494	2.463750	1.566758
#1	2.586883	23.08547	.3011961	-.000414	.3222277	.0316794	.2835563
#2	2.553928	22.81429	.3009684	-.000527	.6280729	.0331630	.2751402
#3	2.558553	22.95692	.3034502	-.000625	.0241147	.0329545	.2773312

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.317548**	**.5174337**	**.0827702**	**.0121671**	**.6712766**	**2.080761**	**.0007252**
Stddev	.013993	.0041232	.0009883	.0002718	.0018356	.006357	.0006106
%RSD	1.062066	.7968512	1.194083	2.234015	.2734456	.3055156	84.20487
#1	1.322253	.5174859	.0827771	.0124383	.6708975	2.082153	.0000964
#2	1.301808	.5132847	.0817784	.0118947	.6696603	2.073823	.0007633
#3	1.328582	.5215306	.0837550	.0121683	.6732722	2.086307	.0013158

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1163-02LDLX10 Acquired: 1/28/2025 20:37:54 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2255726	.0163205	.1356746
Stddev	.0014577	.0009253	.0009984
%RSD	.6462300	5.669685	.7358423
#1	.2265620	.0157433	.1368200
#2	.2238986	.0158304	.1352148
#3	.2262573	.0173878	.1349891

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3534.507	76894.71	11463.01	2502.023	4168.583
Stddev	16.487	491.38	47.12	19.267	15.345
%RSD	.4664497	.6390301	.4111016	.7700646	.3681075
#1	3546.941	76465.18	11417.61	2494.577	4177.759
#2	3540.774	77430.54	11511.68	2523.901	4177.122
#3	3515.806	76788.42	11459.73	2487.589	4150.868

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1163-04DLX2 Acquired: 1/28/2025 20:41:56 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0787062	.0247368	.5202568	.1350289	.1169472	40.31779	2.124153
Stddev	.0040167	.0029729	.0024322	.0075419	.0023534	.31296	.028094
%RSD	5.103435	12.01824	.4674947	5.585422	2.012386	.7762254	1.322585
#1	.0793181	.0281523	.5174725	.1264427	.1149369	40.21975	2.107844
#2	.0744186	.0227311	.5213313	.1380612	.1163689	40.66803	2.156592
#3	.0823818	.0233269	.5219668	.1405826	.1195359	40.06559	2.108021

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0533874	.0605024	447.2305	3.153374	.5840974	.3775835	248.9420
Stddev	.0004212	.0000746	1.3130	.009641	.0005619	.0015378	1.4918
%RSD	.7889582	.1233392	.2935952	.3057355	.0961995	.4072803	.5992568
#1	.0535001	.0605808	448.2774	3.160329	.5837930	.3765099	248.5897
#2	.0529213	.0604323	447.6568	3.157424	.5837534	.3793453	250.5785
#3	.0537408	.0604942	445.7572	3.142368	.5847458	.3768955	247.6580

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.14268	107.5454	1.984073	.0322783	.6198362	.6311057	1.773477
Stddev	.11071	.5111	.001579	.0003052	.3053886	.0036424	.018483
%RSD	.9117039	.4752406	.0795632	.9455060	49.26924	.5771446	1.042212
#1	12.08372	107.5305	1.982895	.0319422	.3033388	.6342852	1.774611
#2	12.27038	108.0638	1.983458	.0325381	.6434215	.6271316	1.791368
#3	12.07393	107.0419	1.985867	.0323546	.9127484	.6319002	1.754453

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.821773	2.698849	.3275075	.0549246	3.549640	7.756334	.0132753
Stddev	.093494	.003739	.0159618	.0004335	.005883	.010565	.0012137
%RSD	1.605939	.1385432	4.873710	.7893626	.1657343	.1362072	9.142399
#1	5.800307	2.695566	.3252407	.0544859	3.543339	7.748983	.0120848
#2	5.924133	2.698062	.3444816	.0553528	3.550591	7.751577	.0132300
#3	5.740879	2.702919	.3128004	.0549350	3.554989	7.768441	.0145109

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1163-04DLX2 Acquired: 1/28/2025 20:41:56 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947S Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9904305	.0804534	.6438386
Stddev	.0019354	.0016171	.0082105
%RSD	.1954122	2.009922	1.275241
#1	.9894615	.0788576	.6397412
#2	.9891710	.0820909	.6532914
#3	.9926590	.0804117	.6384831

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3370.506	75077.42	11346.62	2399.035	3666.878
Stddev	5.881	226.04	77.15	11.671	1.821
%RSD	.1744824	.3010723	.6799552	.4864986	.0496704
#1	3373.495	75059.64	11299.02	2395.700	3668.760
#2	3374.292	74860.79	11435.63	2389.394	3666.751
#3	3363.731	75311.82	11305.20	2412.011	3665.124

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: PB166236TB Acquired: 1/28/2025 20:45:57 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LEB236 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0034162**	**-.001305**	**.0012528**	**-.005142**	**.0017185**	**.0015383**
Stddev	.0029545	.002547	.0015908	.003043	.0005653	.0060217
%RSD	86.48503	195.2425	126.9817	59.17487	32.89726	391.4439
#1	.0066587	-.004027	.0000481	-.006862	.0011302	-.005343
#2	.0008766	-.000909	.0030560	-.006934	.0022576	.005845
#3	.0027131	.001022	.0006541	-.001629	.0017676	.004112

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000445**	**.0000409**	**-.000031**	**.0245543**	**.0014614**	**-.000222**
Stddev	.001504	.0000275	.000064	.0043022	.0003745	.000210
%RSD	338.3499	67.35844	209.8025	17.52115	25.62610	94.48398
#1	.001125	.0000712	.000040	.0267084	.0012123	-.000102
#2	-.000584	.0000174	-.000084	.0196006	.0018921	-.000464
#3	-.001874	.0000340	-.000048	.0273540	.0012799	-.000100

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009754**	**.0188736**	**.0022195**	**-.005432**	**.0030301**	**-.000052**
Stddev	.0009402	.0026379	.0002038	.011680	.0004192	.000086
%RSD	96.39365	13.97648	9.181102	215.0088	13.83466	166.6399
#1	.0004730	.0161173	.0022930	-.018066	.0025460	-.000142
#2	.0003931	.0213744	.0019892	-.003203	.0032699	-.000042
#3	.0020600	.0191291	.0023763	.004972	.0032743	.000029

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **1548.497**	**.0010279**	**.0001312**	**-.734294**	**.0044747**	**-.001177**
Stddev	4.398	.0002861	.0021070	.021165	.0015878	.000579
%RSD	.2840319	27.82968	1605.476	2.882406	35.48293	49.21174
#1	1550.754	.0013419	.0023974	-.744772	.0027522	-.001104
#2	1543.428	.0009598	-.001769	-.748178	.0058797	-.001789
#3	1551.309	.0007821	-.000235	-.709934	.0047923	-.000638

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: PB166236TB Acquired: 1/28/2025 20:45:57 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LEB236 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004436	.0612303	.0065380	.0030259	.0008663	-.002505
Stddev	.0001903	.0010561	.0036972	.0011527	.0007796	.000906
%RSD	42.91121	1.724853	56.55028	38.09220	89.99264	36.17559
#1	.0005621	.0612999	.0107943	.0028214	.0013882	-.003070
#2	.0005446	.0601411	.0046964	.0042672	.0012404	-.001460
#3	.0002240	.0622499	.0041232	.0019893	-.000030	-.002985

Elem	Sr4077
Units	ppm
Avg	.0000187
Stddev	.0000561
%RSD	300.5285
#1	.0000331
#2	.0000662
#3	-.000043

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3161.834	68105.06	11576.92	2235.126	3540.568
Stddev	5.447	318.20	59.88	13.742	9.877
%RSD	.1722785	.4672126	.5172008	.6148116	.2789781
#1	3156.303	67995.61	11516.55	2233.297	3539.395
#2	3167.193	67856.04	11577.91	2222.389	3550.980
#3	3162.005	68463.54	11636.29	2249.690	3531.330

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1164-01 Acquired: 1/28/2025 20:50:07 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2946 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037419	-.004480	.0012597	-.012131	.0075687	.2393526
Stddev	.0034073	.003850	.0014660	.001334	.0014747	.0090095
%RSD	91.05931	85.93106	116.3756	10.99248	19.48408	3.764123
#1	.0059037	-.008076	.0022568	-.011485	.0058691	.2299406
#2	-.000186	-.000418	-.000424	-.011244	.0083285	.2478969
#3	.005508	-.004948	.001946	-.013665	.0085086	.2402202

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6397138	.0003699	-.000147	493.5365	-.000479	.0008173
Stddev	.0029006	.0000454	.000150	.9155	.000313	.0002049
%RSD	.4534232	12.27759	102.1092	.1854887	65.37456	25.06767
#1	.6388062	.0004044	-.000209	494.5559	-.000177	.0006224
#2	.6429597	.0003184	.000024	492.7844	-.000803	.0007986
#3	.6373755	.0003869	-.000256	493.2694	-.000458	.0010308

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0057725	.1154094	2.995863	107.2681	.0286472	-.000104
Stddev	.0015745	.0108563	.018597	.2316	.0009622	.000049
%RSD	27.27585	9.406782	.6207602	.2159108	3.358789	47.45147
#1	.0043321	.1037721	2.998180	107.1017	.0284877	-.000142
#2	.0074535	.1171921	3.013193	107.5326	.0296792	-.000048
#3	.0055319	.1252640	2.976216	107.1699	.0277748	-.000122

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 1499.906	.0037018	.1778136	10.50945	.0340612	1.755119
Stddev	3.365	.0022635	.0017235	.05856	.0031261	.011270
%RSD	.2243620	61.14558	.9692825	.5571709	9.177799	.6421029
#1	1503.266	.0062948	.1768425	10.53673	.0355663	1.755206
#2	1496.535	.0021214	.1798036	10.54939	.0361499	1.743806
#3	1499.917	.0026891	.1767948	10.44223	.0304673	1.766345

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1164-01 Acquired: 1/28/2025 20:50:07 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2946 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0840907	F 46.51507	F 12.60843	-.001712	-.013637	.0720131
Stddev	.0005042	.07180	.06997	.000451	.000475	.0010537
%RSD	.5995383	.1543568	.5549265	26.35404	3.480931	1.463165
#1	.0846129	46.58261	12.67323	-.001355	-.013336	.0732209
#2	.0840524	46.52293	12.53424	-.002219	-.013392	.0715368
#3	.0836068	46.43966	12.61783	-.001563	-.014185	.0712817

Elem	Sr4077
Units	ppm
Avg	1.295930
Stddev	.009101
%RSD	.7022422
#1	1.295113
#2	1.305411
#3	1.287265

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2947.244	64221.11	10860.59	2064.217	3253.594
Stddev	18.220	82.96	63.11	4.558	12.448
%RSD	.6181997	.1291741	.5811000	.2207938	.3825965
#1	2963.351	64224.72	10839.51	2069.436	3265.736
#2	2950.910	64136.40	10931.54	2062.191	3254.185
#3	2927.469	64302.19	10810.72	2061.023	3240.861

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1164-02 Acquired: 1/28/2025 20:54:17 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033605	-.009051	.0045824	-.013287	.0064193	.2320891
Stddev	.0028305	.004631	.0009976	.001971	.0005988	.0111587
%RSD	84.22724	51.16537	21.77091	14.83253	9.327980	4.807919
#1	.0007751	-.013498	.0035445	-.011423	.0057299	.2448212
#2	.0029217	-.009401	.0046684	-.015349	.0067183	.2240097
#3	.0063847	-.004255	.0055342	-.013088	.0068097	.2274363

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.547137	.0003536	.0011411	643.5712	-.000533	.0058147
Stddev	.004866	.0000724	.0000264	4.9249	.000206	.0002107
%RSD	.3145382	20.48520	2.312310	.7652497	38.68146	3.623958
#1	1.550113	.0003506	.0011646	638.2034	-.000362	.0060228
#2	1.549778	.0002827	.0011125	644.6288	-.000762	.0058199
#3	1.541521	.0004274	.0011463	647.8815	-.000474	.0056015

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0076493	.0249122	4.216201	32.84333	.0200378	-.000252
Stddev	.0013022	.0058288	.006077	.09152	.0003191	.000146
%RSD	17.02418	23.39746	.1441346	.2786584	1.592276	57.95884
#1	.0065836	.0199594	4.219168	32.87599	.0197133	-.000389
#2	.0072634	.0313355	4.209211	32.73996	.0200492	-.000269
#3	.0091009	.0234418	4.220225	32.91405	.0203511	-.000098

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 1579.502	.0006041	.4959351	5.893291	.0057672	.2326500
Stddev	2.007	.0004281	.0026044	.043578	.0020022	.0009275
%RSD	.1270528	70.87425	.5251556	.7394494	34.71700	.3986481
#1	1578.827	.0007719	.4947128	5.854757	.0066424	.2316122
#2	1581.760	.0009229	.4989259	5.884532	.0034764	.2329403
#3	1577.920	.0001175	.4941666	5.940582	.0071829	.2333976

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1164-02 Acquired: 1/28/2025 20:54:17 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0143075**	**9.410834**	**5.671311**	**-.001081**	**-.017341**	**.0199932**
Stddev	.0003250	.010833	.006872	.000763	.000529	.0002894
%RSD	2.271303	.1151128	.1211751	70.61127	3.050512	1.447545
#1	.0144449	9.405307	5.665746	-.001166	-.017193	.0196663
#2	.0139364	9.423316	5.669194	-.001798	-.017928	.0200966
#3	.0145412	9.403879	5.678992	-.000279	-.016902	.0202167

Elem	Sr4077
Units	ppm
Avg	**1.678255**
Stddev	.012545
%RSD	.7475265
#1	1.664270
#2	1.681974
#3	1.688520

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2934.932**	**64447.47**	**10997.12**	**2056.365**	**3224.473**
Stddev	13.456	250.58	77.06	5.130	4.029
%RSD	.4584827	.3888086	.7006880	.2494569	.1249607
#1	2945.583	64660.16	11080.57	2055.562	3228.508
#2	2939.404	64511.00	10982.10	2061.850	3224.461
#3	2919.809	64171.24	10928.67	2051.685	3220.449

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1164-03 Acquired: 1/28/2025 20:58:36 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0044190**	**-.007085**	**.0036007**	**-.015777**	**.0049826**	**.1855270**
Stddev	.0014153	.003226	.0012592	.003447	.0023969	.0088042
%RSD	32.02731	45.53103	34.96944	21.84865	48.10513	4.745528
#1	.0060408	-.006149	.0028205	-.016768	.0032141	.1901591
#2	.0037823	-.004431	.0029284	-.018620	.0077106	.1910482
#3	.0034340	-.010676	.0050534	-.011943	.0040231	.1753737

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.537721**	**.0004008**	**.0012710**	**645.8310**	**-.000746**	**.0054126**
Stddev	.010936	.0000320	.0000899	5.6178	.000300	.0001802
%RSD	.7112103	7.986111	7.074774	.8698591	40.15130	3.329635
#1	1.542067	.0004372	.0012809	647.4589	-.000945	.0055695
#2	1.545816	.0003885	.0013555	650.4552	-.000891	.0052157
#3	1.525279	.0003768	.0011765	639.5790	-.000402	.0054526

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0081681**	**.0270567**	**4.178425**	**32.89643**	**.0197110**	**.0001233**
Stddev	.0013431	.0005190	.023928	.18262	.0002846	.0001993
%RSD	16.44283	1.918213	.5726587	.5551502	1.443974	161.5740
#1	.0078928	.0276404	4.188406	33.04183	.0195445	-.000023
#2	.0096275	.0268827	4.195746	32.95601	.0200396	.000043
#3	.0069840	.0266471	4.151122	32.69146	.0195488	.000350

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **1555.984**	**.0011058**	**.4876108**	**5.904053**	**.0037652**	**.2335010**
Stddev	6.501	.0012551	.0036813	.076089	.0027940	.0006100
%RSD	.4178328	113.5105	.7549694	1.288765	74.20572	.2612384
#1	1555.451	-.000014	.4909323	5.858258	.0069429	.2327967
#2	1562.736	.002462	.4882476	5.991887	.0026587	.2338555
#3	1549.766	.000869	.4836527	5.862015	.0016939	.2338509

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1164-03 Acquired: 1/28/2025 20:58:36 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947D Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0145421**	**9.250952**	**5.608536**	**-.000834**	**-.016602**	**.0204262**
Stddev	.0005391	.035314	.013838	.001034	.000758	.0001004
%RSD	3.707020	.3817314	.2467396	123.9182	4.568124	.4917038
#1	.0150982	9.231555	5.608458	-.000575	-.017282	.0203988
#2	.0145063	9.229588	5.622413	.000045	-.016741	.0205374
#3	.0140218	9.291713	5.594737	-.001973	-.015784	.0203422

Elem	Sr4077
Units	ppm
Avg	**1.680247**
Stddev	.002578
%RSD	.1534362
#1	1.677396
#2	1.682415
#3	1.680930

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2944.364**	**63971.96**	**10940.04**	**2052.588**	**3239.890**
Stddev	5.044	192.38	41.02	4.177	7.396
%RSD	.1713095	.3007208	.3749335	.2035063	.2282845
#1	2947.641	64046.71	10987.40	2057.190	3246.695
#2	2946.896	63753.43	10915.76	2051.537	3240.956
#3	2938.556	64115.75	10916.97	2049.036	3232.019

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1164-02LX5 Acquired: 1/28/2025 21:02:57 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000356**	**-.002539**	**.0004949**	**-.001093**	**.0020542**	**.1014241**	**.2889304**
Stddev	.002248	.001905	.0019249	.002491	.0016698	.0037488	.0022533
%RSD	631.6418	75.02849	388.9243	227.9870	81.28779	3.696193	.7798658
#1	.001737	-.002568	-.000881	-.002193	.0039822	.1055546	.2870837
#2	-.002732	-.004428	-.000329	.001759	.0011130	.0982372	.2914411
#3	-.000073	-.000619	.002695	-.002844	.0010675	.1004806	.2882666

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001373**	**.0002183**	**125.3094**	**-.000696**	**.0010845**	**.0022028**	**.0121470**
Stddev	.0000066	.0000234	.7218	.000585	.0003842	.0031688	.0023687
%RSD	4.791281	10.73689	.5760205	84.11614	35.42478	143.8521	19.50009
#1	.0001352	.0002454	124.5577	-.000620	.0014380	.0046773	.0096790
#2	.0001446	.0002039	125.9970	-.000152	.0011400	.0032999	.0123601
#3	.0001319	.0002057	125.3735	-.001316	.0006756	-.001369	.0144019

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8355517**	**6.421307**	**.0038410**	**-.000254**	**304.9486**	**.0006154**	**.0932079**
Stddev	.0049003	.061254	.0001382	.000360	.7996	.0009772	.0012269
%RSD	.5864737	.9539151	3.597965	141.7735	.2622027	158.7906	1.316327
#1	.8299818	6.357796	.0036825	-.000308	305.6061	-.000485	.0917916
#2	.8391997	6.426103	.0039367	.000130	304.0585	.001383	.0938871
#3	.8374737	6.480022	.0039036	-.000584	305.1812	.000948	.0939451

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.442577**	**-.000345**	**.0534189**	**.0034510**	**1.784056**	**1.158560**	**-.002103**
Stddev	.031839	.002551	.0002529	.0001073	.007683	.010847	.000461
%RSD	2.207120	738.4832	.4733699	3.109942	.4306465	.9362227	21.93099
#1	1.454723	.001339	.0531834	.0033508	1.785499	1.147332	-.002375
#2	1.406452	-.003280	.0536862	.0035643	1.790915	1.159369	-.002365
#3	1.466555	.000904	.0533872	.0034380	1.775754	1.168980	-.001571

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: Q1164-02LX5 Acquired: 1/28/2025 21:02:57 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME2947L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.002804	.0063017	.3153138
Stddev	.000225	.0022182	.0017648
%RSD	8.017739	35.20017	.5597079
#1	-.003054	.0047867	.3134394
#2	-.002740	.0052706	.3169435
#3	-.002619	.0088478	.3155585

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3311.605	70714.70	11115.44	2308.809	3777.856
Stddev	20.099	319.82	26.98	11.452	17.580
%RSD	.6069178	.4522692	.2427432	.4960226	.4653444
#1	3292.737	71014.96	11086.57	2321.968	3763.329
#2	3309.334	70378.38	11140.02	2303.360	3772.840
#3	3332.742	70750.76	11119.72	2301.098	3797.398

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: CCV026 Acquired: 1/28/2025 21:11:22 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV026 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.023703**	**4.934285**	**25.09389**	**5.014920**	**5.034738**	**394.2481**	**10.16543**
Stddev	.019684	.002738	.10439	.023929	.008752	2.7346	.14722
%RSD	.3918185	.0554979	.4160162	.4771552	.1738243	.6936117	1.448288
#1	5.016457	4.936674	25.09557	4.996901	5.024777	396.1329	10.32069
#2	5.008669	4.931296	24.98866	5.005790	5.038240	395.4996	10.14777
#3	5.045983	4.934884	25.19743	5.042070	5.041196	391.1117	10.02784

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5169747**	**2.569112**	**404.8855**	**16.02950**	**2.539182**	**15.37745**	**403.1055**
Stddev	.0006204	.009893	1.3169	.04711	.007886	.06610	.7670
%RSD	.1200033	.3850867	.3252484	.2938746	.3105737	.4298716	.1902663
#1	.5162894	2.573345	405.3657	16.07462	2.539468	15.33381	403.8802
#2	.5171367	2.557807	405.8949	16.03325	2.531157	15.34504	403.0896
#3	.5174980	2.576186	403.3959	15.98063	2.546921	15.45350	402.3465

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**15.51538**	**404.6799**	**2.538579**	**1.295772**	**401.9557**	**2.541147**	**15.35078**
Stddev	.00863	.6635	.007363	.000533	1.6626	.012825	.03323
%RSD	.0556214	.1639625	.2900485	.0410973	.4136241	.5046914	.2164903
#1	15.50635	405.0629	2.539739	1.295228	400.6766	2.526852	15.33852
#2	15.51624	405.0630	2.530705	1.295794	401.3553	2.544946	15.32543
#3	15.52355	403.9137	2.545294	1.296293	403.8350	2.551643	15.38840

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**154.1346**	**5.152559**	**5.372881**	**5.001973**	**5.098785**	**5.086739**	**5.089266**
Stddev	.4466	.016513	.007289	.008320	.017288	.025022	.018722
%RSD	.2897782	.3204826	.1356587	.1663250	.3390665	.4919155	.3678685
#1	154.4283	5.141081	5.366218	4.996750	5.101179	5.081286	5.089874
#2	154.3550	5.145112	5.371760	4.997601	5.080425	5.064892	5.070248
#3	153.6206	5.171484	5.380666	5.011567	5.114752	5.114038	5.107677

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: CCV026 Acquired: 1/28/2025 21:11:22 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV026 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.106333**	**5.091577**	**5.129190**
Stddev	.019890	.008277	.031465
%RSD	.3895240	.1625531	.6134407
#1	5.104513	5.096143	5.098922
#2	5.087416	5.096565	5.161728
#3	5.127071	5.082023	5.126918

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2962.050**	**64226.63**	**10435.84**	**2065.735**	**3235.015**
Stddev	4.183	109.31	25.14	3.077	5.293
%RSD	.1412139	.1702017	.2409014	.1489674	.1636201
#1	2963.793	64149.98	10451.11	2062.334	3235.976
#2	2965.080	64178.10	10449.59	2068.327	3239.761
#3	2957.278	64351.81	10406.82	2066.543	3229.306

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: CCB026 Acquired: 1/28/2025 21:15:41 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB026 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004193**	**.0012068**	**.0003768**	**-.000263**	**.0014297**	**-.000965**	**.0024448**
Stddev	.0019895	.0013685	.0004773	.003273	.0006000	.004195	.0003251
%RSD	474.4641	113.3993	126.6658	1246.397	41.96540	434.7720	13.29877
#1	-.001559	-.000004	.0001907	.002698	.0009436	.003863	.0027537
#2	.000397	.000933	.0000206	.000291	.0021002	-.003031	.0021056
#3	.002420	.002692	.0009192	-.003777	.0012453	-.003726	.0024750

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000208**	**.0000251**	**-.000773**	**.0004269**	**-.000080**	**.0005824**	**.0102342**
Stddev	.0000704	.0000304	.008492	.0002678	.000146	.0029438	.0008317
%RSD	339.3935	121.0209	1098.979	62.73970	183.1964	505.4508	8.126859
#1	-.000060	.0000595	-.005224	.0001177	-.000240	.0001366	.0102531
#2	.000072	.0000017	.009019	.0005890	.000047	.0037236	.0093932
#3	.000050	.0000142	-.006113	.0005738	-.000046	-.002113	.0110563

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003332**	**-.002756**	**-.000055**	**.0001068**	**-.163498**	**-.000430**	**-.001476**
Stddev	.0003167	.013613	.000234	.0002562	.044618	.000273	.000775
%RSD	95.04921	493.9991	429.3990	239.9098	27.28946	63.66042	52.51427
#1	.0000455	-.017957	.000212	-.000187	-.115472	-.000617	-.002041
#2	.0002816	.001380	-.000146	.000282	-.171360	-.000116	-.001794
#3	.0006725	.008310	-.000229	.000226	-.203662	-.000556	-.000592

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5122053**	**-.001845**	**.0063849**	**.0005480**	**.0038144**	**.0035680**	**.0005891**
Stddev	.0458323	.002497	.0009083	.0000577	.0034153	.0051286	.0003919
%RSD	8.948028	135.3049	14.22581	10.53744	89.53833	143.7417	66.52026
#1	.4613688	-.004728	.0073935	.0005734	.0005632	.0050979	.0009497
#2	.5248825	-.000404	.0056314	.0004819	.0073730	-.002152	.0001721
#3	.5503646	-.000403	.0061298	.0005886	.0035069	.007758	.0006455

Reviewed By:Jaswal
On:1/30/2025 7:27:43 AM
Inst Id :P4

Sample Name: CCB026 Acquired: 1/28/2025 21:15:41 Type: Unk
Method: EPA SFAM01.0(v58) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB026 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0011509	.0022069	.0000761
Stddev	.0008144	.0005904	.0000474
%RSD	70.76521	26.75294	62.26168
#1	.0020762	.0015295	.0000392
#2	.0008334	.0024791	.0001295
#3	.0005430	.0026121	.0000596

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3678.363	78247.57	11031.94	2597.717	4602.640
Stddev	5.617	277.49	83.50	8.657	6.791
%RSD	.1527025	.3546280	.7569286	.3332414	.1475466
#1	3678.621	78133.91	10938.10	2591.659	4595.119
#2	3672.622	78044.95	11098.06	2593.861	4604.476
#3	3683.847	78563.84	11059.66	2607.632	4608.324

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

Prep Standard - Chemical Standard Summary

Order ID : Q1163

Test : Metals CLP12

Prepbatch ID : PB166229,

Sequence ID/Qc Batch ID: LB134438,LB134460,

Standard ID :
MP83500,MP84041,MP84063,MP84070,MP84204,MP84206,MP84207,MP84208,MP84209,MP84210,MP84211,MP84212,MP84213,MP84214,MP84215,MP84216,MP84218,MP84219,

Chemical ID :
M5130,M5218,M5223,M5289,M5295,M5298,M5393,M5429,M5466,M5472,M5476,M5496,M5497,M5513,M5519,M5565,M5658,M5697,M5798,M5799,M5800,M5801,M5802,M5806,M5815,M5817,M5819,M5875,M5942,M5959,M5961,M5962,M5976,M5977,M5978,M5985,M5990,M6021,M6023,M6025,M6028,M6030,M6032,M6077,M6121,M6125,M6126,M6127,M6128,M6144,W3112,

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP83500	12/06/2024	01/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 125.00000ml of M6121 + 2350.00000ml of W3112 + 25.00000ml of M6126 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
169	1:1HNO3	MP84041	01/14/2025	07/14/2025	Eman Mughal	None	None	Sarabjit Jaswal 01/16/2025

FROM 1250.00000ml of M6126 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
994	ICPAES ISM01.2 S1 (CONC.)	MP84063	01/14/2025	02/14/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/16/2025

FROM 0.02000ml of M5815 + 0.03000ml of M5429 + 0.10000ml of M5798 + 0.10000ml of M6028 + 0.14000ml of M5799 + 0.20000ml of M5298 + 0.20000ml of M5476 + 0.20000ml of M5658 + 0.20000ml of M5801 + 0.20000ml of M5817 + 0.20000ml of M5976 + 0.20000ml of M6025 + 0.20000ml of M6030 + 0.30000ml of M6128 + 0.40000ml of M5496 + 0.50000ml of M5697 + 0.50000ml of M6023 + 0.70000ml of M5962 + 0.80000ml of M5961 + 1.00000ml of M5800 + 1.00000ml of M6021 + 1.20000ml of M5802 + 1.20000ml of M5819 + 10.00000ml of M5497 + 10.00000ml of M5519 + 10.00000ml of M5806 + 10.00000ml of M6127 + 2.00000ml of M5942 + 4.00000ml of M6032 + 34.24000ml of MP83500 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
921	ICPAES SPIKE SOL#6	MP84070	01/14/2025	02/14/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/16/2025

FROM 2.50000ml of M5962 + 50.00000ml of M5565 + 50.00000ml of M5990 + 147.50000ml of MP83500 = Final Quantity: 250.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP84204	01/24/2025	02/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 125.00000ml of M6121 + 2350.00000ml of W3112 + 25.00000ml of M6126 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2480	ICP AES STD 6 ISM01.3	MP84206	01/24/2025	02/04/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 4.00000ml of M5289 + 4.00000ml of M5298 + 4.00000ml of M5497 + 4.00000ml of M6127 + 4.00000ml of M6144 + 30.00000ml of MP84204 = Final Quantity: 50.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1004	ICPAES ISM01.2 (S5)	MP84207	01/24/2025	02/04/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 0.25000ml of M5798 + 0.50000ml of M5429 + 0.50000ml of M5476 + 0.50000ml of M5815 + 0.50000ml of M5817 + 12.50000ml of M5519 + 12.50000ml of M5819 + 12.50000ml of M6128 + 12.50000ml of M6144 + 13.75000ml of M5697 + 14.50000ml of M5298 + 14.50000ml of M5496 + 14.50000ml of M5658 + 2.00000ml of M5513 + 22.50000ml of M5497 + 22.50000ml of M6127 + 5.00000ml of M5393 + 5.00000ml of M5802 + 5.00000ml of M5875 + 5.00000ml of M6077 + 303.50000ml of MP84204 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1005	ICPAES ISM01.2(S4)	MP84208	01/24/2025	02/04/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 250.00000ml of MP84204 + 250.00000ml of MP84207 = Final Quantity: 500.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1007	ICPAES ISM01.2(S3)	MP84209	01/24/2025	02/04/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 25.00000ml of MP84207 + 75.00000ml of MP84204 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1008	ICPAES ISM01.2(S2)	MP84210	01/24/2025	02/04/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 12.50000ml of MP84207 + 87.50000ml of MP84204 = Final Quantity: 100.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
994	ICPAES ISM01.2 S1 (CONC.)	MP84211	01/24/2025	02/04/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 0.02000ml of M5815 + 0.03000ml of M5429 + 0.10000ml of M5798 + 0.10000ml of M6028 + 0.14000ml of M5799 + 0.20000ml of M5298 + 0.20000ml of M5476 + 0.20000ml of M5658 + 0.20000ml of M5801 + 0.20000ml of M5817 + 0.20000ml of M5977 + 0.20000ml of M6025 + 0.20000ml of M6030 + 0.30000ml of M6128 + 0.40000ml of M5496 + 0.50000ml of M5697 + 0.50000ml of M6023 + 0.70000ml of M5962 + 0.80000ml of M5961 + 1.00000ml of M5800 + 1.00000ml of M6021 + 1.20000ml of M5802 + 1.20000ml of M5819 + 10.00000ml of M5497 + 10.00000ml of M5519 + 10.00000ml of M6127 + 10.00000ml of M6144 + 2.00000ml of M5978 + 4.00000ml of M6032 + 34.24000ml of MP84204 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1003	ICPAES ISM01.2 S1	MP84212	01/24/2025	02/04/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 0.50000ml of MP84211 + 99.50000ml of MP84204 = Final Quantity: 100.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
912	ICP AES ICV SOLN	MP84213	01/24/2025	02/05/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 0.02500ml of M5429 + 0.02500ml of M5815 + 0.02500ml of M5817 + 0.10000ml of M5466 + 0.25000ml of M5218 + 0.25000ml of M5472 + 10.00000ml of M5295 + 89.77500ml of MP84204 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP84214	01/24/2025	01/31/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 25.00000ml of M5130 + 225.00000ml of MP84204 = Final Quantity: 250.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
905	ICP AES ICSAB SOLN	MP84215	01/24/2025	01/31/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 25.00000ml of M5130 + 25.00000ml of M5223 + 200.00000ml of MP84204 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1119	ICPAES ISM01.2(CCV)	MP84216	01/24/2025	02/04/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 0.75000ml of M5497 + 0.75000ml of M6127 + 1.22500ml of M5496 + 1.25000ml of M5298 + 1.25000ml of M6144 + 19.77500ml of MP84204 + 25.00000ml of MP84207 = Final Quantity: 50.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP84218	01/24/2025	02/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 1.00000ml of M5959 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6126 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
903	ICP AES RINSE SOLN	MP84219	01/24/2025	02/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 200.00000ml of M6126 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART A / ICSA (ICP) STOCK SOLN	ICSA-1211	01/31/2025	05/20/2024 / jaswal	04/20/2021 / bin	M5130

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CHEM-QC-4 / CHEM-QC-4, Second Source, 1000 ug/ml, B, Mo, Si, Sn, Ti	S2-MEB711674	11/02/2026	07/01/2022 / bin	09/10/2021 / bin	M5218

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART B / ICSAB (ICP) STOCK SOLN	ICSB-0710	01/31/2025	05/20/2024 / jaswal	04/20/2021 / bin	M5223

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	02/05/2025	08/07/2024 / jaswal	04/20/2021 / bin	M5295

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	020422	02/04/2025	05/02/2023 / jaswal	06/15/2022 / jaswal	M5298

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-3 / CLP CAL SOLUTION #3, 125mL	T2-MEB714159	01/13/2027	10/12/2022 / bin	09/19/2022 / bin	M5393

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57103 / Li, 10000 PPM, 125 ml	070622	07/06/2025	01/30/2023 / bin	01/26/2023 / bin	M5429

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57058 / Cerium, 1000PPM, 100ML	061322	06/13/2025	03/06/2023 / bin	03/01/2023 / bin	M5466

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	082922	08/29/2025	01/14/2025 / Jaswal	03/16/2023 / jaswal	M5472

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	08/29/2025	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.	58113 / Al, 10000 PPM, 500 ml	011623	01/16/2026	08/15/2023 / jaswal	03/17/2023 / bin	M5496

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

CHEMICAL RECEIPT LOG BOOK

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	03/18/2023 / bin	03/17/2023 / bin	M5497

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.	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 #
Inorganic Ventures	CLPP-SPK-1 / SOIL/WATER SPIKE SOLN 1, 125mL	T2-MEB721963	07/27/2027	05/30/2023 / jaswal	05/26/2023 / jaswal	M5565

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	102523	10/25/2026	04/03/2024 / jaswal	10/27/2023 / jaswal	M5697

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

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

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57115 / P, 10000 PPM, 125 ml	041723	04/17/2026	05/21/2024 / Jaswal	02/09/2024 / jaswal	M5815

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57116 / S, 10000 PPM, 125 ml	071123	07/11/2026	03/01/2024 / jaswal	02/09/2024 / jaswal	M5817

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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 #
Inorganic Ventures	CLPP-CAL-1 / CLP CAL SOLUTION #1, 125mL	T2-MEB714417	01/27/2027	04/19/2024 / jaswal	02/22/2024 / jaswal	M5875

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	06/18/2024 / Jaswal	02/22/2024 / Jaswal	M5942

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGY10-1 / YTTRIUM 125mL 10,000ug/mL	V2-Y740548	02/20/2029	07/01/2024 / Jaswal	06/14/2024 / Jaswal	M5959

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

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	CGMO1-1 / MOLYBDENUM 125mL 1000ug/mL	T2-MO720876	07/17/2027	01/16/2025 / JANVI	02/22/2024 / Jaswal	M5977

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 #
Inorganic Ventures	CGIN10-5 / INDIUM 1 x 500 ml	U2-IN729349	02/21/2028	10/08/2024 / Jaswal	06/14/2024 / Jaswal	M5985

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-SPK-5 / CLP Spike Standard 5	V2-MEB742037	03/12/2029	10/04/2024 / Jaswal	02/22/2024 / Jaswal	M5990

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 / Tl, 1000 PPM, 125 ml	0624724	06/27/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6023

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57082 / Pb, 1000 PPM, 125 ml	061224	11/09/2026	08/05/2024 / Jaswal	08/05/2024 / Jaswal	M6025

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	08/05/2024 / 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

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	010924	01/09/2027	01/14/2025 / Jaswal	08/05/2024 / Jaswal	M6032

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	V2-MEB746762	09/06/2029	01/23/2025 / kareem	09/19/2024 / kareem	M6077

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)	0000275677	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6121

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	1403 / Hydrogen Peroxide, 30% 1 gal	820803	05/25/2025	11/26/2024 / Eman	11/22/2024 / Eman	M6125

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	06/03/2025	12/03/2024 / Janvi	11/12/2024 / Janvi	M6126

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	112124	11/21/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6127

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	101124	10/11/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6128

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	072424	07/24/2027	01/23/2025 / kareem	01/13/2025 / Jaswal	M6144

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

R: 02/22/24 M5986 M5987, M5988, M5989-M5990

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).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-SPK-5
Lot Number:	V2-MEB742037
Matrix:	5% (v/v) HNO_3
Value / Analyte(s):	100 µg/mL ea: Antimony,
	50 µg/mL ea: Selenium, Cadmium, Thallium,
	40 µg/mL ea: Arsenic,
	20 µg/mL ea: Lead

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	49.99 ± 0.22 µg/mL	Lead, Pb	19.99 ± 0.09 µg/mL
Selenium, Se	50.00 ± 0.23 µg/mL	Thallium, Tl	50.00 ± 0.22 µg/mL

Density: 1.025 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, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

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

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6032

R 8/5/24

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

331

CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Lot #**		
Lot Number:	**010924**	**Solvent:**	24002546	Nitric Acid	
Description:	**Barium (Ba)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	010927				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

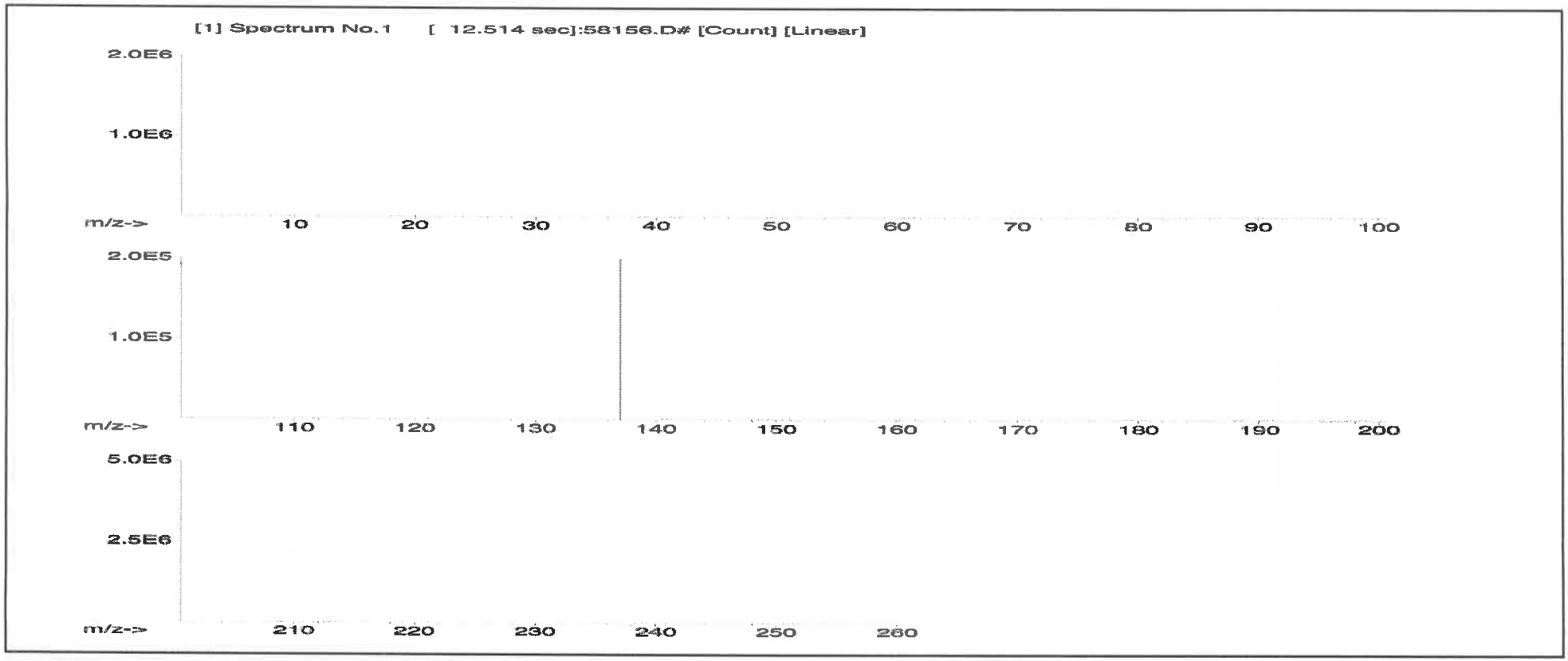
Giovanni Esposito

Formulated By:	Giovanni Esposito	010924

Pedro Rentas

Reviewed By:	Pedro L. Rentas	010924

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Barium nitrate (Ba)	IN023	BAD022019A1	1000	99.999	0.10	52.3	3.82417	3.82441	**1000.1**	**2.0**	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



332

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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6028

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

R 8/15/24

333

CERTIFIED WEIGHT REPORT:

Part Number:	**57048**		**Lot #**		
Lot Number:	**070124**	**Solvent:**	24002546	Nitric Acid	
Description:	**Cadmium (Cd)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	070127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

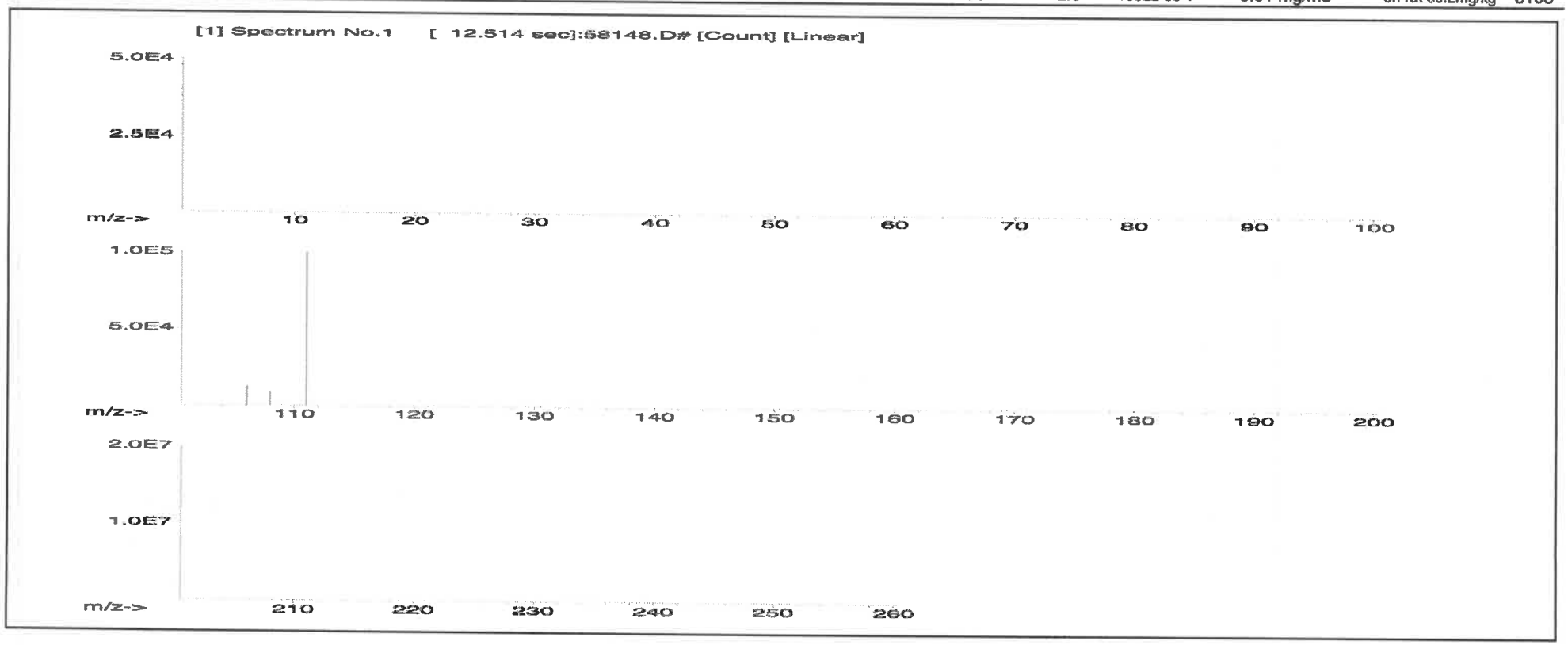
Aleah O'Brady

Formulated By:	Aleah O'Brady	070124

Pedro Rentas

Reviewed By:	Pedro L. Rentas	070124

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	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



334

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

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

Al	<0.02	Cd	T	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	<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:

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 certifed (+/-) 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).

INORGANIC VENTURES™
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).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-1
Lot Number:	T2-MEB714417
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 2 000 µg/mL ea: Aluminum, Barium, 1 000 µg/mL ea: Iron, 500 µg/mL ea: Nickel, Vanadium, Zinc, Cobalt, Manganese, 250 µg/mL ea: Silver, Copper, 200 µg/mL ea: Chromium, 50 µg/mL ea: Beryllium

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**	**Calcium, Ca**	**5 000 ± 22 µg/mL**
Chromium, Cr	**200.0 ± 1.0 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**
Magnesium, Mg	**5 000 ± 20 µg/mL**	**Manganese, Mn**	**500.0 ± 2.0 µg/mL**
Nickel, Ni	**500.0 ± 2.2 µg/mL**	**Potassium, K**	**5 000 ± 19 µg/mL**
Silver, Ag	**250.0 ± 1.1 µg/mL**	**Sodium, Na**	**5 000 ± 18 µg/mL**
Vanadium, V	**499.7 ± 2.2 µg/mL**	**Zinc, Zn**	**500.0 ± 2.2 µg/mL**

Density: 1.118 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
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, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

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

January 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

- **January 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

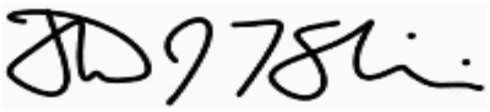
- Sealed TCT Bag Open Date: _____

- 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



INORGANIC VENTURES™
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).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-3
Lot Number:	T2-MEB714159
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 500 µg/mL ea: Cadmium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**1 000 ± 8 µg/mL**	**Cadmium, Cd**	**500.0 ± 2.1 µg/mL**
Lead, Pb	**1 000 ± 5 µg/mL**	**Selenium, Se**	**1 000 ± 8 µg/mL**
Thallium, Tl	**1 000 ± 7 µg/mL**		

Density: 1.043 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 13, 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

- **January 13, 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

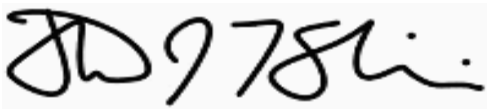
- Sealed TCT Bag Open Date: _____

- 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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 8/5/24 M6025

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

342

CERTIFIED WEIGHT REPORT:

Part Number: 57182
Lot Number: 110923
Description: Lead (Pb)

Expiration Date: 110926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

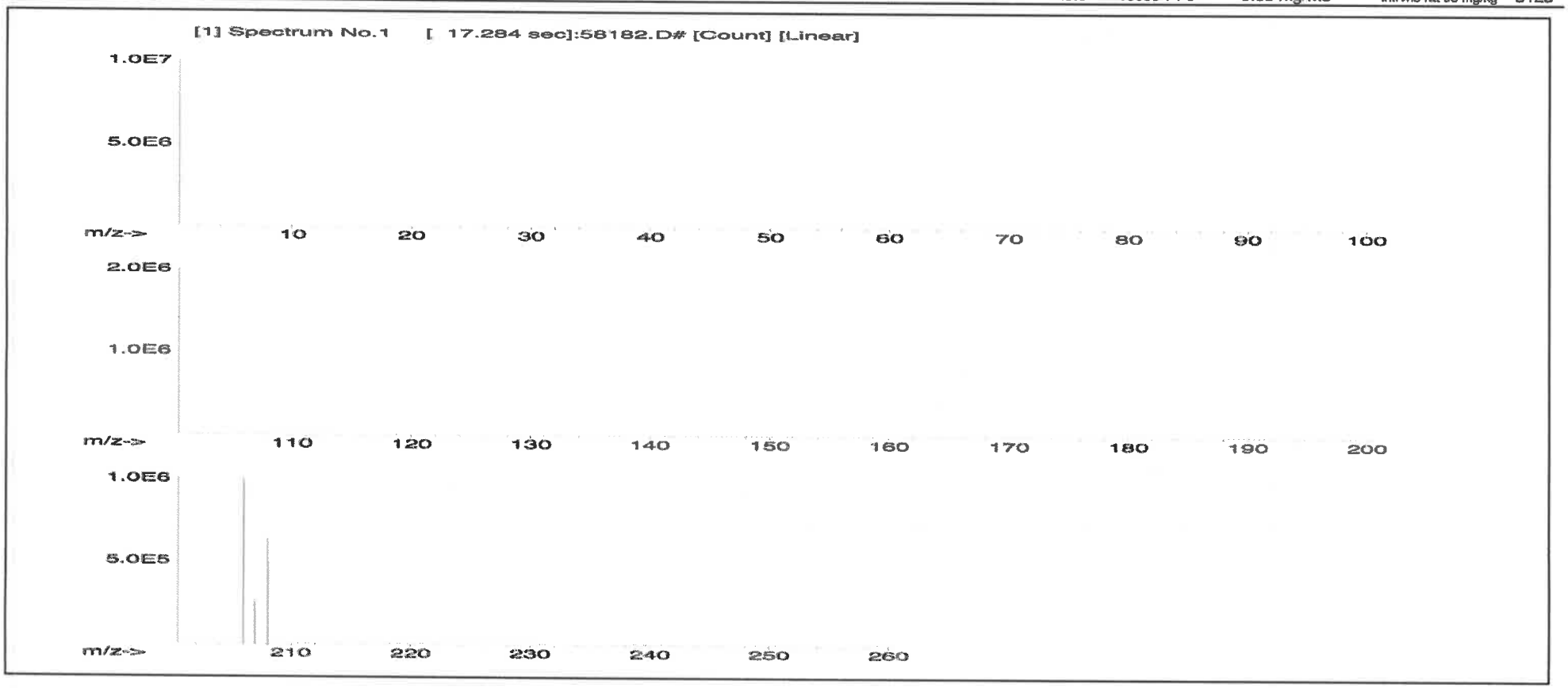
Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

		Lot #	
Solvent:	24002546		Nitric Acid
	2%	40.0 (mL)	Nitric Acid

5E-05 Balance Uncertainty

Formulated By:	Lawence Barry	110923
Reviewed By:	Pedro L. Rentas	110923

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	10000	99.999	0.10	62.5	32.0006	32.0040	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



343

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(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 certifed (+/-) 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).



QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (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 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-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. 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 ICP-AES 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-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, 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 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES 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-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

ICSA M5126 M5127 M5128 M5129 M5130

ICSB M5219 M5220 M5221 M5222 M5223

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 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.

INORGANIC VENTURES™
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).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-QC-4
Lot Number:	S2-MEB711674
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	**1 000 ± 7 µg/mL**	**Molybdenum, Mo**	**1 000 ± 5 µg/mL**
Silicon, Si	**1 000 ± 7 µg/mL**	**Tin, Sn**	**1 000 ± 5 µg/mL**
Titanium, Ti	**1 001 ± 6 µg/mL**		

Density: 1.032 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	110830
Mo	ICP Assay	3134	130418
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 02, 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

- **November 02, 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-AES (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 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-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. 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 ICP-AES 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-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, 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 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES 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-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

ICSA M5126 M5127 M5128 M5129 M5130

ICSB M5219 M5220 M5221 M5222 M5223

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 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.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

M5289 R: 07/12/22 (BH)

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT:

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

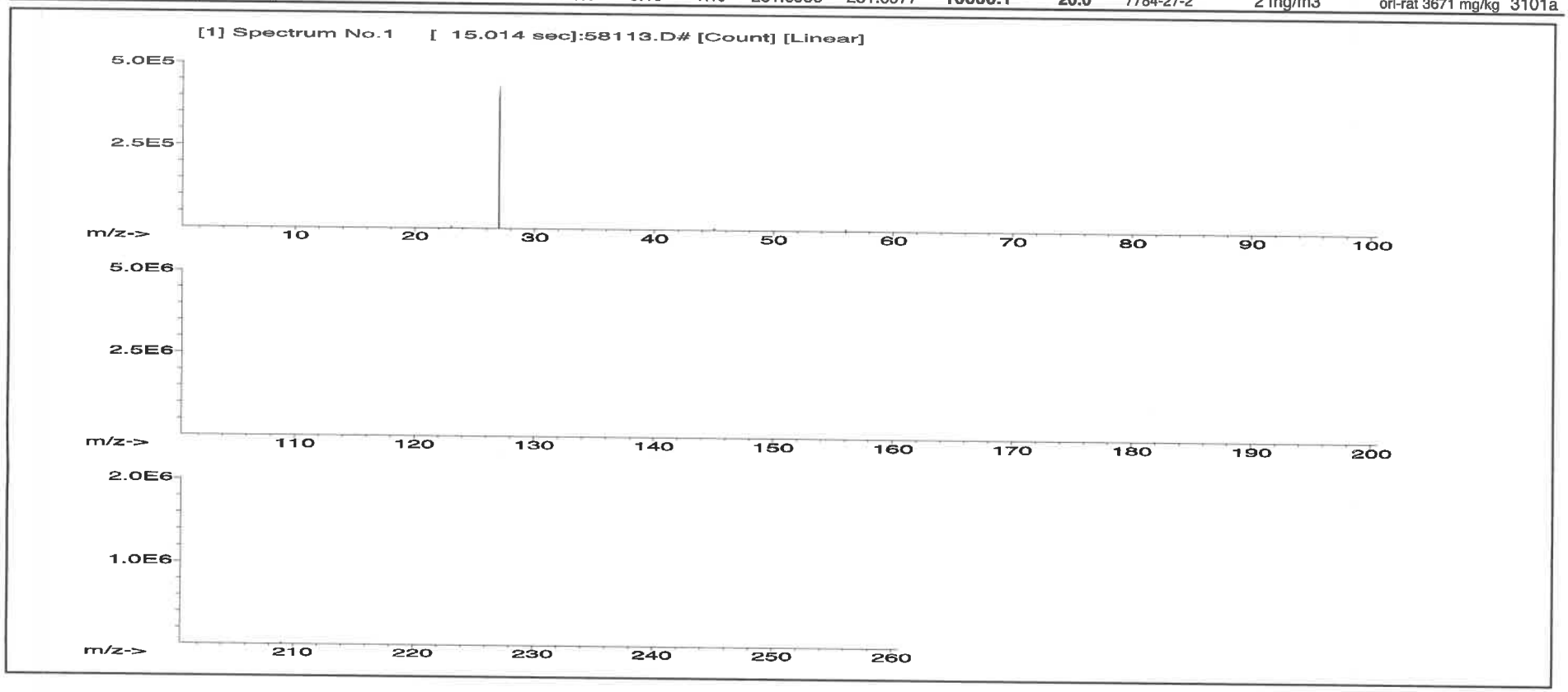
Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02 ± 0.058 Flask Uncertainty

		Lot #	
Solvent:	20370011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

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

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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	orl-rat 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	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

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 certifed (+/-) 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).

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.

Contains Metals in Dilute Acidic or Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets Available Upon Request

M5291
M5292
M5293
M5294
M5295

(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.

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

SJ 6/15/22

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 020422
Description: Iron (Fe)

M5298

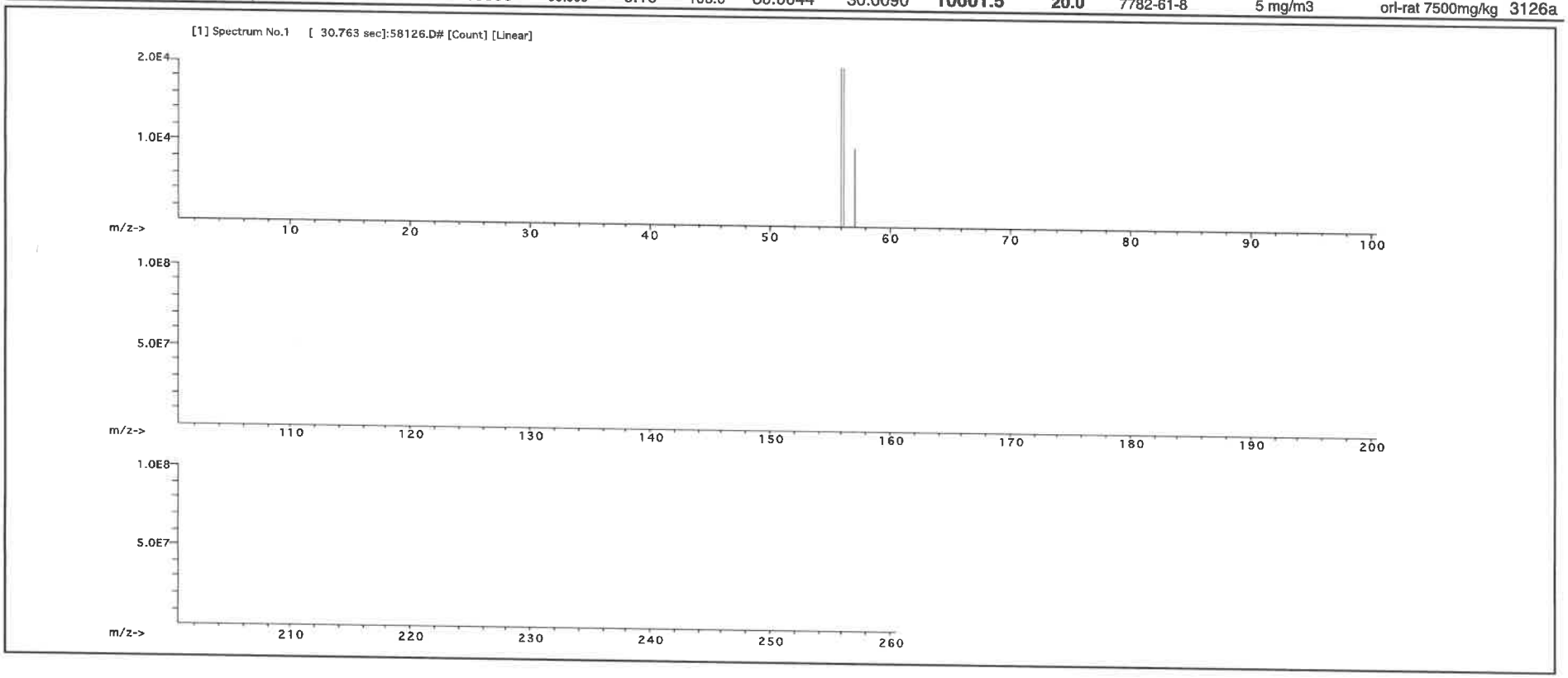
Expiration Date: 020425
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	Lot #	
Solvent:	20370011	Nitric Acid
5.0%	150.0 (mL)	Nitric Acid
5E-05	Balance Uncertainty	
0.058	Flask Uncertainty	

Giovanni Esposito
Formulated By: Giovanni Esposito 020422

Pedro Rentas
Reviewed By: Pedro L. Rentas 020422

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Iron(III) nitrate nonahydrate (Fe)	IN346	221035107	10000	99.999	0.10	100.0	30.0044	30.0090	**10001.5**	**20.0**	7782-61-8	5 mg/m3	orl-rat 7500mg/kg	3126a



355

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	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	<0.10	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.5	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	<0.02
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:



* 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 certifed (+/-) 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).

356

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5429 R1 01/26/23 BH

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

CERTIFIED WEIGHT REPORT:

Part Number: 57103
Lot Number: 070622
Description: Lithium (Li)

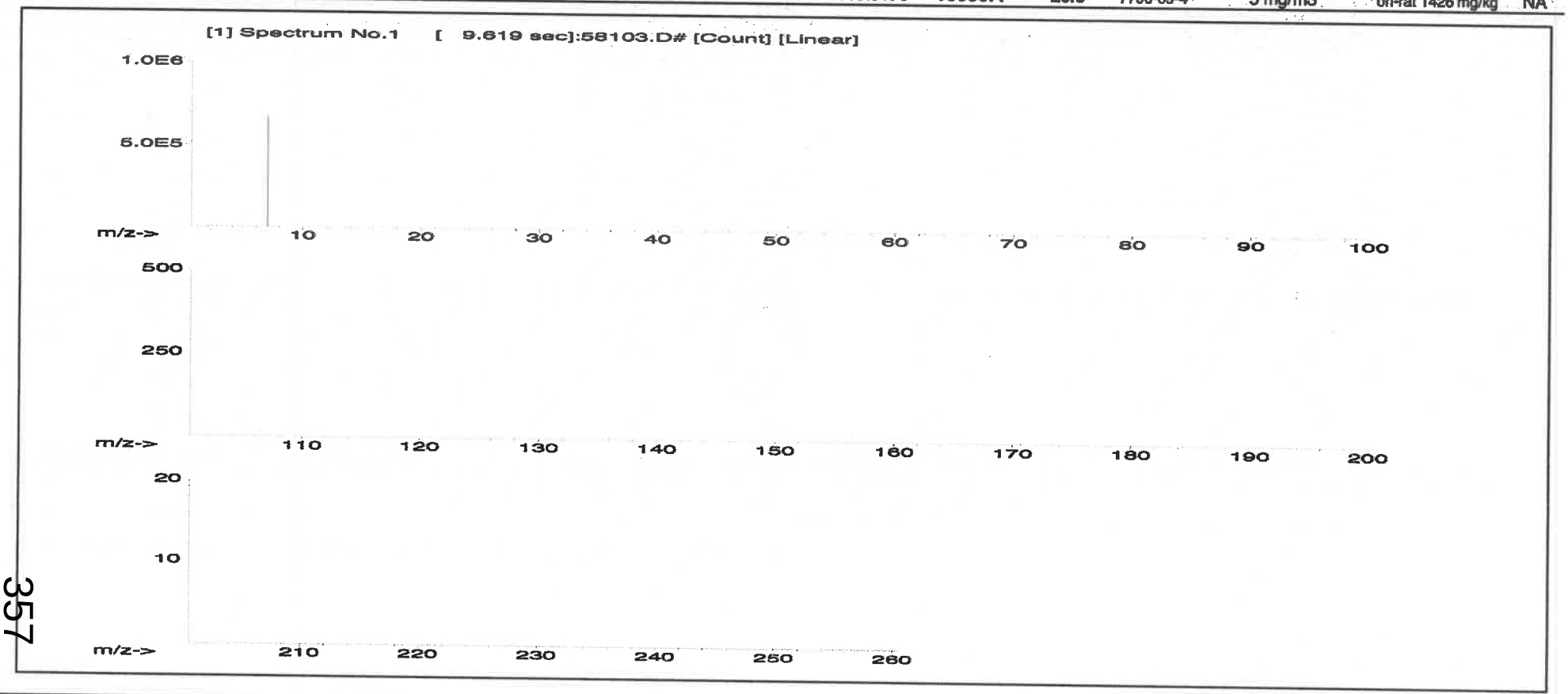
Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12

	Lot #			
Solvent:	20510011	Nitric Acid		
2%	20.0 (mL)	Nitric Acid		

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	IN019	LIZ042018A1	10000	99.999	0.10	10.0	100.0134	100.0173	**10000.4**	**20.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



357

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	T	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	<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 certifed (+/-) 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).

358

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

N 5466
R: 03/01/23 BH

Certified Reference Material CRM

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

359

CERTIFIED WEIGHT REPORT:

Part Number: 57058
Lot Number: 061322
Description: Cerium (Ce)

Expiration Date: 061325
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

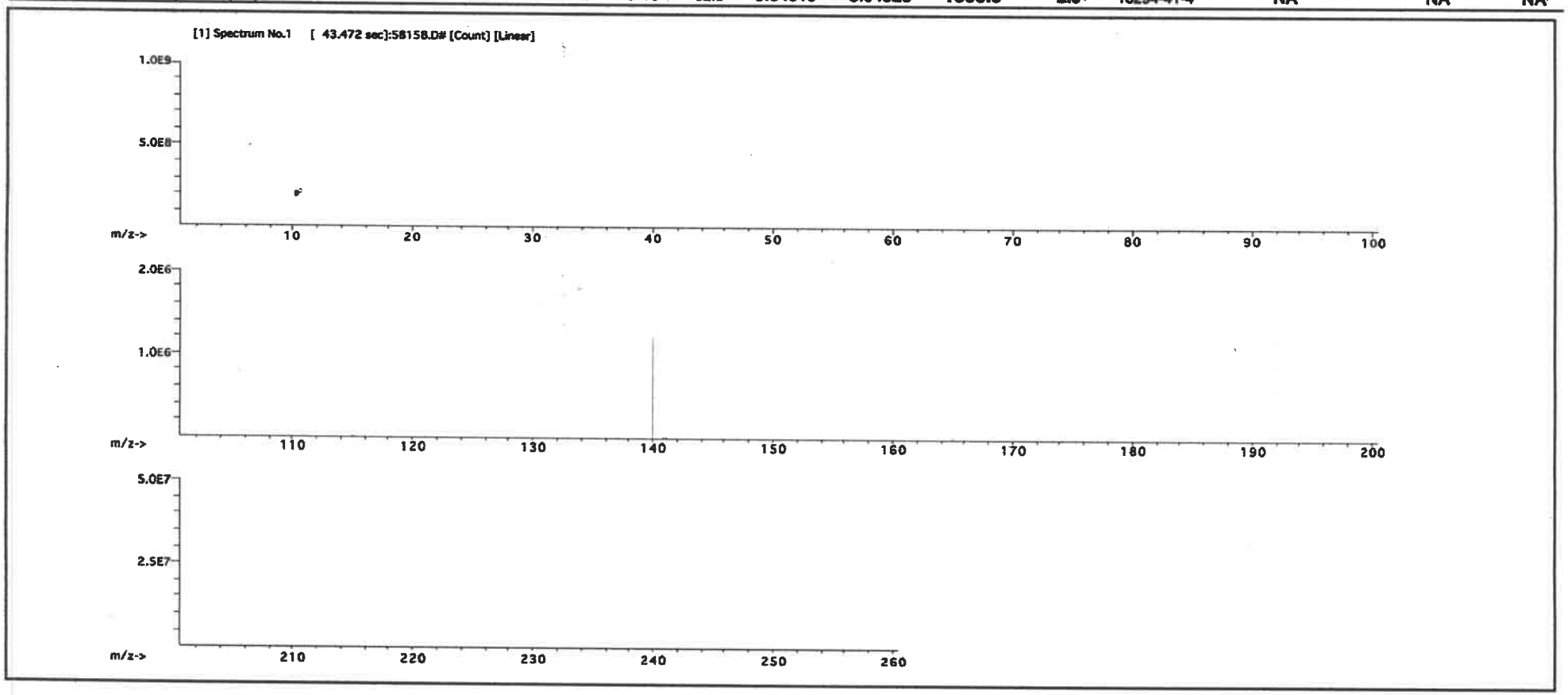
Weight shown below was diluted to (mL): 1000.12 ± 0.058 Flask Uncertainty

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawrence Barry	061322
Reviewed By:	Pedro L. Rentas	061322

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cerium nitrate hexahydrate (Ce)	IN146	Z512CEB1	1000	99.999	0.10	32.8	3.04919	3.04923	1000.0	2.0	10294-41-4	NA	NA	NA



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	T	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:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5496 R 7/20/23

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

361

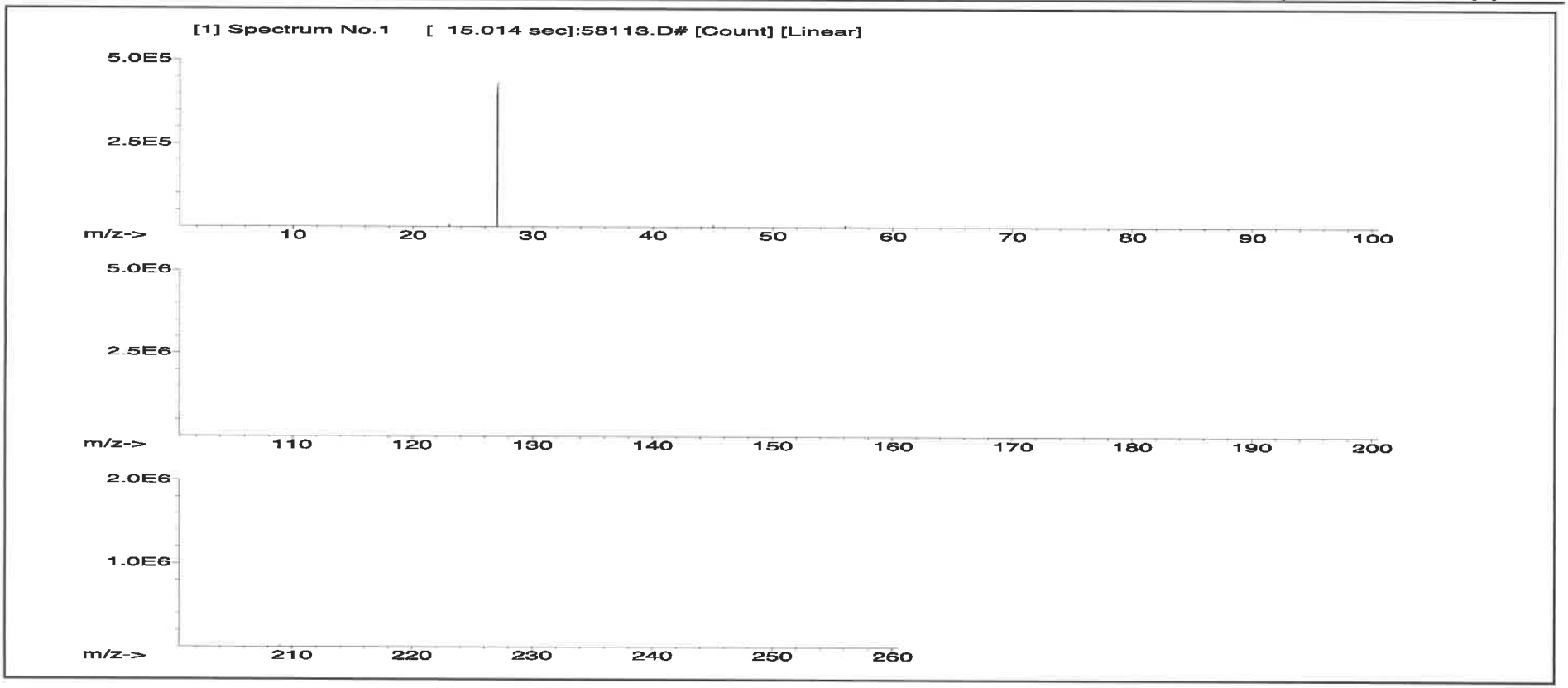
CERTIFIED WEIGHT REPORT:

Part Number:	**58113**		**Lot #**		
Lot Number:	**011623**	**Solvent:**	20510011	Nitric Acid	
Description:	**Aluminum (Al)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	011626				
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		

Giovanni Esposito

Formulated By:	Giovanni Esposito	011623
Reviewed By:	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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Aluminum nitrate nonahydrate (Al)	IN022	ALM112021A1	10000	99.999	0.10	7.30	273.9779	274.0078	**10001.1**	**20.0**	7784-27-2	2 mg/m3	orl-rat 3671 mg/kg	3101a



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5497 - M5498 R: 03/17/23 BH

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

CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

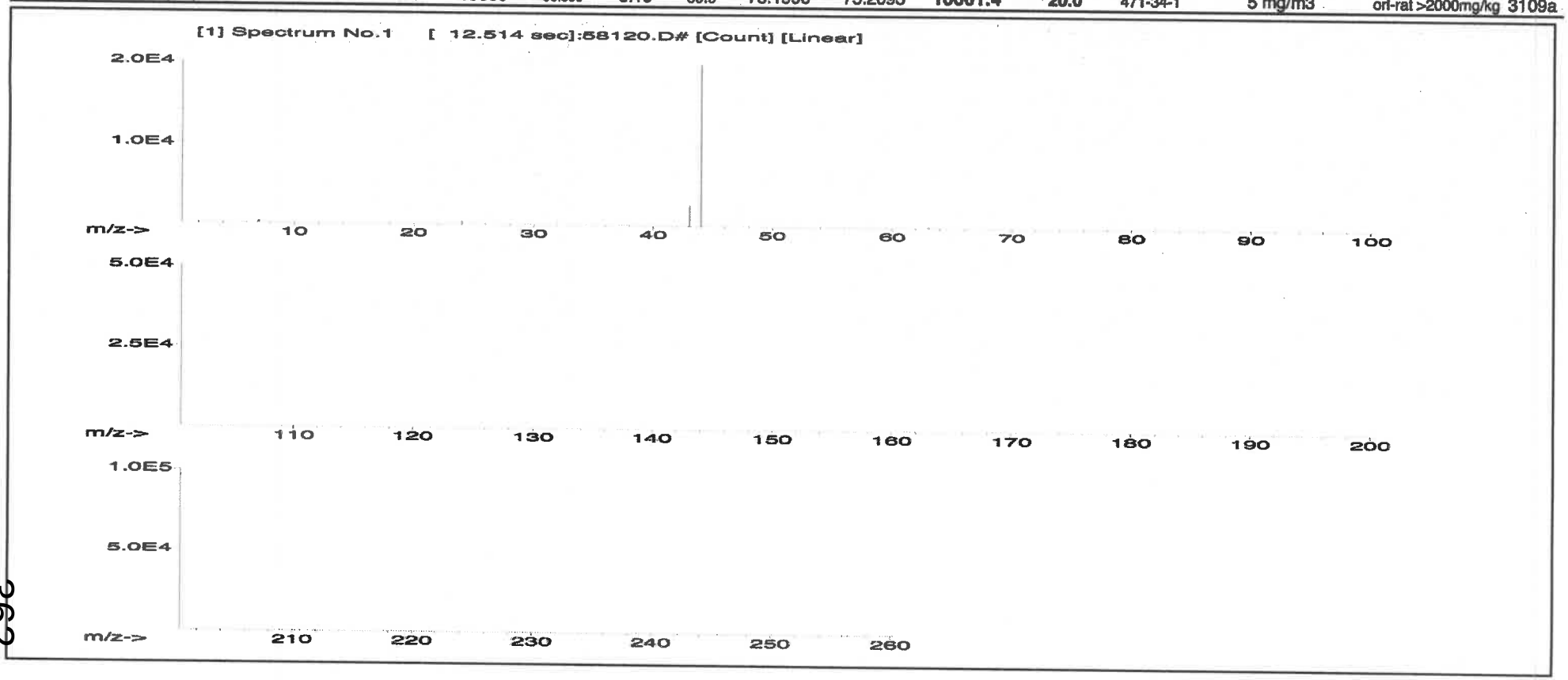
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41 ± 0.058 Flask Uncertainty

		Lot #	
Solvent:	21110221	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	

Giovanni Esposito
Formulated By: Giovanni Esposito 031523

Pedro Rentas
Reviewed By: Pedro L. Rentas 031523

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Calcium carbonate (Ca)	IN014	CAD072022A1	10000	99.999	0.10	39.9	75.1990	75.2093	**10001.4**	**20.0**	471-34-1	5 mg/m3	orl-rat >2000mg/kg	3109a



362

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	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<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:

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 certifed (+/-) 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).

3963

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

MS513 R:03/17/23

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

CERTIFIED WEIGHT REPORT:

Part Number: 57182
Lot Number: 061522
Description: Lead (Pb)

Expiration Date: 061525
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

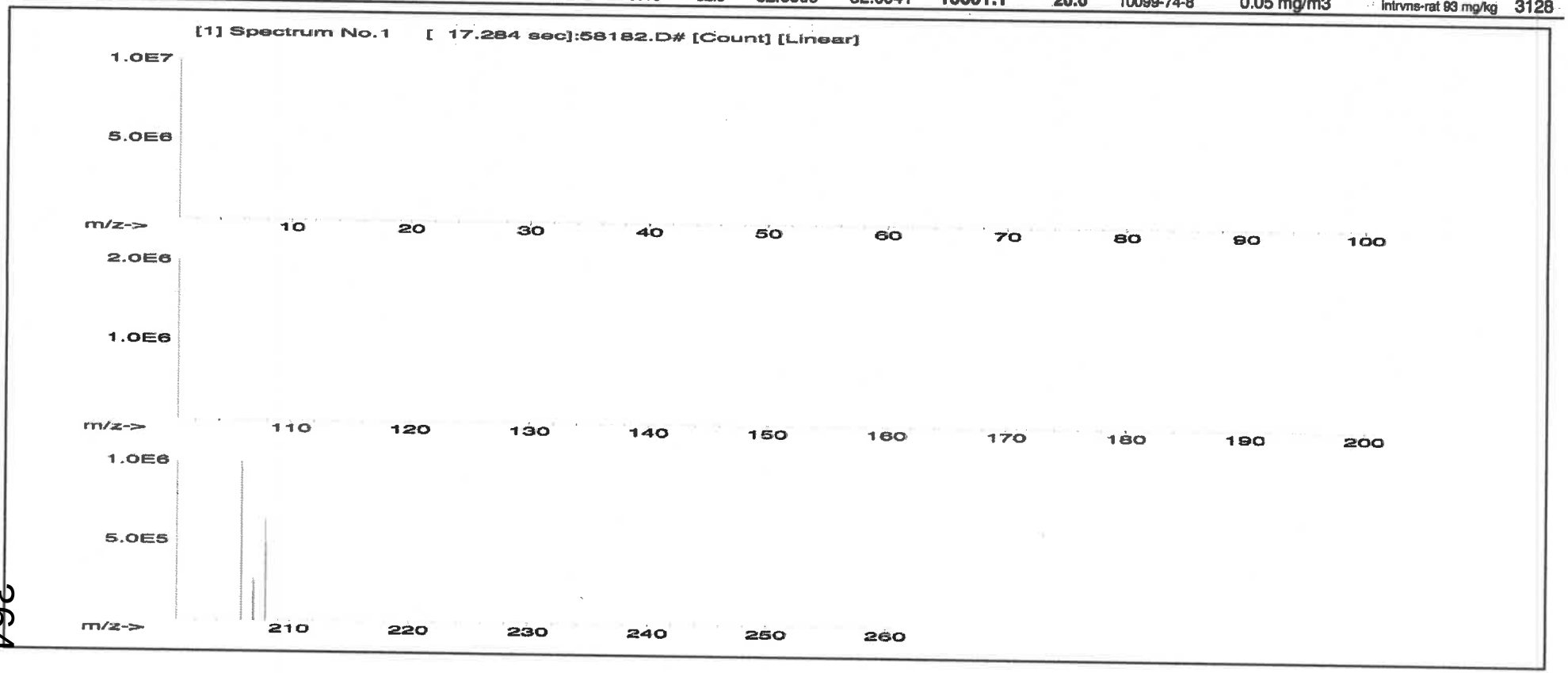
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	061522
Reviewed By:	Pedro L. Rentas	061522

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	10000	99.999	0.10	62.5	32.0006	32.0041	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



364

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(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 certifed (+/-) 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).

3957

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5519. M5520 (BH) R:03/17/23

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

366

CERTIFIED WEIGHT REPORT:

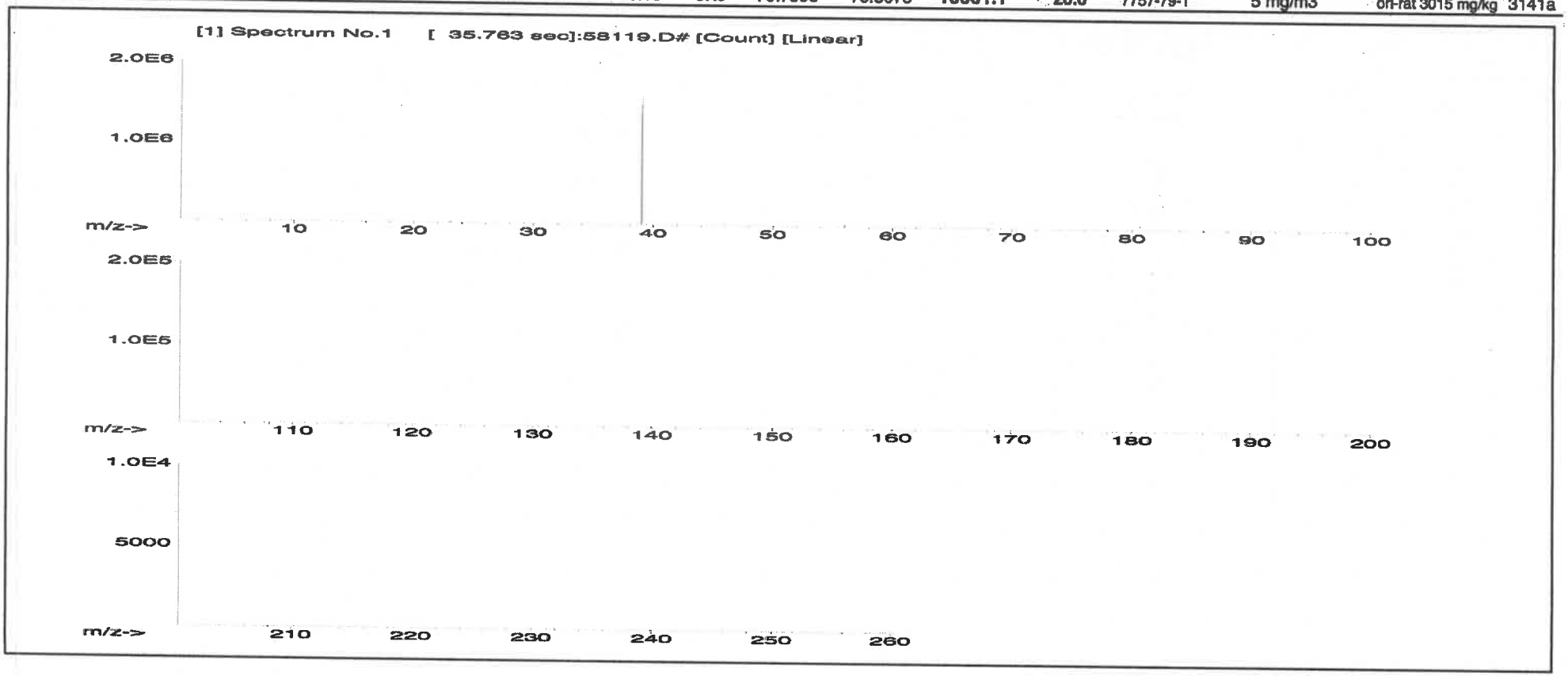
Part Number: 58119
Lot Number: 120822
Description: Potassium (K)

Expiration Date: 120825
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.4

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.06	Flask Uncertainty	

Giovanni Esposito
Formulated By: Giovanni Esposito 120822
Pedro Rentas
Reviewed By: Pedro L. Rentas 120822

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Potassium nitrate (K)	IN034	KD022021A1	10000	99.999	0.10	37.6	79.7990	79.8075	**10001.1**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3015 mg/kg	3141a



367

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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 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).

INORGANIC VENTURES™
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:	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, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method I with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

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

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5658 R! 8/25/23

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

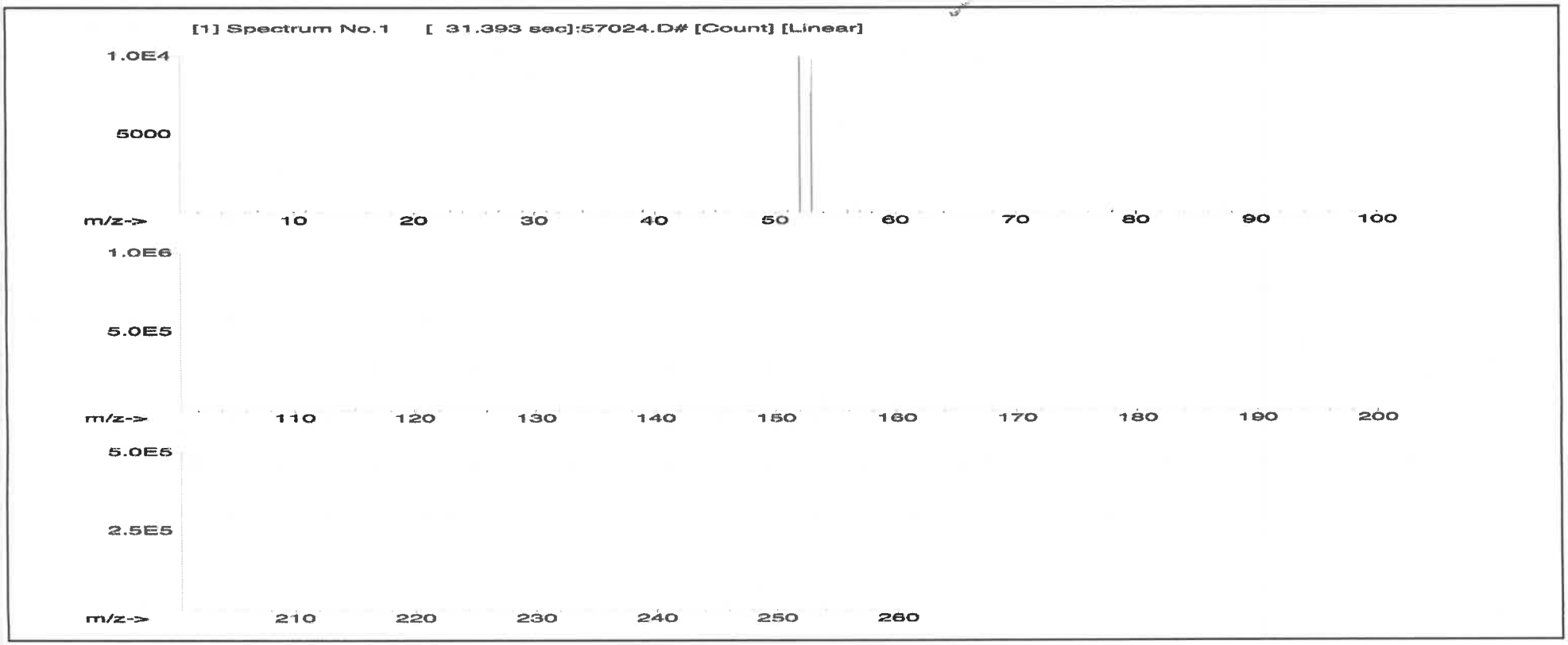
372

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

	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.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1.	Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



373

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5697 R: 10/27/23

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

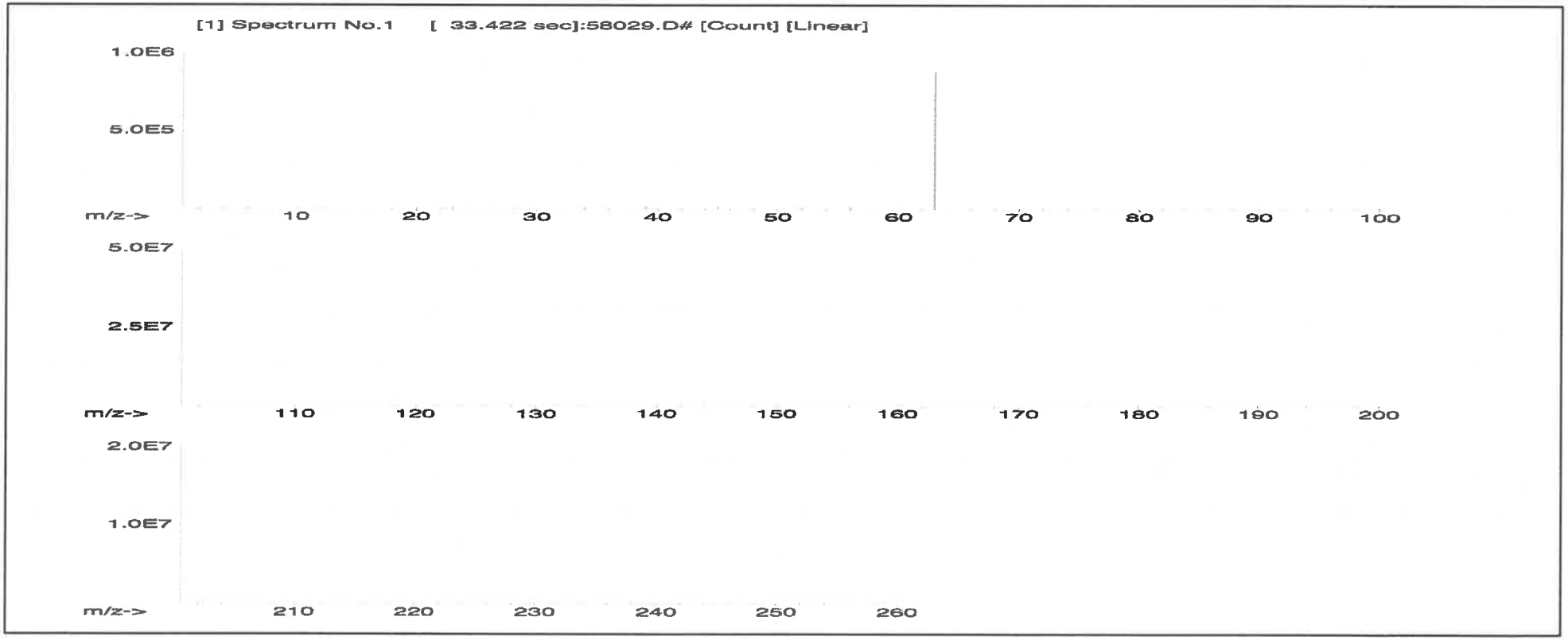
374

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**58029**	24002546	Nitric Acid		
Lot Number:	**102523**				
Description:	**Copper (Cu)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	102526				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

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.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	100223	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



375

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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5798

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

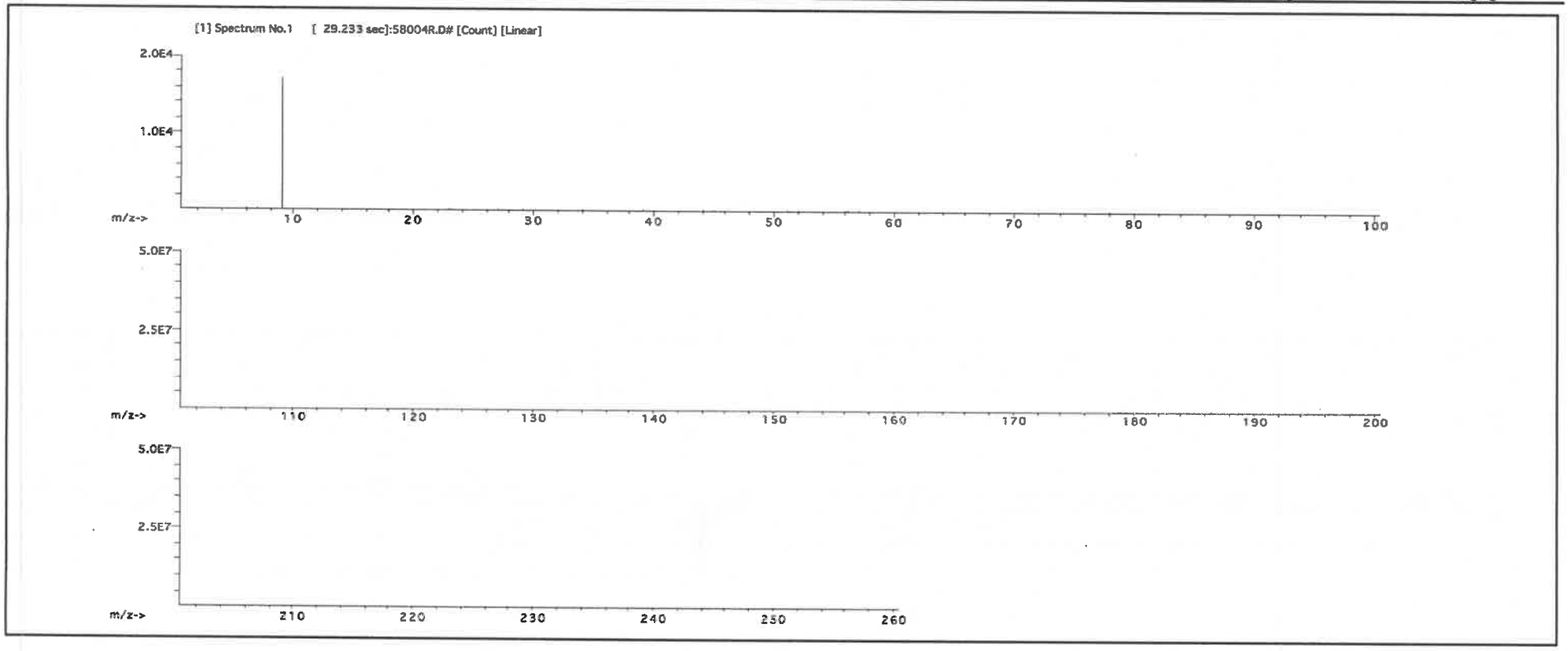
376

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57004**	24002546	Nitric Acid		
Lot Number:	**102523**				
Description:	**Beryllium (Be)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	102526				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

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.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13597-99-4	0.2ug/m3	intrvns-rat 3.16mg/kg	NA



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	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	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:

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 certifed (+/-) 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).

377

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R? 02/09/24 IM5799

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

BA

378

CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

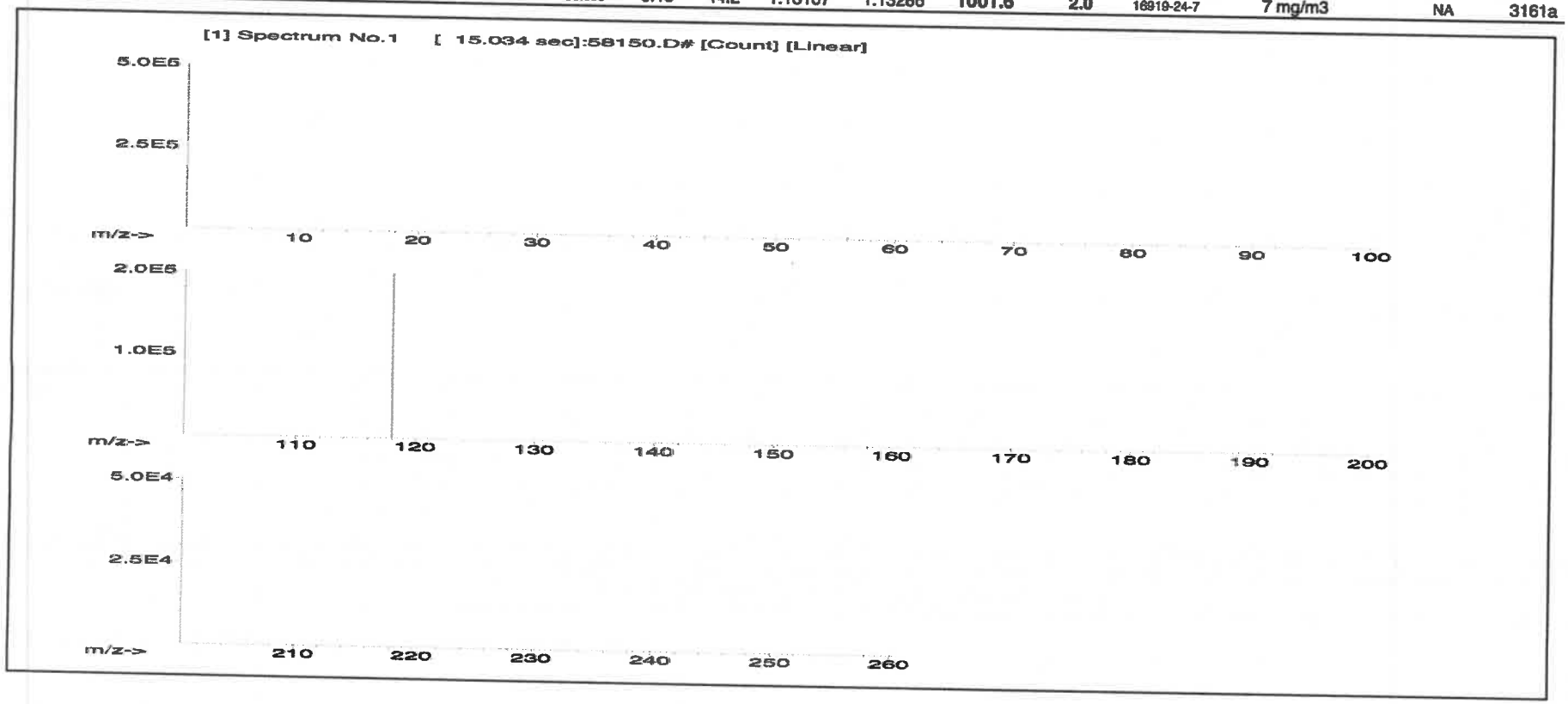
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	Lot #	
Solvents:	21110221	Nitric Acid
	22D0562008	Hydrochloric acid
2%	10.0	Nitric Acid
6%	30.0	Hydrochloric acid
	(mL)	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorostannate(IV) (Sn)	IN010	SND042023A1	1000	99.999	0.10	44.2	1.13107	1.13286	**1001.6**	**2.0**	16919-24-7	7 mg/m3	NA	3161a



379

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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 IM5800 BH

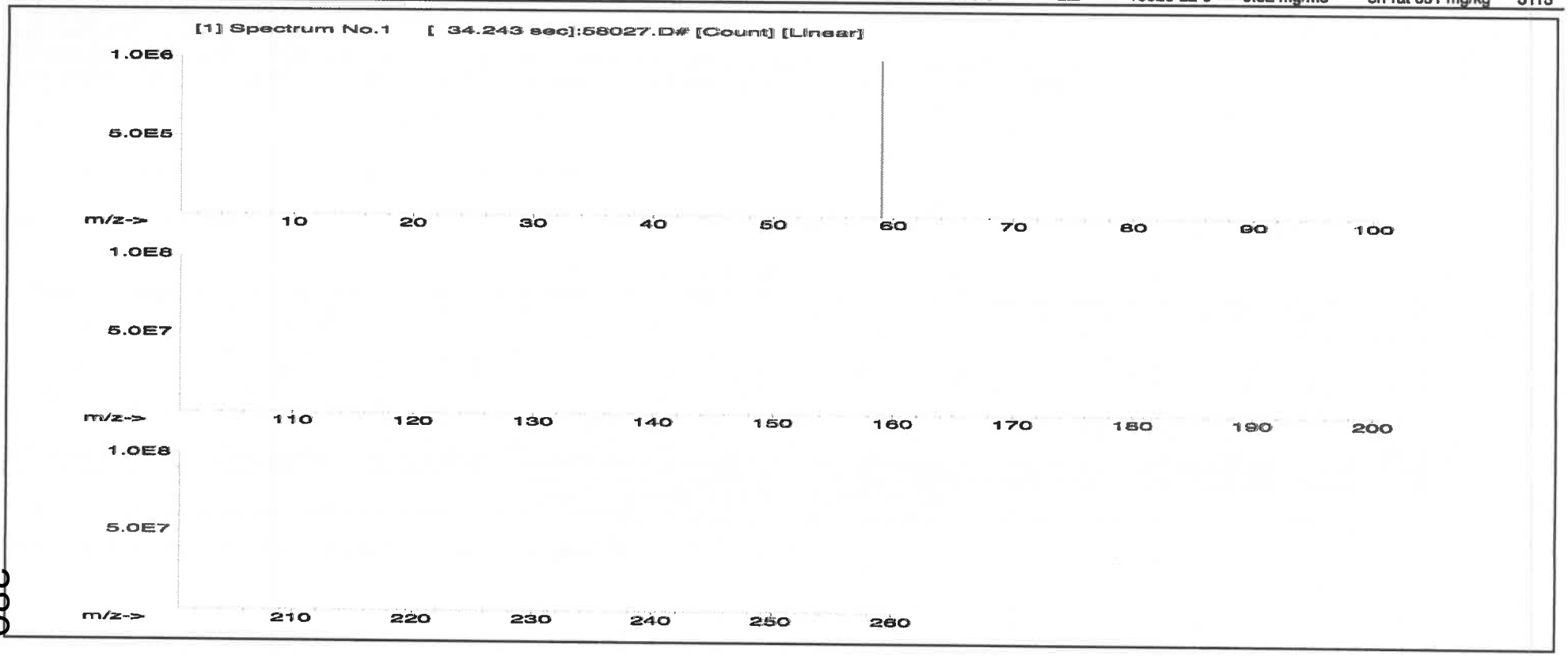
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**				
		2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091923
Reviewed By:	Pedro L. Rentas	091923

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.) 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	orl-rat 691 mg/kg	3113



380

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	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Gé	<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:

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 certifed (+/-) 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).

381

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 IM5801 BH

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

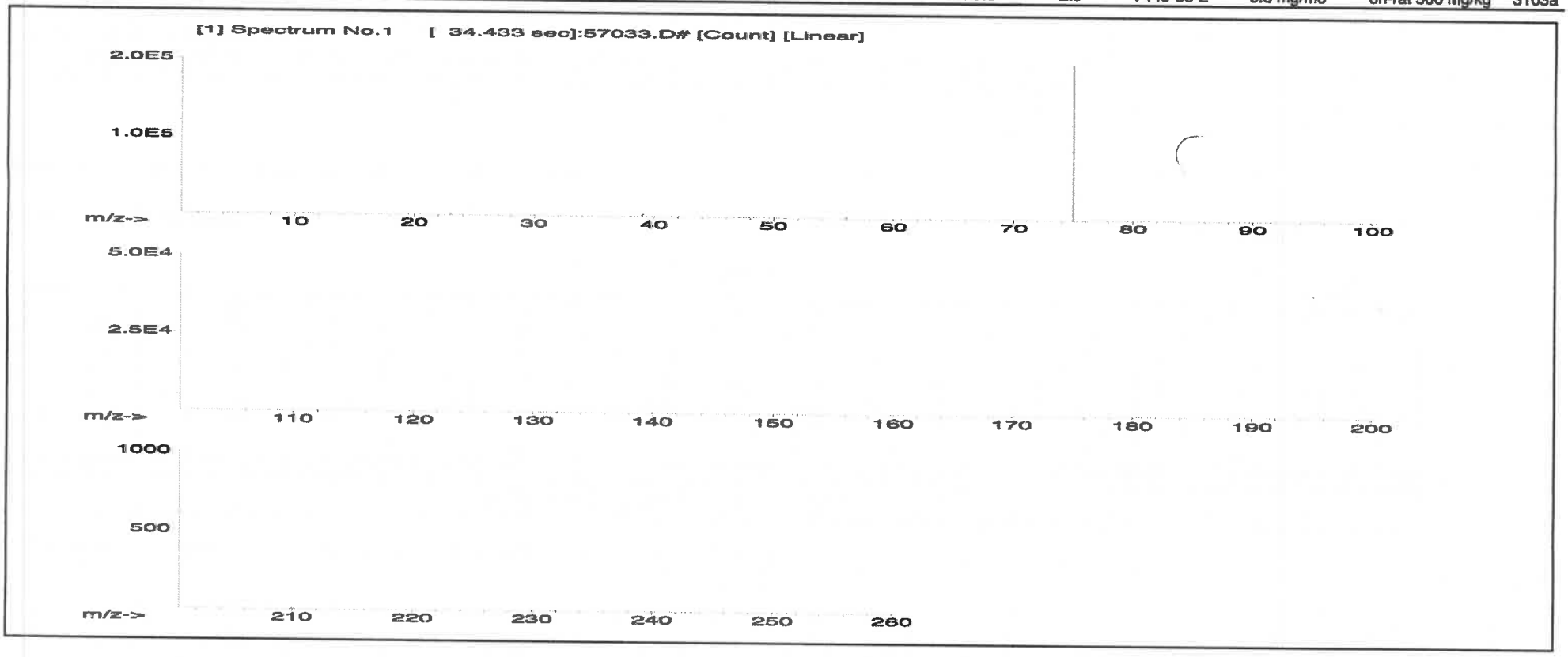
382

CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**				
Lot Number:	**111323**	24002546	Nitric Acid		
Description:	**Arsenic (As)**				
		2.0%	80.0 (mL)	Nitric Acid	
Expiration Date:	111326				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty		

Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rentas	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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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	orl-rat 500 mg/kg	3103a



383

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	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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R1 02/09/24. M58165

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

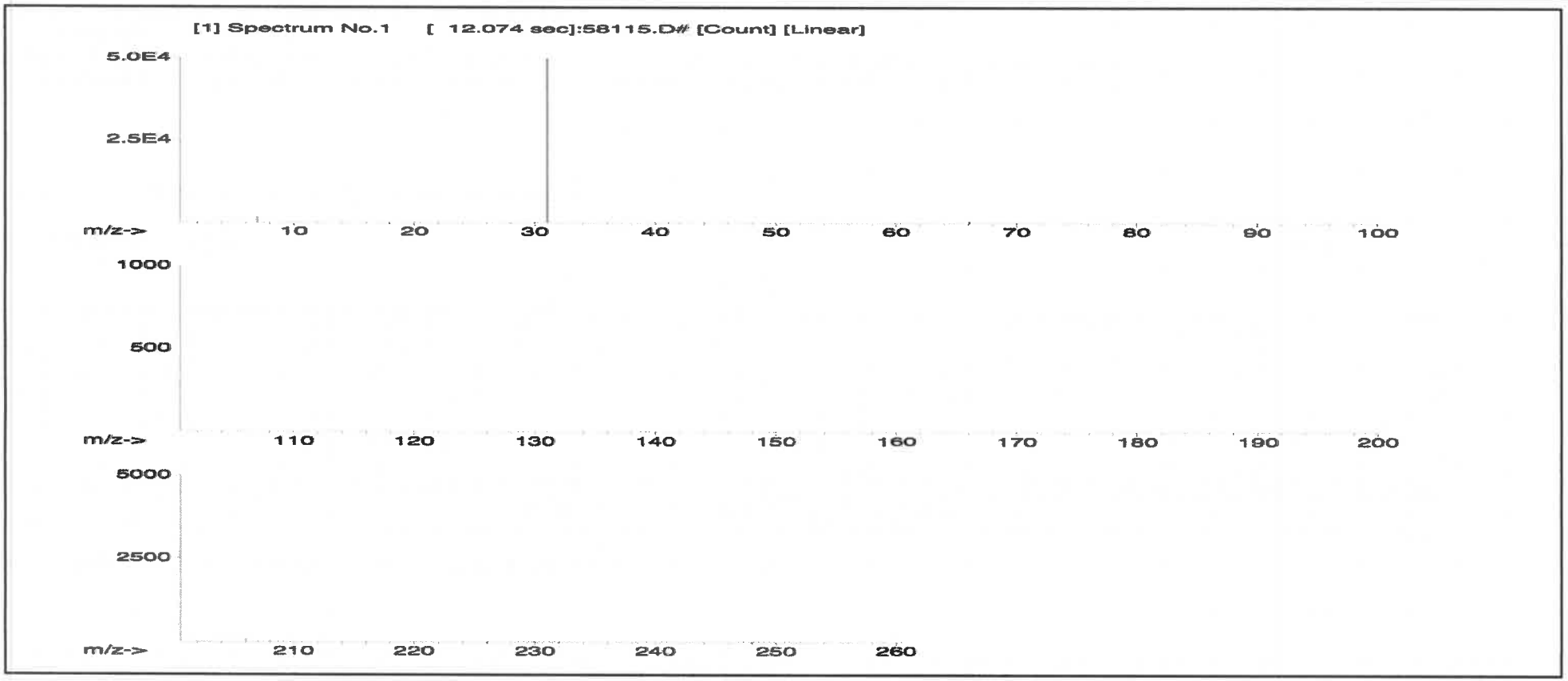
384

CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**57115**	**Solvent:**	21110221	Nitric Acid
Lot Number:	**041723**			
Description:	**Phosphorous (P)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	041726			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	041723
Reviewed By:	Pedro L. Rentas	041723

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	10000	99.999	0.10	27.5	72.7287	72.7289	**10000.0**	**20.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/kg	3186



385

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	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:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5817

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

386

CERTIFIED WEIGHT REPORT:

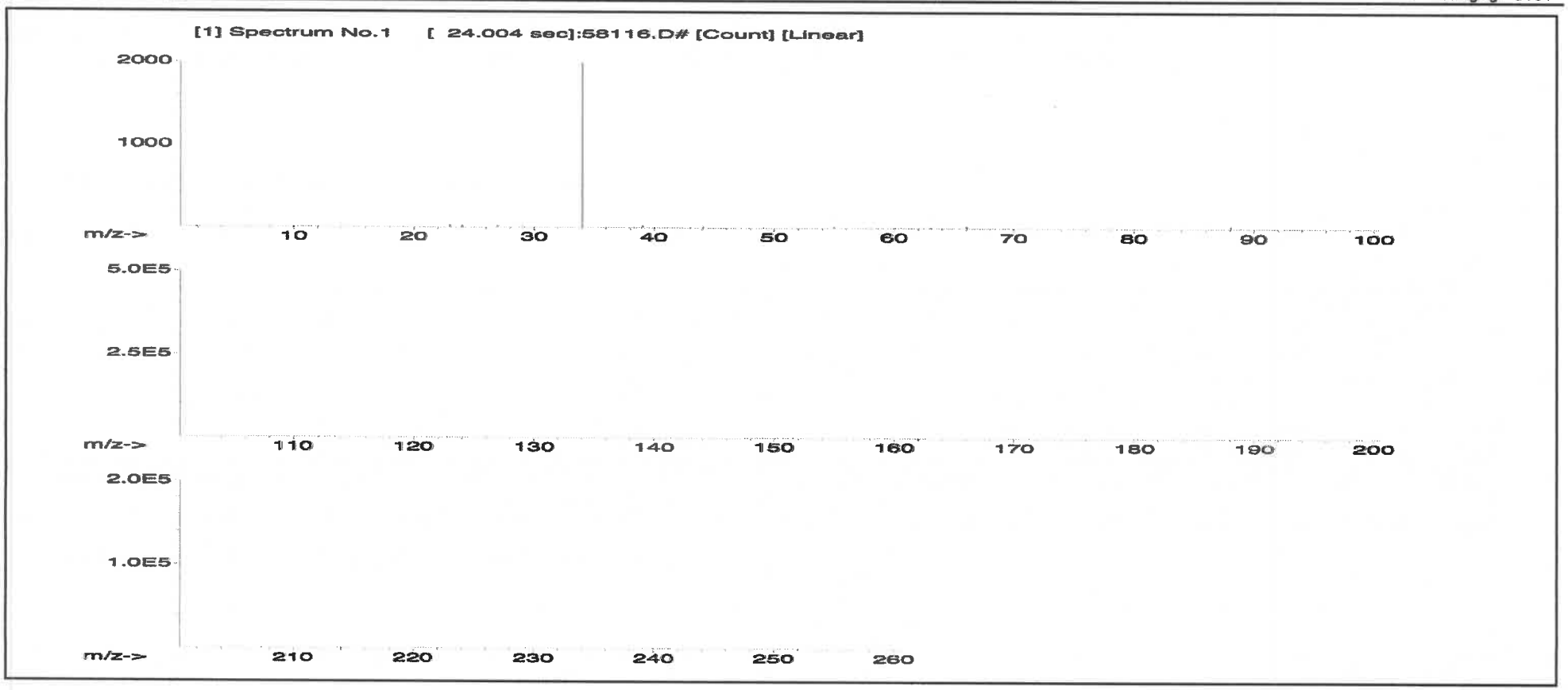
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

Lot #
Solvent: 071123 ASTM Type 1 Water

Expiration Date: 071126
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): 1999.48 0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	071123
Reviewed By:	Pedro L. Rentas	071123

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	10000	99.9	0.10	24.3	82.4675	82.4682	**10000.1**	**20.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



387

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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<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

(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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5819

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

388

CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 111623
Description: Zinc (Zn)

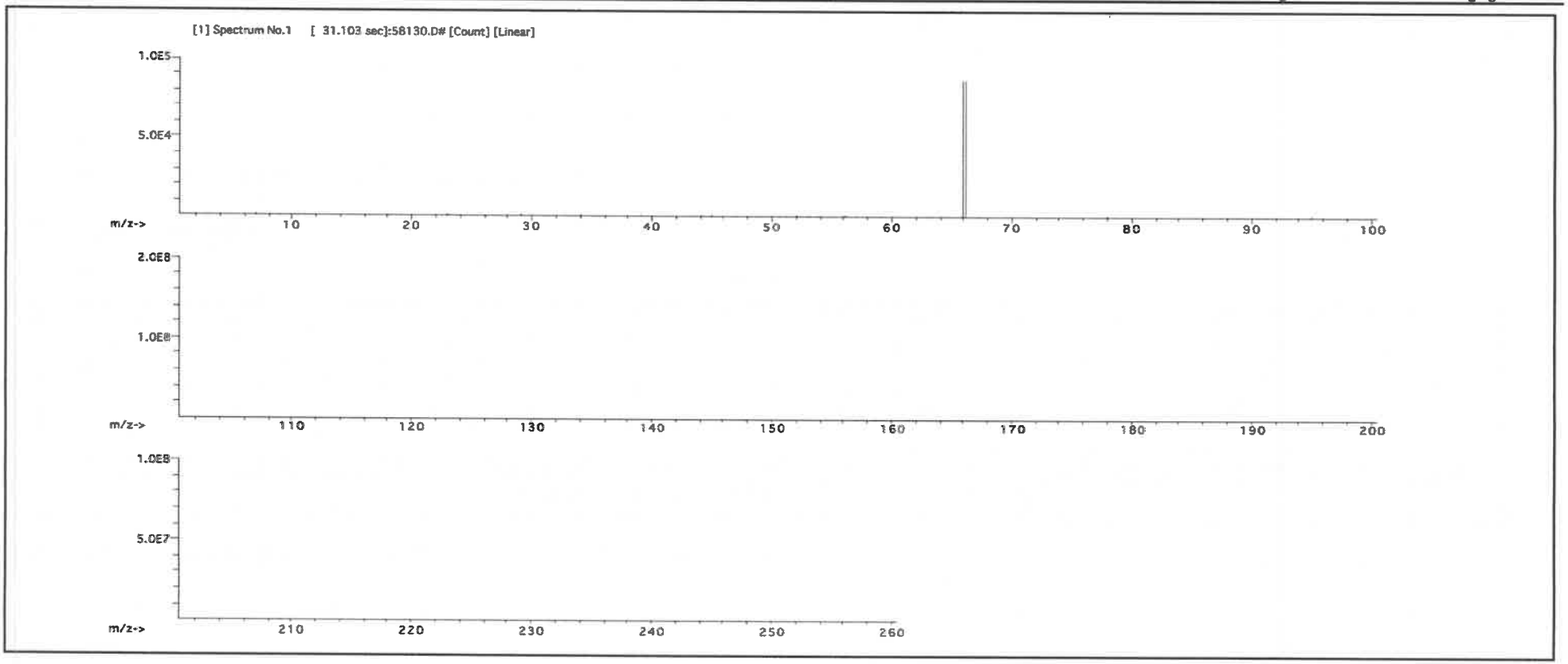
Expiration Date: 111626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 3000.4 | 0.06 Flask Uncertainty | 5E-05 Balance Uncertainty

	Lot #	
Solvent:	24002546	Nitric Acid
2%	60.0 (mL)	Nitric Acid

Formulated By:	Benson Chan	111623
Reviewed By:	Pedro L. Rentas	111623

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hexahydrate (Zn)	IN016	ZNE032021A1	1000	99.999	0.10	24.3	12.3475	12.3502	**1000.2**	**2.0**	10196-18-6	1 mg/m3	orl-rat 1190mg/kg	3168



389

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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<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	T
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 certifed (+/-) 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).

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

R: 02/22/24 M5942

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).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	Ti Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 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:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	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		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
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	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

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 - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - 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); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 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 crystalline 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 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

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 Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

M5959 R: 6/14/24.

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).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGY10
Lot Number:	V2-Y740548
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Yttrium
Starting Material:	Yttrium Oxide
Starting Material Lot#:	2661 and 06230520YL
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10000 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10011 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**9997 ± 50 µg/mL** ICP Assay NIST SRM 3167a Lot Number: 190730
Assay Method #3	**9984 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5961 R: 6/11/24

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

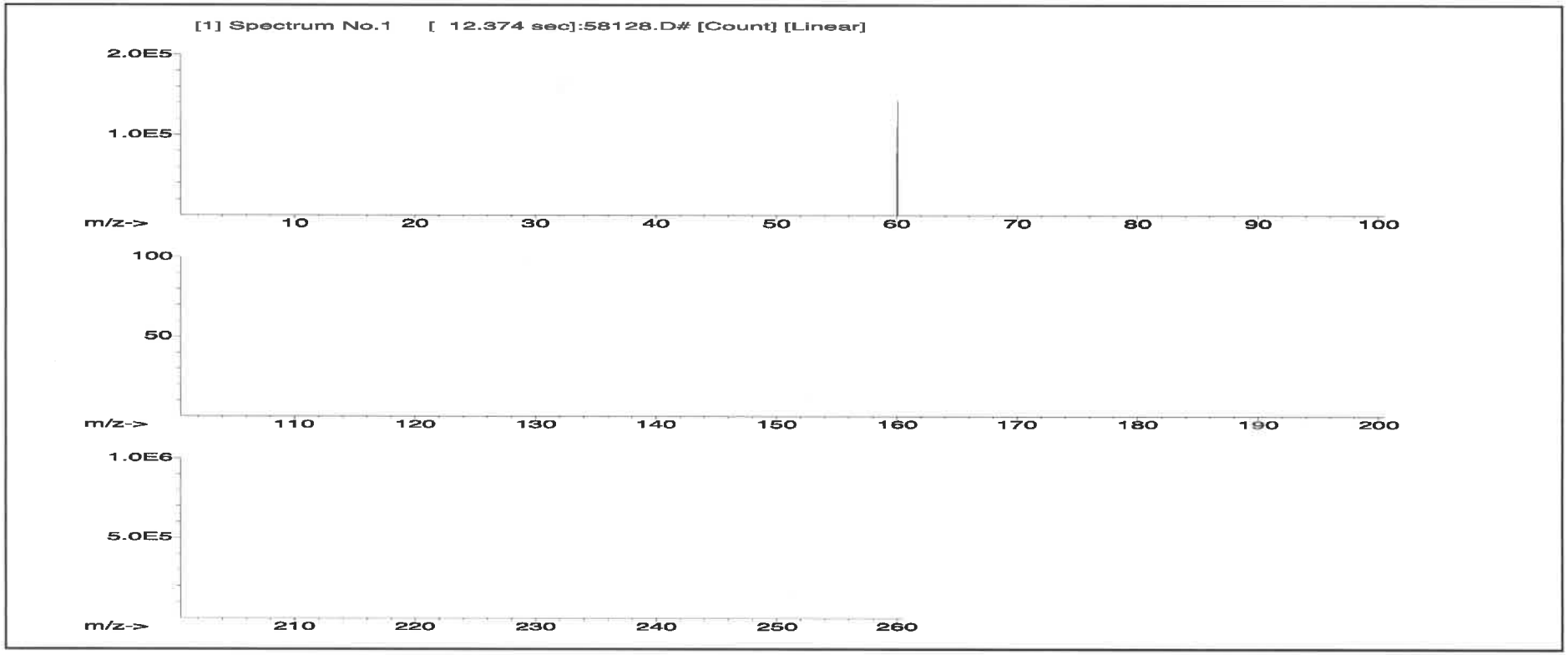
398

CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**57028**	**Solvent:**	24002546	Nitric Acid
Lot Number:	**041124**			
Description:	**Nickel (Ni)**			
		2%	5.0 (mL)	Nitric Acid
Expiration Date:	041127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	249.85	0.002	Flask Uncertainty	

Formulated By:	Brian Geddes	041124
Reviewed By:	Pedro L. Rentas	041124

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST 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	orl-rat 1620 mg/kg	3136



399

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5962 R! 06/14/24.

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

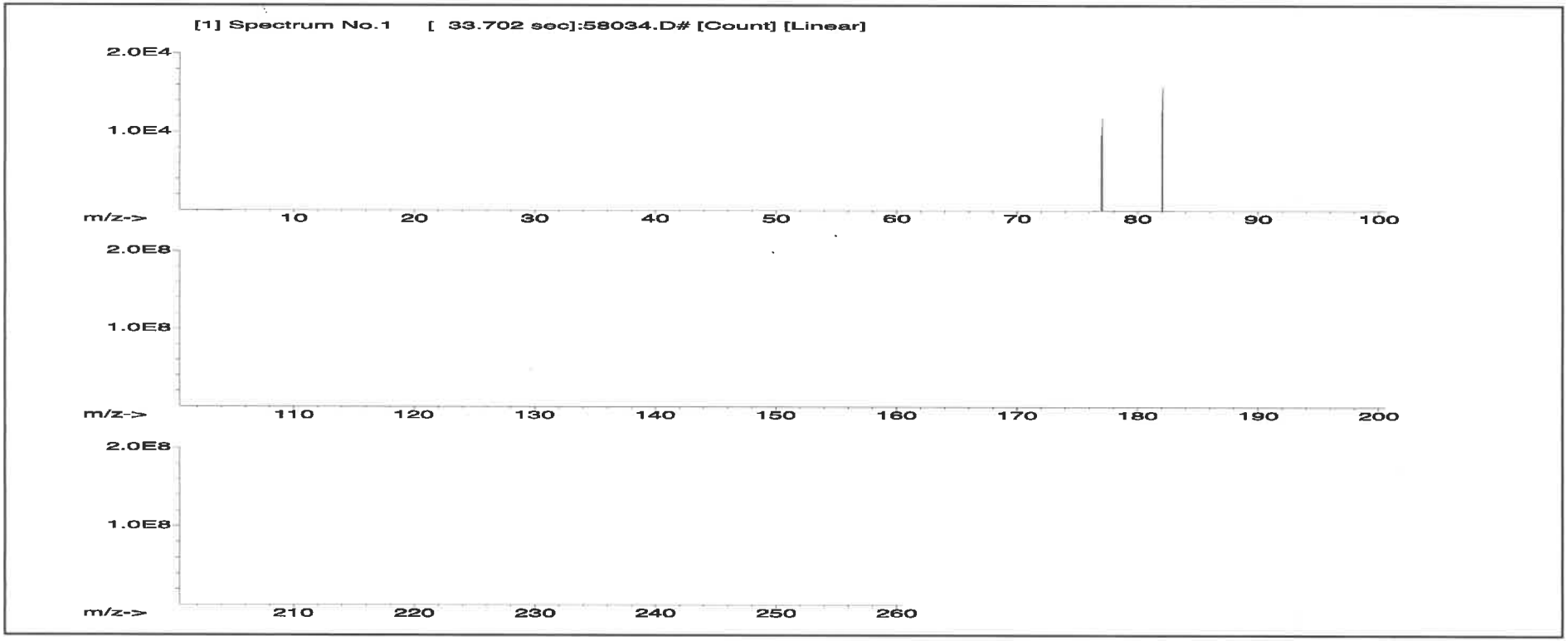
400

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

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.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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	orl-rat 6700 mg/kg	3149



401

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	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 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).

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

M5976, M5977
R: 02/22/24

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).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	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:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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	Tl	<	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,79Br1 6O,190Os2+,190Pt 2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

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



INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

M5976, M5977
R: 02/22/24

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).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	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:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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	Tl	<	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,79Br1 6O,190Os2+,190Pt 2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

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



410

M5978, M5979

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

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).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	Ti Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 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:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma(w_i)^2\ (u_{char\ i})^2]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	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		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
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	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

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 - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - 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); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 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 crystalline 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 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

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 Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
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

MS985
R: 6/14/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGIN10
Lot Number:	U2-IN729349
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Indium
Starting Material:	Indium Metal
Starting Material Lot#:	2511
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.044 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10021 ± 56 µg/mL** ICP Assay NIST SRM 3124a Lot Number: 110516
Assay Method #2	**10035 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10001 ± 33 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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	<	0.000760	M	Eu	<	0.000760	O	Na		0.012771	M	Se	<	0.023000	M	Zn	<	0.006100
M	Al		0.003385	O	Fe		0.004462	M	Nb	<	0.000760	O	Si		0.024619	M	Zr	<	0.000760
M	As	<	0.004600	M	Ga	<	0.000760	M	Nd	<	0.000760	M	Sm	<	0.000760				
M	Au	<	0.002300	M	Gd	<	0.000760	O	Ni	<	0.005100	M	Sn	<	0.000760				
O	B		0.003692	M	Ge	<	0.001600	M	Os	<	0.000760	O	Sr	<	0.000610				
M	Ba	<	0.001600	M	Hf	<	0.000760	n	P	<		M	Ta	<	0.000760				
O	Be	<	0.000130	M	Hg	<	0.003100	M	Pb		0.001400	M	Tb	<	0.000760				
M	Bi	<	0.000760	M	Ho	<	0.000760	M	Pd	<	0.001600	M	Te	<	0.000760				
O	Ca		0.004616	s	In	<		M	Pr	<	0.000760	M	Th	<	0.000760				
M	Cd	<	0.000760	M	Ir	<	0.000760	M	Pt	<	0.000760	O	Ti	<	0.001100				
M	Ce	<	0.000760	O	K		0.007078	M	Rb	<	0.000760	M	Tl	<	0.000760				
M	Co	<	0.000760	M	La	<	0.000760	M	Re	<	0.000760	M	Tm	<	0.000760				
O	Cr	<	0.001300	O	Li	<	0.000130	M	Rh	<	0.000760	M	U	<	0.000760				
M	Cs	<	0.000760	M	Lu	<	0.000760	M	Ru	<	0.000760	M	V	<	0.001600				
M	Cu	<	0.003800	O	Mg		0.000707	n	S	<		M	W	<	0.001600				
M	Dy	<	0.000760	O	Mn		0.000149	M	Sb	<	0.000760	M	Y	<	0.000760				
M	Er	<	0.000760	M	Mo	<	0.002300	M	Sc	<	0.000760	M	Yb	<	0.000760				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 114.82 +3 6 In(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 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

- February 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



INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

M6074
M6075
M6076
M6077

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

EXP.: 9/6/2029

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	V2-MEB746762
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	1 000 ± 5 µg/mL	Molybdenum, Mo	1 000 ± 5 µg/mL
Silicon, Si	1 000 ± 7 µg/mL	Tin, Sn	1 000 ± 5 µg/mL
Titanium, Ti	1 000 ± 6 µg/mL		

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Mo	ICP Assay	traceable to 3134	U2-MO739068
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162a	T2-TI725816

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

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 06, 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

- September 06, 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



Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

R → 10/13/24
Met dig

M 6121

Material No.: 9530-33
Batch No.: 0000275677
Manufactured Date: 2020/12/16
Retest Date: 2025/12/15
Revision No: 1

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
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.190
ACS - Bromide (Br)	<= 0.005 %	< 0.005
ACS - Extractable Organic Substances	<= 5 ppm	1
ACS - Free Chlorine (as Cl_2)	<= 0.5 ppm	< 0.5
Phosphate (PO_4)	<= 0.05 ppm	< 0.03
Sulfate (SO_4)	<= 0.5 ppm	< 0.3
Sulfite (SO_3)	<= 0.8 ppm	0.3
Ammonium (NH_4)	<= 3 ppm	< 1
Trace Impurities - Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities - Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	29.7
Trace Impurities - Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 1.0 ppb	< 0.2

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

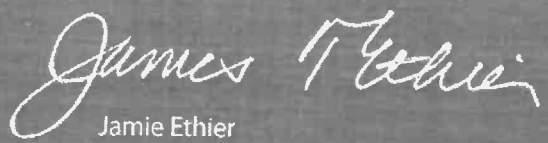
422

Material No.: 9530-33
Batch No.: 0000275677

Test	Specification	Result
Trace Impurities - Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 15.0 ppb	<1
Trace Impurities - Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	0.2
Trace Impurities - Magnesium (Mg)	<= 10.0 ppb	0.4
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 4.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	< 0.2
Trace Impurities - Potassium (K)	<= 9.0 ppb	< 2.0
Trace Impurities - Selenium (Se), For Information Only	ppb	1.0
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 100.0 ppb	< 5.0
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 1.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 1.0 ppb	0.2
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

M6125 Receive -> 11/22/24

CORCO CHEMICAL CORPORATION

Manufacturers of ACS Reagents and Semiconductor Grade Chemicals

Office and Plant
299 Cedar Lane
Fairless Hills, PA 19030

Phone: 215-295-5006
Fax: 215-295-0781

Hydrogen Peroxide 30%, ACS

Reagent Grade

SPECIFICATION	MAXIMUM LIMITS
Appearance	Colorless and free from suspended matter or sediment
Assay	29-32%
Color (APHA)	10
Residue after Evaporation	0.002%
Titratable Acid	0.0006 meq/g
Chloride (Cl)	3 ppm
Nitrate (NO_3)	2 ppm
Phosphate	2 ppm
Sulfate (SO_4)	5 ppm
Ammonium (NH_4)	5 ppm
Heavy Metals (as Pb)	1 ppm
Iron (Fe)	0.5 ppm

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R -> 11/12/24

M6126

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

428

CERTIFIED WEIGHT REPORT:

R→ 1/13/25

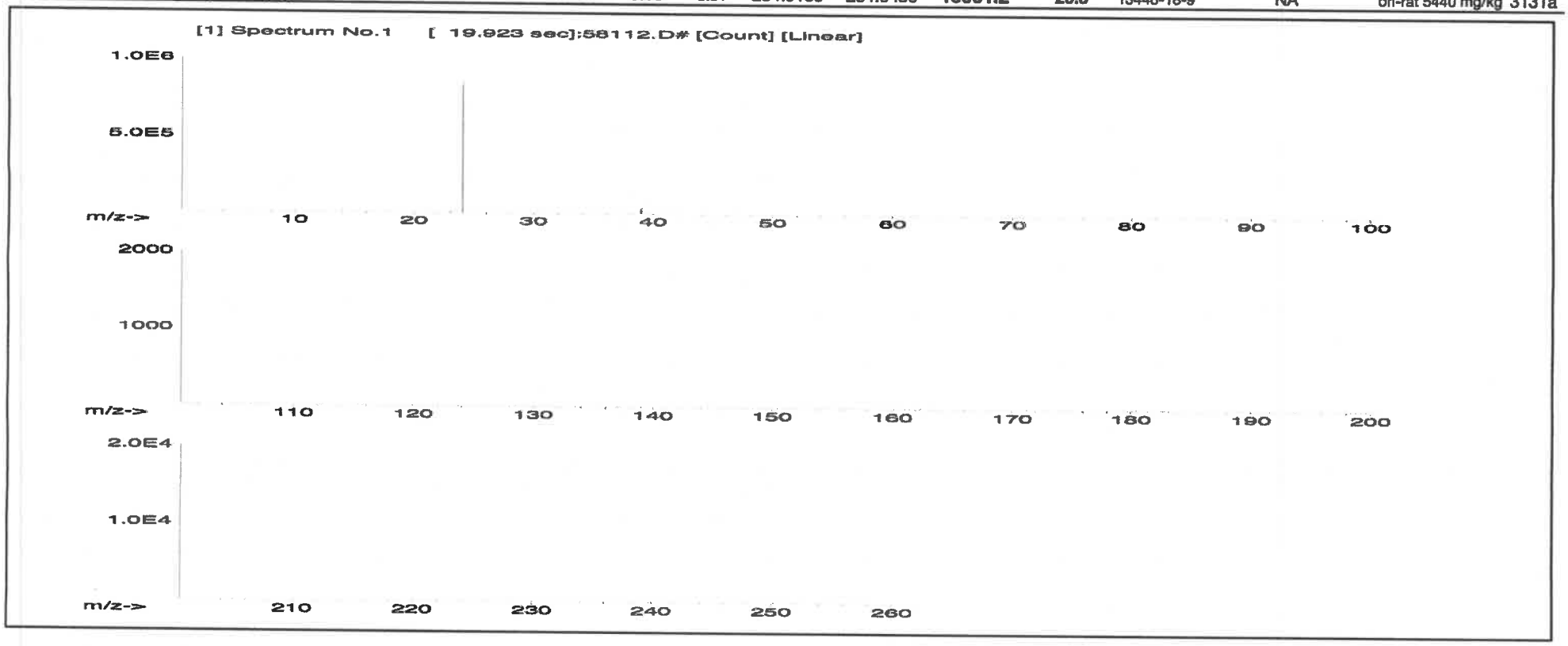
M 6127

			Lot #	
Part Number:	**58112**	**Solvent:**	24012496	Nitric Acid
Lot Number:	**112124**			
Description:	**Magnesium (Mg)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	112127			
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):	2000.07	0.100	Flask Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	112124
Reviewed By:	Pedro L. Rentas	112124

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	IN030	MGD052023A1	10000	99.999	0.10	8.51	234.9183	234.9459	**10001.2**	**20.0**	13446-18-9	NA	orl-rat 5440 mg/kg	3131a



429

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:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

430

CERTIFIED WEIGHT REPORT:

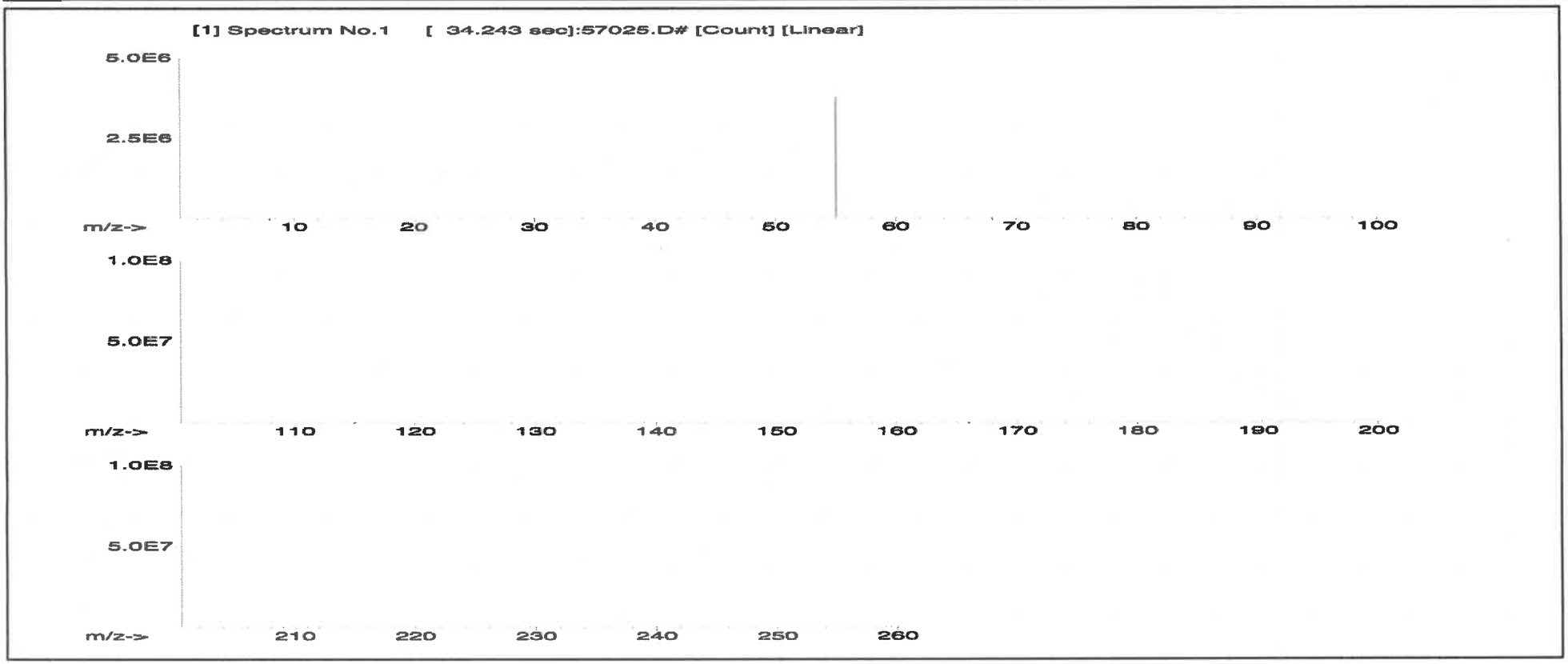
R->1/13/25
M6128

Part Number:	**58025**	**Solvent:**	**Lot #** 24002546	Nitric Acid
Lot Number:	**101124**			
Description:	**Manganese (Mn)**	2%	80.0 (mL)	Nitric Acid
Expiration Date:	101127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.2	0.10	Flask Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	101124
Reviewed By:	Pedro L. Rentas	101124

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Manganese(II) nitrate hydrate (Mn)	IN031	MNM092020A1	1000	99.999	0.10	20.8	19.2322	19.2344	**1000.1**	**2.0**	15710-66-4	5 mg/m3	orl-rat >300mg/kg	3132



431

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT:

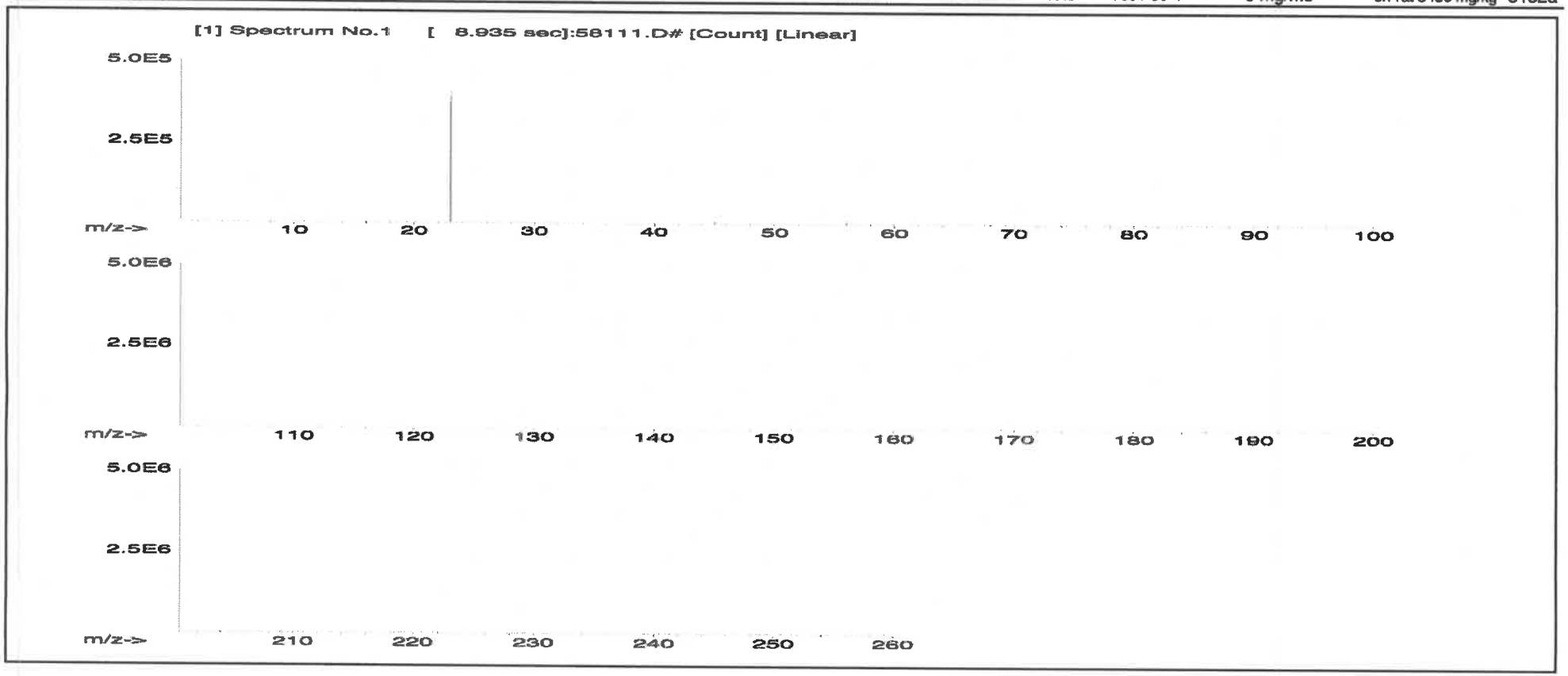
R->1/13/25

Part Number:	**58111**			**Lot #**	
Lot Number:	**072424**	**Solvent:**	24002546	Nitric Acid	
Description:	**Sodium (Na)**				
		MG144 2%	80.0 (mL)	Nitric Acid	
Expiration Date:	072427				
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):	4000.2	0.10	Flask Uncertainty		

Formulated By:	Benson Chan 072424
Reviewed By:	Pedro L. Rentas 072424

432

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	148.7096	######	**10000.0**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



433

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	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	<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	T	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:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 01/03/24 M5806, M5807

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

434

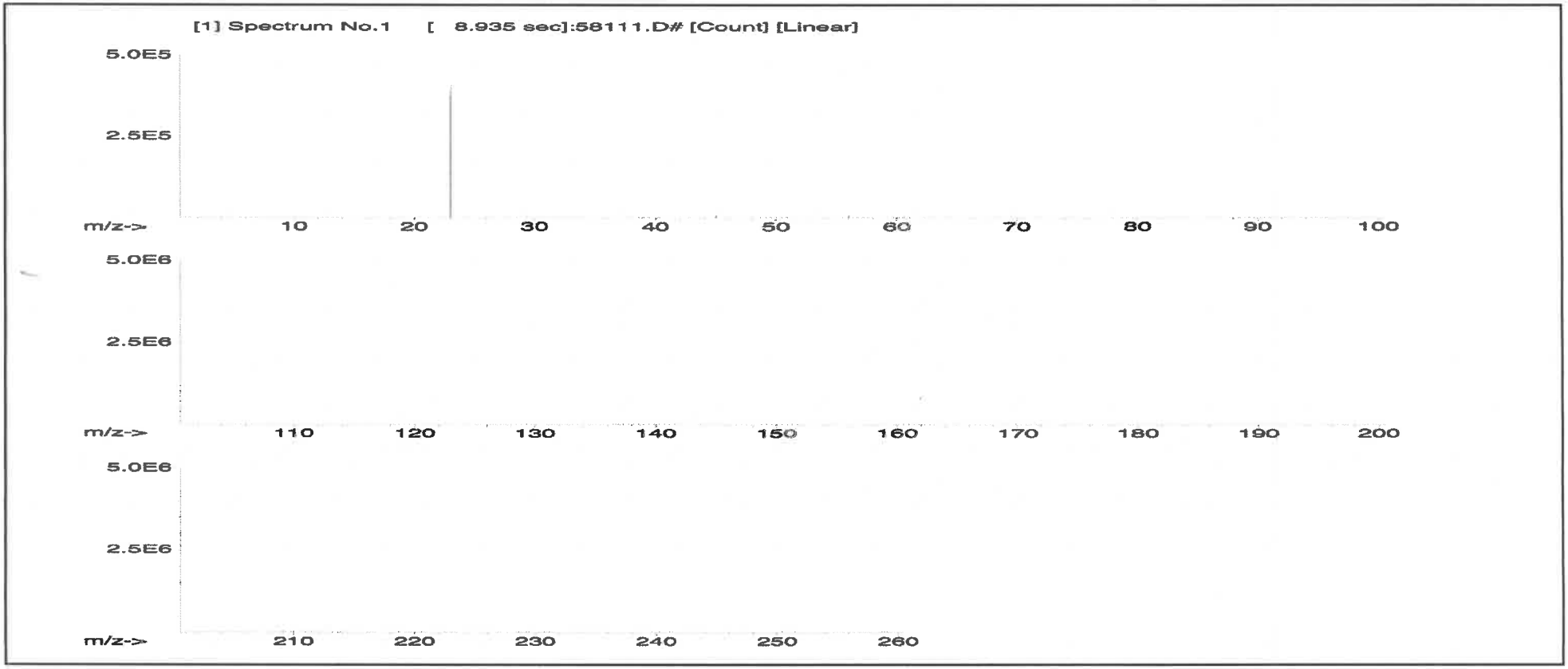
CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**58111**	**Solvent:**	24002546	Nitric Acid
Lot Number:	**122223**			
Description:	**Sodium (Na)**			
		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	

Aleah O'Brady

Formulated By:	Aleah O'Brady	122223
Reviewed By:	Pedro L. Rentas	122223

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	111.5406	111.5479	**10000.7**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



435

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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	T	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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

R: 01/03/24 M5802, M5803

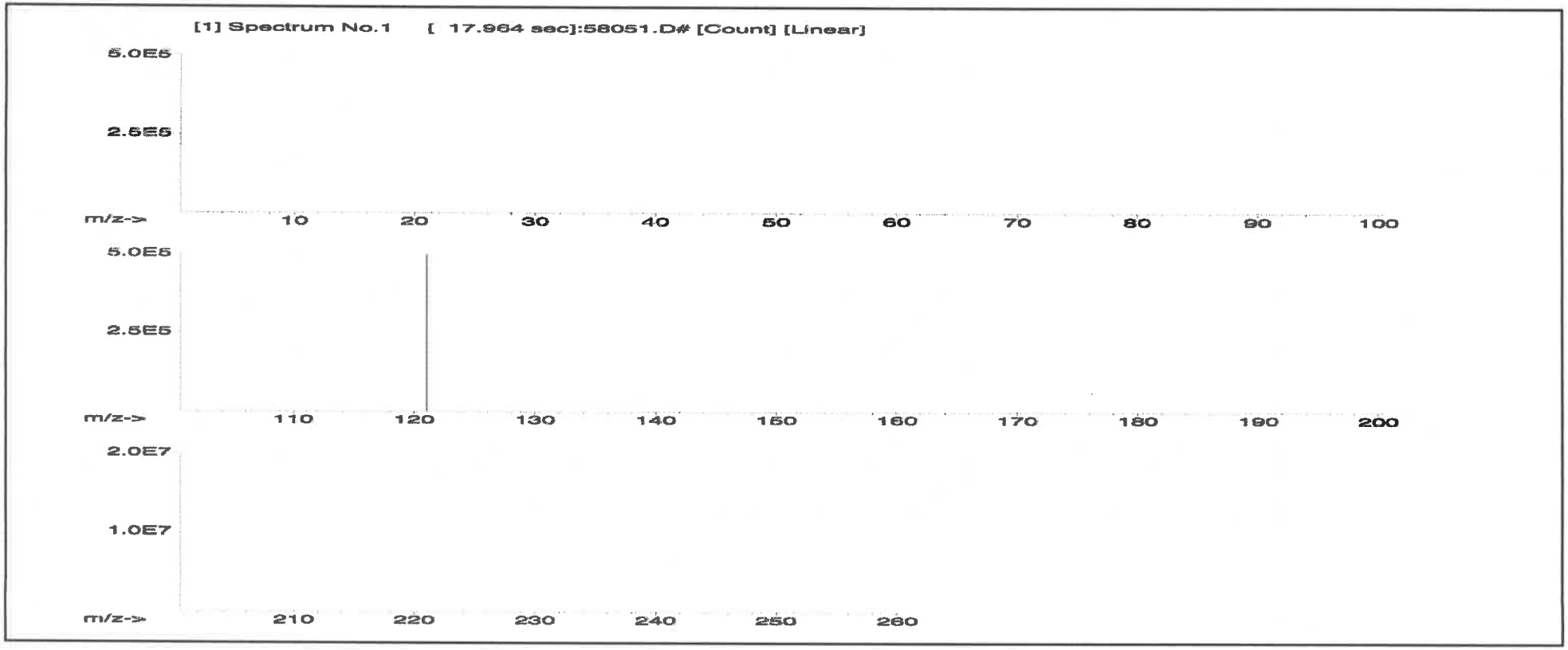
436

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57051**	24002546	Nitric Acid	
Lot Number:	**120523**			
Description:	**Antimony (Sb)**			
		2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	120526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	120523
Reviewed By:	Pedro L. Rentas	120523

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.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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	orl-rat 7000 mg/kg	3102a



437

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	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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6030

R: 8/5/24

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

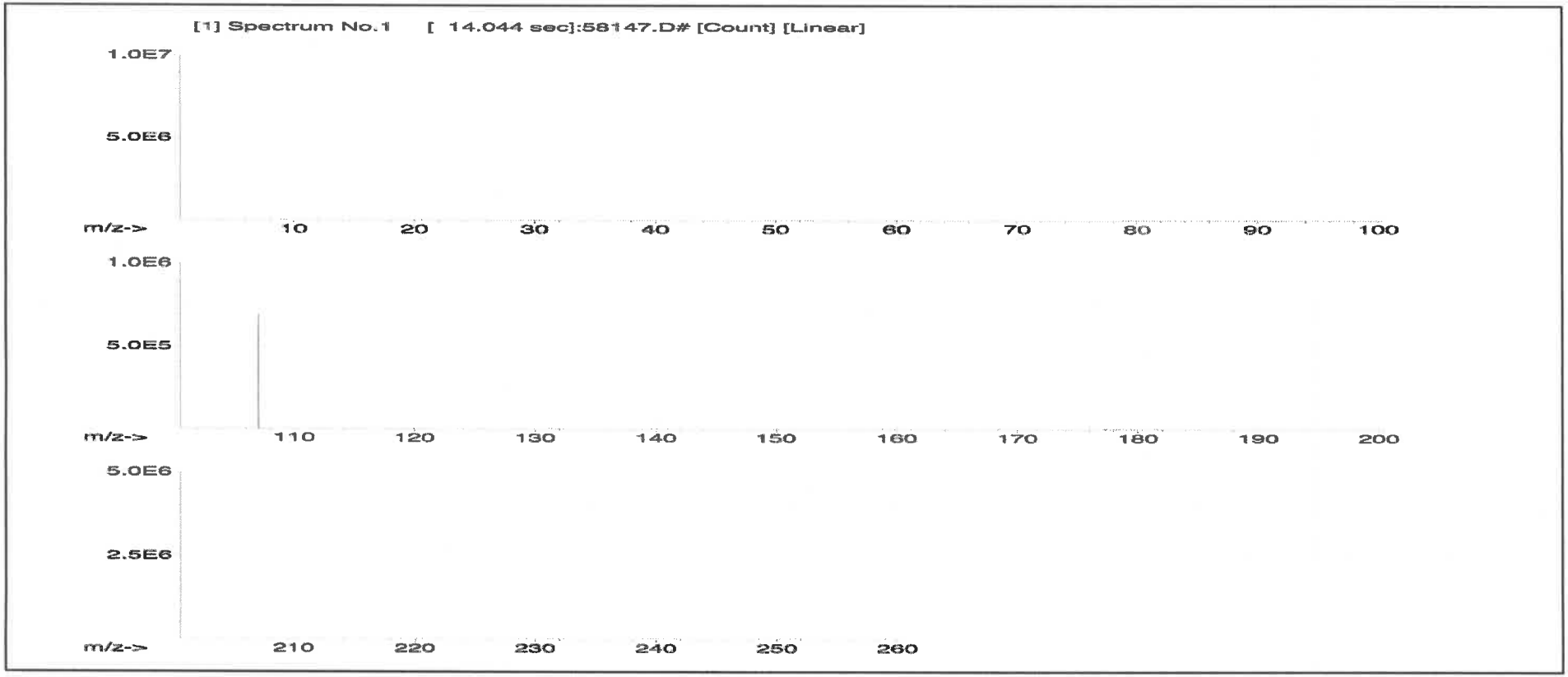
438

CERTIFIED WEIGHT REPORT:

Part Number:	**57047**		**Lot #**		
Lot Number:	**122823**	**Solvent:**	24002546	Nitric Acid	
Description:	**Silver (Ag)**	2%	80.0 (mL)	Nitric Acid	
Expiration Date:	122826				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	4000.30	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	122823
Reviewed By:	Pedro L. Rentas	122823

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9999	0.10	63.7	6.27992	6.27998	**1000.0**	**2.0**	7761-88-8	10 ug/m3	NA	3151



439

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	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

(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 certifed (+/-) 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).

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

R: 8/5/24 M6019

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).

ACCREDITED Testing Laboratory Certificate 885.01 ACCREDITED Reference Material Producer Certificate 885.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSR1
Lot Number:	U2-SR730227
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Strontium
Starting Material:	SrCO3
Starting Material Lot#:	M2-2192
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 3 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 Traceable to 3153a Lot Number: K2-SR650985

Assay Method #2 **1001 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **1001 ± 2 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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	<	0.001980	M	Eu	<	0.000495	O	Na		0.000200	M	Se	<	0.013862	O	Zn		0.000143
O	Al		0.000370	O	Fe		0.000410	M	Nb	<	0.000495	i	Si	<		M	Zr	<	0.000495
M	As	<	0.000495	M	Ga	<	0.000495	M	Nd	<	0.000495	M	Sm	<	0.000495				
M	Au	<	0.000989	M	Gd	<	0.000495	O	Ni	<	0.007631	M	Sn	<	0.000990				
M	B	<	0.039606	M	Ge	<	0.000495	M	Os	<	0.000494	s	Sr	<					
M	Ba		0.006486	M	Hf	<	0.000495	i	P	<		M	Ta	<	0.000495				
M	Be	<	0.000990	M	Hg	<	0.000989	M	Pb	<	0.002970	M	Tb	<	0.000495				
M	Bi	<	0.000495	M	Ho	<	0.000495	M	Pd	<	0.003957	M	Te	<	0.027724				
O	Ca		0.004255	M	In	<	0.000495	M	Pr	<	0.000495	M	Th	<	0.000990				
M	Cd		0.001339	M	Ir	<	0.000494	M	Pt	<	0.002970	M	Ti	<	0.005940				
M	Ce	<	0.004950	O	K	<	0.008184	M	Rb	<	0.002970	M	Tl	<	0.000495				
M	Co	<	0.000495	M	La	<	0.000495	M	Re	<	0.000495	M	Tm	<	0.000495				
O	Cr	<	0.003207	O	Li	<	0.000884	O	Rh	<	0.012829	M	U	<	0.001485				
M	Cs	<	0.000990	M	Lu	<	0.002970	M	Ru	<	0.000989	M	V	<	0.001980				
M	Cu		0.000099	O	Mg		0.000064	i	S	<		M	W	<	0.003960				
M	Dy	<	0.000495	O	Mn		0.000066	M	Sb	<	0.014852	O	Y	<	0.000995				
M	Er	<	0.000495	M	Mo	<	0.001980	M	Sc	<	0.001980	M	Yb	<	0.000495				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 87.62 +2 6 $Sr(H_2O)_{6}^{+2}$

Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate and tungstate in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1 - 3.5% HNO_3 / LDPE container.

Sr Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO_3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 88 amu	1200 ppt	N/A	72Ge16O, 176Yb+2, 176Lu+2 , 176Hf+2
ICP-OES 407.771 nm	0.0004 / 0.00006 µg/mL	1	U, Ce
ICP-OES 421.552 nm	0.0008 / 0.00004 µg/mL	1	Rb
ICP-OES 460.733 nm	0.07 / 0.003 µg/mL	1	Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 03, 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

- **March 03, 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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 03/16/23 M5473, M5474, M5475, M5476

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

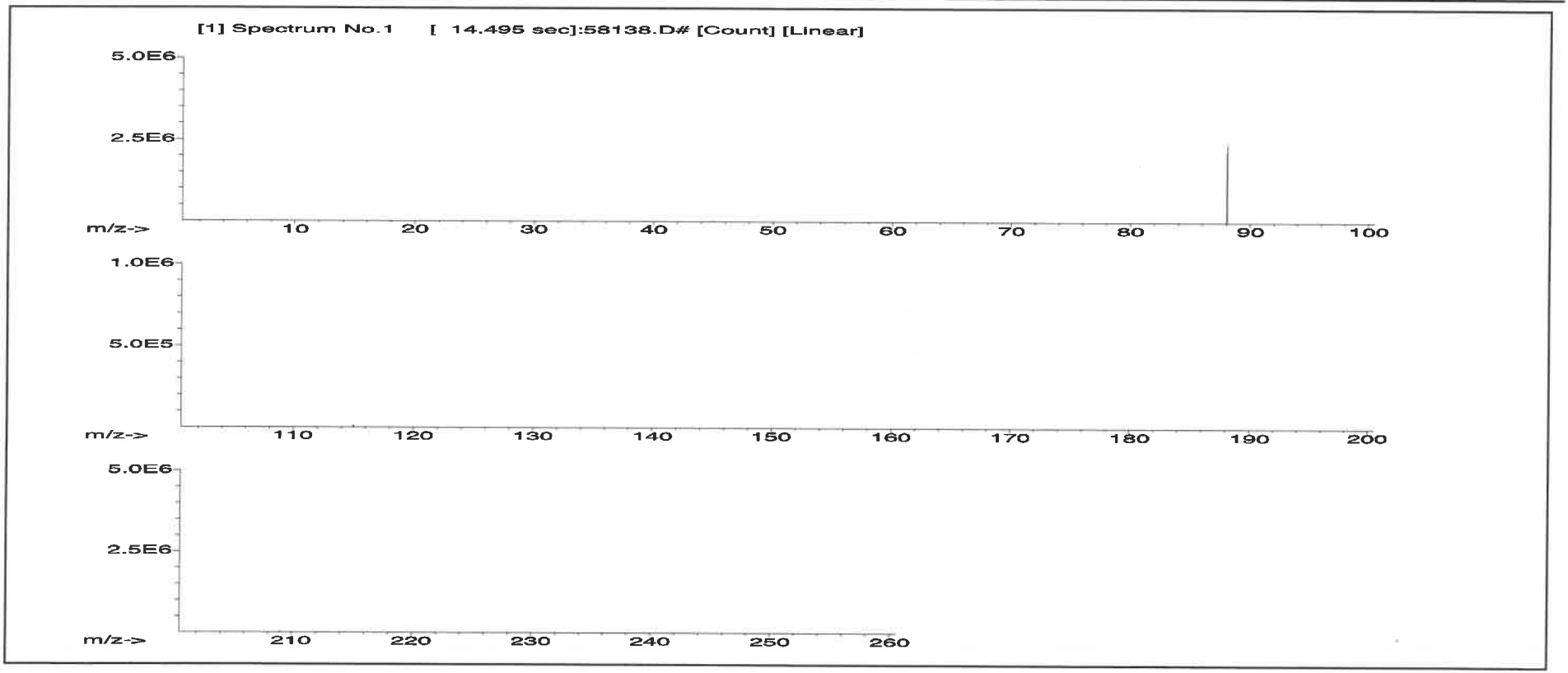
444

CERTIFIED WEIGHT REPORT:

Part Number:	**56138**		**Lot #**		
Lot Number:	**082922**	**Solvent:**	20510011	Nitric Acid	
Description:	**Strontium (Sr)**				
		2%	20.0 (mL)	Nitric Acid	
Expiration Date:	082925				
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):	1000.12	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	082922
Reviewed By:	Pedro L. Rentas	082922

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Strontium nitrate (Sr)	IN017	SRZ022018A1	10000	99.997	0.10	41.2	24.2756	24.2758	**10000.1**	**20.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



445

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:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6023

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

R ! 8/5/24

446

CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

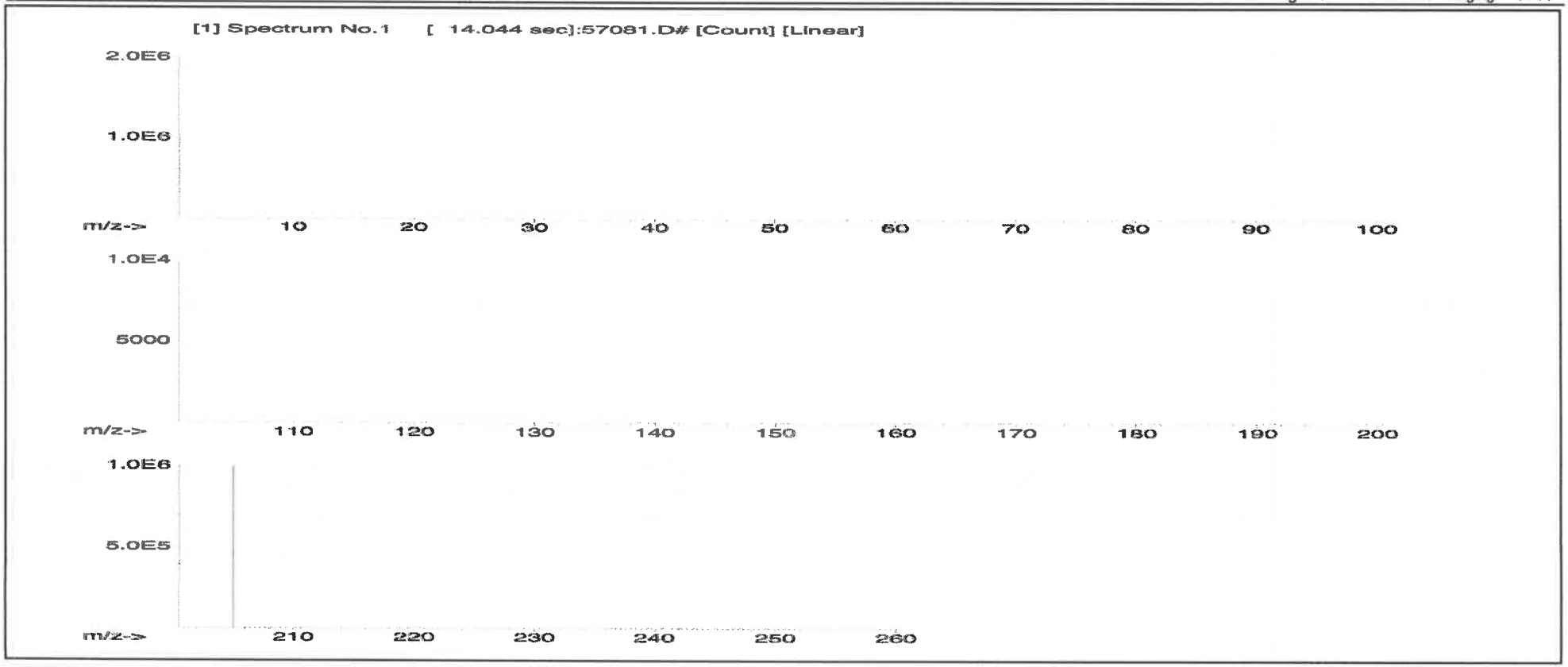
Aleah O'Brady

Formulated By:	Aleah O'Brady	062724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062724

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	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



447

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	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	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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6021

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

Rc. 8/5/24

448

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**			
Lot Number:	**062424**			
Description:	**Vanadium (V)**	24002546	Nitric Acid	
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.3	0.06	Flask Uncertainty	

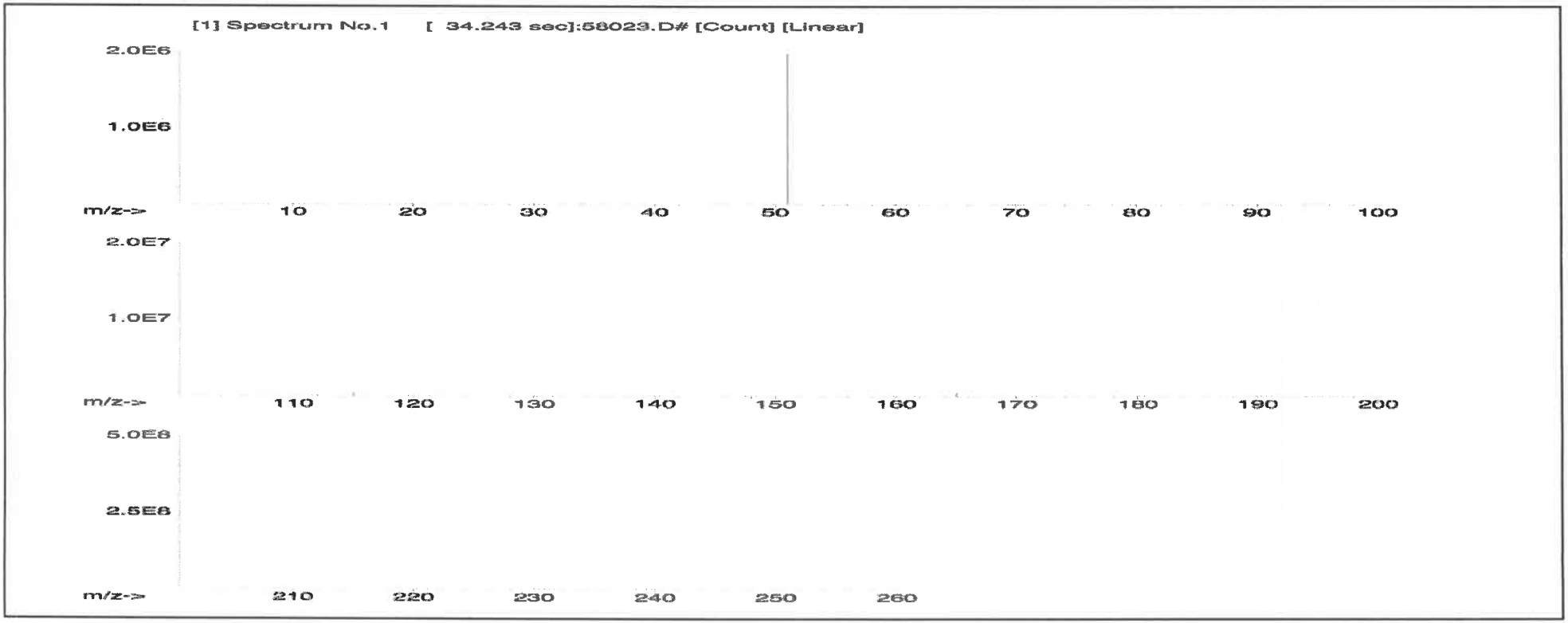
Aleah O'Brady

Formulated By:	Aleah O'Brady	062424

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062424

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.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)	58123	021224	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	7803-55-6	0.05 mg/m3	orl-rat 58.1mg/kg	3165



449

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* 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 certifed (+/-) 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).

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB166229

SOP ID : M3050B-Digestion-20, MSFAM01.1-Trace Metals-2

SDG No : MC0AZ0,ME2946

Matrix : SOIL

Pippete ID: ICP A

Balance ID : M SC-2

Filter paper ID : N/A

pH Strip ID : N/A

Hood ID : #3

Block ID: 1. HOT BLOCK #5 2. N/A

Start Digest Date: 01/24/2025 **Time :** 10:40 **Temp :** 96 °C

End Digest Date: 01/24/2025 **Time :** 12:45 **Temp :** 96 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. #5

Dig Technician Signature: GLD.

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LCSS	1.00	MP84063
Spike Sol 6	1.00	MP84070
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	10.00	MP84041
Conc. HNO3	5.00	M6126
30% H2O2	3.00	M6125
Conc. HCL	10.00	M6121
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 #35 : 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
01/24/25 13:45	SPD. met digestion	
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB166229

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
PB166229BL	PBS229	N/A	1.00	100	Colorless	Colorless	Fine	N/A	N/A	1
PB166229BS	LCS229	N/A	1.00	100	Colorless	Colorless	Fine	N/A	MP84063	2
Q1151-01	MC0AZ0	N/A	1.20	100	Black	Yellow	Medium	N/A	N/A	3
Q1151-02	MC0AZ1	N/A	1.17	100	Brown	Yellow	Medium	N/A	N/A	4
Q1151-03	MC0AZ2	N/A	1.04	100	Brown	Yellow	Medium	N/A	N/A	5
Q1151-04	MC0AZ3	N/A	1.24	100	Brown	Yellow	Medium	N/A	N/A	6
Q1151-05	MC0AZ4	N/A	1.45	100	Black	Yellow	Medium	N/A	N/A	7
Q1151-06	MC0AZ5	N/A	1.24	100	Brown	Yellow	Medium	N/A	N/A	8
Q1151-07	MC0AZ6	N/A	1.15	100	Brown	Yellow	Medium	N/A	N/A	9
Q1151-08	MC0AZ7	N/A	1.10	100	Black	Yellow	Medium	N/A	N/A	10
Q1151-09	MC0AZ7D	N/A	1.28	100	Black	Yellow	Medium	N/A	N/A	11
Q1151-10	MC0AZ7S	N/A	1.28	100	Black	Yellow	Medium	N/A	MP84070	12
Q1151-11	MC0B00	N/A	1.12	100	Black	Yellow	Medium	N/A	N/A	13
Q1151-12	MC0B01	N/A	1.44	100	Brown	Yellow	Medium	N/A	N/A	14
Q1163-01	ME2946	N/A	1.39	100	Brown	Yellow	Medium	N/A	N/A	15
Q1163-02	ME2947	N/A	1.27	100	Brown	Yellow	Medium	N/A	N/A	16
Q1163-03	ME2947D	N/A	1.17	100	Brown	Yellow	Medium	N/A	N/A	17
Q1163-04	ME2947S	N/A	1.29	100	Brown	Yellow	Medium	N/A	MP84070	18

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134438

Review By	Sarabjit Jaswal	Review On	1/28/2025 6:59:17 AM
Supervise By	Kareem Khairalla	Supervise On	1/28/2025 12:16:01 PM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84212,MP84210,MP84209,MP84208,MP84207,MP84206
ICV Standard	MP84213
CCV Standard	MP84216
ICSA Standard	MP84214,MP84215
CRI Standard	
LCS Standard	MP84063
Chk Standard	MP84218,MP84219

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	01/27/25 14:23		Kareem	OK
2	S1	S01	CAL2	01/27/25 14:27		Kareem	OK
3	S2	S02	CAL3	01/27/25 14:32		Kareem	OK
4	S3	S03	CAL4	01/27/25 14:36		Kareem	OK
5	S4	S04	CAL5	01/27/25 14:40		Kareem	OK
6	S5	S05	CAL6	01/27/25 14:44		Kareem	OK
7	S6	S06	CAL7	01/27/25 14:48		Kareem	OK
8	ICV003	ICV003	ICV	01/27/25 15:41	Inst. paused for calibration review	Kareem	OK
9	ICB003	ICB003	ICB	01/27/25 15:45		Kareem	OK
10	ICSA003	ICSA003	ICSA	01/27/25 15:56	Inst. paused for review	Kareem	OK
11	ICSAB003	ICSAB003	ICSAB	01/27/25 16:01		Kareem	OK
12	CCV021	CCV021	CCV	01/27/25 16:10	Inst. paused for review	Kareem	OK
13	CCB021	CCB021	CCB	01/27/25 16:14		Kareem	OK
14	Q1106-01DL	YE8G3	SAM	01/27/25 16:19	2x for Ca	Kareem	Confirms
15	Q1106-02DL	YE8G5	SAM	01/27/25 16:23	2x for Mn	Kareem	Confirms
16	Q1106-07DL	YE8H1	SAM	01/27/25 16:27	2x for Mn	Kareem	Confirms
17	Q1106-12DL	YE8H6	SAM	01/27/25 16:31	2x for Mn	Kareem	Confirms
18	Q1045-17DL	GCQ12	SAM	01/27/25 16:39	2x for Ba	Kareem	Confirms

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134438

Review By	Sarabjit Jaswal	Review On	1/28/2025 6:59:17 AM
Supervise By	Kareem Khairalla	Supervise On	1/28/2025 12:16:01 PM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84212,MP84210,MP84209,MP84208,MP84207,MP84206
ICV Standard	MP84213
CCV Standard	MP84216
ICSA Standard	MP84214,MP84215
CRI Standard	
LCS Standard	MP84063
Chk Standard	MP84218,MP84219

19	PB166225TB	LEB225	MB	01/27/25 16:43		Kareem	OK
20	Q1136-01	YE8F5	SAM	01/27/25 16:47		Kareem	OK
21	Q1136-02	YE8F7	SAM	01/27/25 16:56	NOT USE	Kareem	Not Ok
22	Q1105-01DL	YE8G3	SAM	01/27/25 17:00	5x for Ca	Kareem	Confirms
23	Q1136-03	YE8F7D	DUP	01/27/25 17:04	NOT USE	Kareem	Not Ok
24	Q1136-02L	YE8F7L	SD	01/27/25 17:08	NOT USE	Kareem	Not Ok
25	Q1136-04	YE8F7S	MS	01/27/25 17:12	NOT USE	Kareem	Not Ok
26	Q1136-05	YE8F8	SAM	01/27/25 17:16		Kareem	OK
27	Q1136-06	YE8E3	SAM	01/27/25 17:20		Kareem	OK
28	Q1136-07	YE8E4	SAM	01/27/25 17:24		Kareem	OK
29	Q1136-08	YE8E5	SAM	01/27/25 17:28		Kareem	OK
30	Q1136-09	YE8E6	SAM	01/27/25 17:32		Kareem	OK
31	Q1136-10	YE8E7	SAM	01/27/25 17:36		Kareem	OK
32	Q1136-11	YE8E8	SAM	01/27/25 17:40		Kareem	OK
33	Q1136-12	YE8D1	SAM	01/27/25 17:44		Kareem	OK
34	CCV022	CCV022	CCV	01/27/25 17:57		Kareem	OK
35	CCB022	CCB022	CCB	01/27/25 18:01		Kareem	OK
36	Q1136-13	YE8D2	SAM	01/27/25 18:05		Kareem	OK
37	Q1136-14	YE8D4	SAM	01/27/25 18:09		Kareem	OK
38	Q1136-15	YE8C3	SAM	01/27/25 18:13		Kareem	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134438

Review By	Sarabjit Jaswal	Review On	1/28/2025 6:59:17 AM
Supervise By	Kareem Khairalla	Supervise On	1/28/2025 12:16:01 PM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84212,MP84210,MP84209,MP84208,MP84207,MP84206
ICV Standard	MP84213
CCV Standard	MP84216
ICSA Standard	MP84214,MP84215
CRI Standard	
LCS Standard	MP84063
Chk Standard	MP84218,MP84219

39	Q1136-17	YE8D5	SAM	01/27/25 18:17		Kareem	OK
40	PB166225BL	PBW225	MB	01/27/25 18:21		Kareem	OK
41	PB166225BS	LCS225	LCS	01/27/25 18:26		Kareem	OK
42	Q1151-01	MC0AZ0	SAM	01/27/25 18:30	NOT USE	Kareem	Not Ok
43	Q1151-02	MC0AZ1	SAM	01/27/25 18:34	Co,Ni high	Kareem	Dilution
44	Q1151-03	MC0AZ2	SAM	01/27/25 18:38	Co,Ni high	Kareem	Dilution
45	Q1151-04	MC0AZ3	SAM	01/27/25 18:42		Kareem	OK
46	Q1151-05	MC0AZ4	SAM	01/27/25 18:46	Co high	Kareem	Dilution
47	Q1151-06	MC0AZ5	SAM	01/27/25 18:50		Kareem	OK
48	Q1151-07	MC0AZ6	SAM	01/27/25 18:54		Kareem	OK
49	Q1151-08	MC0AZ7	SAM	01/27/25 18:58		Kareem	OK
50	Q1151-09	MC0AZ7D	DUP	01/27/25 19:01		Kareem	OK
51	Q1151-08L	MC0AZ7L	SD	01/27/25 19:05		Kareem	OK
52	Q1151-10	MC0AZ7S	MS	01/27/25 19:09	MS fail for As(76.26 ppb), Be(17.66 ppb), Cu(243.04 ppb), Mn(384.13 ppb), Zn(541.32 ppb) & Sb,Se,Ag (Below RL)	Kareem	OK
53	Q1151-11	MC0B00	SAM	01/27/25 19:13		Kareem	OK
54	CCV023	CCV023	CCV	01/27/25 19:21		Kareem	OK
55	CCB023	CCB023	CCB	01/27/25 19:26		Kareem	OK
56	Q1151-12	MC0B01	SAM	01/27/25 19:30		Kareem	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134438

Review By	Sarabjit Jaswal	Review On	1/28/2025 6:59:17 AM
Supervise By	Kareem Khairalla	Supervise On	1/28/2025 12:16:01 PM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84212,MP84210,MP84209,MP84208,MP84207,MP84206
ICV Standard	MP84213
CCV Standard	MP84216
ICSA Standard	MP84214,MP84215
CRI Standard	
LCS Standard	MP84063
Chk Standard	MP84218,MP84219

57	Q1163-01	ME2946	SAM	01/27/25 19:34	Fe high	Kareem	Dilution
58	Q1163-02	ME2947	SAM	01/27/25 19:38	Ca high	Kareem	Dilution
59	Q1163-03	ME2947D	DUP	01/27/25 19:42	Ca high	Kareem	Dilution
60	Q1163-02L	ME2947L	SD	01/27/25 19:47	Ca high	Kareem	Dilution
61	Q1163-04	ME2947S	MS	01/27/25 19:51		Kareem	OK
62	PB166229BL	PBS229	MB	01/27/25 19:55		Kareem	OK
63	PB166229BS	LCS229	LCS	01/27/25 19:59		Kareem	OK
64	Q1181-01	MBHH96	SAM	01/27/25 20:03		Kareem	OK
65	Q1181-02	MBHH97	SAM	01/27/25 20:07		Kareem	OK
66	Q1181-03	MBHH98	SAM	01/27/25 20:11		Kareem	OK
67	Q1181-04	MBHH99	SAM	01/27/25 20:15		Kareem	OK
68	Q1181-05	MBHH99D	DUP	01/27/25 20:19		Kareem	OK
69	Q1181-04L	MBHH99L	SD	01/27/25 20:23		Kareem	OK
70	Q1181-06	MBHH99S	MS	01/27/25 20:27		Kareem	OK
71	PB166278BL	PBS278	MB	01/27/25 20:31		Kareem	OK
72	PB166278BS	LCS278	LCS	01/27/25 20:35		Kareem	OK
73	CCV024	CCV024	CCV	01/27/25 20:44		Kareem	OK
74	CCB024	CCB024	CCB	01/27/25 20:48		Kareem	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134460

Review By	Kareem Khairalla	Review On	1/29/2025 10:02:19 AM
Supervise By	Sarabjit Jaswal	Supervise On	1/30/2025 7:27:43 AM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84212,MP84210,MP84209,MP84208,MP84207,MP84206
ICV Standard	MP84213
CCV Standard	MP84216
ICSA Standard	MP84214,MP84215
CRI Standard	WP110806,WP110804
LCS Standard	MP84063
Chk Standard	MP84218,MP84219

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	01/28/25 17:57		Kareem	OK
2	S1	S01	CAL2	01/28/25 18:01		Kareem	OK
3	S2	S02	CAL3	01/28/25 18:05		Kareem	OK
4	S3	S03	CAL4	01/28/25 18:09		Kareem	OK
5	S4	S04	CAL5	01/28/25 18:14		Kareem	OK
6	S5	S05	CAL6	01/28/25 18:18		Kareem	OK
7	S6	S06	CAL7	01/28/25 18:22		Kareem	OK
8	ICV004	ICV004	ICV	01/28/25 19:08	Inst. paused for calibration review	Kareem	OK
9	ICB004	ICB004	ICB	01/28/25 19:12		Kareem	OK
10	ICSA004	ICSA004	ICSA	01/28/25 19:29	Inst. paused for review	Kareem	OK
11	ICSAB004	ICSAB004	ICSAB	01/28/25 19:33		Kareem	OK
12	CCV025	CCV025	CCV	01/28/25 19:37		Kareem	OK
13	CCB025	CCB025	CCB	01/28/25 19:41		Kareem	OK
14	Q1136-02	YE8F7	SAM	01/28/25 19:45	NOT USE	Kareem	Not Ok
15	Q1136-03	YE8F7D	DUP	01/28/25 19:49	NOT USE	Kareem	Not Ok
16	Q1136-02L	YE8F7L	SD	01/28/25 19:53	NOT USE	Kareem	Not Ok
17	Q1136-04	YE8F7S	MS	01/28/25 19:57	NOT USE	Kareem	Not Ok
18	Q1151-01	MC0AZ0	SAM	01/28/25 20:01	Cr,Co,Ni high	Kareem	Dilution

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134460

Review By	Kareem Khairalla	Review On	1/29/2025 10:02:19 AM
Supervise By	Sarabjit Jaswal	Supervise On	1/30/2025 7:27:43 AM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84212,MP84210,MP84209,MP84208,MP84207,MP84206
ICV Standard	MP84213
CCV Standard	MP84216
ICSA Standard	MP84214,MP84215
CRI Standard	WP110806,WP110804
LCS Standard	MP84063
Chk Standard	MP84218,MP84219

19	Q1151-01DL	MC0AZ0	SAM	01/28/25 20:05	NOT USE	Kareem	Not Ok
20	Q1151-02DL	MC0AZ1	SAM	01/28/25 20:10	2x for Co,Ni high, Still Co,Ni high	Kareem	Dilution
21	Q1151-03DL	MC0AZ2	SAM	01/28/25 20:13	2x for Co,Ni	Kareem	Confirms
22	Q1151-05DL	MC0AZ4	SAM	01/28/25 20:17	2x for Co	Kareem	Confirms
23	Q1151-08A	MC0AZ7A	PS	01/28/25 20:21	PS for As,Be,Cu,Mn,Se,Zn(0.0152 ML MP84220,0.035 ML MP84252,0.0048 ML M5715,0.0076 ML M6128,0.007 ML MP84254,0.01 ML M5819)	Kareem	OK
24	Q1163-01DL	ME2946	SAM	01/28/25 20:25	5x for Fe	Kareem	Confirms
25	Q1163-02DL	ME2947	SAM	01/28/25 20:29	2x for Ca	Kareem	Confirms
26	Q1163-03DL	ME2947D	DUP	01/28/25 20:33	2x for Ca	Kareem	Confirms
27	Q1163-02LDL	ME2947L	SD	01/28/25 20:37	10x for Ca	Kareem	Confirms
28	Q1163-04DL	ME2947S	MS	01/28/25 20:41	not required	Kareem	Not Ok
29	PB166236TB	LEB236	MB	01/28/25 20:45		Kareem	OK
30	Q1164-01	ME2946	SAM	01/28/25 20:50		Kareem	OK
31	Q1164-02	ME2947	SAM	01/28/25 20:54		Kareem	OK
32	Q1164-03	ME2947D	DUP	01/28/25 20:58		Kareem	OK
33	Q1164-02L	ME2947L	SD	01/28/25 21:02		Kareem	OK
34	CCV026	CCV026	CCV	01/28/25 21:11		Kareem	OK
35	CCB026	CCB026	CCB	01/28/25 21:15		Kareem	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134460

Review By	Kareem Khairalla	Review On	1/29/2025 10:02:19 AM
Supervise By	Sarabjit Jaswal	Supervise On	1/30/2025 7:27:43 AM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84212,MP84210,MP84209,MP84208,MP84207,MP84206
ICV Standard	MP84213
CCV Standard	MP84216
ICSA Standard	MP84214,MP84215
CRI Standard	WP110806,WP110804
LCS Standard	MP84063
Chk Standard	MP84218,MP84219

36	Q1164-04	ME2947S	MS	01/28/25 21:19		Kareem	OK
37	Q1182-01	MBHH96	SAM	01/28/25 21:24		Kareem	OK
38	Q1182-02	MBHH97	SAM	01/28/25 21:28		Kareem	OK
39	Q1182-03	MBHH98	SAM	01/28/25 21:32		Kareem	OK
40	Q1182-04	MBHH99	SAM	01/28/25 21:36		Kareem	OK
41	Q1182-05	MBHH99D	DUP	01/28/25 21:40		Kareem	OK
42	Q1182-04L	MBHH99L	SD	01/28/25 21:44		Kareem	OK
43	Q1182-06	MBHH99S	MS	01/28/25 21:49		Kareem	OK
44	PB166272BL	PBW272	MB	01/28/25 21:53		Kareem	OK
45	PB166272BS	LCS272	LCS	01/28/25 21:57		Kareem	OK
46	PB166267TB	LEB267	MB	01/28/25 22:01		Kareem	OK
47	Q1160-01	YE8C9	SAM	01/28/25 22:05		Kareem	OK
48	Q1160-02	YE8C9D	DUP	01/28/25 22:09		Kareem	OK
49	Q1160-01L	YE8C9L	SD	01/28/25 22:13		Kareem	OK
50	Q1160-03	YE8C9S	MS	01/28/25 22:17		Kareem	OK
51	Q1160-04	YE8D0	SAM	01/28/25 22:21		Kareem	OK
52	Q1160-05	YE8D3	SAM	01/28/25 22:25		Kareem	OK
53	PB166267BL	PBW267	MB	01/28/25 22:29		Kareem	OK
54	PB166267BS	LCS267	LCS	01/28/25 22:33		Kareem	OK
55	CCV027	CCV027	CCV	01/28/25 22:42		Kareem	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134460

Review By	Kareem Khairalla	Review On	1/29/2025 10:02:19 AM
Supervise By	Sarabjit Jaswal	Supervise On	1/30/2025 7:27:43 AM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84212,MP84210,MP84209,MP84208,MP84207,MP84206
ICV Standard	MP84213
CCV Standard	MP84216
ICSA Standard	MP84214,MP84215
CRI Standard	WP110806,WP110804
LCS Standard	MP84063
Chk Standard	MP84218,MP84219

56	CCB027	CCB027	CCB	01/28/25 22:46		Kareem	OK

EPA SAMPLE NO.

ME2946

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51900 MA No. : SDG No.: ME2946

Matrix: SOIL Lab Sample ID: Q1163-01

% Solids: 90.8 Date Received: 01/22/2025

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	0.71	J	01/28/2025	1540
7440-38-2	Arsenic	8.5		01/28/2025	1540
7440-39-3	Barium	73		01/28/2025	1540
7440-41-7	Beryllium	0.56		01/28/2025	1540
7440-43-9	Cadmium	1.7		01/28/2025	1540
7440-47-3	Chromium	200		01/28/2025	1540
7440-48-4	Cobalt	8.3		01/28/2025	1540
7440-50-8	Copper	44		01/28/2025	1540
7439-92-1	Lead	270		01/28/2025	1540
7439-96-5	Manganese	4100		01/28/2025	1540
7440-02-0	Nickel	98		01/28/2025	1540
7782-49-2	Selenium	2.4	U*	01/28/2025	1540
7440-22-4	Silver	0.88		01/28/2025	1540
7440-28-0	Thallium	0.32	J	01/28/2025	1540
7440-62-2	Vanadium	38		01/28/2025	1540
7440-66-6	Zinc	670	*	01/28/2025	1540

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

Comments:

EPA SAMPLE NO.

ME2947

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51900 MA No. : SDG No.: ME2946

Matrix: SOIL Lab Sample ID: Q1163-02

% Solids: 88.8 Date Received: 01/22/2025

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	01/28/2025	1543
7440-38-2	Arsenic	6.6		01/28/2025	1543
7440-39-3	Barium	63		01/28/2025	1543
7440-41-7	Beryllium	0.45	J	01/28/2025	1543
7440-43-9	Cadmium	0.31	J	01/28/2025	1543
7440-47-3	Chromium	28		01/28/2025	1543
7440-48-4	Cobalt	8.4		01/28/2025	1543
7440-50-8	Copper	22		01/28/2025	1543
7439-92-1	Lead	26		01/28/2025	1543
7439-96-5	Manganese	610		01/28/2025	1543
7440-02-0	Nickel	26		01/28/2025	1543
7782-49-2	Selenium	0.65	J*	01/28/2025	1543
7440-22-4	Silver	0.15	J	01/28/2025	1543
7440-28-0	Thallium	0.28	J	01/28/2025	1543
7440-62-2	Vanadium	18		01/28/2025	1543
7440-66-6	Zinc	100	*	01/28/2025	1543

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

Comments:

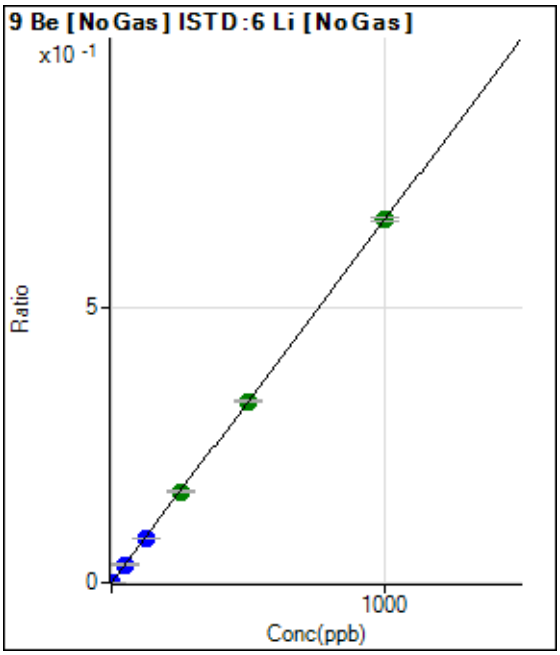
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

Calibration for 006CALS.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\P8012825MS.b\
Analysis File: P8012825MS.batch.bin
DA Date-Time: 2025-01-28 17:18:11
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	004CALB.d	S00	2025-01-28 12:10:06
2	006CALS.d	S02	2025-01-28 12:16:52
3	007CALB.d	S03	2025-01-28 12:20:13
4	008CALS.d	S04	2025-01-28 12:23:25
5	009CALS.d	S05	2025-01-28 12:26:27
6	010CALS.d	S06	2025-01-28 12:29:25
7	011CALS.d	S07	2025-01-28 12:32:15
8	012CALS.d	S08	2025-01-28 12:35:02

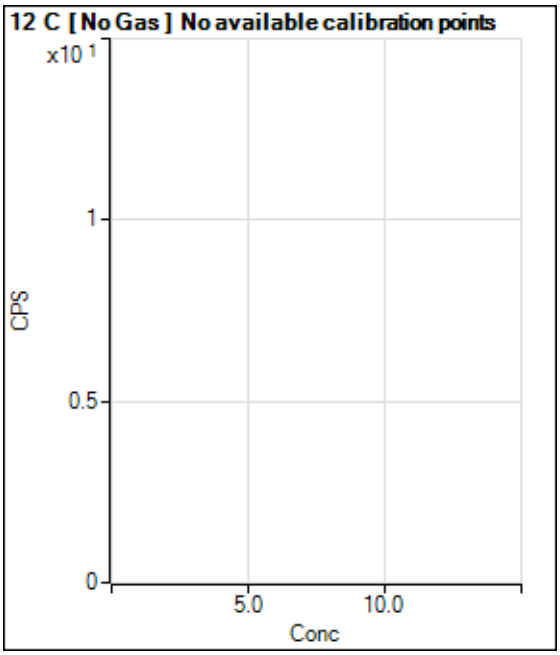
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	205.40	0.0000	P	4.7
2	☐	1.000	1.051	4759.35	0.0007	P	3.6
3	☐	50.000	50.126	214726.21	0.0330	P	1.6
4	☐	125.000	121.426	524925.50	0.0800	P	1.8
5	☐	250.000	250.939	1093394.64	0.1652	A	2.7
6	☐	500.000	499.388	2179665.04	0.3288	A	1.1
7	☐	1000.000	1000.512	4356270.63	0.6587	A	1.0
8	☐			1066.58	0.0002	P	11.2

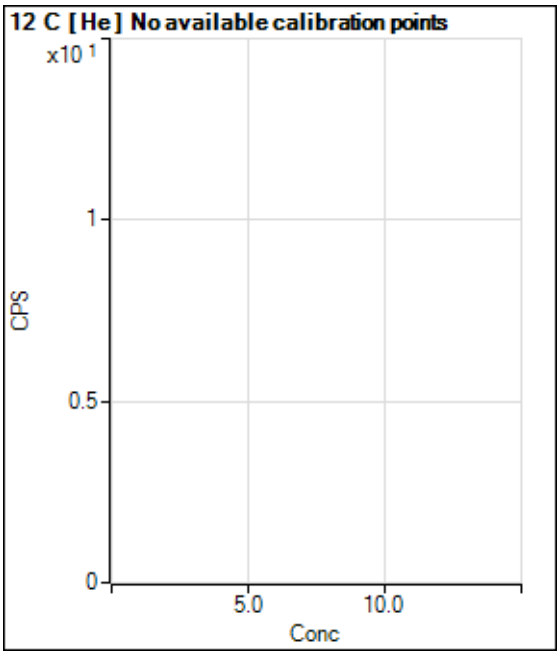
y = 6.5830E-004 * x + 3.1412E-005
R = 1.0000
DL = 0.006708
BEC = 0.04772

Weight: <None>
Min Conc: 0

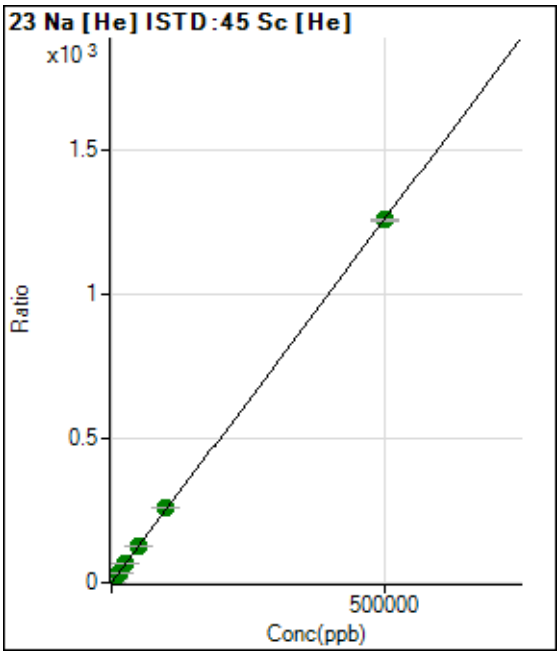


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1911508.08		A	1.8
2	☐			2016339.43		A	2.1
3	☐			2067327.59		A	1.7
4	☐			2222367.92		A	1.4
5	☐			2285811.32		A	0.6
6	☐			2539403.03		A	2.0
7	☐			3009697.25		A	2.1
8	☐			3003786.28		A	4.1

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			12767.84		P	1.5
2	☐			13676.43		P	0.8
3	☐			13920.00		P	0.9
4	☐			15048.89		P	1.6
5	☐			15955.38		P	1.2
6	☐			18554.03		P	1.3
7	☐			22607.44		P	2.2
8	☐			25947.37		P	1.3

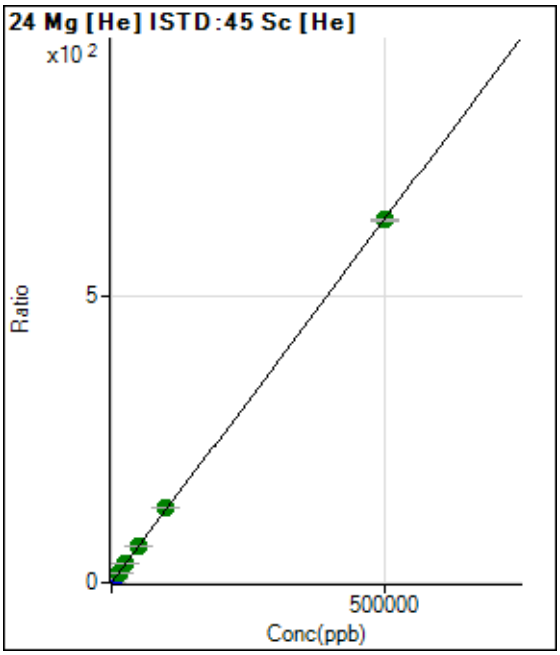


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	19518.68	0.1671	P	1.1
2	☐	500.000	527.119	174261.46	1.4962	P	2.0
3	☐	5000.000	5251.127	1548141.21	13.4075	A	1.6
4	☐	12500.000	12809.759	3804851.65	32.4662	A	1.3
5	☐	25000.000	25710.155	7817287.94	64.9938	A	1.7
6	☐	50000.000	50287.607	15594208.65	126.9644	A	0.9
7	☐	100000.00	102767.78	32066987.02	259.2902	A	0.5
8	☐	500000.00	499371.89	118614633.7	1,259.305	A	0.8

y = 0.0025 * x + 0.1671
R = 1.0000
DL = 2.183
BEC = 66.26

Weight: <None>
Min Conc: 0

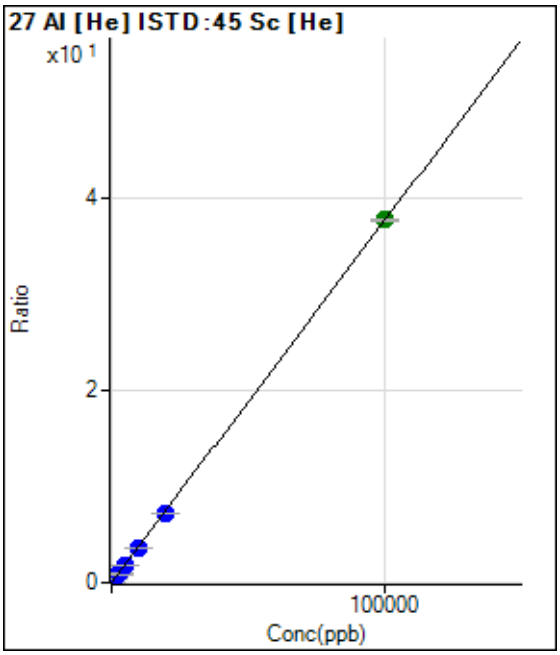
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1064.49	0.0091	P	8.5
2	☐	500.000	542.633	81419.86	0.6990	P	1.7
3	☐	5000.000	5160.497	758583.87	6.5703	P	0.6
4	☐	12500.000	13137.277	1958257.36	16.7122	A	2.5
5	☐	25000.000	26100.353	3992203.83	33.1938	A	2.1
6	☐	50000.000	50443.094	7878361.34	64.1439	A	0.9
7	☐	100000.00	102896.56	16180500.04	130.8347	A	1.3
8	☐	500000.00	499303.78	59796278.55	634.8379	A	0.7

y = 0.0013 * x + 0.0091
R = 1.0000
DL = 1.829
BEC = 7.166

Weight: <None>
Min Conc: 0

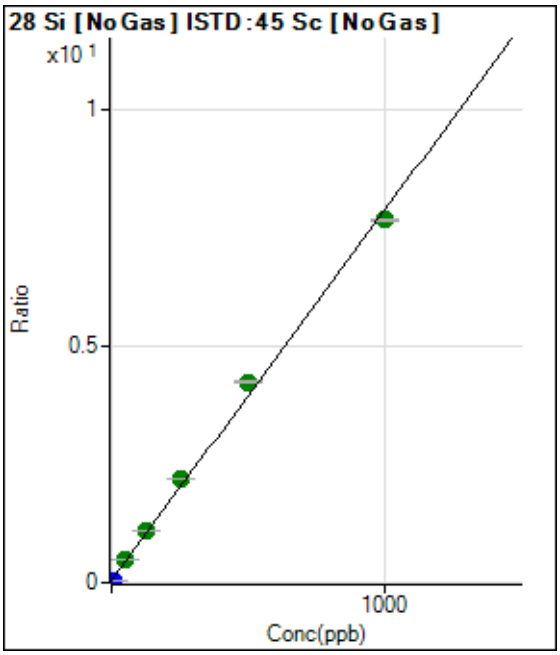


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0004	P	45.9
2	☐	20.000	19.686	913.37	0.0078	P	6.6
3	☐	1000.000	986.896	42966.53	0.3721	P	0.9
4	☐	2500.000	2396.646	105840.17	0.9031	P	1.9
5	☐	5000.000	4808.408	217886.83	1.8116	P	1.9
6	☐	10000.000	9477.065	438497.09	3.5700	P	0.3
7	☐	20000.000	19180.047	893501.59	7.2247	P	0.3
8	☐	100000.00	100228.57	3555920.47	37.7523	A	0.5

y = 3.7666E-004 * x + 4.2742E-004
R = 1.0000
DL = 1.564
BEC = 1.135

Weight: <None>
Min Conc: 0

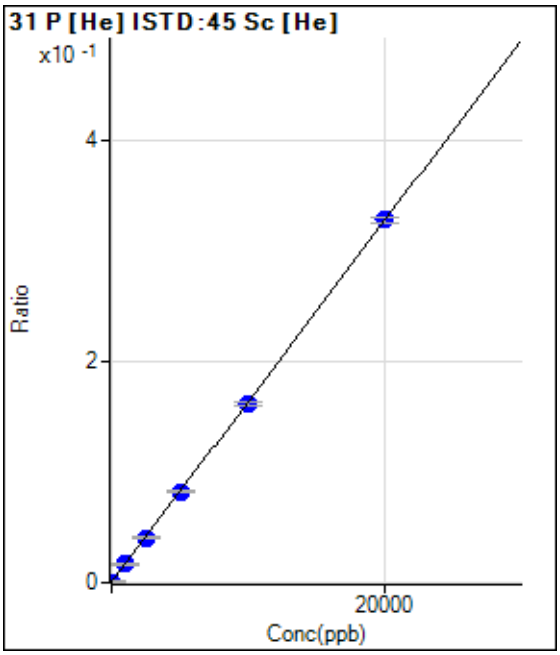
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	326451.57	0.0454	P	1.0
2	☐	10.000	1.045	383999.76	0.0536	P	0.1
3	☐	50.000	56.593	3417983.91	0.4875	A	1.6
4	☐	125.000	135.320	7923163.22	1.1025	A	1.3
5	☐	250.000	275.834	15878850.60	2.2002	A	0.8
6	☐	500.000	534.748	31318312.87	4.2227	A	1.0
7	☐	1000.000	974.637	56990910.82	7.6590	A	0.3
8	☐			426321.88	0.0695	P	3.5

y = 0.0078 * x + 0.0454
R = 0.9985
DL = 0.1756
BEC = 5.815

Weight: <None>
Min Conc: 0

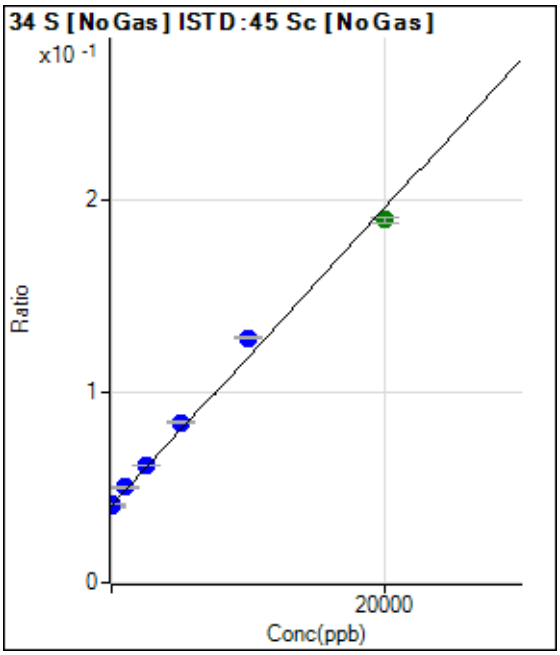


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-16.064	35.56	0.0003	P	59.9
2	☐	0.000	16.064	96.67	0.0008	P	14.3
3	☐	1000.000	987.259	1929.04	0.0167	P	4.0
4	☐	2500.000	2462.171	4783.05	0.0408	P	3.0
5	☐	5000.000	5013.282	9923.46	0.0825	P	3.8
6	☐	10000.000	9893.347	19936.02	0.1623	P	2.2
7	☐	20000.000	20055.372	40615.60	0.3284	P	1.5
8	☐			38.89	0.0004	P	49.7

y = 1.6347E-005 * x + 5.6654E-004
R = 1.0000
DL = 27.59
BEC = 34.66

Weight: <None>
Min Conc: 0

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-47.305	288087.22	0.0401	P	1.5
2	☐	0.000	47.305	292532.51	0.0408	P	0.0
3	☐	1000.000	1227.707	350702.49	0.0500	P	2.2
4	☐	2500.000	2645.206	438898.78	0.0611	P	0.4
5	☐	5000.000	5588.716	606269.08	0.0840	P	1.7
6	☐	10000.000	11260.122	950904.10	0.1282	P	0.5
7	☐	20000.000	19193.224	1414031.70	0.1900	A	1.8
8	☐			251018.18	0.0410	P	0.9

y = 7.7930E-006 * x + 0.0405

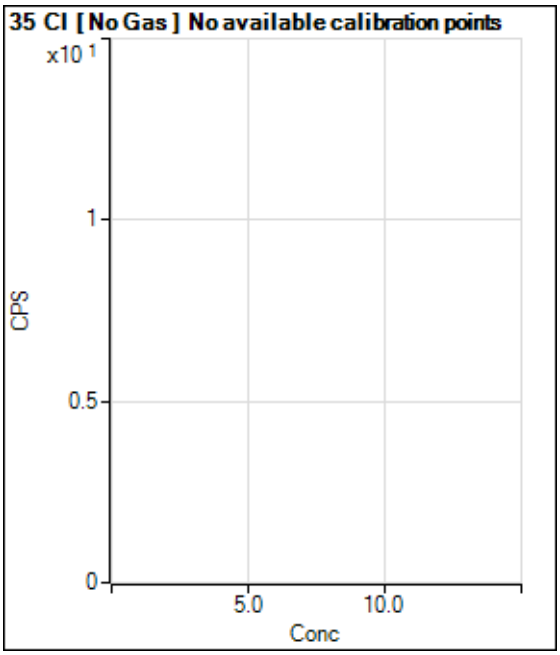
R = 0.9964

DL = 119.7

BEC = 5192

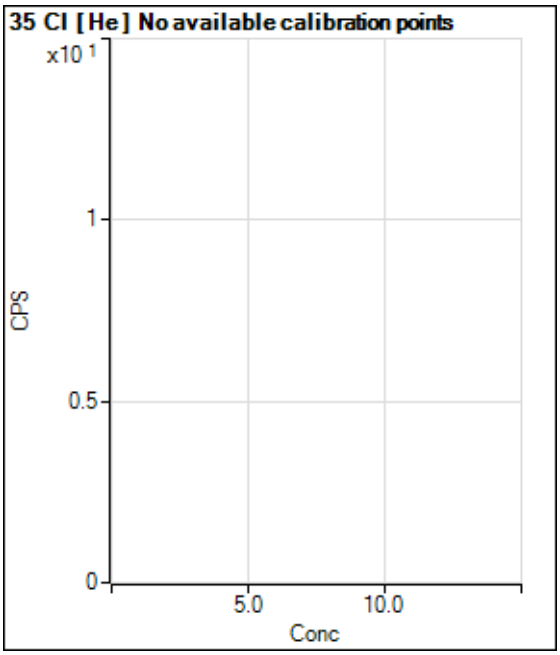
Weight: <None>

Min Conc: 0

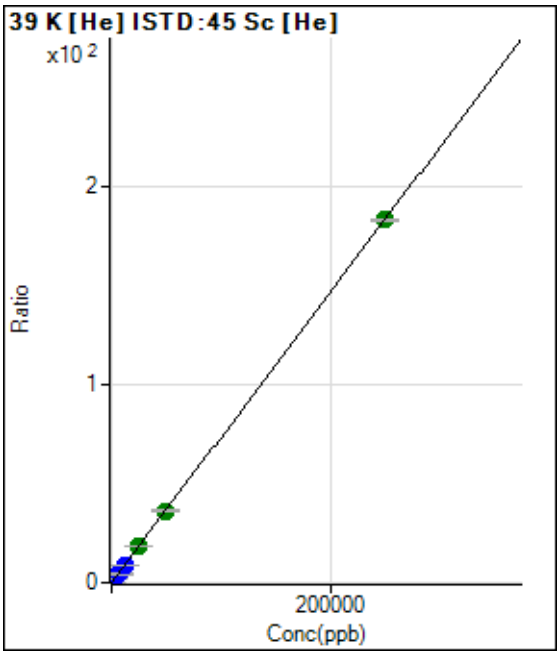


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			158954.84		P	3.5
2	☐			160264.91		P	4.2
3	☐			158618.85		P	3.9
4	☐			156615.28		P	4.1
5	☐			152486.08		P	3.0
6	☐			138551.24		P	2.6
7	☐			118046.39		P	1.7
8	☐			75564.71		P	3.5

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			635.58		P	17.4
2	☐			600.02		P	3.6
3	☐			587.79		P	6.6
4	☐			603.35		P	8.9
5	☐			598.91		P	5.6
6	☐			487.79		P	7.5
7	☐			443.34		P	0.8
8	☐			267.78		P	19.1

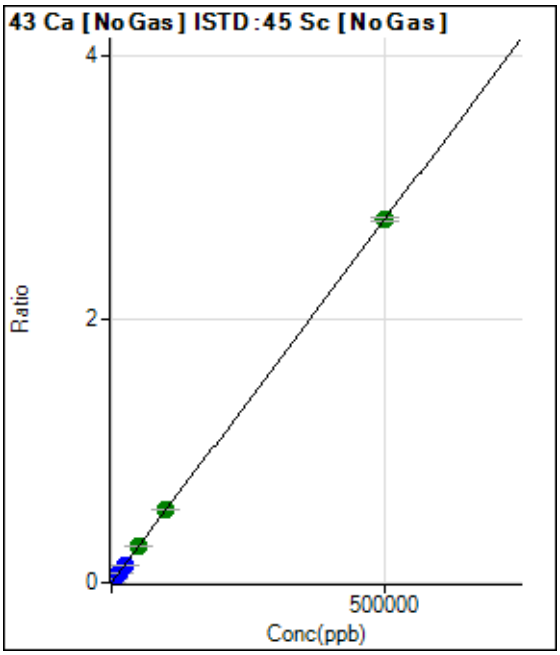


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5119.85	0.0438	P	2.7
2	☐	500.000	508.104	48489.94	0.4163	P	2.3
3	☐	2500.000	2400.307	208235.59	1.8036	P	0.9
4	☐	6250.000	5946.881	516065.17	4.4038	P	1.9
5	☐	12500.000	11843.901	1049755.25	8.7272	P	1.2
6	☐	25000.000	24732.879	2232518.63	18.1767	A	1.0
7	☐	50000.000	49493.193	4493038.51	36.3298	A	0.8
8	☐	250000.00	250169.43	17279385.57	183.4556	A	0.7

y = 7.3315E-004 * x + 0.0438
R = 1.0000
DL = 4.808
BEC = 59.77

Weight: <None>
Min Conc: 0

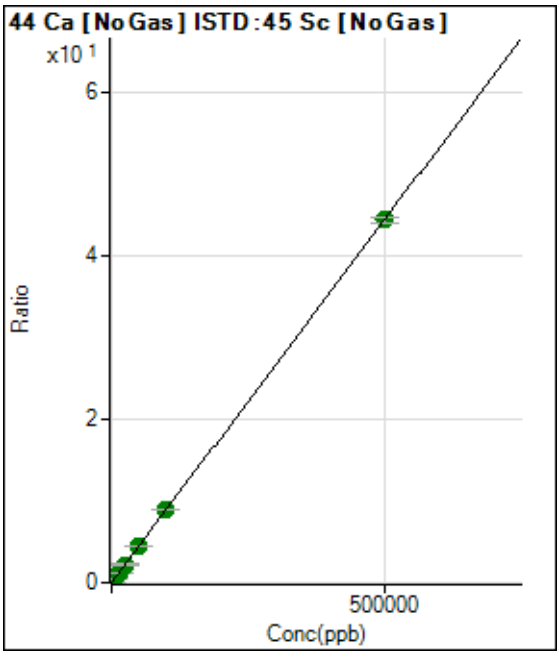
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	380.01	0.0001	P	9.7
2	☐	500.000	543.471	21848.87	0.0030	P	1.0
3	☐	5000.000	4995.386	193458.90	0.0276	P	1.9
4	☐	12500.000	12086.782	479288.19	0.0667	P	0.9
5	☐	25000.000	24534.337	976583.31	0.1353	P	2.1
6	☐	50000.000	49794.573	2036537.76	0.2746	A	1.0
7	☐	100000.00	100766.61	4134419.83	0.5556	A	0.3
8	☐	500000.00	499900.83	16891269.33	2.7562	A	1.2

y = 5.5135E-006 * x + 5.2874E-005
R = 1.0000
DL = 2.798
BEC = 9.59

Weight: <None>
Min Conc: 0

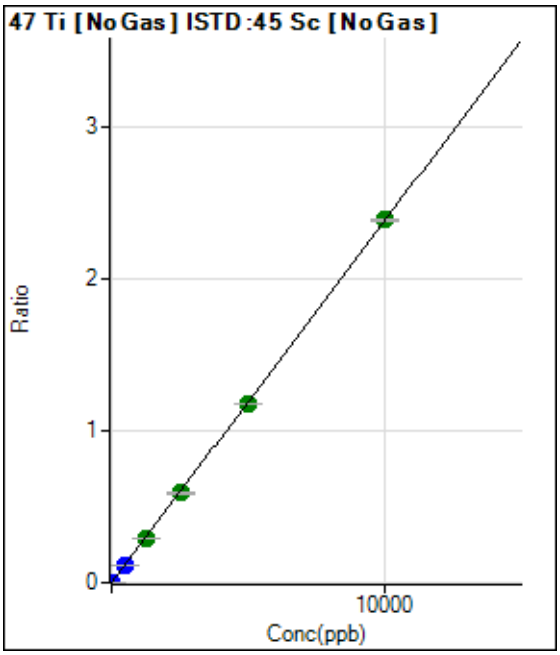


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6697.18	0.0009	P	1.7
2	☐	500.000	545.797	353978.89	0.0494	P	0.8
3	☐	5000.000	5061.768	3157907.49	0.4505	A	2.1
4	☐	12500.000	12257.053	7829363.49	1.0895	A	1.6
5	☐	25000.000	24883.499	15953623.79	2.2108	A	2.7
6	☐	50000.000	49271.631	32461967.30	4.3767	A	0.1
7	☐	100000.00	100635.56	66508555.12	8.9382	A	0.7
8	☐	500000.00	499956.95	272147587.0	44.4012	A	1.3

y = 8.8808E-005 * x + 9.3178E-004
R = 1.0000
DL = 0.5242
BEC = 10.49

Weight: <None>
Min Conc: 0

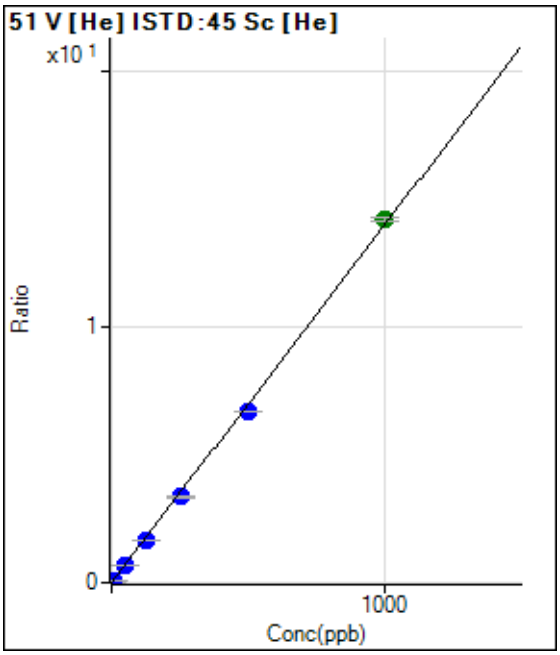
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	114.45	0.0000	P	2.5
2	☐	5.000	5.090	8779.43	0.0012	P	1.3
3	☐	500.000	491.889	819473.68	0.1169	P	1.2
4	☐	1250.000	1236.988	2112120.85	0.2939	A	0.2
5	☐	2500.000	2484.874	4260202.61	0.5904	A	2.5
6	☐	5000.000	4943.534	8711307.86	1.1745	A	0.4
7	☐	10000.000	10034.046	17738660.15	2.3839	A	0.9
8	☐			4372.94	0.0007	P	4.1

y = 2.3758E-004 * x + 1.5927E-005
R = 1.0000
DL = 0.005019
BEC = 0.06704

Weight: <None>
Min Conc: 0

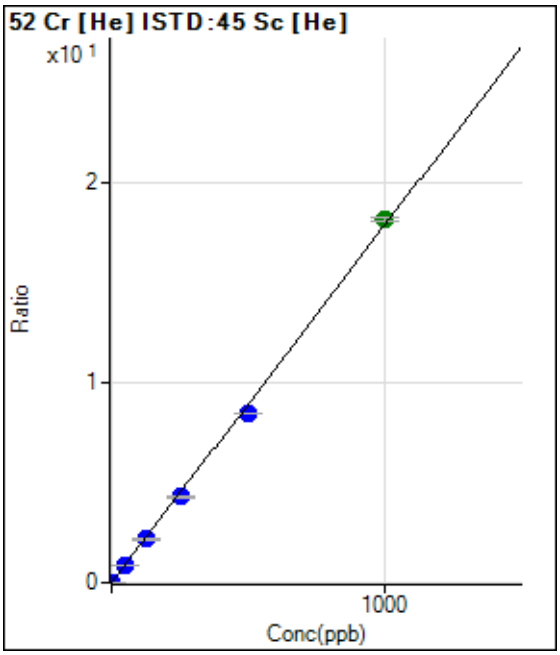


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	99.8
2	☐	5.000	4.936	8037.88	0.0690	P	0.7
3	☐	50.000	48.153	77689.02	0.6729	P	1.9
4	☐	125.000	119.899	196338.93	1.6755	P	1.9
5	☐	250.000	239.789	402998.86	3.3508	P	2.1
6	☐	500.000	476.798	818361.26	6.6627	P	0.3
7	☐	1000.000	1014.884	1753883.29	14.1818	A	1.2
8	☐			302.23	0.0032	P	13.9

y = 0.0140 * x + 2.8554E-005
R = 0.9995
DL = 0.006121
BEC = 0.002043

Weight: <None>
Min Conc: 0

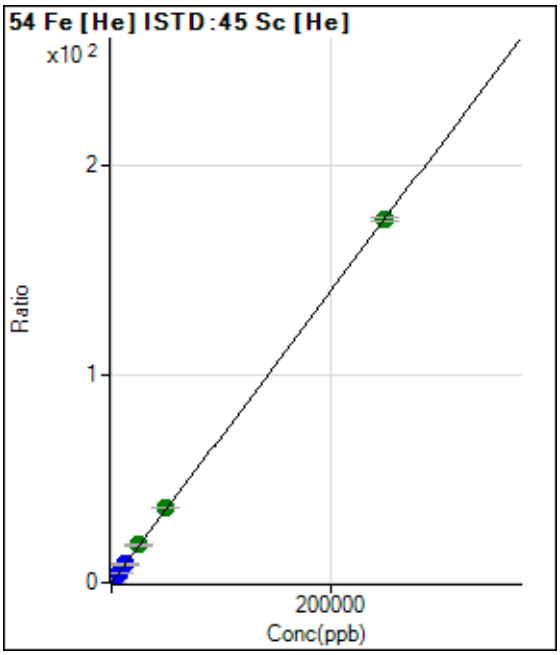
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	574.46	0.0049	P	3.4
2	☐	2.000	2.020	4770.85	0.0410	P	5.8
3	☐	50.000	49.383	102347.86	0.8865	P	1.5
4	☐	125.000	120.965	253642.56	2.1644	P	1.6
5	☐	250.000	241.374	518835.12	4.3139	P	2.1
6	☐	500.000	473.579	1039010.51	8.4592	P	0.5
7	☐	1000.000	1015.902	2243529.70	18.1407	A	1.0
8	☐			3017.87	0.0320	P	19.2

y = 0.0179 * x + 0.0049
R = 0.9994
DL = 0.02785
BEC = 0.2754

Weight: <None>
Min Conc: 0

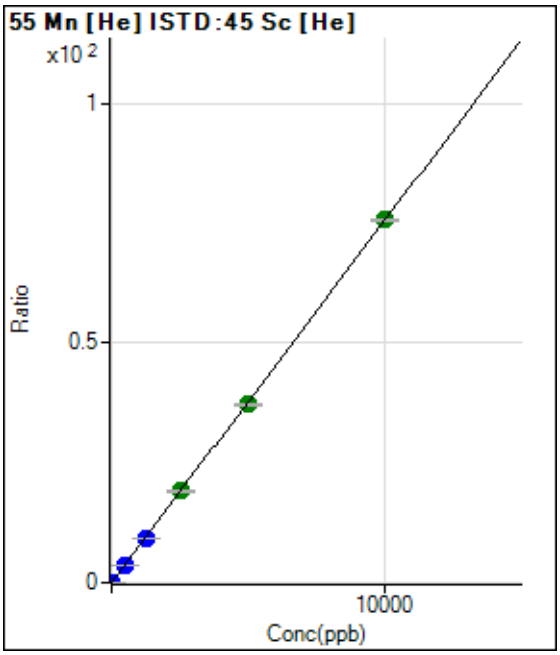


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	448.90	0.0038	P	2.0
2	☐	50.000	55.959	4992.04	0.0428	P	1.1
3	☐	2500.000	2596.960	209444.28	1.8141	P	1.1
4	☐	6250.000	6354.555	519548.79	4.4334	P	1.6
5	☐	12500.000	12599.354	1056890.72	8.7864	P	1.1
6	☐	25000.000	25934.017	2220747.59	18.0815	A	2.0
7	☐	50000.000	51590.149	4447950.39	35.9654	A	0.3
8	☐	250000.00	249580.01	16387250.04	173.9767	A	1.1

y = 6.9706E-004 * x + 0.0038
R = 1.0000
DL = 0.3271
BEC = 5.513

Weight: <None>
Min Conc: 0

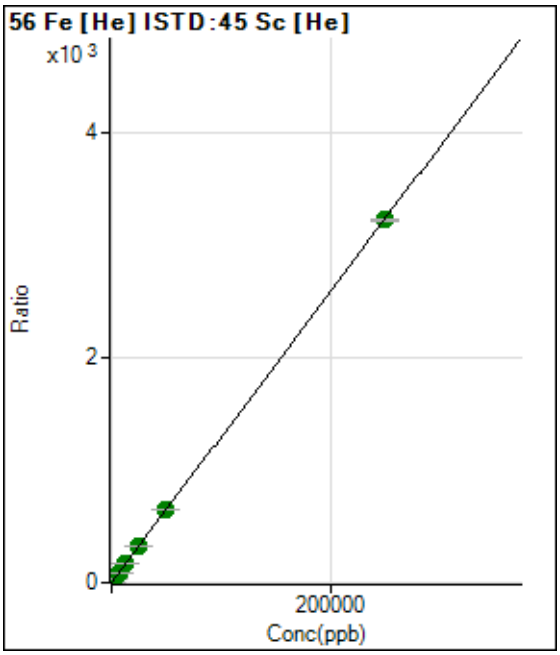
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	242.23	0.0021	P	8.6
2	☐	1.000	1.097	1206.73	0.0104	P	5.2
3	☐	500.000	495.452	432320.85	3.7445	P	1.2
4	☐	1250.000	1216.165	1076786.31	9.1885	P	1.6
5	☐	2500.000	2545.590	2312959.41	19.2305	A	1.9
6	☐	5000.000	4935.000	4578664.66	37.2793	A	1.3
7	☐	10000.000	10025.559	9365994.17	75.7315	A	0.6
8	☐			3129.26	0.0332	P	3.8

y = 0.0076 * x + 0.0021
R = 1.0000
DL = 0.07065
BEC = 0.2745

Weight: <None>
Min Conc: 0

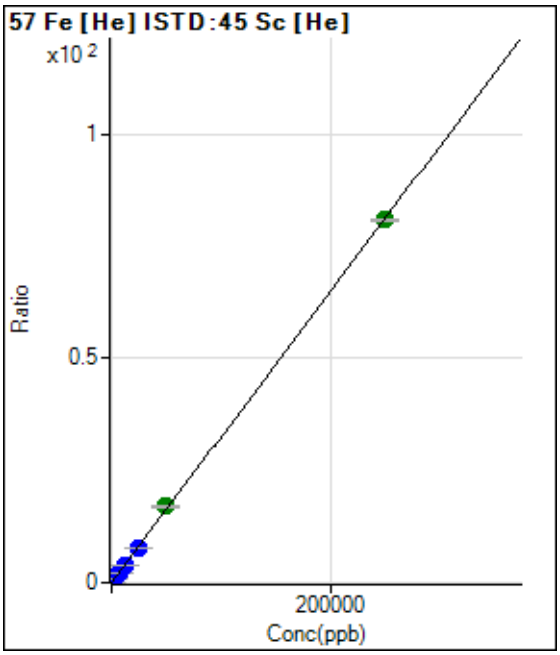


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6354.80	0.0544	P	2.5
2	☐	50.000	55.030	89200.68	0.7659	P	2.4
3	☐	2500.000	2658.250	3974263.52	34.4232	A	1.3
4	☐	6250.000	6421.909	9736197.84	83.0841	A	1.9
5	☐	12500.000	12774.241	19871843.45	165.2141	A	1.8
6	☐	25000.000	25090.024	39848531.91	324.4464	A	1.4
7	☐	50000.000	50687.469	81055532.68	655.3990	A	0.6
8	☐	250000.00	249833.91	304255866.5	3,230.188	A	0.7

y = 0.0129 * x + 0.0544
R = 1.0000
DL = 0.3189
BEC = 4.207

Weight: <None>
Min Conc: 0

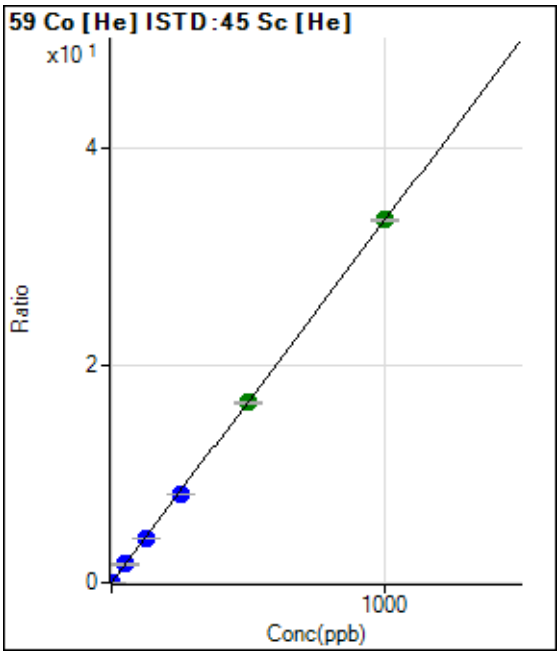
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	178.89	0.0015	P	12.3
2	☐	50.000	54.579	2241.32	0.0192	P	1.8
3	☐	2500.000	2572.024	96505.65	0.8359	P	1.6
4	☐	6250.000	6266.213	238379.47	2.0343	P	2.1
5	☐	12500.000	12421.845	484878.43	4.0311	P	1.4
6	☐	25000.000	24382.050	971681.59	7.9110	P	0.5
7	☐	50000.000	52316.616	2099093.96	16.9729	A	0.5
8	☐	250000.00	249601.25	7626838.29	80.9715	A	0.9

y = 3.2440E-004 * x + 0.0015
R = 0.9999
DL = 1.739
BEC = 4.719

Weight: <None>
Min Conc: 0

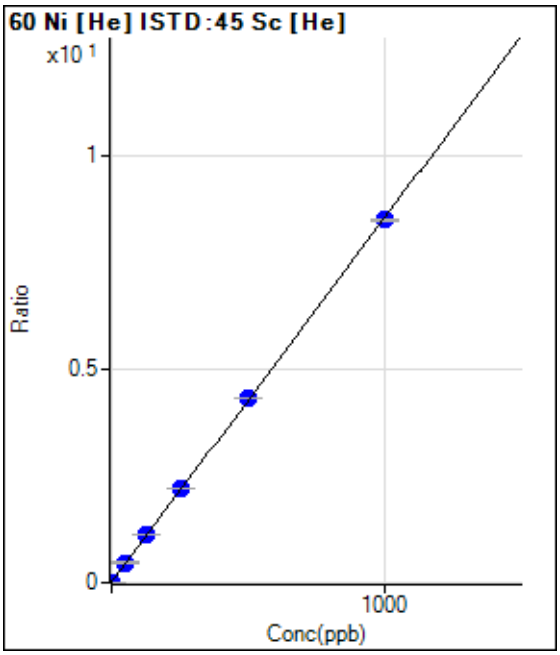


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	175.56	0.0015	P	4.3
2	☐	1.000	1.082	4377.38	0.0376	P	2.5
3	☐	50.000	50.569	194808.53	1.6873	P	1.4
4	☐	125.000	123.321	481990.03	4.1127	P	1.2
5	☐	250.000	243.456	976436.80	8.1177	P	1.3
6	☐	500.000	498.849	2042853.55	16.6319	A	1.1
7	☐	1000.000	1002.393	4133026.74	33.4189	A	0.4
8	☐			6354.81	0.0675	P	1.5

y = 0.0333 * x + 0.0015
R = 1.0000
DL = 0.005873
BEC = 0.04508

Weight: <None>
Min Conc: 0

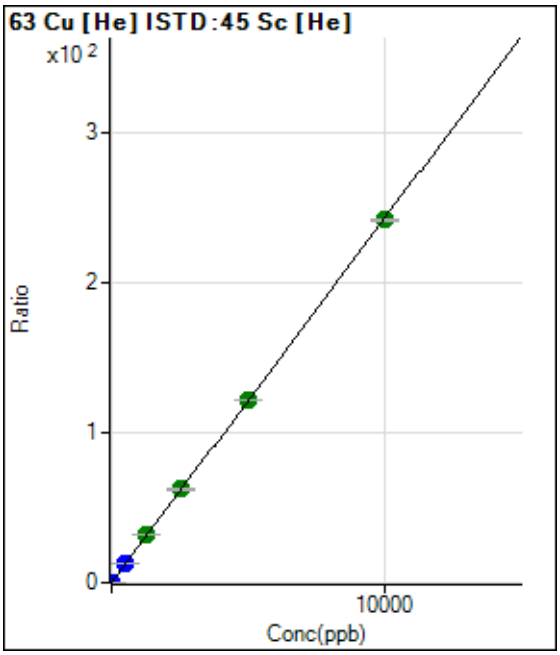
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	882.26	0.0076	P	8.4
2	☐	1.000	1.122	1996.83	0.0171	P	0.4
3	☐	50.000	54.429	54588.47	0.4728	P	1.2
4	☐	125.000	130.709	131818.99	1.1249	P	1.9
5	☐	250.000	257.904	266081.22	2.2121	P	1.5
6	☐	500.000	504.210	530317.57	4.3176	P	0.3
7	☐	1000.000	994.984	1052807.59	8.5128	P	0.6
8	☐			2396.89	0.0254	P	2.0

y = 0.0085 * x + 0.0076
R = 0.9999
DL = 0.2218
BEC = 0.8836

Weight: <None>
Min Conc: 0

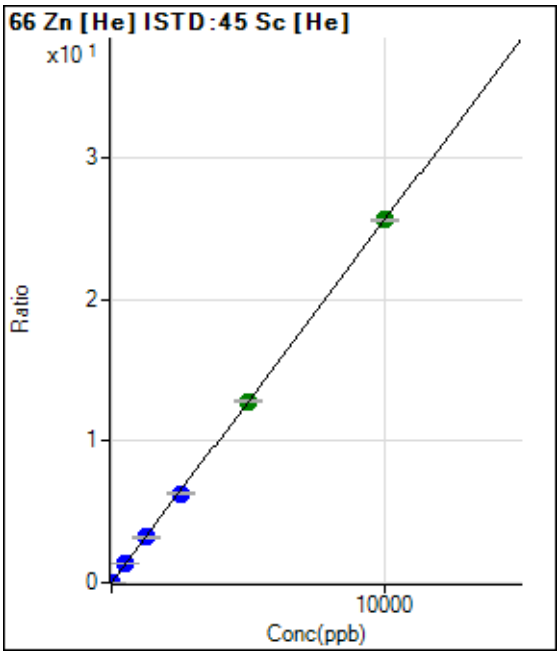


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3039.25	0.0260	P	1.2
2	☐	2.000	2.238	9349.82	0.0803	P	2.4
3	☐	500.000	523.042	1467448.88	12.7102	P	1.0
4	☐	1250.000	1321.995	3759668.28	32.0855	A	2.4
5	☐	2500.000	2574.951	7512826.55	62.4707	A	2.6
6	☐	5000.000	5018.008	14949860.75	121.7168	A	0.9
7	☐	10000.000	9962.107	29881079.00	241.6152	A	0.6
8	☐			5375.51	0.0571	P	3.5

y = 0.0243 * x + 0.0260
R = 1.0000
DL = 0.03729
BEC = 1.073

Weight: <None>
Min Conc: 0

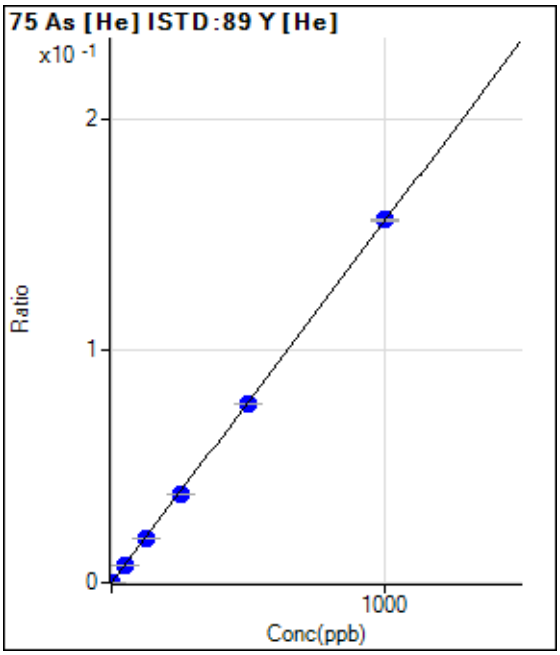
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	178.89	0.0015	P	4.4
2	☐	2.000	6.457	2103.51	0.0181	P	2.6
3	☐	500.000	510.813	151119.61	1.3089	P	1.1
4	☐	1250.000	1251.218	375455.00	3.2039	P	1.8
5	☐	2500.000	2463.089	758419.07	6.3056	P	1.7
6	☐	5000.000	4997.216	1571100.79	12.7915	A	1.0
7	☐	10000.000	10009.926	3168649.64	25.6212	A	0.6
8	☐			867.82	0.0092	P	5.8

y = 0.0026 * x + 0.0015
R = 1.0000
DL = 0.0785
BEC = 0.5982

Weight: <None>
Min Conc: 0

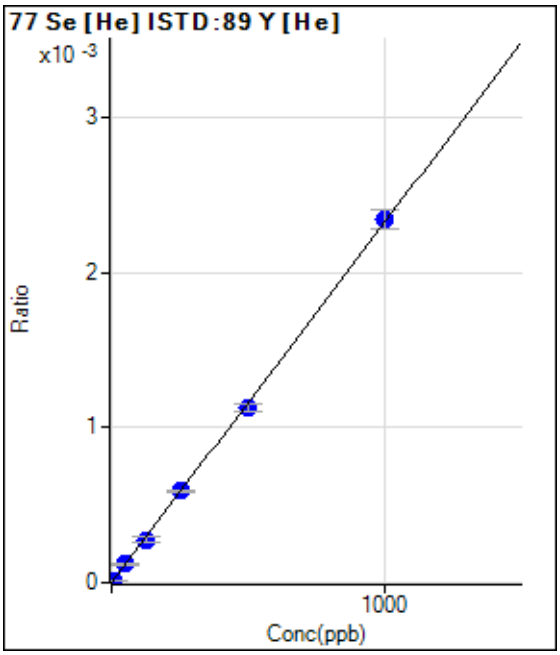


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	100.4
2	☐	1.000	1.121	203.34	0.0002	P	6.4
3	☐	50.000	48.177	8468.17	0.0075	P	1.1
4	☐	125.000	121.740	21640.00	0.0190	P	1.4
5	☐	250.000	244.787	44391.86	0.0381	P	0.2
6	☐	500.000	495.727	90913.84	0.0773	P	0.4
7	☐	1000.000	1003.938	183710.74	0.1564	P	0.6
8	☐			77.78	0.0001	P	15.6

y = 1.5583E-004 * x + 2.9392E-006
R = 1.0000
DL = 0.05679
BEC = 0.01886

Weight: <None>
Min Conc: 0

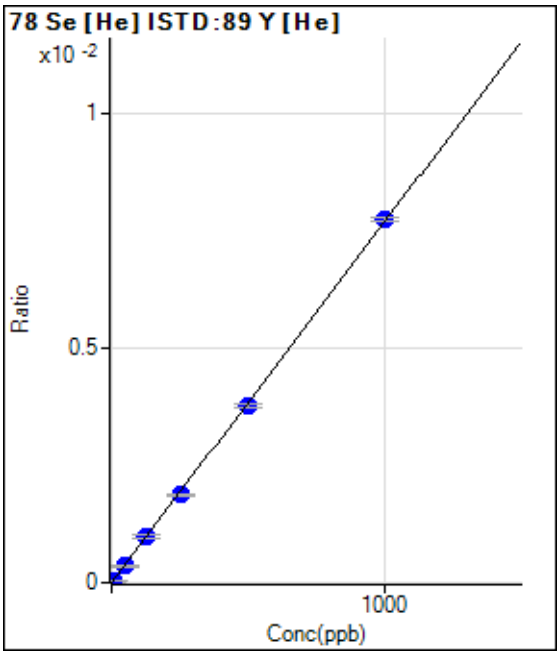
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	5.000	3.757	10.00	0.0000	P	33.4
3	☐	50.000	51.730	135.56	0.0001	P	13.9
4	☐	125.000	118.924	315.56	0.0003	P	14.9
5	☐	250.000	255.154	690.03	0.0006	P	2.9
6	☐	500.000	483.959	1323.41	0.0011	P	4.5
7	☐	1000.000	1007.411	2749.19	0.0023	P	5.1
8	☐			0.00	0.0000	P	

y = 2.3239E-006 * x + 0.0000E+000
R = 0.9998
DL = 0
BEC = 0

Weight: <None>
Min Conc: 0

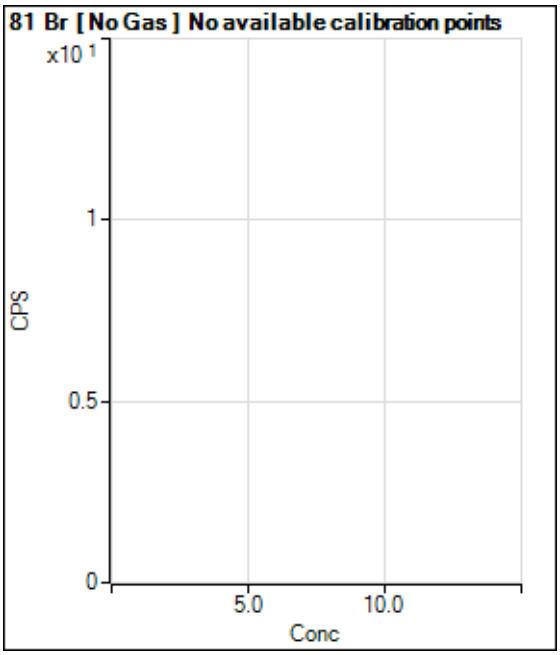


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4.44	0.0000	P	44.1
2	☐	5.000	4.405	43.33	0.0000	P	26.4
3	☐	50.000	46.747	410.01	0.0004	P	8.9
4	☐	125.000	126.442	1114.50	0.0010	P	8.2
5	☐	250.000	243.173	2182.41	0.0019	P	1.3
6	☐	500.000	491.969	4460.75	0.0038	P	2.0
7	☐	1000.000	1005.708	9094.12	0.0077	P	1.1
8	☐			2.22	0.0000	P	86.6

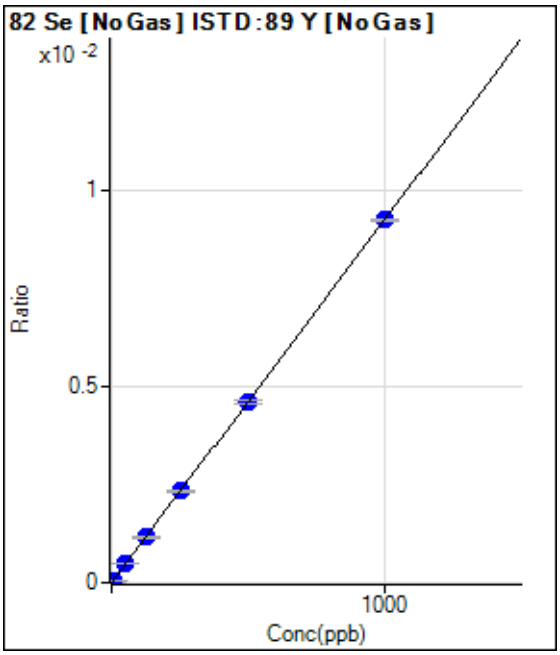
y = 7.6966E-006 * x + 3.9079E-006
R = 0.9999
DL = 0.6725
BEC = 0.5077

Weight: <None>
Min Conc: 0

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			5772.36		P	2.7
2	☐			5573.39		P	1.3
3	☐			5677.88		P	1.6
4	☐			5620.07		P	0.8
5	☐			5835.74		P	3.5
6	☐			5964.66		P	1.6
7	☐			6142.52		P	3.2
8	☐			5775.70		P	1.8

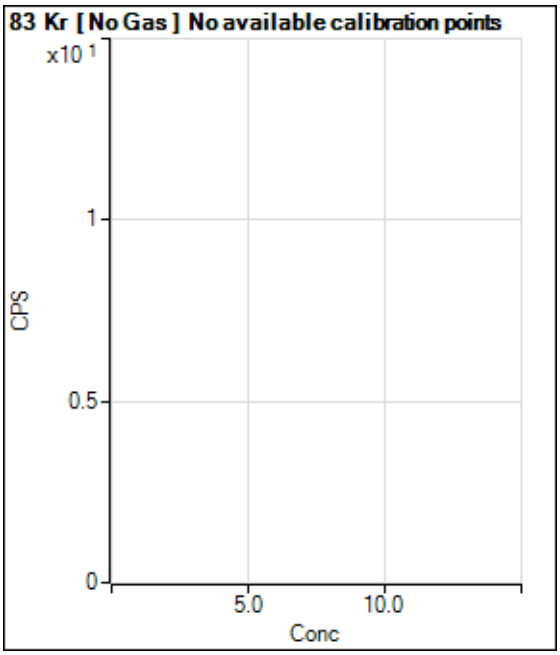


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	-262804.
2	☐	5.000	5.303	865.60	0.0000	P	6.1
3	☐	50.000	51.685	8320.42	0.0005	P	2.5
4	☐	125.000	124.710	20481.94	0.0012	P	1.2
5	☐	250.000	252.166	41693.25	0.0023	P	1.9
6	☐	500.000	498.065	83267.16	0.0046	P	1.9
7	☐	1000.000	1000.376	168750.35	0.0092	P	0.7
8	☐			48.89	0.0000	P	122.1

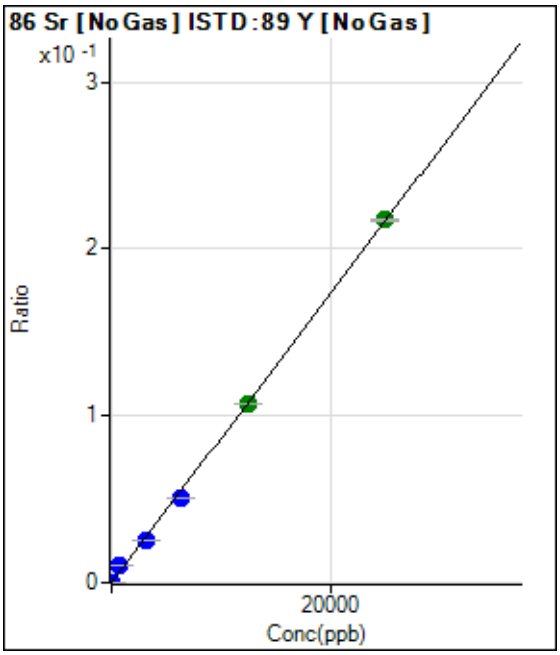
y = 9.2425E-006 * x - 1.1697E-009
R = 1.0000
DL = 0.9978
BEC = -0.0001266

Weight: <None>
Min Conc: 0

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			141.11		P	17.7
2	☐			174.45		P	1.1
3	☐			161.11		P	19.6
4	☐			157.78		P	8.5
5	☐			147.78		P	20.5
6	☐			176.67		P	19.9
7	☐			198.89		P	5.9
8	☐			182.23		P	13.8

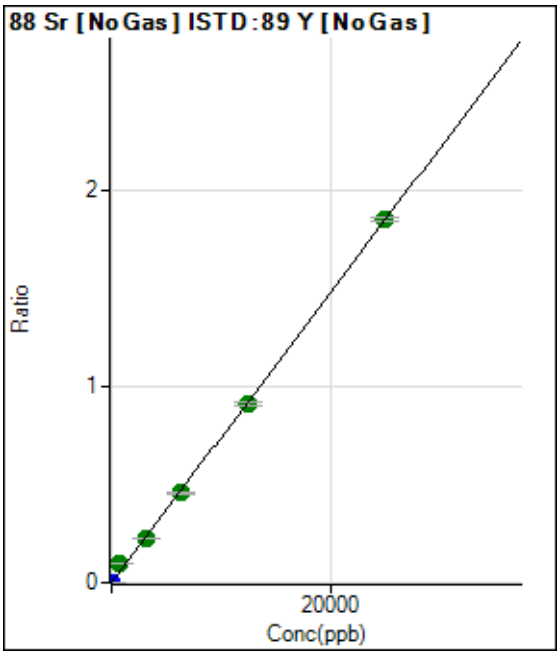


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	270.01	0.0000	P	5.2
2	☐	1.000	24.177	3959.48	0.0002	P	3.9
3	☐	625.000	1202.626	181442.97	0.0104	P	1.8
4	☐	3125.000	2921.970	449306.20	0.0253	P	1.2
5	☐	6250.000	5893.781	912327.73	0.0510	P	0.8
6	☐	12500.000	12411.291	1941886.65	0.1074	A	0.7
7	☐	25000.000	25144.346	3969275.49	0.2175	A	0.7
8	☐			10047.05	0.0007	P	1.8

y = 8.6487E-006 * x + 1.5112E-005
R = 0.9995
DL = 0.2704
BEC = 1.747

Weight: <None>
Min Conc: 0

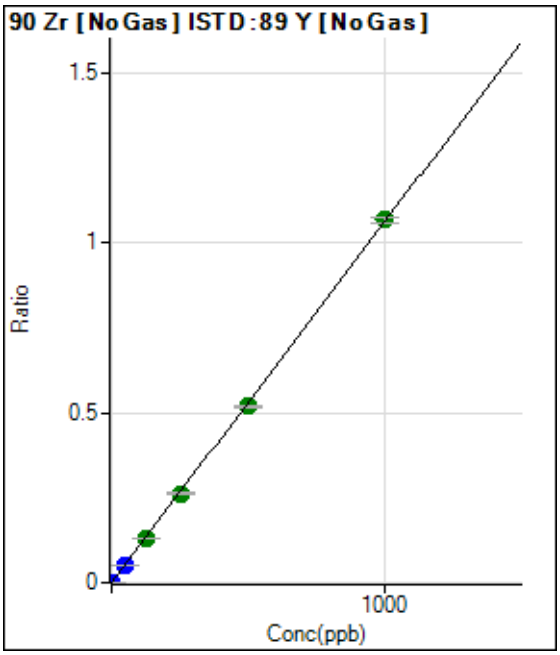
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	645.58	0.0000	P	12.3
2	☐	1.000	24.468	32576.87	0.0018	P	1.2
3	☐	625.000	1272.713	1639360.29	0.0941	A	0.8
4	☐	3125.000	3088.859	4057749.25	0.2283	A	0.3
5	☐	6250.000	6202.136	8202424.26	0.4584	A	1.4
6	☐	12500.000	12349.996	16511454.89	0.9128	A	1.3
7	☐	25000.000	25075.292	33825817.55	1.8534	A	1.1
8	☐			85164.25	0.0056	P	1.0

y = 7.3911E-005 * x + 3.6123E-005
R = 0.9996
DL = 0.1802
BEC = 0.4887

Weight: <None>
Min Conc: 0

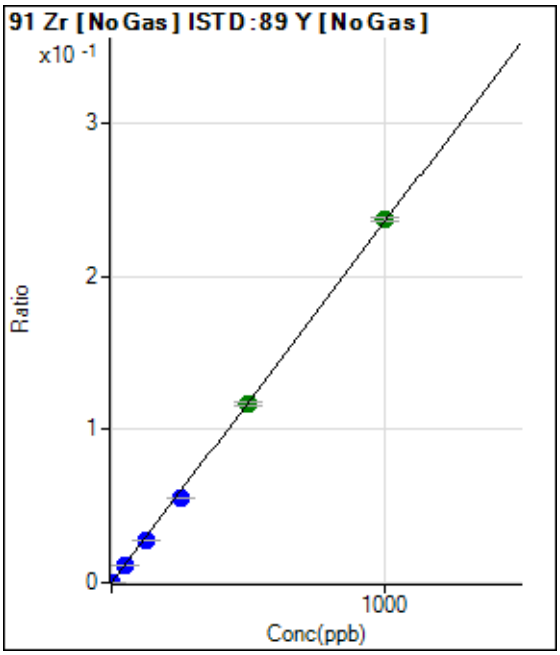


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	614.46	0.0000	P	4.3
2	☐	1.000	0.994	19233.35	0.0011	P	1.0
3	☐	50.000	47.558	879085.09	0.0505	P	1.5
4	☐	125.000	121.803	2295535.02	0.1292	A	1.7
5	☐	250.000	247.005	4687176.25	0.2620	A	1.0
6	☐	500.000	489.179	9383738.61	0.5188	A	0.5
7	☐	1000.000	1006.681	19483484.71	1.0675	A	1.5
8	☐			9015.23	0.0006	P	2.1

y = 0.0011 * x + 3.4398E-005
R = 0.9999
DL = 0.004227
BEC = 0.03244

Weight: <None>
Min Conc: 0

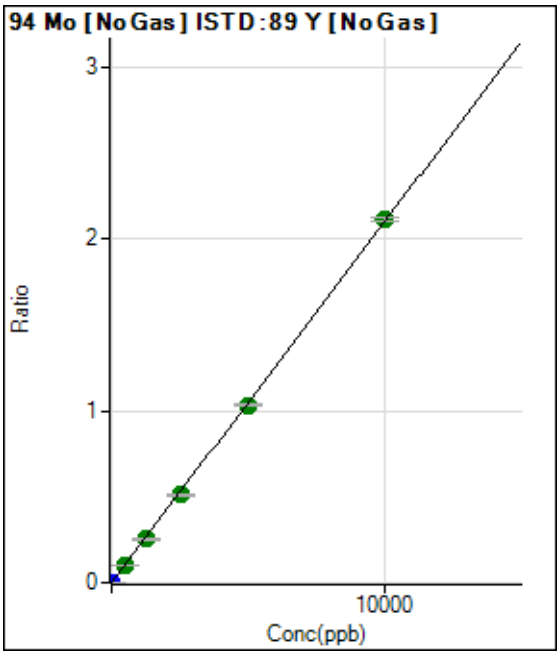
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120.00	0.0000	P	14.4
2	☐	1.000	0.985	4205.12	0.0002	P	1.4
3	☐	50.000	47.621	195084.65	0.0112	P	1.1
4	☐	125.000	116.147	485158.63	0.0273	P	0.9
5	☐	250.000	235.375	989865.03	0.0553	P	1.0
6	☐	500.000	496.375	2110320.06	0.1167	A	1.1
7	☐	1000.000	1006.694	4318275.94	0.2366	A	1.0
8	☐			2054.62	0.0001	P	5.8

y = 2.3502E-004 * x + 6.7197E-006
R = 0.9999
DL = 0.01232
BEC = 0.02859

Weight: <None>
Min Conc: 0

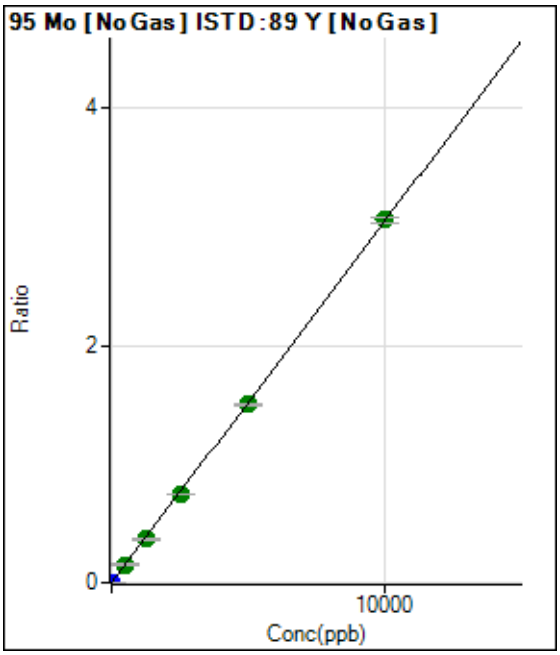


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	304.45	0.0000	P	9.8
2	☐	5.000	5.900	22191.14	0.0013	P	1.3
3	☐	500.000	497.875	1822039.43	0.1046	A	2.6
4	☐	1250.000	1210.776	4518680.56	0.2543	A	2.3
5	☐	2500.000	2440.708	9173159.24	0.5127	A	1.5
6	☐	5000.000	4927.225	18721556.11	1.0350	A	0.2
7	☐	10000.000	10056.219	38553006.09	2.1124	A	1.1
8	☐			8060.21	0.0005	P	5.6

y = 2.1006E-004 * x + 1.7047E-005
R = 0.9999
DL = 0.02395
BEC = 0.08115

Weight: <None>
Min Conc: 0

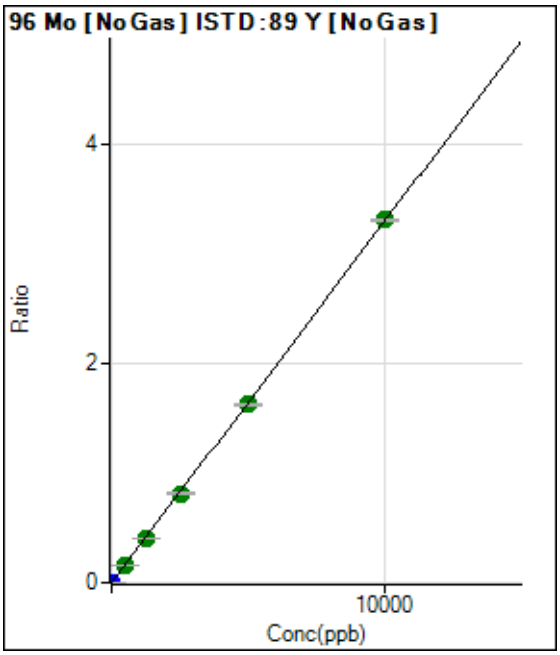
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	264.45	0.0000	P	13.9
2	☐	5.000	4.987	27058.61	0.0015	P	0.6
3	☐	500.000	502.760	2664760.27	0.1530	A	1.8
4	☐	1250.000	1202.810	6502623.72	0.3660	A	1.2
5	☐	2500.000	2451.123	13343393.41	0.7458	A	0.7
6	☐	5000.000	4935.355	27160997.09	1.5016	A	0.6
7	☐	10000.000	10050.302	55806680.28	3.0578	A	1.5
8	☐			7523.22	0.0005	P	2.9

y = 3.0425E-004 * x + 1.4801E-005
R = 0.9999
DL = 0.02028
BEC = 0.04865

Weight: <None>
Min Conc: 0

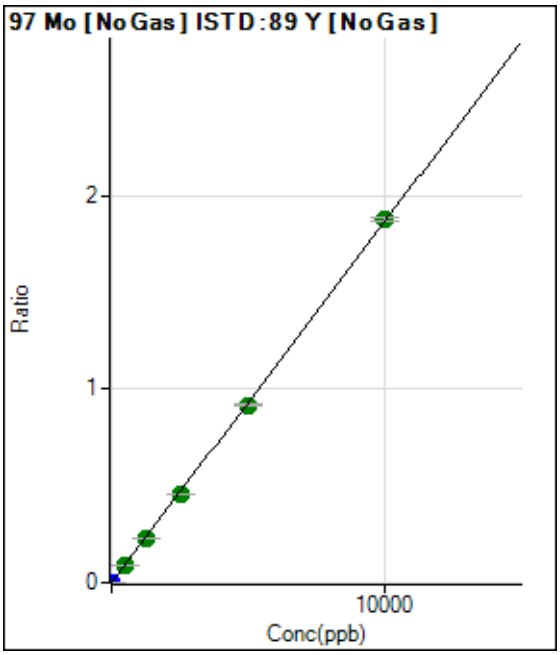


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	347.78	0.0000	P	17.3
2	☐	5.000	5.097	29970.13	0.0017	P	1.3
3	☐	500.000	502.948	2884115.31	0.1656	A	0.9
4	☐	1250.000	1211.764	7086875.87	0.3988	A	1.3
5	☐	2500.000	2472.907	14563757.84	0.8139	A	0.6
6	☐	5000.000	4926.836	29332097.62	1.6216	A	0.5
7	☐	10000.000	10047.987	60358758.55	3.3071	A	0.9
8	☐			11563.80	0.0008	P	1.9

y = 3.2913E-004 * x + 1.9455E-005
R = 1.0000
DL = 0.03061
BEC = 0.05911

Weight: <None>
Min Conc: 0

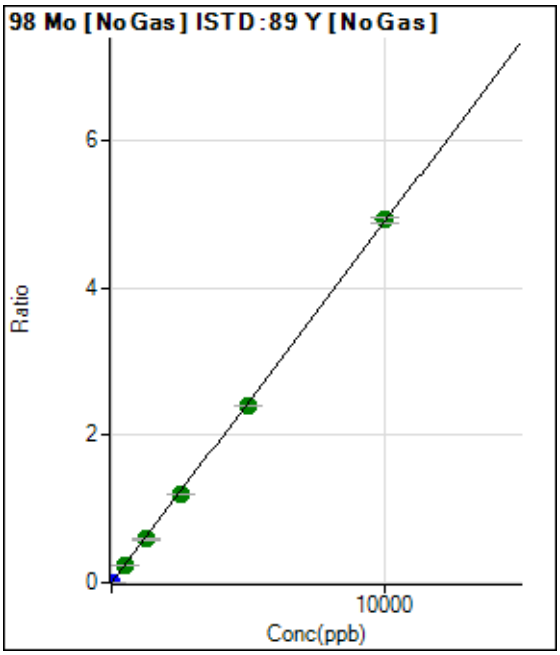
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	138.89	0.0000	P	15.9
2	☐	5.000	5.064	16825.85	0.0010	P	1.2
3	☐	500.000	496.940	1615537.17	0.0927	A	1.0
4	☐	1250.000	1219.823	4044296.26	0.2276	A	1.7
5	☐	2500.000	2449.485	8177886.34	0.4571	A	0.8
6	☐	5000.000	4923.479	16618453.23	0.9187	A	0.4
7	☐	10000.000	10054.814	34243555.60	1.8763	A	1.1
8	☐			3932.82	0.0003	P	7.1

y = 1.8660E-004 * x + 7.7703E-006
R = 0.9999
DL = 0.01986
BEC = 0.04164

Weight: <None>
Min Conc: 0

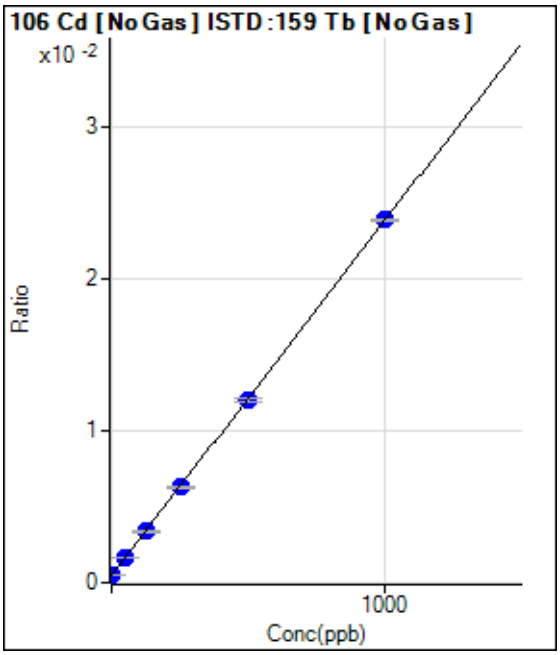


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	347.78	0.0000	P	1.9
2	☐	5.000	5.028	43798.88	0.0025	P	2.4
3	☐	500.000	498.226	4247575.60	0.2438	A	1.7
4	☐	1250.000	1208.126	10504159.77	0.5913	A	2.4
5	☐	2500.000	2451.876	21468590.51	1.1999	A	0.8
6	☐	5000.000	4913.803	43498910.46	2.4048	A	0.4
7	☐	10000.000	10060.452	89858604.21	4.9235	A	1.3
8	☐			9836.98	0.0006	P	4.4

y = 4.8939E-004 * x + 1.9468E-005
R = 0.9999
DL = 0.002323
BEC = 0.03978

Weight: <None>
Min Conc: 0

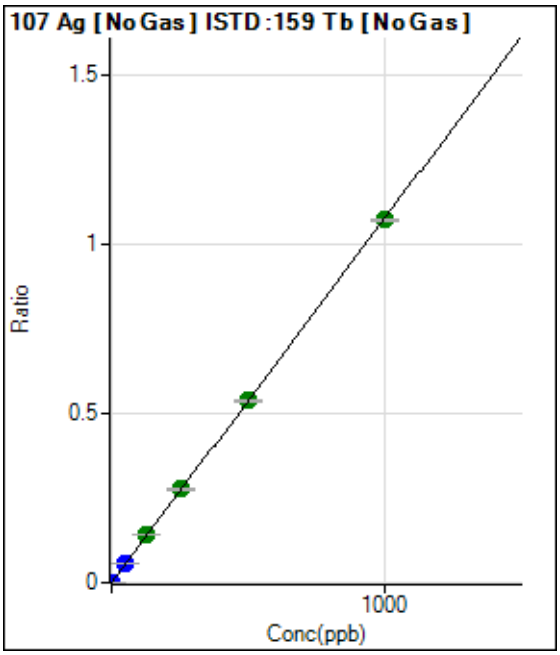
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5993.58	0.0005	P	2.4
2	☐	1.000	0.920	6235.91	0.0005	P	2.4
3	☐	50.000	51.600	20780.20	0.0017	P	0.5
4	☐	125.000	125.000	42559.98	0.0034	P	2.5
5	☐	250.000	248.528	79787.47	0.0063	P	1.8
6	☐	500.000	494.491	153950.47	0.0120	P	1.9
7	☐	1000.000	1003.043	306388.51	0.0239	P	0.9
8	☐			5195.48	0.0005	P	4.2

y = 2.3357E-005 * x + 4.7755E-004
R = 1.0000
DL = 1.467
BEC = 20.45

Weight: <None>
Min Conc: 0

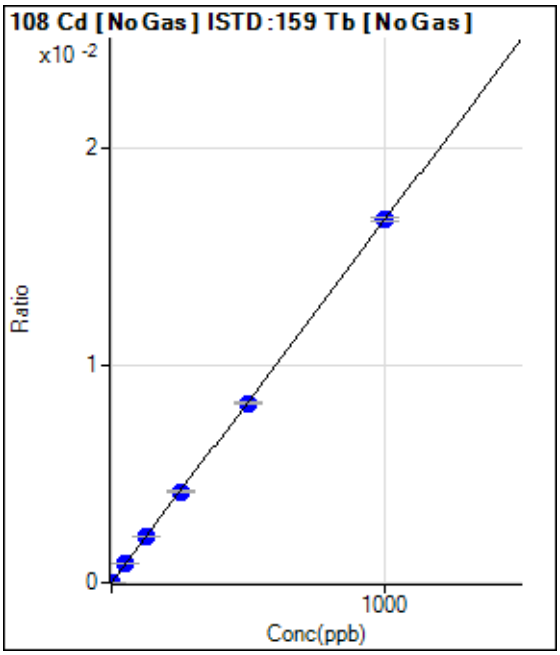


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	135.56	0.0000	P	11.6
2	☐	1.000	0.992	13447.76	0.0011	P	1.4
3	☐	50.000	50.953	675818.00	0.0547	P	0.7
4	☐	125.000	130.709	1758497.11	0.1404	A	1.2
5	☐	250.000	258.274	3522559.01	0.2774	A	2.1
6	☐	500.000	501.225	6890358.64	0.5383	A	0.9
7	☐	1000.000	996.558	13716695.63	1.0702	A	0.7
8	☐			1581.22	0.0001	P	17.6

y = 0.0011 * x + 1.0802E-005
R = 1.0000
DL = 0.003512
BEC = 0.01006

Weight: <None>
Min Conc: 0

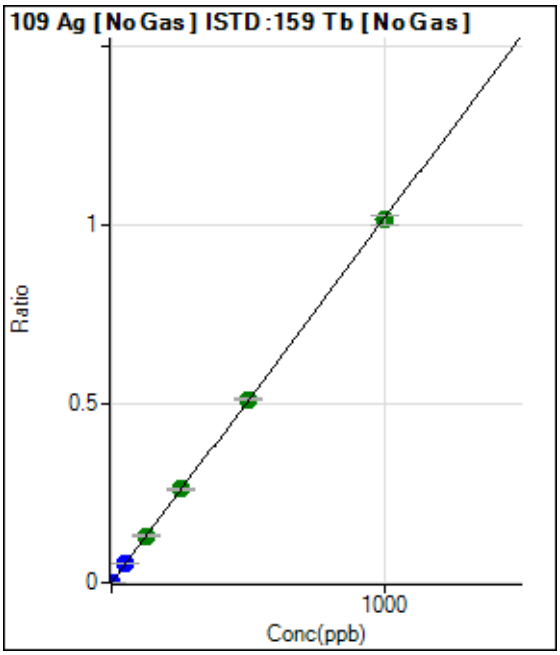
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31.11	0.0000	P	6.0
2	☐	1.000	1.176	275.56	0.0000	P	2.5
3	☐	50.000	53.505	11023.39	0.0009	P	0.8
4	☐	125.000	127.588	26621.30	0.0021	P	2.0
5	☐	250.000	250.880	53039.30	0.0042	P	2.7
6	☐	500.000	496.112	105694.56	0.0083	P	0.8
7	☐	1000.000	1001.225	213536.78	0.0167	P	1.0
8	☐			182.23	0.0000	P	9.9

y = 1.6638E-005 * x + 2.4787E-006
R = 1.0000
DL = 0.0269
BEC = 0.149

Weight: <None>
Min Conc: 0

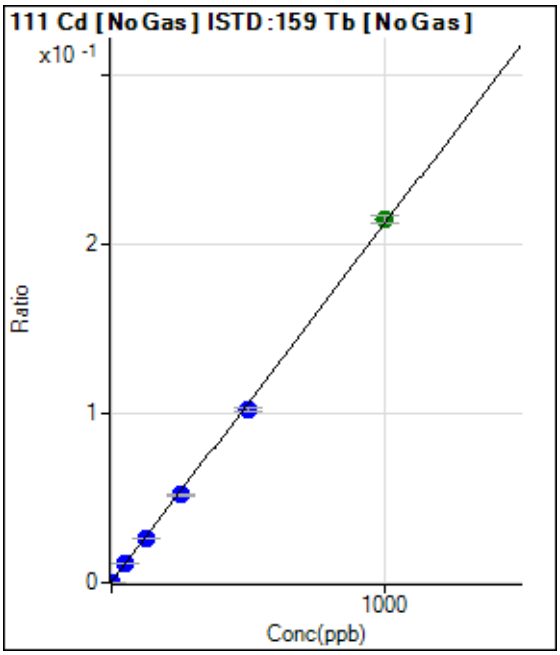


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41.11	0.0000	P	47.7
2	☐	1.000	1.012	12920.61	0.0010	P	1.1
3	☐	50.000	51.331	645897.89	0.0523	P	0.8
4	☐	125.000	128.363	1638371.94	0.1308	A	2.1
5	☐	250.000	257.899	3337413.04	0.2628	A	1.7
6	☐	500.000	503.514	6567678.86	0.5130	A	0.5
7	☐	1000.000	995.781	13003483.28	1.0146	A	2.6
8	☐			5567.64	0.0005	P	131.3

y = 0.0010 * x + 3.2773E-006
R = 1.0000
DL = 0.004602
BEC = 0.003216

Weight: <None>
Min Conc: 0

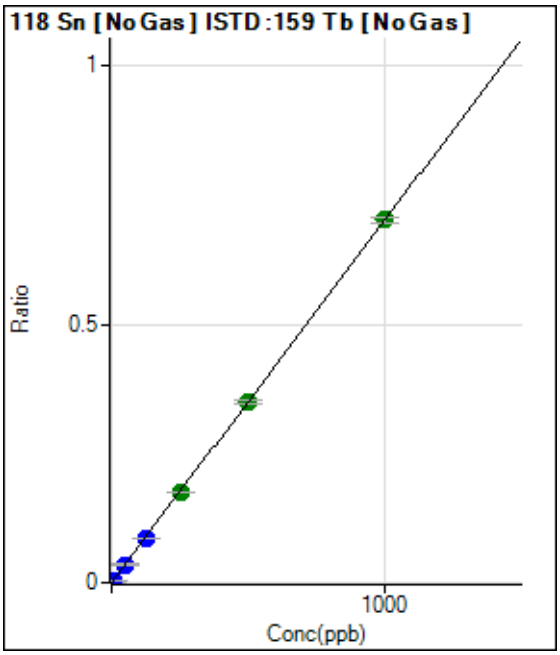
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4213.73	0.0003	P	2.0
2	☐	1.000	1.066	7019.24	0.0006	P	1.2
3	☐	50.000	50.956	137541.50	0.0111	P	1.4
4	☐	125.000	122.340	329133.33	0.0263	P	1.3
5	☐	250.000	244.449	662481.94	0.0522	P	1.7
6	☐	500.000	481.237	1310321.59	0.1024	P	1.7
7	☐	1000.000	1011.054	2751571.98	0.2147	A	2.2
8	☐			4108.18	0.0004	P	3.3

y = 2.1202E-004 * x + 3.3574E-004
R = 0.9997
DL = 0.09382
BEC = 1.584

Weight: <None>
Min Conc: 0

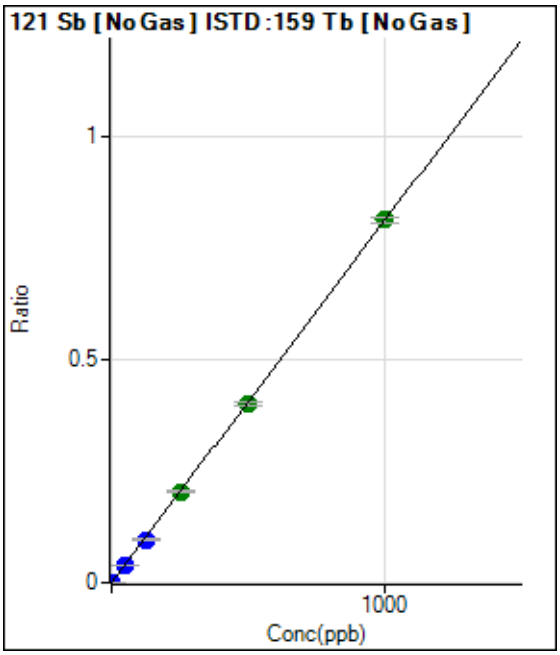


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4659.73	0.0004	P	3.1
2	☐	5.000	5.068	49013.98	0.0039	P	0.6
3	☐	50.000	49.809	435514.62	0.0353	P	1.2
4	☐	125.000	121.182	1068234.68	0.0853	P	2.1
5	☐	250.000	249.586	2225695.89	0.1752	A	1.5
6	☐	500.000	497.645	4468014.86	0.3491	A	1.8
7	☐	1000.000	1001.768	9000895.56	0.7023	A	1.6
8	☐			2300.22	0.0002	P	9.8

y = 7.0067E-004 * x + 3.7130E-004
R = 1.0000
DL = 0.04924
BEC = 0.5299

Weight: <None>
Min Conc: 0

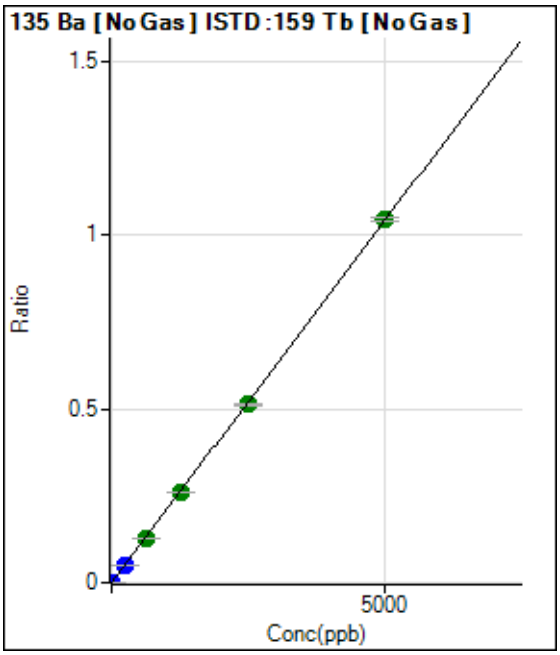
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	84.44	0.0000	P	9.0
2	☐	2.000	2.017	20525.50	0.0016	P	0.4
3	☐	50.000	49.047	491238.09	0.0398	P	1.8
4	☐	125.000	119.562	1214781.76	0.0970	P	1.7
5	☐	250.000	250.830	2583716.16	0.2034	A	1.6
6	☐	500.000	495.088	5140060.17	0.4015	A	1.4
7	☐	1000.000	1002.976	10425937.42	0.8135	A	1.4
8	☐			3034.81	0.0003	P	8.1

y = 8.1105E-004 * x + 6.7278E-006
R = 1.0000
DL = 0.002227
BEC = 0.008295

Weight: <None>
Min Conc: 0

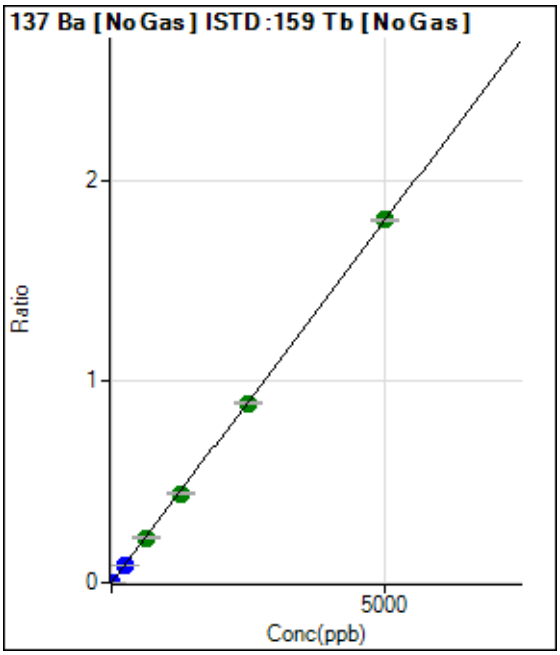


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113.33	0.0000	P	10.4
2	☐	10.000	10.178	26607.22	0.0021	P	0.8
3	☐	250.000	241.868	622239.41	0.0504	P	1.4
4	☐	625.000	616.775	1609485.17	0.1285	A	1.7
5	☐	1250.000	1250.266	3307827.00	0.2605	A	1.4
6	☐	2500.000	2470.298	6587269.76	0.5146	A	0.9
7	☐	5000.000	5016.219	13392673.97	1.0449	A	1.0
8	☐			5711.27	0.0005	P	6.7

y = 2.0831E-004 * x + 9.0292E-006
R = 1.0000
DL = 0.01355
BEC = 0.04335

Weight: <None>
Min Conc: 0

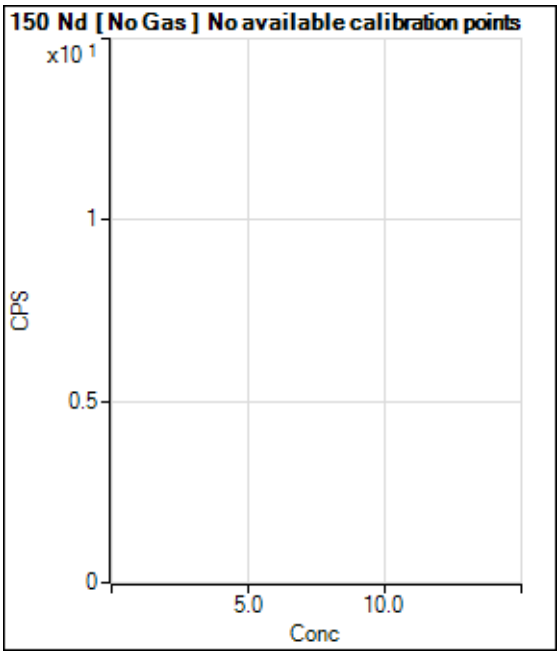
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	188.89	0.0000	P	14.6
2	☐	10.000	10.262	46292.22	0.0037	P	1.3
3	☐	250.000	244.654	1086256.18	0.0880	P	1.4
4	☐	625.000	620.868	2795997.01	0.2232	A	2.8
5	☐	1250.000	1230.983	5620893.74	0.4426	A	1.5
6	☐	2500.000	2479.005	11409248.16	0.8913	A	1.3
7	☐	5000.000	5016.035	23114120.21	1.8034	A	0.8
8	☐			9691.35	0.0009	P	6.6

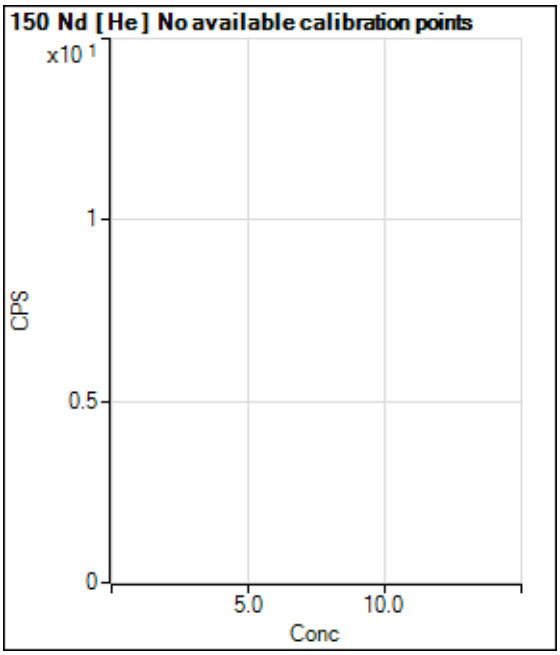
y = 3.5953E-004 * x + 1.5053E-005
R = 1.0000
DL = 0.0183
BEC = 0.04187

Weight: <None>
Min Conc: 0

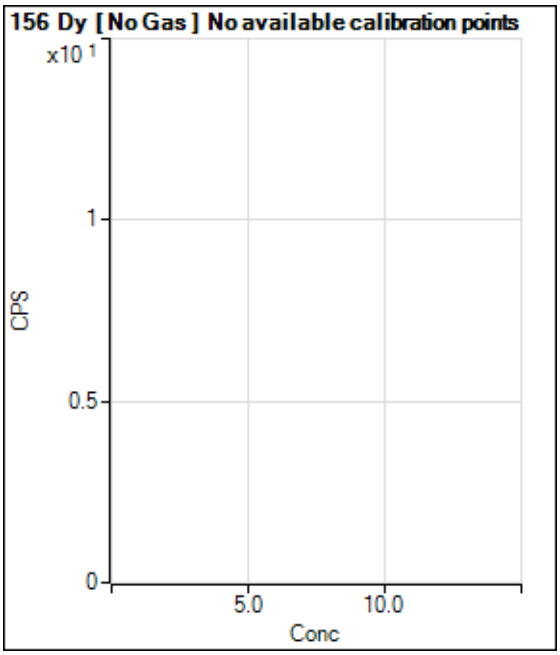


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			12.22		P	41.7
2	☐			11.11		P	45.8
3	☐			65.55		P	38.8
4	☐			210.00		P	9.7
5	☐			361.12		P	14.0
6	☐			686.69		P	8.9
7	☐			1440.09		P	5.3
8	☐			296.67		P	13.2

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

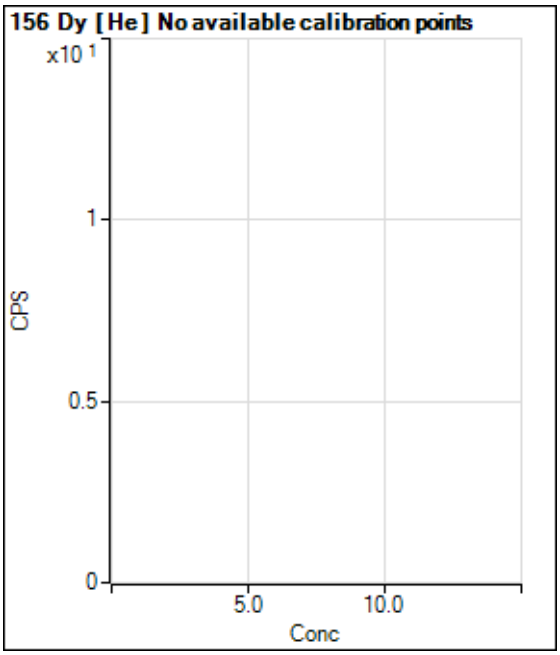


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			0.00		P	
2	☐			0.00		P	
3	☐			1.11		P	173.2
4	☐			1.11		P	173.2
5	☐			11.11		P	86.6
6	☐			26.67		P	12.5
7	☐			43.33		P	33.5
8	☐			51.11		P	38.2

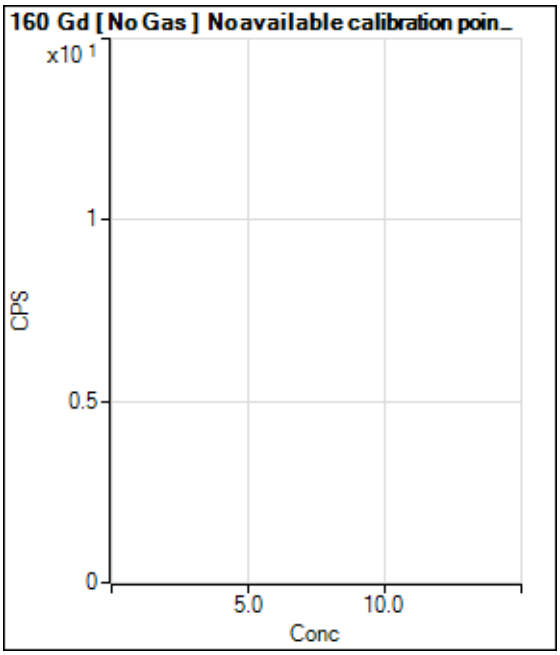


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			231.12		P	14.0
2	☐			203.34		P	15.0
3	☐			224.45		P	14.3
4	☐			212.23		P	11.8
5	☐			291.12		P	10.4
6	☐			353.34		P	4.1
7	☐			477.79		P	4.6
8	☐			556.68		P	3.7

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

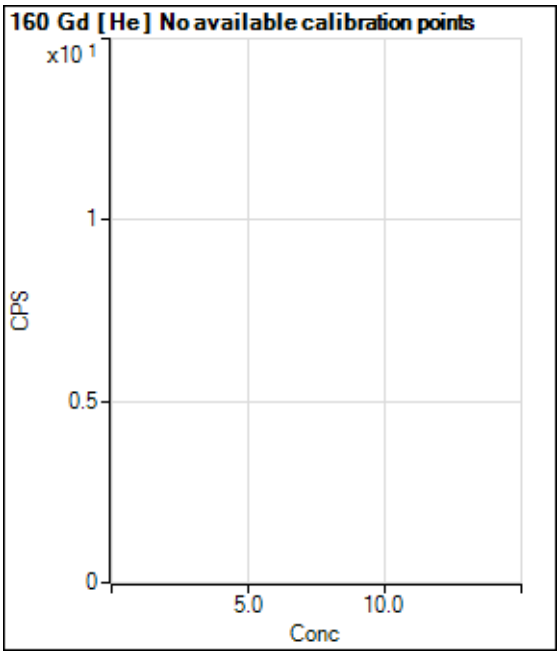


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			4.44		P	43.4
2	☐			6.67		P	86.6
3	☐			5.55		P	69.3
4	☐			13.34		P	43.3
5	☐			14.44		P	35.3
6	☐			26.67		P	45.1
7	☐			58.89		P	21.4
8	☐			117.78		P	15.6

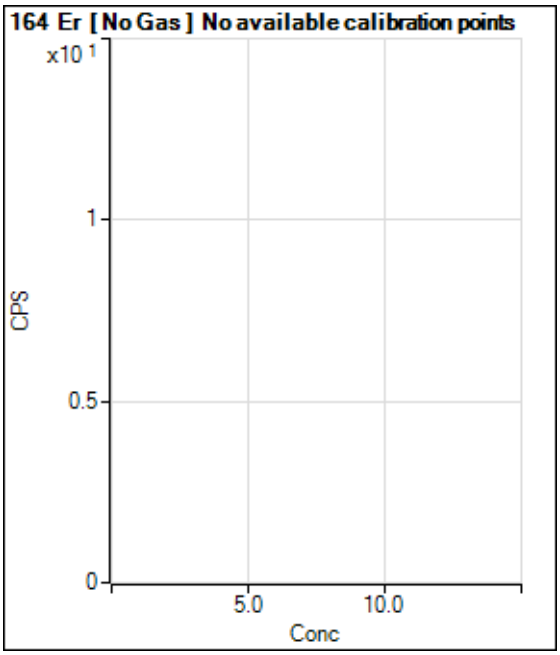


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			33.33		P	45.8
2	☐			55.56		P	44.2
3	☐			47.78		P	52.4
4	☐			54.44		P	23.2
5	☐			70.00		P	19.0
6	☐			134.45		P	12.5
7	☐			186.67		P	13.9
8	☐			368.90		P	9.9

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

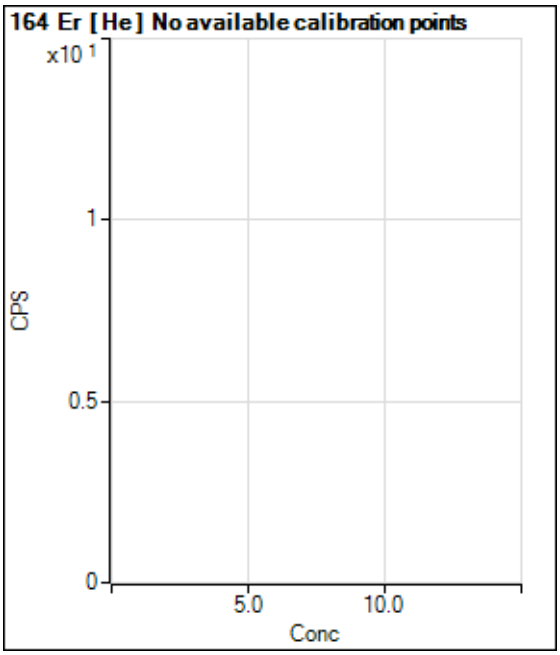


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			5.56		P	34.7
2	☐			13.33		P	75.0
3	☐			8.89		P	57.3
4	☐			14.44		P	35.3
5	☐			20.00		P	28.9
6	☐			36.67		P	24.1
7	☐			61.11		P	19.2
8	☐			152.22		P	4.6

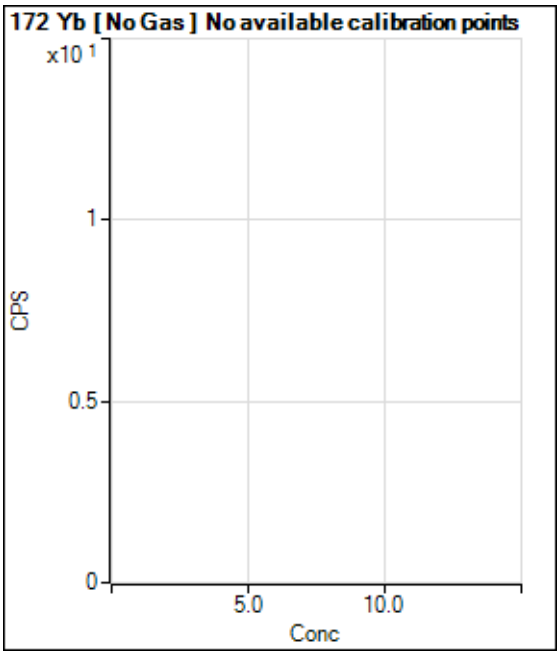


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			76.67		P	19.0
2	☐			65.56		P	43.3
3	☐			73.33		P	27.7
4	☐			68.89		P	20.1
5	☐			80.00		P	18.2
6	☐			160.00		P	11.6
7	☐			204.45		P	4.7
8	☐			444.46		P	9.3

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

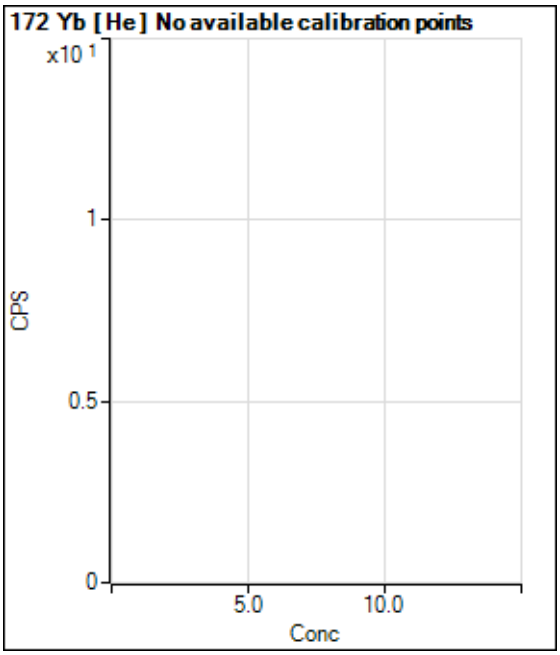


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			26.66		P	78.1
2	☐			35.55		P	19.5
3	☐			31.11		P	32.7
4	☐			30.00		P	40.1
5	☐			37.78		P	28.4
6	☐			44.45		P	15.6
7	☐			83.33		P	10.6
8	☐			157.78		P	10.8

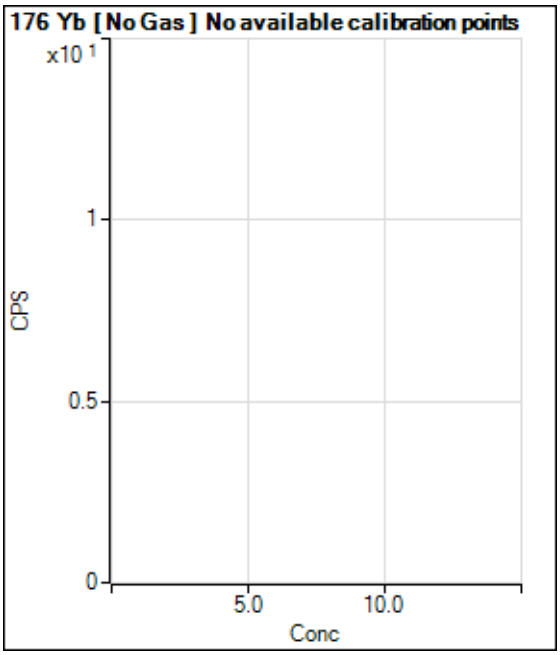


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			74.44		P	15.7
2	☐			72.22		P	30.7
3	☐			52.22		P	40.5
4	☐			86.67		P	13.9
5	☐			121.11		P	7.9
6	☐			135.56		P	27.1
7	☐			205.56		P	27.8
8	☐			463.34		P	5.6

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

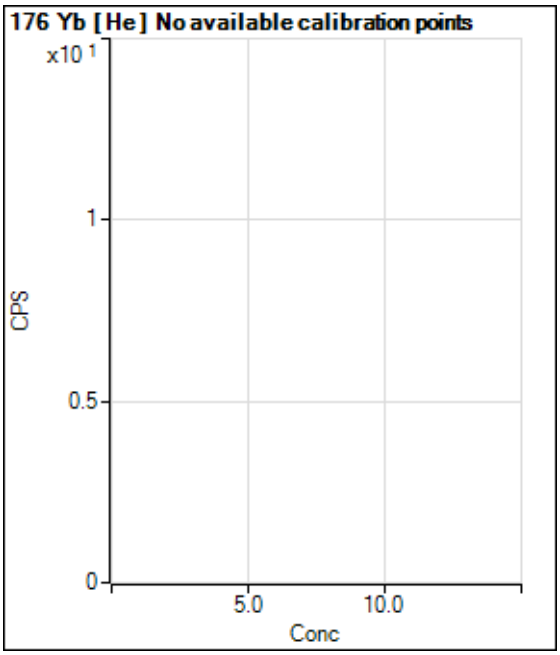


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1				28.89		P	13.3
2				30.00		P	11.1
3				38.89		P	4.9
4				26.67		P	21.7
5				43.33		P	42.8
6				53.33		P	27.2
7				76.67		P	28.5
8				180.00		P	6.4

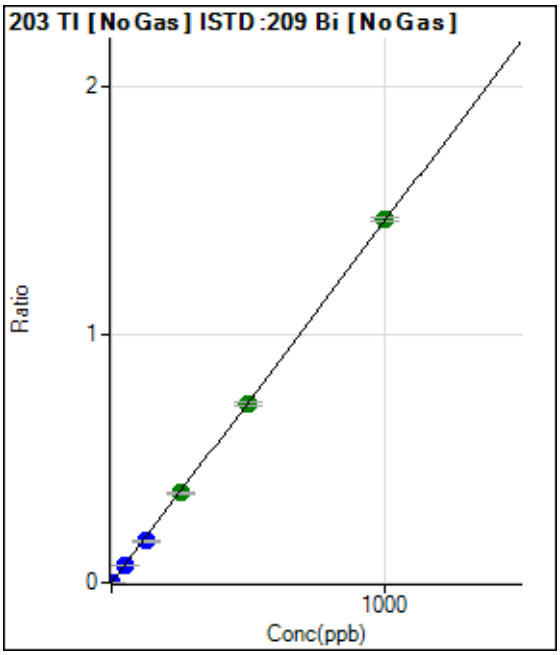


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1				1733.47		P	1.3
2				1729.02		P	3.6
3				3998.43		P	2.8
4				7365.46		P	1.7
5				13289.01		P	2.9
6				25288.72		P	0.9
7				49294.85		P	1.2
8				1757.92		P	3.5

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			260.01		P	13.9
2	☐			298.90		P	9.3
3	☐			985.60		P	1.3
4	☐			2200.20		P	3.5
5	☐			4245.16		P	1.2
6	☐			8314.90		P	0.2
7	☐			16637.23		P	0.3
8	☐			313.34		P	9.6

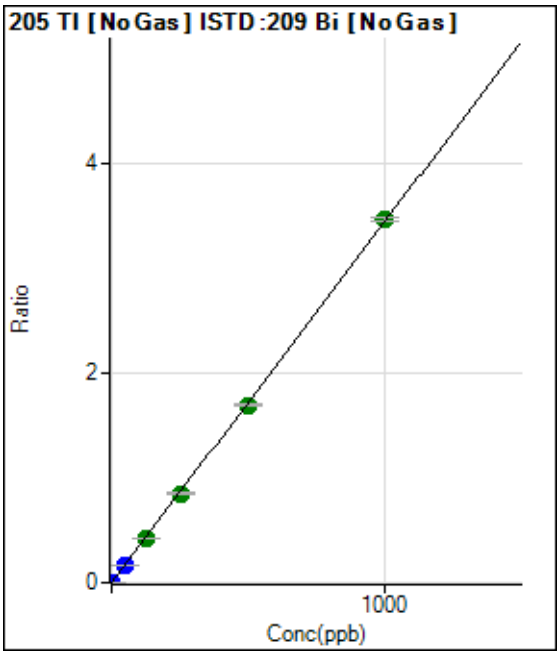


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	296.67	0.0000	P	16.3
2	☐	1.000	0.950	11089.26	0.0014	P	2.7
3	☐	50.000	46.953	521845.81	0.0684	P	2.0
4	☐	125.000	115.311	1288585.11	0.1680	P	1.5
5	☐	250.000	248.792	2745421.32	0.3625	A	3.3
6	☐	500.000	493.779	5431852.91	0.7194	A	2.1
7	☐	1000.000	1004.776	10794604.70	1.4639	A	1.1
8	☐			930.05	0.0002	P	4.2

y = 0.0015 * x + 3.7933E-005
R = 0.9999
DL = 0.01272
BEC = 0.02604

Weight: <None>
Min Conc: 0

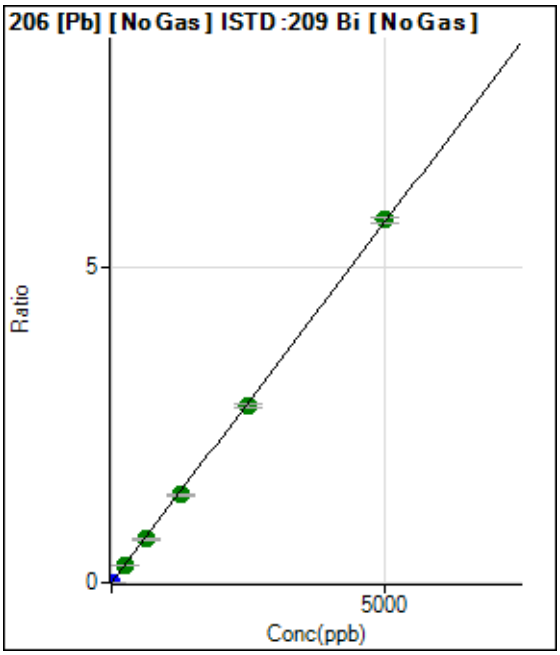
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	742.25	0.0001	P	5.6
2	☐	1.000	0.949	26273.32	0.0034	P	0.6
3	☐	50.000	47.502	1250188.23	0.1640	P	1.4
4	☐	125.000	121.853	3224318.74	0.4204	A	1.1
5	☐	250.000	247.165	6459577.06	0.8527	A	1.1
6	☐	500.000	490.876	12788047.72	1.6934	A	1.0
7	☐	1000.000	1005.789	25584986.29	3.4697	A	1.1
8	☐			2077.97	0.0004	P	13.4

y = 0.0034 * x + 9.4804E-005
R = 0.9999
DL = 0.004639
BEC = 0.02748

Weight: <None>
Min Conc: 0

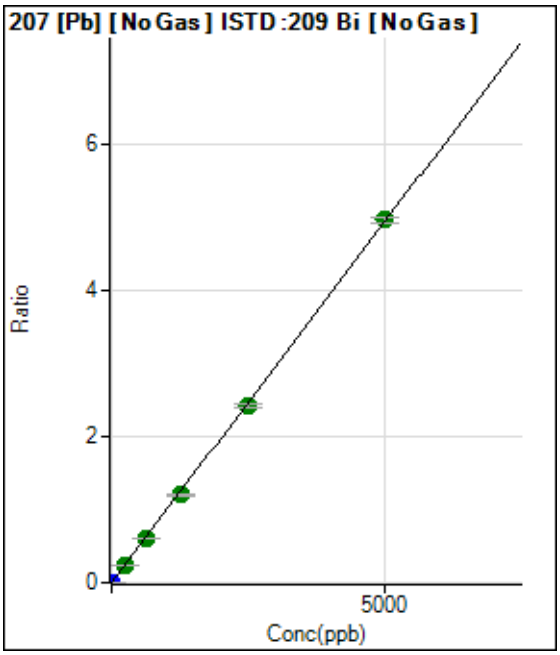


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1000.05	0.0001	P	1.0
2	☐	1.000	0.981	9717.06	0.0012	P	1.4
3	☐	250.000	249.397	2168779.85	0.2845	A	2.6
4	☐	625.000	605.393	5293890.79	0.6903	A	1.8
5	☐	1250.000	1220.648	10542429.15	1.3918	A	1.8
6	☐	2500.000	2448.761	21080215.94	2.7920	A	2.2
7	☐	5000.000	5035.439	42332889.65	5.7411	A	1.5
8	☐			5676.86	0.0010	P	4.1

y = 0.0011 * x + 1.2765E-004
R = 0.9999
DL = 0.00325
BEC = 0.112

Weight: <None>
Min Conc: 0

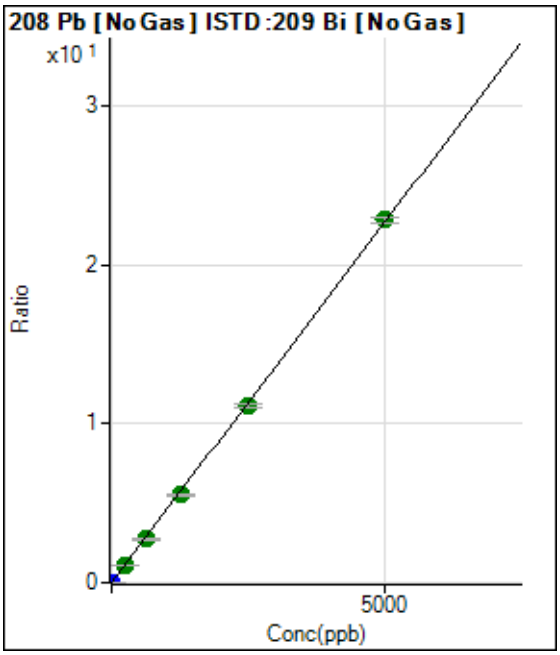
Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	884.48	0.0001	P	7.3
2	☐	1.000	0.969	8355.00	0.0011	P	1.8
3	☐	250.000	249.890	1884225.84	0.2471	A	1.9
4	☐	625.000	606.911	4601294.59	0.6000	A	2.2
5	☐	1250.000	1222.458	9152883.54	1.2085	A	2.9
6	☐	2500.000	2451.537	18295814.45	2.4234	A	2.9
7	☐	5000.000	5033.384	36688269.17	4.9756	A	1.5
8	☐			4828.74	0.0008	P	8.7

y = 9.8849E-004 * x + 1.1297E-004
R = 0.9999
DL = 0.02486
BEC = 0.1143

Weight: <None>
Min Conc: 0

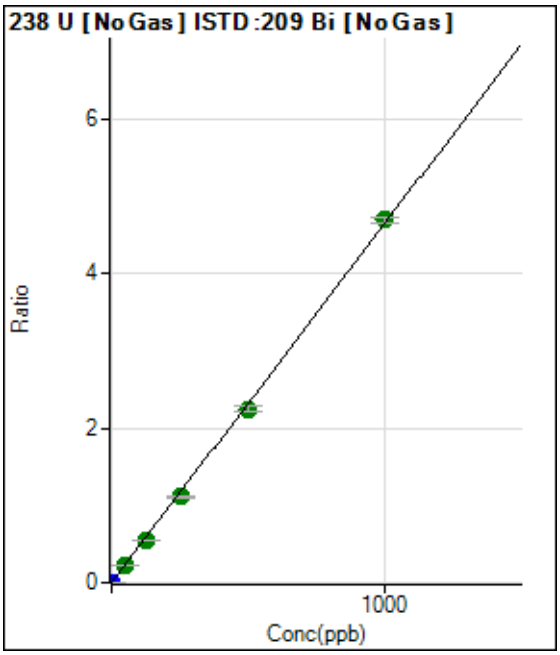


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3924.71	0.0005	P	3.0
2	☐	1.000	0.970	38237.85	0.0049	P	0.6
3	☐	250.000	249.473	8630780.14	1.1321	A	2.2
4	☐	625.000	604.575	21032687.30	2.7427	A	1.6
5	☐	1250.000	1221.324	41965670.42	5.5401	A	1.8
6	☐	2500.000	2444.595	83722640.28	11.0886	A	2.1
7	☐	5000.000	5037.451	168483367.4	22.8492	A	1.4
8	☐			22703.68	0.0039	P	5.6

y = 0.0045 * x + 5.0119E-004
R = 0.9999
DL = 0.009807
BEC = 0.1105

Weight: <None>
Min Conc: 0

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0000	P	31.8
2	☐	1.000	0.944	34261.71	0.0044	P	2.0
3	☐	50.000	48.277	1708771.62	0.2241	A	1.7
4	☐	125.000	118.495	4218320.35	0.5501	A	1.1
5	☐	250.000	239.393	8417740.78	1.1113	A	2.0
6	☐	500.000	484.830	16991999.61	2.2506	A	2.4
7	☐	1000.000	1011.136	34610929.76	4.6937	A	1.3
8	☐			1725.70	0.0003	P	16.4

y = 0.0046 * x + 9.8158E-006

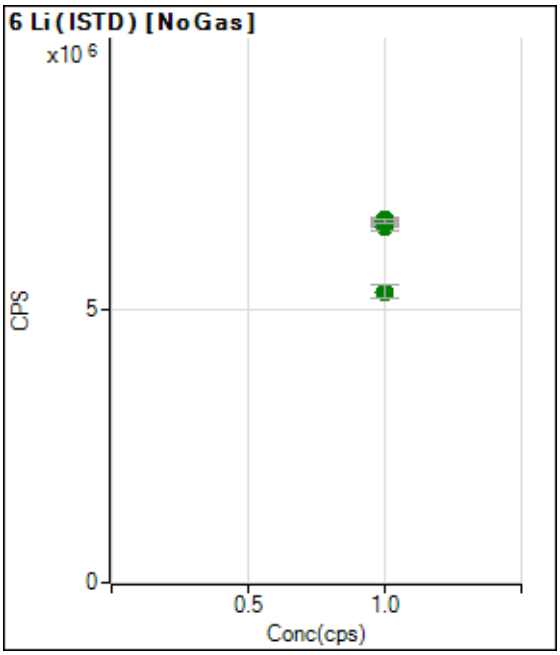
R = 0.9998

DL = 0.002016

BEC = 0.002115

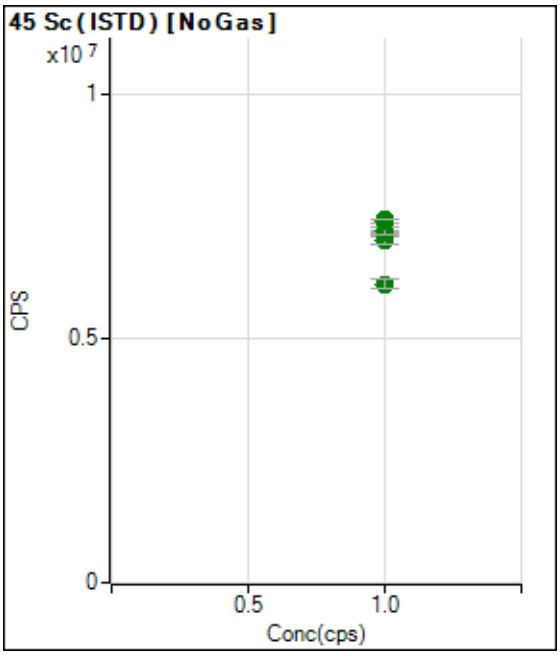
Weight: <None>

Min Conc: 0

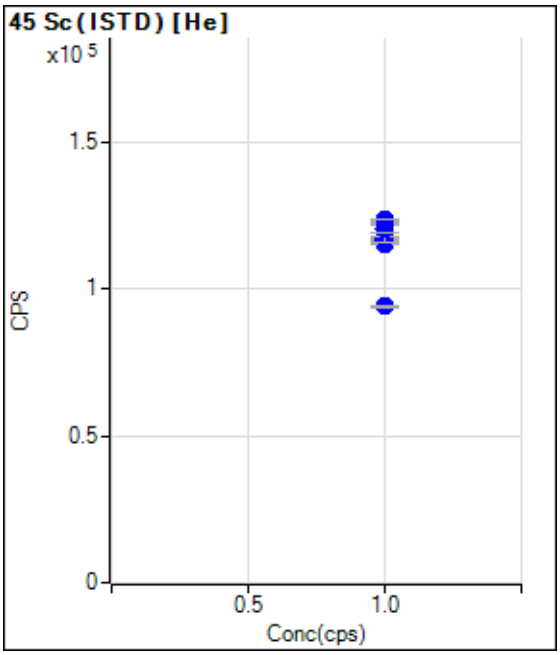


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6537049.81		A	0.9
2	☐	1.000		6581078.99		A	1.2
3	☐	1.000		6502261.24		A	1.7
4	☐	1.000		6564847.95		A	0.7
5	☐	1.000		6619324.52		A	1.4
6	☐	1.000		6629591.05		A	0.8
7	☐	1.000		6614253.85		A	1.2
8	☐	1.000		5311038.84		A	4.6

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

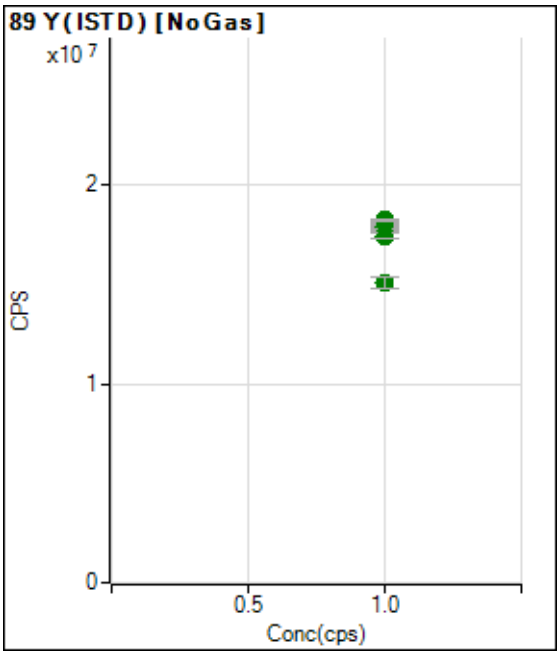


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		7186843.30		A	1.2
2	☐	1.000		7165108.16		A	0.3
3	☐	1.000		7012363.78		A	2.0
4	☐	1.000		7186483.09		A	0.2
5	☐	1.000		7217714.96		A	1.7
6	☐	1.000		7417031.21		A	1.0
7	☐	1.000		7440993.15		A	0.2
8	☐	1.000		6129411.99		A	3.4

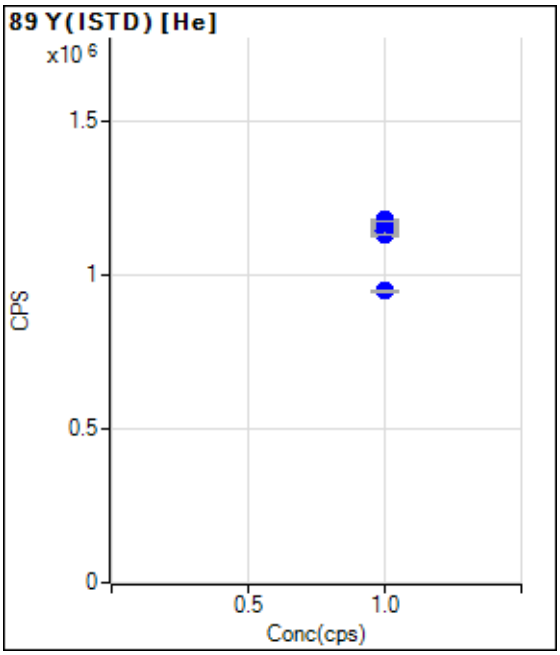


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		116825.24		P	0.4
2	☐	1.000		116497.29		P	1.7
3	☐	1.000		115459.81		P	0.7
4	☐	1.000		117211.06		P	1.8
5	☐	1.000		120307.03		P	2.2
6	☐	1.000		122829.04		P	0.8
7	☐	1.000		123672.84		P	0.2
8	☐	1.000		94189.16		P	0.5

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

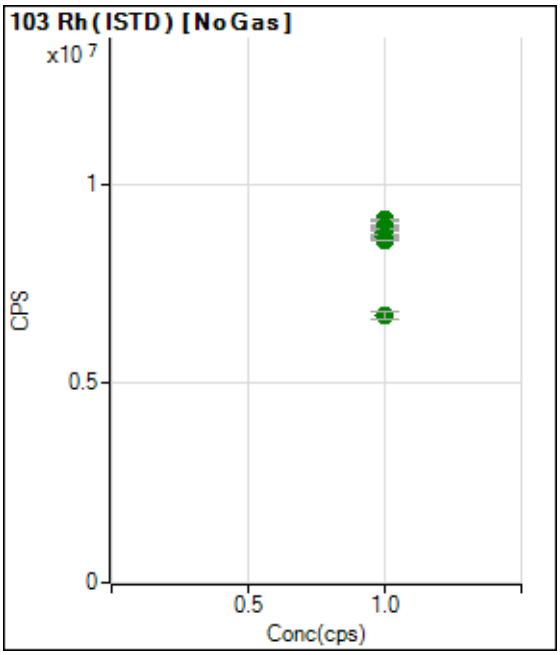


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		17865768.35		A	0.5
2	☐	1.000		17661633.76		A	0.5
3	☐	1.000		17422225.57		A	1.6
4	☐	1.000		17770633.48		A	1.8
5	☐	1.000		17892664.87		A	1.6
6	☐	1.000		18088329.59		A	0.2
7	☐	1.000		18251500.42		A	0.4
8	☐	1.000		15129061.86		A	3.9

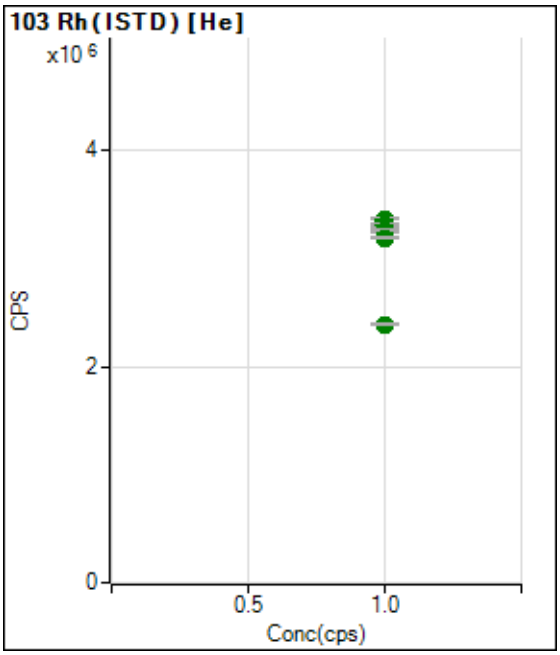


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1139238.12		P	0.7
2	☐	1.000		1145273.80		P	0.7
3	☐	1.000		1127566.94		P	0.5
4	☐	1.000		1140716.08		P	1.8
5	☐	1.000		1163676.71		P	0.6
6	☐	1.000		1176835.88		P	0.5
7	☐	1.000		1174273.65		P	0.2
8	☐	1.000		945028.65		P	1.0

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

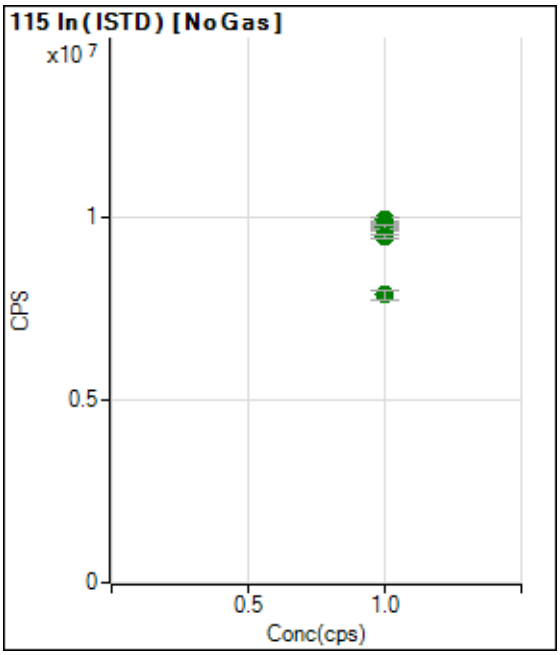


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9110403.27		A	0.4
2	☐	1.000		8954553.69		A	0.4
3	☐	1.000		8749648.76		A	2.0
4	☐	1.000		8861332.44		A	0.5
5	☐	1.000		8789197.72		A	1.9
6	☐	1.000		8691701.19		A	1.0
7	☐	1.000		8599035.91		A	0.4
8	☐	1.000		6700350.80		A	3.0

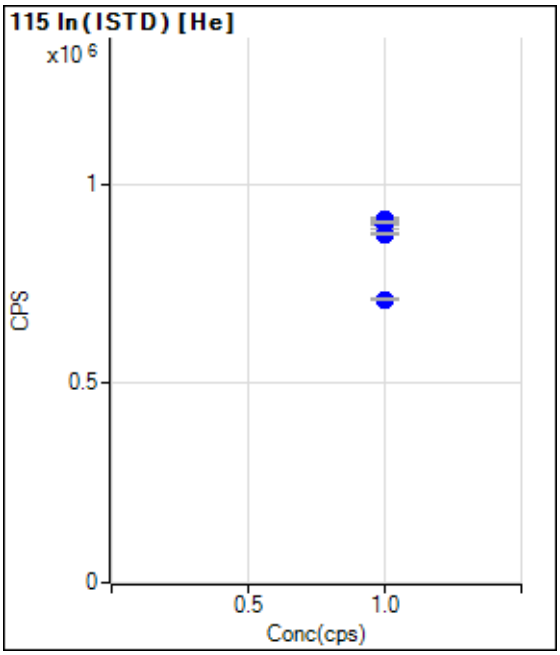


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3349080.05		A	1.0
2	☐	1.000		3354179.22		A	1.3
3	☐	1.000		3296151.55		A	1.4
4	☐	1.000		3269278.98		A	1.8
5	☐	1.000		3302172.52		A	1.2
6	☐	1.000		3258421.34		A	0.3
7	☐	1.000		3189565.30		A	1.0
8	☐	1.000		2388102.36		A	0.6

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

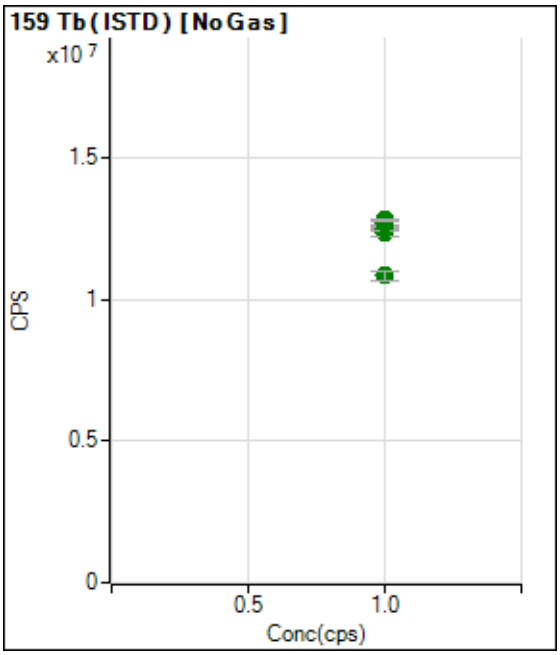


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9942879.82		A	0.9
2	☐	1.000		9859108.66		A	0.3
3	☐	1.000		9556169.79		A	2.9
4	☐	1.000		9691614.81		A	0.8
5	☐	1.000		9760365.49		A	0.3
6	☐	1.000		9751384.78		A	0.7
7	☐	1.000		9486705.52		A	0.9
8	☐	1.000		7883151.54		A	3.1

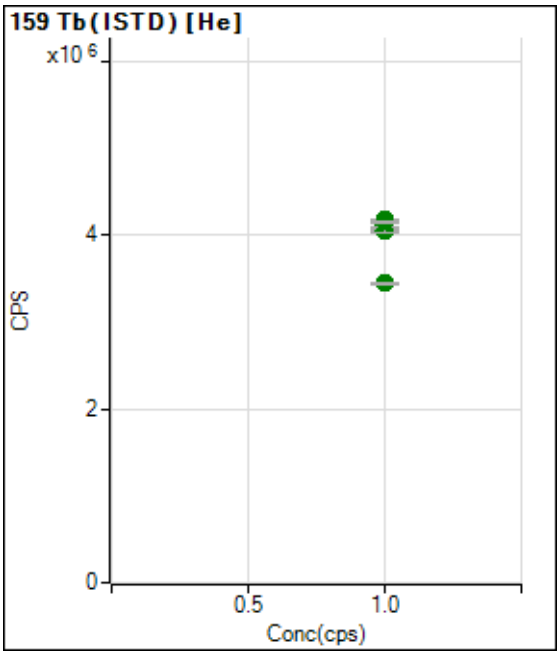


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		908181.65		P	0.9
2	☐	1.000		909793.99		P	1.1
3	☐	1.000		897733.91		P	0.6
4	☐	1.000		896170.47		P	1.8
5	☐	1.000		906314.77		P	1.1
6	☐	1.000		903450.86		P	0.7
7	☐	1.000		874927.52		P	0.4
8	☐	1.000		710835.97		P	0.7

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

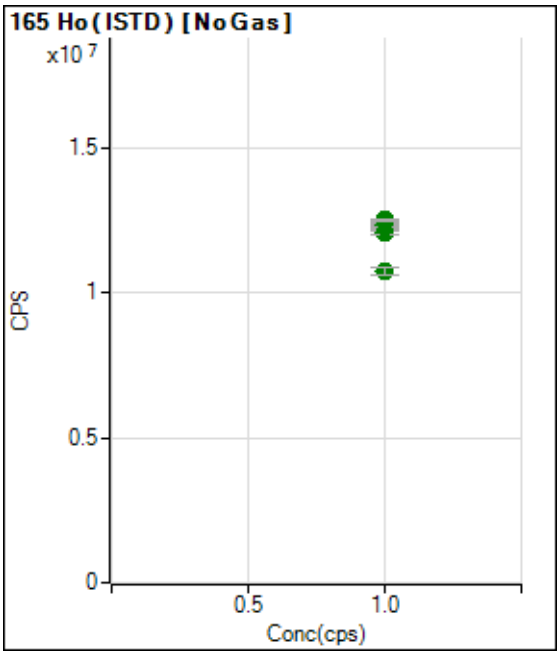


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12550278.01		A	0.2
2	☐	1.000		12496787.32		A	0.7
3	☐	1.000		12349618.01		A	1.9
4	☐	1.000		12527588.28		A	1.1
5	☐	1.000		12701786.90		A	1.4
6	☐	1.000		12801467.03		A	0.8
7	☐	1.000		12817235.92		A	0.6
8	☐	1.000		10841945.81		A	3.2

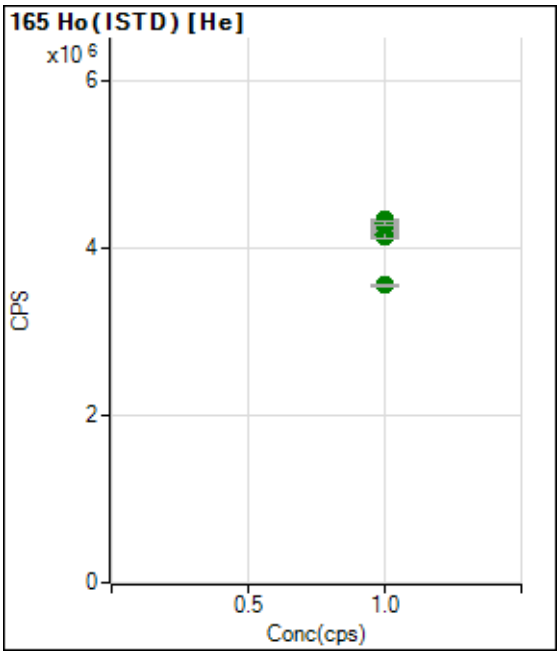


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4073261.71		A	0.8
2	☐	1.000		4124302.96		A	1.4
3	☐	1.000		4058328.31		A	1.1
4	☐	1.000		4062166.57		A	1.3
5	☐	1.000		4178896.53		A	0.7
6	☐	1.000		4159638.27		A	1.1
7	☐	1.000		4153117.47		A	0.4
8	☐	1.000		3450219.32		A	0.6

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

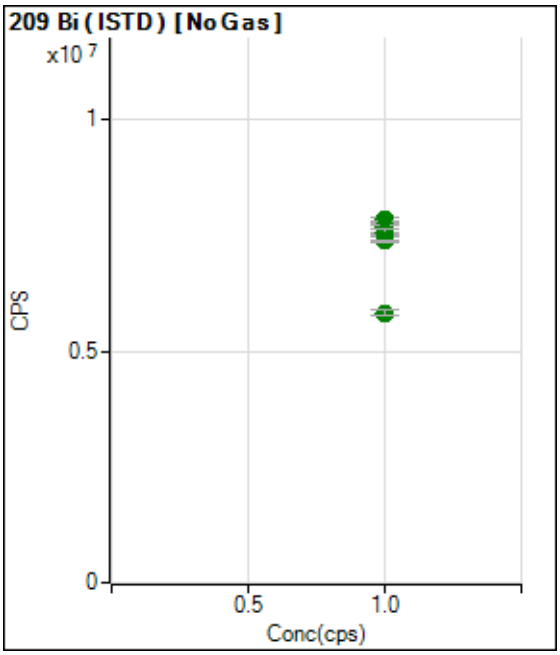


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12195429.40		A	0.7
2	☐	1.000		12267700.23		A	0.2
3	☐	1.000		12111747.46		A	1.7
4	☐	1.000		12257678.43		A	1.0
5	☐	1.000		12357430.65		A	1.2
6	☐	1.000		12508571.06		A	0.5
7	☐	1.000		12521445.64		A	0.3
8	☐	1.000		10743651.72		A	2.9

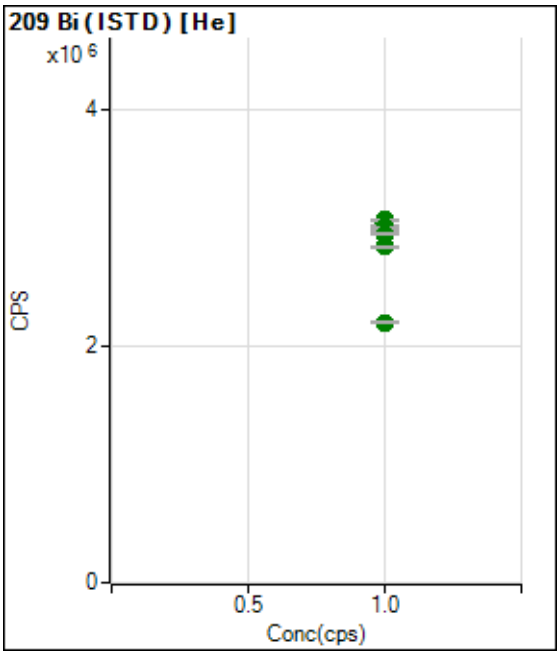


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4138483.83		A	0.8
2	☐	1.000		4188868.24		A	1.7
3	☐	1.000		4159572.23		A	1.1
4	☐	1.000		4160594.42		A	2.3
5	☐	1.000		4264454.07		A	1.1
6	☐	1.000		4332749.79		A	0.7
7	☐	1.000		4293343.65		A	0.6
8	☐	1.000		3553278.66		A	0.8

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		7833317.04		A	1.9
2	☐	1.000		7799400.58		A	0.6
3	☐	1.000		7626378.71		A	2.1
4	☐	1.000		7669246.48		A	0.9
5	☐	1.000		7576175.09		A	1.8
6	☐	1.000		7552441.42		A	2.0
7	☐	1.000		7374227.11		A	0.8
8	☐	1.000		5825036.51		A	2.5



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3039673.35		A	0.9
2	☐	1.000		3069424.40		A	0.7
3	☐	1.000		2991728.71		A	1.1
4	☐	1.000		3005979.99		A	1.5
5	☐	1.000		3004337.39		A	0.8
6	☐	1.000		2947594.85		A	0.4
7	☐	1.000		2845838.08		A	0.5
8	☐	1.000		2200798.53		A	0.5

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8
ClientSampleId :TUNE002

US EPA Tune Check Report

Operator Name	Jaswal
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\P8012825MS.b
Acq. Date-Time	2025-01-28 11:32:13
Report Comment	---
Instrument Name	G8403A SG19224459

[No Gas]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9		24866	248659.05			0.258	5.000
24		446005	4460051.36			0.545	5.000
25		60908	609082.86			0.106	5.000
26		68866	688660.64			0.275	5.000
59		96637	966365.22			0.610	5.000
113		11773	117725.28			0.799	5.000
115		157434	1574341.80			1.165	5.000
206		35408	354082.98			0.247	5.000
207		30892	308921.76			0.243	5.000
208		75038	750378.31			0.260	5.000
220		0	2.60			43.853	

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

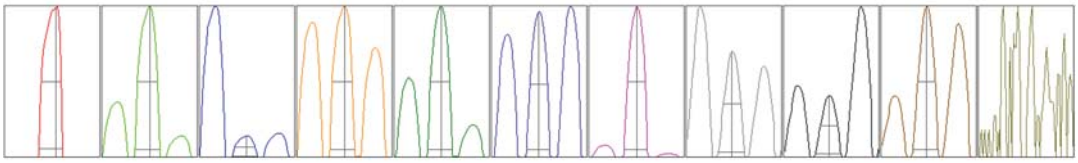
Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	24929	24919	24878	24827	24776
24	447804	448551	444654	446462	442555
25	60983	60889	60812	60909	60948
26	68907	69142	68907	68684	68690
59	96771	96326	97613	96271	96201
113	11911	11776	11793	11654	11729
115	159254	158270	158593	156169	154885
206	35538	35388	35344	35449	35322
207	30878	30951	30978	30789	30864
208	75192	74909	75260	74788	75041

US EPA Tune Check Report

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

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	42551.98	9.15	8.90 - 9.10	Fail
24	758424.05	24.05	23.90 - 24.10	
25	103978.74	25.00	24.90 - 25.10	
26	116550.41	26.05	25.90 - 26.10	
59	171008.13	59.00	58.90 - 59.10	
113	22577.59	113.00	112.90 - 113.10	
115	300632.80	115.05	114.90 - 115.10	
206	67153.22	205.95	205.90 - 206.10	
207	57805.55	206.95	206.90 - 207.10	
208	140897.70	207.95	207.90 - 208.10	
220			-	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.62	0.738	0.900	
24	0.63	0.785	0.900	
25	0.62	0.784	0.900	
26	0.63	0.784	0.900	
59	0.60	0.780	0.900	
113	0.55	0.729	0.900	
115	0.55	0.731	0.900	
206	0.55	0.818	0.900	
207	0.55	0.789	0.900	
208	0.55	0.787	0.900	
220				

Integration Time [sec] 0.1
Acquisition Time [sec] 256.770000000002
Y Axis Linear

Tune Parameters

Plasma Parameters

Plasma Mode --- Nebulizer Gas 0.78 L/min Dilution Gas 0.40 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.9
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	-6.0 V	Omega Lens	7.3 V	Deflect	14.6 V
Extract 2	-115.0 V	Cell Entrance	-30 V	Plate Bias	-50 V
Omega Bias	-60 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	4.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	170 V		

QP Parameters

Mass Gain	102	Axis Gain	0.9960	QP Bias	-4.0 V
Mass Offset	126	Axis Offset	0.05		

Hardware Settings

Torch

Torch H	-0.2 mm	Torch V	1.4 mm		

EM

Discriminator	4.0 mV	Analog HV	2178 V	Pulse HV	1068 V

[He]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
59		16161	161605.17			1.897	
89		13562	135617.18			2.507	
205		19977	199769.32			0.978	

Mass	RSD% (Flag)
59	
89	
205	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	16379	16241	16409	16121	15652
89	13811	13553	13927	13463	13055
205	20114	19926	20241	19799	19804

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.78 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	-6.0 V	Omega Lens	7.3 V	Deflect	2.2 V

US EPA Tune Check Report

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8
ClientSampleId :TUNE002

Extract 2	-115.0 V	Cell Entrance	-50 V	Plate Bias	-60
Omega Bias	-60 V	Cell Exit	-70 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	4.5 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	190 V		

QP Parameters

Mass Gain	102	Axis Gain	0.9960	QP Bias	-13.0 V
Mass Offset	126	Axis Offset	0.05		

Hardware Settings

Torch

Torch H	-0.2 mm	Torch V	1.4 mm		

EM

Discriminator	4.0 mV	Analog HV	2178 V	Pulse HV	1068 V

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:10:06	DataFile Name :	004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.60	0.30	0.30	0.00	N/A	ppb
Antimony	121-1	0.00	0.00	0.00	0.00	N/A	ppb
Arsenic	75-2	0.02	-0.02	0.00	0.00	N/A	ppb
Barium	135-1	0.01	0.00	0.00	0.00	N/A	ppb
Barium	137-1	0.00	0.01	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
Cadmium	108-1	0.01	-0.01	-0.01	0.00	N/A	ppb
Cadmium	106-1	0.44	-0.52	0.08	0.00	N/A	ppb
Cadmium	111-1	0.02	-0.04	0.01	0.00	N/A	ppb
Calcium	43-1	0.04	0.91	-0.95	0.00	N/A	ppb
Calcium	44-1	0.13	-0.20	0.06	0.00	N/A	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.01	0.00	0.01	0.00	N/A	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	N/A	ppb
Copper	63-2	0.01	-0.01	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	54-2	0.12	-0.03	-0.09	0.00	N/A	ppb
Iron	56-2	-0.11	0.00	0.11	0.00	N/A	ppb
Iron	57-2	-0.65	0.20	0.45	0.00	N/A	ppb
Krypton	83-1						cps
Lead	206-1	0.00	0.00	0.00	0.00	N/A	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:10:06	DataFile Name :	004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.00	-0.01	0.01	0.00	N/A	ppb
Lead	208-1	0.00	0.00	0.00	0.00	N/A	ppb
Lithium	6-1				100		%
Magnesium	24-2	-0.40	0.70	-0.30	0.00	N/A	ppb
Manganese	55-2	-0.01	-0.02	0.03	0.00	N/A	ppb
Molybdenum	94-1	0.00	-0.01	0.01	0.00	N/A	ppb
Molybdenum	95-1	0.01	-0.01	0.00	0.00	N/A	ppb
Molybdenum	96-1	0.01	0.01	-0.01	0.00	N/A	ppb
Molybdenum	97-1	0.01	0.00	-0.01	0.00	N/A	ppb
Molybdenum	98-1	0.00	0.00	0.00	0.00	N/A	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.05	0.04	-0.09	0.00	N/A	ppb
Phosphorus	31-2	-24.13	-20.71	-3.35	-16.06		ppb
Potassium	39-2	-1.61	0.02	1.59	0.00	N/A	ppb
Rhodium	103-1				100		%
Rhodium	103-2				100		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	82-1	-0.32	0.34	-0.02	0.00	N/A	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	0.26	-0.13	-0.13	0.00	N/A	ppb
Silicon	28-1	-0.07	0.04	0.02	0.00	N/A	ppb
Silver	107-1	0.00	0.00	0.00	0.00	N/A	ppb
Silver	109-1	0.00	0.00	0.00	0.00	N/A	ppb
Sodium	23-2	0.74	-0.71	-0.03	0.00	N/A	ppb
Strontium	86-1	-0.07	0.10	-0.03	0.00	N/A	ppb
Strontium	88-1	0.06	-0.01	-0.06	0.00	N/A	ppb
Sulfur	34-1	-135.03	-21.96	15.07	-47.30		ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	0.00	0.00	0.00	0.00	N/A	ppb
Thallium	205-1	0.00	0.00	0.00	0.00	N/A	ppb
Tin	118-1	-0.01	0.02	-0.01	0.00	N/A	ppb
Titanium	47-1	0.00	0.00	0.00	0.00	N/A	ppb
Uranium	238-1	0.00	0.00	0.00	0.00	N/A	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:10:06	DataFile Name :	004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.00	0.00	0.00	N/A	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				100		%
Zinc	66-2	-0.03	0.03	0.00	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

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P8
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:16:52	DataFile Name :	006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	18.91	21.27	18.87	19.69	6.97	ppb
Antimony	121-1	2.02	2.01	2.03	2.02	0.40	ppb
Arsenic	75-2	1.06	1.20	1.11	1.12	6.55	ppb
Barium	135-1	10.14	10.12	10.27	10.18	0.81	ppb
Barium	137-1	10.15	10.24	10.40	10.26	1.27	ppb
Beryllium	9-1	1.01	1.08	1.07	1.05	3.75	ppb
Bismuth	209-1				100		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Cadmium	108-1	1.18	1.14	1.21	1.18	2.81	ppb
Cadmium	106-1	1.20	0.33	1.23	0.92	55.93	ppb
Cadmium	111-1	1.10	1.05	1.04	1.07	2.96	ppb
Calcium	43-1	537.68	543.64	549.09	543.47	1.05	ppb
Calcium	44-1	542.58	550.52	544.30	545.80	0.77	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1.91	1.99	2.17	2.02	6.59	ppb
Cobalt	59-2	1.05	1.09	1.11	1.08	2.59	ppb
Copper	63-2	2.15	2.29	2.28	2.24	3.54	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				101		%
Holmium	165-2				101		%
Indium	115-1				99		%
Indium	115-2				100		%
Iron	54-2	56.07	56.56	55.24	55.96	1.19	ppb
Iron	56-2	53.61	55.08	56.40	55.03	2.53	ppb
Iron	57-2	55.43	54.95	53.36	54.58	1.98	ppb
Krypton	83-1						cps
Lead	206-1	0.97	1.00	0.97	0.98	1.53	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P8
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:16:52	DataFile Name :	006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.95	0.98	0.99	0.97	2.00	ppb
Lead	208-1	0.96	0.97	0.98	0.97	0.66	ppb
Lithium	6-1				101		%
Magnesium	24-2	532.05	547.63	548.22	542.63	1.69	ppb
Manganese	55-2	1.14	1.01	1.14	1.10	6.49	ppb
Molybdenum	94-1	5.81	5.92	5.97	5.90	1.35	ppb
Molybdenum	95-1	4.96	4.99	5.01	4.99	0.60	ppb
Molybdenum	96-1	5.10	5.16	5.03	5.10	1.33	ppb
Molybdenum	97-1	5.13	5.04	5.02	5.06	1.16	ppb
Molybdenum	98-1	4.93	5.17	4.98	5.03	2.44	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.11	1.12	1.13	1.12	0.77	ppb
Phosphorus	31-2	18.57	21.72	7.89	16.06	45.13	ppb
Potassium	39-2	493.92	511.60	518.79	508.10	2.52	ppb
Rhodium	103-1				98		%
Rhodium	103-2				100		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	82-1	5.68	5.09	5.14	5.30	6.11	ppb
Selenium	77-2	3.73	5.03	2.52	3.76	33.44	ppb
Selenium	78-2	5.12	5.19	2.91	4.41	29.40	ppb
Silicon	28-1	1.04	1.05	1.04	1.05	0.59	ppb
Silver	107-1	1.00	0.98	1.00	0.99	1.43	ppb
Silver	109-1	1.00	1.01	1.02	1.01	1.13	ppb
Sodium	23-2	513.38	533.18	534.80	527.12	2.26	ppb
Strontium	86-1	24.36	25.08	23.09	24.18	4.17	ppb
Strontium	88-1	24.65	24.63	24.12	24.47	1.22	ppb
Sulfur	34-1	47.93	45.49	48.50	47.30	3.38	ppb
Terbium	159-1				100		%
Terbium	159-2				101		%
Thallium	203-1	0.98	0.93	0.95	0.95	2.77	ppb
Thallium	205-1	0.94	0.96	0.95	0.95	0.64	ppb
Tin	118-1	5.03	5.10	5.08	5.07	0.65	ppb
Titanium	47-1	5.17	5.06	5.04	5.09	1.35	ppb
Uranium	238-1	0.92	0.95	0.96	0.94	2.01	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P8
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:16:52	DataFile Name :	006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	4.90	4.97	4.94	4.94	0.73	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				99		%
Yttrium	89-2				101		%
Zinc	66-2	6.44	6.28	6.65	6.46	2.88	ppb
Zirconium	90-1	1.00	0.98	1.00	0.99	1.06	ppb
Zirconium	91-1	1.00	0.98	0.97	0.98	1.44	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P8
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:20:13	DataFile Name :	007CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	976.74	988.82	995.13	986.90	0.95	ppb
Antimony	121-1	49.64	49.44	48.06	49.05	1.75	ppb
Arsenic	75-2	47.59	48.53	48.42	48.18	1.07	ppb
Barium	135-1	243.20	244.32	238.08	241.87	1.38	ppb
Barium	137-1	248.29	244.41	241.27	244.65	1.44	ppb
Beryllium	9-1	50.97	49.33	50.08	50.13	1.64	ppb
Bismuth	209-1				97		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Cadmium	108-1	54.01	53.25	53.25	53.50	0.81	ppb
Cadmium	106-1	51.96	51.52	51.32	51.60	0.64	ppb
Cadmium	111-1	51.57	51.14	50.16	50.96	1.41	ppb
Calcium	43-1	5102.40	4920.87	4962.88	4995.39	1.90	ppb
Calcium	44-1	5185.67	5001.33	4998.30	5061.77	2.12	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	48.64	50.17	49.34	49.38	1.55	ppb
Cobalt	59-2	49.85	51.22	50.64	50.57	1.36	ppb
Copper	63-2	517.24	527.81	524.07	523.04	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				99		%
Holmium	165-2				101		%
Indium	115-1				96		%
Indium	115-2				99		%
Iron	54-2	2568.95	2628.35	2593.58	2596.96	1.15	ppb
Iron	56-2	2619.55	2676.22	2678.99	2658.25	1.26	ppb
Iron	57-2	2532.57	2570.54	2612.96	2572.02	1.56	ppb
Krypton	83-1						cps
Lead	206-1	251.41	242.26	254.52	249.40	2.56	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P8
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:20:13	DataFile Name :	007CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	251.81	244.55	253.31	249.89	1.87	ppb
Lead	208-1	253.97	243.43	251.02	249.47	2.18	ppb
Lithium	6-1				99		%
Magnesium	24-2	5122.37	5181.16	5177.96	5160.50	0.64	ppb
Manganese	55-2	489.13	501.03	496.21	495.45	1.21	ppb
Molybdenum	94-1	498.55	484.80	510.27	497.87	2.56	ppb
Molybdenum	95-1	507.21	492.28	508.79	502.76	1.81	ppb
Molybdenum	96-1	505.23	497.99	505.62	502.95	0.85	ppb
Molybdenum	97-1	502.12	492.73	495.98	496.94	0.96	ppb
Molybdenum	98-1	505.24	488.54	500.90	498.23	1.74	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	53.71	54.50	55.08	54.43	1.26	ppb
Phosphorus	31-2	1018.16	1003.29	940.33	987.26	4.19	ppb
Potassium	39-2	2376.30	2420.57	2404.05	2400.31	0.93	ppb
Rhodium	103-1				96		%
Rhodium	103-2				98		%
Scandium	45-1				98		%
Scandium	45-2				99		%
Selenium	82-1	52.69	50.24	52.13	51.69	2.48	ppb
Selenium	77-2	49.37	46.00	59.83	51.73	13.94	ppb
Selenium	78-2	44.59	51.57	44.08	46.75	8.96	ppb
Silicon	28-1	57.70	56.28	55.81	56.59	1.74	ppb
Silver	107-1	51.27	51.04	50.55	50.95	0.72	ppb
Silver	109-1	51.69	51.43	50.88	51.33	0.81	ppb
Sodium	23-2	5343.84	5170.01	5239.53	5251.13	1.67	ppb
Strontium	86-1	1214.83	1178.22	1214.83	1202.63	1.76	ppb
Strontium	88-1	1284.28	1265.75	1268.11	1272.71	0.79	ppb
Sulfur	34-1	1389.91	1152.58	1140.63	1227.71	11.45	ppb
Terbium	159-1				98		%
Terbium	159-2				100		%
Thallium	203-1	47.32	45.88	47.66	46.95	2.01	ppb
Thallium	205-1	47.92	46.74	47.85	47.50	1.39	ppb
Tin	118-1	50.36	49.90	49.16	49.81	1.22	ppb
Titanium	47-1	498.83	488.26	488.57	491.89	1.22	ppb
Uranium	238-1	48.86	47.34	48.64	48.28	1.70	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P8
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:20:13	DataFile Name :	007CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	47.47	49.18	47.81	48.15	1.87	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				98		%
Yttrium	89-2				99		%
Zinc	66-2	504.37	514.84	513.23	510.81	1.10	ppb
Zirconium	90-1	48.09	46.74	47.85	47.56	1.52	ppb
Zirconium	91-1	48.02	47.03	47.81	47.62	1.09	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P8
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:23:25	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2442.31	2350.02	2397.62	2396.65	1.93	ppb
Antimony	121-1	118.35	118.46	121.87	119.56	1.67	ppb
Arsenic	75-2	123.51	121.69	120.01	121.74	1.44	ppb
Barium	135-1	612.73	608.98	628.62	616.77	1.69	ppb
Barium	137-1	623.18	602.25	637.18	620.87	2.83	ppb
Beryllium	9-1	118.96	122.96	122.36	121.43	1.78	ppb
Bismuth	209-1				98		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	126.53	125.73	130.51	127.59	2.01	ppb
Cadmium	106-1	120.89	127.34	126.78	125.00	2.86	ppb
Cadmium	111-1	120.86	122.11	124.04	122.34	1.31	ppb
Calcium	43-1	11969.39	12114.51	12176.45	12086.78	0.88	ppb
Calcium	44-1	12040.70	12305.29	12425.17	12257.05	1.60	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	123.19	119.66	120.04	120.97	1.60	ppb
Cobalt	59-2	125.01	122.65	122.31	123.32	1.19	ppb
Copper	63-2	1358.72	1308.18	1299.09	1321.99	2.43	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				101		%
Holmium	165-2				101		%
Indium	115-1				97		%
Indium	115-2				99		%
Iron	54-2	6468.71	6270.28	6324.68	6354.55	1.61	ppb
Iron	56-2	6558.25	6367.86	6339.62	6421.91	1.85	ppb
Iron	57-2	6420.73	6184.02	6193.89	6266.21	2.14	ppb
Krypton	83-1						cps
Lead	206-1	599.94	598.57	617.66	605.39	1.76	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P8
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:23:25	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	597.86	600.59	622.29	606.91	2.21	ppb
Lead	208-1	597.65	600.25	615.83	604.58	1.63	ppb
Lithium	6-1				100		%
Magnesium	24-2	13504.37	13058.37	12849.10	13137.28	2.55	ppb
Manganese	55-2	1238.55	1209.51	1200.43	1216.17	1.64	ppb
Molybdenum	94-1	1242.36	1195.59	1194.37	1210.78	2.26	ppb
Molybdenum	95-1	1216.79	1203.93	1187.71	1202.81	1.21	ppb
Molybdenum	96-1	1227.23	1196.09	1211.96	1211.76	1.29	ppb
Molybdenum	97-1	1243.51	1212.36	1203.60	1219.82	1.72	ppb
Molybdenum	98-1	1241.46	1192.59	1190.33	1208.13	2.39	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	133.08	130.97	128.07	130.71	1.92	ppb
Phosphorus	31-2	2500.32	2511.35	2374.85	2462.17	3.08	ppb
Potassium	39-2	6075.60	5848.23	5916.82	5946.88	1.96	ppb
Rhodium	103-1				97		%
Rhodium	103-2				98		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	82-1	125.39	122.99	125.75	124.71	1.20	ppb
Selenium	77-2	102.60	137.80	116.36	118.92	14.92	ppb
Selenium	78-2	131.16	114.48	133.68	126.44	8.25	ppb
Silicon	28-1	133.20	136.28	136.48	135.32	1.36	ppb
Silver	107-1	129.49	130.10	132.53	130.71	1.23	ppb
Silver	109-1	126.69	126.93	131.47	128.36	2.10	ppb
Sodium	23-2	12998.49	12671.65	12759.13	12809.76	1.32	ppb
Strontium	86-1	2951.80	2884.87	2929.24	2921.97	1.17	ppb
Strontium	88-1	3083.20	3084.38	3099.00	3088.86	0.28	ppb
Sulfur	34-1	2613.57	2662.91	2659.14	2645.21	1.04	ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	114.59	114.12	117.22	115.31	1.45	ppb
Thallium	205-1	120.83	121.41	123.32	121.85	1.07	ppb
Tin	118-1	119.47	119.94	124.14	121.18	2.12	ppb
Titanium	47-1	1234.45	1238.11	1238.40	1236.99	0.18	ppb
Uranium	238-1	117.98	117.53	119.98	118.49	1.10	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P8
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:23:25	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	122.40	119.13	118.16	119.90	1.85	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				99		%
Yttrium	89-2				100		%
Zinc	66-2	1277.73	1237.17	1238.76	1251.22	1.84	ppb
Zirconium	90-1	123.79	119.62	122.00	121.80	1.72	ppb
Zirconium	91-1	117.40	115.42	115.63	116.15	0.94	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P8
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:26:27	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	4906.40	4789.94	4728.88	4808.41	1.88	ppb
Antimony	121-1	249.99	255.23	247.27	250.83	1.61	ppb
Arsenic	75-2	244.84	245.19	244.33	244.79	0.18	ppb
Barium	135-1	1240.84	1270.69	1239.27	1250.27	1.42	ppb
Barium	137-1	1225.65	1252.00	1215.29	1230.98	1.54	ppb
Beryllium	9-1	244.32	257.87	250.63	250.94	2.70	ppb
Bismuth	209-1				97		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	247.08	258.58	246.98	250.88	2.66	ppb
Cadmium	106-1	244.36	254.03	247.20	248.53	2.00	ppb
Cadmium	111-1	241.31	249.31	242.72	244.45	1.75	ppb
Calcium	43-1	24070.03	25085.97	24447.01	24534.34	2.09	ppb
Calcium	44-1	24332.78	25630.10	24687.61	24883.50	2.69	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	246.10	241.97	236.05	241.37	2.09	ppb
Cobalt	59-2	246.39	243.85	240.13	243.46	1.30	ppb
Copper	63-2	2631.94	2591.35	2501.57	2574.95	2.59	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				101		%
Holmium	165-2				103		%
Indium	115-1				98		%
Indium	115-2				100		%
Iron	54-2	12733.94	12612.82	12451.30	12599.35	1.13	ppb
Iron	56-2	13027.92	12701.68	12593.12	12774.24	1.77	ppb
Iron	57-2	12563.40	12468.88	12233.25	12421.84	1.37	ppb
Krypton	83-1						cps
Lead	206-1	1203.49	1245.94	1212.51	1220.65	1.83	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P8
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:26:27	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1194.29	1262.49	1210.60	1222.46	2.91	ppb
Lead	208-1	1199.54	1244.28	1220.15	1221.32	1.83	ppb
Lithium	6-1				101		%
Magnesium	24-2	26569.67	26252.29	25479.10	26100.35	2.15	ppb
Manganese	55-2	2594.67	2542.36	2499.74	2545.59	1.87	ppb
Molybdenum	94-1	2421.32	2483.11	2417.69	2440.71	1.51	ppb
Molybdenum	95-1	2441.04	2470.35	2441.98	2451.12	0.68	ppb
Molybdenum	96-1	2456.98	2486.99	2474.75	2472.91	0.61	ppb
Molybdenum	97-1	2468.15	2448.89	2431.41	2449.48	0.75	ppb
Molybdenum	98-1	2469.94	2453.03	2432.66	2451.88	0.76	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	261.66	257.97	254.09	257.90	1.47	ppb
Phosphorus	31-2	5056.03	5177.72	4806.09	5013.28	3.78	ppb
Potassium	39-2	11986.95	11850.48	11694.27	11843.90	1.24	ppb
Rhodium	103-1				96		%
Rhodium	103-2				99		%
Scandium	45-1				100		%
Scandium	45-2				103		%
Selenium	82-1	256.06	253.56	246.88	252.17	1.88	ppb
Selenium	77-2	257.88	246.72	260.87	255.15	2.92	ppb
Selenium	78-2	246.57	240.49	242.46	243.17	1.28	ppb
Silicon	28-1	276.30	277.80	273.40	275.83	0.81	ppb
Silver	107-1	254.10	264.57	256.15	258.27	2.15	ppb
Silver	109-1	254.73	263.04	255.92	257.90	1.74	ppb
Sodium	23-2	26172.45	25680.12	25277.89	25710.16	1.74	ppb
Strontium	86-1	5853.11	5943.54	5884.70	5893.78	0.78	ppb
Strontium	88-1	6152.79	6300.39	6153.23	6202.14	1.37	ppb
Sulfur	34-1	5528.74	5789.02	5448.39	5588.72	3.19	ppb
Terbium	159-1				101		%
Terbium	159-2				103		%
Thallium	203-1	241.66	257.87	246.84	248.79	3.33	ppb
Thallium	205-1	246.92	250.04	244.54	247.16	1.12	ppb
Tin	118-1	248.12	253.78	246.86	249.59	1.48	ppb
Titanium	47-1	2446.16	2556.58	2451.88	2484.87	2.50	ppb
Uranium	238-1	234.69	244.10	239.39	239.39	1.97	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P8
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:26:27	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	244.76	240.09	234.52	239.79	2.14	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				102		%
Zinc	66-2	2501.60	2470.63	2417.04	2463.09	1.74	ppb
Zirconium	90-1	245.29	249.89	245.83	247.01	1.02	ppb
Zirconium	91-1	234.95	237.84	233.33	235.37	0.97	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P8
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:29:25	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9478.06	9507.03	9446.10	9477.06	0.32	ppb
Antimony	121-1	489.11	493.67	502.49	495.09	1.37	ppb
Arsenic	75-2	497.68	493.83	495.66	495.73	0.39	ppb
Barium	135-1	2452.65	2461.75	2496.49	2470.30	0.94	ppb
Barium	137-1	2487.44	2444.55	2505.02	2479.00	1.25	ppb
Beryllium	9-1	493.96	504.58	499.63	499.39	1.06	ppb
Bismuth	209-1				96		%
Bismuth	209-2				97		%
Bromine	81-1						cps
Cadmium	108-1	492.80	495.05	500.48	496.11	0.80	ppb
Cadmium	106-1	488.46	489.54	505.47	494.49	1.93	ppb
Cadmium	111-1	473.90	479.64	490.17	481.24	1.72	ppb
Calcium	43-1	50372.90	49436.46	49574.36	49794.57	1.02	ppb
Calcium	44-1	49230.28	49279.39	49305.22	49271.63	0.08	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	474.12	475.71	470.91	473.58	0.52	ppb
Cobalt	59-2	504.83	497.17	494.54	498.85	1.07	ppb
Copper	63-2	4980.20	5069.75	5004.08	5018.01	0.92	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				105		%
Indium	115-1				98		%
Indium	115-2				99		%
Iron	54-2	26325.84	26144.39	25331.82	25934.02	2.04	ppb
Iron	56-2	25038.56	25472.54	24758.97	25090.02	1.43	ppb
Iron	57-2	24311.65	24511.46	24323.04	24382.05	0.46	ppb
Krypton	83-1						cps
Lead	206-1	2488.21	2471.58	2386.50	2448.76	2.23	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P8
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:29:25	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2505.00	2479.85	2369.76	2451.54	2.93	ppb
Lead	208-1	2478.71	2469.04	2386.04	2444.60	2.08	ppb
Lithium	6-1				101		%
Magnesium	24-2	50462.24	50892.57	49974.47	50443.09	0.91	ppb
Manganese	55-2	4938.32	4999.11	4867.57	4935.00	1.33	ppb
Molybdenum	94-1	4917.83	4935.14	4928.71	4927.23	0.18	ppb
Molybdenum	95-1	4906.11	4960.01	4939.94	4935.36	0.55	ppb
Molybdenum	96-1	4909.80	4955.00	4915.70	4926.84	0.50	ppb
Molybdenum	97-1	4901.26	4936.23	4932.95	4923.48	0.39	ppb
Molybdenum	98-1	4910.34	4935.73	4895.34	4913.80	0.42	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	504.03	506.05	502.55	504.21	0.35	ppb
Phosphorus	31-2	9698.38	9857.13	10124.53	9893.35	2.18	ppb
Potassium	39-2	24735.43	24975.21	24488.00	24732.88	0.98	ppb
Rhodium	103-1				95		%
Rhodium	103-2				97		%
Scandium	45-1				103		%
Scandium	45-2				105		%
Selenium	82-1	487.47	504.54	502.19	498.07	1.86	ppb
Selenium	77-2	496.62	496.37	458.89	483.96	4.49	ppb
Selenium	78-2	503.42	485.43	487.06	491.97	2.02	ppb
Silicon	28-1	540.64	530.64	532.97	534.75	0.98	ppb
Silver	107-1	497.45	500.01	506.22	501.23	0.90	ppb
Silver	109-1	500.79	504.43	505.32	503.51	0.48	ppb
Sodium	23-2	50482.38	50632.87	49747.57	50287.61	0.94	ppb
Strontium	86-1	12313.31	12425.74	12494.82	12411.29	0.74	ppb
Strontium	88-1	12176.99	12369.24	12503.76	12350.00	1.33	ppb
Sulfur	34-1	11347.40	11209.36	11223.60	11260.12	0.67	ppb
Terbium	159-1				102		%
Terbium	159-2				102		%
Thallium	203-1	498.24	501.18	481.91	493.78	2.10	ppb
Thallium	205-1	491.15	495.56	485.92	490.88	0.98	ppb
Tin	118-1	491.45	493.44	508.05	497.64	1.82	ppb
Titanium	47-1	4952.38	4922.53	4955.70	4943.53	0.37	ppb
Uranium	238-1	489.34	493.61	471.53	484.83	2.42	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P8
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:29:25	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	476.83	478.13	475.43	476.80	0.28	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				101		%
Yttrium	89-2				103		%
Zinc	66-2	5024.47	5026.61	4940.57	4997.22	0.98	ppb
Zirconium	90-1	486.89	492.11	488.53	489.18	0.55	ppb
Zirconium	91-1	502.88	492.47	493.78	496.38	1.14	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P8
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:32:15	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19194.50	19235.15	19110.49	19180.05	0.33	ppb
Antimony	121-1	987.75	1007.24	1013.93	1002.98	1.36	ppb
Arsenic	75-2	1002.71	998.97	1010.14	1003.94	0.57	ppb
Barium	135-1	4976.61	4998.40	5073.64	5016.22	1.01	ppb
Barium	137-1	4973.52	5019.53	5055.05	5016.04	0.81	ppb
Beryllium	9-1	991.29	998.44	1011.80	1000.51	1.04	ppb
Bismuth	209-1				94		%
Bismuth	209-2				94		%
Bromine	81-1						cps
Cadmium	108-1	991.57	999.70	1012.40	1001.23	1.05	ppb
Cadmium	106-1	993.48	1004.83	1010.82	1003.04	0.88	ppb
Cadmium	111-1	989.07	1011.37	1032.72	1011.05	2.16	ppb
Calcium	43-1	100451.55	100815.62	101032.67	100766.62	0.29	ppb
Calcium	44-1	99977.57	101448.81	100480.33	100635.57	0.74	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1007.69	1012.92	1027.09	1015.90	0.99	ppb
Cobalt	59-2	1004.11	997.59	1005.48	1002.39	0.42	ppb
Copper	63-2	9996.03	10000.52	9889.77	9962.11	0.63	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				104		%
Indium	115-1				95		%
Indium	115-2				96		%
Iron	54-2	51761.00	51434.41	51575.03	51590.15	0.32	ppb
Iron	56-2	50697.44	50388.90	50976.07	50687.47	0.58	ppb
Iron	57-2	52107.70	52213.46	52628.69	52316.62	0.53	ppb
Krypton	83-1						cps
Lead	206-1	4947.45	5089.86	5069.01	5035.44	1.53	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P8
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:32:15	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	4945.80	5073.16	5081.19	5033.38	1.51	ppb
Lead	208-1	4958.07	5077.20	5077.08	5037.45	1.36	ppb
Lithium	6-1				101		%
Magnesium	24-2	102229.04	104379.98	102080.66	102896.56	1.25	ppb
Manganese	55-2	10017.87	9965.46	10093.35	10025.56	0.64	ppb
Molybdenum	94-1	9932.03	10128.77	10107.86	10056.22	1.07	ppb
Molybdenum	95-1	9870.88	10135.55	10144.48	10050.30	1.55	ppb
Molybdenum	96-1	9949.10	10092.80	10102.06	10047.99	0.85	ppb
Molybdenum	97-1	9931.78	10099.66	10133.01	10054.81	1.07	ppb
Molybdenum	98-1	9910.42	10115.32	10155.62	10060.45	1.31	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	990.45	992.61	1001.89	994.98	0.61	ppb
Phosphorus	31-2	19939.47	20400.30	19826.34	20055.37	1.52	ppb
Potassium	39-2	49825.18	49021.59	49632.81	49493.19	0.85	ppb
Rhodium	103-1				94		%
Rhodium	103-2				95		%
Scandium	45-1				104		%
Scandium	45-2				106		%
Selenium	82-1	992.62	1006.36	1002.15	1000.38	0.70	ppb
Selenium	77-2	1013.77	1055.60	952.86	1007.41	5.13	ppb
Selenium	78-2	994.89	1005.94	1016.28	1005.71	1.06	ppb
Silicon	28-1	971.21	975.47	977.22	974.64	0.32	ppb
Silver	107-1	988.16	999.23	1002.29	996.56	0.75	ppb
Silver	109-1	970.88	993.84	1022.63	995.78	2.60	ppb
Sodium	23-2	102795.01	103301.83	102206.50	102767.78	0.53	ppb
Strontium	86-1	24960.94	25155.23	25316.87	25144.35	0.71	ppb
Strontium	88-1	24780.58	25308.82	25136.48	25075.29	1.07	ppb
Sulfur	34-1	18729.51	19246.94	19603.23	19193.22	2.29	ppb
Terbium	159-1				102		%
Terbium	159-2				102		%
Thallium	203-1	992.61	1007.17	1014.55	1004.78	1.11	ppb
Thallium	205-1	992.93	1012.96	1011.48	1005.79	1.11	ppb
Tin	118-1	983.41	1013.76	1008.13	1001.77	1.61	ppb
Titanium	47-1	9935.02	10105.73	10061.39	10034.05	0.88	ppb
Uranium	238-1	1004.21	1026.13	1003.07	1011.14	1.29	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P8
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:32:15	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	1016.31	1025.84	1002.51	1014.88	1.16	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				102		%
Yttrium	89-2				103		%
Zinc	66-2	9944.58	10017.91	10067.28	10009.93	0.62	ppb
Zirconium	90-1	989.02	1016.77	1014.25	1006.68	1.52	ppb
Zirconium	91-1	995.06	1009.99	1015.03	1006.69	1.03	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P8
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:35:02	DataFile Name :	012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	100744.24	100227.27	99714.23	100228.58	0.51	ppb
Antimony	121-1	0.36	0.35	0.30	0.34	8.25	ppb
Arsenic	75-2	0.43	0.59	0.51	0.51	16.14	ppb
Barium	135-1	2.64	2.51	2.30	2.48	6.82	ppb
Barium	137-1	2.57	2.50	2.26	2.44	6.67	ppb
Beryllium	9-1	0.28	0.28	0.22	0.26	13.33	ppb
Bismuth	209-1				74		%
Bismuth	209-2				72		%
Bromine	81-1						cps
Cadmium	108-1	0.94	0.88	0.75	0.86	11.66	ppb
Cadmium	106-1	0.78	0.28	-0.91	0.05	1649.46	ppb
Cadmium	111-1	0.26	0.21	0.14	0.20	28.94	ppb
Calcium	43-1	494440.72	506510.59	498751.20	499900.84	1.22	ppb
Calcium	44-1	497890.88	507136.19	494843.81	499956.96	1.28	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1.88	1.48	1.19	1.52	22.68	ppb
Cobalt	59-2	1.95	1.98	2.01	1.98	1.57	ppb
Copper	63-2	1.38	1.23	1.24	1.28	6.42	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				88		%
Holmium	165-2				86		%
Indium	115-1				79		%
Indium	115-2				78		%
Iron	54-2	252602.48	248786.71	247350.86	249580.02	1.09	ppb
Iron	56-2	251479.26	249928.65	248093.83	249833.91	0.68	ppb
Iron	57-2	252046.70	248957.64	247799.42	249601.25	0.88	ppb
Krypton	83-1						cps
Lead	206-1	0.77	0.76	0.70	0.74	4.73	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P8
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:35:02	DataFile Name :	012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.80	0.73	0.65	0.72	10.10	ppb
Lead	208-1	0.80	0.74	0.70	0.75	6.37	ppb
Lithium	6-1				81		%
Magnesium	24-2	503155.44	498846.92	495908.98	499303.78	0.73	ppb
Manganese	55-2	4.27	3.94	4.16	4.12	4.04	ppb
Molybdenum	94-1	2.61	2.40	2.35	2.45	5.73	ppb
Molybdenum	95-1	1.64	1.55	1.57	1.58	2.99	ppb
Molybdenum	96-1	2.31	2.23	2.24	2.26	1.91	ppb
Molybdenum	97-1	1.45	1.35	1.25	1.35	7.35	ppb
Molybdenum	98-1	1.34	1.30	1.22	1.29	4.58	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	2.04	2.08	2.16	2.09	2.78	ppb
Phosphorus	31-2	-23.87	-2.25	-1.98	-9.37		ppb
Potassium	39-2	251172.55	248172.37	251163.39	250169.44	0.69	ppb
Rhodium	103-1				74		%
Rhodium	103-2				71		%
Scandium	45-1				85		%
Scandium	45-2				81		%
Selenium	82-1	0.30	0.80	-0.05	0.35	122.06	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.05	-0.05	-0.51	-0.20		ppb
Silicon	28-1	3.37	3.13	2.75	3.08	10.05	ppb
Silver	107-1	0.15	0.13	0.10	0.13	18.98	ppb
Silver	109-1	1.24	0.11	0.12	0.49	132.21	ppb
Sodium	23-2	504008.15	496315.63	497791.90	499371.89	0.82	ppb
Strontium	86-1	76.27	75.18	73.57	75.00	1.81	ppb
Strontium	88-1	75.77	76.40	74.82	75.67	1.05	ppb
Sulfur	34-1	35.63	116.30	39.43	63.79	71.36	ppb
Terbium	159-1				86		%
Terbium	159-2				85		%
Thallium	203-1	0.08	0.09	0.08	0.08	5.49	ppb
Thallium	205-1	0.09	0.08	0.06	0.08	18.24	ppb
Tin	118-1	-0.19	-0.24	-0.25	-0.23		ppb
Titanium	47-1	3.07	2.90	2.83	2.93	4.21	ppb
Uranium	238-1	0.07	0.05	0.06	0.06	16.91	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P8
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:35:02	DataFile Name :	012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.19	0.26	0.23	0.23	13.99	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				85		%
Yttrium	89-2				83		%
Zinc	66-2	2.91	2.85	3.24	3.00	6.99	ppb
Zirconium	90-1	0.54	0.54	0.52	0.53	2.27	ppb
Zirconium	91-1	0.55	0.52	0.58	0.55	6.06	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICV002	Instrumnet Name :	P8
Client Sample ID :	ICV002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:07:57	DataFile Name :	013ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	487.19	472.55	473.33	477.69	1.72	ppb
Antimony	121-1	196.57	199.32	201.22	199.04	1.17	ppb
Arsenic	75-2	200.20	198.26	199.09	199.18	0.49	ppb
Barium	135-1	95.22	98.49	99.78	97.83	2.40	ppb
Barium	137-1	96.94	99.77	100.84	99.18	2.03	ppb
Beryllium	9-1	97.27	99.66	100.59	99.17	1.73	ppb
Bismuth	209-1				87		%
Bismuth	209-2				90		%
Bromine	81-1						cps
Cadmium	108-1	81.75	81.76	85.12	82.88	2.35	ppb
Cadmium	106-1	77.06	80.02	79.72	78.93	2.06	ppb
Cadmium	111-1	94.16	97.86	100.08	97.37	3.07	ppb
Calcium	43-1	1860.48	1906.01	1987.45	1917.98	3.35	ppb
Calcium	44-1	1864.15	1910.22	1964.10	1912.82	2.62	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	99.04	96.83	98.12	98.00	1.13	ppb
Cobalt	59-2	101.06	100.00	100.45	100.50	0.53	ppb
Copper	63-2	109.03	106.83	105.15	107.00	1.82	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				87		%
Holmium	165-2				91		%
Indium	115-1				86		%
Indium	115-2				89		%
Iron	54-2	2186.27	2108.68	2124.30	2139.75	1.92	ppb
Iron	56-2	2178.17	2110.44	2128.59	2139.07	1.64	ppb
Iron	57-2	2094.39	2061.81	2063.09	2073.10	0.89	ppb
Krypton	83-1						cps
Lead	206-1	187.84	189.19	196.60	191.21	2.47	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICV002	Instrumnet Name :	P8
Client Sample ID :	ICV002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:07:57	DataFile Name :	013ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	180.27	182.51	185.63	182.80	1.47	ppb
Lead	208-1	191.20	193.07	194.32	192.87	0.81	ppb
Lithium	6-1				85		%
Magnesium	24-2	1172.37	1150.05	1150.13	1157.52	1.11	ppb
Manganese	55-2	102.19	98.62	99.19	100.00	1.92	ppb
Molybdenum	94-1	0.07	0.09	0.07	0.07	20.24	ppb
Molybdenum	95-1	0.03	0.02	0.03	0.03	22.23	ppb
Molybdenum	96-1	0.09	0.07	0.08	0.08	8.33	ppb
Molybdenum	97-1	0.05	0.03	0.03	0.04	19.36	ppb
Molybdenum	98-1	0.04	0.03	0.04	0.04	7.53	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	108.29	106.26	107.52	107.35	0.96	ppb
Phosphorus	31-2	-14.29	-7.01	-11.29	-10.86		ppb
Potassium	39-2	1916.02	1892.41	1885.56	1898.00	0.84	ppb
Rhodium	103-1				86		%
Rhodium	103-2				88		%
Scandium	45-1				86		%
Scandium	45-2				88		%
Selenium	82-1	198.32	205.79	214.29	206.13	3.88	ppb
Selenium	77-2	183.22	201.69	226.11	203.68	10.56	ppb
Selenium	78-2	212.01	213.70	200.54	208.75	3.43	ppb
Silicon	28-1	0.17	0.24	0.47	0.30	53.64	ppb
Silver	107-1	45.62	47.14	47.97	46.91	2.53	ppb
Silver	109-1	45.99	47.43	47.80	47.07	2.03	ppb
Sodium	23-2	1987.67	1956.17	1950.32	1964.72	1.02	ppb
Strontium	86-1	5.68	6.31	6.87	6.29	9.49	ppb
Strontium	88-1	5.56	5.61	5.71	5.63	1.34	ppb
Sulfur	34-1	-127.78	-80.66	113.71	-31.57		ppb
Terbium	159-1				87		%
Terbium	159-2				90		%
Thallium	203-1	191.19	190.60	196.07	192.62	1.56	ppb
Thallium	205-1	188.44	190.34	199.41	192.73	3.04	ppb
Tin	118-1	-0.02	-0.03	-0.02	-0.02		ppb
Titanium	47-1	0.02	0.01	0.03	0.02	39.69	ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICV002	Instrumnet Name :	P8
Client Sample ID :	ICV002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:07:57	DataFile Name :	013ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	95.00	92.95	92.68	93.54	1.35	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				86		%
Yttrium	89-2				89		%
Zinc	66-2	205.29	201.39	200.13	202.27	1.33	ppb
Zirconium	90-1	0.00	0.01	0.00	0.00	72.87	ppb
Zirconium	91-1	0.11	0.11	0.13	0.12	12.11	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICB002	Instrumnet Name :	P8
Client Sample ID :	ICB002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:19:07	DataFile Name :	014CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.15	0.05	0.07	0.09	57.53	ppb
Antimony	121-1	0.01	0.02	0.01	0.01	17.15	ppb
Arsenic	75-2	-0.02	0.04	0.00	0.01	406.82	ppb
Barium	135-1	0.01	0.01	0.03	0.02	65.64	ppb
Barium	137-1	0.02	0.01	0.02	0.02	22.68	ppb
Beryllium	9-1	0.02	0.02	0.02	0.02	9.30	ppb
Bismuth	209-1				94		%
Bismuth	209-2				97		%
Bromine	81-1						cps
Cadmium	108-1	0.07	0.02	0.07	0.05	54.57	ppb
Cadmium	106-1	-0.58	-0.63	-1.63	-0.95		ppb
Cadmium	111-1	-0.05	-0.05	-0.12	-0.07		ppb
Calcium	43-1	0.30	-0.82	0.34	-0.06		ppb
Calcium	44-1	-0.03	-0.87	-0.38	-0.43		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.03	0.03	0.03	0.03	3.52	ppb
Cobalt	59-2	0.00	0.00	-0.01	0.00		ppb
Copper	63-2	0.00	-0.06	-0.05	-0.03		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				96		%
Holmium	165-2				97		%
Indium	115-1				94		%
Indium	115-2				95		%
Iron	54-2	-0.96	-0.26	-0.38	-0.53		ppb
Iron	56-2	0.43	0.47	0.47	0.46	4.89	ppb
Iron	57-2	-0.06	0.05	1.17	0.39	174.34	ppb
Krypton	83-1						cps
Lead	206-1	0.02	0.03	0.03	0.03	9.56	ppb

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICB002	Instrumnet Name :	P8
Client Sample ID :	ICB002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:19:07	DataFile Name :	014CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.01	0.03	0.00	0.01	105.62	ppb
Lead	208-1	0.02	0.03	0.02	0.02	28.18	ppb
Lithium	6-1				94		%
Magnesium	24-2	-2.29	-2.83	-2.25	-2.46		ppb
Manganese	55-2	0.06	0.10	0.12	0.09	35.14	ppb
Molybdenum	94-1	0.01	0.01	0.01	0.01	47.54	ppb
Molybdenum	95-1	0.01	0.00	0.01	0.00	194.67	ppb
Molybdenum	96-1	0.00	0.00	0.01	0.00	189.08	ppb
Molybdenum	97-1	0.01	0.00	0.01	0.01	34.31	ppb
Molybdenum	98-1	0.01	0.00	0.00	0.00	181.80	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.04	-0.04	-0.03	-0.01		ppb
Phosphorus	31-2	-23.55	-10.99	-21.68	-18.74		ppb
Potassium	39-2	0.78	1.26	0.31	0.78	60.68	ppb
Rhodium	103-1				94		%
Rhodium	103-2				95		%
Scandium	45-1				94		%
Scandium	45-2				95		%
Selenium	82-1	0.51	0.13	-0.06	0.19	152.60	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.11	-0.51	0.69	0.03	2351.29	ppb
Silicon	28-1	-0.29	-0.21	-0.18	-0.23		ppb
Silver	107-1	0.00	0.00	0.00	0.00	211.93	ppb
Silver	109-1	0.00	0.00	0.01	0.00	28.34	ppb
Sodium	23-2	-3.08	-3.79	-2.34	-3.07		ppb
Strontium	86-1	-0.18	0.08	-0.05	-0.05		ppb
Strontium	88-1	0.00	-0.04	-0.09	-0.05		ppb
Sulfur	34-1	-66.88	-32.24	-13.07	-37.40		ppb
Terbium	159-1				95		%
Terbium	159-2				97		%
Thallium	203-1	0.01	0.01	0.00	0.00	55.01	ppb
Thallium	205-1	0.00	0.00	0.00	0.00	14.22	ppb
Tin	118-1	-0.02	-0.05	-0.03	-0.03		ppb
Titanium	47-1	0.00	-0.01	0.02	0.00	367.59	ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICB002	Instrumnet Name :	P8
Client Sample ID :	ICB002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:19:07	DataFile Name :	014CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.01	0.00	0.00	88.09	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				95		%
Yttrium	89-2				95		%
Zinc	66-2	0.09	-0.04	0.08	0.04	170.68	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00		ppb
Zirconium	91-1	0.00	0.01	0.00	0.00	624.71	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICSA002	Instrumnet Name :	P8
Client Sample ID :	ICSA002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:22:30	DataFile Name :	015ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	91838.49	92105.36	92795.39	92246.41	0.54	ppb
Antimony	121-1	1.04	1.08	1.05	1.06	2.08	ppb
Arsenic	75-2	0.34	0.32	0.17	0.28	33.59	ppb
Barium	135-1	1.33	1.42	1.47	1.41	5.16	ppb
Barium	137-1	1.41	1.37	1.40	1.39	1.61	ppb
Beryllium	9-1	0.28	0.29	0.29	0.29	0.96	ppb
Bismuth	209-1				89		%
Bismuth	209-2				89		%
Bromine	81-1						cps
Cadmium	108-1	15.66	15.86	15.11	15.54	2.49	ppb
Cadmium	106-1	-2.77	-1.74	-2.71	-2.41		ppb
Cadmium	111-1	0.37	0.47	0.41	0.42	12.73	ppb
Calcium	43-1	97146.04	97353.80	98482.07	97660.64	0.74	ppb
Calcium	44-1	96827.82	98651.12	98189.02	97889.32	0.97	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	18.46	18.94	18.63	18.68	1.32	ppb
Cobalt	59-2	1.07	1.09	1.07	1.07	1.18	ppb
Copper	63-2	7.74	7.67	7.62	7.68	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				98		%
Holmium	165-2				99		%
Indium	115-1				92		%
Indium	115-2				94		%
Iron	54-2	102932.05	102028.81	103240.44	102733.77	0.61	ppb
Iron	56-2	103500.49	101357.37	103228.00	102695.29	1.14	ppb
Iron	57-2	104086.86	101219.49	104224.36	103176.90	1.64	ppb
Krypton	83-1						cps
Lead	206-1	4.71	4.60	4.70	4.67	1.27	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICSA002	Instrumnet Name :	P8
Client Sample ID :	ICSA002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:22:30	DataFile Name :	015ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	4.24	4.15	4.16	4.18	1.18	ppb
Lead	208-1	4.42	4.30	4.34	4.36	1.39	ppb
Lithium	6-1				94		%
Magnesium	24-2	96340.20	96202.50	97446.59	96663.10	0.71	ppb
Manganese	55-2	7.39	7.21	7.28	7.29	1.27	ppb
Molybdenum	94-1	1561.66	1581.43	1576.79	1573.29	0.66	ppb
Molybdenum	95-1	1885.91	1918.26	1909.01	1904.39	0.87	ppb
Molybdenum	96-1	1873.89	1880.09	1903.80	1885.92	0.84	ppb
Molybdenum	97-1	1918.26	1953.61	1925.78	1932.55	0.96	ppb
Molybdenum	98-1	1898.18	1944.21	1929.61	1924.00	1.22	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	5.23	4.97	4.93	5.04	3.24	ppb
Phosphorus	31-2	101768.85	102109.28	101336.24	101738.12	0.38	ppb
Potassium	39-2	98996.80	97112.43	98448.82	98186.02	0.99	ppb
Rhodium	103-1				90		%
Rhodium	103-2				91		%
Scandium	45-1				99		%
Scandium	45-2				100		%
Selenium	82-1	-0.17	0.23	0.08	0.05	424.21	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.12	-0.13	0.26	0.00	5705.20	ppb
Silicon	28-1	3.71	3.81	3.81	3.78	1.54	ppb
Silver	107-1	0.04	0.03	0.03	0.03	10.63	ppb
Silver	109-1	0.05	0.05	0.04	0.05	15.74	ppb
Sodium	23-2	102331.28	101838.80	102288.28	102152.79	0.27	ppb
Strontium	86-1	764.04	762.54	763.49	763.36	0.10	ppb
Strontium	88-1	763.43	772.09	772.77	769.43	0.68	ppb
Sulfur	34-1	90808.26	89895.69	90968.24	90557.40	0.64	ppb
Terbium	159-1				98		%
Terbium	159-2				98		%
Thallium	203-1	0.08	0.10	0.08	0.09	13.51	ppb
Thallium	205-1	0.09	0.09	0.10	0.09	5.37	ppb
Tin	118-1	0.05	0.09	0.07	0.07	33.48	ppb
Titanium	47-1	2030.23	2011.47	2038.95	2026.89	0.69	ppb
Uranium	238-1	0.02	0.01	0.02	0.01	11.27	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICSA002	Instrumnet Name :	P8
Client Sample ID :	ICSA002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:22:30	DataFile Name :	015ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.14	0.14	0.13	0.14	5.22	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				98		%
Yttrium	89-2				99		%
Zinc	66-2	10.66	10.75	10.51	10.64	1.13	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	45.13	ppb
Zirconium	91-1	0.01	0.01	0.02	0.01	44.64	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICSAB002	Instrumnet Name :	P8
Client Sample ID :	ICSAB002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:25:41	DataFile Name :	016ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	90089.43	90268.91	91354.91	90571.09	0.76	ppb
Antimony	121-1	19.57	19.77	20.06	19.80	1.25	ppb
Arsenic	75-2	19.79	20.49	19.52	19.93	2.52	ppb
Barium	135-1	20.35	21.30	20.75	20.80	2.29	ppb
Barium	137-1	20.74	21.32	21.21	21.09	1.46	ppb
Beryllium	9-1	19.78	19.48	20.04	19.77	1.42	ppb
Bismuth	209-1				90		%
Bismuth	209-2				90		%
Bromine	81-1						cps
Cadmium	108-1	29.59	31.34	30.13	30.35	2.96	ppb
Cadmium	106-1	13.98	13.29	13.28	13.52	2.97	ppb
Cadmium	111-1	18.48	18.95	19.08	18.83	1.67	ppb
Calcium	43-1	95420.12	98703.03	99698.67	97940.60	2.29	ppb
Calcium	44-1	96077.71	99413.16	98698.86	98063.24	1.79	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	36.96	36.20	37.26	36.81	1.48	ppb
Cobalt	59-2	19.83	19.62	19.92	19.79	0.77	ppb
Copper	63-2	26.81	26.72	27.10	26.87	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				101		%
Holmium	165-2				101		%
Indium	115-1				95		%
Indium	115-2				96		%
Iron	54-2	99793.03	99400.79	101227.45	100140.42	0.96	ppb
Iron	56-2	99766.33	99733.75	100597.08	100032.39	0.49	ppb
Iron	57-2	102412.30	102498.92	102023.37	102311.53	0.25	ppb
Krypton	83-1						cps
Lead	206-1	24.34	24.28	24.36	24.33	0.16	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICSAB002	Instrumnet Name :	P8
Client Sample ID :	ICSAB002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:25:41	DataFile Name :	016ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	23.22	23.12	23.53	23.29	0.90	ppb
Lead	208-1	23.53	23.40	23.77	23.56	0.80	ppb
Lithium	6-1				98		%
Magnesium	24-2	95652.35	94815.55	95214.34	95227.42	0.44	ppb
Manganese	55-2	25.98	25.86	26.19	26.01	0.64	ppb
Molybdenum	94-1	1591.94	1589.92	1599.53	1593.80	0.32	ppb
Molybdenum	95-1	1934.47	1951.67	1936.12	1940.75	0.49	ppb
Molybdenum	96-1	1894.34	1947.28	1902.43	1914.68	1.49	ppb
Molybdenum	97-1	1898.55	1955.74	1939.25	1931.18	1.52	ppb
Molybdenum	98-1	1912.37	1925.38	1938.83	1925.53	0.69	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	24.31	24.38	24.87	24.52	1.23	ppb
Phosphorus	31-2	99993.45	98994.45	102002.72	100330.21	1.53	ppb
Potassium	39-2	95893.23	95278.53	96985.28	96052.34	0.90	ppb
Rhodium	103-1				91		%
Rhodium	103-2				93		%
Scandium	45-1				102		%
Scandium	45-2				103		%
Selenium	82-1	19.24	21.27	20.20	20.24	5.04	ppb
Selenium	77-2	9.99	24.84	13.64	16.16	47.87	ppb
Selenium	78-2	22.12	18.99	24.21	21.78	12.05	ppb
Silicon	28-1	3.92	4.25	4.32	4.16	5.07	ppb
Silver	107-1	17.40	17.78	17.87	17.68	1.41	ppb
Silver	109-1	17.50	18.01	18.00	17.84	1.64	ppb
Sodium	23-2	100884.34	100249.49	100519.70	100551.18	0.32	ppb
Strontium	86-1	763.36	780.20	774.74	772.77	1.11	ppb
Strontium	88-1	768.38	787.48	785.21	780.36	1.34	ppb
Sulfur	34-1	89031.98	91449.45	91929.91	90803.78	1.71	ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	19.35	19.32	19.37	19.35	0.15	ppb
Thallium	205-1	19.47	19.37	19.74	19.52	0.98	ppb
Tin	118-1	0.03	-0.01	0.01	0.01	221.64	ppb
Titanium	47-1	1988.66	2055.46	2057.46	2033.86	1.93	ppb
Uranium	238-1	0.01	0.01	0.01	0.01	1.26	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICSAB002	Instrumnet Name :	P8
Client Sample ID :	ICSAB002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:25:41	DataFile Name :	016ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	18.37	18.63	18.79	18.60	1.12	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				101		%
Zinc	66-2	29.72	28.58	30.46	29.59	3.21	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	18.09	ppb
Zirconium	91-1	0.02	0.02	0.03	0.02	37.96	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV009	Instrumnet Name :	P8
Client Sample ID :	CCV009	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:28:49	DataFile Name :	017CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	53447.61	52679.79	53838.58	53321.99	1.11	ppb
Antimony	121-1	518.55	523.22	521.75	521.17	0.46	ppb
Arsenic	75-2	514.70	521.51	511.90	516.04	0.96	ppb
Barium	135-1	2651.05	2650.23	2668.23	2656.50	0.38	ppb
Barium	137-1	2667.65	2675.21	2655.37	2666.08	0.38	ppb
Beryllium	9-1	533.52	538.34	556.66	542.84	2.25	ppb
Bismuth	209-1				84		%
Bismuth	209-2				82		%
Bromine	81-1						cps
Cadmium	108-1	504.16	505.60	509.85	506.54	0.58	ppb
Cadmium	106-1	506.84	506.19	502.16	505.06	0.50	ppb
Cadmium	111-1	485.29	485.03	490.12	486.81	0.59	ppb
Calcium	43-1	266109.56	264170.77	264089.50	264789.94	0.43	ppb
Calcium	44-1	265771.05	262594.62	263087.74	263817.80	0.65	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	504.50	505.53	507.61	505.88	0.31	ppb
Cobalt	59-2	521.81	514.92	518.90	518.54	0.67	ppb
Copper	63-2	4978.59	5014.16	5066.85	5019.87	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				96		%
Holmium	165-2				95		%
Indium	115-1				89		%
Indium	115-2				88		%
Iron	54-2	132070.23	130425.31	133512.81	132002.78	1.17	ppb
Iron	56-2	130943.26	132052.73	133387.78	132127.92	0.93	ppb
Iron	57-2	132341.66	132379.20	133637.80	132786.22	0.56	ppb
Krypton	83-1						cps
Lead	206-1	2659.99	2768.54	2762.35	2730.29	2.23	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV009	Instrumnet Name :	P8
Client Sample ID :	CCV009	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:28:49	DataFile Name :	017CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2628.58	2756.91	2787.68	2724.39	3.10	ppb
Lead	208-1	2644.31	2748.63	2760.43	2717.79	2.35	ppb
Lithium	6-1				92		%
Magnesium	24-2	270957.68	266488.03	267007.36	268151.03	0.91	ppb
Manganese	55-2	5208.88	5298.18	5291.00	5266.02	0.94	ppb
Molybdenum	94-1	5348.74	5274.42	5375.07	5332.74	0.98	ppb
Molybdenum	95-1	5355.68	5313.07	5380.42	5349.73	0.64	ppb
Molybdenum	96-1	5415.70	5296.96	5419.48	5377.38	1.30	ppb
Molybdenum	97-1	5327.25	5292.02	5377.16	5332.15	0.80	ppb
Molybdenum	98-1	5328.68	5253.42	5380.24	5320.78	1.20	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	505.68	506.47	512.56	508.24	0.74	ppb
Phosphorus	31-2	10502.46	10549.42	10352.47	10468.12	0.98	ppb
Potassium	39-2	133920.78	129983.33	133845.53	132583.21	1.70	ppb
Rhodium	103-1				85		%
Rhodium	103-2				83		%
Scandium	45-1				96		%
Scandium	45-2				96		%
Selenium	82-1	521.61	507.86	519.63	516.37	1.44	ppb
Selenium	77-2	505.00	512.78	485.87	501.22	2.76	ppb
Selenium	78-2	470.98	516.31	486.15	491.15	4.70	ppb
Silicon	28-1	541.84	555.11	556.75	551.23	1.48	ppb
Silver	107-1	501.04	499.55	501.61	500.73	0.21	ppb
Silver	109-1	499.08	501.06	506.63	502.26	0.78	ppb
Sodium	23-2	270909.62	268943.03	271849.58	270567.41	0.55	ppb
Strontium	86-1	13540.61	13341.42	13487.47	13456.50	0.77	ppb
Strontium	88-1	13330.55	13317.67	13497.96	13382.06	0.75	ppb
Sulfur	34-1	11867.71	11978.03	12176.45	12007.40	1.30	ppb
Terbium	159-1				95		%
Terbium	159-2				93		%
Thallium	203-1	542.56	555.13	562.46	553.38	1.82	ppb
Thallium	205-1	537.36	548.56	550.24	545.39	1.28	ppb
Tin	118-1	525.70	524.22	527.64	525.85	0.33	ppb
Titanium	47-1	5185.28	5299.72	5399.79	5294.93	2.03	ppb
Uranium	238-1	546.22	564.12	567.01	559.12	2.01	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV009	Instrumnet Name :	P8
Client Sample ID :	CCV009	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:28:49	DataFile Name :	017CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	514.36	513.62	517.97	515.32	0.45	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				94		%
Yttrium	89-2				95		%
Zinc	66-2	4761.81	4789.08	4838.88	4796.59	0.81	ppb
Zirconium	90-1	527.22	526.82	539.16	531.07	1.32	ppb
Zirconium	91-1	543.90	536.55	547.14	542.53	1.00	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB009	Instrumnet Name :	P8
Client Sample ID :	CCB009	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:32:00	DataFile Name :	018CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.68	1.35	0.59	0.87	47.84	ppb
Antimony	121-1	0.12	0.09	0.08	0.10	17.26	ppb
Arsenic	75-2	0.02	0.02	0.00	0.01	89.00	ppb
Barium	135-1	0.22	0.20	0.20	0.21	5.73	ppb
Barium	137-1	0.20	0.21	0.20	0.20	4.26	ppb
Beryllium	9-1	0.12	0.10	0.10	0.11	14.04	ppb
Bismuth	209-1				99		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Cadmium	108-1	0.14	0.11	0.01	0.08	76.21	ppb
Cadmium	106-1	-1.11	-1.01	-0.90	-1.01		ppb
Cadmium	111-1	-0.07	-0.06	-0.04	-0.06		ppb
Calcium	43-1	3.10	2.09	3.40	2.86	24.01	ppb
Calcium	44-1	3.23	1.88	2.37	2.49	27.39	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.01	0.04	0.04	0.03	67.86	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	1533.31	ppb
Copper	63-2	-0.09	-0.06	-0.06	-0.07		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				102		%
Indium	115-1				100		%
Indium	115-2				101		%
Iron	54-2	1.30	1.28	1.65	1.41	14.79	ppb
Iron	56-2	1.60	1.87	1.69	1.72	7.81	ppb
Iron	57-2	0.19	0.62	0.67	0.49	53.82	ppb
Krypton	83-1						cps
Lead	206-1	0.18	0.17	0.17	0.17	5.37	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB009	Instrumnet Name :	P8
Client Sample ID :	CCB009	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:32:00	DataFile Name :	018CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.19	0.16	0.15	0.17	11.64	ppb
Lead	208-1	0.18	0.16	0.16	0.17	5.98	ppb
Lithium	6-1				99		%
Magnesium	24-2	-1.67	-1.48	-2.04	-1.73		ppb
Manganese	55-2	0.07	0.11	0.08	0.08	25.34	ppb
Molybdenum	94-1	0.19	0.15	0.11	0.15	28.65	ppb
Molybdenum	95-1	0.14	0.11	0.11	0.12	16.53	ppb
Molybdenum	96-1	0.14	0.13	0.11	0.13	12.69	ppb
Molybdenum	97-1	0.14	0.14	0.11	0.13	12.27	ppb
Molybdenum	98-1	0.17	0.12	0.10	0.13	25.74	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.20	0.11	-0.03	0.09	128.18	ppb
Phosphorus	31-2	-17.27	-6.89	-15.67	-13.28		ppb
Potassium	39-2	29.78	26.65	22.18	26.20	14.56	ppb
Rhodium	103-1				101		%
Rhodium	103-2				100		%
Scandium	45-1				100		%
Scandium	45-2				101		%
Selenium	82-1	0.00	-0.18	-0.14	-0.11		ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.13	-0.13	-0.13	-0.13		ppb
Silicon	28-1	0.00	-0.04	0.06	0.01	680.88	ppb
Silver	107-1	0.04	0.04	0.03	0.04	10.36	ppb
Silver	109-1	0.04	0.04	0.04	0.04	9.44	ppb
Sodium	23-2	30.39	29.59	27.77	29.25	4.60	ppb
Strontium	86-1	0.00	-0.02	0.34	0.11	185.01	ppb
Strontium	88-1	-0.02	-0.13	-0.07	-0.07		ppb
Sulfur	34-1	-326.49	-365.32	-212.02	-301.27		ppb
Terbium	159-1				100		%
Terbium	159-2				101		%
Thallium	203-1	0.06	0.05	0.05	0.05	10.52	ppb
Thallium	205-1	0.05	0.05	0.05	0.05	0.82	ppb
Tin	118-1	-0.02	0.00	0.00	-0.01		ppb
Titanium	47-1	0.10	0.06	0.09	0.09	21.76	ppb
Uranium	238-1	0.01	0.00	0.00	0.01	39.78	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB009	Instrumnet Name :	P8
Client Sample ID :	CCB009	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:32:00	DataFile Name :	018CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.01	0.00	0.01	0.01	131.87	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				102		%
Yttrium	89-2				101		%
Zinc	66-2	0.10	0.13	0.16	0.13	23.03	ppb
Zirconium	90-1	0.02	0.02	0.02	0.02	11.63	ppb
Zirconium	91-1	0.02	0.01	0.03	0.02	37.01	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1135-02A	Instrumnet Name :	P8
Client Sample ID :	YE8F7A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:38:21	DataFile Name :	019AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	32713.39	33591.43	34035.37	33446.73	2.01	ppb
Antimony	121-1	0.72	0.74	0.72	0.73	1.10	ppb
Arsenic	75-2	28.27	29.46	28.84	28.86	2.06	ppb
Barium	135-1	367.30	375.51	377.17	373.32	1.42	ppb
Barium	137-1	392.48	401.94	396.10	396.84	1.20	ppb
Beryllium	9-1	1.35	1.40	1.37	1.37	1.93	ppb
Bismuth	209-1				97		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Cadmium	108-1	1.18	1.00	1.11	1.09	8.58	ppb
Cadmium	106-1	2.42	1.96	2.45	2.28	12.20	ppb
Cadmium	111-1	0.55	0.51	0.52	0.53	3.46	ppb
Calcium	43-1	4434.69	4445.10	4481.10	4453.63	0.55	ppb
Calcium	44-1	4574.60	4598.85	4528.74	4567.40	0.78	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	61.39	62.79	63.10	62.42	1.46	ppb
Cobalt	59-2	49.77	50.51	51.02	50.43	1.24	ppb
Copper	63-2	109.68	111.93	114.05	111.89	1.95	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				100		%
Indium	115-2				99		%
Iron	54-2	102282.55	103497.61	105179.59	103653.25	1.40	ppb
Iron	56-2	101796.33	104757.45	103547.10	103366.96	1.44	ppb
Iron	57-2	100731.90	103458.93	104685.18	102958.67	1.97	ppb
Krypton	83-1						cps
Lead	206-1	24.48	24.82	24.67	24.66	0.69	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1135-02A	Instrumnet Name :	P8
Client Sample ID :	YE8F7A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:38:21	DataFile Name :	019AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	23.01	23.07	23.52	23.20	1.21	ppb
Lead	208-1	23.64	23.79	23.91	23.78	0.58	ppb
Lithium	6-1				103		%
Magnesium	24-2	17884.78	18143.69	18389.17	18139.22	1.39	ppb
Manganese	55-2	4140.44	4252.68	4297.89	4230.34	1.92	ppb
Molybdenum	94-1	12.25	12.65	12.64	12.51	1.83	ppb
Molybdenum	95-1	11.57	11.66	11.67	11.63	0.47	ppb
Molybdenum	96-1	11.88	12.18	12.05	12.03	1.22	ppb
Molybdenum	97-1	11.74	11.84	11.62	11.73	0.92	ppb
Molybdenum	98-1	11.39	11.69	11.49	11.53	1.34	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	117.03	119.87	120.87	119.26	1.67	ppb
Phosphorus	31-2	1143.57	1378.64	1245.00	1255.73	9.39	ppb
Potassium	39-2	3604.86	3654.58	3682.99	3647.48	1.08	ppb
Rhodium	103-1				100		%
Rhodium	103-2				100		%
Scandium	45-1				115		%
Scandium	45-2				114		%
Selenium	82-1	1.56	0.70	1.32	1.19	37.40	ppb
Selenium	77-2	112.18	124.20	105.73	114.04	8.22	ppb
Selenium	78-2	19.44	19.38	20.99	19.94	4.59	ppb
Silicon	28-1	449.80	449.98	449.71	449.83	0.03	ppb
Silver	107-1	0.12	0.11	0.10	0.11	11.33	ppb
Silver	109-1	0.12	0.11	0.11	0.11	6.68	ppb
Sodium	23-2	81.67	88.11	91.07	86.95	5.52	ppb
Strontium	86-1	799.58	812.00	808.16	806.58	0.79	ppb
Strontium	88-1	803.34	814.14	809.97	809.15	0.67	ppb
Sulfur	34-1	-686.85	-663.59	-660.90	-670.45		ppb
Terbium	159-1				104		%
Terbium	159-2				103		%
Thallium	203-1	0.40	0.40	0.38	0.39	2.51	ppb
Thallium	205-1	0.41	0.38	0.40	0.40	3.47	ppb
Tin	118-1	1.49	1.51	1.58	1.53	3.18	ppb
Titanium	47-1	910.01	910.59	914.71	911.77	0.28	ppb
Uranium	238-1	1.85	1.82	1.84	1.84	0.68	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1135-02A	Instrumnet Name :	P8
Client Sample ID :	YE8F7A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:38:21	DataFile Name :	019AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	137.93	140.19	141.04	139.72	1.15	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				119		%
Yttrium	89-2				118		%
Zinc	66-2	215.19	218.53	221.38	218.37	1.42	ppb
Zirconium	90-1	1.61	1.60	1.64	1.62	1.27	ppb
Zirconium	91-1	1.64	1.61	1.61	1.62	1.07	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166238BL	Instrumnet Name :	P8
Client Sample ID :	PBW238	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:41:35	DataFile Name :	020CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.08	0.53	0.38	0.33	69.85	ppb
Antimony	121-1	0.01	0.00	0.01	0.01	56.19	ppb
Arsenic	75-2	-0.02	-0.02	0.00	-0.01		ppb
Barium	135-1	0.08	0.09	0.09	0.08	8.81	ppb
Barium	137-1	0.09	0.09	0.06	0.08	17.83	ppb
Beryllium	9-1	0.03	0.03	0.02	0.03	14.78	ppb
Bismuth	209-1				99		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Cadmium	108-1	0.04	0.06	0.01	0.04	63.67	ppb
Cadmium	106-1	-0.78	-0.82	-1.10	-0.90		ppb
Cadmium	111-1	-0.05	-0.06	-0.08	-0.06		ppb
Calcium	43-1	-0.53	0.88	0.23	0.19	365.34	ppb
Calcium	44-1	-0.39	-0.55	-0.41	-0.45		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.02	0.00	0.01	0.01	132.91	ppb
Cobalt	59-2	0.00	0.00	-0.02	-0.01		ppb
Copper	63-2	-0.22	-0.25	-0.25	-0.24		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				101		%
Holmium	165-2				101		%
Indium	115-1				100		%
Indium	115-2				101		%
Iron	54-2	2.08	2.89	2.77	2.58	17.01	ppb
Iron	56-2	2.44	2.36	2.14	2.31	6.64	ppb
Iron	57-2	1.98	1.98	2.12	2.03	3.95	ppb
Krypton	83-1						cps
Lead	206-1	0.23	0.21	0.21	0.22	4.69	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166238BL	Instrumnet Name :	P8
Client Sample ID :	PBW238	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:41:35	DataFile Name :	020CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.21	0.22	0.18	0.20	10.44	ppb
Lead	208-1	0.22	0.22	0.20	0.21	6.11	ppb
Lithium	6-1				98		%
Magnesium	24-2	-3.86	-3.73	-3.83	-3.81		ppb
Manganese	55-2	0.24	0.18	0.16	0.19	22.08	ppb
Molybdenum	94-1	0.01	0.01	0.03	0.02	45.28	ppb
Molybdenum	95-1	0.01	0.01	0.02	0.01	61.75	ppb
Molybdenum	96-1	0.01	0.01	0.00	0.01	62.63	ppb
Molybdenum	97-1	0.03	0.02	0.01	0.02	40.33	ppb
Molybdenum	98-1	0.02	0.01	0.01	0.01	33.22	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.03	0.06	0.04	0.04	34.14	ppb
Phosphorus	31-2	-24.16	-22.42	-12.04	-19.54		ppb
Potassium	39-2	11.84	11.95	11.04	11.61	4.29	ppb
Rhodium	103-1				101		%
Rhodium	103-2				101		%
Scandium	45-1				102		%
Scandium	45-2				100		%
Selenium	82-1	-0.10	0.14	-0.22	-0.06		ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	0.63	-0.51	0.24	0.12	476.68	ppb
Silicon	28-1	-0.19	-0.28	-0.29	-0.25		ppb
Silver	107-1	0.01	0.00	0.00	0.00	31.40	ppb
Silver	109-1	0.00	0.00	0.00	0.00	30.19	ppb
Sodium	23-2	11.67	10.88	9.08	10.54	12.57	ppb
Strontium	86-1	-0.48	-0.06	-0.58	-0.37		ppb
Strontium	88-1	-0.15	-0.19	-0.24	-0.19		ppb
Sulfur	34-1	-359.41	-379.21	-321.73	-353.45		ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	0.04	0.03	0.04	0.03	17.46	ppb
Thallium	205-1	0.03	0.03	0.03	0.03	4.90	ppb
Tin	118-1	-0.04	-0.04	-0.05	-0.04		ppb
Titanium	47-1	0.04	0.00	0.03	0.03	82.00	ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166238BL	Instrumnet Name :	P8
Client Sample ID :	PBW238	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:41:35	DataFile Name :	020CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.01	0.00	0.00	91.78	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				101		%
Yttrium	89-2				101		%
Zinc	66-2	0.06	0.15	0.05	0.09	65.39	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00		ppb
Zirconium	91-1	0.01	0.00	0.01	0.01	50.86	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166238BS	Instrumnet Name :	P8
Client Sample ID :	LCS238	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:44:59	DataFile Name :	021LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	38.85	43.87	38.64	40.45	7.32	ppb
Antimony	121-1	3.87	3.85	3.88	3.87	0.49	ppb
Arsenic	75-2	2.27	2.11	1.95	2.11	7.59	ppb
Barium	135-1	19.57	19.21	19.86	19.55	1.67	ppb
Barium	137-1	19.67	19.62	19.93	19.74	0.85	ppb
Beryllium	9-1	2.02	2.04	2.02	2.03	0.33	ppb
Bismuth	209-1				98		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Cadmium	108-1	2.12	2.32	1.86	2.10	11.15	ppb
Cadmium	106-1	1.69	1.16	1.48	1.44	18.49	ppb
Cadmium	111-1	1.94	1.92	2.06	1.97	3.60	ppb
Calcium	43-1	984.28	1001.12	969.81	985.07	1.59	ppb
Calcium	44-1	973.21	1001.22	968.76	981.07	1.79	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	3.83	3.80	3.69	3.78	1.94	ppb
Cobalt	59-2	2.00	2.02	1.99	2.01	0.78	ppb
Copper	63-2	4.34	4.21	4.33	4.29	1.72	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				99		%
Indium	115-2				99		%
Iron	54-2	422.08	413.17	421.32	418.86	1.18	ppb
Iron	56-2	418.06	415.90	421.99	418.65	0.74	ppb
Iron	57-2	422.87	420.68	419.48	421.01	0.41	ppb
Krypton	83-1						cps
Lead	206-1	2.05	2.06	2.05	2.05	0.17	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166238BS	Instrumnet Name :	P8
Client Sample ID :	LCS238	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:44:59	DataFile Name :	021LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1.99	2.07	2.05	2.04	2.00	ppb
Lead	208-1	2.01	2.05	2.03	2.03	1.04	ppb
Lithium	6-1				97		%
Magnesium	24-2	976.19	961.46	970.74	969.46	0.77	ppb
Manganese	55-2	2.08	2.12	2.14	2.11	1.60	ppb
Molybdenum	94-1	11.20	11.21	11.29	11.24	0.44	ppb
Molybdenum	95-1	9.45	9.55	9.34	9.45	1.14	ppb
Molybdenum	96-1	9.58	9.60	9.61	9.60	0.13	ppb
Molybdenum	97-1	9.73	9.59	9.59	9.63	0.84	ppb
Molybdenum	98-1	9.37	9.52	9.39	9.43	0.82	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	2.11	2.04	2.18	2.11	3.48	ppb
Phosphorus	31-2	33.65	24.80	14.78	24.41	38.68	ppb
Potassium	39-2	976.35	974.13	980.89	977.12	0.35	ppb
Rhodium	103-1				99		%
Rhodium	103-2				101		%
Scandium	45-1				101		%
Scandium	45-2				99		%
Selenium	82-1	9.97	10.19	10.16	10.11	1.23	ppb
Selenium	77-2	11.34	11.19	7.63	10.05	20.91	ppb
Selenium	78-2	8.24	13.00	9.09	10.11	25.13	ppb
Silicon	28-1	3.49	3.69	3.44	3.54	3.74	ppb
Silver	107-1	1.91	1.90	1.97	1.93	2.02	ppb
Silver	109-1	1.95	1.96	1.97	1.96	0.46	ppb
Sodium	23-2	1001.73	991.41	1002.43	998.52	0.62	ppb
Strontium	86-1	45.93	45.98	46.33	46.08	0.47	ppb
Strontium	88-1	45.37	45.75	45.96	45.70	0.66	ppb
Sulfur	34-1	-270.28	-148.87	-285.62	-234.92		ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	1.86	1.90	1.80	1.85	2.81	ppb
Thallium	205-1	1.86	1.91	1.90	1.89	1.44	ppb
Tin	118-1	9.66	9.68	9.67	9.67	0.13	ppb
Titanium	47-1	2.40	2.49	2.36	2.41	2.82	ppb
Uranium	238-1	1.83	1.86	1.84	1.84	0.80	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166238BS	Instrumnet Name :	P8
Client Sample ID :	LCS238	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:44:59	DataFile Name :	021LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	9.62	9.66	9.66	9.65	0.22	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				101		%
Yttrium	89-2				100		%
Zinc	66-2	10.24	10.45	10.94	10.54	3.40	ppb
Zirconium	90-1	1.87	1.92	1.90	1.90	1.28	ppb
Zirconium	91-1	1.94	1.88	1.90	1.91	1.49	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166230BL	Instrumnet Name :	P8
Client Sample ID :	PBS230	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:51:58	DataFile Name :	023CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.20	-0.06	0.57	0.11	390.81	ppb
Antimony	121-1	0.00	0.00	0.00	0.00	51.20	ppb
Arsenic	75-2	0.00	0.02	0.00	0.01	171.86	ppb
Barium	135-1	0.04	0.03	0.01	0.03	48.94	ppb
Barium	137-1	0.02	0.02	0.03	0.02	24.07	ppb
Beryllium	9-1	0.01	0.01	0.01	0.01	16.70	ppb
Bismuth	209-1				98		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	0.07	0.13	0.16	0.12	39.06	ppb
Cadmium	106-1	-1.30	-1.54	-0.57	-1.14		ppb
Cadmium	111-1	-0.10	-0.12	-0.06	-0.09		ppb
Calcium	43-1	-1.76	-0.93	0.82	-0.63		ppb
Calcium	44-1	-1.27	-1.07	-1.48	-1.27		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.04	0.03	0.01	0.02	50.50	ppb
Cobalt	59-2	-0.01	-0.01	-0.02	-0.01		ppb
Copper	63-2	-0.33	-0.27	-0.28	-0.29		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				99		%
Indium	115-2				98		%
Iron	54-2	0.23	0.66	0.28	0.39	60.95	ppb
Iron	56-2	0.36	0.26	0.38	0.33	19.75	ppb
Iron	57-2	0.00	-0.80	0.24	-0.19		ppb
Krypton	83-1						cps
Lead	206-1	0.06	0.05	0.04	0.05	18.89	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166230BL	Instrumnet Name :	P8
Client Sample ID :	PBS230	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:51:58	DataFile Name :	023CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.06	0.05	0.04	0.05	15.03	ppb
Lead	208-1	0.06	0.05	0.05	0.05	12.44	ppb
Lithium	6-1				97		%
Magnesium	24-2	-3.51	-3.67	-3.37	-3.51		ppb
Manganese	55-2	0.03	0.04	0.04	0.04	12.68	ppb
Molybdenum	94-1	-0.01	0.00	0.00	0.00		ppb
Molybdenum	95-1	0.01	-0.01	0.00	0.00		ppb
Molybdenum	96-1	0.00	-0.01	-0.01	-0.01		ppb
Molybdenum	97-1	0.01	-0.01	0.01	0.00	376.79	ppb
Molybdenum	98-1	0.01	0.00	0.01	0.01	45.19	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.03	-0.01	0.05	0.02	150.51	ppb
Phosphorus	31-2	-18.45	-29.35	-13.18	-20.33		ppb
Potassium	39-2	3.90	4.32	9.38	5.87	51.95	ppb
Rhodium	103-1				98		%
Rhodium	103-2				100		%
Scandium	45-1				98		%
Scandium	45-2				98		%
Selenium	82-1	0.12	-0.20	-0.12	-0.07		ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.12	-0.12	-0.13	-0.12		ppb
Silicon	28-1	-0.25	-0.30	-0.39	-0.31		ppb
Silver	107-1	0.00	0.00	0.00	0.00	80.17	ppb
Silver	109-1	0.01	0.00	0.01	0.00	15.48	ppb
Sodium	23-2	4.59	1.69	2.94	3.07	47.26	ppb
Strontium	86-1	-0.54	-0.28	-0.30	-0.37		ppb
Strontium	88-1	-0.17	-0.14	-0.21	-0.17		ppb
Sulfur	34-1	-251.43	-282.99	-375.83	-303.42		ppb
Terbium	159-1				98		%
Terbium	159-2				100		%
Thallium	203-1	0.01	0.02	0.01	0.01	22.91	ppb
Thallium	205-1	0.01	0.02	0.01	0.02	14.78	ppb
Tin	118-1	-0.02	-0.03	-0.01	-0.02		ppb
Titanium	47-1	-0.01	0.01	0.03	0.01	227.61	ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166230BL	Instrumnet Name :	P8
Client Sample ID :	PBS230	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:51:58	DataFile Name :	023CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.01	0.00	0.00	0.00	170.39	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				99		%
Yttrium	89-2				99		%
Zinc	66-2	0.13	0.00	0.00	0.04	181.31	ppb
Zirconium	90-1	0.00	0.00	-0.01	0.00		ppb
Zirconium	91-1	0.01	0.00	0.00	0.00	338.04	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166230BS	Instrumnet Name :	P8
Client Sample ID :	LCS230	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:55:20	DataFile Name :	024LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	38.63	40.03	43.02	40.56	5.52	ppb
Antimony	121-1	3.89	3.84	4.00	3.91	2.12	ppb
Arsenic	75-2	1.96	2.38	2.35	2.23	10.52	ppb
Barium	135-1	19.84	19.66	20.23	19.91	1.45	ppb
Barium	137-1	19.94	20.16	20.11	20.07	0.57	ppb
Beryllium	9-1	2.03	2.08	2.02	2.04	1.69	ppb
Bismuth	209-1				91		%
Bismuth	209-2				93		%
Bromine	81-1						cps
Cadmium	108-1	2.13	2.35	2.19	2.22	4.99	ppb
Cadmium	106-1	0.63	-0.40	0.70	0.31	198.39	ppb
Cadmium	111-1	1.85	1.76	1.90	1.84	3.88	ppb
Calcium	43-1	996.69	1010.87	1013.48	1007.01	0.90	ppb
Calcium	44-1	1000.28	1002.67	1004.96	1002.64	0.23	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	3.69	3.71	3.81	3.74	1.72	ppb
Cobalt	59-2	1.99	2.03	1.97	2.00	1.60	ppb
Copper	63-2	4.36	4.50	4.44	4.44	1.54	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				91		%
Holmium	165-2				92		%
Indium	115-1				90		%
Indium	115-2				90		%
Iron	54-2	423.32	426.64	431.12	427.03	0.92	ppb
Iron	56-2	424.31	425.32	428.11	425.91	0.46	ppb
Iron	57-2	422.42	437.95	433.72	431.36	1.86	ppb
Krypton	83-1						cps
Lead	206-1	2.01	1.93	2.06	2.00	3.36	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166230BS	Instrumnet Name :	P8
Client Sample ID :	LCS230	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:55:20	DataFile Name :	024LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1.98	1.96	1.97	1.97	0.55	ppb
Lead	208-1	2.01	1.98	2.02	2.00	0.93	ppb
Lithium	6-1				89		%
Magnesium	24-2	987.78	995.67	1003.20	995.55	0.77	ppb
Manganese	55-2	2.35	2.36	2.09	2.27	6.80	ppb
Molybdenum	94-1	11.43	11.47	11.76	11.56	1.58	ppb
Molybdenum	95-1	9.56	9.39	9.73	9.56	1.76	ppb
Molybdenum	96-1	9.60	9.73	10.10	9.81	2.68	ppb
Molybdenum	97-1	9.73	9.63	10.02	9.80	2.07	ppb
Molybdenum	98-1	9.55	9.51	9.90	9.66	2.22	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	2.24	2.15	2.33	2.24	3.86	ppb
Phosphorus	31-2	24.15	37.72	23.03	28.30	28.89	ppb
Potassium	39-2	991.40	979.10	998.31	989.60	0.98	ppb
Rhodium	103-1				90		%
Rhodium	103-2				92		%
Scandium	45-1				90		%
Scandium	45-2				91		%
Selenium	82-1	10.86	10.90	11.02	10.93	0.79	ppb
Selenium	77-2	15.20	9.71	8.36	11.09	32.69	ppb
Selenium	78-2	9.92	8.71	11.27	9.97	12.86	ppb
Silicon	28-1	3.95	4.04	3.98	3.99	1.09	ppb
Silver	107-1	1.95	1.97	1.96	1.96	0.41	ppb
Silver	109-1	2.01	2.01	2.03	2.01	0.58	ppb
Sodium	23-2	1021.73	1021.78	1032.83	1025.45	0.62	ppb
Strontium	86-1	45.32	45.56	46.96	45.95	1.92	ppb
Strontium	88-1	46.51	46.07	46.92	46.50	0.91	ppb
Sulfur	34-1	135.53	126.71	60.96	107.73	37.82	ppb
Terbium	159-1				91		%
Terbium	159-2				91		%
Thallium	203-1	1.84	1.86	1.85	1.85	0.33	ppb
Thallium	205-1	1.91	1.92	1.93	1.92	0.48	ppb
Tin	118-1	9.78	9.90	9.93	9.87	0.82	ppb
Titanium	47-1	2.37	2.45	2.32	2.38	2.94	ppb
Uranium	238-1	1.83	1.81	1.87	1.84	1.56	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166230BS	Instrumnet Name :	P8
Client Sample ID :	LCS230	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:55:20	DataFile Name :	024LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	9.94	9.98	9.91	9.94	0.32	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				92		%
Yttrium	89-2				91		%
Zinc	66-2	11.09	10.02	11.55	10.89	7.21	ppb
Zirconium	90-1	1.87	1.90	1.97	1.92	2.50	ppb
Zirconium	91-1	1.89	1.95	2.00	1.95	2.92	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166241BL	Instrumnet Name :	P8
Client Sample ID :	PBS241	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:58:44	DataFile Name :	025CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.28	-0.59	0.26	-0.02		ppb
Antimony	121-1	0.00	0.00	0.00	0.00	76.11	ppb
Arsenic	75-2	0.06	-0.02	0.02	0.02	197.52	ppb
Barium	135-1	0.03	0.02	0.02	0.02	22.15	ppb
Barium	137-1	0.02	0.02	0.02	0.02	9.61	ppb
Beryllium	9-1	0.01	0.01	0.01	0.01	17.61	ppb
Bismuth	209-1				99		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	0.22	0.00	0.00	0.07	183.14	ppb
Cadmium	106-1	-1.34	-1.71	-1.00	-1.35		ppb
Cadmium	111-1	-0.11	-0.12	-0.08	-0.10		ppb
Calcium	43-1	-0.34	0.07	-0.76	-0.34		ppb
Calcium	44-1	-0.95	-1.11	-1.02	-1.03		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.04	-0.02	-0.03	-0.03		ppb
Cobalt	59-2	-0.01	-0.01	-0.01	-0.01		ppb
Copper	63-2	-0.31	-0.27	-0.33	-0.30		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				100		%
Indium	115-1				100		%
Indium	115-2				97		%
Iron	54-2	0.13	0.23	-0.15	0.07	286.89	ppb
Iron	56-2	0.28	0.53	0.46	0.42	30.83	ppb
Iron	57-2	0.57	0.28	-0.58	0.09	678.91	ppb
Krypton	83-1						cps
Lead	206-1	0.04	0.04	0.03	0.04	10.67	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166241BL	Instrumnet Name :	P8
Client Sample ID :	PBS241	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:58:44	DataFile Name :	025CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.03	0.03	0.02	0.02	23.66	ppb
Lead	208-1	0.04	0.04	0.03	0.04	6.37	ppb
Lithium	6-1				97		%
Magnesium	24-2	-2.89	-2.83	-3.52	-3.08		ppb
Manganese	55-2	-0.02	0.04	0.04	0.02	167.81	ppb
Molybdenum	94-1	0.02	0.00	0.00	0.01	164.80	ppb
Molybdenum	95-1	-0.01	0.00	0.00	0.00		ppb
Molybdenum	96-1	0.00	0.00	0.00	0.00		ppb
Molybdenum	97-1	0.00	0.01	0.01	0.00	155.35	ppb
Molybdenum	98-1	0.00	0.00	0.00	0.00	129.66	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.02	-0.05	-0.08	-0.05		ppb
Phosphorus	31-2	-29.23	-16.64	-13.24	-19.70		ppb
Potassium	39-2	5.64	2.07	5.03	4.25	44.88	ppb
Rhodium	103-1				98		%
Rhodium	103-2				99		%
Scandium	45-1				99		%
Scandium	45-2				97		%
Selenium	82-1	-0.12	-0.10	0.02	-0.07		ppb
Selenium	77-2	1.29	0.00	0.00	0.43	173.21	ppb
Selenium	78-2	-0.51	-0.11	-0.51	-0.38		ppb
Silicon	28-1	-0.31	-0.32	-0.39	-0.34		ppb
Silver	107-1	0.01	0.01	0.01	0.01	23.63	ppb
Silver	109-1	0.01	0.01	0.01	0.01	8.02	ppb
Sodium	23-2	3.17	2.46	2.63	2.75	13.39	ppb
Strontium	86-1	-0.45	-0.38	-0.19	-0.34		ppb
Strontium	88-1	-0.16	-0.10	-0.17	-0.14		ppb
Sulfur	34-1	-160.00	-171.13	-183.40	-171.51		ppb
Terbium	159-1				99		%
Terbium	159-2				98		%
Thallium	203-1	0.02	0.02	0.01	0.02	9.07	ppb
Thallium	205-1	0.02	0.01	0.01	0.01	26.32	ppb
Tin	118-1	-0.03	-0.03	-0.01	-0.02		ppb
Titanium	47-1	-0.01	0.01	0.01	0.00	254.78	ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166241BL	Instrumnet Name :	P8
Client Sample ID :	PBS241	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:58:44	DataFile Name :	025CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.00	0.00	0.00	1.35	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				99		%
Yttrium	89-2				97		%
Zinc	66-2	-0.09	-0.02	0.04	-0.02		ppb
Zirconium	90-1	-0.01	0.00	0.00	0.00		ppb
Zirconium	91-1	0.00	0.00	0.00	0.00		ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166241BS	Instrumnet Name :	P8
Client Sample ID :	LCS241	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:02:08	DataFile Name :	026LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	39.29	39.70	40.79	39.93	1.95	ppb
Antimony	121-1	3.86	3.98	4.01	3.95	2.04	ppb
Arsenic	75-2	1.93	2.35	1.79	2.02	14.56	ppb
Barium	135-1	19.78	19.71	20.29	19.93	1.58	ppb
Barium	137-1	20.14	20.32	20.58	20.35	1.07	ppb
Beryllium	9-1	2.04	2.07	2.07	2.06	0.71	ppb
Bismuth	209-1				98		%
Bismuth	209-2				97		%
Bromine	81-1						cps
Cadmium	108-1	2.10	2.01	2.02	2.04	2.54	ppb
Cadmium	106-1	0.64	1.08	0.55	0.75	37.49	ppb
Cadmium	111-1	1.93	1.98	1.96	1.96	1.27	ppb
Calcium	43-1	1010.82	1041.13	1005.30	1019.08	1.89	ppb
Calcium	44-1	1000.04	1010.17	1005.66	1005.29	0.50	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	3.85	3.83	3.86	3.85	0.41	ppb
Cobalt	59-2	2.09	2.13	2.10	2.11	0.87	ppb
Copper	63-2	4.51	4.59	4.54	4.55	0.98	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				99		%
Holmium	165-2				99		%
Indium	115-1				98		%
Indium	115-2				97		%
Iron	54-2	440.56	437.26	437.55	438.45	0.42	ppb
Iron	56-2	432.27	435.15	436.47	434.63	0.49	ppb
Iron	57-2	422.93	440.97	429.24	431.05	2.12	ppb
Krypton	83-1						cps
Lead	206-1	1.99	2.02	2.01	2.01	0.95	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166241BS	Instrumnet Name :	P8
Client Sample ID :	LCS241	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:02:08	DataFile Name :	026LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1.97	1.99	2.07	2.01	2.60	ppb
Lead	208-1	1.99	2.02	2.06	2.02	1.71	ppb
Lithium	6-1				97		%
Magnesium	24-2	1011.56	1012.21	999.28	1007.68	0.72	ppb
Manganese	55-2	2.24	2.36	2.05	2.21	7.06	ppb
Molybdenum	94-1	11.70	11.59	11.73	11.67	0.63	ppb
Molybdenum	95-1	9.93	9.61	9.64	9.73	1.79	ppb
Molybdenum	96-1	9.98	9.78	9.99	9.92	1.18	ppb
Molybdenum	97-1	10.03	9.69	9.74	9.82	1.87	ppb
Molybdenum	98-1	9.78	9.72	9.73	9.74	0.32	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	2.22	2.19	2.39	2.27	4.81	ppb
Phosphorus	31-2	33.93	28.91	21.95	28.27	21.29	ppb
Potassium	39-2	1005.11	1014.92	1013.26	1011.09	0.52	ppb
Rhodium	103-1				99		%
Rhodium	103-2				98		%
Scandium	45-1				99		%
Scandium	45-2				96		%
Selenium	82-1	10.62	9.85	10.77	10.42	4.72	ppb
Selenium	77-2	11.65	7.76	14.17	11.19	28.86	ppb
Selenium	78-2	10.43	13.94	11.55	11.98	14.98	ppb
Silicon	28-1	3.61	3.63	3.58	3.60	0.62	ppb
Silver	107-1	1.93	1.98	2.01	1.97	2.08	ppb
Silver	109-1	1.95	2.02	2.02	2.00	1.95	ppb
Sodium	23-2	1034.97	1049.15	1039.75	1041.29	0.69	ppb
Strontium	86-1	47.60	46.10	46.30	46.67	1.75	ppb
Strontium	88-1	47.64	47.45	47.01	47.36	0.69	ppb
Sulfur	34-1	-74.38	-58.12	-75.05	-69.18		ppb
Terbium	159-1				99		%
Terbium	159-2				98		%
Thallium	203-1	1.85	1.93	1.94	1.91	2.46	ppb
Thallium	205-1	1.89	1.95	1.94	1.93	1.70	ppb
Tin	118-1	9.72	10.14	9.95	9.93	2.10	ppb
Titanium	47-1	2.46	2.45	2.57	2.49	2.71	ppb
Uranium	238-1	1.83	1.90	1.91	1.88	2.30	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166241BS	Instrumnet Name :	P8
Client Sample ID :	LCS241	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:02:08	DataFile Name :	026LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	10.04	10.13	10.28	10.15	1.23	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				99		%
Yttrium	89-2				97		%
Zinc	66-2	11.12	10.78	10.97	10.96	1.53	ppb
Zirconium	90-1	1.92	1.98	1.92	1.94	1.82	ppb
Zirconium	91-1	2.00	1.91	1.87	1.93	3.52	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166280BL	Instrumnet Name :	P8
Client Sample ID :	PBS280	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:05:33	DataFile Name :	027CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.29	0.15	0.74	0.39	78.68	ppb
Antimony	121-1	0.02	0.01	0.01	0.01	28.91	ppb
Arsenic	75-2	0.00	0.00	0.00	0.00	72.47	ppb
Barium	135-1	0.16	0.15	0.16	0.16	4.12	ppb
Barium	137-1	0.19	0.15	0.18	0.17	10.62	ppb
Beryllium	9-1	0.01	0.01	0.01	0.01	14.88	ppb
Bismuth	209-1				98		%
Bismuth	209-2				95		%
Bromine	81-1						cps
Cadmium	108-1	0.14	0.17	0.03	0.11	67.60	ppb
Cadmium	106-1	-2.18	-0.75	-0.50	-1.14		ppb
Cadmium	111-1	-0.17	-0.07	-0.02	-0.08		ppb
Calcium	43-1	1.44	-1.31	-0.53	-0.13		ppb
Calcium	44-1	-0.81	-0.62	-0.77	-0.73		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.04	0.02	0.09	0.05	76.27	ppb
Cobalt	59-2	0.07	0.06	0.05	0.06	9.68	ppb
Copper	63-2	-0.25	-0.26	-0.23	-0.25		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				100		%
Holmium	165-2				97		%
Indium	115-1				98		%
Indium	115-2				94		%
Iron	54-2	0.30	1.04	0.20	0.51	89.83	ppb
Iron	56-2	0.59	0.76	0.90	0.75	20.60	ppb
Iron	57-2	-0.86	-1.08	0.13	-0.61		ppb
Krypton	83-1						cps
Lead	206-1	0.04	0.04	0.07	0.05	34.75	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166280BL	Instrumnet Name :	P8
Client Sample ID :	PBS280	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:05:33	DataFile Name :	027CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.03	0.04	0.03	0.03	17.90	ppb
Lead	208-1	0.04	0.04	0.04	0.04	2.66	ppb
Lithium	6-1				97		%
Magnesium	24-2	-3.25	-3.48	-2.42	-3.05		ppb
Manganese	55-2	0.07	0.14	0.05	0.09	50.77	ppb
Molybdenum	94-1	0.01	0.01	0.00	0.00	96.14	ppb
Molybdenum	95-1	-0.01	-0.01	0.00	-0.01		ppb
Molybdenum	96-1	0.00	0.00	0.00	0.00		ppb
Molybdenum	97-1	0.00	0.01	0.00	0.00	144.15	ppb
Molybdenum	98-1	0.00	0.00	0.00	0.00	49.62	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.00	0.10	0.02	0.04	141.85	ppb
Phosphorus	31-2	-20.08	-16.17	-16.99	-17.75		ppb
Potassium	39-2	3.36	2.42	7.88	4.55	64.17	ppb
Rhodium	103-1				98		%
Rhodium	103-2				96		%
Scandium	45-1				98		%
Scandium	45-2				93		%
Selenium	82-1	0.20	0.12	0.02	0.12	79.00	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.11	-0.51	-0.51	-0.38		ppb
Silicon	28-1	-0.28	-0.38	-0.37	-0.35		ppb
Silver	107-1	0.01	0.00	0.01	0.01	31.33	ppb
Silver	109-1	0.01	0.01	0.01	0.01	23.29	ppb
Sodium	23-2	3.28	4.35	7.69	5.11	45.02	ppb
Strontium	86-1	-0.33	-0.38	-0.34	-0.35		ppb
Strontium	88-1	-0.19	-0.17	-0.11	-0.16		ppb
Sulfur	34-1	-66.19	-132.23	-70.37	-89.60		ppb
Terbium	159-1				99		%
Terbium	159-2				96		%
Thallium	203-1	0.02	0.01	0.02	0.02	10.97	ppb
Thallium	205-1	0.02	0.02	0.02	0.02	21.96	ppb
Tin	118-1	-0.01	-0.03	0.04	0.00	1023.96	ppb
Titanium	47-1	0.01	0.01	-0.02	0.00	1856.56	ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166280BL	Instrumnet Name :	P8
Client Sample ID :	PBS280	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:05:33	DataFile Name :	027CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.05	0.10	0.08	0.07	29.66	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				98		%
Yttrium	89-2				94		%
Zinc	66-2	0.26	0.17	0.17	0.20	27.37	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00	978.30	ppb
Zirconium	91-1	0.00	0.01	0.01	0.00	285.28	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166280BS	Instrumnet Name :	P8
Client Sample ID :	LCS280	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:08:56	DataFile Name :	028LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	36.91	35.28	35.56	35.92	2.43	ppb
Antimony	121-1	3.40	3.41	3.35	3.39	0.99	ppb
Arsenic	75-2	2.00	1.82	2.01	1.94	5.62	ppb
Barium	135-1	17.38	17.59	17.14	17.37	1.29	ppb
Barium	137-1	17.32	17.67	17.11	17.37	1.63	ppb
Beryllium	9-1	1.74	1.77	1.79	1.77	1.58	ppb
Bismuth	209-1				98		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Cadmium	108-1	1.96	1.85	1.90	1.90	2.92	ppb
Cadmium	106-1	0.19	0.97	-0.11	0.35	160.03	ppb
Cadmium	111-1	1.68	1.63	1.66	1.66	1.70	ppb
Calcium	43-1	867.26	887.78	879.00	878.01	1.17	ppb
Calcium	44-1	854.35	875.84	872.29	867.49	1.33	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	3.48	3.51	3.52	3.51	0.54	ppb
Cobalt	59-2	1.82	1.81	1.72	1.78	3.13	ppb
Copper	63-2	3.87	3.75	3.69	3.77	2.50	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				99		%
Indium	115-1				98		%
Indium	115-2				96		%
Iron	54-2	377.42	377.57	375.20	376.73	0.35	ppb
Iron	56-2	374.04	374.43	376.66	375.04	0.38	ppb
Iron	57-2	368.08	372.34	365.08	368.50	0.99	ppb
Krypton	83-1						cps
Lead	206-1	1.65	1.78	1.77	1.74	4.28	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166280BS	Instrumnet Name :	P8
Client Sample ID :	LCS280	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:08:56	DataFile Name :	028LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1.66	1.76	1.77	1.73	3.65	ppb
Lead	208-1	1.68	1.77	1.77	1.74	2.90	ppb
Lithium	6-1				97		%
Magnesium	24-2	874.89	868.83	873.70	872.47	0.37	ppb
Manganese	55-2	1.91	1.79	1.86	1.86	3.20	ppb
Molybdenum	94-1	10.03	9.92	10.04	10.00	0.70	ppb
Molybdenum	95-1	8.35	8.32	8.34	8.34	0.18	ppb
Molybdenum	96-1	8.60	8.65	8.66	8.64	0.36	ppb
Molybdenum	97-1	8.46	8.58	8.58	8.54	0.83	ppb
Molybdenum	98-1	8.36	8.39	8.48	8.41	0.75	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	2.06	1.79	1.99	1.95	7.23	ppb
Phosphorus	31-2	32.92	27.09	35.03	31.68	12.97	ppb
Potassium	39-2	862.36	868.62	858.66	863.21	0.58	ppb
Rhodium	103-1				98		%
Rhodium	103-2				97		%
Scandium	45-1				98		%
Scandium	45-2				96		%
Selenium	82-1	9.24	8.21	9.50	8.98	7.56	ppb
Selenium	77-2	11.85	5.18	5.23	7.42	51.66	ppb
Selenium	78-2	8.24	6.15	8.58	7.65	17.20	ppb
Silicon	28-1	2.98	3.07	2.92	2.99	2.57	ppb
Silver	107-1	1.73	1.72	1.73	1.72	0.27	ppb
Silver	109-1	1.67	1.72	1.73	1.70	2.03	ppb
Sodium	23-2	894.16	898.83	891.96	894.98	0.39	ppb
Strontium	86-1	39.33	38.18	39.25	38.92	1.65	ppb
Strontium	88-1	40.59	40.30	40.34	40.41	0.39	ppb
Sulfur	34-1	-234.27	-238.21	-282.98	-251.82		ppb
Terbium	159-1				99		%
Terbium	159-2				98		%
Thallium	203-1	1.61	1.65	1.67	1.64	1.80	ppb
Thallium	205-1	1.62	1.65	1.68	1.65	1.53	ppb
Tin	118-1	8.55	8.69	8.50	8.58	1.15	ppb
Titanium	47-1	2.08	2.14	2.09	2.10	1.55	ppb
Uranium	238-1	1.59	1.63	1.62	1.61	1.24	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166280BS	Instrumnet Name :	P8
Client Sample ID :	LCS280	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:08:56	DataFile Name :	028LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	8.80	8.54	8.68	8.68	1.49	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				99		%
Yttrium	89-2				96		%
Zinc	66-2	8.69	9.45	8.96	9.03	4.27	ppb
Zirconium	90-1	1.67	1.66	1.64	1.66	0.88	ppb
Zirconium	91-1	1.65	1.63	1.73	1.67	3.27	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166279BS	Instrumnet Name :	P8
Client Sample ID :	LCS279	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:15:40	DataFile Name :	030LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	41.65	39.04	39.63	40.11	3.41	ppb
Antimony	121-1	3.71	3.54	3.71	3.66	2.67	ppb
Arsenic	75-2	2.20	2.12	2.09	2.14	2.78	ppb
Barium	135-1	18.51	18.03	18.77	18.43	2.04	ppb
Barium	137-1	18.45	18.45	19.25	18.72	2.45	ppb
Beryllium	9-1	1.90	1.86	1.99	1.91	3.41	ppb
Bismuth	209-1				100		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Cadmium	108-1	1.97	1.79	2.00	1.92	6.01	ppb
Cadmium	106-1	1.00	0.15	0.26	0.47	98.85	ppb
Cadmium	111-1	1.77	1.75	1.78	1.77	0.95	ppb
Calcium	43-1	957.36	959.95	983.73	967.01	1.50	ppb
Calcium	44-1	950.04	947.17	963.70	953.64	0.93	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	3.67	3.66	3.78	3.71	1.84	ppb
Cobalt	59-2	1.93	1.88	2.14	1.98	7.12	ppb
Copper	63-2	4.22	4.20	4.23	4.22	0.37	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				100		%
Holmium	165-2				98		%
Indium	115-1				98		%
Indium	115-2				95		%
Iron	54-2	405.15	411.81	428.87	415.28	2.95	ppb
Iron	56-2	409.41	407.28	421.64	412.78	1.88	ppb
Iron	57-2	409.56	399.77	417.56	408.96	2.18	ppb
Krypton	83-1						cps
Lead	206-1	1.86	1.82	1.87	1.85	1.45	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166279BS	Instrumnet Name :	P8
Client Sample ID :	LCS279	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:15:40	DataFile Name :	030LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1.80	1.83	1.93	1.85	3.70	ppb
Lead	208-1	1.83	1.83	1.88	1.85	1.65	ppb
Lithium	6-1				98		%
Magnesium	24-2	946.01	950.95	983.93	960.29	2.15	ppb
Manganese	55-2	2.07	2.04	2.11	2.07	1.85	ppb
Molybdenum	94-1	10.82	10.36	11.00	10.73	3.11	ppb
Molybdenum	95-1	8.90	8.77	9.24	8.97	2.73	ppb
Molybdenum	96-1	9.32	9.08	9.35	9.25	1.60	ppb
Molybdenum	97-1	9.02	8.72	9.23	8.99	2.88	ppb
Molybdenum	98-1	9.07	8.79	9.18	9.01	2.21	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	2.14	2.22	2.14	2.17	2.10	ppb
Phosphorus	31-2	52.48	36.13	47.99	45.53	18.55	ppb
Potassium	39-2	953.52	947.12	983.14	961.26	2.00	ppb
Rhodium	103-1				99		%
Rhodium	103-2				97		%
Scandium	45-1				98		%
Scandium	45-2				95		%
Selenium	82-1	10.26	9.12	9.39	9.59	6.17	ppb
Selenium	77-2	3.89	10.44	14.81	9.72	56.58	ppb
Selenium	78-2	14.37	8.95	11.69	11.67	23.22	ppb
Silicon	28-1	3.32	3.35	3.42	3.36	1.63	ppb
Silver	107-1	1.85	1.83	1.91	1.86	2.08	ppb
Silver	109-1	1.83	1.85	1.91	1.86	2.35	ppb
Sodium	23-2	981.49	971.52	1005.98	986.33	1.80	ppb
Strontium	86-1	41.80	42.26	43.63	42.57	2.24	ppb
Strontium	88-1	43.16	42.30	44.83	43.43	2.96	ppb
Sulfur	34-1	-275.84	-206.90	-210.25	-231.00		ppb
Terbium	159-1				101		%
Terbium	159-2				97		%
Thallium	203-1	1.77	1.79	1.77	1.78	0.48	ppb
Thallium	205-1	1.75	1.78	1.81	1.78	1.68	ppb
Tin	118-1	9.29	8.92	9.28	9.16	2.32	ppb
Titanium	47-1	2.23	2.33	2.35	2.30	2.86	ppb
Uranium	238-1	1.77	1.70	1.77	1.75	2.34	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166279BS	Instrumnet Name :	P8
Client Sample ID :	LCS279	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:15:40	DataFile Name :	030LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	9.39	9.29	9.80	9.49	2.83	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				101		%
Yttrium	89-2				96		%
Zinc	66-2	10.45	10.85	10.75	10.68	1.92	ppb
Zirconium	90-1	1.80	1.77	1.81	1.79	0.97	ppb
Zirconium	91-1	1.85	1.79	1.76	1.80	2.57	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166279BL	Instrumnet Name :	P8
Client Sample ID :	PBS279	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:19:04	DataFile Name :	031CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.13	-0.67	0.29	-0.08		ppb
Antimony	121-1	0.00	0.00	0.00	0.00	41.54	ppb
Arsenic	75-2	-0.02	0.00	-0.02	-0.01		ppb
Barium	135-1	0.01	0.00	0.00	0.00	231.52	ppb
Barium	137-1	-0.01	0.01	0.01	0.00	267.43	ppb
Beryllium	9-1	-0.01	0.00	0.00	0.00		ppb
Bismuth	209-1				100		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Cadmium	108-1	0.06	-0.01	0.03	0.03	118.67	ppb
Cadmium	106-1	-1.24	-1.30	-2.61	-1.72		ppb
Cadmium	111-1	-0.10	-0.11	-0.20	-0.14		ppb
Calcium	43-1	-1.14	0.47	-0.30	-0.32		ppb
Calcium	44-1	-1.53	-1.09	-1.16	-1.26		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.01	0.00	0.01	0.00	796.57	ppb
Cobalt	59-2	0.00	-0.01	0.00	-0.01		ppb
Copper	63-2	-0.26	-0.32	-0.33	-0.30		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				100		%
Indium	115-1				100		%
Indium	115-2				97		%
Iron	54-2	-0.27	-0.48	0.31	-0.15		ppb
Iron	56-2	0.18	0.12	0.12	0.14	22.05	ppb
Iron	57-2	-0.33	-1.12	0.16	-0.43		ppb
Krypton	83-1						cps
Lead	206-1	0.01	0.01	0.01	0.01	44.15	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166279BL	Instrumnet Name :	P8
Client Sample ID :	PBS279	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:19:04	DataFile Name :	031CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.02	0.00	0.00	0.01	223.50	ppb
Lead	208-1	0.01	0.01	0.01	0.01	32.08	ppb
Lithium	6-1				97		%
Magnesium	24-2	-2.08	-2.76	-2.22	-2.35		ppb
Manganese	55-2	-0.01	-0.08	-0.01	-0.03		ppb
Molybdenum	94-1	0.01	0.03	-0.02	0.00	528.04	ppb
Molybdenum	95-1	0.00	0.00	-0.01	0.00		ppb
Molybdenum	96-1	-0.01	0.01	0.00	0.00	743.38	ppb
Molybdenum	97-1	-0.01	0.00	0.00	0.00		ppb
Molybdenum	98-1	0.00	0.00	0.00	0.00	1598.14	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.07	-0.04	0.06	0.03	200.59	ppb
Phosphorus	31-2	-21.95	-23.94	-18.23	-21.37		ppb
Potassium	39-2	2.35	-2.99	0.62	-0.01		ppb
Rhodium	103-1				99		%
Rhodium	103-2				100		%
Scandium	45-1				97		%
Scandium	45-2				96		%
Selenium	82-1	-0.16	-0.16	0.08	-0.08		ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.51	0.66	0.28	0.14	418.02	ppb
Silicon	28-1	-0.37	-0.42	-0.54	-0.45		ppb
Silver	107-1	0.01	0.00	0.01	0.01	20.86	ppb
Silver	109-1	0.01	0.01	0.01	0.01	23.76	ppb
Sodium	23-2	-0.58	-1.14	0.06	-0.55		ppb
Strontium	86-1	-0.15	-0.20	-0.18	-0.18		ppb
Strontium	88-1	-0.11	-0.21	-0.14	-0.15		ppb
Sulfur	34-1	-168.48	-138.16	-179.24	-161.96		ppb
Terbium	159-1				99		%
Terbium	159-2				99		%
Thallium	203-1	0.01	0.00	0.01	0.01	26.30	ppb
Thallium	205-1	0.01	0.01	0.01	0.01	35.36	ppb
Tin	118-1	-0.03	-0.02	-0.03	-0.03		ppb
Titanium	47-1	0.00	0.02	0.01	0.01	106.08	ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166279BL	Instrumnet Name :	P8
Client Sample ID :	PBS279	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:19:04	DataFile Name :	031CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.01	0.00	0.00	0.01	135.83	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				99		%
Yttrium	89-2				97		%
Zinc	66-2	-0.09	0.04	0.00	-0.02		ppb
Zirconium	90-1	0.00	0.00	0.00	0.00		ppb
Zirconium	91-1	0.00	0.00	-0.01	0.00		ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-01	Instrumnet Name :	P8
Client Sample ID :	ME2931	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:22:25	DataFile Name :	032AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	5.32	4.79	4.94	5.02	5.44	ppb
Antimony	121-1	0.19	0.20	0.19	0.19	1.83	ppb
Arsenic	75-2	4.10	4.37	3.79	4.09	7.14	ppb
Barium	135-1	26.43	26.54	26.57	26.52	0.28	ppb
Barium	137-1	27.08	27.00	27.06	27.05	0.16	ppb
Beryllium	9-1	0.00	0.00	0.00	0.00	267.08	ppb
Bismuth	209-1				83		%
Bismuth	209-2				82		%
Bromine	81-1						cps
Cadmium	108-1	3.96	3.81	3.40	3.72	7.73	ppb
Cadmium	106-1	0.02	-0.53	0.14	-0.13		ppb
Cadmium	111-1	0.23	0.23	0.32	0.26	19.44	ppb
Calcium	43-1	495911.58	494443.84	494908.07	495087.83	0.15	ppb
Calcium	44-1	499289.10	498759.02	492430.68	496826.26	0.77	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.07	0.05	0.09	0.07	27.00	ppb
Cobalt	59-2	1.60	1.55	1.45	1.54	4.90	ppb
Copper	63-2	-0.15	-0.09	-0.03	-0.09		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				96		%
Holmium	165-2				95		%
Indium	115-1				89		%
Indium	115-2				89		%
Iron	54-2	786.65	790.98	779.17	785.60	0.76	ppb
Iron	56-2	798.08	781.56	787.24	788.96	1.06	ppb
Iron	57-2	805.47	773.77	802.61	793.95	2.21	ppb
Krypton	83-1						cps
Lead	206-1	0.32	0.26	0.28	0.29	10.98	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-01	Instrumnet Name :	P8
Client Sample ID :	ME2931	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:22:25	DataFile Name :	032AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.32	0.25	0.24	0.27	16.39	ppb
Lead	208-1	0.31	0.26	0.26	0.28	11.04	ppb
Lithium	6-1				92		%
Magnesium	24-2	109399.92	107260.23	108995.54	108551.89	1.05	ppb
Manganese	55-2	1037.06	1025.14	1034.46	1032.22	0.61	ppb
Molybdenum	94-1	348.14	343.87	350.52	347.51	0.97	ppb
Molybdenum	95-1	459.18	447.33	449.98	452.16	1.38	ppb
Molybdenum	96-1	444.86	443.43	437.91	442.07	0.83	ppb
Molybdenum	97-1	428.51	424.42	444.58	432.51	2.46	ppb
Molybdenum	98-1	446.36	438.71	438.44	441.17	1.02	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	21.46	20.46	21.16	21.03	2.43	ppb
Phosphorus	31-2	51.63	65.48	50.00	55.70	15.27	ppb
Potassium	39-2	279612.77	281854.18	281025.99	280830.98	0.40	ppb
Rhodium	103-1				85		%
Rhodium	103-2				85		%
Scandium	45-1				94		%
Scandium	45-2				95		%
Selenium	82-1	0.85	1.89	1.31	1.35	38.80	ppb
Selenium	77-2	1.33	0.00	1.33	0.89	86.60	ppb
Selenium	78-2	1.51	0.69	0.30	0.83	74.10	ppb
Silicon	28-1	357.45	369.02	370.52	365.66	1.96	ppb
Silver	107-1	0.04	0.03	0.02	0.03	30.60	ppb
Silver	109-1	0.03	0.03	0.02	0.03	23.76	ppb
Sodium	23-2	208865.43	208843.07	209124.95	208944.49	0.07	ppb
Strontium	86-1	39488.89	39343.09	39261.24	39364.41	0.29	ppb
Strontium	88-1	39762.77	39424.91	39712.45	39633.38	0.46	ppb
Sulfur	34-1	509781.15	501641.36	506451.62	505958.04	0.81	ppb
Terbium	159-1				95		%
Terbium	159-2				94		%
Thallium	203-1	0.03	0.03	0.03	0.03	6.70	ppb
Thallium	205-1	0.04	0.03	0.03	0.04	18.10	ppb
Tin	118-1	-0.20	-0.22	-0.23	-0.22		ppb
Titanium	47-1	0.75	0.82	0.78	0.79	4.12	ppb
Uranium	238-1	0.00	0.00	0.00	0.00	25.99	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-01	Instrumnet Name :	P8
Client Sample ID :	ME2931	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:22:25	DataFile Name :	032AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.22	0.20	0.21	0.21	5.01	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				95		%
Yttrium	89-2				95		%
Zinc	66-2	1.32	1.37	0.89	1.20	21.87	ppb
Zirconium	90-1	0.06	0.03	0.04	0.04	28.39	ppb
Zirconium	91-1	0.07	0.04	0.04	0.05	31.22	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-02	Instrumnet Name :	P8
Client Sample ID :	ME2933	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:25:38	DataFile Name :	033AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9.49	9.47	8.65	9.20	5.22	ppb
Antimony	121-1	0.09	0.09	0.09	0.09	2.84	ppb
Arsenic	75-2	0.83	0.75	0.80	0.79	4.89	ppb
Barium	135-1	66.13	66.62	65.84	66.20	0.59	ppb
Barium	137-1	66.70	67.39	66.78	66.96	0.57	ppb
Beryllium	9-1	0.02	0.01	0.01	0.01	44.56	ppb
Bismuth	209-1				93		%
Bismuth	209-2				90		%
Bromine	81-1						cps
Cadmium	108-1	0.08	0.03	0.11	0.07	54.86	ppb
Cadmium	106-1	0.22	-0.28	-0.01	-0.03		ppb
Cadmium	111-1	0.03	-0.02	0.02	0.01	233.87	ppb
Calcium	43-1	177935.43	175541.05	177792.75	177089.74	0.76	ppb
Calcium	44-1	174447.21	173204.13	173515.04	173722.12	0.37	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.09	0.11	0.07	0.09	25.56	ppb
Cobalt	59-2	0.53	0.53	0.56	0.54	2.82	ppb
Copper	63-2	-0.12	-0.07	-0.16	-0.11		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				97		%
Indium	115-1				96		%
Indium	115-2				93		%
Iron	54-2	153.70	154.29	152.07	153.35	0.75	ppb
Iron	56-2	148.92	151.29	150.48	150.23	0.80	ppb
Iron	57-2	147.01	154.62	154.77	152.13	2.92	ppb
Krypton	83-1						cps
Lead	206-1	0.12	0.11	0.12	0.12	7.99	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-02	Instrumnet Name :	P8
Client Sample ID :	ME2933	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:25:38	DataFile Name :	033AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.11	0.11	0.09	0.10	12.69	ppb
Lead	208-1	0.11	0.11	0.11	0.11	2.68	ppb
Lithium	6-1				90		%
Magnesium	24-2	46079.17	46584.65	46440.51	46368.11	0.56	ppb
Manganese	55-2	97.90	99.56	99.58	99.01	0.97	ppb
Molybdenum	94-1	1.48	1.48	1.61	1.52	5.00	ppb
Molybdenum	95-1	1.74	1.82	1.79	1.78	2.31	ppb
Molybdenum	96-1	1.79	1.77	1.76	1.77	0.80	ppb
Molybdenum	97-1	1.80	1.79	1.84	1.81	1.65	ppb
Molybdenum	98-1	1.81	1.78	1.79	1.79	0.92	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.39	1.64	1.56	1.53	8.30	ppb
Phosphorus	31-2	15.02	-6.89	-1.41	2.24	508.87	ppb
Potassium	39-2	2333.19	2355.00	2345.24	2344.48	0.47	ppb
Rhodium	103-1				93		%
Rhodium	103-2				92		%
Scandium	45-1				96		%
Scandium	45-2				95		%
Selenium	82-1	-0.02	0.55	0.37	0.30	97.47	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.51	-0.11	0.70	0.03	2226.12	ppb
Silicon	28-1	690.09	681.13	680.71	683.97	0.77	ppb
Silver	107-1	0.01	0.01	0.01	0.01	20.90	ppb
Silver	109-1	0.00	0.00	0.00	0.00	97.89	ppb
Sodium	23-2	17976.49	18185.87	18111.03	18091.13	0.59	ppb
Strontium	86-1	329023.78	328402.99	331252.24	329559.67	0.45	ppb
Strontium	88-1	333008.62	330324.42	332426.25	331919.77	0.43	ppb
Sulfur	34-1	155147.24	152299.43	151319.01	152921.89	1.30	ppb
Terbium	159-1				99		%
Terbium	159-2				96		%
Thallium	203-1	0.02	0.02	0.01	0.02	49.44	ppb
Thallium	205-1	0.02	0.02	0.01	0.02	17.34	ppb
Tin	118-1	-0.28	-0.26	-0.28	-0.27		ppb
Titanium	47-1	0.66	0.68	0.64	0.66	3.41	ppb
Uranium	238-1	0.37	0.38	0.37	0.37	1.82	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-02	Instrumnet Name :	P8
Client Sample ID :	ME2933	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:25:38	DataFile Name :	033AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	1.89	1.81	1.83	1.84	2.07	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				98		%
Yttrium	89-2				95		%
Zinc	66-2	1.25	0.80	0.92	0.99	23.46	ppb
Zirconium	90-1	0.03	0.04	0.04	0.03	15.99	ppb
Zirconium	91-1	0.01	0.04	0.03	0.03	41.98	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-03	Instrumnet Name :	P8
Client Sample ID :	ME2937	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:28:53	DataFile Name :	034AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	757.78	768.63	756.17	760.86	0.89	ppb
Antimony	121-1	0.56	0.54	0.52	0.54	3.44	ppb
Arsenic	75-2	9.23	9.34	9.56	9.38	1.79	ppb
Barium	135-1	74.18	72.34	68.78	71.77	3.83	ppb
Barium	137-1	75.17	73.04	70.02	72.74	3.56	ppb
Beryllium	9-1	0.02	0.01	0.01	0.01	63.74	ppb
Bismuth	209-1				92		%
Bismuth	209-2				91		%
Bromine	81-1						cps
Cadmium	108-1	0.31	0.46	0.38	0.38	19.58	ppb
Cadmium	106-1	-1.03	-1.11	-0.75	-0.96		ppb
Cadmium	111-1	-0.03	-0.04	-0.02	-0.03		ppb
Calcium	43-1	72430.15	73016.31	68604.98	71350.48	3.36	ppb
Calcium	44-1	71832.46	71153.42	67406.93	70130.93	3.40	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.05	0.06	0.14	0.08	61.76	ppb
Cobalt	59-2	1.18	1.24	1.24	1.22	3.15	ppb
Copper	63-2	0.02	0.11	0.12	0.08	67.30	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				98		%
Holmium	165-2				98		%
Indium	115-1				93		%
Indium	115-2				92		%
Iron	54-2	35.61	37.19	38.02	36.94	3.32	ppb
Iron	56-2	35.72	35.68	35.58	35.66	0.20	ppb
Iron	57-2	37.36	36.12	37.95	37.14	2.51	ppb
Krypton	83-1						cps
Lead	206-1	0.15	0.14	0.11	0.13	13.72	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-03	Instrumnet Name :	P8
Client Sample ID :	ME2937	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:28:53	DataFile Name :	034AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.12	0.15	0.11	0.13	12.94	ppb
Lead	208-1	0.14	0.13	0.11	0.13	10.49	ppb
Lithium	6-1				89		%
Magnesium	24-2	13.55	14.80	13.55	13.97	5.20	ppb
Manganese	55-2	1.22	1.26	1.32	1.26	4.09	ppb
Molybdenum	94-1	35.78	36.13	34.21	35.37	2.90	ppb
Molybdenum	95-1	43.48	43.59	41.72	42.93	2.44	ppb
Molybdenum	96-1	42.62	43.17	41.09	42.29	2.54	ppb
Molybdenum	97-1	43.72	44.20	42.12	43.35	2.51	ppb
Molybdenum	98-1	43.32	43.93	41.97	43.07	2.33	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	35.48	36.09	35.67	35.75	0.86	ppb
Phosphorus	31-2	189.36	146.47	145.16	160.33	15.68	ppb
Potassium	39-2	53795.69	54700.65	54404.25	54300.20	0.85	ppb
Rhodium	103-1				92		%
Rhodium	103-2				91		%
Scandium	45-1				96		%
Scandium	45-2				94		%
Selenium	82-1	1.40	1.72	1.35	1.49	13.72	ppb
Selenium	77-2	0.00	1.34	1.33	0.89	86.60	ppb
Selenium	78-2	1.12	1.93	3.52	2.19	55.81	ppb
Silicon	28-1	1384.33	1376.19	1277.46	1345.99	4.42	ppb
Silver	107-1	0.00	0.00	0.00	0.00	61.73	ppb
Silver	109-1	0.00	0.00	0.00	0.00	104.63	ppb
Sodium	23-2	115436.73	115310.79	115039.17	115262.23	0.18	ppb
Strontium	86-1	54452.22	54851.98	52517.59	53940.60	2.31	ppb
Strontium	88-1	55025.00	55760.62	53109.74	54631.78	2.50	ppb
Sulfur	34-1	13133.69	12702.63	11657.02	12497.78	6.08	ppb
Terbium	159-1				98		%
Terbium	159-2				96		%
Thallium	203-1	-0.01	-0.01	0.00	0.00		ppb
Thallium	205-1	0.00	-0.01	0.00	0.00		ppb
Tin	118-1	0.10	0.11	0.05	0.09	33.60	ppb
Titanium	47-1	1.21	1.24	1.17	1.21	2.85	ppb
Uranium	238-1	0.00	0.01	0.01	0.01	23.31	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-03	Instrumnet Name :	P8
Client Sample ID :	ME2937	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:28:53	DataFile Name :	034AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	7.36	7.45	7.40	7.40	0.64	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				97		%
Yttrium	89-2				94		%
Zinc	66-2	0.71	0.75	0.81	0.76	6.62	ppb
Zirconium	90-1	0.04	0.05	0.04	0.04	12.34	ppb
Zirconium	91-1	0.05	0.04	0.05	0.05	4.21	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-04	Instrumnet Name :	P8
Client Sample ID :	ME2945	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:32:10	DataFile Name :	035AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3.14	3.34	3.53	3.33	5.80	ppb
Antimony	121-1	0.00	0.00	0.00	0.00	1503.20	ppb
Arsenic	75-2	0.10	0.10	0.02	0.07	61.93	ppb
Barium	135-1	7.08	7.00	6.81	6.97	2.00	ppb
Barium	137-1	7.20	6.84	6.97	7.00	2.61	ppb
Beryllium	9-1	0.03	0.02	0.02	0.02	25.91	ppb
Bismuth	209-1				88		%
Bismuth	209-2				85		%
Bromine	81-1						cps
Cadmium	108-1	0.04	0.08	0.03	0.05	55.70	ppb
Cadmium	106-1	-1.12	-0.68	-1.01	-0.93		ppb
Cadmium	111-1	-0.08	-0.06	-0.07	-0.07		ppb
Calcium	43-1	437330.86	418424.28	433319.16	429691.43	2.32	ppb
Calcium	44-1	437989.82	412930.18	435143.90	428687.97	3.20	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.11	0.04	0.08	0.08	40.21	ppb
Cobalt	59-2	0.01	-0.01	0.00	0.00	702.10	ppb
Copper	63-2	-0.09	-0.05	-0.08	-0.07		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				98		%
Holmium	165-2				95		%
Indium	115-1				92		%
Indium	115-2				90		%
Iron	54-2	436.97	449.84	442.98	443.26	1.45	ppb
Iron	56-2	445.10	446.09	448.68	446.62	0.41	ppb
Iron	57-2	448.87	446.23	461.59	452.23	1.82	ppb
Krypton	83-1						cps
Lead	206-1	0.07	0.06	0.06	0.06	8.85	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-04	Instrumnet Name :	P8
Client Sample ID :	ME2945	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:32:10	DataFile Name :	035AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.08	0.07	0.06	0.07	11.69	ppb
Lead	208-1	0.07	0.07	0.07	0.07	2.41	ppb
Lithium	6-1				90		%
Magnesium	24-2	128317.79	130058.76	129186.39	129187.65	0.67	ppb
Manganese	55-2	36.80	37.14	38.29	37.41	2.08	ppb
Molybdenum	94-1	0.65	0.62	0.64	0.64	2.63	ppb
Molybdenum	95-1	0.74	0.74	0.74	0.74	0.14	ppb
Molybdenum	96-1	0.69	0.70	0.75	0.71	4.63	ppb
Molybdenum	97-1	0.75	0.71	0.76	0.74	3.86	ppb
Molybdenum	98-1	0.74	0.68	0.70	0.71	3.91	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.23	0.24	0.18	0.22	13.85	ppb
Phosphorus	31-2	-10.95	-14.41	-10.59	-11.98		ppb
Potassium	39-2	3286.04	3289.87	3324.89	3300.27	0.65	ppb
Rhodium	103-1				89		%
Rhodium	103-2				89		%
Scandium	45-1				95		%
Scandium	45-2				95		%
Selenium	82-1	0.70	0.37	0.62	0.56	30.28	ppb
Selenium	77-2	1.33	0.00	0.00	0.44	173.21	ppb
Selenium	78-2	-0.11	-0.10	0.71	0.17	281.44	ppb
Silicon	28-1	948.81	903.92	935.82	929.52	2.49	ppb
Silver	107-1	0.01	0.01	0.00	0.01	26.10	ppb
Silver	109-1	0.00	0.00	0.00	0.00	412.54	ppb
Sodium	23-2	34058.04	34499.28	34107.63	34221.65	0.71	ppb
Strontium	86-1	290731.91	277431.27	281517.37	283226.85	2.41	ppb
Strontium	88-1	292132.39	285937.42	285091.59	287720.47	1.34	ppb
Sulfur	34-1	466383.22	448873.38	459865.91	458374.17	1.93	ppb
Terbium	159-1				98		%
Terbium	159-2				95		%
Thallium	203-1	0.00	0.00	-0.01	0.00		ppb
Thallium	205-1	0.00	-0.01	-0.01	-0.01		ppb
Tin	118-1	-0.26	-0.27	-0.26	-0.26		ppb
Titanium	47-1	0.84	0.74	0.74	0.78	7.23	ppb
Uranium	238-1	0.04	0.04	0.04	0.04	1.67	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-04	Instrumnet Name :	P8
Client Sample ID :	ME2945	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:32:10	DataFile Name :	035AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.03	0.02	0.03	0.02	27.72	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				96		%
Yttrium	89-2				94		%
Zinc	66-2	0.14	0.08	0.37	0.20	77.91	ppb
Zirconium	90-1	0.04	0.03	0.03	0.03	11.55	ppb
Zirconium	91-1	0.03	0.03	0.04	0.03	14.12	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-05	Instrumnet Name :	P8
Client Sample ID :	ME2942	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:35:26	DataFile Name :	036AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	121.27	108.53	91.24	107.01	14.08	ppb
Antimony	121-1	0.05	0.04	0.03	0.04	19.71	ppb
Arsenic	75-2	0.34	0.16	0.36	0.29	37.69	ppb
Barium	135-1	29.60	29.74	23.60	27.65	12.67	ppb
Barium	137-1	30.13	29.69	24.22	28.01	11.75	ppb
Beryllium	9-1	0.03	0.03	0.02	0.02	17.81	ppb
Bismuth	209-1				96		%
Bismuth	209-2				81		%
Bromine	81-1						cps
Cadmium	108-1	-0.01	0.00	0.09	0.02	233.20	ppb
Cadmium	106-1	0.13	0.75	-0.17	0.24	199.04	ppb
Cadmium	111-1	0.02	0.07	-0.01	0.03	145.34	ppb
Calcium	43-1	331651.43	327093.36	262616.07	307120.29	12.57	ppb
Calcium	44-1	332392.03	324794.61	258222.31	305136.32	13.37	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.68	0.54	0.51	0.58	16.24	ppb
Cobalt	59-2	0.11	0.09	0.06	0.09	32.25	ppb
Copper	63-2	0.43	0.28	0.26	0.33	28.32	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				90		%
Indium	115-1				100		%
Indium	115-2				85		%
Iron	54-2	978.47	848.21	799.24	875.31	10.58	ppb
Iron	56-2	1003.01	834.87	802.61	880.16	12.23	ppb
Iron	57-2	1031.67	839.85	808.30	893.27	13.53	ppb
Krypton	83-1						cps
Lead	206-1	0.24	0.23	0.15	0.20	24.32	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-05	Instrumnet Name :	P8
Client Sample ID :	ME2942	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:35:26	DataFile Name :	036AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.20	0.22	0.15	0.19	18.19	ppb
Lead	208-1	0.21	0.21	0.15	0.19	17.99	ppb
Lithium	6-1				95		%
Magnesium	24-2	107459.54	91487.81	86555.60	95167.65	11.48	ppb
Manganese	55-2	152.34	128.43	123.19	134.65	11.54	ppb
Molybdenum	94-1	1.00	0.99	0.78	0.92	13.28	ppb
Molybdenum	95-1	0.55	0.50	0.42	0.49	12.78	ppb
Molybdenum	96-1	0.55	0.55	0.44	0.51	12.78	ppb
Molybdenum	97-1	0.48	0.49	0.39	0.45	12.59	ppb
Molybdenum	98-1	0.47	0.46	0.38	0.44	11.91	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.49	0.34	0.42	0.41	17.94	ppb
Phosphorus	31-2	46.36	37.53	18.50	34.13	41.72	ppb
Potassium	39-2	4497.67	3815.72	3636.12	3983.17	11.41	ppb
Rhodium	103-1				96		%
Rhodium	103-2				84		%
Scandium	45-1				102		%
Scandium	45-2				88		%
Selenium	82-1	1.03	0.64	0.85	0.84	23.19	ppb
Selenium	77-2	0.00	2.72	1.34	1.35	100.46	ppb
Selenium	78-2	-0.51	0.31	0.30	0.04	1320.64	ppb
Silicon	28-1	882.06	872.61	697.53	817.40	12.71	ppb
Silver	107-1	0.01	0.01	0.01	0.01	19.18	ppb
Silver	109-1	0.00	0.00	0.00	0.00	540.76	ppb
Sodium	23-2	41363.63	34091.55	32567.61	36007.59	13.05	ppb
Strontium	86-1	392631.56	376502.73	302712.50	357282.26	13.42	ppb
Strontium	88-1	396781.66	385353.66	309686.71	363940.68	13.01	ppb
Sulfur	34-1	269332.15	266683.46	214181.26	250065.62	12.44	ppb
Terbium	159-1				104		%
Terbium	159-2				88		%
Thallium	203-1	0.00	0.00	-0.01	0.00		ppb
Thallium	205-1	-0.01	0.00	-0.01	-0.01		ppb
Tin	118-1	-0.10	-0.09	-0.15	-0.11		ppb
Titanium	47-1	2.89	2.73	2.14	2.59	15.18	ppb
Uranium	238-1	0.10	0.10	0.08	0.10	11.43	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-05	Instrumnet Name :	P8
Client Sample ID :	ME2942	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:35:26	DataFile Name :	036AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.60	0.46	0.43	0.50	18.29	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				104		%
Yttrium	89-2				88		%
Zinc	66-2	1.16	1.02	0.98	1.05	8.75	ppb
Zirconium	90-1	0.32	0.31	0.25	0.29	12.13	ppb
Zirconium	91-1	0.33	0.30	0.26	0.30	11.81	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-06	Instrumnet Name :	P8
Client Sample ID :	ME2943	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:38:44	DataFile Name :	037AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	40.13	33.61	39.37	37.70	9.47	ppb
Antimony	121-1	0.05	0.05	0.04	0.05	5.12	ppb
Arsenic	75-2	0.12	0.20	0.14	0.15	27.19	ppb
Barium	135-1	33.41	32.45	31.34	32.40	3.20	ppb
Barium	137-1	33.89	31.94	31.84	32.55	3.55	ppb
Beryllium	9-1	0.02	0.02	0.02	0.02	16.31	ppb
Bismuth	209-1				88		%
Bismuth	209-2				87		%
Bromine	81-1						cps
Cadmium	108-1	0.06	0.07	0.12	0.08	43.64	ppb
Cadmium	106-1	-0.15	-0.27	0.20	-0.08		ppb
Cadmium	111-1	-0.01	-0.02	0.02	0.00		ppb
Calcium	43-1	339441.85	319446.72	322523.51	327137.36	3.29	ppb
Calcium	44-1	333385.14	311265.05	321222.91	321957.70	3.44	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.36	0.39	0.37	0.38	3.86	ppb
Cobalt	59-2	0.07	0.06	0.05	0.06	20.26	ppb
Copper	63-2	0.09	0.09	0.05	0.07	28.32	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				96		%
Holmium	165-2				96		%
Indium	115-1				93		%
Indium	115-2				90		%
Iron	54-2	813.97	801.94	809.77	808.56	0.76	ppb
Iron	56-2	806.41	804.60	807.23	806.08	0.17	ppb
Iron	57-2	818.59	799.60	810.49	809.56	1.18	ppb
Krypton	83-1						cps
Lead	206-1	0.15	0.10	0.11	0.12	19.40	ppb

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-06	Instrumnet Name :	P8
Client Sample ID :	ME2943	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:38:44	DataFile Name :	037AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.11	0.11	0.10	0.11	7.88	ppb
Lead	208-1	0.12	0.10	0.11	0.11	7.12	ppb
Lithium	6-1				87		%
Magnesium	24-2	87900.08	86259.46	87104.47	87088.01	0.94	ppb
Manganese	55-2	170.83	170.20	169.40	170.14	0.42	ppb
Molybdenum	94-1	1.27	1.17	1.15	1.20	5.07	ppb
Molybdenum	95-1	0.91	0.82	0.89	0.87	5.55	ppb
Molybdenum	96-1	0.95	0.89	0.87	0.90	4.62	ppb
Molybdenum	97-1	0.85	0.89	0.83	0.86	3.93	ppb
Molybdenum	98-1	0.90	0.83	0.87	0.87	4.00	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.17	0.21	0.21	0.20	11.82	ppb
Phosphorus	31-2	88.88	58.42	65.93	71.07	22.33	ppb
Potassium	39-2	3853.81	3815.37	3819.33	3829.50	0.55	ppb
Rhodium	103-1				88		%
Rhodium	103-2				89		%
Scandium	45-1				94		%
Scandium	45-2				94		%
Selenium	82-1	0.37	0.55	0.57	0.50	22.06	ppb
Selenium	77-2	0.00	1.35	0.00	0.45	173.21	ppb
Selenium	78-2	-0.51	1.12	-0.51	0.03	2724.46	ppb
Silicon	28-1	898.49	858.37	869.13	875.33	2.37	ppb
Silver	107-1	0.02	0.01	0.01	0.01	35.11	ppb
Silver	109-1	0.00	0.00	0.00	0.00	1115.05	ppb
Sodium	23-2	32505.60	31450.96	32458.25	32138.27	1.85	ppb
Strontium	86-1	383350.45	360806.22	363578.56	369245.08	3.33	ppb
Strontium	88-1	386215.34	364283.79	365338.60	371945.91	3.33	ppb
Sulfur	34-1	280269.90	264131.67	265545.37	269982.31	3.31	ppb
Terbium	159-1				96		%
Terbium	159-2				94		%
Thallium	203-1	0.00	0.00	0.00	0.00		ppb
Thallium	205-1	0.00	-0.01	-0.01	0.00		ppb
Tin	118-1	0.15	0.13	0.13	0.14	8.86	ppb
Titanium	47-1	1.57	1.50	1.48	1.51	3.07	ppb
Uranium	238-1	0.17	0.16	0.17	0.17	3.27	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-06	Instrumnet Name :	P8
Client Sample ID :	ME2943	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:38:44	DataFile Name :	037AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.32	0.27	0.31	0.30	9.34	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				96		%
Yttrium	89-2				94		%
Zinc	66-2	1.49	1.39	1.42	1.44	3.77	ppb
Zirconium	90-1	0.26	0.25	0.26	0.26	1.93	ppb
Zirconium	91-1	0.28	0.26	0.29	0.28	4.08	ppb

600

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-07	Instrumnet Name :	P8
Client Sample ID :	ME2940	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:42:00	DataFile Name :	038AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1684.60	1677.03	1633.22	1664.95	1.67	ppb
Antimony	121-1	0.80	0.75	0.72	0.75	5.32	ppb
Arsenic	75-2	13.32	12.82	12.25	12.80	4.18	ppb
Barium	135-1	34.41	32.82	32.90	33.38	2.68	ppb
Barium	137-1	34.49	33.07	32.79	33.45	2.72	ppb
Beryllium	9-1	0.03	0.02	0.03	0.02	35.54	ppb
Bismuth	209-1				88		%
Bismuth	209-2				88		%
Bromine	81-1						cps
Cadmium	108-1	0.31	0.34	0.36	0.34	8.16	ppb
Cadmium	106-1	0.32	-0.04	-0.97	-0.23		ppb
Cadmium	111-1	0.07	0.03	-0.04	0.02	280.71	ppb
Calcium	43-1	30345.98	28863.20	29019.85	29409.68	2.77	ppb
Calcium	44-1	31479.53	29645.98	29579.47	30234.99	3.57	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.16	0.14	0.14	0.14	7.53	ppb
Cobalt	59-2	0.62	0.66	0.62	0.63	3.69	ppb
Copper	63-2	0.16	0.07	0.11	0.12	38.34	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				91		%
Indium	115-2				89		%
Iron	54-2	149.58	152.73	153.20	151.83	1.30	ppb
Iron	56-2	157.20	154.82	155.76	155.93	0.77	ppb
Iron	57-2	153.97	148.69	154.47	152.38	2.10	ppb
Krypton	83-1						cps
Lead	206-1	0.29	0.29	0.27	0.28	4.58	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-07	Instrumnet Name :	P8
Client Sample ID :	ME2940	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:42:00	DataFile Name :	038AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.27	0.24	0.26	0.26	6.83	ppb
Lead	208-1	0.29	0.27	0.26	0.27	4.60	ppb
Lithium	6-1				85		%
Magnesium	24-2	2949.45	2917.38	2900.36	2922.40	0.85	ppb
Manganese	55-2	18.16	17.83	17.29	17.76	2.47	ppb
Molybdenum	94-1	25.16	24.03	24.12	24.44	2.57	ppb
Molybdenum	95-1	30.33	28.67	29.29	29.43	2.84	ppb
Molybdenum	96-1	29.60	28.08	28.13	28.60	3.02	ppb
Molybdenum	97-1	30.65	29.18	29.07	29.63	2.98	ppb
Molybdenum	98-1	29.98	29.07	28.90	29.32	1.99	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	39.05	39.17	39.25	39.16	0.26	ppb
Phosphorus	31-2	87.69	94.54	116.64	99.62	15.19	ppb
Potassium	39-2	108675.61	108494.49	106876.00	108015.37	0.92	ppb
Rhodium	103-1				88		%
Rhodium	103-2				89		%
Scandium	45-1				91		%
Scandium	45-2				92		%
Selenium	82-1	0.74	1.28	1.13	1.05	26.43	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	0.32	-0.10	0.73	0.32	129.32	ppb
Silicon	28-1	2571.86	2466.32	2483.63	2507.27	2.26	ppb
Silver	107-1	0.00	0.00	0.00	0.00	481.88	ppb
Silver	109-1	0.00	0.00	0.00	0.00	152.97	ppb
Sodium	23-2	176881.68	175530.54	172873.57	175095.26	1.16	ppb
Strontium	86-1	37734.36	35637.17	35825.38	36398.97	3.19	ppb
Strontium	88-1	38062.30	36316.43	36330.88	36903.20	2.72	ppb
Sulfur	34-1	17161.28	16114.15	16074.15	16449.86	3.75	ppb
Terbium	159-1				95		%
Terbium	159-2				94		%
Thallium	203-1	0.00	-0.01	0.00	0.00		ppb
Thallium	205-1	-0.01	-0.01	-0.01	-0.01		ppb
Tin	118-1	-0.10	-0.10	-0.15	-0.11		ppb
Titanium	47-1	3.19	2.90	3.03	3.04	4.72	ppb
Uranium	238-1	0.13	0.12	0.12	0.12	2.01	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-07	Instrumnet Name :	P8
Client Sample ID :	ME2940	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:42:00	DataFile Name :	038AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	6.93	7.01	6.68	6.87	2.45	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				93		%
Yttrium	89-2				92		%
Zinc	66-2	0.68	0.81	0.71	0.73	9.13	ppb
Zirconium	90-1	0.18	0.19	0.17	0.18	7.40	ppb
Zirconium	91-1	0.19	0.23	0.17	0.20	14.79	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-08	Instrumnet Name :	P8
Client Sample ID :	ME2941	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:45:20	DataFile Name :	039AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	756.98	655.29	792.39	734.89	9.68	ppb
Antimony	121-1	0.38	0.35	0.29	0.34	13.22	ppb
Arsenic	75-2	4.73	4.67	5.57	4.99	10.13	ppb
Barium	135-1	128.06	113.76	97.02	112.95	13.75	ppb
Barium	137-1	130.65	115.78	98.39	114.94	14.05	ppb
Beryllium	9-1	0.07	0.06	0.05	0.06	22.34	ppb
Bismuth	209-1				94		%
Bismuth	209-2				83		%
Bromine	81-1						cps
Cadmium	108-1	0.40	0.40	0.20	0.34	34.84	ppb
Cadmium	106-1	0.03	0.41	1.02	0.49	102.94	ppb
Cadmium	111-1	0.02	0.06	0.10	0.06	65.49	ppb
Calcium	43-1	63141.61	54267.52	47455.35	54954.83	14.31	ppb
Calcium	44-1	58624.15	51727.63	44123.56	51491.78	14.09	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.51	2.01	2.47	2.33	11.99	ppb
Cobalt	59-2	2.38	2.06	2.50	2.32	9.82	ppb
Copper	63-2	2.23	1.72	2.33	2.09	15.66	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				90		%
Indium	115-1				95		%
Indium	115-2				85		%
Iron	54-2	1429.31	1227.18	1449.62	1368.70	8.99	ppb
Iron	56-2	1514.86	1290.92	1539.37	1448.38	9.45	ppb
Iron	57-2	1431.52	1215.24	1450.75	1365.84	9.58	ppb
Krypton	83-1						cps
Lead	206-1	1.10	0.94	0.80	0.95	15.64	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-08	Instrumnet Name :	P8
Client Sample ID :	ME2941	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:45:20	DataFile Name :	039AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.91	0.82	0.67	0.80	15.40	ppb
Lead	208-1	0.97	0.85	0.71	0.84	15.34	ppb
Lithium	6-1				89		%
Magnesium	24-2	28319.73	24420.50	28716.96	27152.40	8.74	ppb
Manganese	55-2	44.50	38.06	45.23	42.60	9.27	ppb
Molybdenum	94-1	17.99	15.89	13.61	15.83	13.85	ppb
Molybdenum	95-1	19.99	17.71	15.27	17.66	13.37	ppb
Molybdenum	96-1	19.90	17.66	15.27	17.61	13.13	ppb
Molybdenum	97-1	20.35	17.84	15.31	17.83	14.13	ppb
Molybdenum	98-1	19.89	17.53	15.20	17.54	13.38	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	12.31	10.09	12.56	11.65	11.66	ppb
Phosphorus	31-2	136.17	126.93	206.07	156.39	27.67	ppb
Potassium	39-2	15730.38	13549.00	15933.98	15071.12	8.77	ppb
Rhodium	103-1				92		%
Rhodium	103-2				85		%
Scandium	45-1				96		%
Scandium	45-2				85		%
Selenium	82-1	1.29	0.89	1.15	1.11	18.52	ppb
Selenium	77-2	1.51	1.32	3.09	1.97	49.12	ppb
Selenium	78-2	1.32	0.69	0.89	0.97	33.54	ppb
Silicon	28-1	2177.39	1971.36	1683.81	1944.19	12.75	ppb
Silver	107-1	0.02	0.02	0.02	0.02	21.61	ppb
Silver	109-1	0.01	0.01	0.01	0.01	7.58	ppb
Sodium	23-2	137283.58	119632.67	139760.91	132225.72	8.30	ppb
Strontium	86-1	421264.80	363914.97	313548.15	366242.64	14.72	ppb
Strontium	88-1	417547.66	368569.22	318893.24	368336.71	13.39	ppb
Sulfur	34-1	29345.43	25317.14	20941.76	25201.44	16.68	ppb
Terbium	159-1				100		%
Terbium	159-2				90		%
Thallium	203-1	0.03	0.03	0.01	0.02	46.13	ppb
Thallium	205-1	0.03	0.02	0.01	0.02	46.42	ppb
Tin	118-1	0.28	0.17	0.09	0.18	50.56	ppb
Titanium	47-1	19.85	17.53	15.03	17.47	13.81	ppb
Uranium	238-1	0.82	0.73	0.61	0.72	14.72	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-08	Instrumnet Name :	P8
Client Sample ID :	ME2941	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:45:20	DataFile Name :	039AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	4.39	3.61	4.47	4.15	11.48	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				99		%
Yttrium	89-2				87		%
Zinc	66-2	7.79	7.09	7.31	7.40	4.80	ppb
Zirconium	90-1	0.80	0.71	0.62	0.71	12.57	ppb
Zirconium	91-1	0.80	0.71	0.59	0.70	14.99	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-09	Instrumnet Name :	P8
Client Sample ID :	ME2944	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:48:35	DataFile Name :	040AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	6.27	4.39	6.01	5.56	18.31	ppb
Antimony	121-1	0.00	0.00	0.00	0.00	200.14	ppb
Arsenic	75-2	0.04	0.14	0.02	0.07	94.40	ppb
Barium	135-1	7.95	7.00	6.77	7.24	8.66	ppb
Barium	137-1	7.88	6.99	6.86	7.25	7.66	ppb
Beryllium	9-1	0.03	0.03	0.03	0.03	12.54	ppb
Bismuth	209-1				83		%
Bismuth	209-2				85		%
Bromine	81-1						cps
Cadmium	108-1	-0.03	-0.03	0.05	-0.01		ppb
Cadmium	106-1	-0.41	-0.04	-0.07	-0.17		ppb
Cadmium	111-1	-0.03	0.00	-0.01	-0.01		ppb
Calcium	43-1	481816.10	423928.56	416285.32	440676.66	8.13	ppb
Calcium	44-1	475207.44	422823.94	409088.36	435706.58	8.01	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.06	0.05	0.02	0.05	46.52	ppb
Cobalt	59-2	0.01	0.00	0.01	0.01	90.45	ppb
Copper	63-2	-0.07	-0.05	-0.08	-0.07		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				93		%
Holmium	165-2				95		%
Indium	115-1				88		%
Indium	115-2				89		%
Iron	54-2	444.22	444.81	433.56	440.86	1.44	ppb
Iron	56-2	439.18	445.50	438.39	441.02	0.88	ppb
Iron	57-2	439.94	448.28	447.44	445.22	1.03	ppb
Krypton	83-1						cps
Lead	206-1	0.11	0.07	0.06	0.08	34.55	ppb

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-09	Instrumnet Name :	P8
Client Sample ID :	ME2944	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:48:35	DataFile Name :	040AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.11	0.07	0.07	0.08	32.88	ppb
Lead	208-1	0.11	0.07	0.06	0.08	31.82	ppb
Lithium	6-1				84		%
Magnesium	24-2	127532.64	128279.71	125234.10	127015.48	1.25	ppb
Manganese	55-2	36.34	36.35	35.96	36.22	0.62	ppb
Molybdenum	94-1	0.76	0.66	0.70	0.71	7.46	ppb
Molybdenum	95-1	0.84	0.71	0.74	0.76	9.00	ppb
Molybdenum	96-1	0.83	0.73	0.70	0.75	8.85	ppb
Molybdenum	97-1	0.79	0.71	0.71	0.74	6.45	ppb
Molybdenum	98-1	0.79	0.70	0.70	0.73	7.57	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.20	0.13	0.20	0.18	22.66	ppb
Phosphorus	31-2	-15.91	-9.95	-23.43	-16.43		ppb
Potassium	39-2	3231.73	3221.52	3202.39	3218.55	0.46	ppb
Rhodium	103-1				84		%
Rhodium	103-2				88		%
Scandium	45-1				89		%
Scandium	45-2				93		%
Selenium	82-1	0.77	0.29	0.43	0.49	49.89	ppb
Selenium	77-2	0.00	0.00	1.37	0.46	173.21	ppb
Selenium	78-2	0.72	-0.51	1.15	0.46	189.14	ppb
Silicon	28-1	1044.85	909.99	891.60	948.82	8.82	ppb
Silver	107-1	0.01	0.01	0.02	0.01	30.29	ppb
Silver	109-1	0.00	0.00	0.01	0.00	18.32	ppb
Sodium	23-2	33787.73	33852.29	33391.10	33677.04	0.74	ppb
Strontium	86-1	316175.90	286739.76	271722.79	291546.15	7.76	ppb
Strontium	88-1	322107.29	290873.31	273978.49	295653.03	8.26	ppb
Sulfur	34-1	516713.11	452484.60	444742.71	471313.47	8.38	ppb
Terbium	159-1				91		%
Terbium	159-2				93		%
Thallium	203-1	0.00	0.00	-0.01	0.00		ppb
Thallium	205-1	0.00	-0.01	0.00	0.00		ppb
Tin	118-1	-0.14	-0.20	-0.19	-0.17		ppb
Titanium	47-1	0.93	0.76	0.79	0.83	11.42	ppb
Uranium	238-1	0.04	0.04	0.04	0.04	4.96	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-09	Instrumnet Name :	P8
Client Sample ID :	ME2944	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:48:35	DataFile Name :	040AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.02	0.03	0.02	0.02	16.63	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				91		%
Yttrium	89-2				92		%
Zinc	66-2	0.44	0.26	0.48	0.39	29.09	ppb
Zirconium	90-1	0.03	0.04	0.04	0.04	8.50	ppb
Zirconium	91-1	0.02	0.02	0.03	0.03	6.98	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-10	Instrumnet Name :	P8
Client Sample ID :	ME2944D	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:51:54	DataFile Name :	041AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	5.75	4.85	4.21	4.94	15.69	ppb
Antimony	121-1	0.01	0.00	0.00	0.00	143.82	ppb
Arsenic	75-2	0.11	0.15	0.16	0.14	20.59	ppb
Barium	135-1	7.42	6.59	6.63	6.88	6.79	ppb
Barium	137-1	7.23	6.70	6.57	6.84	5.10	ppb
Beryllium	9-1	0.04	0.02	0.02	0.03	39.83	ppb
Bismuth	209-1				88		%
Bismuth	209-2				83		%
Bromine	81-1						cps
Cadmium	108-1	0.05	0.06	-0.02	0.03	156.39	ppb
Cadmium	106-1	0.16	0.95	-0.25	0.29	213.52	ppb
Cadmium	111-1	0.02	0.07	-0.01	0.03	172.96	ppb
Calcium	43-1	436392.68	399262.63	390698.16	408784.49	5.94	ppb
Calcium	44-1	431407.57	397766.29	392898.65	407357.50	5.15	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.02	-0.02	0.01	0.00	644.38	ppb
Cobalt	59-2	0.01	0.01	0.00	0.01	54.16	ppb
Copper	63-2	0.03	-0.03	-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				98		%
Holmium	165-2				93		%
Indium	115-1				93		%
Indium	115-2				87		%
Iron	54-2	453.29	437.94	433.51	441.58	2.35	ppb
Iron	56-2	453.27	446.05	428.11	442.47	2.93	ppb
Iron	57-2	462.22	452.30	436.12	450.22	2.93	ppb
Krypton	83-1						cps
Lead	206-1	0.09	0.06	0.05	0.07	32.64	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-10	Instrumnet Name :	P8
Client Sample ID :	ME2944D	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:51:54	DataFile Name :	041AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.06	0.06	0.04	0.05	21.77	ppb
Lead	208-1	0.08	0.05	0.05	0.06	28.72	ppb
Lithium	6-1				87		%
Magnesium	24-2	130130.63	130079.28	122624.02	127611.31	3.38	ppb
Manganese	55-2	36.97	38.11	35.37	36.82	3.74	ppb
Molybdenum	94-1	0.65	0.63	0.63	0.64	1.64	ppb
Molybdenum	95-1	0.76	0.72	0.66	0.71	7.24	ppb
Molybdenum	96-1	0.74	0.71	0.65	0.70	6.44	ppb
Molybdenum	97-1	0.77	0.66	0.70	0.71	7.78	ppb
Molybdenum	98-1	0.75	0.66	0.66	0.69	7.61	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.21	0.25	0.21	0.22	10.72	ppb
Phosphorus	31-2	-11.45	-21.24	-1.10	-11.26		ppb
Potassium	39-2	3322.67	3250.30	3130.57	3234.51	3.00	ppb
Rhodium	103-1				88		%
Rhodium	103-2				87		%
Scandium	45-1				94		%
Scandium	45-2				92		%
Selenium	82-1	0.39	0.40	0.40	0.40	2.26	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.51	-0.51	-0.10	-0.37		ppb
Silicon	28-1	935.89	862.61	850.35	882.95	5.24	ppb
Silver	107-1	0.01	0.01	0.01	0.01	18.67	ppb
Silver	109-1	0.01	0.01	0.01	0.01	5.14	ppb
Sodium	23-2	34418.89	33860.25	32984.16	33754.43	2.14	ppb
Strontium	86-1	289818.89	274834.06	263823.36	276158.77	4.72	ppb
Strontium	88-1	290545.84	275606.54	265762.36	277304.91	4.50	ppb
Sulfur	34-1	463947.56	428648.56	419645.22	437413.78	5.35	ppb
Terbium	159-1				97		%
Terbium	159-2				91		%
Thallium	203-1	0.00	-0.01	-0.01	-0.01		ppb
Thallium	205-1	0.00	-0.01	-0.01	-0.01		ppb
Tin	118-1	-0.19	-0.21	-0.23	-0.21		ppb
Titanium	47-1	0.73	0.79	0.74	0.75	4.25	ppb
Uranium	238-1	0.05	0.04	0.04	0.04	12.46	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-10	Instrumnet Name :	P8
Client Sample ID :	ME2944D	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:51:54	DataFile Name :	041AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.01	0.02	0.02	0.02	39.54	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				95		%
Yttrium	89-2				91		%
Zinc	66-2	0.37	0.38	0.65	0.47	34.59	ppb
Zirconium	90-1	0.04	0.03	0.03	0.03	11.49	ppb
Zirconium	91-1	0.03	0.02	0.04	0.03	24.17	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-09LX5	Instrumnet Name :	P8
Client Sample ID :	ME2944L	Dilution Factor :	5
Date & Time Acquired :	2025-01-28 14:55:10	DataFile Name :	042AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.62	0.91	0.46	0.66	34.59	ppb
Antimony	121-1	0.00	0.00	0.00	0.00		ppb
Arsenic	75-2	-0.02	0.06	-0.02	0.01	665.59	ppb
Barium	135-1	1.32	1.38	1.55	1.42	8.55	ppb
Barium	137-1	1.39	1.39	1.53	1.44	5.42	ppb
Beryllium	9-1	0.01	0.02	0.02	0.02	41.72	ppb
Bismuth	209-1				93		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Cadmium	108-1	0.00	-0.05	-0.01	-0.02		ppb
Cadmium	106-1	0.58	-1.33	-1.29	-0.68		ppb
Cadmium	111-1	0.04	-0.11	-0.11	-0.06		ppb
Calcium	43-1	82045.47	81826.95	85696.58	83189.66	2.61	ppb
Calcium	44-1	81462.35	81967.32	86414.01	83281.23	3.27	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.04	-0.04	-0.02	-0.03		ppb
Cobalt	59-2	-0.02	-0.02	-0.01	-0.02		ppb
Copper	63-2	-0.11	-0.15	-0.17	-0.14		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				98		%
Holmium	165-2				100		%
Indium	115-1				94		%
Indium	115-2				95		%
Iron	54-2	84.94	81.74	87.68	84.79	3.51	ppb
Iron	56-2	86.60	84.09	86.61	85.77	1.69	ppb
Iron	57-2	88.23	87.83	89.52	88.53	1.00	ppb
Krypton	83-1						cps
Lead	206-1	0.03	0.02	0.03	0.02	26.93	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-09LX5	Instrumnet Name :	P8
Client Sample ID :	ME2944L	Dilution Factor :	5
Date & Time Acquired :	2025-01-28 14:55:10	DataFile Name :	042AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.01	0.01	0.02	0.01	48.96	ppb
Lead	208-1	0.02	0.01	0.02	0.02	25.32	ppb
Lithium	6-1				85		%
Magnesium	24-2	24151.87	24012.10	24677.65	24280.54	1.45	ppb
Manganese	55-2	7.31	6.99	6.88	7.06	3.17	ppb
Molybdenum	94-1	0.12	0.14	0.13	0.13	8.18	ppb
Molybdenum	95-1	0.13	0.14	0.16	0.14	10.48	ppb
Molybdenum	96-1	0.14	0.14	0.15	0.14	6.09	ppb
Molybdenum	97-1	0.15	0.15	0.13	0.14	9.78	ppb
Molybdenum	98-1	0.15	0.14	0.16	0.15	7.21	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.06	0.07	0.06	0.06	7.42	ppb
Phosphorus	31-2	-14.39	-32.85	-18.16	-21.80		ppb
Potassium	39-2	614.07	600.24	617.54	610.62	1.50	ppb
Rhodium	103-1				92		%
Rhodium	103-2				97		%
Scandium	45-1				92		%
Scandium	45-2				95		%
Selenium	82-1	0.02	0.02	0.40	0.15	148.31	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	1.87	-0.12	-0.51	0.41	308.75	ppb
Silicon	28-1	174.83	174.49	183.34	177.55	2.82	ppb
Silver	107-1	0.00	0.01	0.00	0.00	47.71	ppb
Silver	109-1	0.00	0.00	0.00	0.00		ppb
Sodium	23-2	6335.57	6314.01	6490.91	6380.16	1.51	ppb
Strontium	86-1	53699.82	54294.99	58055.67	55350.16	4.27	ppb
Strontium	88-1	54063.30	55027.72	58473.35	55854.79	4.15	ppb
Sulfur	34-1	86773.77	86790.45	92396.05	88653.42	3.66	ppb
Terbium	159-1				96		%
Terbium	159-2				99		%
Thallium	203-1	-0.01	-0.01	-0.01	-0.01		ppb
Thallium	205-1	-0.01	-0.01	-0.01	-0.01		ppb
Tin	118-1	-0.10	-0.10	-0.08	-0.09		ppb
Titanium	47-1	0.14	0.15	0.17	0.15	11.97	ppb
Uranium	238-1	0.01	0.01	0.01	0.01	7.73	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-09LX5	Instrumnet Name :	P8
Client Sample ID :	ME2944L	Dilution Factor :	5
Date & Time Acquired :	2025-01-28 14:55:10	DataFile Name :	042AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.00	0.00	0.00	305.49	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				95		%
Yttrium	89-2				97		%
Zinc	66-2	0.19	0.12	-0.05	0.09	140.06	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00		ppb
Zirconium	91-1	0.00	0.01	0.01	0.01	36.70	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-11	Instrumnet Name :	P8
Client Sample ID :	ME2944S	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:58:26	DataFile Name :	043AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1812.43	1778.28	1817.64	1802.78	1.19	ppb
Antimony	121-1	85.15	86.09	90.73	87.33	3.42	ppb
Arsenic	75-2	38.74	38.10	37.81	38.22	1.24	ppb
Barium	135-1	1936.50	1904.26	2054.37	1965.04	4.02	ppb
Barium	137-1	1911.68	1875.94	2026.88	1938.17	4.07	ppb
Beryllium	9-1	44.20	44.43	46.85	45.16	3.25	ppb
Bismuth	209-1				88		%
Bismuth	209-2				82		%
Bromine	81-1						cps
Cadmium	108-1	34.22	36.53	37.41	36.05	4.57	ppb
Cadmium	106-1	35.07	35.72	38.29	36.36	4.70	ppb
Cadmium	111-1	42.08	41.70	44.69	42.82	3.81	ppb
Calcium	43-1	397474.70	395592.67	427141.76	406736.38	4.35	ppb
Calcium	44-1	397606.97	393146.27	426007.26	405586.83	4.39	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	192.19	186.24	190.08	189.50	1.59	ppb
Cobalt	59-2	501.54	491.54	500.11	497.73	1.09	ppb
Copper	63-2	247.93	242.47	245.08	245.16	1.11	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				97		%
Holmium	165-2				91		%
Indium	115-1				92		%
Indium	115-2				86		%
Iron	54-2	1611.70	1574.16	1614.99	1600.29	1.42	ppb
Iron	56-2	1545.34	1506.02	1539.26	1530.21	1.38	ppb
Iron	57-2	1473.25	1438.68	1474.70	1462.21	1.39	ppb
Krypton	83-1						cps
Lead	206-1	18.34	18.54	19.63	18.84	3.68	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-11	Instrumnet Name :	P8
Client Sample ID :	ME2944S	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:58:26	DataFile Name :	043AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	18.15	17.98	19.28	18.47	3.82	ppb
Lead	208-1	18.27	18.22	19.36	18.62	3.47	ppb
Lithium	6-1				86		%
Magnesium	24-2	127037.33	122543.37	125538.94	125039.88	1.83	ppb
Manganese	55-2	514.25	500.44	512.31	509.00	1.47	ppb
Molybdenum	94-1	0.64	0.67	0.68	0.66	2.69	ppb
Molybdenum	95-1	0.67	0.70	0.79	0.72	8.83	ppb
Molybdenum	96-1	0.66	0.66	0.72	0.68	5.02	ppb
Molybdenum	97-1	0.64	0.67	0.70	0.67	4.63	ppb
Molybdenum	98-1	0.66	0.68	0.74	0.70	5.90	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	494.28	483.23	493.70	490.40	1.27	ppb
Phosphorus	31-2	-28.80	-13.56	-13.21	-18.52		ppb
Potassium	39-2	3233.40	3161.19	3210.47	3201.69	1.15	ppb
Rhodium	103-1				88		%
Rhodium	103-2				85		%
Scandium	45-1				92		%
Scandium	45-2				90		%
Selenium	82-1	16.16	19.31	18.49	17.99	9.10	ppb
Selenium	77-2	9.83	11.17	15.30	12.10	23.54	ppb
Selenium	78-2	18.15	17.63	17.12	17.63	2.91	ppb
Silicon	28-1	853.88	847.28	916.61	872.59	4.39	ppb
Silver	107-1	40.06	40.28	42.65	41.00	3.50	ppb
Silver	109-1	40.26	41.02	43.56	41.61	4.16	ppb
Sodium	23-2	33665.36	32855.57	33235.88	33252.27	1.22	ppb
Strontium	86-1	263311.17	263402.97	279742.94	268819.03	3.52	ppb
Strontium	88-1	264547.11	266898.50	284031.91	271825.84	3.91	ppb
Sulfur	34-1	424060.38	419521.89	455388.61	432990.29	4.51	ppb
Terbium	159-1				96		%
Terbium	159-2				90		%
Thallium	203-1	44.41	44.80	47.67	45.63	3.90	ppb
Thallium	205-1	45.14	45.20	48.37	46.24	3.99	ppb
Tin	118-1	-0.18	-0.21	-0.18	-0.19		ppb
Titanium	47-1	0.79	0.80	0.70	0.76	7.46	ppb
Uranium	238-1	0.04	0.04	0.04	0.04	3.63	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-11	Instrumnet Name :	P8
Client Sample ID :	ME2944S	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:58:26	DataFile Name :	043AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	479.27	469.10	476.29	474.88	1.10	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				95		%
Yttrium	89-2				90		%
Zinc	66-2	459.42	450.35	455.73	455.17	1.00	ppb
Zirconium	90-1	0.04	0.04	0.04	0.04	7.54	ppb
Zirconium	91-1	0.06	0.06	0.07	0.06	13.72	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV010	Instrumnet Name :	P8
Client Sample ID :	CCV010	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:01:41	DataFile Name :	044CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	50575.40	49609.97	49971.93	50052.43	0.97	ppb
Antimony	121-1	479.73	508.24	496.72	494.90	2.90	ppb
Arsenic	75-2	500.15	493.76	499.83	497.91	0.72	ppb
Barium	135-1	2429.70	2567.64	2537.73	2511.69	2.89	ppb
Barium	137-1	2435.32	2580.27	2560.14	2525.24	3.11	ppb
Beryllium	9-1	506.28	526.14	517.62	516.68	1.93	ppb
Bismuth	209-1				81		%
Bismuth	209-2				77		%
Bromine	81-1						cps
Cadmium	108-1	456.83	492.44	484.26	477.84	3.90	ppb
Cadmium	106-1	466.60	490.84	487.88	481.77	2.74	ppb
Cadmium	111-1	441.23	467.24	464.10	457.52	3.10	ppb
Calcium	43-1	247441.60	254787.38	256547.38	252925.45	1.91	ppb
Calcium	44-1	245874.45	255759.03	253179.80	251604.43	2.04	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	492.56	483.58	485.15	487.10	0.99	ppb
Cobalt	59-2	521.17	498.20	513.72	511.03	2.29	ppb
Copper	63-2	4979.27	4938.78	4904.99	4941.01	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				92		%
Holmium	165-2				89		%
Indium	115-1				84		%
Indium	115-2				81		%
Iron	54-2	127452.70	126690.04	127265.01	127135.92	0.31	ppb
Iron	56-2	129571.04	126869.41	127846.89	128095.78	1.07	ppb
Iron	57-2	132340.53	125905.01	128357.93	128867.82	2.52	ppb
Krypton	83-1						cps
Lead	206-1	2510.01	2597.13	2660.81	2589.32	2.92	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV010	Instrumnet Name :	P8
Client Sample ID :	CCV010	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:01:41	DataFile Name :	044CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2502.27	2580.16	2619.24	2567.23	2.32	ppb
Lead	208-1	2504.83	2600.12	2621.84	2575.60	2.42	ppb
Lithium	6-1				79		%
Magnesium	24-2	257205.90	249594.27	250832.85	252544.34	1.62	ppb
Manganese	55-2	5155.32	5022.50	5088.50	5088.78	1.31	ppb
Molybdenum	94-1	4960.35	5170.26	5082.74	5071.12	2.08	ppb
Molybdenum	95-1	4999.01	5197.15	5112.21	5102.79	1.95	ppb
Molybdenum	96-1	4982.65	5160.60	5128.62	5090.62	1.86	ppb
Molybdenum	97-1	4894.91	5190.56	5087.96	5057.81	2.97	ppb
Molybdenum	98-1	4940.23	5208.80	5111.61	5086.88	2.67	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	501.35	484.32	494.33	493.34	1.73	ppb
Phosphorus	31-2	10030.90	9794.00	9618.61	9814.50	2.11	ppb
Potassium	39-2	125451.29	121642.98	122797.20	123297.16	1.58	ppb
Rhodium	103-1				79		%
Rhodium	103-2				80		%
Scandium	45-1				87		%
Scandium	45-2				87		%
Selenium	82-1	473.94	491.22	489.00	484.72	1.94	ppb
Selenium	77-2	454.61	484.66	522.28	487.18	6.96	ppb
Selenium	78-2	487.34	470.39	487.96	481.90	2.07	ppb
Silicon	28-1	497.11	522.91	515.27	511.76	2.59	ppb
Silver	107-1	456.63	481.17	479.80	472.53	2.92	ppb
Silver	109-1	459.00	481.70	478.77	473.16	2.61	ppb
Sodium	23-2	257600.22	252439.17	253533.00	254524.13	1.07	ppb
Strontium	86-1	12397.59	13117.93	12640.77	12718.76	2.88	ppb
Strontium	88-1	12415.36	12996.66	12890.94	12767.66	2.43	ppb
Sulfur	34-1	11327.24	12118.86	11786.36	11744.15	3.38	ppb
Terbium	159-1				91		%
Terbium	159-2				87		%
Thallium	203-1	513.33	528.33	539.47	527.04	2.49	ppb
Thallium	205-1	502.96	525.66	529.44	519.35	2.76	ppb
Tin	118-1	480.56	511.51	504.52	498.86	3.25	ppb
Titanium	47-1	4941.22	5236.66	5142.36	5106.75	2.95	ppb
Uranium	238-1	513.87	540.66	536.87	530.46	2.73	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV010	Instrumnet Name :	P8
Client Sample ID :	CCV010	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:01:41	DataFile Name :	044CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	502.31	491.17	493.16	495.55	1.20	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				89		%
Yttrium	89-2				87		%
Zinc	66-2	4741.98	4606.37	4638.66	4662.34	1.52	ppb
Zirconium	90-1	499.18	517.52	505.32	507.34	1.84	ppb
Zirconium	91-1	516.57	526.03	514.36	518.99	1.19	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB010	Instrumnet Name :	P8
Client Sample ID :	CCB010	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:04:33	DataFile Name :	045CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1.87	1.22	0.72	1.27	45.24	ppb
Antimony	121-1	0.13	0.13	0.11	0.12	11.81	ppb
Arsenic	75-2	0.02	0.02	0.04	0.03	41.19	ppb
Barium	135-1	0.27	0.24	0.24	0.25	8.88	ppb
Barium	137-1	0.29	0.22	0.28	0.26	12.67	ppb
Beryllium	9-1	0.15	0.15	0.14	0.15	5.57	ppb
Bismuth	209-1				95		%
Bismuth	209-2				93		%
Bromine	81-1						cps
Cadmium	108-1	0.12	0.08	0.03	0.08	54.45	ppb
Cadmium	106-1	-1.20	-1.40	-0.72	-1.11		ppb
Cadmium	111-1	-0.07	-0.09	-0.01	-0.06		ppb
Calcium	43-1	11.48	14.88	11.73	12.70	14.96	ppb
Calcium	44-1	13.73	10.54	12.72	12.33	13.21	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.04	0.00	0.05	0.03	100.10	ppb
Cobalt	59-2	0.02	0.02	0.02	0.02	5.55	ppb
Copper	63-2	0.16	0.05	-0.06	0.05	206.80	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				96		%
Holmium	165-2				95		%
Indium	115-1				96		%
Indium	115-2				92		%
Iron	54-2	3.50	3.34	2.47	3.11	17.83	ppb
Iron	56-2	4.06	3.18	3.15	3.46	14.93	ppb
Iron	57-2	3.32	2.50	5.28	3.70	38.63	ppb
Krypton	83-1						cps
Lead	206-1	0.16	0.13	0.14	0.14	12.24	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB010	Instrumnet Name :	P8
Client Sample ID :	CCB010	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:04:33	DataFile Name :	045CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.22	0.14	0.16	0.17	26.10	ppb
Lead	208-1	0.19	0.14	0.16	0.16	15.43	ppb
Lithium	6-1				86		%
Magnesium	24-2	3.96	2.59	2.54	3.03	26.48	ppb
Manganese	55-2	0.23	0.25	0.23	0.23	3.98	ppb
Molybdenum	94-1	0.31	0.30	0.28	0.30	4.91	ppb
Molybdenum	95-1	0.33	0.26	0.28	0.29	12.81	ppb
Molybdenum	96-1	0.29	0.24	0.30	0.28	12.72	ppb
Molybdenum	97-1	0.31	0.27	0.29	0.29	7.53	ppb
Molybdenum	98-1	0.30	0.26	0.27	0.28	7.98	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.00	-0.07	-0.02	-0.03		ppb
Phosphorus	31-2	-19.28	-11.43	-19.09	-16.60		ppb
Potassium	39-2	18.80	15.61	17.86	17.42	9.40	ppb
Rhodium	103-1				95		%
Rhodium	103-2				95		%
Scandium	45-1				94		%
Scandium	45-2				90		%
Selenium	82-1	-0.33	-0.50	0.06	-0.26		ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	0.32	-0.51	-0.51	-0.23		ppb
Silicon	28-1	0.51	0.40	0.34	0.42	20.27	ppb
Silver	107-1	0.06	0.06	0.05	0.06	7.58	ppb
Silver	109-1	0.07	0.04	0.06	0.06	20.07	ppb
Sodium	23-2	8.22	8.57	8.20	8.33	2.48	ppb
Strontium	86-1	3.35	2.27	2.87	2.83	19.18	ppb
Strontium	88-1	3.51	2.86	2.95	3.11	11.36	ppb
Sulfur	34-1	-296.14	-217.20	-222.55	-245.30		ppb
Terbium	159-1				97		%
Terbium	159-2				93		%
Thallium	203-1	0.04	0.04	0.04	0.04	8.26	ppb
Thallium	205-1	0.04	0.04	0.04	0.04	4.40	ppb
Tin	118-1	-0.01	0.00	0.02	0.01	225.31	ppb
Titanium	47-1	0.27	0.25	0.29	0.27	7.04	ppb
Uranium	238-1	0.02	0.02	0.02	0.02	15.21	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB010	Instrumnet Name :	P8
Client Sample ID :	CCB010	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:04:33	DataFile Name :	045CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.02	0.03	0.01	0.02	36.36	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				97		%
Yttrium	89-2				92		%
Zinc	66-2	0.29	0.19	0.41	0.30	36.52	ppb
Zirconium	90-1	0.04	0.04	0.04	0.04	3.39	ppb
Zirconium	91-1	0.04	0.03	0.03	0.04	13.58	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-12	Instrumnet Name :	P8
Client Sample ID :	ME2938	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:07:56	DataFile Name :	046AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1309.60	1292.98	1328.72	1310.43	1.37	ppb
Antimony	121-1	0.21	0.25	0.22	0.23	9.00	ppb
Arsenic	75-2	3.56	3.83	3.84	3.74	4.31	ppb
Barium	135-1	54.25	54.23	54.53	54.34	0.31	ppb
Barium	137-1	54.73	54.59	54.88	54.73	0.27	ppb
Beryllium	9-1	0.07	0.06	0.05	0.06	10.85	ppb
Bismuth	209-1				87		%
Bismuth	209-2				85		%
Bromine	81-1						cps
Cadmium	108-1	1.39	1.26	1.29	1.31	5.05	ppb
Cadmium	106-1	-0.84	-1.50	-0.68	-1.01		ppb
Cadmium	111-1	0.07	-0.01	0.12	0.06	108.47	ppb
Calcium	43-1	8842.63	8846.86	8945.34	8878.28	0.65	ppb
Calcium	44-1	9045.84	9006.12	9254.91	9102.29	1.47	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.13	0.08	-0.01	0.07	100.83	ppb
Cobalt	59-2	0.06	0.05	0.05	0.05	9.22	ppb
Copper	63-2	1.32	1.51	1.36	1.40	6.94	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				93		%
Indium	115-1				91		%
Indium	115-2				87		%
Iron	54-2	12.27	11.89	12.24	12.13	1.75	ppb
Iron	56-2	12.77	12.93	12.94	12.88	0.72	ppb
Iron	57-2	12.88	13.93	13.48	13.43	3.93	ppb
Krypton	83-1						cps
Lead	206-1	0.31	0.27	0.26	0.28	9.27	ppb

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-12	Instrumnet Name :	P8
Client Sample ID :	ME2938	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:07:56	DataFile Name :	046AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.27	0.28	0.26	0.27	4.03	ppb
Lead	208-1	0.28	0.27	0.26	0.27	3.45	ppb
Lithium	6-1				88		%
Magnesium	24-2	28.11	29.85	25.66	27.87	7.55	ppb
Manganese	55-2	0.54	0.63	0.54	0.57	8.98	ppb
Molybdenum	94-1	94.43	93.80	93.00	93.74	0.76	ppb
Molybdenum	95-1	113.18	113.05	113.39	113.21	0.15	ppb
Molybdenum	96-1	111.09	111.76	111.43	111.43	0.30	ppb
Molybdenum	97-1	113.97	114.72	113.77	114.15	0.44	ppb
Molybdenum	98-1	113.31	112.74	112.36	112.81	0.42	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	147.78	147.95	148.41	148.05	0.22	ppb
Phosphorus	31-2	123.52	114.50	112.89	116.97	4.90	ppb
Potassium	39-2	161034.68	159204.06	161440.95	160559.89	0.74	ppb
Rhodium	103-1				88		%
Rhodium	103-2				89		%
Scandium	45-1				92		%
Scandium	45-2				90		%
Selenium	82-1	2.30	3.32	3.44	3.02	20.77	ppb
Selenium	77-2	1.39	2.78	1.40	1.86	42.83	ppb
Selenium	78-2	0.75	-0.09	-0.51	0.05	1223.57	ppb
Silicon	28-1	367.93	384.86	394.21	382.33	3.49	ppb
Silver	107-1	0.03	0.02	0.02	0.02	20.53	ppb
Silver	109-1	0.03	0.02	0.02	0.02	16.38	ppb
Sodium	23-2	124780.60	125021.82	124173.35	124658.59	0.35	ppb
Strontium	86-1	10292.76	10356.32	10286.05	10311.71	0.38	ppb
Strontium	88-1	10424.26	10475.76	10238.88	10379.63	1.20	ppb
Sulfur	34-1	15240.79	15336.00	15564.83	15380.54	1.08	ppb
Terbium	159-1				94		%
Terbium	159-2				92		%
Thallium	203-1	0.02	0.01	0.01	0.01	22.40	ppb
Thallium	205-1	0.01	0.01	0.01	0.01	25.15	ppb
Tin	118-1	-0.22	-0.23	-0.22	-0.22		ppb
Titanium	47-1	0.47	0.54	0.45	0.49	9.64	ppb
Uranium	238-1	0.01	0.01	0.01	0.01	8.29	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-12	Instrumnet Name :	P8
Client Sample ID :	ME2938	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:07:56	DataFile Name :	046AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	4.76	4.88	4.76	4.80	1.44	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				94		%
Yttrium	89-2				90		%
Zinc	66-2	2.77	2.54	2.37	2.56	7.83	ppb
Zirconium	90-1	0.06	0.04	0.03	0.04	35.93	ppb
Zirconium	91-1	0.06	0.03	0.03	0.04	42.85	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-13	Instrumnet Name :	P8
Client Sample ID :	ME2939	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:11:14	DataFile Name :	047AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1354.12	1377.40	1397.01	1376.18	1.56	ppb
Antimony	121-1	0.21	0.19	0.21	0.21	5.49	ppb
Arsenic	75-2	3.92	4.59	4.35	4.29	7.97	ppb
Barium	135-1	57.03	57.96	57.87	57.62	0.89	ppb
Barium	137-1	57.73	58.59	58.54	58.29	0.83	ppb
Beryllium	9-1	0.04	0.05	0.04	0.04	13.46	ppb
Bismuth	209-1				86		%
Bismuth	209-2				83		%
Bromine	81-1						cps
Cadmium	108-1	1.16	1.47	1.20	1.28	13.36	ppb
Cadmium	106-1	-0.51	-1.22	-1.48	-1.07		ppb
Cadmium	111-1	0.13	0.03	0.06	0.07	68.18	ppb
Calcium	43-1	11471.52	11697.36	11815.10	11661.33	1.50	ppb
Calcium	44-1	11702.60	11996.07	11900.22	11866.30	1.26	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.06	0.12	0.11	0.10	33.23	ppb
Cobalt	59-2	0.06	0.06	0.07	0.06	6.95	ppb
Copper	63-2	0.85	0.73	0.80	0.79	7.30	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				94		%
Holmium	165-2				92		%
Indium	115-1				90		%
Indium	115-2				87		%
Iron	54-2	24.00	25.20	23.38	24.19	3.84	ppb
Iron	56-2	24.71	25.47	25.57	25.25	1.86	ppb
Iron	57-2	24.21	26.07	24.75	25.01	3.82	ppb
Krypton	83-1						cps
Lead	206-1	0.28	0.30	0.29	0.29	2.67	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-13	Instrumnet Name :	P8
Client Sample ID :	ME2939	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:11:14	DataFile Name :	047AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.25	0.26	0.27	0.26	3.76	ppb
Lead	208-1	0.28	0.28	0.28	0.28	0.40	ppb
Lithium	6-1				88		%
Magnesium	24-2	47.75	48.47	50.82	49.02	3.28	ppb
Manganese	55-2	3.45	3.50	3.26	3.41	3.74	ppb
Molybdenum	94-1	95.25	96.69	93.70	95.21	1.57	ppb
Molybdenum	95-1	114.35	116.67	113.84	114.95	1.31	ppb
Molybdenum	96-1	113.14	115.09	112.10	113.45	1.34	ppb
Molybdenum	97-1	116.92	117.84	115.45	116.74	1.04	ppb
Molybdenum	98-1	115.98	116.42	113.69	115.36	1.27	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	151.63	153.50	155.00	153.37	1.10	ppb
Phosphorus	31-2	130.50	133.05	89.93	117.83	20.53	ppb
Potassium	39-2	163073.63	166128.28	168056.04	165752.65	1.52	ppb
Rhodium	103-1				88		%
Rhodium	103-2				86		%
Scandium	45-1				91		%
Scandium	45-2				88		%
Selenium	82-1	2.61	2.87	3.23	2.90	10.70	ppb
Selenium	77-2	1.40	0.00	1.42	0.94	86.61	ppb
Selenium	78-2	0.76	2.45	1.64	1.62	52.36	ppb
Silicon	28-1	380.95	388.49	402.87	390.77	2.85	ppb
Silver	107-1	0.01	0.01	0.01	0.01	18.23	ppb
Silver	109-1	0.02	0.01	0.02	0.01	28.79	ppb
Sodium	23-2	129050.26	129435.07	128847.38	129110.90	0.23	ppb
Strontium	86-1	10986.61	11041.37	11032.32	11020.10	0.27	ppb
Strontium	88-1	11152.54	11020.29	11179.88	11117.57	0.77	ppb
Sulfur	34-1	15119.42	15117.26	15204.60	15147.09	0.33	ppb
Terbium	159-1				94		%
Terbium	159-2				91		%
Thallium	203-1	0.00	0.00	0.00	0.00		ppb
Thallium	205-1	0.00	0.00	-0.01	0.00		ppb
Tin	118-1	0.25	0.27	0.23	0.25	7.71	ppb
Titanium	47-1	0.75	0.69	0.70	0.71	4.31	ppb
Uranium	238-1	0.01	0.01	0.01	0.01	18.11	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-13	Instrumnet Name :	P8
Client Sample ID :	ME2939	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:11:14	DataFile Name :	047AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	5.03	5.17	5.10	5.10	1.36	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				93		%
Yttrium	89-2				90		%
Zinc	66-2	2.39	2.11	2.24	2.24	6.36	ppb
Zirconium	90-1	0.02	0.03	0.02	0.02	19.63	ppb
Zirconium	91-1	0.04	0.03	0.02	0.03	39.95	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-14	Instrumnet Name :	P8
Client Sample ID :	ME2932	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:14:30	DataFile Name :	048AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	290.76	305.05	275.68	290.50	5.06	ppb
Antimony	121-1	0.80	0.80	0.81	0.80	0.92	ppb
Arsenic	75-2	4.51	5.56	4.80	4.96	10.96	ppb
Barium	135-1	99.61	99.34	102.28	100.41	1.62	ppb
Barium	137-1	101.36	101.39	103.39	102.05	1.14	ppb
Beryllium	9-1	0.03	0.05	0.04	0.04	16.94	ppb
Bismuth	209-1				87		%
Bismuth	209-2				81		%
Bromine	81-1						cps
Cadmium	108-1	0.19	0.26	0.25	0.23	15.63	ppb
Cadmium	106-1	-1.43	-1.24	-2.10	-1.59		ppb
Cadmium	111-1	-0.02	-0.04	-0.10	-0.05		ppb
Calcium	43-1	187106.45	192311.50	192968.90	190795.62	1.68	ppb
Calcium	44-1	189684.29	189530.08	191423.17	190212.51	0.55	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4.15	4.27	3.88	4.10	4.88	ppb
Cobalt	59-2	2.27	2.34	2.18	2.26	3.72	ppb
Copper	63-2	27.27	27.82	25.61	26.90	4.28	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				94		%
Holmium	165-2				90		%
Indium	115-1				90		%
Indium	115-2				84		%
Iron	54-2	85.84	92.32	84.97	87.71	4.58	ppb
Iron	56-2	86.24	89.39	81.84	85.82	4.42	ppb
Iron	57-2	92.74	93.31	84.25	90.10	5.63	ppb
Krypton	83-1						cps
Lead	206-1	0.42	0.44	0.43	0.43	2.50	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-14	Instrumnet Name :	P8
Client Sample ID :	ME2932	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:14:30	DataFile Name :	048AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.41	0.40	0.37	0.40	5.11	ppb
Lead	208-1	0.41	0.41	0.40	0.41	1.14	ppb
Lithium	6-1				83		%
Magnesium	24-2	1563.73	1623.74	1487.87	1558.45	4.37	ppb
Manganese	55-2	8.02	8.36	7.37	7.92	6.37	ppb
Molybdenum	94-1	19.48	19.26	19.48	19.41	0.65	ppb
Molybdenum	95-1	22.47	22.76	22.79	22.67	0.78	ppb
Molybdenum	96-1	22.11	22.12	22.65	22.29	1.40	ppb
Molybdenum	97-1	22.80	22.90	23.00	22.90	0.44	ppb
Molybdenum	98-1	22.34	22.66	23.05	22.68	1.57	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	24.29	25.76	23.30	24.45	5.05	ppb
Phosphorus	31-2	191.65	200.99	200.46	197.70	2.66	ppb
Potassium	39-2	40954.55	41438.21	39329.67	40574.15	2.72	ppb
Rhodium	103-1				86		%
Rhodium	103-2				83		%
Scandium	45-1				90		%
Scandium	45-2				85		%
Selenium	82-1	1.75	1.46	1.42	1.54	11.71	ppb
Selenium	77-2	0.00	1.51	1.43	0.98	86.70	ppb
Selenium	78-2	-0.07	1.31	-0.08	0.39	205.69	ppb
Silicon	28-1	1172.04	1199.86	1194.02	1188.64	1.23	ppb
Silver	107-1	0.01	0.01	0.01	0.01	5.32	ppb
Silver	109-1	0.01	0.00	0.00	0.00	48.98	ppb
Sodium	23-2	73971.01	76603.28	71375.61	73983.30	3.53	ppb
Strontium	86-1	68100.01	68334.47	69032.35	68488.94	0.71	ppb
Strontium	88-1	69095.69	69259.55	69342.44	69232.56	0.18	ppb
Sulfur	34-1	8778.59	8923.21	8974.23	8892.01	1.14	ppb
Terbium	159-1				94		%
Terbium	159-2				88		%
Thallium	203-1	0.00	0.01	0.00	0.00	438.80	ppb
Thallium	205-1	0.00	0.00	0.00	0.00	114.77	ppb
Tin	118-1	0.28	0.27	0.26	0.27	5.11	ppb
Titanium	47-1	2.47	2.46	2.39	2.44	1.56	ppb
Uranium	238-1	0.49	0.52	0.51	0.50	3.27	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-14	Instrumnet Name :	P8
Client Sample ID :	ME2932	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:14:30	DataFile Name :	048AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	16.49	16.99	16.28	16.59	2.19	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				92		%
Yttrium	89-2				86		%
Zinc	66-2	20.18	20.96	18.99	20.04	4.94	ppb
Zirconium	90-1	0.28	0.27	0.28	0.28	2.60	ppb
Zirconium	91-1	0.27	0.29	0.29	0.29	5.00	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-15	Instrumnet Name :	P8
Client Sample ID :	ME2936	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:17:47	DataFile Name :	049AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	5.99	4.05	6.02	5.35	21.12	ppb
Antimony	121-1	0.02	0.01	0.01	0.01	31.83	ppb
Arsenic	75-2	0.02	0.17	0.09	0.09	80.10	ppb
Barium	135-1	15.39	14.78	14.80	14.99	2.31	ppb
Barium	137-1	15.40	15.34	15.12	15.29	0.98	ppb
Beryllium	9-1	0.03	0.03	0.03	0.03	2.84	ppb
Bismuth	209-1				88		%
Bismuth	209-2				86		%
Bromine	81-1						cps
Cadmium	108-1	0.01	0.02	0.04	0.02	67.00	ppb
Cadmium	106-1	-1.04	-1.38	-0.19	-0.87		ppb
Cadmium	111-1	-0.07	-0.11	-0.02	-0.07		ppb
Calcium	43-1	193832.04	194227.22	198910.10	195656.45	1.44	ppb
Calcium	44-1	192895.38	190843.56	197290.36	193676.43	1.70	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.07	0.02	0.06	0.05	50.47	ppb
Cobalt	59-2	0.03	0.02	0.00	0.02	66.92	ppb
Copper	63-2	-0.08	-0.13	0.01	-0.06		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				94		%
Holmium	165-2				94		%
Indium	115-1				90		%
Indium	115-2				88		%
Iron	54-2	311.34	313.80	305.00	310.05	1.46	ppb
Iron	56-2	308.46	313.01	313.69	311.72	0.91	ppb
Iron	57-2	310.05	303.92	313.24	309.07	1.53	ppb
Krypton	83-1						cps
Lead	206-1	0.11	0.09	0.10	0.10	9.85	ppb

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-15	Instrumnet Name :	P8
Client Sample ID :	ME2936	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:17:47	DataFile Name :	049AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.09	0.10	0.08	0.09	11.47	ppb
Lead	208-1	0.10	0.09	0.09	0.09	7.08	ppb
Lithium	6-1				82		%
Magnesium	24-2	52053.37	52527.20	52946.48	52509.02	0.85	ppb
Manganese	55-2	33.05	32.84	33.43	33.11	0.89	ppb
Molybdenum	94-1	0.18	0.16	0.21	0.18	11.94	ppb
Molybdenum	95-1	0.16	0.17	0.14	0.16	8.85	ppb
Molybdenum	96-1	0.19	0.16	0.16	0.17	9.17	ppb
Molybdenum	97-1	0.19	0.17	0.17	0.17	5.75	ppb
Molybdenum	98-1	0.18	0.17	0.17	0.17	3.78	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.38	0.20	0.27	0.29	32.08	ppb
Phosphorus	31-2	7.83	2.53	-18.77	-2.80		ppb
Potassium	39-2	2671.33	2710.92	2700.37	2694.21	0.76	ppb
Rhodium	103-1				87		%
Rhodium	103-2				88		%
Scandium	45-1				89		%
Scandium	45-2				89		%
Selenium	82-1	0.20	0.30	0.30	0.27	21.97	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.09	-0.08	-0.51	-0.23		ppb
Silicon	28-1	794.51	794.75	817.10	802.12	1.62	ppb
Silver	107-1	0.01	0.01	0.01	0.01	9.06	ppb
Silver	109-1	0.00	0.00	0.00	0.00	37.62	ppb
Sodium	23-2	16904.74	17076.70	17171.66	17051.03	0.79	ppb
Strontium	86-1	390266.64	379040.76	382104.74	383804.05	1.51	ppb
Strontium	88-1	391589.18	383263.40	383401.33	386084.64	1.23	ppb
Sulfur	34-1	162126.17	163306.38	167997.52	164476.69	1.89	ppb
Terbium	159-1				94		%
Terbium	159-2				93		%
Thallium	203-1	0.00	0.00	-0.01	-0.01		ppb
Thallium	205-1	-0.01	-0.01	-0.01	-0.01		ppb
Tin	118-1	-0.17	-0.19	-0.18	-0.18		ppb
Titanium	47-1	0.67	0.65	0.71	0.68	4.23	ppb
Uranium	238-1	0.13	0.13	0.13	0.13	1.51	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-15	Instrumnet Name :	P8
Client Sample ID :	ME2936	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:17:47	DataFile Name :	049AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.06	0.06	0.07	0.06	15.62	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				92		%
Yttrium	89-2				90		%
Zinc	66-2	1.35	1.63	1.47	1.48	9.35	ppb
Zirconium	90-1	0.03	0.02	0.03	0.03	13.01	ppb
Zirconium	91-1	0.02	0.04	0.04	0.03	34.06	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-16	Instrumnet Name :	P8
Client Sample ID :	ME2934	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:21:02	DataFile Name :	050AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	861.77	882.91	839.75	861.47	2.51	ppb
Antimony	121-1	2.98	2.96	2.91	2.95	1.30	ppb
Arsenic	75-2	9.86	10.31	10.54	10.24	3.40	ppb
Barium	135-1	60.84	59.23	59.35	59.80	1.50	ppb
Barium	137-1	61.31	59.65	60.14	60.37	1.41	ppb
Beryllium	9-1	0.04	0.03	0.03	0.03	17.57	ppb
Bismuth	209-1				87		%
Bismuth	209-2				86		%
Bromine	81-1						cps
Cadmium	108-1	0.69	0.77	0.65	0.70	8.06	ppb
Cadmium	106-1	0.37	-1.09	-1.13	-0.62		ppb
Cadmium	111-1	0.06	-0.06	-0.05	-0.02		ppb
Calcium	43-1	120792.86	116741.73	119068.21	118867.60	1.71	ppb
Calcium	44-1	118972.36	116333.64	119154.57	118153.52	1.34	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.64	0.71	0.61	0.66	7.89	ppb
Cobalt	59-2	1.25	1.40	1.28	1.31	6.28	ppb
Copper	63-2	7.37	7.57	7.31	7.41	1.82	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				94		%
Holmium	165-2				93		%
Indium	115-1				90		%
Indium	115-2				87		%
Iron	54-2	67.74	68.94	66.79	67.82	1.58	ppb
Iron	56-2	69.01	69.25	69.96	69.41	0.71	ppb
Iron	57-2	75.92	67.57	68.94	70.81	6.33	ppb
Krypton	83-1						cps
Lead	206-1	0.35	0.34	0.36	0.35	3.79	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-16	Instrumnet Name :	P8
Client Sample ID :	ME2934	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:21:02	DataFile Name :	050AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.36	0.32	0.33	0.34	5.72	ppb
Lead	208-1	0.34	0.33	0.36	0.34	4.31	ppb
Lithium	6-1				81		%
Magnesium	24-2	49.23	48.43	46.89	48.18	2.47	ppb
Manganese	55-2	1.92	1.82	1.74	1.83	5.03	ppb
Molybdenum	94-1	48.52	47.90	47.73	48.05	0.86	ppb
Molybdenum	95-1	58.57	58.26	57.73	58.18	0.73	ppb
Molybdenum	96-1	57.85	56.62	56.81	57.09	1.16	ppb
Molybdenum	97-1	59.11	58.44	58.81	58.78	0.57	ppb
Molybdenum	98-1	58.36	58.11	57.87	58.12	0.42	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	45.97	47.74	46.10	46.60	2.12	ppb
Phosphorus	31-2	213.82	286.77	234.53	245.04	15.34	ppb
Potassium	39-2	42585.24	42759.44	41792.53	42379.07	1.22	ppb
Rhodium	103-1				87		%
Rhodium	103-2				87		%
Scandium	45-1				90		%
Scandium	45-2				87		%
Selenium	82-1	2.00	2.67	1.99	2.22	17.55	ppb
Selenium	77-2	2.83	2.83	5.64	3.77	43.07	ppb
Selenium	78-2	2.48	1.20	3.75	2.48	51.49	ppb
Silicon	28-1	852.20	821.97	835.47	836.54	1.81	ppb
Silver	107-1	0.01	0.01	0.00	0.01	12.98	ppb
Silver	109-1	0.00	0.01	0.00	0.00	33.69	ppb
Sodium	23-2	101581.47	103212.30	101374.12	102055.97	0.99	ppb
Strontium	86-1	58216.92	57387.26	56479.15	57361.11	1.52	ppb
Strontium	88-1	59128.79	57581.15	57198.68	57969.54	1.76	ppb
Sulfur	34-1	14316.55	13440.60	13986.57	13914.57	3.18	ppb
Terbium	159-1				94		%
Terbium	159-2				92		%
Thallium	203-1	0.00	0.00	0.00	0.00		ppb
Thallium	205-1	0.00	0.00	-0.01	0.00		ppb
Tin	118-1	0.38	0.30	0.34	0.34	11.33	ppb
Titanium	47-1	1.33	1.31	1.35	1.33	1.76	ppb
Uranium	238-1	0.03	0.04	0.03	0.03	6.84	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-16	Instrumnet Name :	P8
Client Sample ID :	ME2934	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:21:02	DataFile Name :	050AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	8.82	9.05	8.91	8.93	1.28	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				93		%
Yttrium	89-2				89		%
Zinc	66-2	1.65	1.60	1.90	1.71	9.41	ppb
Zirconium	90-1	0.05	0.05	0.04	0.05	6.03	ppb
Zirconium	91-1	0.07	0.05	0.06	0.06	11.13	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-17	Instrumnet Name :	P8
Client Sample ID :	ME2935	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:24:19	DataFile Name :	051AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	16.05	17.44	15.92	16.47	5.12	ppb
Antimony	121-1	0.02	0.03	0.03	0.02	20.68	ppb
Arsenic	75-2	0.04	0.11	0.13	0.09	47.06	ppb
Barium	135-1	9.85	10.74	10.44	10.34	4.38	ppb
Barium	137-1	9.99	10.62	10.65	10.42	3.57	ppb
Beryllium	9-1	0.03	0.03	0.03	0.03	11.12	ppb
Bismuth	209-1				87		%
Bismuth	209-2				81		%
Bromine	81-1						cps
Cadmium	108-1	0.06	-0.06	0.07	0.02	325.90	ppb
Cadmium	106-1	0.03	0.49	-0.06	0.15	191.95	ppb
Cadmium	111-1	0.01	0.04	0.00	0.02	141.43	ppb
Calcium	43-1	404404.44	419828.72	433393.13	419208.76	3.46	ppb
Calcium	44-1	404952.67	419463.35	424594.99	416337.00	2.45	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.10	0.11	0.08	0.10	16.09	ppb
Cobalt	59-2	0.04	0.04	0.04	0.04	2.61	ppb
Copper	63-2	0.36	0.45	0.39	0.40	11.79	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				96		%
Holmium	165-2				91		%
Indium	115-1				92		%
Indium	115-2				85		%
Iron	54-2	2738.53	2715.97	2735.76	2730.09	0.45	ppb
Iron	56-2	2933.85	2825.73	2840.49	2866.69	2.05	ppb
Iron	57-2	2783.97	2716.04	2725.05	2741.69	1.35	ppb
Krypton	83-1						cps
Lead	206-1	0.20	0.20	0.23	0.21	8.40	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-17	Instrumnet Name :	P8
Client Sample ID :	ME2935	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:24:19	DataFile Name :	051AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.17	0.19	0.19	0.18	7.67	ppb
Lead	208-1	0.19	0.20	0.20	0.19	3.92	ppb
Lithium	6-1				84		%
Magnesium	24-2	131261.38	130346.05	130483.97	130697.13	0.38	ppb
Manganese	55-2	49.33	48.34	49.69	49.12	1.42	ppb
Molybdenum	94-1	2.08	2.33	2.22	2.21	5.68	ppb
Molybdenum	95-1	2.40	2.64	2.56	2.53	4.77	ppb
Molybdenum	96-1	2.48	2.66	2.58	2.57	3.42	ppb
Molybdenum	97-1	2.54	2.50	2.64	2.56	2.85	ppb
Molybdenum	98-1	2.53	2.59	2.64	2.59	2.02	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.48	0.69	0.60	0.59	17.87	ppb
Phosphorus	31-2	-10.66	-6.92	-8.74	-8.77		ppb
Potassium	39-2	4126.05	4087.72	4117.35	4110.38	0.49	ppb
Rhodium	103-1				87		%
Rhodium	103-2				85		%
Scandium	45-1				93		%
Scandium	45-2				88		%
Selenium	82-1	0.55	0.50	0.73	0.59	20.13	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.51	-0.08	0.79	0.07	978.50	ppb
Silicon	28-1	1019.32	1055.53	1073.65	1049.50	2.64	ppb
Silver	107-1	0.02	0.02	0.02	0.02	10.85	ppb
Silver	109-1	0.02	0.01	0.02	0.01	27.80	ppb
Sodium	23-2	33857.50	33502.56	33998.30	33786.12	0.76	ppb
Strontium	86-1	259658.86	273331.18	269887.98	267626.01	2.66	ppb
Strontium	88-1	259309.14	275406.28	273252.41	269322.61	3.24	ppb
Sulfur	34-1	431080.23	446249.66	462799.86	446709.92	3.55	ppb
Terbium	159-1				95		%
Terbium	159-2				90		%
Thallium	203-1	-0.01	0.00	0.00	0.00		ppb
Thallium	205-1	-0.01	-0.01	0.00	0.00		ppb
Tin	118-1	-0.30	-0.28	-0.29	-0.29		ppb
Titanium	47-1	1.09	1.11	1.06	1.09	2.15	ppb
Uranium	238-1	0.09	0.09	0.09	0.09	2.56	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-17	Instrumnet Name :	P8
Client Sample ID :	ME2935	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:24:19	DataFile Name :	051AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.17	0.14	0.17	0.16	11.62	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				94		%
Yttrium	89-2				88		%
Zinc	66-2	0.90	1.21	0.96	1.02	16.40	ppb
Zirconium	90-1	0.04	0.04	0.04	0.04	10.12	ppb
Zirconium	91-1	0.03	0.04	0.05	0.04	24.88	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-18	Instrumnet Name :	P8
Client Sample ID :	ME2950	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:27:34	DataFile Name :	052AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	29.93	32.14	31.73	31.27	3.77	ppb
Antimony	121-1	0.04	0.04	0.03	0.04	12.83	ppb
Arsenic	75-2	0.46	0.65	0.30	0.47	37.63	ppb
Barium	135-1	21.36	20.72	20.79	20.96	1.67	ppb
Barium	137-1	21.54	21.26	20.99	21.26	1.29	ppb
Beryllium	9-1	0.04	0.03	0.04	0.04	11.21	ppb
Bismuth	209-1				85		%
Bismuth	209-2				83		%
Bromine	81-1						cps
Cadmium	108-1	0.08	0.09	0.00	0.06	79.96	ppb
Cadmium	106-1	-0.04	-0.14	-0.70	-0.29		ppb
Cadmium	111-1	-0.01	-0.01	-0.06	-0.03		ppb
Calcium	43-1	336616.80	326188.31	327109.30	329971.47	1.75	ppb
Calcium	44-1	334069.76	324528.87	325788.89	328129.17	1.58	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.06	0.06	0.09	0.07	27.62	ppb
Cobalt	59-2	0.07	0.05	0.09	0.07	23.75	ppb
Copper	63-2	-0.09	-0.13	0.00	-0.07		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				92		%
Holmium	165-2				90		%
Indium	115-1				87		%
Indium	115-2				84		%
Iron	54-2	221.20	222.98	223.42	222.53	0.53	ppb
Iron	56-2	219.79	221.96	221.95	221.23	0.56	ppb
Iron	57-2	235.68	221.83	232.25	229.92	3.14	ppb
Krypton	83-1						cps
Lead	206-1	0.09	0.07	0.08	0.08	16.73	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-18	Instrumnet Name :	P8
Client Sample ID :	ME2950	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:27:34	DataFile Name :	052AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.09	0.06	0.06	0.07	24.61	ppb
Lead	208-1	0.08	0.07	0.07	0.07	8.96	ppb
Lithium	6-1				79		%
Magnesium	24-2	97511.43	96798.63	97108.35	97139.47	0.37	ppb
Manganese	55-2	38.82	38.40	38.84	38.69	0.64	ppb
Molybdenum	94-1	0.61	0.57	0.58	0.59	3.19	ppb
Molybdenum	95-1	0.38	0.34	0.34	0.35	6.03	ppb
Molybdenum	96-1	0.39	0.37	0.34	0.37	6.89	ppb
Molybdenum	97-1	0.32	0.33	0.35	0.33	3.68	ppb
Molybdenum	98-1	0.35	0.34	0.34	0.35	1.26	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.86	0.92	0.72	0.84	12.13	ppb
Phosphorus	31-2	-8.38	-4.23	-4.29	-5.63		ppb
Potassium	39-2	3224.66	3218.65	3264.76	3236.02	0.77	ppb
Rhodium	103-1				84		%
Rhodium	103-2				84		%
Scandium	45-1				87		%
Scandium	45-2				86		%
Selenium	82-1	0.16	0.73	0.57	0.49	59.76	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.07	0.37	-0.51	-0.07		ppb
Silicon	28-1	971.08	949.03	953.96	958.02	1.21	ppb
Silver	107-1	0.01	0.01	0.01	0.01	31.85	ppb
Silver	109-1	0.00	0.00	0.00	0.00	31.09	ppb
Sodium	23-2	37576.04	36915.82	37156.26	37216.04	0.90	ppb
Strontium	86-1	309292.08	296735.50	299584.77	301870.78	2.18	ppb
Strontium	88-1	312138.52	303245.28	301071.91	305485.24	1.92	ppb
Sulfur	34-1	316259.11	309493.53	310174.26	311975.63	1.19	ppb
Terbium	159-1				92		%
Terbium	159-2				88		%
Thallium	203-1	0.00	0.00	0.00	0.00	478.64	ppb
Thallium	205-1	0.00	-0.01	0.00	0.00		ppb
Tin	118-1	-0.25	-0.26	-0.25	-0.25		ppb
Titanium	47-1	1.28	1.21	1.25	1.25	3.04	ppb
Uranium	238-1	0.29	0.27	0.27	0.27	4.07	ppb

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-18	Instrumnet Name :	P8
Client Sample ID :	ME2950	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:27:34	DataFile Name :	052AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.11	0.10	0.14	0.12	22.44	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				90		%
Yttrium	89-2				87		%
Zinc	66-2	1.29	1.03	1.08	1.13	11.83	ppb
Zirconium	90-1	0.17	0.15	0.16	0.16	4.43	ppb
Zirconium	91-1	0.14	0.14	0.17	0.15	13.82	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-19	Instrumnet Name :	P8
Client Sample ID :	ME2951	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:30:54	DataFile Name :	053AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	5.10	5.41	5.32	5.28	3.03	ppb
Antimony	121-1	0.05	0.04	0.04	0.04	17.76	ppb
Arsenic	75-2	0.49	0.31	0.15	0.32	52.28	ppb
Barium	135-1	20.43	20.87	20.78	20.69	1.12	ppb
Barium	137-1	20.68	20.64	20.93	20.75	0.78	ppb
Beryllium	9-1	0.04	0.03	0.03	0.03	10.13	ppb
Bismuth	209-1				85		%
Bismuth	209-2				81		%
Bromine	81-1						cps
Cadmium	108-1	0.03	0.09	0.15	0.09	66.95	ppb
Cadmium	106-1	0.40	-0.96	-0.17	-0.24		ppb
Cadmium	111-1	0.04	-0.08	-0.01	-0.02		ppb
Calcium	43-1	327538.13	326793.89	318666.66	324332.89	1.52	ppb
Calcium	44-1	323653.11	324848.52	314050.36	320850.66	1.84	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.04	0.03	0.05	0.04	21.33	ppb
Cobalt	59-2	0.05	0.07	0.06	0.06	21.00	ppb
Copper	63-2	0.43	0.50	0.56	0.50	12.54	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				93		%
Holmium	165-2				89		%
Indium	115-1				88		%
Indium	115-2				83		%
Iron	54-2	213.85	216.97	207.15	212.66	2.36	ppb
Iron	56-2	213.95	213.12	212.64	213.24	0.31	ppb
Iron	57-2	221.02	219.51	219.96	220.16	0.35	ppb
Krypton	83-1						cps
Lead	206-1	0.05	0.04	0.05	0.05	8.06	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-19	Instrumnet Name :	P8
Client Sample ID :	ME2951	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:30:54	DataFile Name :	053AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.03	0.05	0.04	0.04	16.23	ppb
Lead	208-1	0.04	0.05	0.05	0.05	3.65	ppb
Lithium	6-1				78		%
Magnesium	24-2	95978.78	97637.70	96239.84	96618.77	0.92	ppb
Manganese	55-2	33.32	33.92	34.29	33.84	1.44	ppb
Molybdenum	94-1	0.56	0.51	0.54	0.54	4.96	ppb
Molybdenum	95-1	0.31	0.32	0.33	0.32	2.53	ppb
Molybdenum	96-1	0.34	0.36	0.32	0.34	6.13	ppb
Molybdenum	97-1	0.33	0.30	0.27	0.30	10.38	ppb
Molybdenum	98-1	0.33	0.32	0.32	0.33	1.83	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	2.04	2.10	2.10	2.08	1.76	ppb
Phosphorus	31-2	8.44	-14.00	-2.06	-2.54		ppb
Potassium	39-2	3227.32	3205.61	3202.69	3211.87	0.42	ppb
Rhodium	103-1				84		%
Rhodium	103-2				83		%
Scandium	45-1				87		%
Scandium	45-2				85		%
Selenium	82-1	0.50	0.88	0.78	0.72	27.05	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.06	0.83	0.81	0.53	97.09	ppb
Silicon	28-1	942.36	932.03	905.43	926.60	2.06	ppb
Silver	107-1	0.00	0.01	0.01	0.01	42.26	ppb
Silver	109-1	0.00	0.00	0.00	0.00	270.80	ppb
Sodium	23-2	37179.85	37348.29	36762.50	37096.88	0.81	ppb
Strontium	86-1	294223.83	300351.88	295896.35	296824.02	1.07	ppb
Strontium	88-1	297820.08	301445.05	301636.86	300300.67	0.72	ppb
Sulfur	34-1	305037.40	305170.26	292958.98	301055.55	2.33	ppb
Terbium	159-1				92		%
Terbium	159-2				88		%
Thallium	203-1	-0.01	0.00	-0.01	-0.01		ppb
Thallium	205-1	0.00	-0.01	-0.01	-0.01		ppb
Tin	118-1	-0.27	-0.29	-0.28	-0.28		ppb
Titanium	47-1	0.83	0.87	0.75	0.82	7.43	ppb
Uranium	238-1	0.26	0.26	0.27	0.27	1.59	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-19	Instrumnet Name :	P8
Client Sample ID :	ME2951	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:30:54	DataFile Name :	053AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.14	0.12	0.09	0.12	19.79	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				90		%
Yttrium	89-2				86		%
Zinc	66-2	0.11	0.27	0.16	0.18	46.75	ppb
Zirconium	90-1	0.15	0.14	0.14	0.15	3.96	ppb
Zirconium	91-1	0.16	0.14	0.14	0.14	6.32	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-20	Instrumnet Name :	P8
Client Sample ID :	ME2953	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:34:11	DataFile Name :	054AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	140.04	144.77	141.40	142.07	1.71	ppb
Antimony	121-1	0.32	0.34	0.32	0.33	3.67	ppb
Arsenic	75-2	3.06	2.70	3.06	2.94	6.96	ppb
Barium	135-1	63.20	64.66	66.16	64.67	2.29	ppb
Barium	137-1	64.33	64.67	66.97	65.32	2.20	ppb
Beryllium	9-1	0.03	0.02	0.02	0.02	23.80	ppb
Bismuth	209-1				86		%
Bismuth	209-2				82		%
Bromine	81-1						cps
Cadmium	108-1	0.87	0.93	1.05	0.95	9.62	ppb
Cadmium	106-1	-0.19	0.08	-0.83	-0.31		ppb
Cadmium	111-1	0.04	0.05	-0.02	0.02	148.90	ppb
Calcium	43-1	101738.72	104139.15	102658.46	102845.44	1.18	ppb
Calcium	44-1	101232.91	102011.43	102933.05	102059.13	0.83	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1.97	1.97	2.05	2.00	2.29	ppb
Cobalt	59-2	0.12	0.15	0.13	0.13	10.50	ppb
Copper	63-2	4.55	4.74	4.62	4.64	2.04	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				93		%
Holmium	165-2				90		%
Indium	115-1				87		%
Indium	115-2				82		%
Iron	54-2	73.68	74.89	72.81	73.79	1.41	ppb
Iron	56-2	73.14	73.56	75.80	74.17	1.92	ppb
Iron	57-2	79.82	75.01	75.76	76.87	3.37	ppb
Krypton	83-1						cps
Lead	206-1	0.53	0.57	0.57	0.56	4.32	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-20	Instrumnet Name :	P8
Client Sample ID :	ME2953	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:34:11	DataFile Name :	054AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.53	0.52	0.53	0.53	0.50	ppb
Lead	208-1	0.53	0.54	0.55	0.54	1.65	ppb
Lithium	6-1				78		%
Magnesium	24-2	1179.61	1176.96	1190.39	1182.32	0.60	ppb
Manganese	55-2	3.63	3.61	3.46	3.57	2.69	ppb
Molybdenum	94-1	87.53	88.64	90.34	88.84	1.59	ppb
Molybdenum	95-1	105.33	107.98	109.53	107.61	1.97	ppb
Molybdenum	96-1	103.82	107.15	107.28	106.08	1.85	ppb
Molybdenum	97-1	107.92	110.10	110.29	109.44	1.21	ppb
Molybdenum	98-1	105.62	108.41	109.42	107.82	1.83	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	8.92	9.32	9.80	9.35	4.71	ppb
Phosphorus	31-2	46.76	16.79	42.10	35.22	45.79	ppb
Potassium	39-2	80865.77	79738.37	79150.34	79918.16	1.09	ppb
Rhodium	103-1				84		%
Rhodium	103-2				82		%
Scandium	45-1				85		%
Scandium	45-2				82		%
Selenium	82-1	2.84	3.80	5.13	3.93	29.36	ppb
Selenium	77-2	6.02	0.00	2.95	2.99	100.64	ppb
Selenium	78-2	2.67	4.46	4.39	3.84	26.40	ppb
Silicon	28-1	810.32	819.57	833.51	821.14	1.42	ppb
Silver	107-1	0.05	0.05	0.06	0.05	7.17	ppb
Silver	109-1	0.06	0.05	0.06	0.06	6.53	ppb
Sodium	23-2	111139.22	109777.65	112128.98	111015.29	1.06	ppb
Strontium	86-1	12820.42	13177.01	13047.29	13014.91	1.39	ppb
Strontium	88-1	12932.44	13110.61	13338.46	13127.17	1.55	ppb
Sulfur	34-1	65213.62	67468.21	65985.93	66222.59	1.73	ppb
Terbium	159-1				92		%
Terbium	159-2				87		%
Thallium	203-1	0.01	0.01	0.00	0.00	86.54	ppb
Thallium	205-1	0.00	0.00	0.00	0.00	60.05	ppb
Tin	118-1	-0.23	-0.24	-0.24	-0.24		ppb
Titanium	47-1	0.87	0.93	0.97	0.92	5.51	ppb
Uranium	238-1	0.36	0.38	0.38	0.38	3.38	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-20	Instrumnet Name :	P8
Client Sample ID :	ME2953	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:34:11	DataFile Name :	054AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	8.89	8.77	8.98	8.88	1.17	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				90		%
Yttrium	89-2				84		%
Zinc	66-2	1.19	1.35	1.42	1.32	8.63	ppb
Zirconium	90-1	0.03	0.03	0.03	0.03	13.66	ppb
Zirconium	91-1	0.03	0.04	0.03	0.03	28.24	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-21	Instrumnet Name :	P8
Client Sample ID :	ME2954	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:37:27	DataFile Name :	055AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	81.55	85.28	83.81	83.55	2.24	ppb
Antimony	121-1	0.34	0.36	0.33	0.34	5.96	ppb
Arsenic	75-2	2.71	3.21	2.69	2.87	10.20	ppb
Barium	135-1	55.68	54.93	54.49	55.03	1.10	ppb
Barium	137-1	56.25	55.29	55.63	55.72	0.88	ppb
Beryllium	9-1	0.01	0.02	0.01	0.01	25.32	ppb
Bismuth	209-1				85		%
Bismuth	209-2				82		%
Bromine	81-1						cps
Cadmium	108-1	0.82	1.06	0.83	0.90	15.10	ppb
Cadmium	106-1	-0.48	-2.24	-1.38	-1.37		ppb
Cadmium	111-1	0.01	-0.12	-0.05	-0.06		ppb
Calcium	43-1	95149.14	92614.14	89838.90	92534.06	2.87	ppb
Calcium	44-1	93845.31	91058.90	88929.97	91278.06	2.70	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.07	2.05	2.00	2.04	1.80	ppb
Cobalt	59-2	0.11	0.13	0.11	0.12	7.90	ppb
Copper	63-2	4.32	4.36	4.22	4.30	1.71	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				91		%
Holmium	165-2				91		%
Indium	115-1				87		%
Indium	115-2				83		%
Iron	54-2	30.37	31.56	30.66	30.86	2.02	ppb
Iron	56-2	28.61	29.32	29.25	29.06	1.36	ppb
Iron	57-2	31.82	31.79	32.77	32.13	1.72	ppb
Krypton	83-1						cps
Lead	206-1	0.30	0.28	0.26	0.28	7.32	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-21	Instrumnet Name :	P8
Client Sample ID :	ME2954	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:37:27	DataFile Name :	055AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.25	0.26	0.23	0.25	5.54	ppb
Lead	208-1	0.27	0.26	0.25	0.26	4.56	ppb
Lithium	6-1				77		%
Magnesium	24-2	9455.38	9499.19	9363.19	9439.25	0.74	ppb
Manganese	55-2	3.20	3.06	3.05	3.11	2.75	ppb
Molybdenum	94-1	92.59	92.19	92.26	92.35	0.23	ppb
Molybdenum	95-1	112.83	110.50	111.44	111.59	1.05	ppb
Molybdenum	96-1	110.46	109.07	110.25	109.93	0.68	ppb
Molybdenum	97-1	114.78	113.03	113.55	113.79	0.79	ppb
Molybdenum	98-1	112.51	111.75	112.04	112.10	0.34	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	8.82	8.95	9.01	8.93	1.11	ppb
Phosphorus	31-2	49.18	33.33	9.34	30.62	65.50	ppb
Potassium	39-2	80203.14	80646.86	79022.68	79957.56	1.05	ppb
Rhodium	103-1				83		%
Rhodium	103-2				83		%
Scandium	45-1				83		%
Scandium	45-2				83		%
Selenium	82-1	3.97	4.11	4.59	4.22	7.64	ppb
Selenium	77-2	1.46	1.48	4.43	2.46	69.48	ppb
Selenium	78-2	3.92	3.52	2.61	3.35	19.93	ppb
Silicon	28-1	822.03	819.18	810.07	817.09	0.76	ppb
Silver	107-1	0.06	0.05	0.06	0.06	12.17	ppb
Silver	109-1	0.07	0.06	0.06	0.06	7.41	ppb
Sodium	23-2	112560.38	113406.09	111488.07	112484.85	0.85	ppb
Strontium	86-1	13241.96	13031.69	13047.36	13107.00	0.89	ppb
Strontium	88-1	13220.76	12874.04	13125.69	13073.50	1.37	ppb
Sulfur	34-1	71968.83	70054.13	68889.79	70304.25	2.21	ppb
Terbium	159-1				91		%
Terbium	159-2				89		%
Thallium	203-1	0.01	0.01	0.02	0.02	15.88	ppb
Thallium	205-1	0.02	0.02	0.02	0.02	7.24	ppb
Tin	118-1	-0.17	-0.21	-0.22	-0.20		ppb
Titanium	47-1	0.78	0.65	0.66	0.70	10.16	ppb
Uranium	238-1	0.51	0.50	0.49	0.50	1.53	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-21	Instrumnet Name :	P8
Client Sample ID :	ME2954	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:37:27	DataFile Name :	055AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	7.58	7.40	7.23	7.40	2.36	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				88		%
Yttrium	89-2				85		%
Zinc	66-2	0.39	0.35	0.39	0.38	6.18	ppb
Zirconium	90-1	0.02	0.02	0.01	0.02	24.58	ppb
Zirconium	91-1	0.02	0.03	0.02	0.02	32.13	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-01	Instrumnet Name :	P8
Client Sample ID :	ME2946	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:40:40	DataFile Name :	056AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	12917.44	12949.33	13148.99	13005.25	0.96	ppb
Antimony	121-1	1.47	1.51	1.49	1.49	1.15	ppb
Arsenic	75-2	17.90	17.55	18.22	17.89	1.88	ppb
Barium	135-1	150.65	153.05	151.86	151.85	0.79	ppb
Barium	137-1	151.23	153.67	153.38	152.76	0.87	ppb
Beryllium	9-1	1.19	1.16	1.20	1.18	1.94	ppb
Bismuth	209-1				89		%
Bismuth	209-2				86		%
Bromine	81-1						cps
Cadmium	108-1	4.46	4.64	4.70	4.60	2.69	ppb
Cadmium	106-1	5.26	4.54	5.12	4.97	7.61	ppb
Cadmium	111-1	3.50	3.53	3.53	3.52	0.39	ppb
Calcium	43-1	119727.42	120005.24	121925.24	120552.63	0.99	ppb
Calcium	44-1	119042.19	119093.57	121529.47	119888.41	1.19	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	417.98	416.76	422.40	419.05	0.71	ppb
Cobalt	59-2	17.16	17.26	17.77	17.40	1.88	ppb
Copper	63-2	93.18	92.68	94.58	93.48	1.06	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				94		%
Holmium	165-2				92		%
Indium	115-1				89		%
Indium	115-2				86		%
Iron	54-2	203660.09	205528.00	206607.57	205265.22	0.73	ppb
Iron	56-2	204114.06	203022.31	205549.95	204228.77	0.62	ppb
Iron	57-2	203217.89	204061.00	208768.12	205349.00	1.46	ppb
Krypton	83-1						cps
Lead	206-1	593.00	610.77	621.57	608.45	2.37	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-01	Instrumnet Name :	P8
Client Sample ID :	ME2946	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:40:40	DataFile Name :	056AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	549.64	566.63	577.92	564.73	2.52	ppb
Lead	208-1	564.59	579.38	586.64	576.87	1.95	ppb
Lithium	6-1				79		%
Magnesium	24-2	32776.86	32793.60	33196.20	32922.22	0.72	ppb
Manganese	55-2	8571.14	8507.60	8676.39	8585.04	0.99	ppb
Molybdenum	94-1	32.90	32.04	33.32	32.76	1.99	ppb
Molybdenum	95-1	12.84	12.60	12.85	12.76	1.12	ppb
Molybdenum	96-1	15.64	15.45	15.61	15.57	0.66	ppb
Molybdenum	97-1	12.65	12.84	12.81	12.77	0.79	ppb
Molybdenum	98-1	12.54	12.70	12.73	12.66	0.79	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	205.59	203.88	207.14	205.53	0.79	ppb
Phosphorus	31-2	1065.87	1043.83	1166.45	1092.05	5.99	ppb
Potassium	39-2	1532.96	1541.77	1577.70	1550.81	1.53	ppb
Rhodium	103-1				86		%
Rhodium	103-2				86		%
Scandium	45-1				88		%
Scandium	45-2				87		%
Selenium	82-1	1.01	0.37	0.83	0.74	44.87	ppb
Selenium	77-2	19.51	19.47	23.50	20.83	11.11	ppb
Selenium	78-2	3.28	4.53	5.34	4.38	23.65	ppb
Silicon	28-1	1176.34	1149.63	1163.75	1163.24	1.15	ppb
Silver	107-1	1.83	1.86	1.85	1.85	0.72	ppb
Silver	109-1	1.86	1.91	1.88	1.88	1.38	ppb
Sodium	23-2	526.23	524.89	534.51	528.54	0.99	ppb
Strontium	86-1	3212.33	3204.37	3242.80	3219.83	0.63	ppb
Strontium	88-1	3393.21	3403.90	3433.25	3410.12	0.61	ppb
Sulfur	34-1	2751.26	2737.31	2930.08	2806.22	3.83	ppb
Terbium	159-1				93		%
Terbium	159-2				89		%
Thallium	203-1	0.61	0.67	0.71	0.66	7.58	ppb
Thallium	205-1	0.62	0.67	0.72	0.67	7.32	ppb
Tin	118-1	6.96	6.98	7.00	6.98	0.28	ppb
Titanium	47-1	428.67	432.97	447.16	436.26	2.22	ppb
Uranium	238-1	1.72	1.75	1.74	1.74	0.91	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-01	Instrumnet Name :	P8
Client Sample ID :	ME2946	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:40:40	DataFile Name :	056AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	78.73	79.40	79.81	79.31	0.69	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				92		%
Yttrium	89-2				91		%
Zinc	66-2	1408.22	1392.97	1410.17	1403.79	0.67	ppb
Zirconium	90-1	12.07	11.98	12.20	12.08	0.92	ppb
Zirconium	91-1	12.18	12.09	12.35	12.21	1.06	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02	Instrumnet Name :	P8
Client Sample ID :	ME2947	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:43:54	DataFile Name :	057AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	12630.77	13204.73	12221.47	12685.66	3.89	ppb
Antimony	121-1	0.47	0.48	0.48	0.48	0.93	ppb
Arsenic	75-2	14.02	14.91	12.98	13.97	6.90	ppb
Barium	135-1	132.60	133.56	127.73	131.29	2.38	ppb
Barium	137-1	132.81	134.51	130.02	132.45	1.71	ppb
Beryllium	9-1	0.93	0.96	0.93	0.94	1.93	ppb
Bismuth	209-1				90		%
Bismuth	209-2				89		%
Bromine	81-1						cps
Cadmium	108-1	1.05	1.10	0.99	1.05	5.37	ppb
Cadmium	106-1	0.78	1.15	0.97	0.97	19.48	ppb
Cadmium	111-1	0.66	0.70	0.61	0.66	6.54	ppb
Calcium	43-1	154533.79	159317.04	150392.41	154747.75	2.89	ppb
Calcium	44-1	157245.20	159218.93	153615.03	156693.05	1.81	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	58.45	61.13	56.66	58.75	3.83	ppb
Cobalt	59-2	17.52	18.40	17.25	17.72	3.39	ppb
Copper	63-2	46.48	48.16	43.88	46.17	4.67	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				96		%
Holmium	165-2				94		%
Indium	115-1				92		%
Indium	115-2				90		%
Iron	54-2	48929.92	50772.12	46987.79	48896.61	3.87	ppb
Iron	56-2	49092.78	50608.82	46739.76	48813.79	3.99	ppb
Iron	57-2	50249.33	51570.00	46680.73	49500.02	5.11	ppb
Krypton	83-1						cps
Lead	206-1	57.81	58.07	57.70	57.86	0.33	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02	Instrumnet Name :	P8
Client Sample ID :	ME2947	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:43:54	DataFile Name :	057AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	53.77	54.07	53.21	53.69	0.81	ppb
Lead	208-1	55.08	55.41	54.73	55.07	0.62	ppb
Lithium	6-1				84		%
Magnesium	24-2	24021.11	25503.01	23289.00	24271.04	4.65	ppb
Manganese	55-2	1289.03	1337.41	1226.07	1284.17	4.35	ppb
Molybdenum	94-1	14.08	14.51	14.18	14.26	1.56	ppb
Molybdenum	95-1	8.54	8.77	8.36	8.56	2.43	ppb
Molybdenum	96-1	9.37	9.62	9.17	9.39	2.35	ppb
Molybdenum	97-1	8.71	8.80	8.72	8.74	0.58	ppb
Molybdenum	98-1	8.50	8.80	8.63	8.64	1.71	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	54.15	57.41	52.39	54.65	4.67	ppb
Phosphorus	31-2	922.04	915.66	865.68	901.13	3.42	ppb
Potassium	39-2	1635.90	1676.24	1558.18	1623.44	3.70	ppb
Rhodium	103-1				89		%
Rhodium	103-2				92		%
Scandium	45-1				92		%
Scandium	45-2				93		%
Selenium	82-1	1.19	1.51	1.41	1.37	12.17	ppb
Selenium	77-2	32.72	34.18	18.36	28.42	30.76	ppb
Selenium	78-2	8.19	6.10	5.04	6.44	24.89	ppb
Silicon	28-1	477.66	491.93	473.31	480.97	2.03	ppb
Silver	107-1	0.31	0.33	0.30	0.31	5.97	ppb
Silver	109-1	0.31	0.33	0.32	0.32	3.08	ppb
Sodium	23-2	514.32	545.14	490.81	516.76	5.27	ppb
Strontium	86-1	4617.45	4766.92	4655.28	4679.88	1.66	ppb
Strontium	88-1	4902.45	5011.06	4930.89	4948.13	1.14	ppb
Sulfur	34-1	991.02	1080.84	891.84	987.90	9.57	ppb
Terbium	159-1				95		%
Terbium	159-2				93		%
Thallium	203-1	0.53	0.60	0.61	0.58	7.18	ppb
Thallium	205-1	0.53	0.60	0.62	0.59	8.28	ppb
Tin	118-1	0.99	1.06	1.00	1.02	3.63	ppb
Titanium	47-1	181.79	184.27	178.45	181.50	1.61	ppb
Uranium	238-1	2.02	2.05	1.99	2.02	1.34	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02	Instrumnet Name :	P8
Client Sample ID :	ME2947	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:43:54	DataFile Name :	057AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	38.58	40.78	37.36	38.91	4.45	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				98		%
Yttrium	89-2				97		%
Zinc	66-2	215.23	222.28	204.82	214.11	4.10	ppb
Zirconium	90-1	3.83	3.98	3.86	3.89	2.03	ppb
Zirconium	91-1	3.85	3.83	3.83	3.84	0.31	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-03	Instrumnet Name :	P8
Client Sample ID :	ME2947D	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:47:08	DataFile Name :	058AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	13488.11	13248.03	13499.22	13411.79	1.06	ppb
Antimony	121-1	0.47	0.50	0.46	0.48	3.66	ppb
Arsenic	75-2	14.32	13.62	14.25	14.06	2.74	ppb
Barium	135-1	127.67	129.30	130.95	129.31	1.27	ppb
Barium	137-1	130.36	132.45	131.29	131.37	0.80	ppb
Beryllium	9-1	0.96	0.95	0.96	0.95	0.85	ppb
Bismuth	209-1				90		%
Bismuth	209-2				85		%
Bromine	81-1						cps
Cadmium	108-1	1.07	0.94	0.94	0.98	7.36	ppb
Cadmium	106-1	0.97	1.22	0.57	0.92	35.52	ppb
Cadmium	111-1	0.62	0.65	0.61	0.63	3.26	ppb
Calcium	43-1	153103.08	156867.38	154806.06	154925.51	1.22	ppb
Calcium	44-1	154895.08	156167.70	156084.80	155715.86	0.46	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	63.40	61.78	62.99	62.72	1.35	ppb
Cobalt	59-2	19.12	18.33	18.89	18.78	2.15	ppb
Copper	63-2	49.75	48.32	50.08	49.38	1.90	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				96		%
Holmium	165-2				91		%
Indium	115-1				91		%
Indium	115-2				86		%
Iron	54-2	52404.66	51008.71	52198.49	51870.62	1.45	ppb
Iron	56-2	52386.84	50892.64	52030.96	51770.15	1.51	ppb
Iron	57-2	53574.59	52675.97	54096.78	53449.12	1.34	ppb
Krypton	83-1						cps
Lead	206-1	56.22	58.29	57.39	57.30	1.82	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-03	Instrumnet Name :	P8
Client Sample ID :	ME2947D	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:47:08	DataFile Name :	058AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	52.26	53.82	53.26	53.11	1.49	ppb
Lead	208-1	53.64	55.41	54.86	54.64	1.66	ppb
Lithium	6-1				83		%
Magnesium	24-2	26016.13	25354.74	26048.40	25806.42	1.52	ppb
Manganese	55-2	1374.52	1330.40	1364.51	1356.48	1.71	ppb
Molybdenum	94-1	14.31	14.16	14.25	14.24	0.56	ppb
Molybdenum	95-1	8.62	8.67	8.59	8.63	0.52	ppb
Molybdenum	96-1	9.22	9.60	9.33	9.38	2.08	ppb
Molybdenum	97-1	8.59	8.70	8.49	8.59	1.23	ppb
Molybdenum	98-1	8.54	8.50	8.67	8.57	1.05	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	58.53	58.47	59.14	58.71	0.64	ppb
Phosphorus	31-2	932.27	965.11	936.15	944.51	1.90	ppb
Potassium	39-2	1717.75	1686.26	1718.52	1707.51	1.08	ppb
Rhodium	103-1				89		%
Rhodium	103-2				87		%
Scandium	45-1				93		%
Scandium	45-2				89		%
Selenium	82-1	0.58	0.41	0.45	0.48	18.09	ppb
Selenium	77-2	26.03	34.23	45.35	35.20	27.55	ppb
Selenium	78-2	4.87	6.52	3.64	5.01	28.83	ppb
Silicon	28-1	477.40	485.05	481.00	481.15	0.80	ppb
Silver	107-1	0.29	0.33	0.32	0.31	5.36	ppb
Silver	109-1	0.32	0.30	0.34	0.32	7.03	ppb
Sodium	23-2	541.82	535.91	551.25	542.99	1.42	ppb
Strontium	86-1	4692.35	4753.13	4753.31	4732.93	0.74	ppb
Strontium	88-1	4923.13	5053.44	5020.74	4999.10	1.36	ppb
Sulfur	34-1	946.65	1068.24	1066.99	1027.29	6.80	ppb
Terbium	159-1				95		%
Terbium	159-2				90		%
Thallium	203-1	0.55	0.52	0.57	0.54	4.69	ppb
Thallium	205-1	0.51	0.56	0.56	0.54	5.73	ppb
Tin	118-1	0.97	1.07	1.03	1.02	4.60	ppb
Titanium	47-1	178.40	181.03	181.64	180.36	0.95	ppb
Uranium	238-1	1.96	2.04	1.99	2.00	1.94	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-03	Instrumnet Name :	P8
Client Sample ID :	ME2947D	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:47:08	DataFile Name :	058AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	40.98	40.35	41.03	40.79	0.94	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				97		%
Yttrium	89-2				92		%
Zinc	66-2	227.74	220.24	229.72	225.90	2.21	ppb
Zirconium	90-1	3.85	3.93	3.87	3.88	1.16	ppb
Zirconium	91-1	3.80	3.99	3.92	3.90	2.50	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02LX5	Instrumnet Name :	P8
Client Sample ID :	ME2947L	Dilution Factor :	5
Date & Time Acquired :	2025-01-28 15:50:24	DataFile Name :	059AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2754.52	2718.70	2744.07	2739.10	0.67	ppb
Antimony	121-1	0.09	0.07	0.09	0.08	13.83	ppb
Arsenic	75-2	3.32	3.04	2.83	3.06	7.99	ppb
Barium	135-1	26.00	26.62	26.54	26.39	1.28	ppb
Barium	137-1	26.28	26.97	26.44	26.56	1.36	ppb
Beryllium	9-1	0.22	0.21	0.19	0.21	7.34	ppb
Bismuth	209-1				92		%
Bismuth	209-2				89		%
Bromine	81-1						cps
Cadmium	108-1	0.17	0.26	0.31	0.25	27.92	ppb
Cadmium	106-1	-1.05	-1.10	-1.52	-1.22		ppb
Cadmium	111-1	0.03	0.03	-0.01	0.02	131.61	ppb
Calcium	43-1	31235.54	31273.79	31263.99	31257.77	0.06	ppb
Calcium	44-1	32409.76	32230.40	32335.11	32325.09	0.28	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	12.32	12.63	13.00	12.65	2.68	ppb
Cobalt	59-2	3.92	3.83	3.93	3.89	1.48	ppb
Copper	63-2	10.15	10.12	10.41	10.23	1.57	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				94		%
Holmium	165-2				91		%
Indium	115-1				91		%
Indium	115-2				87		%
Iron	54-2	10268.29	10292.91	10360.02	10307.07	0.46	ppb
Iron	56-2	10631.52	10630.44	10757.36	10673.11	0.68	ppb
Iron	57-2	10319.67	10190.14	10322.31	10277.37	0.74	ppb
Krypton	83-1						cps
Lead	206-1	11.40	11.49	11.56	11.48	0.71	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02LX5	Instrumnet Name :	P8
Client Sample ID :	ME2947L	Dilution Factor :	5
Date & Time Acquired :	2025-01-28 15:50:24	DataFile Name :	059AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	10.72	10.62	10.63	10.66	0.52	ppb
Lead	208-1	10.93	10.94	11.00	10.96	0.36	ppb
Lithium	6-1				82		%
Magnesium	24-2	5089.94	5062.22	5102.40	5084.85	0.40	ppb
Manganese	55-2	282.09	278.96	281.32	280.79	0.58	ppb
Molybdenum	94-1	2.97	3.00	2.81	2.93	3.43	ppb
Molybdenum	95-1	1.78	1.81	1.78	1.79	1.05	ppb
Molybdenum	96-1	1.90	1.98	1.88	1.92	2.73	ppb
Molybdenum	97-1	1.82	1.77	1.77	1.79	1.41	ppb
Molybdenum	98-1	1.78	1.75	1.78	1.77	0.85	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	12.47	12.14	12.13	12.25	1.54	ppb
Phosphorus	31-2	168.49	184.08	186.55	179.71	5.45	ppb
Potassium	39-2	347.74	348.17	355.12	350.34	1.18	ppb
Rhodium	103-1				90		%
Rhodium	103-2				89		%
Scandium	45-1				89		%
Scandium	45-2				87		%
Selenium	82-1	0.22	0.15	-0.54	-0.06		ppb
Selenium	77-2	11.40	4.22	2.85	6.15	74.59	ppb
Selenium	78-2	1.21	-0.08	0.35	0.49	133.52	ppb
Silicon	28-1	107.10	99.51	100.10	102.24	4.13	ppb
Silver	107-1	0.06	0.07	0.05	0.06	13.20	ppb
Silver	109-1	0.07	0.07	0.07	0.07	4.78	ppb
Sodium	23-2	102.61	100.87	102.54	102.01	0.97	ppb
Strontium	86-1	979.78	975.18	986.12	980.36	0.56	ppb
Strontium	88-1	1002.23	997.36	1002.58	1000.72	0.29	ppb
Sulfur	34-1	-13.83	23.03	-55.66	-15.49		ppb
Terbium	159-1				94		%
Terbium	159-2				90		%
Thallium	203-1	0.11	0.09	0.11	0.10	8.61	ppb
Thallium	205-1	0.11	0.10	0.10	0.10	5.19	ppb
Tin	118-1	0.11	0.18	0.17	0.15	22.91	ppb
Titanium	47-1	36.87	37.89	36.66	37.14	1.77	ppb
Uranium	238-1	0.38	0.40	0.40	0.39	1.83	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02LX5	Instrumnet Name :	P8
Client Sample ID :	ME2947L	Dilution Factor :	5
Date & Time Acquired :	2025-01-28 15:50:24	DataFile Name :	059AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	8.32	8.42	8.43	8.39	0.74	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				93		%
Yttrium	89-2				89		%
Zinc	66-2	47.57	47.22	47.17	47.32	0.46	ppb
Zirconium	90-1	0.82	0.79	0.83	0.81	2.42	ppb
Zirconium	91-1	0.83	0.79	0.80	0.81	2.54	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-04	Instrumnet Name :	P8
Client Sample ID :	ME2947S	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:53:42	DataFile Name :	060AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	14210.31	13310.63	13772.64	13764.53	3.27	ppb
Antimony	121-1	18.73	18.66	18.97	18.79	0.88	ppb
Arsenic	75-2	22.11	20.82	22.60	21.84	4.20	ppb
Barium	135-1	508.45	509.40	514.92	510.92	0.68	ppb
Barium	137-1	545.85	549.07	548.76	547.90	0.32	ppb
Beryllium	9-1	10.35	10.55	10.51	10.47	1.02	ppb
Bismuth	209-1				90		%
Bismuth	209-2				87		%
Bromine	81-1						cps
Cadmium	108-1	8.59	8.93	8.96	8.83	2.35	ppb
Cadmium	106-1	9.37	8.27	7.27	8.30	12.63	ppb
Cadmium	111-1	9.93	9.83	9.82	9.86	0.59	ppb
Calcium	43-1	154135.99	154781.57	153829.29	154248.95	0.32	ppb
Calcium	44-1	153277.55	156469.20	154687.39	154811.38	1.03	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	102.07	97.25	100.57	99.96	2.47	ppb
Cobalt	59-2	118.60	110.89	114.29	114.60	3.37	ppb
Copper	63-2	101.77	95.67	99.04	98.83	3.10	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				96		%
Holmium	165-2				92		%
Indium	115-1				92		%
Indium	115-2				87		%
Iron	54-2	52994.02	49422.13	50561.14	50992.43	3.58	ppb
Iron	56-2	53107.39	49506.63	50911.99	51175.34	3.55	ppb
Iron	57-2	53595.97	50586.21	51578.25	51920.14	2.95	ppb
Krypton	83-1						cps
Lead	206-1	62.31	60.41	61.27	61.33	1.55	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-04	Instrumnet Name :	P8
Client Sample ID :	ME2947S	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:53:42	DataFile Name :	060AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	58.51	56.62	57.43	57.52	1.65	ppb
Lead	208-1	59.93	58.11	58.66	58.90	1.58	ppb
Lithium	6-1				86		%
Magnesium	24-2	25919.56	24631.08	25341.02	25297.22	2.55	ppb
Manganese	55-2	1479.49	1387.72	1437.78	1435.00	3.20	ppb
Molybdenum	94-1	13.87	13.99	14.47	14.11	2.26	ppb
Molybdenum	95-1	8.37	8.56	8.64	8.52	1.63	ppb
Molybdenum	96-1	9.17	9.37	9.57	9.37	2.17	ppb
Molybdenum	97-1	8.52	8.64	9.05	8.74	3.19	ppb
Molybdenum	98-1	8.36	8.44	8.71	8.50	2.16	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	163.23	155.01	158.72	158.99	2.59	ppb
Phosphorus	31-2	925.83	940.50	1004.07	956.80	4.35	ppb
Potassium	39-2	1744.20	1630.19	1693.65	1689.35	3.38	ppb
Rhodium	103-1				89		%
Rhodium	103-2				89		%
Scandium	45-1				93		%
Scandium	45-2				91		%
Selenium	82-1	4.88	4.43	4.18	4.50	7.98	ppb
Selenium	77-2	33.34	29.00	29.34	30.56	7.89	ppb
Selenium	78-2	4.94	5.86	8.75	6.52	30.51	ppb
Silicon	28-1	478.65	482.10	475.27	478.67	0.71	ppb
Silver	107-1	9.16	9.21	9.36	9.24	1.13	ppb
Silver	109-1	9.12	9.21	9.41	9.25	1.59	ppb
Sodium	23-2	545.99	513.56	530.53	530.03	3.06	ppb
Strontium	86-1	4625.14	4651.06	4799.40	4691.87	2.00	ppb
Strontium	88-1	4942.86	4936.15	4995.30	4958.10	0.65	ppb
Sulfur	34-1	854.51	848.65	833.70	845.62	1.27	ppb
Terbium	159-1				96		%
Terbium	159-2				91		%
Thallium	203-1	9.78	9.54	9.63	9.65	1.28	ppb
Thallium	205-1	9.95	9.59	9.72	9.75	1.86	ppb
Tin	118-1	1.00	1.09	1.00	1.03	5.19	ppb
Titanium	47-1	178.67	179.82	179.37	179.29	0.32	ppb
Uranium	238-1	2.05	1.97	2.04	2.02	2.19	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-04	Instrumnet Name :	P8
Client Sample ID :	ME2947S	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:53:42	DataFile Name :	060AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	138.65	130.27	135.55	134.82	3.14	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				98		%
Yttrium	89-2				94		%
Zinc	66-2	367.63	347.02	353.48	356.04	2.96	ppb
Zirconium	90-1	3.78	3.78	3.87	3.81	1.25	ppb
Zirconium	91-1	3.74	3.88	4.02	3.88	3.59	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-01DLX2	Instrumnet Name :	P8
Client Sample ID :	ME2931	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 15:56:58	DataFile Name :	061AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3.64	3.01	2.81	3.15	13.69	ppb
Antimony	121-1	0.09	0.09	0.10	0.09	6.64	ppb
Arsenic	75-2	1.78	2.33	2.31	2.14	14.50	ppb
Barium	135-1	12.58	13.19	13.22	13.00	2.80	ppb
Barium	137-1	12.80	13.49	13.40	13.23	2.85	ppb
Beryllium	9-1	0.02	0.02	0.02	0.02	18.28	ppb
Bismuth	209-1				86		%
Bismuth	209-2				81		%
Bromine	81-1						cps
Cadmium	108-1	1.56	1.43	1.46	1.48	4.54	ppb
Cadmium	106-1	-0.32	-1.06	-0.98	-0.79		ppb
Cadmium	111-1	0.07	0.02	0.08	0.06	56.93	ppb
Calcium	43-1	220162.95	239057.34	239870.87	233030.39	4.79	ppb
Calcium	44-1	224812.71	240015.04	238213.72	234347.16	3.54	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.04	0.04	0.05	0.04	16.16	ppb
Cobalt	59-2	0.81	0.84	0.83	0.83	2.12	ppb
Copper	63-2	0.10	0.13	0.06	0.09	37.97	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				96		%
Holmium	165-2				92		%
Indium	115-1				91		%
Indium	115-2				85		%
Iron	54-2	386.95	393.50	381.01	387.15	1.61	ppb
Iron	56-2	395.33	395.66	392.87	394.62	0.39	ppb
Iron	57-2	391.42	410.76	396.95	399.71	2.49	ppb
Krypton	83-1						cps
Lead	206-1	0.11	0.11	0.11	0.11	3.27	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-01DLX2	Instrumnet Name :	P8
Client Sample ID :	ME2931	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 15:56:58	DataFile Name :	061AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.10	0.09	0.08	0.09	9.75	ppb
Lead	208-1	0.11	0.10	0.10	0.10	7.33	ppb
Lithium	6-1				84		%
Magnesium	24-2	52774.93	52735.92	52380.60	52630.49	0.41	ppb
Manganese	55-2	508.64	512.22	505.73	508.86	0.64	ppb
Molybdenum	94-1	155.84	168.05	170.02	164.64	4.66	ppb
Molybdenum	95-1	191.30	204.28	208.59	201.39	4.47	ppb
Molybdenum	96-1	185.60	201.57	202.95	196.70	4.90	ppb
Molybdenum	97-1	190.89	207.19	210.21	202.76	5.12	ppb
Molybdenum	98-1	203.51	220.00	219.42	214.31	4.37	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	10.90	10.97	10.55	10.81	2.11	ppb
Phosphorus	31-2	-4.67	-6.78	18.68	2.41	586.02	ppb
Potassium	39-2	136525.78	137468.83	136927.01	136973.87	0.35	ppb
Rhodium	103-1				87		%
Rhodium	103-2				84		%
Scandium	45-1				91		%
Scandium	45-2				88		%
Selenium	82-1	0.53	0.58	1.03	0.71	38.03	ppb
Selenium	77-2	0.00	0.00	2.84	0.95	173.21	ppb
Selenium	78-2	-0.51	-0.51	-0.08	-0.36		ppb
Silicon	28-1	153.86	167.39	168.50	163.25	4.99	ppb
Silver	107-1	0.02	0.03	0.02	0.02	17.96	ppb
Silver	109-1	0.02	0.02	0.02	0.02	1.63	ppb
Sodium	23-2	101434.83	100369.02	100294.45	100699.43	0.63	ppb
Strontium	86-1	17870.61	19454.43	19468.83	18931.29	4.85	ppb
Strontium	88-1	17926.84	19237.53	19348.93	18837.77	4.20	ppb
Sulfur	34-1	221720.88	237734.27	239102.01	232852.39	4.15	ppb
Terbium	159-1				94		%
Terbium	159-2				90		%
Thallium	203-1	0.01	0.01	0.01	0.01	42.61	ppb
Thallium	205-1	0.01	0.01	0.01	0.01	10.61	ppb
Tin	118-1	-0.15	-0.14	-0.13	-0.14		ppb
Titanium	47-1	0.36	0.33	0.31	0.34	6.42	ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-01DLX2	Instrumnet Name :	P8
Client Sample ID :	ME2931	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 15:56:58	DataFile Name :	061AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.10	0.08	0.09	0.09	6.87	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				95		%
Yttrium	89-2				89		%
Zinc	66-2	0.65	0.86	0.69	0.74	15.36	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	20.79	ppb
Zirconium	91-1	0.02	0.01	0.02	0.02	12.43	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01	Instrumnet Name :	P8
Client Sample ID :	MH2GX1	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:00:11	DataFile Name :	062AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	45210.96	43646.17	46239.38	45032.17	2.90	ppb
Antimony	121-1	16.94	16.97	16.92	16.95	0.15	ppb
Arsenic	75-2	241.03	246.10	248.26	245.13	1.51	ppb
Barium	135-1	3120.34	3146.70	3078.29	3115.11	1.11	ppb
Barium	137-1	3142.48	3085.44	3125.32	3117.75	0.94	ppb
Beryllium	9-1	7.39	7.45	7.40	7.41	0.43	ppb
Bismuth	209-1				91		%
Bismuth	209-2				87		%
Bromine	81-1						cps
Cadmium	108-1	15.96	16.82	15.73	16.17	3.56	ppb
Cadmium	106-1	18.49	16.71	18.45	17.88	5.67	ppb
Cadmium	111-1	15.26	15.60	15.87	15.57	1.97	ppb
Calcium	43-1	168138.27	167305.99	164417.91	166620.72	1.17	ppb
Calcium	44-1	168245.67	167530.09	166341.50	167372.42	0.57	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	69.31	68.66	68.88	68.95	0.48	ppb
Cobalt	59-2	37.84	36.05	37.38	37.09	2.51	ppb
Copper	63-2	1893.45	1864.60	1904.28	1887.44	1.09	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				98		%
Holmium	165-2				92		%
Indium	115-1				93		%
Indium	115-2				88		%
Iron	54-2	104119.60	101793.53	104005.83	103306.32	1.27	ppb
Iron	56-2	104433.46	103471.41	103551.01	103818.62	0.51	ppb
Iron	57-2	106482.28	104291.18	103903.78	104892.41	1.33	ppb
Krypton	83-1						cps
Lead	206-1	7761.43	7759.84	7979.79	7833.69	1.62	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01	Instrumnet Name :	P8
Client Sample ID :	MH2GX1	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:00:11	DataFile Name :	062AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	7422.91	7469.90	7599.27	7497.36	1.22	ppb
Lead	208-1	7555.72	7596.61	7670.84	7607.72	0.77	ppb
Lithium	6-1				84		%
Magnesium	24-2	13135.71	13030.69	12923.77	13030.06	0.81	ppb
Manganese	55-2	8056.75	7791.93	7892.31	7913.66	1.69	ppb
Molybdenum	94-1	29.94	30.22	30.26	30.14	0.58	ppb
Molybdenum	95-1	15.58	15.60	15.56	15.58	0.14	ppb
Molybdenum	96-1	17.76	17.55	17.14	17.49	1.82	ppb
Molybdenum	97-1	15.87	15.82	15.68	15.79	0.65	ppb
Molybdenum	98-1	15.43	15.66	15.42	15.51	0.86	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	128.88	126.98	129.19	128.35	0.93	ppb
Phosphorus	31-2	4110.71	3975.39	4009.89	4032.00	1.74	ppb
Potassium	39-2	5641.92	5576.36	5654.74	5624.34	0.75	ppb
Rhodium	103-1				89		%
Rhodium	103-2				88		%
Scandium	45-1				94		%
Scandium	45-2				92		%
Selenium	82-1	3.11	3.67	3.29	3.36	8.61	ppb
Selenium	77-2	80.16	86.45	85.34	83.99	4.00	ppb
Selenium	78-2	16.25	12.73	13.31	14.10	13.39	ppb
Silicon	28-1	1177.36	1154.15	1169.98	1167.16	1.02	ppb
Silver	107-1	28.87	28.80	29.08	28.92	0.50	ppb
Silver	109-1	28.94	29.40	29.13	29.16	0.79	ppb
Sodium	23-2	2120.24	2063.66	2109.98	2097.96	1.44	ppb
Strontium	86-1	21129.78	21376.94	21199.97	21235.56	0.60	ppb
Strontium	88-1	21312.76	21301.45	21280.77	21298.33	0.08	ppb
Sulfur	34-1	1774.87	1710.26	1734.25	1739.79	1.88	ppb
Terbium	159-1				97		%
Terbium	159-2				92		%
Thallium	203-1	1.02	1.05	1.04	1.04	1.55	ppb
Thallium	205-1	1.03	1.08	1.07	1.06	2.39	ppb
Tin	118-1	40.97	40.67	40.42	40.69	0.67	ppb
Titanium	47-1	1089.28	1085.69	1074.25	1083.07	0.72	ppb
Uranium	238-1	14.21	14.30	14.46	14.32	0.89	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01	Instrumnet Name :	P8
Client Sample ID :	MH2GX1	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:00:11	DataFile Name :	062AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	133.61	133.02	134.14	133.59	0.42	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				107		%
Yttrium	89-2				102		%
Zinc	66-2	11251.50	10896.88	11070.87	11073.09	1.60	ppb
Zirconium	90-1	9.40	9.45	9.41	9.42	0.28	ppb
Zirconium	91-1	9.58	9.45	9.57	9.53	0.77	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-02	Instrumnet Name :	P8
Client Sample ID :	MH2GX1D	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:03:18	DataFile Name :	063AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	44603.41	44617.99	46100.20	45107.20	1.91	ppb
Antimony	121-1	17.71	18.28	17.00	17.66	3.65	ppb
Arsenic	75-2	247.78	244.71	248.35	246.95	0.79	ppb
Barium	135-1	3231.05	3387.65	3125.29	3248.00	4.06	ppb
Barium	137-1	3251.95	3350.25	3139.72	3247.31	3.24	ppb
Beryllium	9-1	7.40	7.78	7.25	7.48	3.62	ppb
Bismuth	209-1				89		%
Bismuth	209-2				88		%
Bromine	81-1						cps
Cadmium	108-1	16.46	18.38	16.41	17.08	6.57	ppb
Cadmium	106-1	18.55	19.57	18.57	18.90	3.09	ppb
Cadmium	111-1	16.47	16.81	15.59	16.29	3.86	ppb
Calcium	43-1	170090.83	175760.65	167974.73	171275.40	2.35	ppb
Calcium	44-1	168930.46	177948.26	167544.92	171474.55	3.29	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	69.01	68.05	69.33	68.80	0.97	ppb
Cobalt	59-2	37.28	36.79	36.90	36.99	0.69	ppb
Copper	63-2	1888.98	1838.11	1896.72	1874.60	1.70	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				96		%
Holmium	165-2				94		%
Indium	115-1				92		%
Indium	115-2				89		%
Iron	54-2	102676.09	102226.08	104190.18	103030.78	1.00	ppb
Iron	56-2	102931.15	103677.55	102970.62	103193.11	0.41	ppb
Iron	57-2	105362.32	103333.72	105238.03	104644.69	1.09	ppb
Krypton	83-1						cps
Lead	206-1	7829.27	8399.30	7955.60	8061.39	3.71	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-02	Instrumnet Name :	P8
Client Sample ID :	MH2GX1D	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:03:18	DataFile Name :	063AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	7452.85	8079.42	7664.08	7732.12	4.12	ppb
Lead	208-1	7625.61	8210.82	7759.76	7865.39	3.90	ppb
Lithium	6-1				85		%
Magnesium	24-2	12842.02	12923.74	12848.98	12871.58	0.35	ppb
Manganese	55-2	7846.86	7829.11	7947.62	7874.53	0.81	ppb
Molybdenum	94-1	30.43	32.12	30.15	30.90	3.45	ppb
Molybdenum	95-1	15.73	16.59	15.78	16.03	3.01	ppb
Molybdenum	96-1	17.51	18.87	17.75	18.04	4.02	ppb
Molybdenum	97-1	15.85	17.24	15.61	16.24	5.42	ppb
Molybdenum	98-1	15.71	16.87	15.59	16.06	4.40	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	126.87	127.45	127.68	127.33	0.33	ppb
Phosphorus	31-2	4107.25	4317.22	4192.48	4205.65	2.51	ppb
Potassium	39-2	5625.53	5558.96	5606.99	5597.16	0.61	ppb
Rhodium	103-1				87		%
Rhodium	103-2				89		%
Scandium	45-1				95		%
Scandium	45-2				93		%
Selenium	82-1	3.36	3.40	2.40	3.05	18.56	ppb
Selenium	77-2	85.71	87.65	76.36	83.24	7.25	ppb
Selenium	78-2	12.98	17.62	21.06	17.22	23.56	ppb
Silicon	28-1	1189.59	1218.56	1195.10	1201.08	1.28	ppb
Silver	107-1	29.80	31.20	29.28	30.09	3.30	ppb
Silver	109-1	30.42	31.70	29.37	30.50	3.84	ppb
Sodium	23-2	2071.27	2062.35	2082.19	2071.94	0.48	ppb
Strontium	86-1	21227.94	22595.54	21508.59	21777.36	3.32	ppb
Strontium	88-1	21504.08	22892.39	21491.53	21962.67	3.67	ppb
Sulfur	34-1	1766.75	1996.21	1665.49	1809.48	9.36	ppb
Terbium	159-1				95		%
Terbium	159-2				92		%
Thallium	203-1	1.04	1.14	1.07	1.08	4.83	ppb
Thallium	205-1	1.09	1.15	1.10	1.11	3.18	ppb
Tin	118-1	42.21	44.21	41.19	42.54	3.62	ppb
Titanium	47-1	1102.02	1153.24	1087.83	1114.36	3.09	ppb
Uranium	238-1	14.48	15.21	14.48	14.73	2.86	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-02	Instrumnet Name :	P8
Client Sample ID :	MH2GX1D	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:03:18	DataFile Name :	063AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	135.01	132.82	134.83	134.22	0.91	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				107		%
Yttrium	89-2				104		%
Zinc	66-2	11128.20	11103.34	11034.90	11088.81	0.44	ppb
Zirconium	90-1	9.50	10.15	9.45	9.70	4.03	ppb
Zirconium	91-1	9.48	10.17	9.61	9.75	3.73	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01LX5	Instrumnet Name :	P8
Client Sample ID :	MH2GX1L	Dilution Factor :	5
Date & Time Acquired :	2025-01-28 16:06:24	DataFile Name :	064AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	8893.81	8857.35	8911.07	8887.41	0.31	ppb
Antimony	121-1	3.52	3.51	3.46	3.50	0.98	ppb
Arsenic	75-2	56.20	54.39	54.27	54.95	1.96	ppb
Barium	135-1	612.20	646.81	605.45	621.49	3.57	ppb
Barium	137-1	643.77	643.69	640.36	642.61	0.30	ppb
Beryllium	9-1	1.59	1.54	1.52	1.55	2.46	ppb
Bismuth	209-1				92		%
Bismuth	209-2				88		%
Bromine	81-1						cps
Cadmium	108-1	3.84	3.72	3.40	3.65	6.18	ppb
Cadmium	106-1	1.12	1.48	2.00	1.53	28.89	ppb
Cadmium	111-1	2.97	3.04	3.10	3.04	2.22	ppb
Calcium	43-1	35449.18	35024.78	34851.89	35108.62	0.88	ppb
Calcium	44-1	35346.83	34783.94	34681.23	34937.33	1.03	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	14.57	14.44	14.36	14.46	0.73	ppb
Cobalt	59-2	8.00	7.81	8.16	7.99	2.17	ppb
Copper	63-2	392.79	390.36	396.24	393.13	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				94		%
Holmium	165-2				92		%
Indium	115-1				93		%
Indium	115-2				88		%
Iron	54-2	22291.77	21939.43	22447.31	22226.17	1.17	ppb
Iron	56-2	22116.27	21854.51	22067.51	22012.76	0.63	ppb
Iron	57-2	21172.62	20959.41	21116.39	21082.81	0.52	ppb
Krypton	83-1						cps
Lead	206-1	1515.83	1568.05	1557.28	1547.06	1.78	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01LX5	Instrumnet Name :	P8
Client Sample ID :	MH2GX1L	Dilution Factor :	5
Date & Time Acquired :	2025-01-28 16:06:24	DataFile Name :	064AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1467.78	1486.87	1497.55	1484.06	1.02	ppb
Lead	208-1	1506.84	1523.57	1519.63	1516.68	0.58	ppb
Lithium	6-1				82		%
Magnesium	24-2	2570.51	2574.16	2617.84	2587.50	1.02	ppb
Manganese	55-2	1582.36	1563.49	1584.09	1576.65	0.72	ppb
Molybdenum	94-1	6.65	6.75	6.67	6.69	0.75	ppb
Molybdenum	95-1	3.53	3.48	3.57	3.52	1.22	ppb
Molybdenum	96-1	3.88	3.88	3.84	3.87	0.55	ppb
Molybdenum	97-1	3.55	3.53	3.47	3.52	1.20	ppb
Molybdenum	98-1	3.43	3.54	3.46	3.48	1.68	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	28.08	27.84	27.87	27.93	0.47	ppb
Phosphorus	31-2	829.00	767.71	774.45	790.39	4.25	ppb
Potassium	39-2	1173.42	1148.81	1169.99	1164.07	1.14	ppb
Rhodium	103-1				91		%
Rhodium	103-2				90		%
Scandium	45-1				91		%
Scandium	45-2				87		%
Selenium	82-1	1.05	0.59	0.54	0.73	38.80	ppb
Selenium	77-2	17.89	13.82	8.23	13.31	36.44	ppb
Selenium	78-2	4.48	4.08	2.39	3.65	30.40	ppb
Silicon	28-1	248.81	243.48	243.75	245.35	1.22	ppb
Silver	107-1	6.21	6.16	6.21	6.19	0.52	ppb
Silver	109-1	6.35	6.14	6.28	6.26	1.69	ppb
Sodium	23-2	421.06	421.66	418.62	420.45	0.38	ppb
Strontium	86-1	4466.83	4509.76	4499.76	4492.12	0.50	ppb
Strontium	88-1	4770.67	4766.04	4757.49	4764.73	0.14	ppb
Sulfur	34-1	88.88	-94.03	-45.90	-17.01		ppb
Terbium	159-1				94		%
Terbium	159-2				90		%
Thallium	203-1	0.20	0.20	0.21	0.20	3.59	ppb
Thallium	205-1	0.21	0.21	0.21	0.21	1.45	ppb
Tin	118-1	8.47	8.45	8.41	8.44	0.32	ppb
Titanium	47-1	216.70	211.57	214.66	214.31	1.21	ppb
Uranium	238-1	2.74	2.71	2.80	2.75	1.62	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01LX5	Instrumnet Name :	P8
Client Sample ID :	MH2GX1L	Dilution Factor :	5
Date & Time Acquired :	2025-01-28 16:06:24	DataFile Name :	064AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	27.85	28.18	27.33	27.79	1.54	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				96		%
Yttrium	89-2				91		%
Zinc	66-2	2278.59	2280.64	2313.15	2290.79	0.85	ppb
Zirconium	90-1	2.08	2.09	2.05	2.07	1.08	ppb
Zirconium	91-1	2.05	2.18	2.12	2.12	2.98	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-03	Instrumnet Name :	P8
Client Sample ID :	MH2GX1S	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:09:39	DataFile Name :	065AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	45500.55	44660.90	45710.40	45290.62	1.23	ppb
Antimony	121-1	35.30	35.32	35.32	35.32	0.04	ppb
Arsenic	75-2	261.46	258.29	255.12	258.29	1.23	ppb
Barium	135-1	3548.39	3494.14	3514.20	3518.91	0.78	ppb
Barium	137-1	3560.98	3527.70	3467.23	3518.64	1.35	ppb
Beryllium	9-1	17.14	16.93	16.56	16.88	1.72	ppb
Bismuth	209-1				91		%
Bismuth	209-2				85		%
Bromine	81-1						cps
Cadmium	108-1	22.83	24.30	24.96	24.03	4.54	ppb
Cadmium	106-1	24.88	25.22	25.45	25.18	1.13	ppb
Cadmium	111-1	24.81	24.83	24.35	24.66	1.11	ppb
Calcium	43-1	168291.68	166284.30	167978.35	167518.11	0.64	ppb
Calcium	44-1	166728.90	166519.09	168224.79	167157.59	0.56	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	107.97	107.38	108.07	107.81	0.35	ppb
Cobalt	59-2	133.62	132.63	133.37	133.21	0.39	ppb
Copper	63-2	2000.07	1978.37	1972.94	1983.79	0.72	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				92		%
Indium	115-1				93		%
Indium	115-2				87		%
Iron	54-2	106760.77	104150.56	106386.14	105765.82	1.33	ppb
Iron	56-2	106897.85	104298.58	105231.14	105475.86	1.25	ppb
Iron	57-2	106860.25	106376.14	106913.42	106716.60	0.28	ppb
Krypton	83-1						cps
Lead	206-1	7875.28	7630.60	7727.93	7744.61	1.59	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-03	Instrumnet Name :	P8
Client Sample ID :	MH2GX1S	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:09:39	DataFile Name :	065AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	7418.79	7310.09	7523.12	7417.33	1.44	ppb
Lead	208-1	7623.88	7427.43	7587.13	7546.15	1.38	ppb
Lithium	6-1				85		%
Magnesium	24-2	13050.80	13101.43	13091.88	13081.37	0.21	ppb
Manganese	55-2	8304.47	7967.78	8107.03	8126.43	2.08	ppb
Molybdenum	94-1	29.83	30.17	29.99	30.00	0.56	ppb
Molybdenum	95-1	15.30	15.93	15.46	15.56	2.10	ppb
Molybdenum	96-1	17.35	17.85	17.33	17.51	1.67	ppb
Molybdenum	97-1	15.90	15.90	15.63	15.81	0.98	ppb
Molybdenum	98-1	15.45	15.75	15.63	15.61	0.97	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	233.17	229.69	233.15	232.00	0.86	ppb
Phosphorus	31-2	4093.84	4033.79	4231.65	4119.76	2.46	ppb
Potassium	39-2	5686.01	5609.79	5658.55	5651.45	0.68	ppb
Rhodium	103-1				89		%
Rhodium	103-2				87		%
Scandium	45-1				96		%
Scandium	45-2				91		%
Selenium	82-1	6.13	6.45	6.66	6.41	4.19	ppb
Selenium	77-2	76.74	70.59	65.20	70.85	8.15	ppb
Selenium	78-2	20.00	18.94	18.07	19.00	5.11	ppb
Silicon	28-1	1166.47	1174.33	1189.10	1176.63	0.98	ppb
Silver	107-1	38.12	38.06	37.86	38.01	0.35	ppb
Silver	109-1	38.57	38.08	38.43	38.36	0.66	ppb
Sodium	23-2	2108.77	2067.99	2105.98	2094.25	1.09	ppb
Strontium	86-1	21176.44	21210.65	21110.57	21165.88	0.24	ppb
Strontium	88-1	21306.94	21611.98	21239.05	21385.99	0.93	ppb
Sulfur	34-1	1562.10	1561.35	1615.41	1579.62	1.96	ppb
Terbium	159-1				96		%
Terbium	159-2				90		%
Thallium	203-1	10.04	9.94	10.01	10.00	0.55	ppb
Thallium	205-1	10.19	10.06	10.08	10.11	0.73	ppb
Tin	118-1	40.94	40.62	40.87	40.81	0.41	ppb
Titanium	47-1	1065.97	1065.75	1097.37	1076.36	1.69	ppb
Uranium	238-1	14.33	14.04	14.28	14.22	1.09	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-03	Instrumnet Name :	P8
Client Sample ID :	MH2GX1S	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:09:39	DataFile Name :	065AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	227.92	226.13	230.94	228.33	1.06	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				108		%
Yttrium	89-2				101		%
Zinc	66-2	11258.86	11159.63	11288.18	11235.56	0.60	ppb
Zirconium	90-1	9.38	9.49	9.42	9.43	0.56	ppb
Zirconium	91-1	9.38	9.61	9.46	9.48	1.22	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-04	Instrumnet Name :	P8
Client Sample ID :	MH2H17	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:12:45	DataFile Name :	066AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	14623.86	18875.69	17890.37	17129.97	12.99	ppb
Antimony	121-1	3.72	3.65	3.53	3.63	2.58	ppb
Arsenic	75-2	40.52	53.39	48.15	47.35	13.67	ppb
Barium	135-1	808.28	791.79	764.30	788.12	2.82	ppb
Barium	137-1	811.85	795.69	771.41	792.98	2.57	ppb
Beryllium	9-1	2.42	2.34	2.27	2.34	3.31	ppb
Bismuth	209-1				88		%
Bismuth	209-2				74		%
Bromine	81-1						cps
Cadmium	108-1	11.65	11.78	11.51	11.65	1.19	ppb
Cadmium	106-1	10.26	10.97	10.31	10.51	3.73	ppb
Cadmium	111-1	12.23	12.03	11.96	12.07	1.16	ppb
Calcium	43-1	377986.66	366974.31	365444.22	370135.06	1.85	ppb
Calcium	44-1	378831.84	368863.68	362596.28	370097.27	2.21	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	44.83	56.03	53.50	51.45	11.41	ppb
Cobalt	59-2	25.22	31.99	30.41	29.20	12.12	ppb
Copper	63-2	279.25	357.48	336.83	324.52	12.49	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				98		%
Holmium	165-2				82		%
Indium	115-1				93		%
Indium	115-2				76		%
Iron	54-2	73642.58	93753.90	88683.89	85360.13	12.25	ppb
Iron	56-2	72738.35	93039.17	88762.35	84846.62	12.61	ppb
Iron	57-2	74659.26	94087.94	89846.26	86197.82	11.85	ppb
Krypton	83-1						cps
Lead	206-1	1057.98	1011.79	1028.11	1032.63	2.27	ppb

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-04	Instrumnet Name :	P8
Client Sample ID :	MH2H17	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:12:45	DataFile Name :	066AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1014.99	987.13	989.72	997.28	1.54	ppb
Lead	208-1	1025.30	999.59	995.35	1006.75	1.61	ppb
Lithium	6-1				86		%
Magnesium	24-2	144233.94	185014.91	173403.53	167550.79	12.54	ppb
Manganese	55-2	4182.92	5419.13	5116.47	4906.18	13.13	ppb
Molybdenum	94-1	10.27	10.04	9.84	10.05	2.15	ppb
Molybdenum	95-1	5.58	5.46	5.40	5.48	1.64	ppb
Molybdenum	96-1	6.34	6.22	5.93	6.16	3.40	ppb
Molybdenum	97-1	5.38	5.53	5.29	5.40	2.30	ppb
Molybdenum	98-1	5.49	5.41	5.23	5.38	2.49	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	99.62	126.60	120.55	115.59	12.25	ppb
Phosphorus	31-2	3492.24	4595.00	4390.46	4159.23	14.10	ppb
Potassium	39-2	4543.92	5791.84	5514.35	5283.37	12.40	ppb
Rhodium	103-1				89		%
Rhodium	103-2				77		%
Scandium	45-1				95		%
Scandium	45-2				81		%
Selenium	82-1	1.81	1.92	1.96	1.90	4.13	ppb
Selenium	77-2	43.63	80.03	50.26	57.97	33.44	ppb
Selenium	78-2	14.21	10.12	9.61	11.32	22.30	ppb
Silicon	28-1	602.20	584.66	573.39	586.75	2.47	ppb
Silver	107-1	4.10	4.01	3.96	4.02	1.78	ppb
Silver	109-1	4.15	4.02	3.96	4.04	2.42	ppb
Sodium	23-2	1545.88	1991.53	1878.95	1805.45	12.84	ppb
Strontium	86-1	12259.92	11963.00	11663.53	11962.15	2.49	ppb
Strontium	88-1	12163.71	12180.87	11771.45	12038.68	1.92	ppb
Sulfur	34-1	1147.67	1004.78	966.07	1039.51	9.20	ppb
Terbium	159-1				97		%
Terbium	159-2				81		%
Thallium	203-1	0.88	0.89	0.86	0.88	2.06	ppb
Thallium	205-1	0.91	0.91	0.91	0.91	0.33	ppb
Tin	118-1	14.40	14.56	14.01	14.32	1.96	ppb
Titanium	47-1	280.44	272.19	268.33	273.65	2.26	ppb
Uranium	238-1	4.78	4.78	4.65	4.74	1.59	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-04	Instrumnet Name :	P8
Client Sample ID :	MH2H17	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:12:45	DataFile Name :	066AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	87.39	112.51	105.27	101.72	12.71	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				103		%
Yttrium	89-2				86		%
Zinc	66-2	2823.53	3583.71	3404.12	3270.45	12.15	ppb
Zirconium	90-1	3.08	3.07	2.98	3.05	1.87	ppb
Zirconium	91-1	3.10	3.12	2.96	3.06	2.80	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-05	Instrumnet Name :	P8
Client Sample ID :	MH2H18	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:15:57	DataFile Name :	067AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	18697.79	18498.91	18888.33	18695.01	1.04	ppb
Antimony	121-1	2.97	3.00	3.00	2.99	0.58	ppb
Arsenic	75-2	48.01	50.41	49.02	49.15	2.46	ppb
Barium	135-1	714.97	741.75	720.01	725.58	1.96	ppb
Barium	137-1	713.71	727.47	729.88	723.69	1.21	ppb
Beryllium	9-1	2.49	2.51	2.49	2.49	0.49	ppb
Bismuth	209-1				89		%
Bismuth	209-2				85		%
Bromine	81-1						cps
Cadmium	108-1	10.19	10.70	10.61	10.50	2.56	ppb
Cadmium	106-1	11.32	10.56	10.01	10.63	6.20	ppb
Cadmium	111-1	11.40	11.33	11.38	11.37	0.30	ppb
Calcium	43-1	121631.96	120516.42	118061.68	120070.02	1.52	ppb
Calcium	44-1	121120.07	120581.05	119053.61	120251.58	0.89	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	32.89	32.11	32.94	32.65	1.42	ppb
Cobalt	59-2	25.43	25.19	25.67	25.43	0.95	ppb
Copper	63-2	252.98	253.89	255.52	254.13	0.51	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				94		%
Holmium	165-2				92		%
Indium	115-1				92		%
Indium	115-2				86		%
Iron	54-2	70998.72	70504.51	71885.48	71129.57	0.98	ppb
Iron	56-2	70279.12	70245.28	70691.96	70405.45	0.35	ppb
Iron	57-2	72142.32	71379.51	71451.25	71657.69	0.59	ppb
Krypton	83-1						cps
Lead	206-1	727.32	733.02	740.44	733.59	0.90	ppb

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-05	Instrumnet Name :	P8
Client Sample ID :	MH2H18	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:15:57	DataFile Name :	067AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	704.90	710.45	701.02	705.46	0.67	ppb
Lead	208-1	705.10	712.15	713.84	710.36	0.65	ppb
Lithium	6-1				83		%
Magnesium	24-2	23888.59	23248.09	24049.40	23728.69	1.79	ppb
Manganese	55-2	3024.99	2970.16	3051.40	3015.52	1.37	ppb
Molybdenum	94-1	9.12	9.26	9.22	9.20	0.78	ppb
Molybdenum	95-1	5.30	5.37	5.31	5.33	0.70	ppb
Molybdenum	96-1	5.78	5.88	5.83	5.83	0.85	ppb
Molybdenum	97-1	5.34	5.42	5.23	5.33	1.78	ppb
Molybdenum	98-1	5.26	5.25	5.20	5.24	0.61	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	110.00	110.02	111.41	110.48	0.73	ppb
Phosphorus	31-2	2969.50	2998.80	2911.94	2960.08	1.49	ppb
Potassium	39-2	5681.57	5685.01	5744.72	5703.76	0.62	ppb
Rhodium	103-1				89		%
Rhodium	103-2				88		%
Scandium	45-1				92		%
Scandium	45-2				89		%
Selenium	82-1	1.68	1.88	2.39	1.98	18.43	ppb
Selenium	77-2	61.89	70.48	53.49	61.95	13.72	ppb
Selenium	78-2	13.01	14.08	14.85	13.98	6.62	ppb
Silicon	28-1	531.21	524.58	516.79	524.19	1.38	ppb
Silver	107-1	3.92	4.02	3.99	3.98	1.29	ppb
Silver	109-1	3.97	4.04	4.09	4.03	1.44	ppb
Sodium	23-2	1640.53	1620.57	1653.38	1638.16	1.01	ppb
Strontium	86-1	8706.11	9369.06	9379.53	9151.57	4.22	ppb
Strontium	88-1	9312.10	9318.69	9317.73	9316.17	0.04	ppb
Sulfur	34-1	2767.59	2780.05	2631.46	2726.36	3.02	ppb
Terbium	159-1				95		%
Terbium	159-2				90		%
Thallium	203-1	1.08	1.11	1.10	1.10	1.24	ppb
Thallium	205-1	1.09	1.09	1.09	1.09	0.41	ppb
Tin	118-1	10.05	10.18	10.38	10.20	1.66	ppb
Titanium	47-1	205.43	202.08	200.39	202.63	1.27	ppb
Uranium	238-1	3.91	3.90	3.92	3.91	0.24	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-05	Instrumnet Name :	P8
Client Sample ID :	MH2H18	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:15:57	DataFile Name :	067AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	98.79	98.48	98.87	98.71	0.21	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				101		%
Yttrium	89-2				96		%
Zinc	66-2	1901.31	1905.21	1916.38	1907.63	0.41	ppb
Zirconium	90-1	2.61	2.67	2.64	2.64	1.20	ppb
Zirconium	91-1	2.67	2.75	2.72	2.72	1.44	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-06	Instrumnet Name :	P8
Client Sample ID :	MH2H19	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:19:05	DataFile Name :	068AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	22657.17	22325.45	22204.90	22395.84	1.05	ppb
Antimony	121-1	1.65	1.63	1.54	1.61	3.45	ppb
Arsenic	75-2	31.84	32.07	33.26	32.39	2.35	ppb
Barium	135-1	819.83	840.34	812.38	824.19	1.76	ppb
Barium	137-1	826.07	834.59	800.96	820.54	2.13	ppb
Beryllium	9-1	2.47	2.38	2.39	2.41	2.02	ppb
Bismuth	209-1				90		%
Bismuth	209-2				85		%
Bromine	81-1						cps
Cadmium	108-1	4.24	4.69	4.61	4.51	5.29	ppb
Cadmium	106-1	4.38	5.25	4.26	4.63	11.67	ppb
Cadmium	111-1	4.93	5.09	4.91	4.98	2.03	ppb
Calcium	43-1	139209.46	139166.40	138008.41	138794.76	0.49	ppb
Calcium	44-1	138490.43	139427.14	138689.51	138869.03	0.36	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	36.30	37.27	37.29	36.95	1.54	ppb
Cobalt	59-2	24.03	24.18	24.07	24.09	0.33	ppb
Copper	63-2	120.77	122.53	121.66	121.65	0.72	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				96		%
Holmium	165-2				91		%
Indium	115-1				93		%
Indium	115-2				87		%
Iron	54-2	56053.35	56319.00	55581.87	55984.74	0.67	ppb
Iron	56-2	55012.60	55697.22	54996.22	55235.35	0.72	ppb
Iron	57-2	56394.67	56808.74	55805.36	56336.26	0.90	ppb
Krypton	83-1						cps
Lead	206-1	195.40	199.29	198.95	197.88	1.09	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-06	Instrumnet Name :	P8
Client Sample ID :	MH2H19	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:19:05	DataFile Name :	068AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	188.07	190.52	191.25	189.95	0.88	ppb
Lead	208-1	197.57	200.10	199.10	198.92	0.64	ppb
Lithium	6-1				84		%
Magnesium	24-2	20104.69	20059.77	19595.09	19919.85	1.42	ppb
Manganese	55-2	1477.06	1498.61	1473.84	1483.17	0.91	ppb
Molybdenum	94-1	8.67	8.92	8.51	8.70	2.38	ppb
Molybdenum	95-1	5.32	5.30	5.17	5.26	1.61	ppb
Molybdenum	96-1	5.80	5.95	5.77	5.84	1.62	ppb
Molybdenum	97-1	5.14	5.44	5.38	5.32	3.02	ppb
Molybdenum	98-1	5.25	5.40	5.22	5.29	1.84	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	103.41	104.79	105.85	104.68	1.17	ppb
Phosphorus	31-2	2937.03	3010.18	3020.64	2989.28	1.52	ppb
Potassium	39-2	6033.42	6009.11	5986.00	6009.51	0.39	ppb
Rhodium	103-1				90		%
Rhodium	103-2				87		%
Scandium	45-1				93		%
Scandium	45-2				90		%
Selenium	82-1	1.96	2.64	2.15	2.25	15.63	ppb
Selenium	77-2	88.73	86.11	70.87	81.91	11.78	ppb
Selenium	78-2	17.48	15.55	13.63	15.55	12.37	ppb
Silicon	28-1	455.22	460.03	459.48	458.25	0.57	ppb
Silver	107-1	1.64	1.74	1.68	1.69	2.90	ppb
Silver	109-1	1.68	1.73	1.69	1.70	1.46	ppb
Sodium	23-2	1359.32	1349.93	1358.62	1355.96	0.39	ppb
Strontium	86-1	7683.07	7651.79	7551.50	7628.79	0.90	ppb
Strontium	88-1	8249.90	8162.67	8039.23	8150.60	1.30	ppb
Sulfur	34-1	2383.27	2467.47	2510.99	2453.91	2.65	ppb
Terbium	159-1				96		%
Terbium	159-2				91		%
Thallium	203-1	0.99	1.00	0.97	0.99	1.55	ppb
Thallium	205-1	1.00	1.03	1.03	1.02	1.91	ppb
Tin	118-1	3.29	3.35	3.33	3.32	1.00	ppb
Titanium	47-1	169.42	170.02	169.69	169.71	0.18	ppb
Uranium	238-1	4.00	4.05	4.06	4.04	0.76	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-06	Instrumnet Name :	P8
Client Sample ID :	MH2H19	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:19:05	DataFile Name :	068AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	115.61	116.98	116.94	116.51	0.67	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				105		%
Yttrium	89-2				99		%
Zinc	66-2	637.66	643.06	642.71	641.14	0.47	ppb
Zirconium	90-1	2.33	2.38	2.33	2.35	1.09	ppb
Zirconium	91-1	2.47	2.37	2.34	2.39	3.00	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-07	Instrumnet Name :	P8
Client Sample ID :	MH2H20	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:22:19	DataFile Name :	069AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	13798.23	13358.77	13503.90	13553.63	1.65	ppb
Antimony	121-1	2.05	2.09	2.19	2.11	3.31	ppb
Arsenic	75-2	19.69	19.64	20.37	19.90	2.06	ppb
Barium	135-1	479.18	487.52	503.34	490.02	2.50	ppb
Barium	137-1	511.57	524.95	537.85	524.79	2.50	ppb
Beryllium	9-1	2.37	2.30	2.36	2.34	1.80	ppb
Bismuth	209-1				84		%
Bismuth	209-2				80		%
Bromine	81-1						cps
Cadmium	108-1	7.11	7.75	7.82	7.56	5.19	ppb
Cadmium	106-1	6.20	6.49	6.25	6.31	2.46	ppb
Cadmium	111-1	3.86	3.91	4.09	3.95	3.00	ppb
Calcium	43-1	348583.55	347608.51	357321.04	351171.03	1.52	ppb
Calcium	44-1	346156.62	349118.69	356991.20	350755.50	1.60	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	117.55	115.53	115.17	116.08	1.11	ppb
Cobalt	59-2	16.92	16.39	16.53	16.61	1.64	ppb
Copper	63-2	159.49	155.27	156.84	157.20	1.36	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				93		%
Holmium	165-2				89		%
Indium	115-1				88		%
Indium	115-2				83		%
Iron	54-2	54536.84	52597.46	52605.31	53246.54	2.10	ppb
Iron	56-2	53306.91	51984.21	52864.67	52718.60	1.28	ppb
Iron	57-2	54779.50	53694.54	53554.07	54009.37	1.24	ppb
Krypton	83-1						cps
Lead	206-1	375.90	395.85	394.20	388.65	2.85	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-07	Instrumnet Name :	P8
Client Sample ID :	MH2H20	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:22:19	DataFile Name :	069AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	355.28	369.94	375.47	366.90	2.84	ppb
Lead	208-1	362.99	372.29	378.47	371.25	2.10	ppb
Lithium	6-1				81		%
Magnesium	24-2	165308.42	158968.39	161281.06	161852.62	1.98	ppb
Manganese	55-2	3933.95	3852.26	3918.92	3901.71	1.11	ppb
Molybdenum	94-1	8.61	8.83	9.02	8.82	2.32	ppb
Molybdenum	95-1	4.13	4.18	4.35	4.22	2.68	ppb
Molybdenum	96-1	4.85	4.90	5.02	4.92	1.79	ppb
Molybdenum	97-1	4.28	4.26	4.34	4.29	0.88	ppb
Molybdenum	98-1	4.14	4.17	4.25	4.18	1.35	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	66.75	65.34	65.74	65.94	1.11	ppb
Phosphorus	31-2	3510.23	3400.50	3581.30	3497.34	2.60	ppb
Potassium	39-2	3798.07	3688.23	3714.20	3733.50	1.54	ppb
Rhodium	103-1				84		%
Rhodium	103-2				85		%
Scandium	45-1				89		%
Scandium	45-2				87		%
Selenium	82-1	2.52	2.33	2.55	2.46	4.92	ppb
Selenium	77-2	45.62	52.34	52.79	50.25	8.00	ppb
Selenium	78-2	8.67	6.79	9.30	8.25	15.87	ppb
Silicon	28-1	978.83	986.00	1018.20	994.34	2.11	ppb
Silver	107-1	1.16	1.25	1.28	1.23	5.33	ppb
Silver	109-1	1.19	1.22	1.28	1.23	3.85	ppb
Sodium	23-2	894.18	870.13	888.50	884.27	1.42	ppb
Strontium	86-1	9586.79	9731.84	10153.71	9824.11	3.00	ppb
Strontium	88-1	9716.56	9854.05	10046.00	9872.20	1.68	ppb
Sulfur	34-1	2166.01	2279.09	2502.54	2315.88	7.39	ppb
Terbium	159-1				92		%
Terbium	159-2				88		%
Thallium	203-1	0.38	0.37	0.43	0.39	8.00	ppb
Thallium	205-1	0.37	0.41	0.40	0.39	4.42	ppb
Tin	118-1	6.47	6.86	6.93	6.75	3.66	ppb
Titanium	47-1	281.67	283.64	291.74	285.69	1.87	ppb
Uranium	238-1	4.47	4.61	4.74	4.61	2.89	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-07	Instrumnet Name :	P8
Client Sample ID :	MH2H20	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:22:19	DataFile Name :	069AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	68.59	66.50	67.66	67.58	1.55	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				98		%
Yttrium	89-2				93		%
Zinc	66-2	1454.33	1405.43	1427.11	1428.96	1.71	ppb
Zirconium	90-1	2.95	2.90	3.05	2.97	2.72	ppb
Zirconium	91-1	2.91	2.91	3.15	2.99	4.80	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-08	Instrumnet Name :	P8
Client Sample ID :	MH2H21	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:25:29	DataFile Name :	070AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19363.62	19466.73	19336.01	19388.79	0.36	ppb
Antimony	121-1	2.22	2.10	2.18	2.17	2.98	ppb
Arsenic	75-2	27.17	26.69	28.37	27.41	3.16	ppb
Barium	135-1	719.29	669.76	692.14	693.73	3.58	ppb
Barium	137-1	730.25	678.00	693.06	700.43	3.84	ppb
Beryllium	9-1	2.95	2.79	2.81	2.85	3.05	ppb
Bismuth	209-1				88		%
Bismuth	209-2				84		%
Bromine	81-1						cps
Cadmium	108-1	5.44	6.05	6.40	5.96	8.12	ppb
Cadmium	106-1	6.06	4.68	5.79	5.51	13.32	ppb
Cadmium	111-1	6.58	6.10	6.32	6.33	3.76	ppb
Calcium	43-1	168786.30	155461.14	168400.08	164215.84	4.62	ppb
Calcium	44-1	168555.38	155405.59	166159.80	163373.59	4.29	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	62.43	61.79	62.81	62.34	0.83	ppb
Cobalt	59-2	22.02	21.73	21.75	21.83	0.73	ppb
Copper	63-2	177.73	176.42	179.88	178.01	0.98	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				95		%
Holmium	165-2				90		%
Indium	115-1				91		%
Indium	115-2				84		%
Iron	54-2	59538.61	59824.07	59278.90	59547.19	0.46	ppb
Iron	56-2	58970.89	58738.59	59492.09	59067.19	0.65	ppb
Iron	57-2	60925.53	60755.05	60980.15	60886.91	0.19	ppb
Krypton	83-1						cps
Lead	206-1	485.43	455.13	468.22	469.59	3.24	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-08	Instrumnet Name :	P8
Client Sample ID :	MH2H21	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:25:29	DataFile Name :	070AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	459.67	428.85	453.63	447.38	3.65	ppb
Lead	208-1	466.11	437.63	454.22	452.65	3.16	ppb
Lithium	6-1				82		%
Magnesium	24-2	37823.27	37884.40	38286.03	37997.90	0.66	ppb
Manganese	55-2	2805.68	2802.31	2864.30	2824.10	1.23	ppb
Molybdenum	94-1	8.72	8.13	8.49	8.45	3.52	ppb
Molybdenum	95-1	5.13	4.80	5.05	4.99	3.47	ppb
Molybdenum	96-1	5.64	5.42	5.53	5.53	1.98	ppb
Molybdenum	97-1	5.26	4.91	5.07	5.08	3.54	ppb
Molybdenum	98-1	5.05	4.81	4.99	4.95	2.48	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	79.53	78.13	79.33	79.00	0.96	ppb
Phosphorus	31-2	3098.76	3310.84	3187.98	3199.19	3.33	ppb
Potassium	39-2	4336.21	4310.82	4352.33	4333.12	0.48	ppb
Rhodium	103-1				88		%
Rhodium	103-2				87		%
Scandium	45-1				91		%
Scandium	45-2				87		%
Selenium	82-1	3.16	2.49	2.87	2.84	11.79	ppb
Selenium	77-2	67.12	73.76	74.17	71.68	5.52	ppb
Selenium	78-2	13.80	14.88	13.49	14.06	5.20	ppb
Silicon	28-1	663.67	618.17	675.64	652.50	4.65	ppb
Silver	107-1	1.88	1.70	1.78	1.78	5.06	ppb
Silver	109-1	1.82	1.71	1.83	1.79	3.60	ppb
Sodium	23-2	878.57	875.34	880.45	878.12	0.29	ppb
Strontium	86-1	10596.89	10105.61	10416.49	10373.00	2.40	ppb
Strontium	88-1	10869.90	10144.75	10368.92	10461.19	3.55	ppb
Sulfur	34-1	1427.57	964.95	1279.79	1224.10	19.30	ppb
Terbium	159-1				96		%
Terbium	159-2				89		%
Thallium	203-1	0.76	0.73	0.74	0.74	1.71	ppb
Thallium	205-1	0.76	0.72	0.78	0.75	3.85	ppb
Tin	118-1	6.90	6.42	6.71	6.68	3.59	ppb
Titanium	47-1	288.22	266.66	284.15	279.68	4.10	ppb
Uranium	238-1	4.39	4.11	4.32	4.27	3.40	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-08	Instrumnet Name :	P8
Client Sample ID :	MH2H21	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:25:29	DataFile Name :	070AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	93.82	93.13	93.86	93.60	0.44	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				101		%
Yttrium	89-2				95		%
Zinc	66-2	1383.31	1374.63	1378.92	1378.95	0.31	ppb
Zirconium	90-1	2.43	2.31	2.34	2.36	2.61	ppb
Zirconium	91-1	2.47	2.31	2.36	2.38	3.35	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-09	Instrumnet Name :	P8
Client Sample ID :	MH2H22	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:28:39	DataFile Name :	071AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19726.85	19704.00	19503.81	19644.89	0.62	ppb
Antimony	121-1	1.67	1.75	1.81	1.74	3.90	ppb
Arsenic	75-2	26.99	25.43	26.11	26.18	3.00	ppb
Barium	135-1	763.82	794.84	797.24	785.30	2.37	ppb
Barium	137-1	772.80	795.81	790.42	786.34	1.53	ppb
Beryllium	9-1	2.37	2.36	2.37	2.37	0.25	ppb
Bismuth	209-1				87		%
Bismuth	209-2				84		%
Bromine	81-1						cps
Cadmium	108-1	4.82	5.16	5.21	5.06	4.23	ppb
Cadmium	106-1	5.07	6.39	4.41	5.29	19.09	ppb
Cadmium	111-1	5.38	5.45	5.46	5.43	0.82	ppb
Calcium	43-1	190791.70	193265.01	197912.97	193989.89	1.86	ppb
Calcium	44-1	191884.47	194340.57	199545.67	195256.90	2.00	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	36.00	35.08	36.22	35.77	1.69	ppb
Cobalt	59-2	22.64	22.44	22.45	22.51	0.50	ppb
Copper	63-2	130.68	130.26	130.09	130.34	0.23	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				93		%
Holmium	165-2				90		%
Indium	115-1				90		%
Indium	115-2				84		%
Iron	54-2	55132.24	53774.91	55474.80	54793.98	1.64	ppb
Iron	56-2	55197.94	54762.47	54475.97	54812.13	0.66	ppb
Iron	57-2	54961.53	56500.57	55494.26	55652.12	1.40	ppb
Krypton	83-1						cps
Lead	206-1	334.98	341.91	343.53	340.14	1.33	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-09	Instrumnet Name :	P8
Client Sample ID :	MH2H22	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:28:39	DataFile Name :	071AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	323.20	324.36	327.64	325.07	0.71	ppb
Lead	208-1	325.21	330.44	334.04	329.90	1.35	ppb
Lithium	6-1				81		%
Magnesium	24-2	17422.23	17243.60	17069.57	17245.14	1.02	ppb
Manganese	55-2	1867.59	1869.69	1880.94	1872.74	0.38	ppb
Molybdenum	94-1	8.95	9.16	9.45	9.19	2.71	ppb
Molybdenum	95-1	5.78	5.93	6.14	5.95	3.08	ppb
Molybdenum	96-1	6.38	6.38	6.70	6.49	2.83	ppb
Molybdenum	97-1	5.79	5.83	6.10	5.90	2.90	ppb
Molybdenum	98-1	5.74	5.88	5.94	5.86	1.75	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	95.06	94.58	94.60	94.74	0.28	ppb
Phosphorus	31-2	3161.52	3119.57	3082.72	3121.27	1.26	ppb
Potassium	39-2	4691.23	4676.70	4651.78	4673.24	0.43	ppb
Rhodium	103-1				87		%
Rhodium	103-2				86		%
Scandium	45-1				90		%
Scandium	45-2				88		%
Selenium	82-1	1.76	1.60	2.20	1.86	16.84	ppb
Selenium	77-2	76.45	70.81	66.73	71.33	6.84	ppb
Selenium	78-2	15.81	12.56	14.11	14.16	11.49	ppb
Silicon	28-1	478.36	498.17	509.66	495.40	3.20	ppb
Silver	107-1	1.29	1.32	1.35	1.32	2.54	ppb
Silver	109-1	1.30	1.33	1.43	1.35	4.96	ppb
Sodium	23-2	1506.45	1498.12	1498.67	1501.08	0.31	ppb
Strontium	86-1	12469.32	12679.78	12793.84	12647.64	1.30	ppb
Strontium	88-1	12372.24	12643.79	13128.30	12714.78	3.01	ppb
Sulfur	34-1	596.12	616.93	712.02	641.69	9.63	ppb
Terbium	159-1				93		%
Terbium	159-2				89		%
Thallium	203-1	0.84	0.86	0.85	0.85	1.60	ppb
Thallium	205-1	0.82	0.86	0.86	0.85	2.57	ppb
Tin	118-1	6.18	6.22	6.29	6.23	0.90	ppb
Titanium	47-1	246.73	253.03	256.29	252.02	1.93	ppb
Uranium	238-1	4.70	4.79	4.87	4.78	1.72	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-09	Instrumnet Name :	P8
Client Sample ID :	MH2H22	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:28:39	DataFile Name :	071AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	107.87	107.55	108.00	107.81	0.21	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				101		%
Yttrium	89-2				96		%
Zinc	66-2	896.22	895.51	894.99	895.57	0.07	ppb
Zirconium	90-1	2.33	2.35	2.38	2.35	1.24	ppb
Zirconium	91-1	2.37	2.45	2.47	2.43	2.30	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV011	Instrumnet Name :	P8
Client Sample ID :	CCV011	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:31:47	DataFile Name :	072CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	49396.04	49825.69	49367.35	49529.69	0.52	ppb
Antimony	121-1	487.32	502.46	495.27	495.02	1.53	ppb
Arsenic	75-2	492.33	492.09	485.45	489.96	0.80	ppb
Barium	135-1	2477.53	2534.52	2494.76	2502.27	1.17	ppb
Barium	137-1	2518.15	2539.47	2483.32	2513.65	1.13	ppb
Beryllium	9-1	506.90	527.72	512.68	515.77	2.08	ppb
Bismuth	209-1				77		%
Bismuth	209-2				73		%
Bromine	81-1						cps
Cadmium	108-1	470.90	473.42	466.99	470.43	0.69	ppb
Cadmium	106-1	472.31	474.64	473.60	473.52	0.25	ppb
Cadmium	111-1	453.68	455.23	452.89	453.94	0.26	ppb
Calcium	43-1	244849.39	249207.75	247213.44	247090.20	0.88	ppb
Calcium	44-1	250229.73	250924.29	251031.33	250728.45	0.17	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	493.20	495.55	483.41	490.72	1.31	ppb
Cobalt	59-2	515.73	520.93	500.51	512.39	2.07	ppb
Copper	63-2	5001.33	5060.72	4918.89	4993.65	1.43	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				87		%
Holmium	165-2				84		%
Indium	115-1				81		%
Indium	115-2				76		%
Iron	54-2	128873.55	129917.29	127401.26	128730.70	0.98	ppb
Iron	56-2	129351.92	129735.09	125587.21	128224.74	1.79	ppb
Iron	57-2	129377.75	129192.94	129805.91	129458.86	0.24	ppb
Krypton	83-1						cps
Lead	206-1	2561.26	2581.57	2600.76	2581.20	0.77	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV011	Instrumnet Name :	P8
Client Sample ID :	CCV011	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:31:47	DataFile Name :	072CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2545.37	2556.59	2569.27	2557.08	0.47	ppb
Lead	208-1	2543.86	2548.02	2571.30	2554.39	0.58	ppb
Lithium	6-1				73		%
Magnesium	24-2	250748.59	252834.40	248638.77	250740.58	0.84	ppb
Manganese	55-2	5121.26	5139.22	5021.13	5093.87	1.25	ppb
Molybdenum	94-1	4951.07	5071.94	5008.66	5010.55	1.21	ppb
Molybdenum	95-1	4946.68	5111.25	5038.61	5032.18	1.64	ppb
Molybdenum	96-1	5000.92	5110.20	5042.34	5051.15	1.09	ppb
Molybdenum	97-1	5003.16	5082.75	5022.91	5036.27	0.82	ppb
Molybdenum	98-1	4967.09	5035.47	5055.93	5019.50	0.93	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	500.17	502.10	492.54	498.27	1.01	ppb
Phosphorus	31-2	9696.59	9877.34	9496.07	9690.00	1.97	ppb
Potassium	39-2	123422.96	124697.20	121773.39	123297.85	1.19	ppb
Rhodium	103-1				76		%
Rhodium	103-2				75		%
Scandium	45-1				82		%
Scandium	45-2				80		%
Selenium	82-1	469.45	480.15	479.45	476.35	1.26	ppb
Selenium	77-2	450.41	472.07	478.05	466.85	3.12	ppb
Selenium	78-2	472.46	486.69	446.43	468.53	4.36	ppb
Silicon	28-1	498.64	506.40	501.90	502.32	0.78	ppb
Silver	107-1	466.39	467.95	467.74	467.36	0.18	ppb
Silver	109-1	473.92	468.43	476.38	472.91	0.86	ppb
Sodium	23-2	253410.78	253092.97	248824.19	251775.98	1.02	ppb
Strontium	86-1	12493.84	12792.32	12818.48	12701.54	1.42	ppb
Strontium	88-1	12508.91	12662.65	12661.13	12610.90	0.70	ppb
Sulfur	34-1	11059.95	11198.29	11104.12	11120.79	0.64	ppb
Terbium	159-1				87		%
Terbium	159-2				82		%
Thallium	203-1	519.82	518.91	525.95	521.56	0.73	ppb
Thallium	205-1	517.07	526.63	522.04	521.91	0.92	ppb
Tin	118-1	503.66	506.78	492.37	500.94	1.51	ppb
Titanium	47-1	4978.59	5033.41	5075.26	5029.09	0.96	ppb
Uranium	238-1	515.40	524.84	531.74	523.99	1.56	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV011	Instrumnet Name :	P8
Client Sample ID :	CCV011	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:31:47	DataFile Name :	072CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	498.65	501.84	493.18	497.89	0.88	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				86		%
Yttrium	89-2				81		%
Zinc	66-2	4676.12	4744.77	4654.64	4691.84	1.00	ppb
Zirconium	90-1	498.33	502.25	502.96	501.18	0.50	ppb
Zirconium	91-1	508.27	520.97	514.16	514.47	1.24	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB011	Instrumnet Name :	P8
Client Sample ID :	CCB011	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:42:42	DataFile Name :	075CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.55	-0.17	-0.09	-0.27		ppb
Antimony	121-1	0.01	0.01	0.01	0.01	16.67	ppb
Arsenic	75-2	-0.02	-0.02	0.00	-0.01		ppb
Barium	135-1	0.13	0.14	0.16	0.14	10.34	ppb
Barium	137-1	0.15	0.12	0.13	0.14	9.61	ppb
Beryllium	9-1	0.03	0.04	0.03	0.03	14.63	ppb
Bismuth	209-1				89		%
Bismuth	209-2				86		%
Bromine	81-1						cps
Cadmium	108-1	-0.02	-0.06	-0.04	-0.04		ppb
Cadmium	106-1	-2.12	-1.21	-2.27	-1.87		ppb
Cadmium	111-1	-0.17	-0.09	-0.18	-0.15		ppb
Calcium	43-1	0.66	2.70	-1.98	0.46	511.72	ppb
Calcium	44-1	-1.32	-0.97	-1.36	-1.22		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.03	0.01	0.00	-0.01		ppb
Cobalt	59-2	-0.01	0.00	-0.02	-0.01		ppb
Copper	63-2	-0.10	-0.08	-0.20	-0.13		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				89		%
Holmium	165-2				87		%
Indium	115-1				89		%
Indium	115-2				82		%
Iron	54-2	1.00	1.03	0.93	0.99	5.50	ppb
Iron	56-2	0.94	0.57	2.33	1.28	72.61	ppb
Iron	57-2	0.25	0.86	-1.07	0.02	6288.71	ppb
Krypton	83-1						cps
Lead	206-1	0.13	0.13	0.12	0.13	5.07	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB011	Instrumnet Name :	P8
Client Sample ID :	CCB011	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:42:42	DataFile Name :	075CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.11	0.14	0.11	0.12	12.39	ppb
Lead	208-1	0.13	0.14	0.12	0.13	5.05	ppb
Lithium	6-1				74		%
Magnesium	24-2	-3.57	-3.78	-4.43	-3.92		ppb
Manganese	55-2	0.22	0.21	0.14	0.19	23.03	ppb
Molybdenum	94-1	-0.01	0.01	0.02	0.01	155.68	ppb
Molybdenum	95-1	0.01	0.01	0.00	0.01	53.16	ppb
Molybdenum	96-1	0.01	0.00	0.00	0.01	100.23	ppb
Molybdenum	97-1	0.01	0.00	0.00	0.00	40.01	ppb
Molybdenum	98-1	0.01	0.02	0.01	0.02	42.45	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.07	0.01	-0.04	0.01	429.68	ppb
Phosphorus	31-2	-18.98	-25.80	-25.87	-23.55		ppb
Potassium	39-2	-1.93	-6.41	-5.73	-4.69		ppb
Rhodium	103-1				87		%
Rhodium	103-2				86		%
Scandium	45-1				82		%
Scandium	45-2				79		%
Selenium	82-1	-0.34	0.28	0.33	0.09	431.32	ppb
Selenium	77-2	0.00	0.00	1.55	0.52	173.21	ppb
Selenium	78-2	-0.04	-0.51	-0.51	-0.35		ppb
Silicon	28-1	-0.50	-0.38	-0.50	-0.46		ppb
Silver	107-1	0.00	0.00	0.01	0.01	45.45	ppb
Silver	109-1	0.01	0.01	0.01	0.01	18.27	ppb
Sodium	23-2	-22.77	-21.50	-22.25	-22.17		ppb
Strontium	86-1	0.17	0.48	0.44	0.36	47.33	ppb
Strontium	88-1	0.44	0.49	0.49	0.48	6.29	ppb
Sulfur	34-1	-259.92	-202.57	-298.10	-253.53		ppb
Terbium	159-1				89		%
Terbium	159-2				86		%
Thallium	203-1	0.03	0.02	0.02	0.02	20.07	ppb
Thallium	205-1	0.02	0.03	0.02	0.02	18.94	ppb
Tin	118-1	-0.08	-0.08	-0.07	-0.08		ppb
Titanium	47-1	0.00	-0.03	0.00	-0.01		ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB011	Instrumnet Name :	P8
Client Sample ID :	CCB011	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:42:42	DataFile Name :	075CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.01	0.00	0.00	82.26	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				87		%
Yttrium	89-2				82		%
Zinc	66-2	0.17	0.05	0.16	0.13	51.47	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00		ppb
Zirconium	91-1	0.00	-0.01	0.00	0.00		ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-10	Instrumnet Name :	P8
Client Sample ID :	MH2H23	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:46:03	DataFile Name :	076AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19704.12	19310.91	19404.70	19473.24	1.05	ppb
Antimony	121-1	1.33	1.32	1.27	1.31	2.70	ppb
Arsenic	75-2	23.08	22.62	24.41	23.37	3.97	ppb
Barium	135-1	1299.88	1296.33	1284.45	1293.55	0.62	ppb
Barium	137-1	1302.63	1291.07	1287.17	1293.62	0.62	ppb
Beryllium	9-1	2.09	2.07	2.09	2.08	0.47	ppb
Bismuth	209-1				86		%
Bismuth	209-2				81		%
Bromine	81-1						cps
Cadmium	108-1	4.48	3.88	3.77	4.04	9.54	ppb
Cadmium	106-1	2.95	4.36	2.94	3.42	24.00	ppb
Cadmium	111-1	4.33	4.58	4.33	4.41	3.26	ppb
Calcium	43-1	246395.72	243228.61	250147.03	246590.46	1.40	ppb
Calcium	44-1	247054.80	244942.35	250516.41	247504.52	1.14	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	37.10	37.02	36.90	37.00	0.27	ppb
Cobalt	59-2	22.93	23.12	22.54	22.86	1.28	ppb
Copper	63-2	104.23	102.37	102.87	103.16	0.93	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				92		%
Holmium	165-2				88		%
Indium	115-1				88		%
Indium	115-2				82		%
Iron	54-2	50392.32	50924.33	50398.26	50571.63	0.60	ppb
Iron	56-2	50780.96	50672.47	50380.84	50611.42	0.41	ppb
Iron	57-2	51508.12	51027.22	51174.60	51236.65	0.48	ppb
Krypton	83-1						cps
Lead	206-1	180.37	180.95	178.59	179.97	0.68	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-10	Instrumnet Name :	P8
Client Sample ID :	MH2H23	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:46:03	DataFile Name :	076AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	172.67	175.08	174.84	174.19	0.76	ppb
Lead	208-1	181.69	185.27	184.27	183.75	1.01	ppb
Lithium	6-1				79		%
Magnesium	24-2	18025.10	18100.27	17946.49	18023.95	0.43	ppb
Manganese	55-2	1324.88	1310.85	1321.14	1318.96	0.55	ppb
Molybdenum	94-1	8.73	8.82	8.76	8.77	0.54	ppb
Molybdenum	95-1	6.17	6.27	6.17	6.20	0.92	ppb
Molybdenum	96-1	6.61	6.47	6.57	6.55	1.11	ppb
Molybdenum	97-1	6.21	6.16	6.12	6.17	0.76	ppb
Molybdenum	98-1	6.21	6.16	6.08	6.15	1.05	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	156.39	156.70	157.85	156.98	0.49	ppb
Phosphorus	31-2	2957.69	3033.28	3083.48	3024.82	2.09	ppb
Potassium	39-2	5024.96	4995.38	5003.92	5008.09	0.30	ppb
Rhodium	103-1				85		%
Rhodium	103-2				83		%
Scandium	45-1				88		%
Scandium	45-2				85		%
Selenium	82-1	1.88	1.24	1.46	1.52	21.26	ppb
Selenium	77-2	84.44	78.26	79.78	80.83	3.98	ppb
Selenium	78-2	10.60	12.12	13.38	12.03	11.57	ppb
Silicon	28-1	667.19	676.36	686.36	676.64	1.42	ppb
Silver	107-1	1.01	1.04	0.98	1.01	2.97	ppb
Silver	109-1	1.03	1.00	1.00	1.01	1.59	ppb
Sodium	23-2	1214.34	1209.70	1218.79	1214.28	0.37	ppb
Strontium	86-1	14836.48	14989.23	14991.17	14938.96	0.59	ppb
Strontium	88-1	15049.16	14862.40	15064.64	14992.07	0.75	ppb
Sulfur	34-1	727.97	707.02	829.88	754.96	8.71	ppb
Terbium	159-1				91		%
Terbium	159-2				87		%
Thallium	203-1	0.96	0.92	0.91	0.93	2.44	ppb
Thallium	205-1	0.97	0.99	0.97	0.98	1.20	ppb
Tin	118-1	4.16	4.10	4.00	4.09	1.91	ppb
Titanium	47-1	194.54	192.66	196.70	194.63	1.04	ppb
Uranium	238-1	5.62	5.70	5.54	5.62	1.41	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-10	Instrumnet Name :	P8
Client Sample ID :	MH2H23	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:46:03	DataFile Name :	076AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	124.96	123.58	124.33	124.29	0.56	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				97		%
Yttrium	89-2				93		%
Zinc	66-2	530.60	527.63	527.76	528.67	0.32	ppb
Zirconium	90-1	1.96	1.98	2.01	1.98	1.04	ppb
Zirconium	91-1	2.04	1.98	1.98	2.00	1.66	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-11	Instrumnet Name :	P8
Client Sample ID :	MH2H24	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:49:18	DataFile Name :	077AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19325.05	19200.69	19244.82	19256.85	0.33	ppb
Antimony	121-1	4.06	4.09	4.06	4.07	0.48	ppb
Arsenic	75-2	43.94	45.48	43.04	44.16	2.80	ppb
Barium	135-1	814.79	819.20	801.41	811.80	1.14	ppb
Barium	137-1	829.54	824.13	810.10	821.26	1.22	ppb
Beryllium	9-1	2.79	2.88	2.89	2.85	1.90	ppb
Bismuth	209-1				89		%
Bismuth	209-2				84		%
Bromine	81-1						cps
Cadmium	108-1	10.55	10.70	10.17	10.47	2.57	ppb
Cadmium	106-1	8.52	9.94	9.81	9.42	8.38	ppb
Cadmium	111-1	10.83	10.96	10.76	10.85	0.94	ppb
Calcium	43-1	156357.23	160963.26	159692.90	159004.46	1.50	ppb
Calcium	44-1	155863.32	160539.97	160751.31	159051.53	1.74	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	62.05	61.67	61.74	61.82	0.33	ppb
Cobalt	59-2	26.10	26.19	26.47	26.25	0.73	ppb
Copper	63-2	302.58	305.54	307.29	305.14	0.78	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				94		%
Holmium	165-2				90		%
Indium	115-1				90		%
Indium	115-2				84		%
Iron	54-2	83048.83	83136.69	82474.07	82886.53	0.43	ppb
Iron	56-2	83502.44	84159.28	83735.27	83798.99	0.40	ppb
Iron	57-2	85331.13	85087.28	83290.06	84569.49	1.32	ppb
Krypton	83-1						cps
Lead	206-1	924.98	919.64	901.05	915.22	1.37	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-11	Instrumnet Name :	P8
Client Sample ID :	MH2H24	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:49:18	DataFile Name :	077AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	875.53	888.70	877.84	880.69	0.80	ppb
Lead	208-1	885.93	895.29	882.98	888.07	0.72	ppb
Lithium	6-1				81		%
Magnesium	24-2	15122.12	15103.79	14871.55	15032.49	0.93	ppb
Manganese	55-2	4348.22	4324.31	4302.92	4325.15	0.52	ppb
Molybdenum	94-1	14.79	15.11	15.28	15.06	1.66	ppb
Molybdenum	95-1	10.49	10.81	10.78	10.69	1.66	ppb
Molybdenum	96-1	11.22	11.34	11.29	11.28	0.52	ppb
Molybdenum	97-1	10.54	10.84	10.69	10.69	1.41	ppb
Molybdenum	98-1	10.47	10.61	10.58	10.55	0.72	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	101.18	101.30	101.88	101.45	0.37	ppb
Phosphorus	31-2	3765.44	3725.38	3676.52	3722.45	1.20	ppb
Potassium	39-2	6453.23	6441.75	6450.71	6448.56	0.09	ppb
Rhodium	103-1				87		%
Rhodium	103-2				86		%
Scandium	45-1				90		%
Scandium	45-2				86		%
Selenium	82-1	1.77	2.50	2.01	2.09	17.95	ppb
Selenium	77-2	82.64	62.91	58.80	68.12	18.71	ppb
Selenium	78-2	11.97	10.40	15.23	12.53	19.64	ppb
Silicon	28-1	692.57	699.05	703.96	698.52	0.82	ppb
Silver	107-1	3.66	3.71	3.72	3.69	0.80	ppb
Silver	109-1	3.66	3.78	3.73	3.73	1.69	ppb
Sodium	23-2	671.92	681.96	685.58	679.82	1.04	ppb
Strontium	86-1	12310.12	12268.18	12379.57	12319.29	0.46	ppb
Strontium	88-1	12183.47	12396.84	12238.27	12272.86	0.90	ppb
Sulfur	34-1	1189.36	1356.76	1361.35	1302.49	7.52	ppb
Terbium	159-1				94		%
Terbium	159-2				89		%
Thallium	203-1	0.69	0.71	0.69	0.70	1.40	ppb
Thallium	205-1	0.72	0.71	0.71	0.71	0.46	ppb
Tin	118-1	17.35	17.77	17.74	17.62	1.32	ppb
Titanium	47-1	302.66	311.27	310.62	308.19	1.56	ppb
Uranium	238-1	4.54	4.61	4.57	4.57	0.74	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-11	Instrumnet Name :	P8
Client Sample ID :	MH2H24	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:49:18	DataFile Name :	077AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	106.64	105.61	107.26	106.50	0.79	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				94		%
Zinc	66-2	3010.11	3010.25	3034.20	3018.19	0.46	ppb
Zirconium	90-1	3.29	3.42	3.35	3.35	2.06	ppb
Zirconium	91-1	3.25	3.47	3.45	3.39	3.55	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-12	Instrumnet Name :	P8
Client Sample ID :	MH2H25	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:52:26	DataFile Name :	078AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	16890.30	16429.77	16806.93	16709.00	1.47	ppb
Antimony	121-1	1.60	1.66	1.66	1.64	2.32	ppb
Arsenic	75-2	28.15	25.43	26.54	26.71	5.12	ppb
Barium	135-1	517.42	552.87	548.06	539.45	3.56	ppb
Barium	137-1	546.55	580.39	584.65	570.53	3.66	ppb
Beryllium	9-1	1.68	1.74	1.73	1.72	1.89	ppb
Bismuth	209-1				90		%
Bismuth	209-2				84		%
Bromine	81-1						cps
Cadmium	108-1	4.05	3.54	4.25	3.95	9.22	ppb
Cadmium	106-1	2.69	3.64	2.93	3.09	15.96	ppb
Cadmium	111-1	4.16	4.54	4.39	4.37	4.36	ppb
Calcium	43-1	117113.80	121033.80	120328.96	119492.19	1.75	ppb
Calcium	44-1	116445.65	121303.08	121858.31	119869.01	2.48	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	26.11	25.57	25.82	25.83	1.04	ppb
Cobalt	59-2	19.00	19.21	19.45	19.22	1.16	ppb
Copper	63-2	121.60	120.44	121.66	121.23	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				96		%
Holmium	165-2				90		%
Indium	115-1				93		%
Indium	115-2				85		%
Iron	54-2	47135.47	46173.29	46967.60	46758.79	1.10	ppb
Iron	56-2	46859.89	45945.39	46476.78	46427.35	0.99	ppb
Iron	57-2	47493.81	47206.89	46461.81	47054.17	1.13	ppb
Krypton	83-1						cps
Lead	206-1	254.92	272.30	267.79	265.00	3.40	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-12	Instrumnet Name :	P8
Client Sample ID :	MH2H25	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:52:26	DataFile Name :	078AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	242.00	257.57	257.14	252.24	3.51	ppb
Lead	208-1	247.63	262.82	258.86	256.44	3.07	ppb
Lithium	6-1				82		%
Magnesium	24-2	11495.27	10974.81	11231.27	11233.78	2.32	ppb
Manganese	55-2	1559.51	1538.94	1555.50	1551.32	0.70	ppb
Molybdenum	94-1	5.96	6.37	6.31	6.21	3.58	ppb
Molybdenum	95-1	3.81	4.05	3.90	3.92	3.05	ppb
Molybdenum	96-1	4.35	4.34	4.40	4.36	0.76	ppb
Molybdenum	97-1	3.86	4.06	4.06	3.99	2.94	ppb
Molybdenum	98-1	3.80	3.96	3.95	3.90	2.32	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	91.92	91.48	91.92	91.78	0.28	ppb
Phosphorus	31-2	3062.96	2937.89	3018.19	3006.35	2.11	ppb
Potassium	39-2	5263.62	5195.86	5250.92	5236.80	0.69	ppb
Rhodium	103-1				89		%
Rhodium	103-2				87		%
Scandium	45-1				91		%
Scandium	45-2				86		%
Selenium	82-1	1.46	1.47	1.46	1.46	0.22	ppb
Selenium	77-2	71.05	76.23	74.69	73.99	3.59	ppb
Selenium	78-2	14.06	8.38	9.16	10.53	29.28	ppb
Silicon	28-1	536.79	552.77	559.72	549.76	2.14	ppb
Silver	107-1	1.19	1.30	1.27	1.25	4.29	ppb
Silver	109-1	1.22	1.28	1.33	1.28	4.38	ppb
Sodium	23-2	339.94	328.09	338.88	335.64	1.95	ppb
Strontium	86-1	6188.28	6429.74	6435.30	6351.11	2.22	ppb
Strontium	88-1	6529.67	6852.01	6840.12	6740.60	2.71	ppb
Sulfur	34-1	122.56	321.83	343.45	262.61	46.37	ppb
Terbium	159-1				95		%
Terbium	159-2				88		%
Thallium	203-1	0.61	0.64	0.65	0.63	3.98	ppb
Thallium	205-1	0.64	0.69	0.68	0.67	3.52	ppb
Tin	118-1	5.58	6.00	5.92	5.83	3.82	ppb
Titanium	47-1	197.92	207.82	208.07	204.60	2.83	ppb
Uranium	238-1	3.41	3.61	3.60	3.54	3.24	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-12	Instrumnet Name :	P8
Client Sample ID :	MH2H25	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:52:26	DataFile Name :	078AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	88.78	87.44	88.05	88.09	0.76	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				103		%
Yttrium	89-2				94		%
Zinc	66-2	783.46	767.42	784.62	778.50	1.24	ppb
Zirconium	90-1	1.62	1.65	1.67	1.65	1.34	ppb
Zirconium	91-1	1.62	1.70	1.65	1.66	2.26	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-13	Instrumnet Name :	P8
Client Sample ID :	MH2H26	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:55:40	DataFile Name :	079AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	18316.72	18035.75	17986.15	18112.87	0.98	ppb
Antimony	121-1	2.93	3.19	3.11	3.08	4.40	ppb
Arsenic	75-2	62.06	63.36	62.77	62.73	1.03	ppb
Barium	135-1	721.81	759.28	769.85	750.31	3.36	ppb
Barium	137-1	716.65	762.70	776.30	751.88	4.16	ppb
Beryllium	9-1	2.35	2.57	2.42	2.45	4.75	ppb
Bismuth	209-1				92		%
Bismuth	209-2				85		%
Bromine	81-1						cps
Cadmium	108-1	9.47	10.62	10.73	10.27	6.78	ppb
Cadmium	106-1	9.20	9.48	9.99	9.56	4.17	ppb
Cadmium	111-1	10.72	11.25	11.54	11.17	3.73	ppb
Calcium	43-1	122533.63	132213.97	131851.95	128866.52	4.26	ppb
Calcium	44-1	123377.12	132702.21	132396.12	129491.82	4.09	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	34.88	34.23	35.19	34.76	1.40	ppb
Cobalt	59-2	24.90	24.28	24.56	24.58	1.26	ppb
Copper	63-2	324.20	320.36	320.19	321.58	0.70	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				96		%
Holmium	165-2				90		%
Indium	115-1				93		%
Indium	115-2				85		%
Iron	54-2	74120.34	72548.41	71392.85	72687.20	1.88	ppb
Iron	56-2	73953.98	71710.68	72846.70	72837.12	1.54	ppb
Iron	57-2	74940.42	73619.70	74301.04	74287.05	0.89	ppb
Krypton	83-1						cps
Lead	206-1	781.16	845.94	850.78	825.96	4.71	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-13	Instrumnet Name :	P8
Client Sample ID :	MH2H26	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:55:40	DataFile Name :	079AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	762.63	830.47	822.66	805.25	4.61	ppb
Lead	208-1	768.80	836.33	827.50	810.88	4.53	ppb
Lithium	6-1				83		%
Magnesium	24-2	12562.51	12355.27	12282.73	12400.17	1.17	ppb
Manganese	55-2	3844.42	3820.13	3793.74	3819.43	0.66	ppb
Molybdenum	94-1	8.82	9.24	9.36	9.14	3.12	ppb
Molybdenum	95-1	4.32	4.79	4.75	4.62	5.55	ppb
Molybdenum	96-1	5.04	5.52	5.30	5.29	4.48	ppb
Molybdenum	97-1	4.40	4.69	4.79	4.63	4.34	ppb
Molybdenum	98-1	4.37	4.63	4.69	4.56	3.72	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	139.56	137.65	138.00	138.40	0.74	ppb
Phosphorus	31-2	3602.05	3409.15	3581.83	3531.01	3.00	ppb
Potassium	39-2	6199.42	6111.70	6126.51	6145.88	0.76	ppb
Rhodium	103-1				90		%
Rhodium	103-2				87		%
Scandium	45-1				93		%
Scandium	45-2				87		%
Selenium	82-1	2.25	1.73	1.67	1.88	17.01	ppb
Selenium	77-2	107.55	66.72	65.54	79.94	29.93	ppb
Selenium	78-2	11.92	12.53	10.97	11.81	6.65	ppb
Silicon	28-1	597.10	634.99	637.52	623.20	3.63	ppb
Silver	107-1	4.00	4.27	4.30	4.19	4.01	ppb
Silver	109-1	4.04	4.44	4.44	4.31	5.32	ppb
Sodium	23-2	569.73	558.21	564.80	564.25	1.02	ppb
Strontium	86-1	8181.07	9348.84	9313.54	8947.82	7.42	ppb
Strontium	88-1	8686.36	9476.85	9359.13	9174.12	4.65	ppb
Sulfur	34-1	233.70	543.25	589.40	455.45	42.47	ppb
Terbium	159-1				96		%
Terbium	159-2				89		%
Thallium	203-1	0.75	0.81	0.80	0.79	4.05	ppb
Thallium	205-1	0.77	0.85	0.83	0.82	4.99	ppb
Tin	118-1	16.97	18.19	18.32	17.83	4.17	ppb
Titanium	47-1	258.70	272.33	272.65	267.89	2.97	ppb
Uranium	238-1	3.52	3.75	3.77	3.68	3.74	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-13	Instrumnet Name :	P8
Client Sample ID :	MH2H26	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:55:40	DataFile Name :	079AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	97.58	95.13	97.48	96.73	1.44	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				104		%
Yttrium	89-2				96		%
Zinc	66-2	2579.02	2521.97	2537.51	2546.16	1.16	ppb
Zirconium	90-1	2.74	2.99	3.02	2.92	5.36	ppb
Zirconium	91-1	2.88	3.01	3.04	2.97	2.85	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01DLX2	Instrumnet Name :	P8
Client Sample ID :	MH2GX1	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 16:58:49	DataFile Name :	080AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	21055.04	21234.88	21239.24	21176.38	0.50	ppb
Antimony	121-1	8.35	8.42	8.49	8.42	0.81	ppb
Arsenic	75-2	129.53	127.90	127.55	128.33	0.82	ppb
Barium	135-1	1550.70	1571.85	1546.10	1556.22	0.88	ppb
Barium	137-1	1506.75	1558.97	1554.77	1540.16	1.88	ppb
Beryllium	9-1	3.59	3.76	3.81	3.72	3.12	ppb
Bismuth	209-1				90		%
Bismuth	209-2				85		%
Bromine	81-1						cps
Cadmium	108-1	8.04	8.16	8.43	8.21	2.45	ppb
Cadmium	106-1	8.37	7.30	8.24	7.97	7.34	ppb
Cadmium	111-1	7.56	7.77	7.87	7.73	2.04	ppb
Calcium	43-1	82254.79	84359.10	84039.23	83551.04	1.36	ppb
Calcium	44-1	81951.85	84340.19	83644.49	83312.18	1.47	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	34.88	35.35	35.20	35.14	0.68	ppb
Cobalt	59-2	18.85	18.99	19.29	19.04	1.18	ppb
Copper	63-2	983.16	998.98	975.20	985.78	1.23	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				94		%
Holmium	165-2				89		%
Indium	115-1				91		%
Indium	115-2				84		%
Iron	54-2	52838.28	52835.18	53666.52	53113.33	0.90	ppb
Iron	56-2	52464.57	52889.33	52662.11	52672.00	0.40	ppb
Iron	57-2	53900.50	53607.50	54657.03	54055.01	1.00	ppb
Krypton	83-1						cps
Lead	206-1	3754.75	3771.85	3792.70	3773.10	0.50	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01DLX2	Instrumnet Name :	P8
Client Sample ID :	MH2GX1	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 16:58:49	DataFile Name :	080AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	3647.30	3571.12	3621.77	3613.40	1.07	ppb
Lead	208-1	3716.90	3680.38	3710.77	3702.68	0.53	ppb
Lithium	6-1				78		%
Magnesium	24-2	6215.18	6254.91	6285.57	6251.89	0.56	ppb
Manganese	55-2	4035.35	4064.36	4078.06	4059.26	0.54	ppb
Molybdenum	94-1	15.84	15.89	15.76	15.83	0.39	ppb
Molybdenum	95-1	8.22	8.20	8.12	8.18	0.66	ppb
Molybdenum	96-1	9.07	9.16	9.22	9.15	0.84	ppb
Molybdenum	97-1	8.13	8.20	8.14	8.16	0.50	ppb
Molybdenum	98-1	8.11	8.15	8.19	8.15	0.49	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	64.89	66.45	66.77	66.04	1.52	ppb
Phosphorus	31-2	1860.73	2035.42	2094.66	1996.94	6.09	ppb
Potassium	39-2	2760.75	2793.74	2764.85	2773.11	0.65	ppb
Rhodium	103-1				88		%
Rhodium	103-2				86		%
Scandium	45-1				88		%
Scandium	45-2				84		%
Selenium	82-1	1.69	1.41	1.44	1.51	10.23	ppb
Selenium	77-2	40.09	52.39	42.95	45.14	14.26	ppb
Selenium	78-2	10.76	6.98	6.60	8.12	28.31	ppb
Silicon	28-1	570.50	595.41	584.54	583.48	2.14	ppb
Silver	107-1	14.34	14.56	14.62	14.51	1.03	ppb
Silver	109-1	14.47	14.73	14.70	14.63	0.95	ppb
Sodium	23-2	1008.89	1035.33	1027.86	1024.03	1.33	ppb
Strontium	86-1	11124.75	11383.13	11086.80	11198.23	1.44	ppb
Strontium	88-1	11151.47	11124.42	11258.74	11178.21	0.64	ppb
Sulfur	34-1	524.72	662.31	599.08	595.37	11.57	ppb
Terbium	159-1				93		%
Terbium	159-2				88		%
Thallium	203-1	0.47	0.47	0.49	0.48	2.33	ppb
Thallium	205-1	0.50	0.50	0.48	0.49	2.61	ppb
Tin	118-1	19.96	20.25	20.48	20.23	1.27	ppb
Titanium	47-1	507.20	524.17	519.62	516.99	1.70	ppb
Uranium	238-1	6.70	6.84	6.83	6.79	1.16	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01DLX2	Instrumnet Name :	P8
Client Sample ID :	MH2GX1	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 16:58:49	DataFile Name :	080AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	67.08	67.46	68.00	67.51	0.68	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				97		%
Yttrium	89-2				91		%
Zinc	66-2	5404.57	5506.10	5471.82	5460.83	0.95	ppb
Zirconium	90-1	4.89	4.92	4.99	4.93	1.02	ppb
Zirconium	91-1	4.87	4.93	4.93	4.91	0.72	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-02DLX2	Instrumnet Name :	P8
Client Sample ID :	MH2GX1D	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 17:02:00	DataFile Name :	081AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	16541.58	19606.32	20723.66	18957.19	11.42	ppb
Antimony	121-1	8.07	8.45	8.50	8.34	2.84	ppb
Arsenic	75-2	101.54	119.93	125.15	115.54	10.74	ppb
Barium	135-1	1494.61	1543.27	1556.40	1531.43	2.13	ppb
Barium	137-1	1488.13	1531.23	1538.74	1519.37	1.80	ppb
Beryllium	9-1	3.58	3.67	3.66	3.64	1.45	ppb
Bismuth	209-1				88		%
Bismuth	209-2				93		%
Bromine	81-1						cps
Cadmium	108-1	7.66	8.47	8.21	8.12	5.09	ppb
Cadmium	106-1	7.48	7.23	7.09	7.27	2.77	ppb
Cadmium	111-1	7.25	7.57	7.62	7.48	2.70	ppb
Calcium	43-1	84123.80	83373.51	83220.08	83572.46	0.58	ppb
Calcium	44-1	83094.93	82607.47	82414.83	82705.74	0.42	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	27.08	32.46	34.13	31.22	11.79	ppb
Cobalt	59-2	14.57	17.45	18.74	16.92	12.61	ppb
Copper	63-2	755.00	910.57	958.50	874.69	12.16	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				93		%
Holmium	165-2				97		%
Indium	115-1				89		%
Indium	115-2				92		%
Iron	54-2	41390.38	48299.18	51687.92	47125.83	11.14	ppb
Iron	56-2	40878.42	48835.34	50961.92	46891.89	11.34	ppb
Iron	57-2	41567.09	49564.79	52535.18	47889.02	11.85	ppb
Krypton	83-1						cps
Lead	206-1	3754.21	3812.44	3828.67	3798.44	1.03	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-02DLX2	Instrumnet Name :	P8
Client Sample ID :	MH2GX1D	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 17:02:00	DataFile Name :	081AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	3574.15	3642.94	3658.21	3625.10	1.24	ppb
Lead	208-1	3664.49	3693.58	3717.28	3691.78	0.72	ppb
Lithium	6-1				77		%
Magnesium	24-2	4828.73	5701.30	6055.30	5528.44	11.42	ppb
Manganese	55-2	3119.46	3725.87	3951.79	3599.04	11.96	ppb
Molybdenum	94-1	15.37	15.59	15.81	15.59	1.39	ppb
Molybdenum	95-1	7.90	7.88	8.15	7.98	1.86	ppb
Molybdenum	96-1	8.86	8.91	9.21	8.99	2.09	ppb
Molybdenum	97-1	7.88	7.91	7.96	7.92	0.54	ppb
Molybdenum	98-1	7.88	7.94	8.04	7.95	0.97	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	50.89	61.04	64.86	58.93	12.25	ppb
Phosphorus	31-2	1491.00	1848.59	2003.94	1781.18	14.77	ppb
Potassium	39-2	2147.17	2552.71	2709.25	2469.71	11.75	ppb
Rhodium	103-1				86		%
Rhodium	103-2				93		%
Scandium	45-1				86		%
Scandium	45-2				93		%
Selenium	82-1	2.25	1.36	1.36	1.66	30.83	ppb
Selenium	77-2	18.16	29.32	41.74	29.74	39.66	ppb
Selenium	78-2	4.98	7.14	9.16	7.09	29.48	ppb
Silicon	28-1	571.97	589.87	570.79	577.54	1.85	ppb
Silver	107-1	13.86	14.58	14.74	14.39	3.27	ppb
Silver	109-1	14.09	14.50	14.60	14.40	1.89	ppb
Sodium	23-2	770.96	919.92	987.06	892.65	12.39	ppb
Strontium	86-1	10685.67	10978.53	10707.94	10790.71	1.51	ppb
Strontium	88-1	10888.90	11067.53	10960.93	10972.45	0.82	ppb
Sulfur	34-1	645.24	623.27	674.24	647.58	3.95	ppb
Terbium	159-1				92		%
Terbium	159-2				95		%
Thallium	203-1	0.47	0.52	0.50	0.49	5.09	ppb
Thallium	205-1	0.49	0.50	0.50	0.50	0.99	ppb
Tin	118-1	19.36	20.02	19.99	19.79	1.89	ppb
Titanium	47-1	508.03	510.97	511.07	510.02	0.34	ppb
Uranium	238-1	6.69	6.81	6.88	6.79	1.43	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-02DLX2	Instrumnet Name :	P8
Client Sample ID :	MH2GX1D	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 17:02:00	DataFile Name :	081AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	52.77	62.20	65.96	60.31	11.26	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				96		%
Yttrium	89-2				99		%
Zinc	66-2	4223.82	5022.96	5356.97	4867.91	11.96	ppb
Zirconium	90-1	4.83	4.85	4.92	4.87	0.94	ppb
Zirconium	91-1	4.80	4.94	4.88	4.87	1.45	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01LDLX10	Instrumnet Name :	P8
Client Sample ID :	MH2GX1L	Dilution Factor :	10
Date & Time Acquired :	2025-01-28 17:05:08	DataFile Name :	082AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	4392.77	4411.75	4431.17	4411.90	0.44	ppb
Antimony	121-1	1.66	1.68	1.69	1.68	0.90	ppb
Arsenic	75-2	26.83	27.46	28.38	27.56	2.83	ppb
Barium	135-1	294.83	294.78	298.13	295.91	0.65	ppb
Barium	137-1	299.72	299.56	303.23	300.84	0.69	ppb
Beryllium	9-1	0.77	0.77	0.77	0.77	0.46	ppb
Bismuth	209-1				88		%
Bismuth	209-2				85		%
Bromine	81-1						cps
Cadmium	108-1	1.39	1.52	1.52	1.48	5.10	ppb
Cadmium	106-1	-0.98	-0.45	-0.79	-0.74		ppb
Cadmium	111-1	1.43	1.46	1.40	1.43	2.25	ppb
Calcium	43-1	16623.76	16721.20	16662.96	16669.30	0.29	ppb
Calcium	44-1	17177.15	17302.30	17244.39	17241.28	0.36	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	7.08	7.32	7.26	7.22	1.70	ppb
Cobalt	59-2	4.05	3.91	4.03	3.99	1.82	ppb
Copper	63-2	198.10	196.27	198.83	197.73	0.67	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				90		%
Holmium	165-2				87		%
Indium	115-1				88		%
Indium	115-2				82		%
Iron	54-2	10478.28	10497.91	10564.29	10513.50	0.43	ppb
Iron	56-2	11114.23	10927.04	10898.46	10979.91	1.07	ppb
Iron	57-2	10595.10	10556.41	10597.60	10583.04	0.22	ppb
Krypton	83-1						cps
Lead	206-1	770.15	796.63	775.93	780.90	1.78	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01LDLX10	Instrumnet Name :	P8
Client Sample ID :	MH2GX1L	Dilution Factor :	10
Date & Time Acquired :	2025-01-28 17:05:08	DataFile Name :	082AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	739.37	761.63	744.98	748.66	1.55	ppb
Lead	208-1	743.08	762.99	752.50	752.86	1.32	ppb
Lithium	6-1				74		%
Magnesium	24-2	1283.14	1303.44	1286.29	1290.96	0.85	ppb
Manganese	55-2	788.58	786.42	792.23	789.08	0.37	ppb
Molybdenum	94-1	3.22	3.32	3.27	3.27	1.62	ppb
Molybdenum	95-1	1.79	1.75	1.77	1.77	1.31	ppb
Molybdenum	96-1	1.94	1.86	2.00	1.93	3.47	ppb
Molybdenum	97-1	1.77	1.79	1.81	1.79	1.10	ppb
Molybdenum	98-1	1.73	1.71	1.72	1.72	0.60	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	14.06	13.90	14.34	14.10	1.56	ppb
Phosphorus	31-2	383.11	406.36	370.93	386.80	4.65	ppb
Potassium	39-2	564.15	560.91	562.51	562.53	0.29	ppb
Rhodium	103-1				86		%
Rhodium	103-2				85		%
Scandium	45-1				84		%
Scandium	45-2				80		%
Selenium	82-1	0.43	0.57	0.43	0.48	16.55	ppb
Selenium	77-2	15.05	16.56	15.09	15.56	5.54	ppb
Selenium	78-2	0.40	1.77	4.96	2.38	98.47	ppb
Silicon	28-1	119.24	118.86	123.42	120.51	2.10	ppb
Silver	107-1	2.95	3.00	3.00	2.98	0.96	ppb
Silver	109-1	3.02	3.01	3.02	3.02	0.30	ppb
Sodium	23-2	185.34	184.79	186.93	185.69	0.60	ppb
Strontium	86-1	2216.20	2259.71	2281.23	2252.38	1.47	ppb
Strontium	88-1	2417.19	2412.90	2441.31	2423.80	0.63	ppb
Sulfur	34-1	-279.10	-272.32	-327.40	-292.94		ppb
Terbium	159-1				90		%
Terbium	159-2				85		%
Thallium	203-1	0.09	0.09	0.09	0.09	0.75	ppb
Thallium	205-1	0.09	0.09	0.09	0.09	1.23	ppb
Tin	118-1	4.01	4.02	4.14	4.06	1.82	ppb
Titanium	47-1	105.36	106.42	105.86	105.88	0.50	ppb
Uranium	238-1	1.37	1.38	1.39	1.38	0.71	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01LDLX10	Instrumnet Name :	P8
Client Sample ID :	MH2GX1L	Dilution Factor :	10
Date & Time Acquired :	2025-01-28 17:05:08	DataFile Name :	082AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	13.77	13.76	13.96	13.83	0.84	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				89		%
Yttrium	89-2				84		%
Zinc	66-2	1149.11	1155.41	1168.87	1157.80	0.87	ppb
Zirconium	90-1	1.03	1.03	1.04	1.03	0.49	ppb
Zirconium	91-1	1.01	1.06	1.03	1.03	2.44	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-03DLX2	Instrumnet Name :	P8
Client Sample ID :	MH2GX1S	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 17:08:26	DataFile Name :	083AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	23125.55	23554.25	23065.47	23248.42	1.15	ppb
Antimony	121-1	19.00	19.07	19.26	19.11	0.71	ppb
Arsenic	75-2	138.71	141.91	141.48	140.70	1.23	ppb
Barium	135-1	1913.72	1887.01	1922.26	1907.66	0.96	ppb
Barium	137-1	1904.63	1903.52	1946.58	1918.24	1.28	ppb
Beryllium	9-1	9.21	9.19	9.45	9.28	1.55	ppb
Bismuth	209-1				87		%
Bismuth	209-2				84		%
Bromine	81-1						cps
Cadmium	108-1	12.71	13.52	12.24	12.82	5.04	ppb
Cadmium	106-1	11.36	11.51	12.12	11.66	3.42	ppb
Cadmium	111-1	13.19	13.25	13.27	13.24	0.30	ppb
Calcium	43-1	91805.01	91248.91	90414.78	91156.23	0.77	ppb
Calcium	44-1	90223.65	90438.55	90818.81	90493.67	0.33	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	58.34	59.31	57.80	58.48	1.31	ppb
Cobalt	59-2	72.47	73.99	72.11	72.86	1.37	ppb
Copper	63-2	1104.79	1126.58	1108.59	1113.32	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				91		%
Holmium	165-2				87		%
Indium	115-1				88		%
Indium	115-2				83		%
Iron	54-2	57771.35	57922.54	57247.17	57647.02	0.61	ppb
Iron	56-2	57267.67	57753.26	57640.56	57553.83	0.44	ppb
Iron	57-2	58167.21	59979.53	57873.20	58673.31	1.94	ppb
Krypton	83-1						cps
Lead	206-1	4200.95	4202.97	4132.30	4178.74	0.96	ppb

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-03DLX2	Instrumnet Name :	P8
Client Sample ID :	MH2GX1S	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 17:08:26	DataFile Name :	083AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	3971.71	3991.11	3932.50	3965.11	0.75	ppb
Lead	208-1	4069.69	4072.29	4025.32	4055.77	0.65	ppb
Lithium	6-1				75		%
Magnesium	24-2	6712.53	6876.92	6710.87	6766.77	1.41	ppb
Manganese	55-2	4403.89	4479.63	4443.52	4442.35	0.85	ppb
Molybdenum	94-1	16.96	17.10	16.74	16.93	1.09	ppb
Molybdenum	95-1	8.75	8.78	8.72	8.75	0.36	ppb
Molybdenum	96-1	9.85	9.88	9.89	9.87	0.20	ppb
Molybdenum	97-1	8.79	9.03	8.87	8.90	1.40	ppb
Molybdenum	98-1	8.80	8.84	8.79	8.81	0.34	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	126.83	129.44	126.57	127.61	1.24	ppb
Phosphorus	31-2	2251.75	2229.64	2126.65	2202.68	3.03	ppb
Potassium	39-2	3004.58	3080.86	2992.79	3026.07	1.58	ppb
Rhodium	103-1				84		%
Rhodium	103-2				84		%
Scandium	45-1				86		%
Scandium	45-2				82		%
Selenium	82-1	3.18	3.81	3.86	3.62	10.45	ppb
Selenium	77-2	49.12	40.92	34.57	41.54	17.56	ppb
Selenium	78-2	7.54	13.13	5.76	8.81	43.65	ppb
Silicon	28-1	632.50	629.96	634.14	632.20	0.33	ppb
Silver	107-1	20.37	20.75	20.82	20.65	1.16	ppb
Silver	109-1	20.98	20.79	20.98	20.91	0.53	ppb
Sodium	23-2	1086.52	1110.10	1096.67	1097.76	1.08	ppb
Strontium	86-1	12059.62	12183.91	12237.40	12160.31	0.75	ppb
Strontium	88-1	12166.02	12138.11	12020.44	12108.19	0.64	ppb
Sulfur	34-1	596.60	595.56	546.92	579.70	4.90	ppb
Terbium	159-1				90		%
Terbium	159-2				86		%
Thallium	203-1	5.34	5.33	5.25	5.31	0.99	ppb
Thallium	205-1	5.31	5.44	5.35	5.37	1.28	ppb
Tin	118-1	22.24	22.09	22.39	22.24	0.67	ppb
Titanium	47-1	561.37	560.05	562.36	561.26	0.21	ppb
Uranium	238-1	7.54	7.60	7.49	7.54	0.79	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-03DLX2	Instrumnet Name :	P8
Client Sample ID :	MH2GX1S	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 17:08:26	DataFile Name :	083AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	123.14	126.08	122.52	123.91	1.54	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				95		%
Yttrium	89-2				90		%
Zinc	66-2	6181.48	6292.06	6296.82	6256.78	1.04	ppb
Zirconium	90-1	5.26	5.28	5.25	5.26	0.31	ppb
Zirconium	91-1	5.31	5.46	5.41	5.39	1.47	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV012	Instrumnet Name :	P8
Client Sample ID :	CCV012	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:17:04	DataFile Name :	086CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	47388.26	48144.07	47123.87	47552.07	1.11	ppb
Antimony	121-1	510.24	485.16	482.91	492.77	3.08	ppb
Arsenic	75-2	466.68	470.88	468.91	468.83	0.45	ppb
Barium	135-1	2597.16	2420.65	2465.68	2494.50	3.68	ppb
Barium	137-1	2577.19	2441.00	2426.73	2481.64	3.35	ppb
Beryllium	9-1	513.43	505.63	514.21	511.09	0.93	ppb
Bismuth	209-1				71		%
Bismuth	209-2				70		%
Bromine	81-1						cps
Cadmium	108-1	543.66	505.47	505.84	518.32	4.23	ppb
Cadmium	106-1	538.31	513.19	502.30	517.93	3.57	ppb
Cadmium	111-1	530.52	506.80	502.63	513.31	2.93	ppb
Calcium	43-1	259364.50	239981.40	242553.22	247299.71	4.26	ppb
Calcium	44-1	259419.22	241439.10	242918.62	247925.65	4.03	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	473.18	474.59	465.75	471.17	1.01	ppb
Cobalt	59-2	470.90	471.12	461.39	467.81	1.19	ppb
Copper	63-2	4822.52	4784.62	4738.07	4781.73	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				80		%
Holmium	165-2				80		%
Indium	115-1				73		%
Indium	115-2				71		%
Iron	54-2	125013.33	122615.29	122536.41	123388.34	1.14	ppb
Iron	56-2	124761.04	124141.33	121779.29	123560.55	1.27	ppb
Iron	57-2	125311.85	125753.58	125606.28	125557.24	0.18	ppb
Krypton	83-1						cps
Lead	206-1	2592.32	2471.17	2529.02	2530.84	2.39	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV012	Instrumnet Name :	P8
Client Sample ID :	CCV012	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:17:04	DataFile Name :	086CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2611.01	2440.53	2490.37	2513.97	3.49	ppb
Lead	208-1	2613.14	2441.48	2499.09	2517.90	3.47	ppb
Lithium	6-1				64		%
Magnesium	24-2	243216.21	240530.92	239128.37	240958.50	0.86	ppb
Manganese	55-2	4966.49	4967.94	4788.24	4907.56	2.11	ppb
Molybdenum	94-1	5227.76	4884.90	4894.96	5002.54	3.90	ppb
Molybdenum	95-1	5212.13	4836.31	4908.47	4985.64	4.00	ppb
Molybdenum	96-1	5222.40	4807.84	4943.65	4991.30	4.23	ppb
Molybdenum	97-1	5230.81	4828.64	4877.31	4978.92	4.41	ppb
Molybdenum	98-1	5243.38	4832.20	4901.99	4992.52	4.41	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	483.46	486.20	475.48	481.71	1.16	ppb
Phosphorus	31-2	9646.92	9065.20	9001.14	9237.75	3.85	ppb
Potassium	39-2	118977.64	116803.60	117050.43	117610.56	1.01	ppb
Rhodium	103-1				68		%
Rhodium	103-2				69		%
Scandium	45-1				73		%
Scandium	45-2				73		%
Selenium	82-1	497.67	459.62	463.58	473.62	4.42	ppb
Selenium	77-2	450.16	408.11	477.26	445.18	7.83	ppb
Selenium	78-2	474.50	446.15	489.18	469.94	4.65	ppb
Silicon	28-1	524.04	486.29	491.09	500.47	4.11	ppb
Silver	107-1	485.04	462.44	449.81	465.77	3.83	ppb
Silver	109-1	486.02	463.78	459.90	469.90	3.00	ppb
Sodium	23-2	241237.05	240646.13	239686.08	240523.09	0.33	ppb
Strontium	86-1	12971.42	12066.88	12407.02	12481.77	3.66	ppb
Strontium	88-1	13212.64	12074.66	12373.68	12553.66	4.70	ppb
Sulfur	34-1	11833.94	10695.28	10901.23	11143.48	5.44	ppb
Terbium	159-1				78		%
Terbium	159-2				77		%
Thallium	203-1	535.19	502.56	515.80	517.85	3.17	ppb
Thallium	205-1	524.72	498.71	513.88	512.44	2.55	ppb
Tin	118-1	509.38	488.82	483.75	493.98	2.75	ppb
Titanium	47-1	5179.90	4877.67	4943.53	5000.37	3.18	ppb
Uranium	238-1	537.64	502.70	514.72	518.35	3.42	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV012	Instrumnet Name :	P8
Client Sample ID :	CCV012	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:17:04	DataFile Name :	086CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	481.60	479.84	476.26	479.23	0.57	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				77		%
Yttrium	89-2				75		%
Zinc	66-2	4579.03	4582.52	4546.01	4569.19	0.44	ppb
Zirconium	90-1	528.82	491.31	487.76	502.63	4.53	ppb
Zirconium	91-1	532.82	490.29	497.02	506.71	4.51	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB012	Instrumnet Name :	P8
Client Sample ID :	CCB012	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:19:57	DataFile Name :	087CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3.47	2.12	1.81	2.47	35.83	ppb
Antimony	121-1	0.17	0.15	0.14	0.15	11.38	ppb
Arsenic	75-2	0.03	0.05	-0.02	0.02	170.76	ppb
Barium	135-1	0.40	0.40	0.36	0.39	5.23	ppb
Barium	137-1	0.40	0.38	0.35	0.38	5.54	ppb
Beryllium	9-1	0.24	0.20	0.20	0.21	11.81	ppb
Bismuth	209-1				84		%
Bismuth	209-2				82		%
Bromine	81-1						cps
Cadmium	108-1	0.04	0.12	-0.02	0.05	141.45	ppb
Cadmium	106-1	-2.01	-2.37	-2.49	-2.29		ppb
Cadmium	111-1	-0.13	-0.15	-0.16	-0.15		ppb
Calcium	43-1	11.41	11.75	11.90	11.69	2.13	ppb
Calcium	44-1	13.17	11.05	11.01	11.74	10.50	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.09	0.02	0.04	0.05	72.21	ppb
Cobalt	59-2	0.02	0.03	0.01	0.02	40.19	ppb
Copper	63-2	0.01	-0.07	-0.08	-0.05		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				86		%
Holmium	165-2				83		%
Indium	115-1				84		%
Indium	115-2				79		%
Iron	54-2	6.65	7.61	5.94	6.73	12.42	ppb
Iron	56-2	8.31	6.51	6.43	7.08	15.02	ppb
Iron	57-2	6.59	5.71	6.56	6.29	7.95	ppb
Krypton	83-1						cps
Lead	206-1	0.32	0.26	0.25	0.28	13.19	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB012	Instrumnet Name :	P8
Client Sample ID :	CCB012	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:19:57	DataFile Name :	087CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.29	0.24	0.26	0.26	10.39	ppb
Lead	208-1	0.30	0.26	0.27	0.27	7.89	ppb
Lithium	6-1				68		%
Magnesium	24-2	8.62	7.04	6.23	7.30	16.65	ppb
Manganese	55-2	0.42	0.27	0.36	0.35	21.27	ppb
Molybdenum	94-1	0.41	0.33	0.31	0.35	14.14	ppb
Molybdenum	95-1	0.35	0.31	0.28	0.32	10.90	ppb
Molybdenum	96-1	0.37	0.31	0.29	0.32	13.81	ppb
Molybdenum	97-1	0.36	0.31	0.33	0.33	7.30	ppb
Molybdenum	98-1	0.38	0.30	0.32	0.34	12.16	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.03	0.04	0.05	0.02	220.02	ppb
Phosphorus	31-2	-22.59	-9.64	-23.35	-18.53		ppb
Potassium	39-2	8.45	1.79	2.99	4.41	80.46	ppb
Rhodium	103-1				83		%
Rhodium	103-2				82		%
Scandium	45-1				78		%
Scandium	45-2				75		%
Selenium	82-1	0.25	0.20	0.22	0.22	11.27	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.51	-0.04	-0.51	-0.35		ppb
Silicon	28-1	-0.34	-0.38	-0.43	-0.38		ppb
Silver	107-1	0.09	0.06	0.05	0.07	27.30	ppb
Silver	109-1	0.08	0.06	0.05	0.06	20.29	ppb
Sodium	23-2	4.36	-1.41	-3.78	-0.28		ppb
Strontium	86-1	0.67	1.03	0.85	0.85	21.53	ppb
Strontium	88-1	0.82	0.62	0.75	0.73	14.15	ppb
Sulfur	34-1	-409.83	-397.45	-448.79	-418.69		ppb
Terbium	159-1				84		%
Terbium	159-2				82		%
Thallium	203-1	0.06	0.05	0.06	0.06	9.51	ppb
Thallium	205-1	0.06	0.05	0.05	0.05	14.70	ppb
Tin	118-1	-0.01	-0.01	0.01	0.00		ppb
Titanium	47-1	0.32	0.28	0.21	0.27	20.53	ppb
Uranium	238-1	0.03	0.02	0.02	0.02	14.45	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB012	Instrumnet Name :	P8
Client Sample ID :	CCB012	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:19:57	DataFile Name :	087CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.02	0.03	0.03	0.03	25.73	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				83		%
Yttrium	89-2				79		%
Zinc	66-2	0.47	0.49	0.21	0.39	39.88	ppb
Zirconium	90-1	0.04	0.04	0.04	0.04	8.33	ppb
Zirconium	91-1	0.04	0.06	0.04	0.05	20.42	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02ARE	Instrumnet Name :	P8
Client Sample ID :	ME2947A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:44:49	DataFile Name :	088AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	13172.59	13259.13	13176.16	13202.63	0.37	ppb
Antimony	121-1	0.41	0.44	0.41	0.42	4.91	ppb
Arsenic	75-2	14.66	14.48	14.61	14.58	0.65	ppb
Barium	135-1	125.46	130.59	128.37	128.14	2.01	ppb
Barium	137-1	126.83	133.12	130.14	130.03	2.42	ppb
Beryllium	9-1	0.99	0.95	0.96	0.97	2.20	ppb
Bismuth	209-1				81		%
Bismuth	209-2				79		%
Bromine	81-1						cps
Cadmium	108-1	0.98	0.95	1.06	1.00	5.43	ppb
Cadmium	106-1	-2.07	-0.86	-1.16	-1.37		ppb
Cadmium	111-1	0.37	0.56	0.49	0.47	20.21	ppb
Calcium	43-1	154589.81	151987.98	156176.32	154251.37	1.37	ppb
Calcium	44-1	154502.72	152856.23	156126.32	154495.09	1.06	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	61.27	62.49	61.67	61.81	1.01	ppb
Cobalt	59-2	18.19	18.65	18.80	18.55	1.71	ppb
Copper	63-2	47.84	48.24	48.56	48.21	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				86		%
Holmium	165-2				84		%
Indium	115-1				80		%
Indium	115-2				78		%
Iron	54-2	49975.89	51404.88	51240.65	50873.81	1.54	ppb
Iron	56-2	50415.92	50675.98	50613.27	50568.39	0.27	ppb
Iron	57-2	51142.82	52141.24	51381.76	51555.27	1.01	ppb
Krypton	83-1						cps
Lead	206-1	56.14	56.80	57.21	56.72	0.95	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02ARE	Instrumnet Name :	P8
Client Sample ID :	ME2947A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:44:49	DataFile Name :	088AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	52.08	52.54	53.48	52.70	1.35	ppb
Lead	208-1	53.60	54.25	54.68	54.18	1.01	ppb
Lithium	6-1				69		%
Magnesium	24-2	24790.26	24851.18	24721.92	24787.79	0.26	ppb
Manganese	55-2	1334.19	1352.46	1337.01	1341.22	0.73	ppb
Molybdenum	94-1	13.57	14.31	14.15	14.01	2.77	ppb
Molybdenum	95-1	8.23	8.53	8.61	8.45	2.38	ppb
Molybdenum	96-1	9.13	9.42	9.43	9.33	1.83	ppb
Molybdenum	97-1	8.53	8.67	8.49	8.56	1.11	ppb
Molybdenum	98-1	8.15	8.58	8.64	8.46	3.19	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	57.63	57.48	58.47	57.86	0.92	ppb
Phosphorus	31-2	941.33	940.93	905.82	929.36	2.19	ppb
Potassium	39-2	1640.96	1657.55	1678.84	1659.12	1.14	ppb
Rhodium	103-1				77		%
Rhodium	103-2				78		%
Scandium	45-1				79		%
Scandium	45-2				78		%
Selenium	82-1	14.40	13.12	13.06	13.53	5.58	ppb
Selenium	77-2	30.47	35.26	45.99	37.24	21.33	ppb
Selenium	78-2	11.91	14.77	17.08	14.59	17.75	ppb
Silicon	28-1	541.34	537.10	547.25	541.90	0.94	ppb
Silver	107-1	0.29	0.26	0.29	0.28	4.70	ppb
Silver	109-1	0.29	0.29	0.31	0.29	4.78	ppb
Sodium	23-2	486.55	495.41	498.04	493.34	1.22	ppb
Strontium	86-1	4596.05	4734.15	4774.09	4701.43	1.99	ppb
Strontium	88-1	4969.09	4987.22	5023.51	4993.27	0.55	ppb
Sulfur	34-1	838.29	853.89	996.63	896.27	9.74	ppb
Terbium	159-1				85		%
Terbium	159-2				81		%
Thallium	203-1	0.56	0.54	0.56	0.55	1.97	ppb
Thallium	205-1	0.58	0.57	0.55	0.57	2.55	ppb
Tin	118-1	0.84	0.86	0.86	0.85	0.89	ppb
Titanium	47-1	174.37	176.12	178.90	176.46	1.29	ppb
Uranium	238-1	2.00	2.00	2.04	2.01	1.19	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02ARE	Instrumnet Name :	P8
Client Sample ID :	ME2947A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:44:49	DataFile Name :	088AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	40.84	40.03	40.38	40.42	1.00	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				85		%
Yttrium	89-2				82		%
Zinc	66-2	221.59	224.70	221.26	222.51	0.85	ppb
Zirconium	90-1	3.70	3.90	3.92	3.84	3.19	ppb
Zirconium	91-1	3.66	3.80	3.81	3.76	2.30	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-09A	Instrumnet Name :	P8
Client Sample ID :	ME2944A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:48:04	DataFile Name :	089AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	6.64	6.36	4.49	5.83	19.99	ppb
Antimony	121-1	0.01	0.00	0.00	0.01	58.61	ppb
Arsenic	75-2	0.08	0.10	0.10	0.09	14.37	ppb
Barium	135-1	7.78	6.80	5.79	6.79	14.60	ppb
Barium	137-1	7.66	6.90	5.97	6.84	12.43	ppb
Beryllium	9-1	0.04	0.04	0.03	0.03	20.17	ppb
Bismuth	209-1				77		%
Bismuth	209-2				73		%
Bromine	81-1						cps
Cadmium	108-1	0.03	0.08	-0.03	0.03	217.32	ppb
Cadmium	106-1	-0.49	-1.89	-1.96	-1.45		ppb
Cadmium	111-1	-0.04	-0.14	-0.14	-0.11		ppb
Calcium	43-1	451246.64	407072.10	353569.09	403962.61	12.11	ppb
Calcium	44-1	449601.64	404669.65	357038.72	403770.00	11.46	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.04	0.03	0.05	0.04	33.71	ppb
Cobalt	59-2	0.01	0.00	0.01	0.01	59.18	ppb
Copper	63-2	-0.09	-0.13	-0.05	-0.09		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				85		%
Holmium	165-2				82		%
Indium	115-1				80		%
Indium	115-2				75		%
Iron	54-2	448.13	442.44	459.38	449.99	1.92	ppb
Iron	56-2	448.56	451.50	462.35	454.14	1.60	ppb
Iron	57-2	460.10	459.96	462.88	460.98	0.36	ppb
Krypton	83-1						cps
Lead	206-1	0.16	0.10	0.07	0.11	41.44	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-09A	Instrumnet Name :	P8
Client Sample ID :	ME2944A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:48:04	DataFile Name :	089AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.18	0.10	0.07	0.11	48.73	ppb
Lead	208-1	0.17	0.10	0.07	0.11	44.25	ppb
Lithium	6-1				68		%
Magnesium	24-2	124232.22	122649.46	126719.26	124533.65	1.65	ppb
Manganese	55-2	36.76	36.54	36.86	36.72	0.46	ppb
Molybdenum	94-1	0.75	0.68	0.61	0.68	10.67	ppb
Molybdenum	95-1	0.78	0.66	0.57	0.67	15.60	ppb
Molybdenum	96-1	0.81	0.74	0.59	0.72	15.43	ppb
Molybdenum	97-1	0.78	0.70	0.62	0.70	11.46	ppb
Molybdenum	98-1	0.73	0.69	0.57	0.66	12.92	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.20	0.23	0.37	0.26	33.45	ppb
Phosphorus	31-2	-11.40	-16.23	-13.43	-13.69		ppb
Potassium	39-2	3211.59	3170.69	3248.97	3210.42	1.22	ppb
Rhodium	103-1				76		%
Rhodium	103-2				75		%
Scandium	45-1				78		%
Scandium	45-2				75		%
Selenium	82-1	17.33	15.68	13.83	15.61	11.21	ppb
Selenium	77-2	14.60	19.33	22.51	18.82	21.15	ppb
Selenium	78-2	11.74	12.63	15.51	13.29	14.84	ppb
Silicon	28-1	952.72	864.98	756.92	858.21	11.43	ppb
Silver	107-1	0.03	0.03	0.02	0.03	28.41	ppb
Silver	109-1	0.02	0.02	0.02	0.02	20.32	ppb
Sodium	23-2	32489.91	32640.48	33808.55	32979.65	2.19	ppb
Strontium	86-1	303096.14	273426.47	236489.27	271003.96	12.31	ppb
Strontium	88-1	306596.77	274537.93	242966.72	274700.47	11.58	ppb
Sulfur	34-1	474468.63	432955.22	370446.13	425956.66	12.29	ppb
Terbium	159-1				84		%
Terbium	159-2				80		%
Thallium	203-1	0.03	0.02	0.01	0.02	52.75	ppb
Thallium	205-1	0.02	0.01	0.00	0.01	91.06	ppb
Tin	118-1	-0.15	-0.21	-0.23	-0.19		ppb
Titanium	47-1	0.83	0.72	0.55	0.70	20.25	ppb
Uranium	238-1	0.05	0.04	0.03	0.04	16.02	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-09A	Instrumnet Name :	P8
Client Sample ID :	ME2944A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:48:04	DataFile Name :	089AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.03	0.03	0.04	0.03	21.28	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				82		%
Yttrium	89-2				78		%
Zinc	66-2	0.28	0.64	0.38	0.43	42.78	ppb
Zirconium	90-1	0.07	0.07	0.04	0.06	20.41	ppb
Zirconium	91-1	0.09	0.06	0.06	0.07	20.57	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01A	Instrumnet Name :	P8
Client Sample ID :	MH2GX1A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:51:23	DataFile Name :	090AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	44386.78	44175.46	44210.20	44257.48	0.26	ppb
Antimony	121-1	16.96	17.08	17.16	17.07	0.60	ppb
Arsenic	75-2	248.06	243.68	244.97	245.57	0.92	ppb
Barium	135-1	3096.07	3099.49	3169.76	3121.77	1.33	ppb
Barium	137-1	3079.75	3133.96	3189.30	3134.33	1.75	ppb
Beryllium	9-1	7.56	7.56	7.65	7.59	0.68	ppb
Bismuth	209-1				82		%
Bismuth	209-2				78		%
Bromine	81-1						cps
Cadmium	108-1	15.83	16.08	17.06	16.32	3.97	ppb
Cadmium	106-1	17.48	17.60	18.97	18.01	4.58	ppb
Cadmium	111-1	15.73	15.61	15.76	15.70	0.51	ppb
Calcium	43-1	167225.39	166552.10	168949.42	167575.64	0.74	ppb
Calcium	44-1	169040.63	167582.36	169651.73	168758.24	0.63	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	70.59	69.67	69.58	69.94	0.80	ppb
Cobalt	59-2	38.24	38.16	37.77	38.06	0.67	ppb
Copper	63-2	1946.07	1899.39	1914.83	1920.09	1.24	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				87		%
Holmium	165-2				85		%
Indium	115-1				83		%
Indium	115-2				78		%
Iron	54-2	104405.40	104450.97	103203.87	104020.08	0.68	ppb
Iron	56-2	106402.28	104058.65	103418.13	104626.36	1.50	ppb
Iron	57-2	107840.14	105882.26	106249.01	106657.14	0.98	ppb
Krypton	83-1						cps
Lead	206-1	7789.09	8036.36	7799.32	7874.92	1.78	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01A	Instrumnet Name :	P8
Client Sample ID :	MH2GX1A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:51:23	DataFile Name :	090AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	7471.13	7670.32	7499.43	7546.96	1.43	ppb
Lead	208-1	7601.83	7782.84	7624.56	7669.74	1.29	ppb
Lithium	6-1				69		%
Magnesium	24-2	12986.99	12908.15	12644.49	12846.54	1.40	ppb
Manganese	55-2	8066.33	7917.64	7867.12	7950.36	1.30	ppb
Molybdenum	94-1	30.55	30.23	30.90	30.56	1.10	ppb
Molybdenum	95-1	15.72	15.76	15.96	15.82	0.82	ppb
Molybdenum	96-1	17.59	17.67	17.68	17.65	0.30	ppb
Molybdenum	97-1	16.00	16.10	16.12	16.07	0.40	ppb
Molybdenum	98-1	15.71	15.68	15.74	15.71	0.17	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	133.19	130.30	130.20	131.23	1.30	ppb
Phosphorus	31-2	4159.39	4259.33	4031.05	4149.92	2.76	ppb
Potassium	39-2	5647.18	5621.38	5553.05	5607.20	0.87	ppb
Rhodium	103-1				78		%
Rhodium	103-2				78		%
Scandium	45-1				81		%
Scandium	45-2				79		%
Selenium	82-1	15.44	15.57	13.76	14.92	6.79	ppb
Selenium	77-2	85.01	96.44	86.51	89.32	6.95	ppb
Selenium	78-2	31.89	23.13	34.46	29.83	19.93	ppb
Silicon	28-1	1157.47	1165.66	1187.89	1170.34	1.34	ppb
Silver	107-1	28.31	28.66	29.29	28.75	1.72	ppb
Silver	109-1	28.76	29.11	29.34	29.07	1.00	ppb
Sodium	23-2	2115.97	2071.32	2073.89	2087.06	1.20	ppb
Strontium	86-1	21474.23	21319.07	21572.95	21455.42	0.60	ppb
Strontium	88-1	21161.92	21716.18	21733.42	21537.17	1.51	ppb
Sulfur	34-1	1900.83	1808.38	1887.85	1865.69	2.68	ppb
Terbium	159-1				86		%
Terbium	159-2				82		%
Thallium	203-1	1.05	1.10	1.08	1.08	2.26	ppb
Thallium	205-1	1.06	1.12	1.08	1.09	2.90	ppb
Tin	118-1	40.20	40.91	41.36	40.82	1.43	ppb
Titanium	47-1	1076.37	1067.54	1104.08	1082.66	1.76	ppb
Uranium	238-1	14.34	14.63	14.47	14.48	0.99	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01A	Instrumnet Name :	P8
Client Sample ID :	MH2GX1A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:51:23	DataFile Name :	090AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	137.39	134.66	135.53	135.86	1.03	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				94		%
Yttrium	89-2				90		%
Zinc	66-2	11466.10	11255.36	11227.93	11316.46	1.15	ppb
Zirconium	90-1	9.53	9.52	9.65	9.57	0.80	ppb
Zirconium	91-1	9.48	9.75	9.84	9.69	1.97	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02A	Instrumnet Name :	P8
Client Sample ID :	ME2947A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:55:40	DataFile Name :	091AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	12603.24	13032.35	13157.10	12930.90	2.25	ppb
Antimony	121-1	0.43	0.46	0.42	0.44	4.73	ppb
Arsenic	75-2	13.83	15.09	14.79	14.57	4.52	ppb
Barium	135-1	134.57	141.19	132.61	136.12	3.30	ppb
Barium	137-1	135.55	142.31	134.97	137.61	2.97	ppb
Beryllium	9-1	0.98	1.05	0.98	1.00	3.93	ppb
Bismuth	209-1				78		%
Bismuth	209-2				80		%
Bromine	81-1						cps
Cadmium	108-1	1.24	1.30	1.26	1.27	2.75	ppb
Cadmium	106-1	-0.30	0.36	-0.38	-0.11		ppb
Cadmium	111-1	0.58	0.61	0.56	0.58	4.23	ppb
Calcium	43-1	160503.29	163727.15	158232.61	160821.01	1.72	ppb
Calcium	44-1	159633.91	165450.81	158110.14	161064.95	2.41	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	59.54	61.87	63.14	61.51	2.97	ppb
Cobalt	59-2	18.07	18.65	18.91	18.55	2.33	ppb
Copper	63-2	47.18	48.92	49.58	48.56	2.55	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				82		%
Holmium	165-2				86		%
Indium	115-1				78		%
Indium	115-2				79		%
Iron	54-2	49806.78	50547.68	52111.38	50821.95	2.32	ppb
Iron	56-2	49539.68	50730.32	51322.31	50530.77	1.80	ppb
Iron	57-2	50141.71	51489.98	52100.09	51243.93	1.96	ppb
Krypton	83-1						cps
Lead	206-1	59.35	61.27	59.05	59.89	2.01	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02A	Instrumnet Name :	P8
Client Sample ID :	ME2947A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:55:40	DataFile Name :	091AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	55.13	57.02	54.94	55.70	2.07	ppb
Lead	208-1	56.52	58.71	56.25	57.16	2.36	ppb
Lithium	6-1				68		%
Magnesium	24-2	24137.12	24942.13	25094.85	24724.70	2.08	ppb
Manganese	55-2	1293.32	1333.92	1353.36	1326.87	2.31	ppb
Molybdenum	94-1	14.65	15.05	14.34	14.68	2.44	ppb
Molybdenum	95-1	8.81	9.12	8.63	8.85	2.76	ppb
Molybdenum	96-1	9.62	9.88	9.46	9.65	2.22	ppb
Molybdenum	97-1	8.93	9.20	8.80	8.98	2.29	ppb
Molybdenum	98-1	8.75	9.17	8.65	8.86	3.13	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	56.42	58.12	59.02	57.85	2.28	ppb
Phosphorus	31-2	858.29	886.36	889.03	877.89	1.94	ppb
Potassium	39-2	1599.77	1648.93	1694.64	1647.78	2.88	ppb
Rhodium	103-1				77		%
Rhodium	103-2				81		%
Scandium	45-1				78		%
Scandium	45-2				80		%
Selenium	82-1	14.78	15.50	13.60	14.63	6.53	ppb
Selenium	77-2	63.55	49.91	40.87	51.45	22.19	ppb
Selenium	78-2	16.94	21.41	13.21	17.19	23.91	ppb
Silicon	28-1	555.33	574.04	549.17	559.51	2.31	ppb
Silver	107-1	0.33	0.34	0.32	0.33	3.12	ppb
Silver	109-1	0.34	0.36	0.31	0.34	7.60	ppb
Sodium	23-2	489.56	520.20	518.62	509.46	3.39	ppb
Strontium	86-1	4847.74	5101.03	4781.60	4910.12	3.43	ppb
Strontium	88-1	5158.93	5443.99	5097.55	5233.49	3.53	ppb
Sulfur	34-1	936.20	1236.14	993.67	1055.34	15.08	ppb
Terbium	159-1				83		%
Terbium	159-2				84		%
Thallium	203-1	0.47	0.48	0.49	0.48	2.18	ppb
Thallium	205-1	0.46	0.51	0.49	0.48	5.15	ppb
Tin	118-1	0.92	0.98	0.92	0.94	4.06	ppb
Titanium	47-1	180.27	189.78	181.12	183.72	2.86	ppb
Uranium	238-1	2.08	2.16	2.06	2.10	2.44	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02A	Instrumnet Name :	P8
Client Sample ID :	ME2947A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:55:40	DataFile Name :	091AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	39.03	40.17	40.84	40.01	2.29	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				84		%
Yttrium	89-2				85		%
Zinc	66-2	684.27	703.65	714.13	700.68	2.16	ppb
Zirconium	90-1	3.92	4.06	3.84	3.94	2.83	ppb
Zirconium	91-1	3.94	4.16	3.94	4.01	3.24	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV013	Instrumnet Name :	P8
Client Sample ID :	CCV013	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 19:06:28	DataFile Name :	094CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	45844.93	46844.52	48784.39	47157.95	3.17	ppb
Antimony	121-1	470.46	493.38	483.73	482.52	2.38	ppb
Arsenic	75-2	466.60	448.98	475.23	463.60	2.89	ppb
Barium	135-1	2418.66	2489.70	2448.77	2452.38	1.45	ppb
Barium	137-1	2383.22	2484.06	2440.61	2435.96	2.08	ppb
Beryllium	9-1	513.85	531.26	518.26	521.12	1.74	ppb
Bismuth	209-1				69		%
Bismuth	209-2				68		%
Bromine	81-1						cps
Cadmium	108-1	448.84	465.65	460.32	458.27	1.87	ppb
Cadmium	106-1	448.58	470.81	459.48	459.63	2.42	ppb
Cadmium	111-1	433.45	449.89	443.59	442.31	1.87	ppb
Calcium	43-1	240823.93	243823.73	235836.84	240161.50	1.68	ppb
Calcium	44-1	238941.07	243022.20	239788.47	240583.91	0.90	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	467.46	466.93	489.27	474.55	2.69	ppb
Cobalt	59-2	460.76	463.49	484.60	469.62	2.78	ppb
Copper	63-2	4787.78	4770.54	5002.98	4853.77	2.67	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				78		%
Holmium	165-2				77		%
Indium	115-1				71		%
Indium	115-2				68		%
Iron	54-2	122225.21	122006.67	127500.37	123910.75	2.51	ppb
Iron	56-2	122428.66	121429.03	128220.51	124026.07	2.96	ppb
Iron	57-2	124166.55	123558.08	128363.61	125362.75	2.09	ppb
Krypton	83-1						cps
Lead	206-1	2509.39	2489.68	2492.73	2497.27	0.42	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV013	Instrumnet Name :	P8
Client Sample ID :	CCV013	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 19:06:28	DataFile Name :	094CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2496.79	2474.85	2471.30	2480.98	0.56	ppb
Lead	208-1	2498.22	2496.97	2472.35	2489.18	0.59	ppb
Lithium	6-1				60		%
Magnesium	24-2	233771.45	233305.65	243759.62	236945.58	2.49	ppb
Manganese	55-2	4897.73	4959.07	5161.66	5006.15	2.76	ppb
Molybdenum	94-1	4817.92	4947.57	4870.46	4878.65	1.34	ppb
Molybdenum	95-1	4821.12	4924.50	4864.74	4870.12	1.07	ppb
Molybdenum	96-1	4869.65	4982.61	4875.91	4909.39	1.29	ppb
Molybdenum	97-1	4790.38	4911.94	4865.23	4855.85	1.26	ppb
Molybdenum	98-1	4803.28	4930.83	4902.51	4878.88	1.37	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	476.55	478.02	500.43	485.00	2.76	ppb
Phosphorus	31-2	9404.92	9403.01	9516.97	9441.63	0.69	ppb
Potassium	39-2	115643.56	114634.22	120445.54	116907.77	2.66	ppb
Rhodium	103-1				67		%
Rhodium	103-2				67		%
Scandium	45-1				71		%
Scandium	45-2				69		%
Selenium	82-1	461.05	469.33	466.51	465.63	0.90	ppb
Selenium	77-2	419.25	430.47	451.42	433.72	3.77	ppb
Selenium	78-2	449.32	446.48	489.35	461.72	5.19	ppb
Silicon	28-1	482.36	484.57	481.48	482.81	0.33	ppb
Silver	107-1	450.77	468.06	456.40	458.41	1.92	ppb
Silver	109-1	454.57	466.95	460.22	460.58	1.35	ppb
Sodium	23-2	232347.53	234648.22	245997.10	237664.28	3.07	ppb
Strontium	86-1	11447.27	11663.85	11582.30	11564.47	0.95	ppb
Strontium	88-1	12043.14	12153.02	12210.74	12135.64	0.70	ppb
Sulfur	34-1	10782.64	10802.71	10658.85	10748.07	0.72	ppb
Terbium	159-1				77		%
Terbium	159-2				76		%
Thallium	203-1	503.73	503.21	509.18	505.38	0.65	ppb
Thallium	205-1	500.32	503.43	508.12	503.96	0.78	ppb
Tin	118-1	471.99	494.03	487.35	484.46	2.33	ppb
Titanium	47-1	4861.00	4876.35	4845.70	4861.02	0.32	ppb
Uranium	238-1	512.88	516.56	510.41	513.28	0.60	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV013	Instrumnet Name :	P8
Client Sample ID :	CCV013	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 19:06:28	DataFile Name :	094CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	473.76	472.57	494.50	480.28	2.57	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				75		%
Yttrium	89-2				72		%
Zinc	66-2	4545.39	4557.58	4755.50	4619.49	2.55	ppb
Zirconium	90-1	482.09	491.54	488.17	487.27	0.98	ppb
Zirconium	91-1	490.21	500.05	502.74	497.67	1.33	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB013	Instrumnet Name :	P8
Client Sample ID :	CCB013	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 19:10:47	DataFile Name :	095CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.99	0.15	0.41	0.52	82.88	ppb
Antimony	121-1	0.09	0.07	0.08	0.08	10.47	ppb
Arsenic	75-2	-0.02	0.03	0.01	0.01	390.57	ppb
Barium	135-1	0.26	0.22	0.30	0.26	15.47	ppb
Barium	137-1	0.30	0.30	0.28	0.29	4.47	ppb
Beryllium	9-1	0.18	0.18	0.18	0.18	1.82	ppb
Bismuth	209-1				80		%
Bismuth	209-2				80		%
Bromine	81-1						cps
Cadmium	108-1	-0.05	-0.01	-0.07	-0.04		ppb
Cadmium	106-1	-2.51	-2.87	-2.73	-2.70		ppb
Cadmium	111-1	-0.17	-0.22	-0.22	-0.20		ppb
Calcium	43-1	2.78	3.16	2.29	2.74	15.87	ppb
Calcium	44-1	0.71	-0.06	-0.43	0.07	796.60	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.02	0.01	0.01	0.01	51.68	ppb
Cobalt	59-2	0.01	0.00	0.01	0.01	41.27	ppb
Copper	63-2	-0.25	-0.28	-0.16	-0.23		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				81		%
Holmium	165-2				81		%
Indium	115-1				80		%
Indium	115-2				76		%
Iron	54-2	1.65	1.68	1.03	1.46	25.11	ppb
Iron	56-2	1.40	1.29	0.97	1.22	18.03	ppb
Iron	57-2	1.07	1.64	1.16	1.29	23.48	ppb
Krypton	83-1						cps
Lead	206-1	0.19	0.16	0.15	0.16	12.13	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB013	Instrumnet Name :	P8
Client Sample ID :	CCB013	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 19:10:47	DataFile Name :	095CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.18	0.15	0.16	0.17	10.54	ppb
Lead	208-1	0.18	0.16	0.16	0.17	8.24	ppb
Lithium	6-1				63		%
Magnesium	24-2	-2.17	-1.60	-1.29	-1.69		ppb
Manganese	55-2	0.14	0.11	0.20	0.15	31.79	ppb
Molybdenum	94-1	0.11	0.10	0.10	0.10	4.94	ppb
Molybdenum	95-1	0.11	0.08	0.09	0.09	17.06	ppb
Molybdenum	96-1	0.11	0.06	0.10	0.09	26.45	ppb
Molybdenum	97-1	0.12	0.07	0.06	0.08	39.57	ppb
Molybdenum	98-1	0.13	0.07	0.08	0.09	32.96	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.00	0.24	0.17	0.14	92.83	ppb
Phosphorus	31-2	-19.99	-22.29	-9.28	-17.19		ppb
Potassium	39-2	-1.60	0.84	-0.24	-0.33		ppb
Rhodium	103-1				78		%
Rhodium	103-2				78		%
Scandium	45-1				73		%
Scandium	45-2				70		%
Selenium	82-1	0.00	-0.05	0.10	0.02	449.26	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	1.47	0.00	-0.51	0.32	319.07	ppb
Silicon	28-1	-0.49	-0.45	-0.47	-0.47		ppb
Silver	107-1	0.02	0.04	0.03	0.03	31.12	ppb
Silver	109-1	0.03	0.03	0.03	0.03	9.13	ppb
Sodium	23-2	-15.44	-14.02	-14.44	-14.63		ppb
Strontium	86-1	0.37	0.18	0.11	0.22	61.93	ppb
Strontium	88-1	0.24	0.30	0.41	0.31	27.53	ppb
Sulfur	34-1	-363.79	-320.06	-365.17	-349.67		ppb
Terbium	159-1				80		%
Terbium	159-2				80		%
Thallium	203-1	0.03	0.03	0.03	0.03	8.46	ppb
Thallium	205-1	0.03	0.03	0.04	0.03	10.91	ppb
Tin	118-1	-0.18	-0.15	-0.15	-0.16		ppb
Titanium	47-1	0.06	0.05	0.04	0.05	25.45	ppb
Uranium	238-1	0.00	0.00	0.00	0.00	29.17	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB013	Instrumnet Name :	P8
Client Sample ID :	CCB013	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 19:10:47	DataFile Name :	095CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.01	0.00	0.00	0.00	92.03	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				78		%
Yttrium	89-2				75		%
Zinc	66-2	0.31	0.33	0.08	0.24	57.24	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	42.34	ppb
Zirconium	91-1	0.01	0.01	0.01	0.01	26.63	ppb

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:10:06	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	23	63	63	50	46.19	cps
Antimony	121-1	93	80	80	84	9.11	cps
Arsenic	75-2	7	0	3	3	100.05	cps
Barium	135-1	127	103	110	113	10.61	cps
Barium	137-1	170	220	177	189	14.37	cps
Beryllium	9-1	192	210	214	205	5.52	cps
Bismuth	209-1	8003694	7762377	7733881	7833317	1.89	cps
Bismuth	209-2	3058261	3009121	3051638	3039673	0.88	cps
Bromine	81-1	5705	5661	5951	5772	2.71	cps
Cadmium	108-1	33	30	30	31	6.18	cps
Cadmium	106-1	6135	5828	6018	5994	2.58	cps
Cadmium	111-1	4288	4112	4242	4214	2.16	cps
Calcium	43-1	387	413	340	380	9.77	cps
Calcium	44-1	6875	6525	6692	6697	2.62	cps
Carbon	12-1	1948439	1905795	1880290	1911508	1.80	cps
Carbon	12-2	12619	12709	12976	12768	1.45	cps
Chlorine	35-1	152524	161675	162665	158955	3.52	cps
Chlorine	35-2	570	573	763	636	17.41	cps
Chromium	52-2	553	573	597	574	3.78	cps
Cobalt	59-2	183	170	173	176	3.95	cps
Copper	63-2	3064	3014	3040	3039	0.82	cps
Dysprosium	156-1	203	267	223	231	14.01	cps
Dysprosium	156-2	7	3	3	4	43.40	cps
Erbium	164-1	83	87	60	77	18.95	cps
Erbium	164-2	33	3	43	27	78.07	cps
Gadolinium	160-1	30	20	50	33	45.83	cps
Gadolinium	160-2	7	3	7	6	34.70	cps
Holmium	165-1	12294055	12178790	12113443	12195429	0.75	cps
Holmium	165-2	4113202	4176615	4125634	4138484	0.81	cps
Indium	115-1	9940991	9855061	10032587	9942880	0.89	cps
Indium	115-2	898465	913919	912161	908182	0.93	cps
Iron	54-2	457	447	443	449	1.55	cps
Iron	56-2	6165	6361	6538	6355	2.94	cps
Iron	57-2	153	187	197	179	12.68	cps
Krypton	83-1	167	117	140	141	17.73	cps
Lead	206-1	1030	993	977	1000	2.73	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:10:06	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	870	837	947	884	6.38	cps
Lead	208-1	3900	3877	3997	3925	1.62	cps
Lithium	6-1	6470213	6573942	6566994	6537050	0.89	cps
Magnesium	24-2	1000	1170	1023	1064	8.66	cps
Manganese	55-2	233	227	267	242	8.85	cps
Molybdenum	94-1	293	283	337	304	9.31	cps
Molybdenum	95-1	307	237	250	264	14.06	cps
Molybdenum	96-1	383	383	277	348	17.71	cps
Molybdenum	97-1	157	147	113	139	16.33	cps
Molybdenum	98-1	343	347	353	348	1.46	cps
Neodymium	150-1	17	13	7	12	41.65	cps
Neodymium	150-2	0	0	0	0	0.00	cps
Nickel	60-2	923	923	800	882	8.07	cps
Phosphorus	31-2	20	27	60	36	60.27	cps
Potassium	39-2	4958	5128	5274	5120	3.10	cps
Rhodium	103-1	9148162	9077343	9105705	9110403	0.39	cps
Rhodium	103-2	3341233	3387003	3319004	3349080	1.04	cps
Scandium	45-1	7285812	7137099	7137619	7186843	1.19	cps
Scandium	45-2	116269	116971	117236	116825	0.43	cps
Selenium	82-1	-53	57	-3	0	-930227747508	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	7	3	3	4	43.40	cps
Silicon	28-1	327168	326559	325628	326452	0.24	cps
Silver	107-1	123	130	153	136	11.62	cps
Silver	109-1	33	63	27	41	47.50	cps
Sodium	23-2	19643	19333	19580	19519	0.84	cps
Strontium	86-1	260	287	263	270	5.38	cps
Strontium	88-1	730	640	567	646	12.67	cps
Sulfur	34-1	287108	287536	289617	288087	0.47	cps
Terbium	159-1	12573034	12524911	12552889	12550278	0.19	cps
Terbium	159-2	4090434	4093244	4036108	4073262	0.79	cps
Thallium	203-1	263	280	347	297	14.86	cps
Thallium	205-1	727	720	780	742	4.43	cps
Tin	118-1	4561	4814	4604	4660	2.91	cps
Titanium	47-1	113	113	117	114	1.68	cps
Uranium	238-1	60	67	103	77	30.44	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:10:06	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	3	7	0	3	100.05	cps
Ytterbium	172-1	87	63	73	74	15.73	cps
Ytterbium	172-2	27	27	33	29	13.31	cps
Ytterbium	176-1	1753	1710	1737	1733	1.26	cps
Ytterbium	176-2	220	290	270	260	13.87	cps
Yttrium	89-1	17912396	17923333	17761577	17865768	0.51	cps
Yttrium	89-2	1130507	1145853	1141354	1139238	0.69	cps
Zinc	66-2	170	187	180	179	4.69	cps
Zirconium	90-1	610	593	640	614	3.85	cps
Zirconium	91-1	120	103	137	120	13.89	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P8
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:16:52	DataFile Name :	006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	897	977	867	913	6.23	cps
Antimony	121-1	20559	20566	20452	20526	0.31	cps
Arsenic	75-2	193	217	200	203	5.91	cps
Barium	135-1	26553	26619	26650	26607	0.19	cps
Barium	137-1	45867	46443	46566	46292	0.81	cps
Beryllium	9-1	4624	4824	4830	4759	2.47	cps
Bismuth	209-1	7813486	7834574	7750142	7799401	0.56	cps
Bismuth	209-2	3087947	3075331	3044995	3069424	0.72	cps
Bromine	81-1	5511	5555	5655	5573	1.32	cps
Cadmium	108-1	277	270	280	276	1.85	cps
Cadmium	106-1	6332	6098	6278	6236	1.96	cps
Cadmium	111-1	7129	7020	6909	7019	1.57	cps
Calcium	43-1	21563	21857	22127	21849	1.29	cps
Calcium	44-1	351005	357006	353926	353979	0.85	cps
Carbon	12-1	2065144	1992494	1991380	2016339	2.10	cps
Carbon	12-2	13797	13616	13616	13676	0.76	cps
Chlorine	35-1	152730	162139	165925	160265	4.24	cps
Chlorine	35-2	597	623	580	600	3.64	cps
Chromium	52-2	4627	4671	5014	4771	4.44	cps
Cobalt	59-2	4344	4367	4421	4377	0.90	cps
Copper	63-2	9270	9427	9353	9350	0.84	cps
Dysprosium	156-1	177	197	237	203	15.02	cps
Dysprosium	156-2	10	10	0	7	86.60	cps
Erbium	164-1	87	77	33	66	43.25	cps
Erbium	164-2	33	30	43	36	19.51	cps
Gadolinium	160-1	47	83	37	56	44.23	cps
Gadolinium	160-2	13	3	23	13	75.02	cps
Holmium	165-1	12295102	12264761	12243237	12267700	0.21	cps
Holmium	165-2	4263691	4126114	4176800	4188868	1.66	cps
Indium	115-1	9855782	9893762	9827782	9859109	0.34	cps
Indium	115-2	921012	903823	904546	909794	1.07	cps
Iron	54-2	5098	5008	4871	4992	2.29	cps
Iron	56-2	88770	88710	90122	89201	0.89	cps
Iron	57-2	2317	2240	2167	2241	3.35	cps
Krypton	83-1	173	173	177	174	1.10	cps
Lead	206-1	9637	9914	9600	9717	1.76	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P8
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:16:52	DataFile Name :	006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	8203	8440	8423	8355	1.58	cps
Lead	208-1	38049	38502	38162	38238	0.62	cps
Lithium	6-1	6668240	6526063	6548934	6581079	1.16	cps
Magnesium	24-2	81409	81637	81214	81420	0.26	cps
Manganese	55-2	1267	1127	1227	1207	5.98	cps
Molybdenum	94-1	21791	22221	22562	22191	1.74	cps
Molybdenum	95-1	26796	27030	27350	27059	1.03	cps
Molybdenum	96-1	29895	30296	29718	29970	0.99	cps
Molybdenum	97-1	16991	16707	16780	16826	0.88	cps
Molybdenum	98-1	42846	44923	43628	43799	2.39	cps
Neodymium	150-1	7	10	17	11	45.82	cps
Neodymium	150-2	0	0	0	0	0.00	cps
Nickel	60-2	2027	1983	1980	1997	1.30	cps
Phosphorus	31-2	103	107	80	97	15.03	cps
Potassium	39-2	48203	48481	48785	48490	0.60	cps
Rhodium	103-1	8935599	8990934	8937128	8954554	0.35	cps
Rhodium	103-2	3404401	3317482	3340655	3354179	1.34	cps
Scandium	45-1	7146292	7165618	7183414	7165108	0.26	cps
Scandium	45-2	118745	115734	115012	116497	1.70	cps
Selenium	82-1	923	830	843	866	5.83	cps
Selenium	77-2	10	13	7	10	33.30	cps
Selenium	78-2	50	50	30	43	26.65	cps
Silicon	28-1	382787	384426	384786	384000	0.28	cps
Silver	107-1	13640	13317	13387	13448	1.27	cps
Silver	109-1	12843	12933	12986	12921	0.56	cps
Sodium	23-2	173549	174927	174308	174261	0.40	cps
Strontium	86-1	3974	4091	3814	3959	3.51	cps
Strontium	88-1	32698	32735	32297	32577	0.75	cps
Sulfur	34-1	291799	292452	293347	292533	0.27	cps
Terbium	159-1	12520958	12568991	12400413	12496787	0.69	cps
Terbium	159-2	4177516	4133391	4062002	4124303	1.41	cps
Thallium	203-1	11425	10858	10985	11089	2.68	cps
Thallium	205-1	26153	26554	26113	26273	0.93	cps
Tin	118-1	48793	49546	48703	49014	0.94	cps
Titanium	47-1	8890	8733	8716	8779	1.09	cps
Uranium	238-1	33538	34717	34530	34262	1.85	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P8
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:16:52	DataFile Name :	006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	8129	8039	7946	8038	1.14	cps
Ytterbium	172-1	83	47	87	72	30.73	cps
Ytterbium	172-2	30	33	27	30	11.10	cps
Ytterbium	176-1	1760	1657	1770	1729	3.63	cps
Ytterbium	176-2	277	330	290	299	9.29	cps
Yttrium	89-1	17600692	17630264	17753946	17661634	0.46	cps
Yttrium	89-2	1154870	1140510	1140442	1145274	0.73	cps
Zinc	66-2	2140	2037	2134	2104	2.75	cps
Zirconium	90-1	19327	18980	19394	19233	1.16	cps
Zirconium	91-1	4254	4187	4174	4205	1.02	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P8
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:20:13	DataFile Name :	007CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	42876	42856	43167	42967	0.40	cps
Antimony	121-1	487923	494710	491081	491238	0.69	cps
Arsenic	75-2	8406	8493	8506	8468	0.64	cps
Barium	135-1	613958	627956	624804	622239	1.18	cps
Barium	137-1	1081785	1084184	1092800	1086256	0.53	cps
Beryllium	9-1	214559	214751	214869	214726	0.07	cps
Bismuth	209-1	7492876	7807955	7578306	7626379	2.14	cps
Bismuth	209-2	3027610	2983870	2963706	2991729	1.09	cps
Bromine	81-1	5571	5731	5731	5678	1.63	cps
Cadmium	108-1	10918	10961	11191	11023	1.33	cps
Cadmium	106-1	20492	20736	21113	20780	1.51	cps
Cadmium	111-1	136538	137896	138191	137541	0.64	cps
Calcium	43-1	193188	192567	194621	193459	0.54	cps
Calcium	44-1	3163004	3152962	3157757	3157907	0.16	cps
Carbon	12-1	2107300	2043819	2050864	2067328	1.68	cps
Carbon	12-2	13847	13850	14064	13920	0.89	cps
Chlorine	35-1	152948	157789	165120	158619	3.86	cps
Chlorine	35-2	547	593	623	588	6.57	cps
Chromium	52-2	101647	103504	101892	102348	0.99	cps
Cobalt	59-2	193617	196431	194377	194809	0.75	cps
Copper	63-2	1463226	1474135	1464985	1467449	0.40	cps
Dysprosium	156-1	190	253	230	224	14.27	cps
Dysprosium	156-2	10	3	3	6	69.34	cps
Erbium	164-1	63	97	60	73	27.65	cps
Erbium	164-2	33	40	20	31	32.73	cps
Gadolinium	160-1	23	47	73	48	52.37	cps
Gadolinium	160-2	13	3	10	9	57.30	cps
Holmium	165-1	11897219	12315176	12122846	12111747	1.73	cps
Holmium	165-2	4208479	4146987	4123251	4159572	1.06	cps
Indium	115-1	9241339	9651099	9776072	9556170	2.93	cps
Indium	115-2	902674	898448	892079	897734	0.59	cps
Iron	54-2	208904	211015	208413	209444	0.66	cps
Iron	56-2	3948947	3983106	3990738	3974264	0.56	cps
Iron	57-2	95816	96017	97685	96506	1.06	cps
Krypton	83-1	137	197	150	161	19.56	cps
Lead	206-1	2148683	2157597	2200059	2168780	1.27	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P8
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:20:13	DataFile Name :	007CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1865878	1888365	1898435	1884226	0.88	cps
Lead	208-1	8635130	8625011	8632199	8630780	0.06	cps
Lithium	6-1	6388811	6606881	6511091	6502261	1.68	cps
Magnesium	24-2	759205	758173	758373	758584	0.07	cps
Manganese	55-2	430338	435215	431410	432321	0.59	cps
Molybdenum	94-1	1795936	1804343	1865839	1822039	2.09	cps
Molybdenum	95-1	2646226	2653571	2694484	2664760	0.98	cps
Molybdenum	96-1	2851600	2904008	2896738	2884115	0.98	cps
Molybdenum	97-1	1606684	1628981	1610946	1615537	0.73	cps
Molybdenum	98-1	4239966	4235892	4266868	4247576	0.40	cps
Neodymium	150-1	93	60	43	66	38.84	cps
Neodymium	150-2	0	3	0	1	173.21	cps
Nickel	60-2	54323	54413	55029	54588	0.70	cps
Phosphorus	31-2	2003	1950	1833	1929	4.51	cps
Potassium	39-2	207909	209004	207794	208236	0.32	cps
Rhodium	103-1	8578025	8934539	8736383	8749649	2.04	cps
Rhodium	103-2	3348392	3276665	3263398	3296152	1.39	cps
Scandium	45-1	6854314	7083852	7098925	7012364	1.95	cps
Scandium	45-2	116410	114934	115035	115460	0.71	cps
Selenium	82-1	8349	8226	8386	8320	1.01	cps
Selenium	77-2	130	120	157	136	13.98	cps
Selenium	78-2	393	450	387	410	8.49	cps
Silicon	28-1	3400834	3435958	3417159	3417984	0.51	cps
Silver	107-1	667213	676335	683906	675818	1.24	cps
Silver	109-1	638176	646521	652996	645898	1.15	cps
Sodium	23-2	1587977	1517475	1538972	1548141	2.33	cps
Strontium	86-1	180411	180789	183129	181443	0.81	cps
Strontium	88-1	1628197	1657971	1631913	1639360	0.99	cps
Sulfur	34-1	351560	350231	350316	350702	0.21	cps
Terbium	159-1	12116549	12336315	12595990	12349618	1.94	cps
Terbium	159-2	4109503	4047020	4018461	4058328	1.15	cps
Thallium	203-1	516858	522197	526482	521846	0.92	cps
Thallium	205-1	1239394	1259653	1251517	1250188	0.82	cps
Tin	118-1	432072	435929	438543	435515	0.75	cps
Titanium	47-1	812440	821853	824127	819474	0.76	cps
Uranium	238-1	1699370	1715921	1711023	1708772	0.50	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P8
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:20:13	DataFile Name :	007CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	77230	78986	76851	77689	1.47	cps
Ytterbium	172-1	40	77	40	52	40.54	cps
Ytterbium	172-2	40	40	37	39	4.94	cps
Ytterbium	176-1	3884	4001	4111	3998	2.84	cps
Ytterbium	176-2	977	980	1000	986	1.28	cps
Yttrium	89-1	17146458	17715492	17404726	17422226	1.64	cps
Yttrium	89-2	1133160	1122662	1126879	1127567	0.47	cps
Zinc	66-2	150451	151624	151283	151120	0.40	cps
Zirconium	90-1	874962	878615	883678	879085	0.50	cps
Zirconium	91-1	193621	195949	195684	195085	0.65	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P8
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:23:25	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	105660	104492	107369	105840	1.37	cps
Antimony	121-1	1199507	1218631	1226208	1214782	1.13	cps
Arsenic	75-2	21530	21717	21673	21640	0.45	cps
Barium	135-1	1594979	1608974	1624503	1609485	0.92	cps
Barium	137-1	2799769	2746267	2841955	2795997	1.72	cps
Beryllium	9-1	518395	529559	526822	524926	1.11	cps
Bismuth	209-1	7678745	7736206	7592788	7669246	0.94	cps
Bismuth	209-2	2955230	3037919	3024791	3005980	1.48	cps
Bromine	81-1	5638	5651	5571	5620	0.76	cps
Cadmium	108-1	26335	26562	26966	26621	1.20	cps
Cadmium	106-1	41248	43776	42656	42560	2.98	cps
Cadmium	111-1	324385	332610	330405	329133	1.29	cps
Calcium	43-1	475032	479362	483471	479288	0.88	cps
Calcium	44-1	7697683	7843392	7947015	7829363	1.60	cps
Carbon	12-1	2237973	2186698	2242433	2222368	1.39	cps
Carbon	12-2	15178	14774	15195	15049	1.58	cps
Chlorine	35-1	149813	157364	162669	156615	4.13	cps
Chlorine	35-2	547	610	653	603	8.89	cps
Chromium	52-2	253049	252637	255242	253643	0.55	cps
Cobalt	59-2	478609	482626	484735	481990	0.65	cps
Copper	63-2	3785807	3746312	3746886	3759668	0.60	cps
Dysprosium	156-1	183	227	227	212	11.79	cps
Dysprosium	156-2	17	17	7	13	43.29	cps
Erbium	164-1	73	80	53	69	20.15	cps
Erbium	164-2	43	27	20	30	40.05	cps
Gadolinium	160-1	63	60	40	54	23.18	cps
Gadolinium	160-2	10	20	13	14	35.26	cps
Holmium	165-1	12389467	12227791	12155777	12257678	0.98	cps
Holmium	165-2	4048903	4228003	4204877	4160594	2.34	cps
Indium	115-1	9670313	9626911	9777621	9691615	0.80	cps
Indium	115-2	878193	899956	910362	896170	1.83	cps
Iron	54-2	518107	516172	524367	519549	0.82	cps
Iron	56-2	9740824	9720844	9746925	9736198	0.14	cps
Iron	57-2	239299	236883	238956	238379	0.55	cps
Krypton	83-1	160	170	143	158	8.54	cps
Lead	206-1	5253293	5280500	5347879	5293891	0.92	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P8
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:23:25	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	4538829	4593663	4671392	4601295	1.45	cps
Lead	208-1	20819426	21066274	21212362	21032687	0.94	cps
Lithium	6-1	6617116	6539804	6537624	6564848	0.69	cps
Magnesium	24-2	1972225	1960080	1942467	1958257	0.76	cps
Manganese	55-2	1074303	1078252	1077804	1076786	0.20	cps
Molybdenum	94-1	4541154	4508334	4506554	4518681	0.43	cps
Molybdenum	95-1	6441896	6575250	6490726	6502624	1.04	cps
Molybdenum	96-1	7028683	7066846	7165099	7086876	0.99	cps
Molybdenum	97-1	4037725	4060998	4034166	4044296	0.36	cps
Molybdenum	98-1	10572049	10476829	10463601	10504160	0.56	cps
Neodymium	150-1	187	223	220	210	9.66	cps
Neodymium	150-2	3	0	0	1	173.21	cps
Nickel	60-2	131470	132991	130996	131819	0.79	cps
Phosphorus	31-2	4757	4911	4681	4783	2.45	cps
Potassium	39-2	516409	511080	520707	516065	0.93	cps
Rhodium	103-1	8878370	8895140	8810487	8861332	0.51	cps
Rhodium	103-2	3207529	3278083	3322225	3269279	1.77	cps
Scandium	45-1	7192453	7171148	7195849	7186483	0.19	cps
Scandium	45-2	114805	117993	118836	117211	1.81	cps
Selenium	82-1	20165	20405	20876	20482	1.77	cps
Selenium	77-2	267	367	313	316	15.86	cps
Selenium	78-2	1133	1013	1197	1115	8.36	cps
Silicon	28-1	7810593	7960274	7998622	7923163	1.25	cps
Silver	107-1	1737753	1772095	1765644	1758497	1.04	cps
Silver	109-1	1613017	1640265	1661834	1638372	1.49	cps
Sodium	23-2	3781906	3789679	3842970	3804852	0.87	cps
Strontium	86-1	444477	448134	455308	449306	1.23	cps
Strontium	88-1	3965817	4092727	4114704	4057749	1.98	cps
Sulfur	34-1	437491	438952	440253	438899	0.31	cps
Terbium	159-1	12495336	12682482	12404946	12527588	1.13	cps
Terbium	159-2	4013096	4055652	4117752	4062167	1.30	cps
Thallium	203-1	1282189	1286544	1297022	1288585	0.59	cps
Thallium	205-1	3201331	3240880	3230745	3224319	0.64	cps
Tin	118-1	1050627	1070503	1083573	1068235	1.55	cps
Titanium	47-1	2109548	2109520	2117295	2112121	0.21	cps
Uranium	238-1	4205448	4220701	4228812	4218320	0.28	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P8
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:23:25	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	196371	196428	196218	196339	0.06	cps
Ytterbium	172-1	100	83	77	87	13.87	cps
Ytterbium	172-2	30	20	30	27	21.65	cps
Ytterbium	176-1	7509	7292	7295	7365	1.69	cps
Ytterbium	176-2	2200	2277	2124	2200	3.49	cps
Yttrium	89-1	17400252	17950191	17961457	17770633	1.81	cps
Yttrium	89-2	1118417	1145007	1158725	1140716	1.80	cps
Zinc	66-2	375616	373798	376951	375455	0.42	cps
Zirconium	90-1	2284728	2277492	2324385	2295535	1.10	cps
Zirconium	91-1	480207	487046	488222	485159	0.89	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P8
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:26:27	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	218124	216100	219437	217887	0.77	cps
Antimony	121-1	2575056	2593679	2582413	2583716	0.36	cps
Arsenic	75-2	44145	44433	44597	44392	0.51	cps
Barium	135-1	3282753	3316563	3324164	3307827	0.67	cps
Barium	137-1	5596446	5639965	5626270	5620894	0.40	cps
Beryllium	9-1	1079979	1107852	1092352	1093395	1.28	cps
Bismuth	209-1	7630685	7420971	7676869	7576175	1.80	cps
Bismuth	209-2	2976597	3016572	3019844	3004337	0.80	cps
Bromine	81-1	5811	5645	6051	5836	3.50	cps
Cadmium	108-1	52238	53935	52944	53039	1.61	cps
Cadmium	106-1	78548	80322	80492	79787	1.35	cps
Cadmium	111-1	654018	666485	666942	662482	1.11	cps
Calcium	43-1	957759	982438	989552	976583	1.71	cps
Calcium	44-1	15595996	16168283	16096592	15953624	1.95	cps
Carbon	12-1	2281368	2274397	2301669	2285811	0.62	cps
Carbon	12-2	15735	16109	16022	15955	1.23	cps
Chlorine	35-1	147877	152675	156906	152486	2.96	cps
Chlorine	35-2	573	587	637	599	5.58	cps
Chromium	52-2	519009	517866	519630	518835	0.17	cps
Cobalt	59-2	969475	973661	986174	976437	0.89	cps
Copper	63-2	7534778	7528470	7475232	7512827	0.44	cps
Dysprosium	156-1	287	323	263	291	10.39	cps
Dysprosium	156-2	10	20	13	14	35.26	cps
Erbium	164-1	73	70	97	80	18.17	cps
Erbium	164-2	33	50	30	38	28.37	cps
Gadolinium	160-1	83	70	57	70	19.04	cps
Gadolinium	160-2	13	23	23	20	28.87	cps
Holmium	165-1	12331376	12220352	12520564	12357431	1.23	cps
Holmium	165-2	4214759	4310461	4268142	4264454	1.12	cps
Indium	115-1	9797998	9748324	9734774	9760365	0.34	cps
Indium	115-2	895876	907041	916027	906315	1.11	cps
Iron	54-2	1047887	1053292	1069493	1056891	1.06	cps
Iron	56-2	19882741	19672037	20060752	19871843	0.98	cps
Iron	57-2	481105	484556	488974	484878	0.81	cps
Krypton	83-1	170	160	113	148	20.47	cps
Lead	206-1	10471194	10542587	10613507	10542429	0.67	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P8
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:26:27	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	9009227	9261923	9187501	9152884	1.42	cps
Lead	208-1	41521032	41885936	42490044	41965670	1.17	cps
Lithium	6-1	6713605	6525030	6619338	6619325	1.42	cps
Magnesium	24-2	3987374	3998092	3991146	3992204	0.14	cps
Manganese	55-2	2313002	2299936	2325941	2312959	0.56	cps
Molybdenum	94-1	8982440	9290922	9246116	9173159	1.82	cps
Molybdenum	95-1	13116016	13387681	13526483	13343393	1.56	cps
Molybdenum	96-1	14281556	14580377	14829340	14563758	1.88	cps
Molybdenum	97-1	8133730	8139694	8260235	8177886	0.87	cps
Molybdenum	98-1	21347355	21383575	21674842	21468591	0.84	cps
Neodymium	150-1	303	397	383	361	13.98	cps
Neodymium	150-2	0	17	17	11	86.60	cps
Nickel	60-2	264825	264970	268448	266081	0.77	cps
Phosphorus	31-2	9820	10204	9747	9923	2.47	cps
Potassium	39-2	1042206	1045657	1061402	1049755	0.97	cps
Rhodium	103-1	8807289	8617145	8943159	8789198	1.86	cps
Rhodium	103-2	3341828	3304670	3260020	3302173	1.24	cps
Scandium	45-1	7214080	7100399	7338666	7217715	1.65	cps
Scandium	45-2	118003	119750	123168	120307	2.18	cps
Selenium	82-1	41796	41742	41542	41693	0.32	cps
Selenium	77-2	693	667	710	690	3.17	cps
Selenium	78-2	2200	2157	2190	2182	1.04	cps
Silicon	28-1	15898545	15730937	16007069	15878851	0.88	cps
Silver	107-1	3465629	3559980	3542068	3522559	1.42	cps
Silver	109-1	3296352	3358135	3357752	3337413	1.07	cps
Sodium	23-2	7806992	7773932	7870940	7817288	0.63	cps
Strontium	86-1	894251	915875	926857	912328	1.82	cps
Strontium	88-1	8031693	8295107	8280472	8202424	1.80	cps
Sulfur	34-1	602696	607601	608510	606269	0.52	cps
Terbium	159-1	12699816	12529208	12876336	12701787	1.37	cps
Terbium	159-2	4173154	4208703	4154833	4178897	0.66	cps
Thallium	203-1	2686842	2788325	2761097	2745421	1.91	cps
Thallium	205-1	6500359	6401728	6476645	6459577	0.80	cps
Tin	118-1	2212618	2232520	2231949	2225696	0.51	cps
Titanium	47-1	4192683	4312878	4275047	4260203	1.44	cps
Uranium	238-1	8313301	8408959	8530963	8417741	1.30	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P8
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:26:27	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	403599	401758	403639	402999	0.27	cps
Ytterbium	172-1	127	110	127	121	7.95	cps
Ytterbium	172-2	47	60	23	43	42.83	cps
Ytterbium	176-1	12950	13213	13704	13289	2.88	cps
Ytterbium	176-2	4204	4231	4301	4245	1.18	cps
Yttrium	89-1	17660115	17812053	18205827	17892665	1.57	cps
Yttrium	89-2	1156971	1162820	1171238	1163677	0.62	cps
Zinc	66-2	755711	757408	762139	758419	0.44	cps
Zirconium	90-1	4594174	4720684	4746671	4687176	1.74	cps
Zirconium	91-1	975293	995790	998513	989865	1.28	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P8
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:29:25	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	438479	436531	440482	438497	0.45	cps
Antimony	121-1	5102612	5147696	5169873	5140060	0.67	cps
Arsenic	75-2	91400	90072	91270	90914	0.81	cps
Barium	135-1	6571817	6593042	6596950	6587270	0.21	cps
Barium	137-1	11503367	11299594	11424784	11409248	0.90	cps
Beryllium	9-1	2147474	2191531	2199990	2179665	1.29	cps
Bismuth	209-1	7477788	7449370	7730167	7552441	2.05	cps
Bismuth	209-2	2951760	2934040	2956984	2947595	0.41	cps
Bromine	81-1	6025	5851	6018	5965	1.65	cps
Cadmium	108-1	105496	105926	105661	105695	0.21	cps
Cadmium	106-1	152889	153141	155821	153950	1.06	cps
Cadmium	111-1	1296682	1311721	1322562	1310322	0.99	cps
Calcium	43-1	2036403	2032059	2041152	2036538	0.22	cps
Calcium	44-1	32057998	32627959	32699945	32461967	1.08	cps
Carbon	12-1	2488754	2537682	2591773	2539403	2.03	cps
Carbon	12-2	18709	18281	18672	18554	1.28	cps
Chlorine	35-1	134834	138667	142153	138551	2.64	cps
Chlorine	35-2	467	467	530	488	7.50	cps
Chromium	52-2	1040048	1035746	1041237	1039011	0.28	cps
Cobalt	59-2	2067025	2020477	2041059	2042854	1.14	cps
Copper	63-2	14835298	14989106	15025178	14949861	0.67	cps
Dysprosium	156-1	363	360	337	353	4.11	cps
Dysprosium	156-2	30	13	37	27	45.08	cps
Erbium	164-1	140	177	163	160	11.60	cps
Erbium	164-2	37	50	47	44	15.61	cps
Gadolinium	160-1	137	150	117	134	12.48	cps
Gadolinium	160-2	47	30	33	37	24.06	cps
Holmium	165-1	12494613	12583082	12448018	12508571	0.55	cps
Holmium	165-2	4310664	4322283	4365303	4332750	0.66	cps
Indium	115-1	9824469	9693768	9735918	9751385	0.68	cps
Indium	115-2	903305	897130	909917	903451	0.71	cps
Iron	54-2	2254107	2221841	2186295	2220748	1.53	cps
Iron	56-2	39763187	40149895	39632514	39848532	0.68	cps
Iron	57-2	968737	969396	976912	971682	0.47	cps
Krypton	83-1	173	143	213	177	19.88	cps
Lead	206-1	21214286	20992456	21033906	21080216	0.56	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P8
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:29:25	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	18517155	18261579	18108709	18295814	1.13	cps
Lead	208-1	84075175	83428906	83663840	83722640	0.39	cps
Lithium	6-1	6603427	6597136	6688210	6629591	0.77	cps
Magnesium	24-2	7880426	7888213	7866445	7878361	0.14	cps
Manganese	55-2	4581308	4603032	4551654	4578665	0.56	cps
Molybdenum	94-1	18696463	18775350	18692856	18721556	0.25	cps
Molybdenum	95-1	27015390	27331207	27136394	27160997	0.59	cps
Molybdenum	96-1	29247197	29537004	29212092	29332098	0.61	cps
Molybdenum	97-1	16552861	16682584	16619916	16618453	0.39	cps
Molybdenum	98-1	43492769	43748114	43255848	43498910	0.57	cps
Neodymium	150-1	713	617	730	687	8.91	cps
Neodymium	150-2	27	30	23	27	12.51	cps
Nickel	60-2	530047	528193	532712	530318	0.43	cps
Phosphorus	31-2	19540	19710	20558	19936	2.74	cps
Potassium	39-2	2232495	2237235	2227826	2232519	0.21	cps
Rhodium	103-1	8752510	8726859	8595734	8691701	0.97	cps
Rhodium	103-2	3249308	3257500	3268456	3258421	0.29	cps
Scandium	45-1	7330919	7453821	7466354	7417031	1.01	cps
Scandium	45-2	122809	121891	123787	122829	0.77	cps
Selenium	82-1	81543	84456	83803	83267	1.84	cps
Selenium	77-2	1360	1350	1260	1323	4.16	cps
Selenium	78-2	4571	4377	4434	4461	2.23	cps
Silicon	28-1	31293835	31236544	31424560	31318313	0.31	cps
Silver	107-1	6871417	6903513	6896147	6890359	0.24	cps
Silver	109-1	6563515	6608072	6531449	6567679	0.59	cps
Sodium	23-2	15652669	15581925	15548032	15594209	0.34	cps
Strontium	86-1	1927664	1946617	1951380	1941887	0.65	cps
Strontium	88-1	16289571	16558258	16686536	16511455	1.23	cps
Sulfur	34-1	944879	952701	955132	950904	0.56	cps
Terbium	159-1	12862682	12856554	12685165	12801467	0.79	cps
Terbium	159-2	4108408	4189414	4181093	4159638	1.07	cps
Thallium	203-1	5428354	5439593	5427612	5431853	0.12	cps
Thallium	205-1	12670293	12735406	12958444	12788048	1.18	cps
Tin	118-1	4433940	4449806	4520298	4468015	1.03	cps
Titanium	47-1	8625645	8717390	8790889	8711308	0.95	cps
Uranium	238-1	16986289	17069258	16920452	16992000	0.44	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P8
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:29:25	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	818298	814394	822392	818361	0.49	cps
Ytterbium	172-1	173	100	133	136	27.09	cps
Ytterbium	172-2	37	60	63	53	27.24	cps
Ytterbium	176-1	25144	25157	25565	25289	0.95	cps
Ytterbium	176-2	8333	8306	8306	8315	0.19	cps
Yttrium	89-1	18098609	18111207	18055173	18088330	0.16	cps
Yttrium	89-2	1178492	1170412	1181604	1176836	0.49	cps
Zinc	66-2	1579480	1568341	1565482	1571101	0.47	cps
Zirconium	90-1	9345203	9451933	9354080	9383739	0.63	cps
Zirconium	91-1	2139162	2096378	2095420	2110320	1.18	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P8
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:32:15	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	894419	894586	891500	893502	0.19	cps
Antimony	121-1	10326542	10476897	10474373	10425937	0.83	cps
Arsenic	75-2	183077	183207	184848	183711	0.54	cps
Barium	135-1	13362915	13353414	13461693	13392674	0.45	cps
Barium	137-1	23049115	23144483	23148763	23114120	0.24	cps
Beryllium	9-1	4345340	4377122	4346350	4356271	0.41	cps
Bismuth	209-1	7438972	7320668	7363041	7374227	0.81	cps
Bismuth	209-2	2856417	2828860	2852238	2845838	0.52	cps
Bromine	81-1	6008	6372	6048	6143	3.24	cps
Cadmium	108-1	212688	213345	214577	213537	0.45	cps
Cadmium	106-1	305261	307113	306792	306389	0.32	cps
Cadmium	111-1	2707342	2754285	2793089	2751572	1.56	cps
Calcium	43-1	4124502	4128176	4150581	4134420	0.34	cps
Calcium	44-1	66122469	66912674	66490522	66508555	0.59	cps
Carbon	12-1	2938950	3029366	3060776	3009697	2.10	cps
Carbon	12-2	22918	22027	22878	22607	2.23	cps
Chlorine	35-1	115795	118607	119737	118046	1.72	cps
Chlorine	35-2	447	440	443	443	0.75	cps
Chromium	52-2	2225995	2233221	2271373	2243530	1.09	cps
Cobalt	59-2	4141203	4106383	4151494	4133027	0.57	cps
Copper	63-2	29991056	29946730	29705450	29881079	0.51	cps
Dysprosium	156-1	453	483	497	478	4.64	cps
Dysprosium	156-2	50	73	53	59	21.43	cps
Erbium	164-1	210	210	193	204	4.70	cps
Erbium	164-2	80	93	77	83	10.58	cps
Gadolinium	160-1	203	157	200	187	13.95	cps
Gadolinium	160-2	60	73	50	61	19.15	cps
Holmium	165-1	12514191	12493437	12556709	12521446	0.26	cps
Holmium	165-2	4317462	4296441	4266129	4293344	0.60	cps
Indium	115-1	9562485	9401751	9495880	9486706	0.85	cps
Indium	115-2	871201	876473	877109	874928	0.37	cps
Iron	54-2	4463872	4427169	4452810	4447950	0.42	cps
Iron	56-2	81092804	80444142	81629652	81055533	0.73	cps
Iron	57-2	2091268	2091477	2114537	2099094	0.64	cps
Krypton	83-1	187	200	210	199	5.88	cps
Lead	206-1	41961759	42483044	42553867	42332890	0.76	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P8
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:32:15	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	36369141	36712362	36983304	36688269	0.84	cps
Lead	208-1	167296052	168590951	169563100	168483367	0.68	cps
Lithium	6-1	6658537	6659163	6525062	6614254	1.17	cps
Magnesium	24-2	16080061	16386756	16074683	16180500	1.10	cps
Manganese	55-2	9361270	9294363	9442350	9365994	0.79	cps
Molybdenum	94-1	38254399	38744300	38660319	38553006	0.68	cps
Molybdenum	95-1	55066581	56154889	56198571	55806680	1.15	cps
Molybdenum	96-1	60042994	60492024	60541257	60358759	0.45	cps
Molybdenum	97-1	33982209	34319355	34429102	34243556	0.68	cps
Molybdenum	98-1	88931689	90147192	90496932	89858604	0.91	cps
Neodymium	150-1	1467	1500	1353	1440	5.34	cps
Neodymium	150-2	27	53	50	43	33.52	cps
Nickel	60-2	1048296	1048551	1061575	1052808	0.72	cps
Phosphorus	31-2	40393	41245	40209	40616	1.36	cps
Potassium	39-2	4524325	4442872	4511919	4493039	0.98	cps
Rhodium	103-1	8634020	8583325	8579763	8599036	0.35	cps
Rhodium	103-2	3156281	3216245	3196170	3189565	0.96	cps
Scandium	45-1	7446424	7426144	7450411	7440993	0.17	cps
Scandium	45-2	123706	123468	123844	123673	0.15	cps
Selenium	82-1	168220	169378	168653	168750	0.35	cps
Selenium	77-2	2760	2887	2600	2749	5.23	cps
Selenium	78-2	8976	9116	9190	9094	1.19	cps
Silicon	28-1	56833314	56925787	57213631	56990911	0.35	cps
Silver	107-1	13678714	13761861	13709512	13716696	0.31	cps
Silver	109-1	12751636	12987022	13271791	13003483	2.00	cps
Sodium	23-2	32084280	32180287	31936395	32066987	0.38	cps
Strontium	86-1	3958647	3962068	3987112	3969275	0.39	cps
Strontium	88-1	33584038	34064439	33828975	33825818	0.71	cps
Sulfur	34-1	1388153	1414317	1439625	1414032	1.82	cps
Terbium	159-1	12890026	12824713	12736969	12817236	0.60	cps
Terbium	159-2	4159358	4164924	4135070	4153117	0.38	cps
Thallium	203-1	10758041	10742228	10883545	10794605	0.72	cps
Thallium	205-1	25481025	25581737	25692197	25584986	0.41	cps
Tin	118-1	8886657	9114318	9001712	9000896	1.26	cps
Titanium	47-1	17576515	17829846	17809619	17738660	0.79	cps
Uranium	238-1	34677287	34870995	34284507	34610930	0.86	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P8
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:32:15	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	1756837	1769895	1734918	1753883	1.01	cps
Ytterbium	172-1	197	267	153	206	27.82	cps
Ytterbium	172-2	80	97	53	77	28.51	cps
Ytterbium	176-1	48827	49964	49094	49295	1.21	cps
Ytterbium	176-2	16601	16624	16687	16637	0.27	cps
Yttrium	89-1	18336054	18210169	18208278	18251500	0.40	cps
Yttrium	89-2	1171655	1176880	1174286	1174274	0.22	cps
Zinc	66-2	3148808	3165919	3191222	3168650	0.67	cps
Zirconium	90-1	19231118	19635060	19584276	19483485	1.13	cps
Zirconium	91-1	4288277	4322708	4343842	4318276	0.65	cps

777

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P8
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:35:02	DataFile Name :	012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3588668	3563408	3515685	3555920	1.04	cps
Antimony	121-1	3314	3127	2664	3035	11.03	cps
Arsenic	75-2	67	90	77	78	15.05	cps
Barium	135-1	6245	5765	5124	5711	9.84	cps
Barium	137-1	10494	9907	8673	9691	9.59	cps
Beryllium	9-1	1184	1132	884	1067	15.04	cps
Bismuth	209-1	5971777	5816769	5686563	5825037	2.45	cps
Bismuth	209-2	2214348	2195097	2192951	2200799	0.54	cps
Bromine	81-1	5661	5798	5868	5776	1.82	cps
Cadmium	108-1	203	187	157	182	12.98	cps
Cadmium	106-1	5545	5254	4788	5195	7.35	cps
Cadmium	111-1	4369	4117	3838	4108	6.46	cps
Calcium	43-1	17344295	16912143	16417370	16891269	2.75	cps
Calcium	44-1	281322722	272748863	262371176	272147587	3.49	cps
Carbon	12-1	2868001	3031521	3111836	3003786	4.14	cps
Carbon	12-2	25616	26294	25933	25947	1.31	cps
Chlorine	35-1	78216	75505	72973	75565	3.47	cps
Chlorine	35-2	327	237	240	268	19.06	cps
Chromium	52-2	3639	2957	2457	3018	19.67	cps
Cobalt	59-2	6285	6365	6415	6355	1.03	cps
Copper	63-2	5615	5271	5241	5376	3.86	cps
Dysprosium	156-1	573	533	563	557	3.74	cps
Dysprosium	156-2	130	127	97	118	15.59	cps
Erbium	164-1	470	467	397	444	9.32	cps
Erbium	164-2	177	153	143	158	10.84	cps
Gadolinium	160-1	390	390	327	369	9.91	cps
Gadolinium	160-2	160	150	147	152	4.56	cps
Holmium	165-1	11098625	10635414	10496916	10743652	2.93	cps
Holmium	165-2	3585228	3549079	3525528	3553279	0.85	cps
Indium	115-1	8132764	7875395	7641295	7883152	3.12	cps
Indium	115-2	716758	709106	706644	710836	0.74	cps
Iron	54-2	16652517	16369527	16139706	16387250	1.57	cps
Iron	56-2	307496182	305014289	300257129	304255867	1.21	cps
Iron	57-2	7732636	7623223	7524656	7626838	1.36	cps
Krypton	83-1	193	153	200	182	13.85	cps
Lead	206-1	5981	5771	5278	5677	6.36	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P8
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:35:02	DataFile Name :	012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	5368	4828	4291	4829	11.15	cps
Lead	208-1	24589	22561	20960	22704	8.01	cps
Lithium	6-1	5564151	5297973	5070993	5311039	4.65	cps
Magnesium	24-2	60500832	59867767	59020236	59796279	1.24	cps
Manganese	55-2	3247	3007	3134	3129	3.84	cps
Molybdenum	94-1	8926	7796	7459	8060	9.54	cps
Molybdenum	95-1	8102	7275	7192	7523	6.69	cps
Molybdenum	96-1	12319	11298	11074	11564	5.74	cps
Molybdenum	97-1	4381	3897	3520	3933	10.96	cps
Molybdenum	98-1	10661	9800	9050	9837	8.20	cps
Neodymium	150-1	330	307	253	297	13.25	cps
Neodymium	150-2	73	37	43	51	38.21	cps
Nickel	60-2	2367	2390	2434	2397	1.41	cps
Phosphorus	31-2	17	50	50	39	49.48	cps
Potassium	39-2	17419262	17178245	17240650	17279386	0.72	cps
Rhodium	103-1	6926788	6629971	6544293	6700351	3.00	cps
Rhodium	103-2	2403538	2382937	2377832	2388102	0.57	cps
Scandium	45-1	6362215	6055866	5970155	6129412	3.36	cps
Scandium	45-2	94572	94390	93605	94189	0.55	cps
Selenium	82-1	43	110	-7	49	119.71	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	3	3	0	2	86.60	cps
Silicon	28-1	456369	423006	399590	426322	6.69	cps
Silver	107-1	1907	1583	1253	1581	20.66	cps
Silver	109-1	14116	1293	1293	5568	132.97	cps
Sodium	23-2	120200168	118138892	117504842	118614634	1.19	cps
Strontium	86-1	10651	9957	9533	10047	5.62	cps
Strontium	88-1	88974	85050	81469	85164	4.41	cps
Sulfur	34-1	259174	250501	243380	251018	3.15	cps
Terbium	159-1	11181857	10853877	10490104	10841946	3.19	cps
Terbium	159-2	3472045	3443522	3435091	3450219	0.56	cps
Thallium	203-1	960	963	867	930	5.90	cps
Thallium	205-1	2410	2070	1753	2078	15.81	cps
Tin	118-1	2637	2174	2090	2300	12.81	cps
Titanium	47-1	4741	4271	4107	4373	7.52	cps
Uranium	238-1	2097	1530	1550	1726	18.64	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P8
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 12:35:02	DataFile Name :	012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	260	343	303	302	13.79	cps
Ytterbium	172-1	433	480	477	463	5.62	cps
Ytterbium	172-2	187	187	167	180	6.41	cps
Ytterbium	176-1	1700	1750	1823	1758	3.53	cps
Ytterbium	176-2	313	283	343	313	9.57	cps
Yttrium	89-1	15785714	14965798	14635673	15129062	3.91	cps
Yttrium	89-2	955142	943214	936729	945029	0.99	cps
Zinc	66-2	850	833	920	868	5.30	cps
Zirconium	90-1	9530	9013	8503	9015	5.70	cps
Zirconium	91-1	2144	1917	2104	2055	5.89	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICV002	Instrumnet Name :	P8
Client Sample ID :	ICV002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:07:57	DataFile Name :	013ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	18415	18422	18715	18517	0.93	cps
Antimony	121-1	1764615	1770932	1732571	1756039	1.17	cps
Arsenic	75-2	30777	31863	32083	31574	2.21	cps
Barium	135-1	219630	224843	220746	221740	1.24	cps
Barium	137-1	385914	393108	385033	388018	1.14	cps
Beryllium	9-1	361976	366256	360081	362771	0.87	cps
Bismuth	209-1	6920512	6867624	6653318	6813818	2.08	cps
Bismuth	209-2	2595911	2772663	2857146	2741907	4.86	cps
Bromine	81-1	5404	5134	5308	5282	2.59	cps
Cadmium	108-1	15082	14928	15062	15024	0.56	cps
Cadmium	106-1	25206	25704	24836	25249	1.73	cps
Cadmium	111-1	224666	230972	228830	228156	1.41	cps
Calcium	43-1	64932	65776	65592	65433	0.68	cps
Calcium	44-1	1048456	1062311	1044639	1051802	0.88	cps
Carbon	12-1	2031818	2046412	2076005	2051412	1.10	cps
Carbon	12-2	13897	14007	14370	14091	1.76	cps
Chlorine	35-1	125916	132913	134460	131096	3.47	cps
Chlorine	35-2	533	520	513	522	1.95	cps
Chromium	52-2	177509	178987	183953	180150	1.87	cps
Cobalt	59-2	337453	344367	350862	344227	1.95	cps
Copper	63-2	267335	270175	269759	269089	0.57	cps
Dysprosium	156-1	150	103	133	129	18.35	cps
Dysprosium	156-2	10	0	3	4	114.60	cps
Erbium	164-1	30	53	37	40	30.04	cps
Erbium	164-2	27	20	13	20	33.35	cps
Gadolinium	160-1	20	37	30	29	29.04	cps
Gadolinium	160-2	10	20	17	16	32.73	cps
Holmium	165-1	10712625	10871602	10396122	10660117	2.27	cps
Holmium	165-2	3675721	3826597	3817675	3773331	2.24	cps
Indium	115-1	8635777	8502970	8385965	8508237	1.47	cps
Indium	115-2	786025	823854	822149	810676	2.64	cps
Iron	54-2	152962	152163	155475	153534	1.13	cps
Iron	56-2	2824976	2822937	2887797	2845237	1.30	cps
Iron	57-2	68175	69217	70248	69214	1.50	cps
Krypton	83-1	150	123	150	141	10.91	cps
Lead	206-1	1482971	1482215	1492184	1485790	0.37	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICV002	Instrumnet Name :	P8
Client Sample ID :	ICV002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:07:57	DataFile Name :	013ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1233985	1239751	1221577	1231771	0.75	cps
Lead	208-1	6005256	6017617	5867581	5963485	1.40	cps
Lithium	6-1	5650112	5580239	5435006	5555119	1.98	cps
Magnesium	24-2	150147	151915	154094	152052	1.30	cps
Manganese	55-2	77489	77134	78682	77768	1.04	cps
Molybdenum	94-1	487	567	467	507	10.44	cps
Molybdenum	95-1	387	330	370	362	8.04	cps
Molybdenum	96-1	753	680	683	706	5.87	cps
Molybdenum	97-1	257	220	210	229	10.74	cps
Molybdenum	98-1	613	567	583	588	4.02	cps
Neodymium	150-1	30	47	27	34	31.11	cps
Neodymium	150-2	7	0	0	2	173.21	cps
Nickel	60-2	93431	94561	97042	95011	1.94	cps
Phosphorus	31-2	33	47	40	40	16.68	cps
Potassium	39-2	145027	147777	149360	147388	1.49	cps
Rhodium	103-1	7920731	7912946	7572108	7801928	2.55	cps
Rhodium	103-2	2841440	3010955	3014001	2955465	3.34	cps
Scandium	45-1	6297641	6227833	5957117	6160864	2.92	cps
Scandium	45-2	100119	103251	104724	102698	2.29	cps
Selenium	82-1	28743	29558	29952	29418	2.10	cps
Selenium	77-2	420	483	543	482	12.79	cps
Selenium	78-2	1613	1700	1600	1638	3.32	cps
Silicon	28-1	294454	294756	292690	293966	0.38	cps
Silver	107-1	542380	554692	546962	548011	1.14	cps
Silver	109-1	518668	529495	517092	521752	1.29	cps
Sodium	23-2	518503	526522	532493	525839	1.33	cps
Strontium	86-1	1007	1083	1127	1072	5.67	cps
Strontium	88-1	7012	7008	6928	6983	0.68	cps
Sulfur	34-1	248523	248056	246296	247625	0.47	cps
Terbium	159-1	11067713	10954458	10615907	10879359	2.16	cps
Terbium	159-2	3496023	3702487	3746320	3648277	3.66	cps
Thallium	203-1	1927948	1907314	1900818	1912027	0.74	cps
Thallium	205-1	4499391	4509877	4577304	4528857	0.93	cps
Tin	118-1	3941	3851	3814	3868	1.69	cps
Titanium	47-1	127	120	137	128	6.57	cps
Uranium	238-1	53	47	43	48	10.66	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICV002	Instrumnet Name :	P8
Client Sample ID :	ICV002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:07:57	DataFile Name :	013ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	132906	134108	135635	134216	1.02	cps
Ytterbium	172-1	50	47	77	58	28.46	cps
Ytterbium	172-2	13	7	47	22	96.44	cps
Ytterbium	176-1	1430	1383	1430	1415	1.91	cps
Ytterbium	176-2	257	287	293	279	7.00	cps
Yttrium	89-1	15680898	15540686	15122900	15448161	1.88	cps
Yttrium	89-2	986426	1031227	1034055	1017236	2.63	cps
Zinc	66-2	52758	53377	53802	53312	0.98	cps
Zirconium	90-1	563	630	557	583	6.95	cps
Zirconium	91-1	500	520	580	533	7.81	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICB002	Instrumnet Name :	P8
Client Sample ID :	ICB002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:19:07	DataFile Name :	014CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	53	50	50	51	3.76	cps
Antimony	121-1	217	237	190	214	10.92	cps
Arsenic	75-2	0	10	3	4	114.60	cps
Barium	135-1	130	143	187	153	19.32	cps
Barium	137-1	267	233	257	252	6.78	cps
Beryllium	9-1	269	259	262	263	1.92	cps
Bismuth	209-1	7489651	7330949	7344357	7388319	1.19	cps
Bismuth	209-2	2933429	2988660	2914506	2945532	1.31	cps
Bromine	81-1	5201	5488	5361	5350	2.69	cps
Cadmium	108-1	43	33	43	40	14.43	cps
Cadmium	106-1	5541	5494	5201	5412	3.41	cps
Cadmium	111-1	3885	3866	3664	3805	3.23	cps
Calcium	43-1	370	323	367	353	7.37	cps
Calcium	44-1	6301	5711	6015	6009	4.91	cps
Carbon	12-1	1895760	1887881	1842132	1875257	1.54	cps
Carbon	12-2	13203	12559	12412	12724	3.31	cps
Chlorine	35-1	128061	137879	142843	136261	5.52	cps
Chlorine	35-2	527	567	503	532	6.02	cps
Chromium	52-2	607	613	607	609	0.63	cps
Cobalt	59-2	157	177	140	158	11.64	cps
Copper	63-2	2877	2754	2734	2788	2.78	cps
Dysprosium	156-1	160	113	167	147	19.82	cps
Dysprosium	156-2	3	3	0	2	86.60	cps
Erbium	164-1	83	80	47	70	28.96	cps
Erbium	164-2	13	23	13	17	34.65	cps
Gadolinium	160-1	40	40	57	46	21.13	cps
Gadolinium	160-2	7	7	13	9	43.25	cps
Holmium	165-1	11871929	11378745	11702227	11650967	2.15	cps
Holmium	165-2	3995169	4004645	3992010	3997275	0.16	cps
Indium	115-1	9362457	9349436	9240641	9317511	0.72	cps
Indium	115-2	864022	869444	860828	864765	0.50	cps
Iron	54-2	350	410	393	384	8.06	cps
Iron	56-2	6608	6775	6648	6677	1.30	cps
Iron	57-2	167	173	210	183	12.73	cps
Krypton	83-1	93	117	173	128	32.20	cps
Lead	206-1	1167	1173	1187	1176	0.87	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICB002	Instrumnet Name :	P8
Client Sample ID :	ICB002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:19:07	DataFile Name :	014CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	893	1013	850	919	9.21	cps
Lead	208-1	4344	4657	4364	4455	3.94	cps
Lithium	6-1	6126639	6198432	6118595	6147889	0.71	cps
Magnesium	24-2	683	617	687	662	5.96	cps
Manganese	55-2	277	317	330	308	9.02	cps
Molybdenum	94-1	310	310	333	318	4.24	cps
Molybdenum	95-1	287	230	280	266	11.66	cps
Molybdenum	96-1	353	310	373	346	9.37	cps
Molybdenum	97-1	153	143	157	151	4.59	cps
Molybdenum	98-1	407	367	300	358	15.06	cps
Neodymium	150-1	20	10	30	20	50.00	cps
Neodymium	150-2	0	0	0	0	0.00	cps
Nickel	60-2	870	810	800	827	4.58	cps
Phosphorus	31-2	20	43	23	29	43.68	cps
Potassium	39-2	4891	5011	4844	4915	1.75	cps
Rhodium	103-1	8587166	8473316	8507535	8522672	0.69	cps
Rhodium	103-2	3200195	3167885	3166082	3178054	0.60	cps
Scandium	45-1	6784267	6686627	6699385	6723426	0.79	cps
Scandium	45-2	110178	111982	109970	110710	1.00	cps
Selenium	82-1	80	20	-10	30	152.75	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	3	0	10	4	114.60	cps
Silicon	28-1	292891	292879	294654	293474	0.35	cps
Silver	107-1	127	123	183	144	23.34	cps
Silver	109-1	73	90	100	88	15.35	cps
Sodium	23-2	17554	17641	17724	17640	0.48	cps
Strontium	86-1	230	267	247	248	7.41	cps
Strontium	88-1	610	553	493	552	10.56	cps
Sulfur	34-1	270947	268852	270366	270055	0.40	cps
Terbium	159-1	11939740	11873484	11835043	11882756	0.45	cps
Terbium	159-2	3922364	3976398	3942620	3947128	0.69	cps
Thallium	203-1	353	333	297	328	8.77	cps
Thallium	205-1	777	773	783	778	0.66	cps
Tin	118-1	4254	4034	4181	4156	2.70	cps
Titanium	47-1	110	90	143	114	23.55	cps
Uranium	238-1	30	20	43	31	37.62	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICB002	Instrumnet Name :	P8
Client Sample ID :	ICB002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:19:07	DataFile Name :	014CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	10	13	3	9	57.30	cps
Ytterbium	172-1	77	67	87	77	13.04	cps
Ytterbium	172-2	27	30	30	29	6.65	cps
Ytterbium	176-1	1537	1540	1510	1529	1.08	cps
Ytterbium	176-2	207	197	217	207	4.84	cps
Yttrium	89-1	16967136	16847304	16840626	16885022	0.42	cps
Yttrium	89-2	1078070	1087710	1082877	1082885	0.45	cps
Zinc	66-2	193	160	190	181	10.14	cps
Zirconium	90-1	513	500	627	547	12.73	cps
Zirconium	91-1	117	137	97	117	17.14	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICSA002	Instrumnet Name :	P8
Client Sample ID :	ICSA002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:22:30	DataFile Name :	015ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4028596	4042760	4069526	4046961	0.51	cps
Antimony	121-1	10431	10791	10584	10602	1.71	cps
Arsenic	75-2	63	60	33	52	31.49	cps
Barium	135-1	3490	3727	3887	3702	5.39	cps
Barium	137-1	6385	6171	6395	6317	2.00	cps
Beryllium	9-1	1315	1372	1387	1358	2.82	cps
Bismuth	209-1	6929600	6969334	6966657	6955197	0.32	cps
Bismuth	209-2	2729083	2658711	2729022	2705606	1.50	cps
Bromine	81-1	7149	7135	7659	7314	4.08	cps
Cadmium	108-1	3220	3247	3137	3202	1.79	cps
Cadmium	106-1	5054	5328	5118	5167	2.77	cps
Cadmium	111-1	5061	5314	5220	5198	2.46	cps
Calcium	43-1	3744438	3810298	3895799	3816845	1.99	cps
Calcium	44-1	60116449	62192637	62565346	61624811	2.14	cps
Carbon	12-1	31973640	33001541	33407345	32794175	2.25	cps
Carbon	12-2	226667	228762	230058	228496	0.75	cps
Chlorine	35-1	44871676	49457976	52025586	48785079	7.43	cps
Chlorine	35-2	193008	194975	194695	194226	0.55	cps
Chromium	52-2	38943	39979	39300	39407	1.34	cps
Cobalt	59-2	4314	4401	4311	4342	1.18	cps
Copper	63-2	24902	24718	24531	24717	0.75	cps
Dysprosium	156-1	137	153	127	139	9.70	cps
Dysprosium	156-2	13	7	13	11	34.61	cps
Erbium	164-1	110	100	90	100	10.00	cps
Erbium	164-2	27	17	23	22	22.91	cps
Gadolinium	160-1	97	53	87	79	28.77	cps
Gadolinium	160-2	20	17	37	24	43.83	cps
Holmium	165-1	11898469	11848348	12069291	11938702	0.97	cps
Holmium	165-2	4074486	4120923	4077534	4090981	0.63	cps
Indium	115-1	9036625	9243449	9253581	9177885	1.33	cps
Indium	115-2	855424	860785	853038	856416	0.46	cps
Iron	54-2	8356456	8288169	8379340	8341321	0.57	cps
Iron	56-2	155849644	152715514	155399451	154654870	1.10	cps
Iron	57-2	3932506	3826505	3936690	3898567	1.60	cps
Krypton	83-1	130	90	157	126	26.73	cps
Lead	206-1	38099	37467	38223	37930	1.07	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICSA002	Instrumnet Name :	P8
Client Sample ID :	ICSA002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:22:30	DataFile Name :	015ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	29831	29380	29440	29550	0.83	cps
Lead	208-1	142487	139573	140614	140891	1.05	cps
Lithium	6-1	6017359	6183679	6329278	6176772	2.53	cps
Magnesium	24-2	14266199	14254474	14426319	14315664	0.67	cps
Manganese	55-2	6745	6588	6642	6658	1.20	cps
Molybdenum	94-1	5680615	5855132	5876273	5804007	1.85	cps
Molybdenum	95-1	9935948	10286624	10304259	10175610	2.04	cps
Molybdenum	96-1	10680238	10906665	11116725	10901209	2.00	cps
Molybdenum	97-1	6198492	6425304	6375362	6333053	1.88	cps
Molybdenum	98-1	16086294	16770267	16753591	16536717	2.36	cps
Neodymium	150-1	53	50	67	57	15.57	cps
Neodymium	150-2	10	27	7	14	74.18	cps
Nickel	60-2	6088	5831	5788	5902	2.75	cps
Phosphorus	31-2	193813	194580	192940	193778	0.42	cps
Potassium	39-2	8457713	8301867	8408767	8389449	0.95	cps
Rhodium	103-1	8082791	8109381	8315827	8169333	1.56	cps
Rhodium	103-2	3049234	3017571	3075523	3047443	0.95	cps
Scandium	45-1	6990254	7098027	7174165	7087482	1.30	cps
Scandium	45-2	116460	116531	116430	116474	0.04	cps
Selenium	82-1	-27	37	13	8	411.91	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	3	3	7	4	43.40	cps
Silicon	28-1	520229	533921	539470	531207	1.86	cps
Silver	107-1	637	540	580	586	8.30	cps
Silver	109-1	693	610	520	608	14.26	cps
Sodium	23-2	30068751	29942337	30048410	30019833	0.23	cps
Strontium	86-1	114685	116504	117414	116201	1.20	cps
Strontium	88-1	977708	1006428	1013925	999354	1.91	cps
Sulfur	34-1	5229633	5259782	5376167	5288527	1.46	cps
Terbium	159-1	12241246	12194501	12356931	12264226	0.68	cps
Terbium	159-2	4052185	3923587	3990249	3988674	1.61	cps
Thallium	203-1	1067	1303	1120	1163	10.67	cps
Thallium	205-1	2877	2834	3067	2926	4.24	cps
Tin	118-1	4948	5338	5221	5169	3.87	cps
Titanium	47-1	3371836	3392190	3475405	3413144	1.61	cps
Uranium	238-1	563	493	600	552	9.81	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICSA002	Instrumnet Name :	P8
Client Sample ID :	ICSA002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:22:30	DataFile Name :	015ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	230	230	210	223	5.17	cps
Ytterbium	172-1	103	87	87	92	10.43	cps
Ytterbium	172-2	37	13	33	28	45.44	cps
Ytterbium	176-1	1473	1533	1540	1516	2.42	cps
Ytterbium	176-2	193	293	263	250	20.53	cps
Yttrium	89-1	17316191	17625066	17740788	17560682	1.25	cps
Yttrium	89-2	1122896	1137232	1126633	1128921	0.66	cps
Zinc	66-2	3357	3384	3310	3350	1.11	cps
Zirconium	90-1	830	730	720	760	8.00	cps
Zirconium	91-1	170	153	207	177	15.44	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICSAB002	Instrumnet Name :	P8
Client Sample ID :	ICSAB002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:25:41	DataFile Name :	016ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4086555	4114586	4113779	4104973	0.39	cps
Antimony	121-1	197724	200180	204380	200762	1.68	cps
Arsenic	75-2	3544	3691	3520	3585	2.57	cps
Barium	135-1	52909	55486	54388	54261	2.38	cps
Barium	137-1	93030	95819	95923	94924	1.73	cps
Beryllium	9-1	83358	83461	84863	83894	1.00	cps
Bismuth	209-1	6982859	7144278	7080563	7069234	1.15	cps
Bismuth	209-2	2731919	2761585	2725513	2739673	0.70	cps
Bromine	81-1	7312	7579	7712	7534	2.70	cps
Cadmium	108-1	6161	6538	6325	6342	2.98	cps
Cadmium	106-1	10014	9834	9890	9913	0.93	cps
Cadmium	111-1	52968	54314	55002	54095	1.91	cps
Calcium	43-1	3859649	3945442	4018189	3941093	2.01	cps
Calcium	44-1	62598184	64008876	64074472	63560511	1.31	cps
Carbon	12-1	33420460	34889359	35370722	34560180	2.94	cps
Carbon	12-2	235147	239817	236844	237269	1.00	cps
Chlorine	35-1	52504088	55317228	57375257	55065524	4.44	cps
Chlorine	35-2	205671	208855	208544	207690	0.85	cps
Chromium	52-2	80055	78805	80099	79653	0.92	cps
Cobalt	59-2	79775	79326	79557	79553	0.28	cps
Copper	63-2	81418	81552	81666	81545	0.15	cps
Dysprosium	156-1	127	143	127	132	7.28	cps
Dysprosium	156-2	13	13	23	17	34.65	cps
Erbium	164-1	87	67	127	93	32.73	cps
Erbium	164-2	20	30	30	27	21.65	cps
Gadolinium	160-1	77	137	83	99	33.26	cps
Gadolinium	160-2	13	20	27	20	33.35	cps
Holmium	165-1	12223860	12357437	12194052	12258450	0.71	cps
Holmium	165-2	4216828	4189509	4133854	4180063	1.01	cps
Indium	115-1	9305383	9551355	9388174	9414970	1.33	cps
Indium	115-2	867950	874901	875221	872691	0.47	cps
Iron	54-2	8377739	8385346	8436264	8399783	0.38	cps
Iron	56-2	155346838	156050441	155499591	155632290	0.24	cps
Iron	57-2	4001108	4023944	3956886	3993980	0.85	cps
Krypton	83-1	207	177	123	169	24.99	cps
Lead	206-1	194676	198689	197518	196961	1.05	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICSAB002	Instrumnet Name :	P8
Client Sample ID :	ICSAB002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:25:41	DataFile Name :	016ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	161068	164115	165465	163549	1.38	cps
Lead	208-1	748742	761737	766858	759112	1.23	cps
Lithium	6-1	6385587	6491842	6416533	6431321	0.85	cps
Magnesium	24-2	14647078	14589473	14473831	14570127	0.61	cps
Manganese	55-2	23880	23890	23897	23889	0.04	cps
Molybdenum	94-1	5938177	5900763	6034986	5957975	1.16	cps
Molybdenum	95-1	10451223	10490990	10580242	10507485	0.63	cps
Molybdenum	96-1	11071653	11323660	11246544	11213952	1.15	cps
Molybdenum	97-1	6290982	6447813	6499609	6412801	1.69	cps
Molybdenum	98-1	16619132	16647865	17042501	16769832	1.41	cps
Neodymium	150-1	73	70	50	64	19.58	cps
Neodymium	150-2	10	13	10	11	17.30	cps
Nickel	60-2	25934	26137	26314	26128	0.73	cps
Phosphorus	31-2	196924	195904	199416	197415	0.92	cps
Potassium	39-2	8471935	8458549	8505954	8478813	0.29	cps
Rhodium	103-1	8240715	8283606	8389254	8304525	0.92	cps
Rhodium	103-2	3087005	3133772	3126229	3115668	0.81	cps
Scandium	45-1	7335648	7249321	7309263	7298078	0.61	cps
Scandium	45-2	120429	121014	119552	120332	0.61	cps
Selenium	82-1	3157	3474	3354	3328	4.80	cps
Selenium	77-2	27	67	37	43	48.03	cps
Selenium	78-2	200	173	220	198	11.84	cps
Silicon	28-1	557947	569732	578529	568736	1.82	cps
Silver	107-1	232818	238466	241013	237433	1.77	cps
Silver	109-1	222067	229082	230252	227133	1.95	cps
Sodium	23-2	30654141	30609327	30320981	30528150	0.59	cps
Strontium	86-1	117501	119482	120618	119200	1.32	cps
Strontium	88-1	1009094	1028944	1043020	1027019	1.66	cps
Sulfur	34-1	5386489	5459673	5532185	5459449	1.33	cps
Terbium	159-1	12452581	12478673	12555101	12495451	0.43	cps
Terbium	159-2	4025542	4086273	4070214	4060676	0.77	cps
Thallium	203-1	197157	201313	200105	199525	1.07	cps
Thallium	205-1	469603	478006	482733	476781	1.39	cps
Tin	118-1	4891	4554	4711	4719	3.57	cps
Titanium	47-1	3465983	3540250	3573000	3526411	1.55	cps
Uranium	238-1	550	553	560	554	0.92	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	ICSAB002	Instrumnet Name :	P8
Client Sample ID :	ICSAB002	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:25:41	DataFile Name :	016ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	30923	31515	31388	31275	1.00	cps
Ytterbium	172-1	97	123	83	101	20.15	cps
Ytterbium	172-2	27	40	47	38	26.95	cps
Ytterbium	176-1	1660	1583	1597	1613	2.54	cps
Ytterbium	176-2	230	213	217	220	4.01	cps
Yttrium	89-1	17757021	17667533	17960898	17795151	0.84	cps
Yttrium	89-2	1148238	1154839	1156452	1153176	0.38	cps
Zinc	66-2	9346	9036	9503	9295	2.56	cps
Zirconium	90-1	847	860	797	834	4.00	cps
Zirconium	91-1	187	190	250	209	17.06	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV009	Instrumnet Name :	P8
Client Sample ID :	CCV009	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:28:49	DataFile Name :	017CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2265763	2243207	2261083	2256684	0.53	cps
Antimony	121-1	5001073	5068920	5017173	5029055	0.70	cps
Arsenic	75-2	86805	87529	86198	86844	0.77	cps
Barium	135-1	6566743	6594351	6589995	6583696	0.23	cps
Barium	137-1	11404712	11488659	11319026	11404132	0.74	cps
Beryllium	9-1	2144758	2119475	2160898	2141711	0.97	cps
Bismuth	209-1	6668797	6567223	6488850	6574957	1.37	cps
Bismuth	209-2	2481171	2498182	2501809	2493720	0.44	cps
Bromine	81-1	6422	6235	6028	6228	3.16	cps
Cadmium	108-1	99774	100509	100604	100296	0.45	cps
Cadmium	106-1	146444	146925	144719	146029	0.79	cps
Cadmium	111-1	1227447	1232313	1236009	1231923	0.35	cps
Calcium	43-1	10230861	10123822	10015176	10123286	1.07	cps
Calcium	44-1	164584288	162096861	160707851	162463000	1.21	cps
Carbon	12-1	2743416	2791304	2786002	2773574	0.95	cps
Carbon	12-2	22110	22037	21946	22031	0.37	cps
Chlorine	35-1	2408716	2249962	2089854	2249511	7.09	cps
Chlorine	35-2	6452	6045	5618	6038	6.90	cps
Chromium	52-2	1014166	1020788	1010929	1015294	0.49	cps
Cobalt	59-2	1958004	1940792	1928940	1942579	0.75	cps
Copper	63-2	13591137	13749481	13703227	13681282	0.60	cps
Dysprosium	156-1	433	403	380	406	6.59	cps
Dysprosium	156-2	57	63	87	69	22.87	cps
Erbium	164-1	333	347	323	334	3.50	cps
Erbium	164-2	130	87	143	120	24.69	cps
Gadolinium	160-1	253	277	247	259	6.08	cps
Gadolinium	160-2	87	93	70	83	14.42	cps
Holmium	165-1	11699416	11630764	11655356	11661846	0.30	cps
Holmium	165-2	3974795	3909996	3900779	3928523	1.03	cps
Indium	115-1	8913008	8767710	8823623	8834780	0.83	cps
Indium	115-2	799940	800081	805311	801777	0.38	cps
Iron	54-2	10361550	10278287	10377176	10339004	0.51	cps
Iron	56-2	190544437	193018630	192293904	191952324	0.66	cps
Iron	57-2	4831916	4854912	4833799	4840209	0.26	cps
Krypton	83-1	127	187	187	167	20.78	cps
Lead	206-1	20225337	20729981	20436858	20464059	1.24	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV009	Instrumnet Name :	P8
Client Sample ID :	CCV009	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:28:49	DataFile Name :	017CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	17328523	17897639	17881417	17702526	1.83	cps
Lead	208-1	79988648	81877857	81248011	81038172	1.19	cps
Lithium	6-1	6106075	5980070	5896384	5994176	1.76	cps
Magnesium	24-2	38773483	38304526	37852396	38310135	1.20	cps
Manganese	55-2	4428471	4524543	4456388	4469801	1.11	cps
Molybdenum	94-1	18880927	18910043	18787190	18859387	0.34	cps
Molybdenum	95-1	27382603	27589964	27238419	27403662	0.64	cps
Molybdenum	96-1	29954410	29756259	29680360	29797010	0.47	cps
Molybdenum	97-1	16705336	16854611	16695926	16751958	0.53	cps
Molybdenum	98-1	43823984	43881291	43812608	43839294	0.08	cps
Neodymium	150-1	767	680	660	702	8.07	cps
Neodymium	150-2	83	23	73	60	53.58	cps
Nickel	60-2	487341	490284	489365	488997	0.31	cps
Phosphorus	31-2	19386	19560	18932	19293	1.68	cps
Potassium	39-2	11055156	10778275	10946052	10926494	1.28	cps
Rhodium	103-1	7805856	7696385	7665607	7722616	0.95	cps
Rhodium	103-2	2804807	2764340	2818389	2795846	1.01	cps
Scandium	45-1	6972851	6950536	6878061	6933816	0.71	cps
Scandium	45-2	112546	113050	111498	112364	0.70	cps
Selenium	82-1	81016	80115	79914	80348	0.73	cps
Selenium	77-2	1270	1283	1220	1258	2.66	cps
Selenium	78-2	3927	4284	4047	4086	4.44	cps
Silicon	28-1	29830793	30456012	30226200	30171001	1.05	cps
Silver	107-1	6398200	6407979	6386722	6397634	0.17	cps
Silver	109-1	6046929	6098333	6120493	6088585	0.62	cps
Sodium	23-2	76897096	76680586	76445237	76674306	0.29	cps
Strontium	86-1	1968229	1969633	1941214	1959692	0.82	cps
Strontium	88-1	16557808	16800729	16600761	16653099	0.78	cps
Sulfur	34-1	927002	930010	930948	929320	0.22	cps
Terbium	159-1	11890927	11944599	11856185	11897237	0.37	cps
Terbium	159-2	3853002	3776449	3780500	3803317	1.13	cps
Thallium	203-1	5271615	5311587	5317490	5300231	0.47	cps
Thallium	205-1	12362611	12428112	12317303	12369342	0.45	cps
Tin	118-1	4384337	4391738	4387638	4387904	0.08	cps
Titanium	47-1	8590173	8751648	8823933	8721918	1.37	cps
Uranium	238-1	16909302	17197398	17079249	17061983	0.85	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV009	Instrumnet Name :	P8
Client Sample ID :	CCV009	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:28:49	DataFile Name :	017CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	808931	811385	807030	809115	0.27	cps
Ytterbium	172-1	363	357	397	372	5.76	cps
Ytterbium	172-2	140	153	127	140	9.52	cps
Ytterbium	176-1	25341	25601	25979	25640	1.25	cps
Ytterbium	176-2	8586	8196	8203	8328	2.68	cps
Yttrium	89-1	16804739	17067776	16639381	16837298	1.28	cps
Yttrium	89-2	1082232	1077015	1080547	1079931	0.25	cps
Zinc	66-2	1371827	1385856	1381045	1379576	0.52	cps
Zirconium	90-1	9395649	9535620	9513878	9481716	0.79	cps
Zirconium	91-1	2148259	2152411	2139792	2146821	0.30	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB009	Instrumnet Name :	P8
Client Sample ID :	CCB009	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:32:00	DataFile Name :	018CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	80	110	77	89	20.65	cps
Antimony	121-1	1273	1027	920	1073	16.89	cps
Arsenic	75-2	7	7	3	6	34.70	cps
Barium	135-1	697	647	623	656	5.72	cps
Barium	137-1	1087	1153	1100	1113	3.17	cps
Beryllium	9-1	726	622	627	659	8.88	cps
Bismuth	209-1	7823903	7813779	7727372	7788351	0.68	cps
Bismuth	209-2	3001926	3054220	3064096	3040081	1.10	cps
Bromine	81-1	6121	5875	6165	6054	2.59	cps
Cadmium	108-1	60	53	33	49	28.39	cps
Cadmium	106-1	5728	5695	5681	5701	0.42	cps
Cadmium	111-1	4074	4049	4060	4061	0.31	cps
Calcium	43-1	507	467	507	493	4.68	cps
Calcium	44-1	8829	7966	8079	8291	5.66	cps
Carbon	12-1	2102320	2054151	2002901	2053124	2.42	cps
Carbon	12-2	13383	13433	13843	13553	1.86	cps
Chlorine	35-1	1252555	1207062	1148618	1202745	4.33	cps
Chlorine	35-2	3831	3741	3644	3738	2.50	cps
Chromium	52-2	590	667	663	640	6.77	cps
Cobalt	59-2	193	163	177	178	8.45	cps
Copper	63-2	2800	2874	2894	2856	1.72	cps
Dysprosium	156-1	87	73	70	77	11.51	cps
Dysprosium	156-2	0	3	7	3	100.05	cps
Erbium	164-1	93	63	63	73	23.62	cps
Erbium	164-2	7	27	13	16	65.47	cps
Gadolinium	160-1	47	40	43	43	7.70	cps
Gadolinium	160-2	20	3	3	9	108.30	cps
Holmium	165-1	12173904	12262245	12121047	12185732	0.59	cps
Holmium	165-2	4159418	4200998	4255305	4205240	1.14	cps
Indium	115-1	10009325	9976667	9720167	9902053	1.60	cps
Indium	115-2	902783	918600	916978	912787	0.95	cps
Iron	54-2	557	557	590	568	3.39	cps
Iron	56-2	8806	9226	9013	9015	2.33	cps
Iron	57-2	187	203	207	199	5.39	cps
Krypton	83-1	127	127	117	123	4.68	cps
Lead	206-1	2640	2480	2484	2535	3.61	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB009	Instrumnet Name :	P8
Client Sample ID :	CCB009	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:32:00	DataFile Name :	018CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2364	2120	2057	2180	7.43	cps
Lead	208-1	10388	9752	9638	9926	4.07	cps
Lithium	6-1	6401290	6581747	6364261	6449099	1.80	cps
Magnesium	24-2	820	850	770	813	4.97	cps
Manganese	55-2	303	340	313	319	5.94	cps
Molybdenum	94-1	1043	870	710	874	19.07	cps
Molybdenum	95-1	1060	847	877	928	12.45	cps
Molybdenum	96-1	1217	1097	1013	1109	9.22	cps
Molybdenum	97-1	633	603	523	587	9.69	cps
Molybdenum	98-1	1840	1403	1253	1499	20.34	cps
Neodymium	150-1	20	27	20	22	17.33	cps
Neodymium	150-2	3	0	10	4	114.60	cps
Nickel	60-2	1090	993	860	981	11.77	cps
Phosphorus	31-2	33	53	37	41	26.06	cps
Potassium	39-2	7699	7445	7098	7414	4.06	cps
Rhodium	103-1	9281529	9188586	9086327	9185481	1.06	cps
Rhodium	103-2	3365579	3387878	3340935	3364798	0.70	cps
Scandium	45-1	7244648	7248128	7073831	7188869	1.39	cps
Scandium	45-2	117266	117505	118140	117637	0.38	cps
Selenium	82-1	0	-30	-23	-18	-88.60	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	3	3	3	3	0.00	cps
Silicon	28-1	328934	327079	324915	326976	0.62	cps
Silver	107-1	653	650	557	620	8.85	cps
Silver	109-1	590	507	497	531	9.65	cps
Sodium	23-2	28578	28401	28010	28330	1.03	cps
Strontium	86-1	277	270	327	291	10.64	cps
Strontium	88-1	630	480	560	557	13.48	cps
Sulfur	34-1	274676	272615	274510	273934	0.42	cps
Terbium	159-1	12685075	12547359	12441592	12558008	0.97	cps
Terbium	159-2	4106164	4138245	4138008	4127472	0.45	cps
Thallium	203-1	950	847	830	876	7.43	cps
Thallium	205-1	1967	1984	1947	1966	0.93	cps
Tin	118-1	4534	4678	4631	4614	1.58	cps
Titanium	47-1	287	227	270	261	11.86	cps
Uranium	238-1	370	230	230	277	29.21	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB009	Instrumnet Name :	P8
Client Sample ID :	CCB009	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:32:00	DataFile Name :	018CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	13	0	23	12	95.78	cps
Ytterbium	172-1	87	103	57	82	28.76	cps
Ytterbium	172-2	23	17	33	24	34.31	cps
Ytterbium	176-1	1680	1673	1693	1682	0.61	cps
Ytterbium	176-2	197	253	233	228	12.62	cps
Yttrium	89-1	18276632	18047886	18090879	18138466	0.67	cps
Yttrium	89-2	1133395	1159206	1153042	1148548	1.17	cps
Zinc	66-2	210	220	230	220	4.55	cps
Zirconium	90-1	1033	973	940	982	4.82	cps
Zirconium	91-1	197	183	243	208	15.16	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1135-02A	Instrumnet Name :	P8
Client Sample ID :	YE8F7A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:38:21	DataFile Name :	019AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1674194	1674218	1685519	1677977	0.39	cps
Antimony	121-1	7762	7819	7659	7747	1.05	cps
Arsenic	75-2	6031	6101	5978	6037	1.02	cps
Barium	135-1	1001952	1013475	1016839	1010755	0.77	cps
Barium	137-1	1847826	1872269	1843086	1854393	0.84	cps
Beryllium	9-1	6296	6367	6249	6304	0.94	cps
Bismuth	209-1	7609792	7640144	7609557	7619831	0.23	cps
Bismuth	209-2	2970861	2860595	2926294	2919250	1.90	cps
Bromine	81-1	7602	7719	7355	7559	2.46	cps
Cadmium	108-1	290	247	270	269	8.07	cps
Cadmium	106-1	6992	6778	6922	6897	1.58	cps
Cadmium	111-1	5918	5762	5770	5817	1.51	cps
Calcium	43-1	203522	203278	204610	203803	0.35	cps
Calcium	44-1	3382096	3387963	3331378	3367146	0.92	cps
Carbon	12-1	2301628	2295797	2269953	2289126	0.74	cps
Carbon	12-2	15698	15635	15525	15619	0.56	cps
Chlorine	35-1	76708919	81803164	84046577	80852887	4.65	cps
Chlorine	35-2	302616	306075	307312	305334	0.80	cps
Chromium	52-2	149569	148962	148737	149090	0.29	cps
Cobalt	59-2	225627	223002	223802	224143	0.60	cps
Copper	63-2	364931	362616	367042	364863	0.61	cps
Dysprosium	156-1	213288	211468	214584	213113	0.73	cps
Dysprosium	156-2	71443	72549	73356	72449	1.33	cps
Erbium	164-1	203613	207266	207773	206217	1.10	cps
Erbium	164-2	66277	66683	65698	66219	0.75	cps
Gadolinium	160-1	217505	219062	217671	218079	0.39	cps
Gadolinium	160-2	85407	86186	85854	85816	0.46	cps
Holmium	165-1	12896904	12753649	12597206	12749253	1.18	cps
Holmium	165-2	4327140	4268309	4259036	4284828	0.86	cps
Indium	115-1	9987028	10096085	9729819	9937644	1.89	cps
Indium	115-2	914516	892877	893292	900228	1.37	cps
Iron	54-2	9687570	9546559	9639790	9624640	0.75	cps
Iron	56-2	178828811	179222797	176021777	178024462	0.98	cps
Iron	57-2	4439999	4441061	4465023	4448694	0.32	cps
Krypton	83-1	413	490	453	452	8.48	cps
Lead	206-1	213396	217214	214988	215199	0.89	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1135-02A	Instrumnet Name :	P8
Client Sample ID :	YE8F7A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:38:21	DataFile Name :	019AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	173910	175089	177789	175596	1.13	cps
Lead	208-1	819648	828175	829085	825636	0.63	cps
Lithium	6-1	6851086	6674479	6673498	6733021	1.52	cps
Magnesium	24-2	3090778	3053590	3075140	3073169	0.61	cps
Manganese	55-2	4249613	4250783	4268556	4256317	0.25	cps
Molybdenum	94-1	55015	56752	57063	56277	1.96	cps
Molybdenum	95-1	75095	75587	76143	75608	0.69	cps
Molybdenum	96-1	83475	85434	85082	84664	1.23	cps
Molybdenum	97-1	46691	47033	46481	46735	0.60	cps
Molybdenum	98-1	118836	121835	120501	120391	1.25	cps
Neodymium	150-1	270306	274264	273243	272604	0.75	cps
Neodymium	150-2	63717	64876	64460	64351	0.91	cps
Nickel	60-2	136951	136578	136830	136786	0.14	cps
Phosphorus	31-2	2617	3057	2750	2808	8.04	cps
Potassium	39-2	365041	360328	360767	362045	0.72	cps
Rhodium	103-1	9083217	9138082	8997242	9072847	0.78	cps
Rhodium	103-2	3430970	3299489	3300224	3343561	2.26	cps
Scandium	45-1	8305854	8276493	8263961	8282103	0.26	cps
Scandium	45-2	135868	132319	131475	133221	1.75	cps
Selenium	82-1	307	137	260	234	37.46	cps
Selenium	77-2	357	383	327	356	7.97	cps
Selenium	78-2	210	203	220	211	3.97	cps
Silicon	28-1	29561859	29468767	29407050	29479225	0.26	cps
Silver	107-1	1823	1640	1463	1642	10.96	cps
Silver	109-1	1670	1523	1453	1549	7.14	cps
Sodium	23-2	50681	51504	52156	51447	1.44	cps
Strontium	86-1	147201	149317	149587	148702	0.88	cps
Strontium	88-1	1261899	1277428	1279224	1272850	0.75	cps
Sulfur	34-1	291586	292055	291786	291809	0.08	cps
Terbium	159-1	13093853	12954849	12940724	12996476	0.65	cps
Terbium	159-2	4283978	4156402	4171822	4204067	1.66	cps
Thallium	203-1	4738	4718	4531	4662	2.45	cps
Thallium	205-1	11402	10768	11285	11152	3.03	cps
Tin	118-1	18506	18553	19143	18734	1.90	cps
Titanium	47-1	1795881	1790660	1796048	1794196	0.17	cps
Uranium	238-1	65343	64740	65075	65053	0.46	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1135-02A	Instrumnet Name :	P8
Client Sample ID :	YE8F7A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:38:21	DataFile Name :	019AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	261874	259220	259122	260072	0.60	cps
Ytterbium	172-1	67534	67772	67048	67452	0.55	cps
Ytterbium	172-2	26653	26463	25895	26337	1.50	cps
Ytterbium	176-1	42699	43090	43699	43162	1.17	cps
Ytterbium	176-2	16607	17061	16627	16765	1.53	cps
Yttrium	89-1	21239973	21216388	21355463	21270608	0.35	cps
Yttrium	89-2	1368098	1328176	1329476	1341917	1.69	cps
Zinc	66-2	75040	74209	74695	74648	0.56	cps
Zirconium	90-1	36972	36698	37834	37168	1.60	cps
Zirconium	91-1	8339	8176	8239	8251	1.00	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166238BL	Instrumnet Name :	P8
Client Sample ID :	PBW238	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:41:35	DataFile Name :	020CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	53	73	67	64	15.80	cps
Antimony	121-1	213	123	157	164	27.67	cps
Arsenic	75-2	0	0	3	1	173.21	cps
Barium	135-1	310	347	333	330	5.62	cps
Barium	137-1	587	587	473	549	11.92	cps
Beryllium	9-1	336	327	299	321	6.11	cps
Bismuth	209-1	7769061	7778364	7831564	7792996	0.43	cps
Bismuth	209-2	3048031	3024890	3092638	3055186	1.13	cps
Bromine	81-1	6048	6071	6328	6149	2.53	cps
Cadmium	108-1	40	43	33	39	13.09	cps
Cadmium	106-1	5755	5725	5631	5703	1.13	cps
Cadmium	111-1	4060	4027	3982	4023	0.98	cps
Calcium	43-1	363	423	397	394	7.62	cps
Calcium	44-1	6528	6475	6558	6520	0.65	cps
Carbon	12-1	2054597	1994047	1964454	2004366	2.29	cps
Carbon	12-2	13323	13129	13026	13159	1.15	cps
Chlorine	35-1	3512330	3160387	2784506	3152408	11.55	cps
Chlorine	35-2	7922	7602	7165	7563	5.02	cps
Chromium	52-2	610	563	607	593	4.39	cps
Cobalt	59-2	170	163	117	150	19.37	cps
Copper	63-2	2400	2337	2344	2360	1.47	cps
Dysprosium	156-1	283	260	270	271	4.32	cps
Dysprosium	156-2	10	7	10	9	21.63	cps
Erbium	164-1	83	53	53	63	27.35	cps
Erbium	164-2	13	40	30	28	48.51	cps
Gadolinium	160-1	57	37	50	48	21.31	cps
Gadolinium	160-2	17	13	20	17	20.01	cps
Holmium	165-1	12393544	12303183	12341311	12346013	0.37	cps
Holmium	165-2	4170982	4227671	4190931	4196528	0.69	cps
Indium	115-1	9970967	9897408	9933759	9934045	0.37	cps
Indium	115-2	909577	914523	915935	913345	0.37	cps
Iron	54-2	617	683	677	659	5.57	cps
Iron	56-2	10010	9900	9620	9843	2.04	cps
Iron	57-2	253	253	260	256	1.51	cps
Krypton	83-1	133	97	143	124	19.74	cps
Lead	206-1	3034	2890	2890	2938	2.82	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166238BL	Instrumnet Name :	P8
Client Sample ID :	PBW238	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:41:35	DataFile Name :	020CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2487	2550	2260	2432	6.27	cps
Lead	208-1	11525	11589	10855	11323	3.59	cps
Lithium	6-1	6395353	6422417	6334317	6384029	0.71	cps
Magnesium	24-2	490	510	497	499	2.04	cps
Manganese	55-2	453	400	383	412	8.87	cps
Molybdenum	94-1	357	357	407	373	7.73	cps
Molybdenum	95-1	327	297	377	333	12.13	cps
Molybdenum	96-1	427	417	367	403	7.97	cps
Molybdenum	97-1	250	217	187	218	14.55	cps
Molybdenum	98-1	497	480	423	467	8.24	cps
Neodymium	150-1	10	23	20	18	39.03	cps
Neodymium	150-2	3	0	0	1	173.21	cps
Nickel	60-2	910	940	927	926	1.62	cps
Phosphorus	31-2	20	23	43	29	43.68	cps
Potassium	39-2	6118	6131	6085	6111	0.39	cps
Rhodium	103-1	9305425	9120147	9110502	9178691	1.20	cps
Rhodium	103-2	3371478	3374226	3406011	3383905	0.57	cps
Scandium	45-1	7273615	7333136	7327565	7311439	0.45	cps
Scandium	45-2	116527	116602	117206	116778	0.32	cps
Selenium	82-1	-17	23	-37	-10	-305.40	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	10	0	7	6	91.64	cps
Silicon	28-1	319560	317035	316276	317624	0.54	cps
Silver	107-1	210	173	197	193	9.60	cps
Silver	109-1	77	60	73	70	12.60	cps
Sodium	23-2	22898	22681	22267	22615	1.42	cps
Strontium	86-1	200	263	183	216	19.58	cps
Strontium	88-1	460	397	337	398	15.51	cps
Sulfur	34-1	273909	275018	278092	275673	0.79	cps
Terbium	159-1	12527576	12490531	12462027	12493378	0.26	cps
Terbium	159-2	4050396	4085999	4134303	4090233	1.03	cps
Thallium	203-1	713	603	730	682	10.09	cps
Thallium	205-1	1593	1647	1573	1605	2.36	cps
Tin	118-1	4314	4301	4207	4274	1.36	cps
Titanium	47-1	187	120	173	160	22.05	cps
Uranium	238-1	87	80	40	69	36.64	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166238BL	Instrumnet Name :	P8
Client Sample ID :	PBW238	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:41:35	DataFile Name :	020CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	3	13	10	9	57.30	cps
Ytterbium	172-1	73	80	87	80	8.34	cps
Ytterbium	172-2	37	27	23	29	24.03	cps
Ytterbium	176-1	1713	1820	1673	1736	4.37	cps
Ytterbium	176-2	183	223	220	209	10.62	cps
Yttrium	89-1	18219873	18052311	18119365	18130516	0.47	cps
Yttrium	89-2	1143024	1155541	1155056	1151207	0.62	cps
Zinc	66-2	197	223	193	204	8.04	cps
Zirconium	90-1	540	670	637	616	10.97	cps
Zirconium	91-1	163	137	143	148	9.39	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166238BS	Instrumnet Name :	P8
Client Sample ID :	LCS238	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:44:59	DataFile Name :	021LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1753	1977	1730	1820	7.48	cps
Antimony	121-1	39447	39494	39403	39448	0.11	cps
Arsenic	75-2	407	383	347	379	7.98	cps
Barium	135-1	51293	50671	51752	51239	1.06	cps
Barium	137-1	88953	89292	89624	89290	0.38	cps
Beryllium	9-1	8659	8669	8795	8708	0.87	cps
Bismuth	209-1	7750298	7652966	7680367	7694544	0.65	cps
Bismuth	209-2	3053116	3049391	3012137	3038215	0.75	cps
Bromine	81-1	6225	6101	6218	6181	1.12	cps
Cadmium	108-1	473	520	417	470	11.01	cps
Cadmium	106-1	6488	6375	6392	6418	0.95	cps
Cadmium	111-1	9388	9393	9630	9470	1.46	cps
Calcium	43-1	39835	39731	39641	39736	0.24	cps
Calcium	44-1	635082	640611	638420	638038	0.44	cps
Carbon	12-1	2065136	2017265	2008510	2030303	1.50	cps
Carbon	12-2	13510	13323	13199	13344	1.17	cps
Chlorine	35-1	2229397	2300067	2314498	2281321	2.00	cps
Chlorine	35-2	7665	7629	7329	7541	2.45	cps
Chromium	52-2	8536	8493	8182	8404	2.29	cps
Cobalt	59-2	7952	8039	7842	7945	1.24	cps
Copper	63-2	15292	14935	15125	15117	1.18	cps
Dysprosium	156-1	223	210	197	210	6.35	cps
Dysprosium	156-2	13	3	13	10	57.75	cps
Erbium	164-1	73	83	80	79	6.45	cps
Erbium	164-2	33	30	17	27	33.06	cps
Gadolinium	160-1	60	43	33	46	29.58	cps
Gadolinium	160-2	7	0	20	9	114.55	cps
Holmium	165-1	12268031	12240794	12251924	12253583	0.11	cps
Holmium	165-2	4213577	4192353	4079215	4161715	1.74	cps
Indium	115-1	9936748	9756192	9941087	9878009	1.07	cps
Indium	115-2	906128	913690	889538	903119	1.37	cps
Iron	54-2	34702	34034	34361	34366	0.97	cps
Iron	56-2	635642	633406	636383	635144	0.24	cps
Iron	57-2	16149	16093	15892	16045	0.84	cps
Krypton	83-1	117	107	143	122	15.51	cps
Lead	206-1	19148	18921	18931	19000	0.68	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166238BS	Instrumnet Name :	P8
Client Sample ID :	LCS238	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:44:59	DataFile Name :	021LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	16143	16544	16411	16366	1.25	cps
Lead	208-1	74513	75041	74530	74695	0.40	cps
Lithium	6-1	6348882	6321557	6449930	6373457	1.06	cps
Magnesium	24-2	145565	143615	143592	144257	0.78	cps
Manganese	55-2	2067	2114	2107	2096	1.20	cps
Molybdenum	94-1	42712	42809	43237	42919	0.65	cps
Molybdenum	95-1	52074	52709	51682	52155	0.99	cps
Molybdenum	96-1	57207	57388	57586	57393	0.33	cps
Molybdenum	97-1	32859	32438	32511	32603	0.69	cps
Molybdenum	98-1	83036	84391	83556	83661	0.82	cps
Neodymium	150-1	27	17	13	19	36.75	cps
Neodymium	150-2	0	0	0	0	0.00	cps
Nickel	60-2	2984	2910	3027	2974	1.98	cps
Phosphorus	31-2	130	113	93	112	16.36	cps
Potassium	39-2	88442	88395	88113	88317	0.20	cps
Rhodium	103-1	9036328	8918011	9123901	9026080	1.14	cps
Rhodium	103-2	3413047	3429640	3339133	3393940	1.42	cps
Scandium	45-1	7269601	7129886	7341080	7246856	1.48	cps
Scandium	45-2	116427	116615	115489	116177	0.52	cps
Selenium	82-1	1660	1700	1700	1687	1.37	cps
Selenium	77-2	30	30	20	27	21.65	cps
Selenium	78-2	77	120	83	93	25.00	cps
Silicon	28-1	528145	529171	530549	529288	0.23	cps
Silver	107-1	25818	25941	26556	26105	1.51	cps
Silver	109-1	24969	25327	25036	25111	0.76	cps
Sodium	23-2	313524	310994	311203	311907	0.45	cps
Strontium	86-1	7432	7449	7525	7469	0.67	cps
Strontium	88-1	61096	61675	62137	61636	0.85	cps
Sulfur	34-1	278807	280194	280671	279891	0.35	cps
Terbium	159-1	12551819	12634141	12482172	12556044	0.61	cps
Terbium	159-2	4146146	4081346	4027148	4084880	1.46	cps
Thallium	203-1	21308	21471	20396	21058	2.75	cps
Thallium	205-1	50468	51190	51103	50921	0.77	cps
Tin	118-1	89610	90409	89184	89734	0.69	cps
Titanium	47-1	4257	4331	4227	4272	1.24	cps
Uranium	238-1	65947	66108	65548	65867	0.44	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166238BS	Instrumnet Name :	P8
Client Sample ID :	LCS238	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:44:59	DataFile Name :	021LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	15659	15742	15592	15664	0.48	cps
Ytterbium	172-1	63	70	57	63	10.52	cps
Ytterbium	172-2	23	57	23	34	55.89	cps
Ytterbium	176-1	1944	1717	1770	1810	6.55	cps
Ytterbium	176-2	273	280	297	283	4.24	cps
Yttrium	89-1	18024170	18044827	18098296	18055764	0.21	cps
Yttrium	89-2	1138543	1153935	1128535	1140338	1.12	cps
Zinc	66-2	3230	3297	3410	3313	2.75	cps
Zirconium	90-1	36411	37377	37126	36971	1.36	cps
Zirconium	91-1	8323	8096	8199	8206	1.38	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166230BL	Instrumnet Name :	P8
Client Sample ID :	PBS230	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:51:58	DataFile Name :	023CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	40	47	73	53	33.07	cps
Antimony	121-1	107	93	117	106	11.09	cps
Arsenic	75-2	3	7	3	4	43.40	cps
Barium	135-1	210	200	147	186	18.35	cps
Barium	137-1	250	290	303	281	9.87	cps
Beryllium	9-1	230	226	241	232	3.36	cps
Bismuth	209-1	7489241	7657696	7791244	7646060	1.98	cps
Bismuth	209-2	2993726	3025245	3052230	3023733	0.97	cps
Bromine	81-1	5895	6105	6005	6001	1.75	cps
Cadmium	108-1	43	57	63	54	18.71	cps
Cadmium	106-1	5401	5481	5798	5560	3.77	cps
Cadmium	111-1	3804	3857	4038	3899	3.14	cps
Calcium	43-1	303	337	410	350	15.59	cps
Calcium	44-1	5755	5905	5721	5793	1.69	cps
Carbon	12-1	1993040	1930475	1950264	1957926	1.63	cps
Carbon	12-2	13166	13286	12679	13044	2.47	cps
Chlorine	35-1	514123	511952	506644	510906	0.75	cps
Chlorine	35-2	1800	1760	1757	1772	1.36	cps
Chromium	52-2	630	623	583	612	4.12	cps
Cobalt	59-2	120	140	103	121	15.16	cps
Copper	63-2	2030	2247	2187	2155	5.19	cps
Dysprosium	156-1	183	180	140	168	14.37	cps
Dysprosium	156-2	10	13	10	11	17.30	cps
Erbium	164-1	70	70	70	70	0.00	cps
Erbium	164-2	7	27	30	21	59.77	cps
Gadolinium	160-1	57	27	40	41	36.56	cps
Gadolinium	160-2	3	10	13	9	57.30	cps
Holmium	165-1	11916981	12263145	12167751	12115959	1.48	cps
Holmium	165-2	4114329	4175249	4196380	4161986	1.02	cps
Indium	115-1	9790457	9924563	9904752	9873257	0.73	cps
Indium	115-2	884544	894069	898012	892208	0.78	cps
Iron	54-2	453	497	460	470	4.96	cps
Iron	56-2	6685	6662	6765	6704	0.81	cps
Iron	57-2	173	147	183	168	11.30	cps
Krypton	83-1	137	123	117	126	8.11	cps
Lead	206-1	1497	1403	1390	1430	4.06	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166230BL	Instrumnet Name :	P8
Client Sample ID :	PBS230	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:51:58	DataFile Name :	023CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1280	1263	1213	1252	2.77	cps
Lead	208-1	5684	5464	5514	5554	2.08	cps
Lithium	6-1	6283986	6338929	6448553	6357156	1.32	cps
Magnesium	24-2	527	513	550	530	3.50	cps
Manganese	55-2	263	277	270	270	2.47	cps
Molybdenum	94-1	277	297	313	296	6.21	cps
Molybdenum	95-1	293	183	263	247	23.05	cps
Molybdenum	96-1	367	270	277	304	17.73	cps
Molybdenum	97-1	177	93	180	150	32.74	cps
Molybdenum	98-1	427	380	410	406	5.83	cps
Neodymium	150-1	27	10	3	13	90.16	cps
Neodymium	150-2	3	0	0	1	173.21	cps
Nickel	60-2	887	857	907	883	2.85	cps
Phosphorus	31-2	30	10	40	27	57.28	cps
Potassium	39-2	5288	5421	5778	5496	4.61	cps
Rhodium	103-1	8895401	8959999	8981393	8945598	0.50	cps
Rhodium	103-2	3362236	3374751	3331221	3356070	0.67	cps
Scandium	45-1	7029060	7053158	7145801	7076006	0.87	cps
Scandium	45-2	113265	115361	113957	114194	0.94	cps
Selenium	82-1	20	-33	-20	-11	-249.81	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	3	3	3	3	0.00	cps
Silicon	28-1	305787	304079	302977	304281	0.47	cps
Silver	107-1	173	137	170	160	12.67	cps
Silver	109-1	103	90	107	100	8.82	cps
Sodium	23-2	20234	19767	19884	19962	1.22	cps
Strontium	86-1	183	227	220	210	11.11	cps
Strontium	88-1	417	457	363	412	11.36	cps
Sulfur	34-1	270614	269807	268181	269534	0.46	cps
Terbium	159-1	12077239	12413215	12491638	12327364	1.79	cps
Terbium	159-2	4030724	4082806	4068316	4060615	0.66	cps
Thallium	203-1	423	500	443	456	8.73	cps
Thallium	205-1	1077	1197	1107	1127	5.54	cps
Tin	118-1	4321	4381	4554	4419	2.74	cps
Titanium	47-1	93	127	163	128	27.41	cps
Uranium	238-1	23	43	33	33	30.00	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166230BL	Instrumnet Name :	P8
Client Sample ID :	PBS230	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:51:58	DataFile Name :	023CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	13	3	3	7	86.65	cps
Ytterbium	172-1	83	77	90	83	8.00	cps
Ytterbium	172-2	33	17	23	24	34.31	cps
Ytterbium	176-1	1640	1677	1560	1626	3.67	cps
Ytterbium	176-2	180	183	177	180	1.85	cps
Yttrium	89-1	17492257	17878466	17517947	17629557	1.22	cps
Yttrium	89-2	1127094	1125738	1132869	1128567	0.34	cps
Zinc	66-2	210	177	173	187	10.86	cps
Zirconium	90-1	573	573	493	547	8.45	cps
Zirconium	91-1	147	110	117	124	15.70	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166230BS	Instrumnet Name :	P8
Client Sample ID :	LCS230	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:55:20	DataFile Name :	024LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1610	1660	1763	1678	4.66	cps
Antimony	121-1	36713	35359	36749	36274	2.18	cps
Arsenic	75-2	320	387	380	362	10.14	cps
Barium	135-1	48051	46476	47683	47404	1.74	cps
Barium	137-1	83342	82218	81815	82458	0.96	cps
Beryllium	9-1	8146	8070	7846	8021	1.94	cps
Bismuth	209-1	7211336	7139490	6997186	7116004	1.53	cps
Bismuth	209-2	2833749	2817861	2815515	2822375	0.35	cps
Bromine	81-1	5768	5845	5615	5742	2.04	cps
Cadmium	108-1	440	470	440	450	3.85	cps
Cadmium	106-1	5711	5301	5578	5530	3.78	cps
Cadmium	111-1	8451	8026	8341	8272	2.67	cps
Calcium	43-1	36373	36232	36313	36306	0.19	cps
Calcium	44-1	588488	579433	580549	582823	0.85	cps
Carbon	12-1	2027225	1970962	1983054	1993747	1.49	cps
Carbon	12-2	13166	13093	13166	13142	0.32	cps
Chlorine	35-1	1295253	1393067	1453402	1380574	5.78	cps
Chlorine	35-2	5394	5341	5224	5320	1.63	cps
Chromium	52-2	7609	7625	7735	7657	0.90	cps
Cobalt	59-2	7275	7415	7129	7273	1.97	cps
Copper	63-2	14171	14467	14184	14274	1.18	cps
Dysprosium	156-1	213	150	173	179	17.91	cps
Dysprosium	156-2	7	3	0	3	100.05	cps
Erbium	164-1	57	83	77	72	19.21	cps
Erbium	164-2	20	20	10	17	34.64	cps
Gadolinium	160-1	40	60	33	44	31.23	cps
Gadolinium	160-2	7	13	7	9	43.25	cps
Holmium	165-1	11388442	11054327	10962937	11135235	2.01	cps
Holmium	165-2	3853769	3837384	3757790	3816314	1.35	cps
Indium	115-1	9148986	8958655	8771097	8959579	2.11	cps
Indium	115-2	824995	820992	816959	820982	0.49	cps
Iron	54-2	32133	32253	32273	32220	0.24	cps
Iron	56-2	595551	594591	592694	594279	0.24	cps
Iron	57-2	14895	15375	15081	15117	1.60	cps
Krypton	83-1	117	97	87	100	15.27	cps
Lead	206-1	17462	16617	17348	17143	2.67	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166230BS	Instrumnet Name :	P8
Client Sample ID :	LCS230	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:55:20	DataFile Name :	024LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	14935	14638	14385	14653	1.88	cps
Lead	208-1	69213	67790	67609	68204	1.29	cps
Lithium	6-1	5960090	5756961	5773384	5830145	1.94	cps
Magnesium	24-2	135980	136515	136216	136237	0.20	cps
Manganese	55-2	2130	2134	1893	2052	6.71	cps
Molybdenum	94-1	40629	39850	39566	40015	1.38	cps
Molybdenum	95-1	49113	47150	47290	47851	2.29	cps
Molybdenum	96-1	53402	52897	53185	53161	0.48	cps
Molybdenum	97-1	30647	29645	29866	30053	1.75	cps
Molybdenum	98-1	78893	76767	77371	77677	1.41	cps
Neodymium	150-1	17	13	7	12	41.65	cps
Neodymium	150-2	3	3	0	2	86.60	cps
Nickel	60-2	2867	2780	2910	2853	2.32	cps
Phosphorus	31-2	103	127	100	110	13.21	cps
Potassium	39-2	82843	81549	82256	82216	0.79	cps
Rhodium	103-1	8508821	8103073	8086406	8232767	2.91	cps
Rhodium	103-2	3103230	3043300	3055395	3067308	1.03	cps
Scandium	45-1	6555866	6439799	6437637	6477768	1.04	cps
Scandium	45-2	107494	107068	106037	106866	0.70	cps
Selenium	82-1	1687	1653	1620	1653	2.02	cps
Selenium	77-2	37	23	20	27	33.08	cps
Selenium	78-2	83	73	93	83	12.00	cps
Silicon	28-1	500156	495640	492843	496213	0.74	cps
Silver	107-1	24448	24054	23907	24137	1.16	cps
Silver	109-1	23764	23190	23363	23439	1.26	cps
Sodium	23-2	294892	293736	293859	294162	0.22	cps
Strontium	86-1	6842	6718	6698	6753	1.15	cps
Strontium	88-1	58381	56507	55714	56867	2.41	cps
Sulfur	34-1	272166	266905	263517	267529	1.63	cps
Terbium	159-1	11601587	11322166	11292193	11405316	1.50	cps
Terbium	159-2	3716758	3679129	3758821	3718236	1.07	cps
Thallium	203-1	19645	19575	19148	19456	1.38	cps
Thallium	205-1	48306	47928	47296	47843	1.07	cps
Tin	118-1	83791	82718	82788	83099	0.72	cps
Titanium	47-1	3794	3857	3644	3765	2.91	cps
Uranium	238-1	61354	60064	60704	60708	1.06	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166230BS	Instrumnet Name :	P8
Client Sample ID :	LCS230	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:55:20	DataFile Name :	024LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	14928	14928	14691	14849	0.92	cps
Ytterbium	172-1	97	70	67	78	21.14	cps
Ytterbium	172-2	17	30	30	26	30.11	cps
Ytterbium	176-1	1440	1627	1520	1529	6.13	cps
Ytterbium	176-2	243	253	213	237	8.80	cps
Yttrium	89-1	16806186	16419385	15901370	16375647	2.77	cps
Yttrium	89-2	1037972	1034147	1029752	1033957	0.40	cps
Zinc	66-2	3217	2910	3297	3141	6.50	cps
Zirconium	90-1	33991	33687	33731	33803	0.49	cps
Zirconium	91-1	7575	7626	7592	7598	0.34	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166241BL	Instrumnet Name :	P8
Client Sample ID :	PBS241	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:58:44	DataFile Name :	025CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	60	23	60	48	44.31	cps
Antimony	121-1	100	87	107	98	10.41	cps
Arsenic	75-2	13	0	7	7	99.98	cps
Barium	135-1	183	170	157	170	7.84	cps
Barium	137-1	290	283	270	281	3.62	cps
Beryllium	9-1	246	235	255	245	4.09	cps
Bismuth	209-1	7785869	7704622	7767126	7752539	0.55	cps
Bismuth	209-2	3001571	2990336	3029207	3007038	0.67	cps
Bromine	81-1	5768	5991	6015	5925	2.30	cps
Cadmium	108-1	77	30	30	46	59.15	cps
Cadmium	106-1	5564	5474	5621	5553	1.33	cps
Cadmium	111-1	3891	3874	3957	3908	1.12	cps
Calcium	43-1	360	377	347	361	4.16	cps
Calcium	44-1	5978	5898	5988	5955	0.83	cps
Carbon	12-1	2000894	1941113	1923363	1955123	2.08	cps
Carbon	12-2	12656	13233	12916	12935	2.23	cps
Chlorine	35-1	442524	433117	422357	432666	2.33	cps
Chlorine	35-2	1507	1270	1450	1409	8.77	cps
Chromium	52-2	483	517	507	502	3.41	cps
Cobalt	59-2	140	130	140	137	4.22	cps
Copper	63-2	2090	2200	2057	2116	3.55	cps
Dysprosium	156-1	103	177	157	146	26.04	cps
Dysprosium	156-2	0	10	3	4	114.60	cps
Erbium	164-1	73	63	63	67	8.66	cps
Erbium	164-2	13	10	30	18	60.28	cps
Gadolinium	160-1	43	47	40	43	7.70	cps
Gadolinium	160-2	7	17	3	9	78.08	cps
Holmium	165-1	12216551	12283513	12158110	12219391	0.51	cps
Holmium	165-2	4165680	4059339	4225639	4150219	2.03	cps
Indium	115-1	9974046	9959847	9770106	9901333	1.15	cps
Indium	115-2	880025	870701	896916	882547	1.51	cps
Iron	54-2	443	453	427	441	3.05	cps
Iron	56-2	6535	6932	6888	6785	3.21	cps
Iron	57-2	193	183	153	177	11.78	cps
Krypton	83-1	117	133	130	127	6.96	cps
Lead	206-1	1353	1327	1283	1321	2.67	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166241BL	Instrumnet Name :	P8
Client Sample ID :	PBS241	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:58:44	DataFile Name :	025CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1093	1090	1017	1067	4.06	cps
Lead	208-1	5180	5184	5067	5144	1.29	cps
Lithium	6-1	6368685	6307858	6412537	6363027	0.83	cps
Magnesium	24-2	613	623	530	589	8.70	cps
Manganese	55-2	217	270	273	253	12.55	cps
Molybdenum	94-1	360	293	317	323	10.46	cps
Molybdenum	95-1	230	237	260	242	6.51	cps
Molybdenum	96-1	357	340	330	342	3.94	cps
Molybdenum	97-1	127	160	177	154	16.48	cps
Molybdenum	98-1	370	347	350	356	3.55	cps
Neodymium	150-1	0	27	13	13	100.01	cps
Neodymium	150-2	0	7	0	2	173.21	cps
Nickel	60-2	830	803	780	804	3.11	cps
Phosphorus	31-2	10	33	40	28	56.71	cps
Potassium	39-2	5404	5131	5428	5321	3.10	cps
Rhodium	103-1	9087423	8982435	8832576	8967478	1.43	cps
Rhodium	103-2	3285714	3246805	3380194	3304238	2.08	cps
Scandium	45-1	7056358	7075417	7118097	7083290	0.45	cps
Scandium	45-2	112701	113161	114240	113367	0.70	cps
Selenium	82-1	-20	-17	3	-11	-113.63	cps
Selenium	77-2	3	0	0	1	173.21	cps
Selenium	78-2	0	3	0	1	173.21	cps
Silicon	28-1	303292	303820	301823	302978	0.34	cps
Silver	107-1	287	260	227	258	11.66	cps
Silver	109-1	157	157	140	151	6.37	cps
Sodium	23-2	19730	19610	19844	19728	0.59	cps
Strontium	86-1	200	210	240	217	9.61	cps
Strontium	88-1	437	503	417	452	10.03	cps
Sulfur	34-1	276693	276826	277816	277112	0.22	cps
Terbium	159-1	12466778	12512236	12373505	12450840	0.57	cps
Terbium	159-2	3959391	3955230	4046911	3987177	1.30	cps
Thallium	203-1	493	480	460	478	3.51	cps
Thallium	205-1	1197	993	1120	1103	9.31	cps
Tin	118-1	4401	4351	4487	4413	1.57	cps
Titanium	47-1	97	130	137	121	17.69	cps
Uranium	238-1	40	23	20	28	38.58	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166241BL	Instrumnet Name :	P8
Client Sample ID :	PBS241	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 13:58:44	DataFile Name :	025CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	7	7	7	7	0.00	cps
Ytterbium	172-1	57	67	43	56	21.08	cps
Ytterbium	172-2	13	10	17	13	25.01	cps
Ytterbium	176-1	1493	1707	1620	1607	6.68	cps
Ytterbium	176-2	247	203	243	231	10.43	cps
Yttrium	89-1	17775754	17745607	17789175	17770179	0.13	cps
Yttrium	89-2	1107355	1096115	1126281	1109917	1.37	cps
Zinc	66-2	147	167	187	167	12.00	cps
Zirconium	90-1	517	613	547	559	8.85	cps
Zirconium	91-1	110	110	130	117	9.90	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166241BS	Instrumnet Name :	P8
Client Sample ID :	LCS241	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:02:08	DataFile Name :	026LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1720	1727	1763	1737	1.34	cps
Antimony	121-1	39363	39931	40119	39804	0.99	cps
Arsenic	75-2	337	410	313	353	14.28	cps
Barium	135-1	51802	50828	52086	51572	1.28	cps
Barium	137-1	91060	90419	91184	90888	0.45	cps
Beryllium	9-1	8704	8822	8865	8797	0.95	cps
Bismuth	209-1	7759015	7676244	7633675	7689645	0.83	cps
Bismuth	209-2	2983299	2919217	2952194	2951570	1.09	cps
Bromine	81-1	6125	5845	5711	5894	3.58	cps
Cadmium	108-1	470	443	443	452	3.40	cps
Cadmium	106-1	6178	6208	6031	6139	1.54	cps
Cadmium	111-1	9350	9333	9233	9305	0.68	cps
Calcium	43-1	39922	40975	39721	40206	1.67	cps
Calcium	44-1	636813	641118	640608	639513	0.37	cps
Carbon	12-1	2057240	2016455	2001514	2025070	1.42	cps
Carbon	12-2	13259	13203	13446	13303	0.96	cps
Chlorine	35-1	1223889	1353720	1419201	1332270	7.46	cps
Chlorine	35-2	4991	4691	5098	4926	4.28	cps
Chromium	52-2	8316	8226	8242	8261	0.58	cps
Cobalt	59-2	8046	8132	8002	8060	0.82	cps
Copper	63-2	15285	15432	15195	15304	0.78	cps
Dysprosium	156-1	133	150	123	136	9.94	cps
Dysprosium	156-2	10	3	7	7	50.03	cps
Erbium	164-1	90	47	70	69	31.48	cps
Erbium	164-2	10	40	17	22	70.88	cps
Gadolinium	160-1	53	37	47	46	18.41	cps
Gadolinium	160-2	7	10	7	8	24.71	cps
Holmium	165-1	12126722	12227956	11917459	12090712	1.31	cps
Holmium	165-2	4055460	4172016	4093475	4106984	1.45	cps
Indium	115-1	9637052	9767481	9763314	9722616	0.76	cps
Indium	115-2	875844	883524	876959	878775	0.47	cps
Iron	54-2	35126	34652	34485	34754	0.96	cps
Iron	56-2	637516	637772	636184	637157	0.13	cps
Iron	57-2	15672	16233	15719	15874	1.96	cps
Krypton	83-1	127	103	123	118	10.72	cps
Lead	206-1	18553	18674	18497	18574	0.49	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166241BS	Instrumnet Name :	P8
Client Sample ID :	LCS241	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:02:08	DataFile Name :	026LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	16010	15987	16497	16165	1.78	cps
Lead	208-1	73946	74197	75139	74428	0.85	cps
Lithium	6-1	6320399	6321203	6371001	6337534	0.46	cps
Magnesium	24-2	146321	145514	142882	144906	1.24	cps
Manganese	55-2	2144	2230	1957	2110	6.62	cps
Molybdenum	94-1	43354	43334	44023	43570	0.90	cps
Molybdenum	95-1	53194	51977	52328	52500	1.19	cps
Molybdenum	96-1	57927	57274	58693	57965	1.23	cps
Molybdenum	97-1	32939	32110	32398	32482	1.30	cps
Molybdenum	98-1	84170	84401	84834	84468	0.40	cps
Neodymium	150-1	17	20	30	22	31.22	cps
Neodymium	150-2	0	7	0	2	173.21	cps
Nickel	60-2	2997	2950	3127	3025	3.03	cps
Phosphorus	31-2	127	117	103	116	10.13	cps
Potassium	39-2	88197	88462	87841	88167	0.35	cps
Rhodium	103-1	9103133	8989387	8871157	8987893	1.29	cps
Rhodium	103-2	3303234	3256257	3301589	3287027	0.81	cps
Scandium	45-1	7095936	7073003	7098729	7089222	0.20	cps
Scandium	45-2	112969	112274	111659	112301	0.58	cps
Selenium	82-1	1720	1610	1767	1699	4.74	cps
Selenium	77-2	30	20	37	29	29.04	cps
Selenium	78-2	93	123	103	107	14.32	cps
Silicon	28-1	522179	521622	521036	521612	0.11	cps
Silver	107-1	26095	26425	26636	26385	1.03	cps
Silver	109-1	24993	25407	25383	25261	0.92	cps
Sodium	23-2	313682	315765	311390	313612	0.70	cps
Strontium	86-1	7479	7315	7375	7390	1.12	cps
Strontium	88-1	62335	62636	62298	62423	0.30	cps
Sulfur	34-1	282979	282961	283054	282998	0.02	cps
Terbium	159-1	12547177	12350259	12299488	12398975	1.06	cps
Terbium	159-2	4053882	3953241	3940613	3982579	1.56	cps
Thallium	203-1	21251	21895	21848	21665	1.66	cps
Thallium	205-1	51394	52475	51907	51925	1.04	cps
Tin	118-1	90103	92291	90298	90897	1.33	cps
Titanium	47-1	4261	4224	4447	4311	2.78	cps
Uranium	238-1	66110	67850	67873	67278	1.50	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166241BS	Instrumnet Name :	P8
Client Sample ID :	LCS241	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:02:08	DataFile Name :	026LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	15849	15896	16049	15931	0.66	cps
Ytterbium	172-1	67	67	53	62	12.38	cps
Ytterbium	172-2	40	30	40	37	15.75	cps
Ytterbium	176-1	1740	1730	1703	1725	1.10	cps
Ytterbium	176-2	237	247	260	248	4.73	cps
Yttrium	89-1	17522931	17678996	17747021	17649649	0.65	cps
Yttrium	89-2	1108460	1108840	1113224	1110175	0.24	cps
Zinc	66-2	3387	3270	3307	3322	1.80	cps
Zirconium	90-1	36230	37738	36775	36914	2.07	cps
Zirconium	91-1	8369	8046	7929	8115	2.81	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166280BL	Instrumnet Name :	P8
Client Sample ID :	PBS280	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:05:33	DataFile Name :	027CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	60	53	73	62	16.37	cps
Antimony	121-1	277	203	207	229	18.09	cps
Arsenic	75-2	3	3	3	3	0.00	cps
Barium	135-1	530	497	523	517	3.41	cps
Barium	137-1	1013	857	983	951	8.74	cps
Beryllium	9-1	255	239	250	248	3.36	cps
Bismuth	209-1	7717228	7668348	7672295	7685957	0.35	cps
Bismuth	209-2	2986591	2906188	2753113	2881964	4.12	cps
Bromine	81-1	5628	5918	6035	5860	3.57	cps
Cadmium	108-1	60	67	37	54	28.93	cps
Cadmium	106-1	5284	5695	5828	5602	5.06	cps
Cadmium	111-1	3724	3983	4141	3949	5.33	cps
Calcium	43-1	423	323	350	366	14.17	cps
Calcium	44-1	5988	6208	6051	6082	1.86	cps
Carbon	12-1	2004355	1943029	1955112	1967499	1.65	cps
Carbon	12-2	13189	13283	13053	13175	0.88	cps
Chlorine	35-1	366585	355162	346704	356150	2.80	cps
Chlorine	35-2	1067	1250	1087	1135	8.87	cps
Chromium	52-2	630	580	687	632	8.44	cps
Cobalt	59-2	413	390	343	382	9.32	cps
Copper	63-2	2224	2177	2134	2178	2.07	cps
Dysprosium	156-1	150	163	107	140	21.16	cps
Dysprosium	156-2	7	13	7	9	43.25	cps
Erbium	164-1	57	63	63	61	6.29	cps
Erbium	164-2	17	10	17	14	26.66	cps
Gadolinium	160-1	43	70	53	56	24.25	cps
Gadolinium	160-2	7	7	13	9	43.25	cps
Holmium	165-1	12420377	12219452	11895070	12178300	2.18	cps
Holmium	165-2	4102027	4079418	3809511	3996985	4.07	cps
Indium	115-1	9764788	9712030	9741508	9739442	0.27	cps
Indium	115-2	876008	867728	811381	851706	4.13	cps
Iron	54-2	453	503	413	457	9.88	cps
Iron	56-2	6945	7082	6858	6962	1.62	cps
Iron	57-2	140	130	163	144	11.84	cps
Krypton	83-1	110	137	117	121	11.46	cps
Lead	206-1	1333	1293	1557	1395	10.18	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166280BL	Instrumnet Name :	P8
Client Sample ID :	PBS280	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:05:33	DataFile Name :	027CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1130	1163	1073	1122	4.05	cps
Lead	208-1	5237	5250	5280	5256	0.42	cps
Lithium	6-1	6324322	6281670	6344615	6316869	0.51	cps
Magnesium	24-2	557	517	627	567	9.83	cps
Manganese	55-2	293	343	257	298	14.61	cps
Molybdenum	94-1	327	323	293	314	5.84	cps
Molybdenum	95-1	197	227	237	220	9.46	cps
Molybdenum	96-1	320	343	353	339	5.05	cps
Molybdenum	97-1	133	153	143	143	6.98	cps
Molybdenum	98-1	383	353	367	368	4.09	cps
Neodymium	150-1	10	7	23	13	66.12	cps
Neodymium	150-2	0	0	0	0	0.00	cps
Nickel	60-2	843	930	800	858	7.72	cps
Phosphorus	31-2	27	33	30	30	11.10	cps
Potassium	39-2	5181	5028	5151	5120	1.59	cps
Rhodium	103-1	8993575	8926770	8800668	8907005	1.10	cps
Rhodium	103-2	3322032	3283561	3069852	3225148	4.21	cps
Scandium	45-1	6962592	7083473	7005580	7017215	0.87	cps
Scandium	45-2	111941	110272	103856	108690	3.93	cps
Selenium	82-1	33	20	3	19	79.60	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	3	0	0	1	173.21	cps
Silicon	28-1	301018	300513	297741	299757	0.59	cps
Silver	107-1	260	200	230	230	13.05	cps
Silver	109-1	157	187	133	159	16.83	cps
Sodium	23-2	19630	19633	19366	19543	0.78	cps
Strontium	86-1	217	207	210	211	2.41	cps
Strontium	88-1	393	407	490	430	12.18	cps
Sulfur	34-1	278106	279289	279595	278997	0.28	cps
Terbium	159-1	12389389	12375753	12511438	12425527	0.60	cps
Terbium	159-2	4044246	3950759	3729149	3908051	4.14	cps
Thallium	203-1	490	457	497	481	4.45	cps
Thallium	205-1	1330	1147	1137	1205	9.04	cps
Tin	118-1	4551	4374	5007	4644	7.03	cps
Titanium	47-1	130	130	80	113	25.47	cps
Uranium	238-1	20	30	17	22	31.22	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166280BL	Instrumnet Name :	P8
Client Sample ID :	PBS280	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:05:33	DataFile Name :	027CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	83	150	117	117	28.57	cps
Ytterbium	172-1	77	43	60	60	27.78	cps
Ytterbium	172-2	17	23	33	24	34.31	cps
Ytterbium	176-1	1587	1733	1657	1659	4.42	cps
Ytterbium	176-2	197	187	210	198	5.92	cps
Yttrium	89-1	17673552	17510102	17310797	17498150	1.04	cps
Yttrium	89-2	1100809	1091427	1024822	1072353	3.86	cps
Zinc	66-2	247	217	203	222	9.99	cps
Zirconium	90-1	540	677	610	609	11.22	cps
Zirconium	91-1	100	140	137	126	17.68	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166280BS	Instrumnet Name :	P8
Client Sample ID :	LCS280	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:08:56	DataFile Name :	028LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1600	1540	1537	1559	2.29	cps
Antimony	121-1	34373	34169	33869	34137	0.74	cps
Arsenic	75-2	343	317	347	336	4.90	cps
Barium	135-1	45155	45279	44553	44996	0.86	cps
Barium	137-1	77668	78486	76739	77631	1.13	cps
Beryllium	9-1	7416	7614	7600	7543	1.46	cps
Bismuth	209-1	7739470	7616867	7636021	7664119	0.86	cps
Bismuth	209-2	2961064	2975631	2985842	2974179	0.42	cps
Bromine	81-1	5638	5725	5685	5682	0.76	cps
Cadmium	108-1	437	410	423	423	3.15	cps
Cadmium	106-1	5995	6165	5911	6024	2.14	cps
Cadmium	111-1	8615	8389	8556	8520	1.37	cps
Calcium	43-1	34211	34612	34715	34512	0.77	cps
Calcium	44-1	543504	550646	555520	549890	1.10	cps
Carbon	12-1	2037005	2009435	1998879	2015106	0.98	cps
Carbon	12-2	13500	13426	13446	13457	0.28	cps
Chlorine	35-1	1046033	1185132	1237161	1156108	8.55	cps
Chlorine	35-2	4301	4407	4501	4403	2.27	cps
Chromium	52-2	7495	7589	7539	7541	0.62	cps
Cobalt	59-2	6948	6952	6545	6815	3.43	cps
Copper	63-2	13393	13120	12843	13118	2.10	cps
Dysprosium	156-1	123	140	117	127	9.49	cps
Dysprosium	156-2	3	10	0	4	114.60	cps
Erbium	164-1	60	67	47	58	17.62	cps
Erbium	164-2	7	30	13	17	72.11	cps
Gadolinium	160-1	33	27	47	36	28.64	cps
Gadolinium	160-2	7	3	13	8	65.47	cps
Holmium	165-1	12103709	11969325	12132452	12068496	0.72	cps
Holmium	165-2	4094675	4099940	4066580	4087065	0.44	cps
Indium	115-1	9657572	9872537	9691084	9740398	1.19	cps
Indium	115-2	868127	877813	869221	871720	0.61	cps
Iron	54-2	29804	29981	29510	29765	0.80	cps
Iron	56-2	546035	549641	547574	547750	0.33	cps
Iron	57-2	13503	13733	13340	13525	1.46	cps
Krypton	83-1	127	120	67	104	31.49	cps
Lead	206-1	15546	16457	16414	16139	3.18	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166280BS	Instrumnet Name :	P8
Client Sample ID :	LCS280	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:08:56	DataFile Name :	028LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	13547	14111	14231	13963	2.62	cps
Lead	208-1	62814	64800	65027	64214	1.90	cps
Lithium	6-1	6312720	6377595	6273083	6321133	0.83	cps
Magnesium	24-2	125219	125050	124540	124936	0.28	cps
Manganese	55-2	1843	1753	1793	1797	2.51	cps
Molybdenum	94-1	37210	37347	37236	37264	0.20	cps
Molybdenum	95-1	44799	45310	44671	44927	0.75	cps
Molybdenum	96-1	49943	50973	50250	50389	1.05	cps
Molybdenum	97-1	27791	28613	28175	28193	1.46	cps
Molybdenum	98-1	72056	73416	73047	72840	0.97	cps
Neodymium	150-1	10	27	10	16	61.87	cps
Neodymium	150-2	3	0	3	2	86.60	cps
Nickel	60-2	2814	2567	2727	2703	4.63	cps
Phosphorus	31-2	123	113	127	121	5.73	cps
Potassium	39-2	75486	76421	74876	75594	1.03	cps
Rhodium	103-1	9140724	8821870	8873052	8945215	1.91	cps
Rhodium	103-2	3228848	3272184	3251951	3250994	0.67	cps
Scandium	45-1	7076385	6995559	7085873	7052606	0.70	cps
Scandium	45-2	111656	112277	111200	111711	0.48	cps
Selenium	82-1	1497	1350	1537	1461	6.73	cps
Selenium	77-2	30	13	13	19	50.96	cps
Selenium	78-2	73	57	77	69	15.55	cps
Silicon	28-1	486059	485662	483491	485071	0.29	cps
Silver	107-1	23213	22892	23220	23108	0.81	cps
Silver	109-1	21146	21684	21934	21588	1.86	cps
Sodium	23-2	270393	273218	268670	270760	0.85	cps
Strontium	86-1	6225	6141	6208	6191	0.71	cps
Strontium	88-1	53201	53626	52843	53223	0.74	cps
Sulfur	34-1	273382	270045	271059	271495	0.63	cps
Terbium	159-1	12440159	12325744	12445092	12403665	0.54	cps
Terbium	159-2	3962730	4020250	3972712	3985231	0.77	cps
Thallium	203-1	18456	18610	18850	18639	1.07	cps
Thallium	205-1	44115	44105	44857	44359	0.97	cps
Tin	118-1	79113	79646	78778	79179	0.55	cps
Titanium	47-1	3614	3671	3627	3637	0.81	cps
Uranium	238-1	57372	57878	57322	57524	0.53	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166280BS	Instrumnet Name :	P8
Client Sample ID :	LCS280	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:08:56	DataFile Name :	028LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	13740	13410	13490	13546	1.27	cps
Ytterbium	172-1	63	83	53	67	22.91	cps
Ytterbium	172-2	13	13	23	17	34.65	cps
Ytterbium	176-1	1507	1663	1607	1592	4.98	cps
Ytterbium	176-2	270	233	253	252	7.28	cps
Yttrium	89-1	17521845	17785935	17510694	17606158	0.88	cps
Yttrium	89-2	1089516	1106414	1096397	1097443	0.77	cps
Zinc	66-2	2654	2887	2720	2754	4.37	cps
Zirconium	90-1	31679	31933	31118	31577	1.32	cps
Zirconium	91-1	6898	6915	7232	7015	2.68	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166279BS	Instrumnet Name :	P8
Client Sample ID :	LCS279	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:15:40	DataFile Name :	030LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1810	1700	1667	1726	4.35	cps
Antimony	121-1	37906	37281	37759	37648	0.87	cps
Arsenic	75-2	383	367	350	367	4.54	cps
Barium	135-1	48590	48717	48991	48766	0.42	cps
Barium	137-1	83582	86065	86715	85454	1.93	cps
Beryllium	9-1	8208	8150	8338	8232	1.17	cps
Bismuth	209-1	7877299	7950591	7782429	7870106	1.07	cps
Bismuth	209-2	3009180	2994101	2888408	2963896	2.22	cps
Bromine	81-1	5318	5768	5991	5692	6.03	cps
Cadmium	108-1	443	417	447	436	3.78	cps
Cadmium	106-1	6298	6225	6048	6190	2.08	cps
Cadmium	111-1	8936	9150	8929	9005	1.40	cps
Calcium	43-1	37622	37793	38104	37840	0.65	cps
Calcium	44-1	601984	601286	601933	601735	0.06	cps
Carbon	12-1	2009352	1961067	2006643	1992354	1.36	cps
Carbon	12-2	13603	13349	13386	13446	1.02	cps
Chlorine	35-1	1088047	1235171	1298780	1207332	8.95	cps
Chlorine	35-2	4574	4584	4841	4666	3.24	cps
Chromium	52-2	7909	7902	7869	7893	0.27	cps
Cobalt	59-2	7392	7192	7916	7500	4.98	cps
Copper	63-2	14404	14377	13974	14252	1.69	cps
Dysprosium	156-1	117	137	123	126	8.11	cps
Dysprosium	156-2	0	7	0	2	173.21	cps
Erbium	164-1	47	113	67	76	45.28	cps
Erbium	164-2	17	30	17	21	36.45	cps
Gadolinium	160-1	23	40	43	36	30.14	cps
Gadolinium	160-2	10	13	13	12	15.73	cps
Holmium	165-1	12222997	12456320	12007214	12228844	1.84	cps
Holmium	165-2	4049586	4090556	4005236	4048459	1.05	cps
Indium	115-1	9812801	9976437	9557183	9782140	2.16	cps
Indium	115-2	881297	869968	850444	867236	1.80	cps
Iron	54-2	32153	32681	32871	32568	1.14	cps
Iron	56-2	600656	597697	597721	598691	0.28	cps
Iron	57-2	15095	14741	14871	14902	1.20	cps
Krypton	83-1	87	97	123	102	18.54	cps
Lead	206-1	17749	17535	17609	17631	0.62	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166279BS	Instrumnet Name :	P8
Client Sample ID :	LCS279	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:15:40	DataFile Name :	030LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	14905	15259	15726	15297	2.69	cps
Lead	208-1	69340	69951	70348	69879	0.73	cps
Lithium	6-1	6392338	6502609	6230661	6375203	2.15	cps
Magnesium	24-2	136121	136855	136797	136591	0.30	cps
Manganese	55-2	1987	1960	1957	1968	0.84	cps
Molybdenum	94-1	41318	40385	41411	41038	1.38	cps
Molybdenum	95-1	49137	49424	50294	49618	1.21	cps
Molybdenum	96-1	55691	55407	55085	55394	0.55	cps
Molybdenum	97-1	30517	30109	30784	30470	1.12	cps
Molybdenum	98-1	80428	79623	80250	80100	0.53	cps
Neodymium	150-1	40	10	23	24	61.49	cps
Neodymium	150-2	7	0	0	2	173.21	cps
Nickel	60-2	2907	2984	2810	2900	3.00	cps
Phosphorus	31-2	160	130	147	146	10.33	cps
Potassium	39-2	83443	82933	83007	83127	0.33	cps
Rhodium	103-1	8921922	9135701	9071764	9043129	1.21	cps
Rhodium	103-2	3280638	3282301	3163895	3242278	2.09	cps
Scandium	45-1	7056975	7069958	6957483	7028139	0.88	cps
Scandium	45-2	112321	112344	108560	111075	1.96	cps
Selenium	82-1	1710	1553	1543	1602	5.83	cps
Selenium	77-2	10	27	37	24	55.11	cps
Selenium	78-2	127	80	100	102	22.91	cps
Silicon	28-1	503491	506182	502192	503955	0.40	cps
Silver	107-1	25086	25627	25741	25485	1.37	cps
Silver	109-1	23503	24418	24432	24118	2.21	cps
Sodium	23-2	296735	293971	293503	294736	0.59	cps
Strontium	86-1	6795	7012	6982	6930	1.69	cps
Strontium	88-1	58204	58261	59586	58684	1.33	cps
Sulfur	34-1	270346	274642	270091	271693	0.94	cps
Terbium	159-1	12571475	12942846	12503841	12672721	1.87	cps
Terbium	159-2	3976709	4007530	3845502	3943247	2.18	cps
Thallium	203-1	20667	20987	20353	20669	1.53	cps
Thallium	205-1	48417	49474	49424	49105	1.21	cps
Tin	118-1	86514	85672	85923	86037	0.50	cps
Titanium	47-1	3847	4031	3994	3957	2.45	cps
Uranium	238-1	64821	62768	63950	63846	1.61	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166279BS	Instrumnet Name :	P8
Client Sample ID :	LCS279	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:15:40	DataFile Name :	030LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	14741	14584	14864	14730	0.95	cps
Ytterbium	172-1	47	67	77	63	24.12	cps
Ytterbium	172-2	30	33	37	33	10.01	cps
Ytterbium	176-1	1557	1717	1627	1633	4.91	cps
Ytterbium	176-2	237	230	247	238	3.53	cps
Yttrium	89-1	18042591	18421036	17788500	18084042	1.76	cps
Yttrium	89-2	1106201	1098821	1065409	1090144	1.99	cps
Zinc	66-2	3177	3290	3154	3207	2.28	cps
Zirconium	90-1	35024	35298	34723	35015	0.82	cps
Zirconium	91-1	7962	7876	7469	7769	3.39	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166279BL	Instrumnet Name :	P8
Client Sample ID :	PBS279	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:19:04	DataFile Name :	031CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	53	20	60	44	48.22	cps
Antimony	121-1	103	123	103	110	10.50	cps
Arsenic	75-2	0	3	0	1	173.21	cps
Barium	135-1	137	103	120	120	13.89	cps
Barium	137-1	160	230	213	201	18.18	cps
Beryllium	9-1	174	205	210	196	10.01	cps
Bismuth	209-1	7830099	7801798	7766227	7799375	0.41	cps
Bismuth	209-2	3075450	3029719	2972201	3025790	1.71	cps
Bromine	81-1	5811	5688	5755	5751	1.07	cps
Cadmium	108-1	43	30	37	37	18.18	cps
Cadmium	106-1	5568	5615	5181	5454	4.36	cps
Cadmium	111-1	3891	3936	3648	3825	4.05	cps
Calcium	43-1	323	387	363	358	8.95	cps
Calcium	44-1	5524	5821	5875	5740	3.29	cps
Carbon	12-1	1987324	1995542	1941327	1974731	1.48	cps
Carbon	12-2	12789	12782	13323	12965	2.39	cps
Chlorine	35-1	302008	295678	291450	296378	1.79	cps
Chlorine	35-2	1033	950	950	978	4.92	cps
Chromium	52-2	537	560	573	557	3.33	cps
Cobalt	59-2	157	137	150	148	6.89	cps
Copper	63-2	2227	2084	2024	2111	4.95	cps
Dysprosium	156-1	100	123	127	117	12.46	cps
Dysprosium	156-2	10	17	7	11	45.82	cps
Erbium	164-1	70	70	53	64	14.93	cps
Erbium	164-2	30	10	17	19	53.91	cps
Gadolinium	160-1	37	40	37	38	5.09	cps
Gadolinium	160-2	10	13	10	11	17.30	cps
Holmium	165-1	11976983	12200701	12277269	12151651	1.28	cps
Holmium	165-2	4173586	4102378	4130917	4135627	0.87	cps
Indium	115-1	9839184	9855936	10047194	9914105	1.17	cps
Indium	115-2	880568	886110	875952	880877	0.58	cps
Iron	54-2	410	400	453	421	6.73	cps
Iron	56-2	6368	6392	6258	6339	1.12	cps
Iron	57-2	160	133	177	157	13.95	cps
Krypton	83-1	117	133	130	127	6.96	cps
Lead	206-1	1110	1063	1037	1070	3.47	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166279BL	Instrumnet Name :	P8
Client Sample ID :	PBS279	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:19:04	DataFile Name :	031CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1043	860	873	926	11.04	cps
Lead	208-1	4367	4234	4120	4240	2.91	cps
Lithium	6-1	6293773	6317446	6372535	6327918	0.64	cps
Magnesium	24-2	727	640	703	690	6.50	cps
Manganese	55-2	227	167	220	204	16.08	cps
Molybdenum	94-1	320	403	230	318	27.28	cps
Molybdenum	95-1	243	263	223	243	8.22	cps
Molybdenum	96-1	303	393	353	350	12.88	cps
Molybdenum	97-1	117	143	127	129	10.45	cps
Molybdenum	98-1	327	370	340	346	6.42	cps
Neodymium	150-1	23	7	7	12	78.69	cps
Neodymium	150-2	3	0	0	1	173.21	cps
Nickel	60-2	913	823	903	880	5.61	cps
Phosphorus	31-2	23	20	30	24	20.83	cps
Potassium	39-2	5114	4751	4948	4938	3.68	cps
Rhodium	103-1	9053707	8956071	9005219	9004999	0.54	cps
Rhodium	103-2	3363619	3346116	3296391	3335375	1.05	cps
Scandium	45-1	6939028	6969497	7091585	7000037	1.15	cps
Scandium	45-2	112291	114125	111740	112718	1.11	cps
Selenium	82-1	-27	-27	13	-13	-173.25	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	0	10	7	6	91.64	cps
Silicon	28-1	295150	293637	292045	293611	0.53	cps
Silver	107-1	230	200	210	213	7.16	cps
Silver	109-1	173	193	133	167	18.33	cps
Sodium	23-2	18599	18739	18685	18674	0.38	cps
Strontium	86-1	243	237	240	240	1.39	cps
Strontium	88-1	493	370	460	441	14.46	cps
Sulfur	34-1	271633	274473	277011	274372	0.98	cps
Terbium	159-1	12410586	12556443	12436170	12467733	0.62	cps
Terbium	159-2	4044575	4027586	4055305	4042489	0.35	cps
Thallium	203-1	370	350	387	369	4.98	cps
Thallium	205-1	880	937	1017	944	7.27	cps
Tin	118-1	4331	4517	4314	4387	2.57	cps
Titanium	47-1	113	147	123	128	13.38	cps
Uranium	238-1	50	17	33	33	50.00	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	PB166279BL	Instrumnet Name :	P8
Client Sample ID :	PBS279	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:19:04	DataFile Name :	031CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	23	3	7	11	96.43	cps
Ytterbium	172-1	50	77	97	74	31.45	cps
Ytterbium	172-2	57	30	27	38	43.52	cps
Ytterbium	176-1	1537	1550	1507	1531	1.45	cps
Ytterbium	176-2	247	177	173	199	20.82	cps
Yttrium	89-1	17653438	17698124	17687516	17679693	0.13	cps
Yttrium	89-2	1106593	1117328	1102282	1108734	0.70	cps
Zinc	66-2	147	187	170	168	11.98	cps
Zirconium	90-1	550	617	593	587	5.77	cps
Zirconium	91-1	120	130	60	103	36.64	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-01	Instrumnet Name :	P8
Client Sample ID :	ME2931	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:22:25	DataFile Name :	032AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	270	250	253	258	4.16	cps
Antimony	121-1	1880	1974	1984	1946	2.93	cps
Arsenic	75-2	690	740	640	690	7.25	cps
Barium	135-1	64851	66137	66947	65978	1.60	cps
Barium	137-1	114677	116092	117640	116136	1.28	cps
Beryllium	9-1	196	189	189	191	2.26	cps
Bismuth	209-1	6490296	6587609	6474973	6517626	0.94	cps
Bismuth	209-2	2474743	2502742	2511599	2496361	0.77	cps
Bromine	81-1	343778	383114	406881	377924	8.43	cps
Cadmium	108-1	803	787	713	768	6.24	cps
Cadmium	106-1	5621	5555	5805	5660	2.29	cps
Cadmium	111-1	4533	4588	4871	4664	3.89	cps
Calcium	43-1	18299800	18598136	18643784	18513907	1.01	cps
Calcium	44-1	296771629	302183956	298801616	299252400	0.91	cps
Carbon	12-1	16458011	18008462	18626110	17697528	6.31	cps
Carbon	12-2	130079	131481	132093	131218	0.79	cps
Chlorine	35-1	27606870	30325905	31186940	29706572	6.29	cps
Chlorine	35-2	113632	115852	115382	114955	1.02	cps
Chromium	52-2	687	650	717	684	4.88	cps
Cobalt	59-2	6105	5958	5541	5868	4.98	cps
Copper	63-2	2497	2657	2794	2649	5.61	cps
Dysprosium	156-1	130	123	130	128	3.01	cps
Dysprosium	156-2	10	7	13	10	33.30	cps
Erbium	164-1	63	60	53	59	8.65	cps
Erbium	164-2	13	7	23	14	58.06	cps
Gadolinium	160-1	33	60	57	50	29.06	cps
Gadolinium	160-2	10	17	13	13	25.01	cps
Holmium	165-1	11635631	11655393	11827667	11706230	0.90	cps
Holmium	165-2	3912785	3933123	3962973	3936294	0.64	cps
Indium	115-1	8691555	8860447	9053303	8868435	2.04	cps
Indium	115-2	810522	813965	810910	811799	0.23	cps
Iron	54-2	61334	62184	60608	61375	1.29	cps
Iron	56-2	1152163	1137857	1133847	1141289	0.84	cps
Iron	57-2	29193	28285	29020	28832	1.67	cps
Krypton	83-1	283	253	250	262	7.00	cps
Lead	206-1	3187	2764	2924	2958	7.23	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-01	Instrumnet Name :	P8
Client Sample ID :	ME2931	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:22:25	DataFile Name :	032AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2784	2354	2267	2468	11.21	cps
Lead	208-1	12513	11045	10982	11513	7.52	cps
Lithium	6-1	5950460	6022409	6072865	6015245	1.02	cps
Magnesium	24-2	15450907	15275111	15356471	15360830	0.57	cps
Manganese	55-2	870347	867523	866059	867976	0.25	cps
Molybdenum	94-1	1214144	1239797	1260131	1238024	1.86	cps
Molybdenum	95-1	2319204	2335694	2342744	2332547	0.52	cps
Molybdenum	96-1	2430740	2504779	2466452	2467324	1.50	cps
Molybdenum	97-1	1327413	1359167	1419625	1368735	3.42	cps
Molybdenum	98-1	3626290	3684630	3671698	3660873	0.84	cps
Neodymium	150-1	40	23	27	30	29.40	cps
Neodymium	150-2	10	7	3	7	50.03	cps
Nickel	60-2	21213	20435	20879	20842	1.87	cps
Phosphorus	31-2	157	183	153	164	10.00	cps
Potassium	39-2	22775065	23149119	22834645	22919610	0.88	cps
Rhodium	103-1	7708029	7791362	7714216	7737869	0.60	cps
Rhodium	103-2	2855390	2834439	2885652	2858494	0.90	cps
Scandium	45-1	6692803	6822104	6832434	6782447	1.15	cps
Scandium	45-2	111075	112002	110806	111294	0.56	cps
Selenium	82-1	130	300	207	212	40.12	cps
Selenium	77-2	3	0	3	2	86.60	cps
Selenium	78-2	17	10	7	11	45.82	cps
Silicon	28-1	18992616	19975904	20086173	19684898	3.06	cps
Silver	107-1	600	467	397	488	21.18	cps
Silver	109-1	447	343	307	366	19.86	cps
Sodium	23-2	58515417	58997271	58446034	58652907	0.51	cps
Strontium	86-1	5669274	5839220	5810273	5772922	1.57	cps
Strontium	88-1	48783473	50003536	50223011	49670006	1.56	cps
Sulfur	34-1	26859614	26945776	27242700	27016030	0.74	cps
Terbium	159-1	11758941	11942006	12074609	11925186	1.33	cps
Terbium	159-2	3817088	3807763	3860337	3828396	0.73	cps
Thallium	203-1	550	520	537	536	2.81	cps
Thallium	205-1	1570	1367	1300	1412	9.96	cps
Tin	118-1	2747	2587	2530	2621	4.29	cps
Titanium	47-1	1307	1437	1380	1375	4.74	cps
Uranium	238-1	110	93	110	104	9.21	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-01	Instrumnet Name :	P8
Client Sample ID :	ME2931	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:22:25	DataFile Name :	032AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	347	317	333	332	4.52	cps
Ytterbium	172-1	30	60	80	57	44.41	cps
Ytterbium	172-2	23	20	20	21	9.11	cps
Ytterbium	176-1	1670	1703	1707	1693	1.20	cps
Ytterbium	176-2	160	200	210	190	13.93	cps
Yttrium	89-1	16599069	17160011	17110539	16956539	1.83	cps
Yttrium	89-2	1075531	1081025	1078009	1078188	0.26	cps
Zinc	66-2	547	563	423	511	14.96	cps
Zirconium	90-1	1557	1177	1313	1349	14.27	cps
Zirconium	91-1	387	293	280	320	18.16	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-02	Instrumnet Name :	P8
Client Sample ID :	ME2933	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:25:38	DataFile Name :	033AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	443	440	407	430	4.72	cps
Antimony	121-1	983	1023	987	998	2.22	cps
Arsenic	75-2	143	130	137	137	4.88	cps
Barium	135-1	169988	171644	171885	171172	0.60	cps
Barium	137-1	295924	299677	300855	298819	0.86	cps
Beryllium	9-1	244	211	246	234	8.35	cps
Bismuth	209-1	7240164	7375804	7214502	7276823	1.19	cps
Bismuth	209-2	2701209	2704225	2766592	2724009	1.35	cps
Bromine	81-1	63741	63553	62250	63181	1.28	cps
Cadmium	108-1	47	37	53	46	18.41	cps
Cadmium	106-1	5951	5821	5978	5917	1.42	cps
Cadmium	111-1	4210	4109	4251	4190	1.74	cps
Calcium	43-1	6673683	6778096	6813799	6755193	1.08	cps
Calcium	44-1	105389505	107725205	107113132	106742614	1.13	cps
Carbon	12-1	6621925	7410757	7859673	7297452	8.59	cps
Carbon	12-2	55304	55655	56722	55893	1.32	cps
Chlorine	35-1	2355199	2264198	2143684	2254360	4.71	cps
Chlorine	35-2	6632	6351	6058	6347	4.52	cps
Chromium	52-2	723	767	677	722	6.23	cps
Cobalt	59-2	2117	2124	2214	2151	2.51	cps
Copper	63-2	2567	2687	2454	2569	4.54	cps
Dysprosium	156-1	153	153	143	150	3.85	cps
Dysprosium	156-2	27	20	17	21	24.12	cps
Erbium	164-1	123	193	157	158	22.19	cps
Erbium	164-2	30	43	53	42	27.72	cps
Gadolinium	160-1	100	140	127	122	16.66	cps
Gadolinium	160-2	43	30	40	38	18.36	cps
Holmium	165-1	11961648	12162242	12361073	12161654	1.64	cps
Holmium	165-2	4035862	3997422	4059395	4030893	0.78	cps
Indium	115-1	9544660	9617996	9575601	9579419	0.38	cps
Indium	115-2	844008	843901	840796	842902	0.22	cps
Iron	54-2	12299	12272	12125	12232	0.76	cps
Iron	56-2	219394	221488	220764	220549	0.48	cps
Iron	57-2	5454	5695	5711	5620	2.56	cps
Krypton	83-1	157	127	123	136	13.54	cps
Lead	206-1	1950	1833	1893	1892	3.08	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-02	Instrumnet Name :	P8
Client Sample ID :	ME2933	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:25:38	DataFile Name :	033AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1600	1650	1443	1565	6.89	cps
Lead	208-1	7364	7304	7254	7308	0.75	cps
Lithium	6-1	5764223	5960320	6007563	5910702	2.18	cps
Magnesium	24-2	6493501	6526127	6518837	6512822	0.26	cps
Manganese	55-2	82181	83079	83261	82840	0.70	cps
Molybdenum	94-1	5641	5781	6238	5887	5.30	cps
Molybdenum	95-1	9383	9994	9840	9739	3.26	cps
Molybdenum	96-1	10497	10567	10524	10530	0.34	cps
Molybdenum	97-1	5941	5998	6175	6038	2.02	cps
Molybdenum	98-1	15609	15636	15672	15639	0.20	cps
Neodymium	150-1	67	63	87	72	17.48	cps
Neodymium	150-2	10	13	10	11	17.30	cps
Nickel	60-2	2154	2374	2310	2279	4.97	cps
Phosphorus	31-2	90	50	60	67	31.22	cps
Potassium	39-2	194421	195040	194637	194699	0.16	cps
Rhodium	103-1	8360335	8449211	8582422	8463989	1.32	cps
Rhodium	103-2	3090103	3056742	3078026	3074957	0.55	cps
Scandium	45-1	6802273	7002928	6950662	6918621	1.50	cps
Scandium	45-2	110819	110168	110386	110458	0.30	cps
Selenium	82-1	-3	90	60	49	97.46	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	0	3	10	4	114.60	cps
Silicon	28-1	36978699	37579239	37276114	37278018	0.81	cps
Silver	107-1	217	233	263	238	9.95	cps
Silver	109-1	57	53	40	50	17.64	cps
Sodium	23-2	5041584	5070106	5059327	5057006	0.28	cps
Strontium	86-1	49094429	49940843	50261751	49765674	1.21	cps
Strontium	88-1	424635447	429284580	431052300	428324109	0.77	cps
Sulfur	34-1	8499637	8594944	8477690	8524090	0.73	cps
Terbium	159-1	12332416	12360431	12523369	12405406	0.83	cps
Terbium	159-2	3873896	3892856	3942365	3903039	0.91	cps
Thallium	203-1	510	457	350	439	18.56	cps
Thallium	205-1	1133	1127	1000	1087	6.91	cps
Tin	118-1	2164	2370	2170	2235	5.26	cps
Titanium	47-1	1173	1243	1160	1192	3.75	cps
Uranium	238-1	12586	13157	12429	12724	3.01	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-02	Instrumnet Name :	P8
Client Sample ID :	ME2933	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:25:38	DataFile Name :	033AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	2924	2797	2820	2847	2.37	cps
Ytterbium	172-1	70	107	83	87	21.42	cps
Ytterbium	172-2	30	23	40	31	26.97	cps
Ytterbium	176-1	1640	1760	1753	1718	3.93	cps
Ytterbium	176-2	217	280	193	230	19.50	cps
Yttrium	89-1	17252542	17583160	17543933	17459878	1.03	cps
Yttrium	89-2	1083710	1081360	1077429	1080833	0.29	cps
Zinc	66-2	523	393	430	449	14.93	cps
Zirconium	90-1	1107	1313	1293	1238	9.21	cps
Zirconium	91-1	177	273	237	229	21.32	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-03	Instrumnet Name :	P8
Client Sample ID :	ME2937	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:28:53	DataFile Name :	034AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	31484	31661	31053	31400	1.00	cps
Antimony	121-1	5454	5418	5528	5467	1.02	cps
Arsenic	75-2	1537	1557	1607	1567	2.30	cps
Barium	135-1	183437	184693	184406	184178	0.36	cps
Barium	137-1	320843	321819	324031	322231	0.51	cps
Beryllium	9-1	264	214	220	232	11.72	cps
Bismuth	209-1	6965602	7111795	7440438	7172611	3.39	cps
Bismuth	209-2	2779148	2759949	2748181	2762426	0.57	cps
Bromine	81-1	68175	78380	81498	76018	9.17	cps
Cadmium	108-1	90	123	113	109	15.71	cps
Cadmium	106-1	5381	5531	5918	5610	4.94	cps
Cadmium	111-1	3917	4005	4270	4064	4.52	cps
Calcium	43-1	2647029	2718016	2729791	2698279	1.66	cps
Calcium	44-1	42285689	42664079	43202878	42717549	1.08	cps
Carbon	12-1	13229172	15679009	17016720	15308300	12.55	cps
Carbon	12-2	125722	126504	129094	127107	1.39	cps
Chlorine	35-1	2815634	3019543	3144342	2993173	5.54	cps
Chlorine	35-2	10934	11425	11508	11289	2.75	cps
Chromium	52-2	640	647	810	699	13.78	cps
Cobalt	59-2	4484	4684	4677	4615	2.46	cps
Copper	63-2	2914	3124	3137	3058	4.10	cps
Dysprosium	156-1	143	127	127	132	7.28	cps
Dysprosium	156-2	10	10	10	10	0.00	cps
Erbium	164-1	90	110	107	102	10.48	cps
Erbium	164-2	27	10	23	20	44.10	cps
Gadolinium	160-1	70	53	90	71	25.82	cps
Gadolinium	160-2	27	17	23	22	22.91	cps
Holmium	165-1	11593996	11800283	12332239	11908839	3.20	cps
Holmium	165-2	4056735	4050233	4021491	4042819	0.46	cps
Indium	115-1	9102462	9159740	9594940	9285714	2.90	cps
Indium	115-2	832205	828029	838014	832749	0.60	cps
Iron	54-2	3157	3250	3304	3237	2.29	cps
Iron	56-2	56859	56310	56003	56391	0.77	cps
Iron	57-2	1503	1447	1507	1486	2.27	cps
Krypton	83-1	130	100	140	123	16.88	cps
Lead	206-1	2064	2020	1903	1996	4.15	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-03	Instrumnet Name :	P8
Client Sample ID :	ME2937	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:28:53	DataFile Name :	034AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1610	1823	1683	1706	6.36	cps
Lead	208-1	7834	7671	7488	7664	2.26	cps
Lithium	6-1	5738672	5733163	6078489	5850108	3.38	cps
Magnesium	24-2	2900	3050	2867	2939	3.32	cps
Manganese	55-2	1240	1263	1310	1271	2.80	cps
Molybdenum	94-1	128470	129048	129250	128923	0.31	cps
Molybdenum	95-1	225876	225235	228050	226387	0.65	cps
Molybdenum	96-1	239581	241365	243054	241333	0.72	cps
Molybdenum	97-1	139287	140034	141182	140168	0.68	cps
Molybdenum	98-1	361892	365064	368952	365302	0.97	cps
Neodymium	150-1	83	70	43	66	31.07	cps
Neodymium	150-2	17	17	7	13	43.29	cps
Nickel	60-2	34241	34512	34021	34258	0.72	cps
Phosphorus	31-2	403	323	320	349	13.52	cps
Potassium	39-2	4348839	4384141	4346995	4359992	0.48	cps
Rhodium	103-1	8194000	8270485	8623888	8362791	2.74	cps
Rhodium	103-2	3083049	3012040	3077361	3057483	1.29	cps
Scandium	45-1	6627597	6750710	7215848	6864719	4.52	cps
Scandium	45-2	110141	109201	108865	109402	0.60	cps
Selenium	82-1	220	270	223	238	11.76	cps
Selenium	77-2	0	3	3	2	86.60	cps
Selenium	78-2	13	20	33	22	45.83	cps
Silicon	28-1	71972259	72879721	72336214	72396064	0.63	cps
Silver	107-1	140	150	180	157	13.29	cps
Silver	109-1	33	90	87	70	45.43	cps
Sodium	23-2	32076947	31768255	31595954	31813718	0.77	cps
Strontium	86-1	8032733	8047963	8151030	8077242	0.80	cps
Strontium	88-1	69367369	69914726	70441552	69907882	0.77	cps
Sulfur	34-1	946489	941393	947459	945114	0.34	cps
Terbium	159-1	11864853	12248536	12863118	12325502	4.09	cps
Terbium	159-2	3912638	3925503	3944609	3927583	0.41	cps
Thallium	203-1	210	193	283	229	20.92	cps
Thallium	205-1	560	500	627	562	11.27	cps
Tin	118-1	5221	5491	5264	5326	2.72	cps
Titanium	47-1	2007	2094	2120	2074	2.86	cps
Uranium	238-1	230	333	290	284	18.24	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-03	Instrumnet Name :	P8
Client Sample ID :	ME2937	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:28:53	DataFile Name :	034AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	11331	11378	11258	11322	0.53	cps
Ytterbium	172-1	70	80	57	69	16.99	cps
Ytterbium	172-2	37	13	30	27	45.08	cps
Ytterbium	176-1	1573	1680	1660	1638	3.46	cps
Ytterbium	176-2	227	177	203	202	12.37	cps
Yttrium	89-1	17056279	16964078	17945010	17321789	3.13	cps
Yttrium	89-2	1066117	1067418	1076348	1069961	0.52	cps
Zinc	66-2	370	377	393	380	3.16	cps
Zirconium	90-1	1310	1427	1320	1352	4.78	cps
Zirconium	91-1	303	287	313	301	4.47	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-04	Instrumnet Name :	P8
Client Sample ID :	ME2945	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:32:10	DataFile Name :	035AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	180	187	193	187	3.57	cps
Antimony	121-1	87	67	97	83	18.33	cps
Arsenic	75-2	20	20	7	16	49.47	cps
Barium	135-1	17735	18179	17702	17872	1.49	cps
Barium	137-1	31102	30655	31259	31005	1.01	cps
Beryllium	9-1	282	250	274	269	6.26	cps
Bismuth	209-1	6779967	6925476	6956337	6887260	1.37	cps
Bismuth	209-2	2601253	2561199	2579629	2580694	0.78	cps
Bromine	81-1	81047	94512	105019	93526	12.85	cps
Cadmium	108-1	37	47	37	40	14.43	cps
Cadmium	106-1	5391	5721	5628	5580	3.05	cps
Cadmium	111-1	3801	4012	3967	3927	2.83	cps
Calcium	43-1	15870076	16185886	16433448	16163137	1.75	cps
Calcium	44-1	256012563	257291123	265816563	259706749	2.05	cps
Carbon	12-1	8872625	9409686	9804404	9362238	5.00	cps
Carbon	12-2	66881	66934	68234	67350	1.14	cps
Chlorine	35-1	1909390	2049857	2094361	2017869	4.78	cps
Chlorine	35-2	7118	7185	7295	7200	1.24	cps
Chromium	52-2	760	633	690	694	9.14	cps
Cobalt	59-2	207	130	180	172	22.60	cps
Copper	63-2	2670	2737	2650	2686	1.69	cps
Dysprosium	156-1	113	117	120	117	2.86	cps
Dysprosium	156-2	27	7	17	17	59.99	cps
Erbium	164-1	80	153	97	110	34.95	cps
Erbium	164-2	33	23	43	33	30.00	cps
Gadolinium	160-1	107	100	97	101	5.04	cps
Gadolinium	160-2	17	37	40	31	40.56	cps
Holmium	165-1	11731466	12147494	11953842	11944267	1.74	cps
Holmium	165-2	3919749	3907854	3910975	3912859	0.16	cps
Indium	115-1	8844565	9295129	9269627	9136440	2.77	cps
Indium	115-2	816963	813940	819363	816756	0.33	cps
Iron	54-2	34488	35163	34431	34694	1.17	cps
Iron	56-2	649566	644964	644884	646472	0.41	cps
Iron	57-2	16453	16206	16660	16440	1.38	cps
Krypton	83-1	173	200	153	176	13.33	cps
Lead	206-1	1393	1337	1377	1369	2.13	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-04	Instrumnet Name :	P8
Client Sample ID :	ME2945	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:32:10	DataFile Name :	035AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1277	1253	1200	1243	3.16	cps
Lead	208-1	5627	5751	5681	5686	1.09	cps
Lithium	6-1	5736428	5960267	6034710	5910469	2.63	cps
Magnesium	24-2	18243555	18320085	18090711	18218117	0.64	cps
Manganese	55-2	31314	31311	32079	31568	1.40	cps
Molybdenum	94-1	2540	2567	2654	2587	2.29	cps
Molybdenum	95-1	3951	4171	4191	4104	3.25	cps
Molybdenum	96-1	4041	4357	4647	4349	6.98	cps
Molybdenum	97-1	2444	2440	2620	2501	4.12	cps
Molybdenum	98-1	6258	6168	6298	6241	1.07	cps
Neodymium	150-1	67	70	63	67	5.00	cps
Neodymium	150-2	13	13	0	9	86.60	cps
Nickel	60-2	1067	1060	1003	1043	3.34	cps
Phosphorus	31-2	43	37	43	41	9.35	cps
Potassium	39-2	274285	272060	273295	273213	0.41	cps
Rhodium	103-1	7917829	8086632	8263533	8089331	2.14	cps
Rhodium	103-2	3029193	2973937	2956661	2986597	1.27	cps
Scandium	45-1	6581634	7015910	6878370	6825305	3.25	cps
Scandium	45-2	111817	110783	110134	110911	0.76	cps
Selenium	82-1	107	60	100	89	28.39	cps
Selenium	77-2	3	0	0	1	173.21	cps
Selenium	78-2	3	3	10	6	69.34	cps
Silicon	28-1	49081401	49859506	50596201	49845703	1.52	cps
Silver	107-1	210	230	190	210	9.52	cps
Silver	109-1	27	40	70	46	48.72	cps
Sodium	23-2	9620985	9655277	9490010	9588757	0.91	cps
Strontium	86-1	41451527	41849899	42569789	41957072	1.35	cps
Strontium	88-1	355945221	368608635	368414115	364322657	1.99	cps
Sulfur	34-1	24187546	24826157	24928703	24647469	1.63	cps
Terbium	159-1	11943547	12389661	12395518	12242909	2.12	cps
Terbium	159-2	3866852	3867984	3824516	3853117	0.64	cps
Thallium	203-1	210	237	200	216	8.79	cps
Thallium	205-1	567	463	500	510	10.27	cps
Tin	118-1	2257	2244	2344	2281	2.38	cps
Titanium	47-1	1420	1350	1327	1366	3.56	cps
Uranium	238-1	1380	1367	1403	1383	1.34	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-04	Instrumnet Name :	P8
Client Sample ID :	ME2945	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:32:10	DataFile Name :	035AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	43	27	43	38	25.46	cps
Ytterbium	172-1	87	90	50	76	29.38	cps
Ytterbium	172-2	23	30	37	30	22.23	cps
Ytterbium	176-1	1680	1540	1737	1652	6.13	cps
Ytterbium	176-2	163	220	180	188	15.51	cps
Yttrium	89-1	16485256	17441616	17484132	17137001	3.30	cps
Yttrium	89-2	1076168	1067260	1069153	1070860	0.44	cps
Zinc	66-2	210	193	273	226	18.71	cps
Zirconium	90-1	1183	1123	1160	1156	2.62	cps
Zirconium	91-1	217	253	267	246	10.54	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-05	Instrumnet Name :	P8
Client Sample ID :	ME2942	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:35:26	DataFile Name :	036AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4177	4434	3871	4161	6.78	cps
Antimony	121-1	530	467	480	492	6.78	cps
Arsenic	75-2	50	30	63	48	35.11	cps
Barium	135-1	73843	76001	74017	74621	1.61	cps
Barium	137-1	129731	130939	131074	130581	0.57	cps
Beryllium	9-1	285	289	311	295	4.81	cps
Bismuth	209-1	6990423	6993433	8676419	7553425	12.88	cps
Bismuth	209-2	2189088	2551843	2602190	2447707	9.21	cps
Bromine	81-1	88465	108432	116085	104327	13.67	cps
Cadmium	108-1	27	30	60	39	47.20	cps
Cadmium	106-1	5748	6065	7115	6309	11.34	cps
Cadmium	111-1	4062	4291	5022	4458	11.25	cps
Calcium	43-1	12163200	12493481	12288607	12315096	1.35	cps
Calcium	44-1	196356464	199824770	194627590	196936275	1.34	cps
Carbon	12-1	11021462	12139565	12500048	11887025	6.49	cps
Carbon	12-2	85708	85728	85966	85800	0.17	cps
Chlorine	35-1	2881902	3142870	3246114	3090295	6.07	cps
Chlorine	35-2	11721	11495	11925	11714	1.84	cps
Chromium	52-2	1550	1557	1557	1555	0.25	cps
Cobalt	59-2	480	470	383	444	11.96	cps
Copper	63-2	3307	3530	3604	3480	4.44	cps
Dysprosium	156-1	323	357	417	366	12.94	cps
Dysprosium	156-2	123	73	130	109	28.45	cps
Erbium	164-1	290	303	307	300	2.94	cps
Erbium	164-2	83	77	97	86	11.90	cps
Gadolinium	160-1	290	267	343	300	13.10	cps
Gadolinium	160-2	127	93	123	114	16.05	cps
Holmium	165-1	11728655	12262851	14760731	12917412	12.53	cps
Holmium	165-2	3290218	3895773	3942118	3709370	9.81	cps
Indium	115-1	8927899	9329497	11479662	9912353	13.84	cps
Indium	115-2	680675	807038	828025	771913	10.33	cps
Iron	54-2	62148	63882	62405	62812	1.49	cps
Iron	56-2	1179929	1164550	1160461	1168313	0.88	cps
Iron	57-2	30463	29410	29340	29738	2.11	cps
Krypton	83-1	97	140	107	114	19.82	cps
Lead	206-1	2777	2704	2557	2679	4.18	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-05	Instrumnet Name :	P8
Client Sample ID :	ME2942	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:35:26	DataFile Name :	036AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2200	2327	2304	2277	2.96	cps
Lead	208-1	10298	10202	10358	10286	0.77	cps
Lithium	6-1	5689884	5962146	7000880	6217637	11.13	cps
Magnesium	24-2	12380266	12487574	12243581	12370474	0.99	cps
Manganese	55-2	104451	104358	103747	104185	0.37	cps
Molybdenum	94-1	3821	3914	3907	3881	1.34	cps
Molybdenum	95-1	3047	2897	3094	3013	3.41	cps
Molybdenum	96-1	3340	3507	3507	3452	2.79	cps
Molybdenum	97-1	1647	1717	1720	1695	2.44	cps
Molybdenum	98-1	4194	4287	4391	4291	2.29	cps
Neodymium	150-1	473	453	383	437	10.82	cps
Neodymium	150-2	80	100	93	91	11.18	cps
Nickel	60-2	1060	1120	1237	1139	7.89	cps
Phosphorus	31-2	120	127	97	114	13.76	cps
Potassium	39-2	302746	305006	301438	303063	0.60	cps
Rhodium	103-1	8000327	8219617	10060910	8760285	12.92	cps
Rhodium	103-2	2468841	2946965	2999018	2804941	10.42	cps
Scandium	45-1	6651625	6927449	8486720	7355265	13.45	cps
Scandium	45-2	90608	107347	111246	103067	10.64	cps
Selenium	82-1	160	103	170	144	24.89	cps
Selenium	77-2	0	7	3	3	100.05	cps
Selenium	78-2	0	7	7	4	86.60	cps
Silicon	28-1	46134719	47536624	46629071	46766805	1.52	cps
Silver	107-1	243	257	267	256	4.58	cps
Silver	109-1	60	30	47	46	32.99	cps
Sodium	23-2	9465146	9245455	9153841	9288147	1.72	cps
Strontium	86-1	57005729	56783431	56379981	56723047	0.56	cps
Strontium	88-1	492312659	496671259	492915899	493966606	0.48	cps
Sulfur	34-1	14230337	14677437	14508759	14472178	1.56	cps
Terbium	159-1	11959268	12249424	15026593	13078428	12.95	cps
Terbium	159-2	3255106	3725572	3773109	3584596	7.99	cps
Thallium	203-1	253	263	263	260	2.22	cps
Thallium	205-1	503	610	497	537	11.85	cps
Tin	118-1	3624	3744	4017	3795	5.31	cps
Titanium	47-1	4671	4607	4457	4579	2.39	cps
Uranium	238-1	3424	3427	3477	3443	0.87	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-05	Instrumnet Name :	P8
Client Sample ID :	ME2942	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:35:26	DataFile Name :	036AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	760	690	670	707	6.69	cps
Ytterbium	172-1	197	140	177	171	16.80	cps
Ytterbium	172-2	20	80	30	43	74.18	cps
Ytterbium	176-1	1723	1707	2130	1853	12.94	cps
Ytterbium	176-2	183	250	237	223	15.80	cps
Yttrium	89-1	16787338	17438212	21534884	18586811	13.85	cps
Yttrium	89-2	893891	1056790	1069775	1006818	9.73	cps
Zinc	66-2	407	443	450	433	5.38	cps
Zirconium	90-1	6285	6278	6525	6363	2.21	cps
Zirconium	91-1	1420	1350	1467	1412	4.16	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-06	Instrumnet Name :	P8
Client Sample ID :	ME2943	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:38:44	DataFile Name :	037AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1693	1433	1670	1599	9.00	cps
Antimony	121-1	543	543	537	541	0.71	cps
Arsenic	75-2	23	37	27	29	24.03	cps
Barium	135-1	80578	82261	81402	81414	1.03	cps
Barium	137-1	141062	139749	142740	141184	1.06	cps
Beryllium	9-1	249	250	279	259	6.55	cps
Bismuth	209-1	6614873	6988742	7035825	6879814	3.35	cps
Bismuth	209-2	2631569	2638507	2654907	2641661	0.45	cps
Bromine	81-1	95443	113041	124452	110979	13.17	cps
Cadmium	108-1	40	43	57	47	18.90	cps
Cadmium	106-1	5481	5728	6005	5738	4.56	cps
Cadmium	111-1	3855	4026	4237	4039	4.73	cps
Calcium	43-1	11986528	12151341	12213318	12117062	0.97	cps
Calcium	44-1	189628297	190715157	195932984	192092146	1.75	cps
Carbon	12-1	12068171	13211158	13683374	12987567	6.39	cps
Carbon	12-2	93280	94031	93370	93560	0.44	cps
Chlorine	35-1	2685065	2964307	3087829	2912400	7.08	cps
Chlorine	35-2	10574	11088	11148	10936	2.88	cps
Chromium	52-2	1240	1303	1270	1271	2.49	cps
Cobalt	59-2	423	370	340	378	11.17	cps
Copper	63-2	3064	3077	2980	3040	1.72	cps
Dysprosium	156-1	263	227	233	241	8.10	cps
Dysprosium	156-2	63	40	67	57	25.64	cps
Erbium	164-1	173	297	217	229	27.33	cps
Erbium	164-2	40	63	93	66	40.78	cps
Gadolinium	160-1	277	280	207	254	16.28	cps
Gadolinium	160-2	90	87	90	89	2.16	cps
Holmium	165-1	11162062	11859459	11923979	11648500	3.63	cps
Holmium	165-2	3917163	4022267	3978766	3972732	1.33	cps
Indium	115-1	8872728	9427952	9400122	9233601	3.39	cps
Indium	115-2	816867	819560	827667	821365	0.68	cps
Iron	54-2	62231	61656	62211	62033	0.53	cps
Iron	56-2	1141777	1145506	1148465	1145249	0.29	cps
Iron	57-2	29096	28582	28949	28876	0.92	cps
Krypton	83-1	183	143	140	156	15.50	cps
Lead	206-1	1944	1690	1817	1817	6.97	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-06	Instrumnet Name :	P8
Client Sample ID :	ME2943	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:38:44	DataFile Name :	037AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1487	1527	1467	1493	2.05	cps
Lead	208-1	6881	6784	6981	6882	1.43	cps
Lithium	6-1	5512537	5781730	5835108	5709792	3.03	cps
Magnesium	24-2	12176215	12014909	12124396	12105173	0.68	cps
Manganese	55-2	140802	141062	140301	140722	0.27	cps
Molybdenum	94-1	4651	4651	4554	4619	1.21	cps
Molybdenum	95-1	4804	4664	5018	4829	3.69	cps
Molybdenum	96-1	5461	5501	5384	5449	1.09	cps
Molybdenum	97-1	2724	3080	2850	2885	6.27	cps
Molybdenum	98-1	7589	7555	7809	7651	1.80	cps
Neodymium	150-1	270	260	260	263	2.19	cps
Neodymium	150-2	43	57	77	59	28.49	cps
Nickel	60-2	983	1027	1027	1012	2.47	cps
Phosphorus	31-2	220	167	180	189	14.69	cps
Potassium	39-2	312581	311219	311327	311709	0.24	cps
Rhodium	103-1	7705179	8097789	8204757	8002575	3.29	cps
Rhodium	103-2	2964678	2966603	3027565	2986282	1.20	cps
Scandium	45-1	6404572	6899015	6868054	6723880	4.12	cps
Scandium	45-2	108942	109543	109469	109318	0.30	cps
Selenium	82-1	57	90	93	80	25.34	cps
Selenium	77-2	0	3	0	1	173.21	cps
Selenium	78-2	0	13	0	4	173.21	cps
Silicon	28-1	45243169	46574004	46942219	46253131	1.93	cps
Silver	107-1	317	233	270	273	15.28	cps
Silver	109-1	37	37	47	40	14.43	cps
Sodium	23-2	8947210	8705286	8977434	8876643	1.68	cps
Strontium	86-1	54515383	55148299	55284906	54982863	0.75	cps
Strontium	88-1	469362820	475832326	474744420	473313189	0.73	cps
Sulfur	34-1	14247713	14479997	14490681	14406130	0.95	cps
Terbium	159-1	11564434	12154700	12453287	12057474	3.75	cps
Terbium	159-2	3778237	3884006	3877400	3846548	1.54	cps
Thallium	203-1	240	227	243	237	3.73	cps
Thallium	205-1	613	513	543	557	9.22	cps
Tin	118-1	5501	5581	5785	5622	2.60	cps
Titanium	47-1	2487	2564	2524	2525	1.52	cps
Uranium	238-1	5371	5328	5478	5392	1.43	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-06	Instrumnet Name :	P8
Client Sample ID :	ME2943	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:38:44	DataFile Name :	037AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	493	413	473	460	9.05	cps
Ytterbium	172-1	97	107	137	113	18.37	cps
Ytterbium	172-2	53	23	43	40	38.19	cps
Ytterbium	176-1	1737	1567	1693	1666	5.30	cps
Ytterbium	176-2	207	213	240	220	8.02	cps
Yttrium	89-1	16442641	17672845	17581531	17232339	3.98	cps
Yttrium	89-2	1066969	1064726	1070955	1067550	0.30	cps
Zinc	66-2	583	557	567	569	2.37	cps
Zirconium	90-1	5148	5348	5391	5296	2.45	cps
Zirconium	91-1	1177	1217	1303	1232	5.25	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-07	Instrumnet Name :	P8
Client Sample ID :	ME2940	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:42:00	DataFile Name :	038AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	67727	67841	66374	67314	1.21	cps
Antimony	121-1	7455	7495	7162	7371	2.47	cps
Arsenic	75-2	2170	2097	2003	2090	4.00	cps
Barium	135-1	82003	83435	83642	83027	1.08	cps
Barium	137-1	141837	145101	143838	143592	1.15	cps
Beryllium	9-1	286	234	270	263	10.21	cps
Bismuth	209-1	6576879	6969256	7103000	6883045	3.97	cps
Bismuth	209-2	2690802	2692063	2670361	2684408	0.45	cps
Bromine	81-1	78545	85652	88671	84290	6.17	cps
Cadmium	108-1	87	100	103	97	9.12	cps
Cadmium	106-1	5541	5808	5545	5631	2.72	cps
Cadmium	111-1	4005	4162	3992	4053	2.34	cps
Calcium	43-1	1057252	1062124	1068736	1062704	0.54	cps
Calcium	44-1	17666092	17572497	17547025	17595204	0.36	cps
Carbon	12-1	12088183	13357094	14051935	13165738	7.56	cps
Carbon	12-2	97570	99936	101353	99620	1.92	cps
Chlorine	35-1	2038369	2236560	2293437	2189456	6.12	cps
Chlorine	35-2	8232	8036	8376	8215	2.08	cps
Chromium	52-2	820	793	790	801	2.05	cps
Cobalt	59-2	2364	2527	2397	2429	3.55	cps
Copper	63-2	3190	2980	3100	3090	3.41	cps
Dysprosium	156-1	203	180	193	192	6.09	cps
Dysprosium	156-2	63	50	33	49	30.75	cps
Erbium	164-1	197	210	177	194	8.63	cps
Erbium	164-2	80	70	57	69	16.99	cps
Gadolinium	160-1	147	210	187	181	17.68	cps
Gadolinium	160-2	60	43	50	51	16.42	cps
Holmium	165-1	11295381	11725423	11735249	11585351	2.17	cps
Holmium	165-2	3910015	3969142	3933991	3937716	0.76	cps
Indium	115-1	8794643	9216548	9191873	9067688	2.61	cps
Indium	115-2	804978	809624	813326	809309	0.52	cps
Iron	54-2	11531	11838	11928	11766	1.77	cps
Iron	56-2	222600	220677	223001	222093	0.56	cps
Iron	57-2	5491	5341	5568	5467	2.11	cps
Krypton	83-1	120	110	87	106	16.20	cps
Lead	206-1	2984	3204	3067	3085	3.60	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-07	Instrumnet Name :	P8
Client Sample ID :	ME2940	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:42:00	DataFile Name :	038AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2517	2427	2617	2520	3.77	cps
Lead	208-1	11866	11942	12069	11959	0.86	cps
Lithium	6-1	5372029	5603975	5597788	5524598	2.39	cps
Magnesium	24-2	400968	399077	398582	399542	0.32	cps
Manganese	55-2	14854	14681	14307	14614	1.91	cps
Molybdenum	94-1	85406	85970	86319	85898	0.54	cps
Molybdenum	95-1	148843	148314	151562	149573	1.16	cps
Molybdenum	96-1	157228	157201	157545	157325	0.12	cps
Molybdenum	97-1	92250	92536	92260	92349	0.18	cps
Molybdenum	98-1	236652	241801	240498	239650	1.12	cps
Neodymium	150-1	163	230	180	191	18.15	cps
Neodymium	150-2	40	47	57	48	17.56	cps
Nickel	60-2	36413	36744	36991	36716	0.79	cps
Phosphorus	31-2	213	227	267	236	11.78	cps
Potassium	39-2	8503289	8541746	8453132	8499389	0.52	cps
Rhodium	103-1	7704119	8151925	8159242	8005095	3.26	cps
Rhodium	103-2	2977840	2993172	2978540	2983184	0.29	cps
Scandium	45-1	6317052	6672073	6677378	6555501	3.15	cps
Scandium	45-2	106665	107326	107821	107271	0.54	cps
Selenium	82-1	110	200	177	162	28.79	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	7	3	10	7	50.03	cps
Silicon	28-1	127201065	128849201	129854301	128634856	1.04	cps
Silver	107-1	143	137	117	132	10.50	cps
Silver	109-1	43	53	37	44	18.87	cps
Sodium	23-2	47590224	47519576	47016018	47375273	0.66	cps
Strontium	86-1	5256672	5231179	5262036	5249962	0.31	cps
Strontium	88-1	45311856	45555581	45601709	45489715	0.34	cps
Sulfur	34-1	1100414	1107812	1106611	1104946	0.36	cps
Terbium	159-1	11426011	12188409	12187067	11933829	3.69	cps
Terbium	159-2	3852290	3791029	3841487	3828269	0.85	cps
Thallium	203-1	260	200	247	236	13.38	cps
Thallium	205-1	503	433	513	483	9.02	cps
Tin	118-1	3474	3671	3277	3474	5.66	cps
Titanium	47-1	4888	4707	4921	4839	2.37	cps
Uranium	238-1	3907	4017	4067	3997	2.05	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-07	Instrumnet Name :	P8
Client Sample ID :	ME2940	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:42:00	DataFile Name :	038AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	10330	10511	10074	10305	2.13	cps
Ytterbium	172-1	130	110	107	116	10.92	cps
Ytterbium	172-2	30	27	37	31	16.37	cps
Ytterbium	176-1	1603	1643	1820	1689	6.83	cps
Ytterbium	176-2	220	190	237	216	10.97	cps
Yttrium	89-1	16106612	16971709	16982136	16686819	3.01	cps
Yttrium	89-2	1043987	1048276	1047701	1046655	0.22	cps
Zinc	66-2	350	387	360	366	5.19	cps
Zirconium	90-1	3557	4041	3574	3724	7.38	cps
Zirconium	91-1	827	1023	797	882	13.96	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-08	Instrumnet Name :	P8
Client Sample ID :	ME2941	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:45:20	DataFile Name :	039AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	26928	27145	27850	27308	1.76	cps
Antimony	121-1	3407	3621	3470	3499	3.13	cps
Arsenic	75-2	700	793	810	768	7.72	cps
Barium	135-1	290454	292150	289524	290709	0.46	cps
Barium	137-1	511449	513195	506738	510461	0.65	cps
Beryllium	9-1	407	397	412	406	1.88	cps
Bismuth	209-1	6400117	7202932	8510036	7371028	14.45	cps
Bismuth	209-2	2413758	2786717	2391918	2530798	8.77	cps
Bromine	81-1	135311	161467	175395	157391	12.93	cps
Cadmium	108-1	100	113	83	99	15.20	cps
Cadmium	106-1	5204	6005	7179	6129	16.20	cps
Cadmium	111-1	3700	4294	5100	4365	16.10	cps
Calcium	43-1	2108773	2052536	2061448	2074252	1.46	cps
Calcium	44-1	31537694	31514638	30874555	31308962	1.20	cps
Carbon	12-1	12616663	13948031	14505080	13689924	7.09	cps
Carbon	12-2	102460	102406	102034	102300	0.23	cps
Chlorine	35-1	2911480	3207093	3329391	3149321	6.82	cps
Chlorine	35-2	11591	12109	12148	11949	2.60	cps
Chromium	52-2	4694	4477	4567	4580	2.38	cps
Cobalt	59-2	7632	7715	7916	7754	1.88	cps
Copper	63-2	7545	7429	7685	7553	1.70	cps
Dysprosium	156-1	1857	1827	1957	1880	3.62	cps
Dysprosium	156-2	577	593	563	578	2.60	cps
Erbium	164-1	1700	1437	1527	1555	8.61	cps
Erbium	164-2	537	450	480	489	9.00	cps
Gadolinium	160-1	1850	1760	1553	1721	8.84	cps
Gadolinium	160-2	577	627	577	593	4.87	cps
Holmium	165-1	10824695	12064461	14096374	12328510	13.40	cps
Holmium	165-2	3574496	4096523	3446359	3705793	9.29	cps
Indium	115-1	8179948	9413987	10762699	9452212	13.67	cps
Indium	115-2	732821	848091	721707	767540	9.12	cps
Iron	54-2	94319	94339	94513	94390	0.11	cps
Iron	56-2	1852145	1838412	1859572	1850043	0.58	cps
Iron	57-2	43937	43449	43994	43794	0.68	cps
Krypton	83-1	93	120	123	112	14.66	cps
Lead	206-1	8850	8670	8886	8802	1.32	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-08	Instrumnet Name :	P8
Client Sample ID :	ME2941	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:45:20	DataFile Name :	039AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	6495	6635	6582	6571	1.08	cps
Lead	208-1	31355	31371	31712	31479	0.64	cps
Lithium	6-1	5075427	5836840	6513700	5808655	12.39	cps
Magnesium	24-2	3396402	3409860	3402940	3403067	0.20	cps
Manganese	55-2	31892	31789	32029	31903	0.38	cps
Molybdenum	94-1	58385	58783	57917	58362	0.74	cps
Molybdenum	95-1	93753	94649	93867	94090	0.52	cps
Molybdenum	96-1	101020	102145	101645	101603	0.55	cps
Molybdenum	97-1	58506	58446	57679	58210	0.79	cps
Molybdenum	98-1	150024	150604	150199	150276	0.20	cps
Neodymium	150-1	2670	2497	2670	2613	3.83	cps
Neodymium	150-2	630	603	593	609	3.11	cps
Nickel	60-2	10637	10300	10707	10548	2.06	cps
Phosphorus	31-2	263	290	367	307	17.49	cps
Potassium	39-2	1091711	1095405	1092595	1093237	0.18	cps
Rhodium	103-1	7244773	8368398	9651164	8421445	14.30	cps
Rhodium	103-2	2724434	3113381	2721931	2853249	7.90	cps
Scandium	45-1	6056511	6858806	7877234	6930850	13.17	cps
Scandium	45-2	94304	109790	93178	99091	9.37	cps
Selenium	82-1	183	143	213	180	19.51	cps
Selenium	77-2	3	3	7	4	43.40	cps
Selenium	78-2	13	10	10	11	17.30	cps
Silicon	28-1	103291725	105935852	103971182	104399586	1.32	cps
Silver	107-1	387	343	407	379	8.55	cps
Silver	109-1	153	167	180	167	8.00	cps
Sodium	23-2	32659214	33136169	32851592	32882325	0.73	cps
Strontium	86-1	56030291	55132674	54616973	55259979	1.29	cps
Strontium	88-1	474602446	477182166	474705713	475496775	0.31	cps
Sulfur	34-1	1630105	1630725	1604269	1621700	0.93	cps
Terbium	159-1	10884630	12323858	14318755	12509081	13.79	cps
Terbium	159-2	3456990	4061108	3462336	3660145	9.49	cps
Thallium	203-1	480	623	470	524	16.36	cps
Thallium	205-1	1330	1223	1163	1239	6.81	cps
Tin	118-1	6151	6081	6255	6163	1.42	cps
Titanium	47-1	28664	28682	28252	28533	0.85	cps
Uranium	238-1	24293	24377	24006	24225	0.80	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-08	Instrumnet Name :	P8
Client Sample ID :	ME2941	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:45:20	DataFile Name :	039AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	5785	5534	5821	5713	2.73	cps
Ytterbium	172-1	493	540	497	510	5.11	cps
Ytterbium	172-2	157	217	150	174	21.05	cps
Ytterbium	176-1	1893	2060	2307	2087	9.97	cps
Ytterbium	176-2	250	363	367	327	20.33	cps
Yttrium	89-1	15378585	17516911	20140555	17678684	13.49	cps
Yttrium	89-2	946153	1086417	929750	987440	8.72	cps
Zinc	66-2	2024	2160	1887	2023	6.75	cps
Zirconium	90-1	13623	13723	14027	13791	1.52	cps
Zirconium	91-1	3007	3037	2944	2996	1.59	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-09	Instrumnet Name :	P8
Client Sample ID :	ME2944	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:48:35	DataFile Name :	040AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	303	223	293	273	15.95	cps
Antimony	121-1	90	90	73	84	11.40	cps
Arsenic	75-2	10	27	7	14	74.18	cps
Barium	135-1	16981	17325	17578	17294	1.73	cps
Barium	137-1	29045	29853	30752	29883	2.86	cps
Beryllium	9-1	260	277	287	275	5.06	cps
Bismuth	209-1	5889006	6672217	7054217	6538480	9.08	cps
Bismuth	209-2	2649684	2550043	2534017	2577914	2.43	cps
Bromine	81-1	95133	107454	114825	105804	9.40	cps
Cadmium	108-1	20	23	40	28	38.58	cps
Cadmium	106-1	4771	5628	5895	5431	10.81	cps
Cadmium	111-1	3359	3953	4142	3818	10.70	cps
Calcium	43-1	15177973	15499734	15752896	15476867	1.86	cps
Calcium	44-1	241126043	249011596	249353250	246496963	1.89	cps
Carbon	12-1	8256522	9106854	9551120	8971499	7.33	cps
Carbon	12-2	65552	65626	66305	65827	0.63	cps
Chlorine	35-1	1683172	1819509	1927793	1810158	6.77	cps
Chlorine	35-2	6688	6548	6442	6559	1.89	cps
Chromium	52-2	660	620	580	620	6.45	cps
Cobalt	59-2	210	160	217	196	15.84	cps
Copper	63-2	2657	2654	2624	2645	0.69	cps
Dysprosium	156-1	120	107	100	109	9.35	cps
Dysprosium	156-2	3	3	17	8	99.04	cps
Erbium	164-1	87	90	107	94	11.35	cps
Erbium	164-2	27	27	37	30	19.24	cps
Gadolinium	160-1	83	93	77	84	9.93	cps
Gadolinium	160-2	23	23	27	24	7.89	cps
Holmium	165-1	9966742	11630783	12292549	11296691	10.61	cps
Holmium	165-2	3892042	3944446	3901703	3912730	0.71	cps
Indium	115-1	7795741	8886229	9450459	8710810	9.66	cps
Indium	115-2	808903	806895	798963	804920	0.65	cps
Iron	54-2	34104	33676	33349	33710	1.12	cps
Iron	56-2	623629	623782	623519	623644	0.02	cps
Iron	57-2	15692	15765	15982	15813	0.95	cps
Krypton	83-1	217	193	160	190	14.99	cps
Lead	206-1	1507	1417	1363	1429	5.07	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-09	Instrumnet Name :	P8
Client Sample ID :	ME2944	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:48:35	DataFile Name :	040AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1320	1193	1253	1256	5.05	cps
Lead	208-1	5791	5434	5427	5551	3.75	cps
Lithium	6-1	4927543	5666837	5928185	5507522	9.42	cps
Magnesium	24-2	17640731	17498643	17350617	17496664	0.83	cps
Manganese	55-2	30088	29677	29821	29862	0.70	cps
Molybdenum	94-1	2587	2554	2884	2675	6.79	cps
Molybdenum	95-1	3937	3777	4214	3976	5.56	cps
Molybdenum	96-1	4264	4271	4394	4310	1.70	cps
Molybdenum	97-1	2274	2320	2454	2349	3.98	cps
Molybdenum	98-1	5945	5931	6328	6068	3.71	cps
Neodymium	150-1	47	67	67	60	19.24	cps
Neodymium	150-2	17	13	7	12	41.65	cps
Nickel	60-2	1007	930	1010	982	4.61	cps
Phosphorus	31-2	33	43	20	32	36.33	cps
Potassium	39-2	262523	258088	260600	260403	0.85	cps
Rhodium	103-1	6769126	7925007	8181417	7625183	9.87	cps
Rhodium	103-2	2958692	2940209	2939701	2946201	0.37	cps
Scandium	45-1	5713446	6631261	6863310	6402672	9.50	cps
Scandium	45-2	108788	107283	108962	108344	0.85	cps
Selenium	82-1	103	43	70	72	41.63	cps
Selenium	77-2	0	0	3	1	173.21	cps
Selenium	78-2	10	0	13	8	89.21	cps
Silicon	28-1	46893309	47440503	48114586	47482799	1.29	cps
Silver	107-1	230	233	337	267	22.74	cps
Silver	109-1	83	87	113	94	17.41	cps
Sodium	23-2	9286204	9175230	9192140	9217858	0.65	cps
Strontium	86-1	39875110	40770665	41201104	40615626	1.67	cps
Strontium	88-1	347159821	353442968	355021581	351874790	1.18	cps
Sulfur	34-1	23237899	23651675	24065242	23651605	1.75	cps
Terbium	159-1	10193493	11805505	12384982	11461327	9.91	cps
Terbium	159-2	3836742	3769788	3730955	3779162	1.42	cps
Thallium	203-1	233	223	207	221	6.09	cps
Thallium	205-1	537	500	560	532	5.68	cps
Tin	118-1	2810	2760	2934	2835	3.15	cps
Titanium	47-1	1360	1303	1390	1351	3.26	cps
Uranium	238-1	1200	1247	1337	1261	5.51	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-09	Instrumnet Name :	P8
Client Sample ID :	ME2944	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:48:35	DataFile Name :	040AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	37	47	37	40	14.43	cps
Ytterbium	172-1	90	73	83	82	10.20	cps
Ytterbium	172-2	33	23	23	27	21.65	cps
Ytterbium	176-1	1393	1670	1683	1582	10.35	cps
Ytterbium	176-2	240	190	253	228	14.66	cps
Yttrium	89-1	14582138	16440223	17531960	16184774	9.21	cps
Yttrium	89-2	1056001	1049497	1044278	1049925	0.56	cps
Zinc	66-2	290	237	300	276	12.36	cps
Zirconium	90-1	1020	1247	1327	1198	13.28	cps
Zirconium	91-1	183	207	233	208	12.04	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-10	Instrumnet Name :	P8
Client Sample ID :	ME2944D	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:51:54	DataFile Name :	041AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	273	240	220	244	11.02	cps
Antimony	121-1	133	77	103	104	27.14	cps
Arsenic	75-2	20	27	30	26	19.92	cps
Barium	135-1	17508	17171	17572	17417	1.24	cps
Barium	137-1	29459	30137	30073	29890	1.25	cps
Beryllium	9-1	322	270	280	291	9.58	cps
Bismuth	209-1	6314356	7120493	7224255	6886368	7.23	cps
Bismuth	209-2	2488164	2492406	2580746	2520439	2.07	cps
Bromine	81-1	87049	102504	110817	100123	12.05	cps
Cadmium	108-1	37	43	27	36	23.58	cps
Cadmium	106-1	5421	6211	5965	5866	6.89	cps
Cadmium	111-1	3826	4361	4207	4131	6.67	cps
Calcium	43-1	15041586	15227323	15369940	15212950	1.08	cps
Calcium	44-1	239514843	244355076	248965843	244278587	1.93	cps
Carbon	12-1	7839446	8855074	9299051	8664524	8.64	cps
Carbon	12-2	66235	66044	65384	65888	0.68	cps
Chlorine	35-1	1628693	1781596	1834409	1748233	6.11	cps
Chlorine	35-2	6311	6221	6371	6301	1.20	cps
Chromium	52-2	557	480	563	533	8.68	cps
Cobalt	59-2	190	187	173	183	4.81	cps
Copper	63-2	2814	2680	2804	2766	2.69	cps
Dysprosium	156-1	100	83	70	84	17.80	cps
Dysprosium	156-2	37	23	3	21	79.49	cps
Erbium	164-1	97	107	107	103	5.59	cps
Erbium	164-2	27	43	37	36	23.58	cps
Gadolinium	160-1	57	77	93	76	24.29	cps
Gadolinium	160-2	13	27	30	23	37.81	cps
Holmium	165-1	11237087	12247865	12314479	11933143	5.06	cps
Holmium	165-2	3821406	3811432	3914670	3849169	1.48	cps
Indium	115-1	8406078	9440392	9790945	9212472	7.82	cps
Indium	115-2	779949	785995	809589	791844	1.98	cps
Iron	54-2	33723	32885	33473	33360	1.29	cps
Iron	56-2	623688	619303	611365	618118	1.01	cps
Iron	57-2	15972	15772	15642	15796	1.05	cps
Krypton	83-1	143	177	203	174	17.23	cps
Lead	206-1	1450	1400	1313	1388	4.98	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-10	Instrumnet Name :	P8
Client Sample ID :	ME2944D	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:51:54	DataFile Name :	041AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1110	1193	1107	1137	4.32	cps
Lead	208-1	5424	5317	5127	5289	2.84	cps
Lithium	6-1	5349128	5870362	5911355	5710282	5.49	cps
Magnesium	24-2	17447220	17595373	17053990	17365528	1.61	cps
Manganese	55-2	29668	30843	29450	29987	2.50	cps
Molybdenum	94-1	2437	2580	2670	2562	4.59	cps
Molybdenum	95-1	3921	4034	3861	3938	2.24	cps
Molybdenum	96-1	4177	4324	4184	4228	1.96	cps
Molybdenum	97-1	2410	2257	2470	2379	4.62	cps
Molybdenum	98-1	6181	5915	6158	6085	2.43	cps
Neodymium	150-1	70	83	30	61	45.42	cps
Neodymium	150-2	17	23	17	19	20.36	cps
Nickel	60-2	987	1033	1023	1014	2.42	cps
Phosphorus	31-2	40	23	60	41	44.66	cps
Potassium	39-2	261489	258170	255837	258499	1.10	cps
Rhodium	103-1	7366722	8152672	8404651	7974682	6.79	cps
Rhodium	103-2	2883062	2846481	2972116	2900553	2.23	cps
Scandium	45-1	6251453	6917176	7135008	6767879	6.80	cps
Scandium	45-2	105446	106384	109379	107070	1.92	cps
Selenium	82-1	57	63	67	62	8.19	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	0	0	3	1	173.21	cps
Silicon	28-1	45988079	46925831	47720118	46878009	1.85	cps
Silver	107-1	287	297	263	282	6.06	cps
Silver	109-1	107	113	123	114	7.33	cps
Sodium	23-2	9168796	9100454	9115059	9128103	0.39	cps
Strontium	86-1	39901380	40866469	40942535	40570128	1.43	cps
Strontium	88-1	341846795	350220528	352460448	348175924	1.61	cps
Sulfur	34-1	22855470	23386544	23622406	23288140	1.69	cps
Terbium	159-1	11265847	12427177	12644621	12112548	6.12	cps
Terbium	159-2	3675918	3608471	3798603	3694330	2.61	cps
Thallium	203-1	260	177	170	202	24.80	cps
Thallium	205-1	490	440	497	476	6.51	cps
Tin	118-1	2684	2764	2690	2713	1.64	cps
Titanium	47-1	1180	1403	1363	1316	9.05	cps
Uranium	238-1	1410	1283	1347	1347	4.70	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-10	Instrumnet Name :	P8
Client Sample ID :	ME2944D	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:51:54	DataFile Name :	041AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	17	30	37	28	36.66	cps
Ytterbium	172-1	97	60	73	77	24.21	cps
Ytterbium	172-2	27	7	23	19	56.72	cps
Ytterbium	176-1	1537	1667	1730	1645	5.99	cps
Ytterbium	176-2	200	210	233	214	7.98	cps
Yttrium	89-1	15918754	17192707	17943579	17018347	6.01	cps
Yttrium	89-2	1019709	1023366	1064486	1035854	2.40	cps
Zinc	66-2	260	267	350	292	17.16	cps
Zirconium	90-1	1140	1123	1163	1142	1.76	cps
Zirconium	91-1	230	207	277	238	14.99	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-09LX5	Instrumnet Name :	P8
Client Sample ID :	ME2944L	Dilution Factor :	5
Date & Time Acquired :	2025-01-28 14:55:10	DataFile Name :	042AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	73	87	67	76	13.48	cps
Antimony	121-1	47	77	87	70	29.74	cps
Arsenic	75-2	0	13	0	4	173.21	cps
Barium	135-1	3514	3677	3844	3678	4.49	cps
Barium	137-1	6365	6418	6518	6434	1.21	cps
Beryllium	9-1	209	255	237	234	9.99	cps
Bismuth	209-1	7478550	7500850	6938337	7305912	4.36	cps
Bismuth	209-2	2888802	2954146	2877311	2906753	1.43	cps
Bromine	81-1	38192	39251	38570	38671	1.39	cps
Cadmium	108-1	30	20	27	26	19.92	cps
Cadmium	106-1	6061	5555	5168	5595	8.01	cps
Cadmium	111-1	4255	3894	3609	3919	8.27	cps
Calcium	43-1	3006365	3027722	3045504	3026530	0.65	cps
Calcium	44-1	48081344	48853151	49466531	48800342	1.42	cps
Carbon	12-1	3718061	3795179	3767576	3760272	1.04	cps
Carbon	12-2	25262	24978	24794	25011	0.94	cps
Chlorine	35-1	589740	604067	611464	601757	1.84	cps
Chlorine	35-2	2150	1917	2234	2100	7.82	cps
Chromium	52-2	470	477	500	482	3.27	cps
Cobalt	59-2	80	110	123	104	21.25	cps
Copper	63-2	2594	2530	2447	2524	2.92	cps
Dysprosium	156-1	70	43	50	54	25.49	cps
Dysprosium	156-2	13	0	3	6	124.93	cps
Erbium	164-1	110	70	73	84	26.28	cps
Erbium	164-2	20	10	20	17	34.64	cps
Gadolinium	160-1	27	57	53	46	36.09	cps
Gadolinium	160-2	3	10	3	6	69.34	cps
Holmium	165-1	12247718	12127053	11323444	11899405	4.22	cps
Holmium	165-2	4123473	4201127	4133724	4152775	1.02	cps
Indium	115-1	9457226	9515575	9064493	9345765	2.63	cps
Indium	115-2	857118	876903	862038	865353	1.19	cps
Iron	54-2	6978	6842	7225	7015	2.77	cps
Iron	56-2	129942	128418	130597	129653	0.86	cps
Iron	57-2	3337	3377	3400	3372	0.95	cps
Krypton	83-1	127	117	127	123	4.68	cps
Lead	206-1	1180	1097	1107	1128	4.03	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-09LX5	Instrumnet Name :	P8
Client Sample ID :	ME2944L	Dilution Factor :	5
Date & Time Acquired :	2025-01-28 14:55:10	DataFile Name :	042AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	923	890	897	903	1.95	cps
Lead	208-1	4300	4187	4137	4208	1.99	cps
Lithium	6-1	5650070	5695842	5332539	5559484	3.56	cps
Magnesium	24-2	3399562	3435285	3490838	3441895	1.34	cps
Manganese	55-2	6341	6171	6011	6175	2.67	cps
Molybdenum	94-1	730	800	730	753	5.36	cps
Molybdenum	95-1	953	977	1043	991	4.71	cps
Molybdenum	96-1	1160	1110	1153	1141	2.38	cps
Molybdenum	97-1	630	623	520	591	10.43	cps
Molybdenum	98-1	1610	1503	1607	1573	3.85	cps
Neodymium	150-1	17	13	13	14	13.35	cps
Neodymium	150-2	7	17	0	8	107.84	cps
Nickel	60-2	890	913	900	901	1.30	cps
Phosphorus	31-2	37	3	30	23	75.61	cps
Potassium	39-2	54676	54432	55232	54780	0.75	cps
Rhodium	103-1	8511081	8560472	8062666	8378073	3.27	cps
Rhodium	103-2	3184075	3298684	3221269	3234676	1.81	cps
Scandium	45-1	6645239	6710318	6444978	6600178	2.10	cps
Scandium	45-2	110676	112489	111226	111464	0.83	cps
Selenium	82-1	3	3	60	22	147.25	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	20	3	0	8	137.80	cps
Silicon	28-1	9377319	9451592	9523107	9450673	0.77	cps
Silver	107-1	157	203	183	181	12.93	cps
Silver	109-1	30	43	37	37	18.18	cps
Sodium	23-2	1786509	1809672	1838966	1811716	1.45	cps
Strontium	86-1	8076727	8092405	8251789	8140307	1.19	cps
Strontium	88-1	69488424	70088494	71024717	70200545	1.10	cps
Sulfur	34-1	4762583	4810097	4901442	4824707	1.46	cps
Terbium	159-1	12345273	12437729	11549837	12110946	4.03	cps
Terbium	159-2	4011436	4065269	4027531	4034745	0.68	cps
Thallium	203-1	210	217	170	199	12.69	cps
Thallium	205-1	470	470	427	456	5.49	cps
Tin	118-1	3717	3757	3624	3699	1.85	cps
Titanium	47-1	323	350	370	348	6.73	cps
Uranium	238-1	320	287	290	299	6.14	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-09LX5	Instrumnet Name :	P8
Client Sample ID :	ME2944L	Dilution Factor :	5
Date & Time Acquired :	2025-01-28 14:55:10	DataFile Name :	042AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	7	7	0	4	86.60	cps
Ytterbium	172-1	57	60	57	58	3.33	cps
Ytterbium	172-2	30	40	17	29	40.51	cps
Ytterbium	176-1	1790	1677	1453	1640	10.45	cps
Ytterbium	176-2	170	207	173	183	11.06	cps
Yttrium	89-1	17389973	17232739	16433908	17018873	3.01	cps
Yttrium	89-2	1094600	1118351	1098476	1103809	1.15	cps
Zinc	66-2	223	207	157	196	17.74	cps
Zirconium	90-1	537	570	593	567	5.03	cps
Zirconium	91-1	133	150	143	142	5.90	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-11	Instrumnet Name :	P8
Client Sample ID :	ME2944S	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:58:26	DataFile Name :	043AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	71300	71250	71645	71398	0.30	cps
Antimony	121-1	836506	862203	868941	855883	2.00	cps
Arsenic	75-2	6168	6101	6081	6117	0.74	cps
Barium	135-1	4885471	4897679	5053069	4945406	1.89	cps
Barium	137-1	8323921	8327296	8604536	8418584	1.91	cps
Beryllium	9-1	163918	168410	170171	167500	1.92	cps
Bismuth	209-1	6882654	7060412	6681266	6874778	2.76	cps
Bismuth	209-2	2507960	2475888	2473326	2485725	0.78	cps
Bromine	81-1	76200	94059	103404	91221	15.15	cps
Cadmium	108-1	6925	7535	7379	7280	4.35	cps
Cadmium	106-1	15702	16196	16200	16033	1.78	cps
Cadmium	111-1	112105	113289	115850	113748	1.68	cps
Calcium	43-1	14534884	14940790	15134573	14870083	2.06	cps
Calcium	44-1	234198737	239170736	243132810	238834094	1.87	cps
Carbon	12-1	6528263	7460578	7981632	7323491	10.05	cps
Carbon	12-2	57485	57736	58683	57968	1.09	cps
Chlorine	35-1	14766883	16349310	17010854	16042349	7.19	cps
Chlorine	35-2	61818	60529	61771	61373	1.19	cps
Chromium	52-2	358627	353955	355389	355990	0.67	cps
Cobalt	59-2	1745372	1742188	1743827	1743796	0.09	cps
Copper	63-2	630281	627853	624308	627481	0.48	cps
Dysprosium	156-1	110	137	143	130	13.57	cps
Dysprosium	156-2	17	10	17	14	26.66	cps
Erbium	164-1	113	130	90	111	18.08	cps
Erbium	164-2	20	37	20	26	37.66	cps
Gadolinium	160-1	77	50	83	70	25.20	cps
Gadolinium	160-2	17	27	23	22	22.91	cps
Holmium	165-1	11925815	12055131	11542882	11841276	2.25	cps
Holmium	165-2	3698238	3784389	3797689	3760105	1.44	cps
Indium	115-1	9253569	9387970	8834434	9158658	3.15	cps
Indium	115-2	779587	782181	783958	781909	0.28	cps
Iron	54-2	117666	117058	118136	117620	0.46	cps
Iron	56-2	2091137	2075731	2087027	2084632	0.38	cps
Iron	57-2	50044	49776	50191	50004	0.42	cps
Krypton	83-1	130	150	170	150	13.33	cps
Lead	206-1	144805	150165	150384	148452	2.13	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-11	Instrumnet Name :	P8
Client Sample ID :	ME2944S	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:58:26	DataFile Name :	043AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	124289	126282	128096	126222	1.51	cps
Lead	208-1	573779	587009	590141	583643	1.49	cps
Lithium	6-1	5627472	5752120	5511900	5630497	2.13	cps
Magnesium	24-2	16859995	16564044	16693807	16705949	0.89	cps
Manganese	55-2	405673	402077	404930	404226	0.47	cps
Molybdenum	94-1	2580	2747	2634	2654	3.21	cps
Molybdenum	95-1	3714	3974	4234	3974	6.54	cps
Molybdenum	96-1	4051	4147	4264	4154	2.57	cps
Molybdenum	97-1	2154	2324	2290	2256	3.99	cps
Molybdenum	98-1	5851	6198	6348	6133	4.16	cps
Neodymium	150-1	497	470	597	521	12.82	cps
Neodymium	150-2	37	17	20	24	43.83	cps
Nickel	60-2	441808	439923	442148	441293	0.27	cps
Phosphorus	31-2	10	37	37	28	55.43	cps
Potassium	39-2	252010	251037	250746	251264	0.26	cps
Rhodium	103-1	7930672	8159363	7834358	7974798	2.09	cps
Rhodium	103-2	2862619	2834667	2870740	2856009	0.66	cps
Scandium	45-1	6632327	6849978	6426326	6636210	3.19	cps
Scandium	45-2	104378	106306	104583	105089	1.01	cps
Selenium	82-1	2540	3120	2834	2831	10.24	cps
Selenium	77-2	23	27	37	29	24.03	cps
Selenium	78-2	147	143	140	143	2.33	cps
Silicon	28-1	44540948	45649351	46306543	45498947	1.96	cps
Silver	107-1	521077	534255	540895	532076	1.90	cps
Silver	109-1	496831	516072	524146	512350	2.74	cps
Sodium	23-2	8877613	8824552	8781763	8827976	0.54	cps
Strontium	86-1	38736434	39827593	40112300	39558776	1.84	cps
Strontium	88-1	332589708	344877568	348049568	341838948	2.39	cps
Sulfur	34-1	22186345	22672150	23066170	22641555	1.95	cps
Terbium	159-1	12110729	12346487	11807500	12088239	2.24	cps
Terbium	159-2	3695170	3642249	3668490	3668636	0.72	cps
Thallium	203-1	445594	461104	464289	456996	2.19	cps
Thallium	205-1	1072341	1101663	1115413	1096472	2.01	cps
Tin	118-1	2927	2764	2884	2858	2.96	cps
Titanium	47-1	1353	1417	1170	1313	9.75	cps
Uranium	238-1	1250	1330	1300	1293	3.12	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-11	Instrumnet Name :	P8
Client Sample ID :	ME2944S	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 14:58:26	DataFile Name :	043AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	699047	696848	696056	697317	0.22	cps
Ytterbium	172-1	83	80	90	84	6.03	cps
Ytterbium	172-2	37	30	27	31	16.37	cps
Ytterbium	176-1	1750	1707	1547	1668	6.42	cps
Ytterbium	176-2	213	163	233	203	17.73	cps
Yttrium	89-1	17009751	17482800	16579300	17023950	2.65	cps
Yttrium	89-2	1021368	1027034	1031639	1026680	0.50	cps
Zinc	66-2	122893	122695	122147	122578	0.32	cps
Zirconium	90-1	1307	1390	1213	1303	6.78	cps
Zirconium	91-1	347	347	390	361	6.93	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV010	Instrumnet Name :	P8
Client Sample ID :	CCV010	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:01:41	DataFile Name :	044CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1917568	1929015	1929432	1925338	0.35	cps
Antimony	121-1	4560476	4647426	4588287	4598730	0.97	cps
Arsenic	75-2	75501	77431	77015	76649	1.33	cps
Barium	135-1	5932383	6030317	6020637	5994446	0.90	cps
Barium	137-1	10262556	10459100	10482937	10401531	1.16	cps
Beryllium	9-1	1750106	1782781	1755223	1762703	1.00	cps
Bismuth	209-1	6518245	6325848	6274953	6373015	2.01	cps
Bismuth	209-2	2300757	2370676	2360234	2343889	1.61	cps
Bromine	81-1	21790	20719	19407	20639	5.78	cps
Cadmium	108-1	89115	92400	91789	91102	1.92	cps
Cadmium	106-1	133333	134635	135217	134395	0.72	cps
Cadmium	111-1	1100394	1120637	1124455	1115162	1.16	cps
Calcium	43-1	8726778	8645636	8827448	8733287	1.04	cps
Calcium	44-1	139676645	139790918	140322031	139929865	0.25	cps
Carbon	12-1	2936902	2983295	3001622	2973940	1.12	cps
Carbon	12-2	21980	21743	22207	21977	1.06	cps
Chlorine	35-1	880372	828697	785743	831604	5.70	cps
Chlorine	35-2	2644	2344	2177	2388	9.90	cps
Chromium	52-2	885613	891674	888288	888525	0.34	cps
Cobalt	59-2	1749058	1714702	1755671	1739810	1.26	cps
Copper	63-2	12157392	12366577	12195671	12239880	0.91	cps
Dysprosium	156-1	277	370	343	330	14.57	cps
Dysprosium	156-2	60	40	47	49	20.83	cps
Erbium	164-1	317	283	267	289	8.81	cps
Erbium	164-2	97	120	110	109	10.75	cps
Gadolinium	160-1	237	247	250	244	2.84	cps
Gadolinium	160-2	87	73	97	86	13.69	cps
Holmium	165-1	11579541	11080186	11067715	11242481	2.60	cps
Holmium	165-2	3628230	3716783	3714511	3686508	1.37	cps
Indium	115-1	8622207	8135526	8252095	8336609	3.05	cps
Indium	115-2	720052	747999	741818	736623	1.99	cps
Iron	54-2	8943227	9116805	9093810	9051281	1.04	cps
Iron	56-2	168634314	169336304	169441584	169137401	0.26	cps
Iron	57-2	4321558	4216442	4268373	4268791	1.23	cps
Krypton	83-1	173	210	133	172	22.26	cps
Lead	206-1	18654153	18731880	19036689	18807574	1.08	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV010	Instrumnet Name :	P8
Client Sample ID :	CCV010	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:01:41	DataFile Name :	044CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	16123474	16134600	16247206	16168426	0.42	cps
Lead	208-1	74059052	74607076	74625224	74430451	0.43	cps
Lithium	6-1	5250563	5146740	5150590	5182631	1.14	cps
Magnesium	24-2	32918469	32760350	32691515	32790111	0.35	cps
Manganese	55-2	3920035	3916607	3940179	3925607	0.32	cps
Molybdenum	94-1	16840624	17031930	17046779	16973111	0.68	cps
Molybdenum	95-1	24581987	24797297	24833678	24737654	0.55	cps
Molybdenum	96-1	26505726	26637041	26951260	26698009	0.86	cps
Molybdenum	97-1	14762834	15189546	15158895	15037092	1.58	cps
Molybdenum	98-1	39076170	39976843	39941299	39664771	1.29	cps
Neodymium	150-1	667	680	780	709	8.74	cps
Neodymium	150-2	37	33	37	36	5.42	cps
Nickel	60-2	432151	428161	433921	431411	0.68	cps
Phosphorus	31-2	16563	16586	16176	16442	1.40	cps
Potassium	39-2	9262535	9210922	9232925	9235461	0.28	cps
Rhodium	103-1	7378574	7058209	7236066	7224283	2.22	cps
Rhodium	103-2	2627539	2691564	2685333	2668145	1.32	cps
Scandium	45-1	6396446	6154277	6240590	6263771	1.96	cps
Scandium	45-2	100660	103231	102505	102132	1.30	cps
Selenium	82-1	70798	71200	72161	71387	0.98	cps
Selenium	77-2	1023	1133	1200	1119	7.97	cps
Selenium	78-2	3637	3647	3717	3667	1.19	cps
Silicon	28-1	25129884	25418742	25402905	25317177	0.64	cps
Silver	107-1	5747651	5825826	5868286	5813921	1.05	cps
Silver	109-1	5481744	5533713	5555927	5523795	0.69	cps
Sodium	23-2	65397624	65724854	65545619	65556032	0.25	cps
Strontium	86-1	1733215	1779439	1745770	1752808	1.36	cps
Strontium	88-1	14831605	15064881	15212901	15036462	1.28	cps
Sulfur	34-1	823430	830222	825695	826449	0.42	cps
Terbium	159-1	11720863	11274278	11388857	11461333	2.02	cps
Terbium	159-2	3560915	3590222	3531882	3561006	0.82	cps
Thallium	203-1	4875048	4869399	4932064	4892170	0.71	cps
Thallium	205-1	11309923	11471507	11461118	11414182	0.79	cps
Tin	118-1	3950970	4044906	4030211	4008696	1.26	cps
Titanium	47-1	7509182	7656851	7624436	7596823	1.02	cps
Uranium	238-1	15548641	15876399	15638203	15687748	1.08	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV010	Instrumnet Name :	P8
Client Sample ID :	CCV010	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:01:41	DataFile Name :	044CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	706548	708534	706400	707160	0.17	cps
Ytterbium	172-1	287	347	323	319	9.48	cps
Ytterbium	172-2	127	117	100	114	11.77	cps
Ytterbium	176-1	23554	23251	23180	23328	0.85	cps
Ytterbium	176-2	7435	7369	7666	7490	2.08	cps
Yttrium	89-1	16162351	15682329	15966286	15936989	1.51	cps
Yttrium	89-2	968677	1006309	988751	987912	1.91	cps
Zinc	66-2	1221834	1217215	1217132	1218727	0.22	cps
Zirconium	90-1	8555940	8606918	8556182	8573013	0.34	cps
Zirconium	91-1	1962326	1938911	1930232	1943823	0.85	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB010	Instrumnet Name :	P8
Client Sample ID :	CCB010	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:04:33	DataFile Name :	045CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	120	93	73	96	24.50	cps
Antimony	121-1	1383	1363	1127	1291	11.06	cps
Arsenic	75-2	7	7	10	8	24.71	cps
Barium	135-1	803	710	707	740	7.42	cps
Barium	137-1	1437	1167	1383	1329	10.76	cps
Beryllium	9-1	746	711	686	715	4.22	cps
Bismuth	209-1	7425857	7410808	7454490	7430385	0.30	cps
Bismuth	209-2	2781474	2824208	2835345	2813676	1.01	cps
Bromine	81-1	13023	12549	12436	12669	2.46	cps
Cadmium	108-1	53	47	37	46	18.41	cps
Cadmium	106-1	5448	5411	5595	5484	1.77	cps
Cadmium	111-1	3899	3852	4044	3932	2.54	cps
Calcium	43-1	787	903	787	826	8.16	cps
Calcium	44-1	14568	12506	13797	13623	7.65	cps
Carbon	12-1	2264585	2256722	2213987	2245098	1.21	cps
Carbon	12-2	14571	14571	14284	14475	1.14	cps
Chlorine	35-1	517184	506465	491054	504901	2.60	cps
Chlorine	35-2	1583	1643	1440	1556	6.72	cps
Chromium	52-2	600	510	607	572	9.44	cps
Cobalt	59-2	213	217	210	213	1.56	cps
Copper	63-2	3167	2877	2584	2876	10.14	cps
Dysprosium	156-1	33	43	37	38	13.48	cps
Dysprosium	156-2	3	0	0	1	173.21	cps
Erbium	164-1	47	70	40	52	30.16	cps
Erbium	164-2	30	23	20	24	20.83	cps
Gadolinium	160-1	63	17	43	41	56.94	cps
Gadolinium	160-2	3	10	7	7	50.03	cps
Holmium	165-1	11716001	11798501	11789723	11768075	0.39	cps
Holmium	165-2	3905766	3947069	3902090	3918308	0.64	cps
Indium	115-1	9558259	9474624	9613357	9548747	0.73	cps
Indium	115-2	836799	836268	824754	832607	0.82	cps
Iron	54-2	667	650	583	633	6.96	cps
Iron	56-2	11341	10064	9967	10457	7.34	cps
Iron	57-2	277	247	340	288	16.56	cps
Krypton	83-1	170	217	137	174	23.04	cps
Lead	206-1	2324	2020	2174	2172	6.98	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB010	Instrumnet Name :	P8
Client Sample ID :	CCB010	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:04:33	DataFile Name :	045CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2480	1847	1997	2108	15.70	cps
Lead	208-1	10195	8548	8988	9244	9.23	cps
Lithium	6-1	5607022	5580625	5607575	5598408	0.28	cps
Magnesium	24-2	1500	1307	1293	1367	8.46	cps
Manganese	55-2	407	413	397	406	2.07	cps
Molybdenum	94-1	1430	1380	1323	1378	3.87	cps
Molybdenum	95-1	1990	1600	1720	1770	11.29	cps
Molybdenum	96-1	2014	1673	2050	1912	10.86	cps
Molybdenum	97-1	1130	983	1073	1062	6.96	cps
Molybdenum	98-1	2870	2484	2637	2664	7.31	cps
Neodymium	150-1	23	10	20	18	39.03	cps
Neodymium	150-2	0	0	0	0	0.00	cps
Nickel	60-2	800	737	777	771	4.15	cps
Phosphorus	31-2	27	40	27	31	24.74	cps
Potassium	39-2	6111	5821	5965	5966	2.43	cps
Rhodium	103-1	8643509	8636088	8677763	8652453	0.26	cps
Rhodium	103-2	3181397	3155126	3196485	3177669	0.66	cps
Scandium	45-1	6772674	6694810	6693813	6720432	0.67	cps
Scandium	45-2	106091	105329	104798	105406	0.62	cps
Selenium	82-1	-53	-80	10	-41	-112.45	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	7	0	0	2	173.21	cps
Silicon	28-1	334677	325147	322033	327286	2.01	cps
Silver	107-1	903	870	797	857	6.37	cps
Silver	109-1	870	593	747	737	18.82	cps
Sodium	23-2	19924	19874	19677	19825	0.66	cps
Strontium	86-1	763	597	690	683	12.22	cps
Strontium	88-1	5118	4254	4394	4589	10.10	cps
Sulfur	34-1	258383	259532	259214	259043	0.23	cps
Terbium	159-1	12120448	12163603	12139795	12141282	0.18	cps
Terbium	159-2	3797727	3799789	3796905	3798140	0.04	cps
Thallium	203-1	693	750	690	711	4.74	cps
Thallium	205-1	1647	1723	1667	1679	2.37	cps
Tin	118-1	4457	4527	4714	4566	2.91	cps
Titanium	47-1	543	503	563	537	5.69	cps
Uranium	238-1	873	660	793	776	13.90	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB010	Instrumnet Name :	P8
Client Sample ID :	CCB010	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:04:33	DataFile Name :	045CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	37	40	20	32	33.25	cps
Ytterbium	172-1	73	87	57	72	20.81	cps
Ytterbium	172-2	20	13	23	19	26.96	cps
Ytterbium	176-1	1503	1523	1543	1523	1.31	cps
Ytterbium	176-2	187	200	223	203	9.13	cps
Yttrium	89-1	17305928	17177428	17293264	17258874	0.41	cps
Yttrium	89-2	1050336	1047545	1046043	1047975	0.21	cps
Zinc	66-2	240	213	270	241	11.76	cps
Zirconium	90-1	1280	1300	1327	1302	1.80	cps
Zirconium	91-1	287	247	257	263	7.90	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-12	Instrumnet Name :	P8
Client Sample ID :	ME2938	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:07:56	DataFile Name :	046AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	52190	51310	52611	52037	1.28	cps
Antimony	121-1	2080	2474	2204	2252	8.93	cps
Arsenic	75-2	573	620	613	602	4.19	cps
Barium	135-1	132763	133512	134260	133512	0.56	cps
Barium	137-1	231135	231934	233199	232089	0.45	cps
Beryllium	9-1	430	407	384	407	5.68	cps
Bismuth	209-1	6803010	6791713	6849037	6814587	0.45	cps
Bismuth	209-2	2589702	2576712	2569655	2578690	0.39	cps
Bromine	81-1	408440	502436	551144	487340	14.88	cps
Cadmium	108-1	300	277	283	287	4.19	cps
Cadmium	106-1	5374	5224	5451	5350	2.16	cps
Cadmium	111-1	4115	3940	4257	4104	3.87	cps
Calcium	43-1	321275	321428	324047	322250	0.48	cps
Calcium	44-1	5294254	5271024	5400542	5321940	1.30	cps
Carbon	12-1	10752461	12111508	12973469	11945813	9.37	cps
Carbon	12-2	90600	92280	92223	91701	1.04	cps
Chlorine	35-1	5146998	5784108	6120201	5683769	8.70	cps
Chlorine	35-2	21980	22281	23022	22427	2.39	cps
Chromium	52-2	770	667	507	648	20.48	cps
Cobalt	59-2	370	333	347	350	5.30	cps
Copper	63-2	6141	6585	6201	6309	3.81	cps
Dysprosium	156-1	40	43	83	56	43.40	cps
Dysprosium	156-2	7	0	3	3	100.05	cps
Erbium	164-1	80	70	43	64	29.41	cps
Erbium	164-2	3	30	20	18	75.79	cps
Gadolinium	160-1	50	43	73	56	28.35	cps
Gadolinium	160-2	7	10	10	9	21.63	cps
Holmium	165-1	11641454	11571497	11487417	11566789	0.67	cps
Holmium	165-2	3833838	3844588	3841134	3839853	0.14	cps
Indium	115-1	9030417	9027211	9111706	9056445	0.53	cps
Indium	115-2	793952	794359	791703	793338	0.18	cps
Iron	54-2	1310	1277	1300	1296	1.32	cps
Iron	56-2	23209	23319	23289	23272	0.24	cps
Iron	57-2	603	637	620	620	2.69	cps
Krypton	83-1	117	103	127	116	10.13	cps
Lead	206-1	3274	2974	2907	3052	6.40	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-12	Instrumnet Name :	P8
Client Sample ID :	ME2938	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:07:56	DataFile Name :	046AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2614	2620	2510	2581	2.39	cps
Lead	208-1	12032	11726	11535	11764	2.13	cps
Lithium	6-1	5702175	5776315	5739652	5739381	0.65	cps
Magnesium	24-2	4741	4954	4384	4693	6.14	cps
Manganese	55-2	653	720	647	673	6.02	cps
Molybdenum	94-1	330477	332298	330370	331048	0.33	cps
Molybdenum	95-1	573503	579855	583148	578836	0.85	cps
Molybdenum	96-1	609016	620166	620022	616401	1.04	cps
Molybdenum	97-1	354158	360849	358844	357950	0.96	cps
Molybdenum	98-1	923494	930058	929441	927664	0.39	cps
Neodymium	150-1	23	77	37	46	60.93	cps
Neodymium	150-2	7	7	7	7	0.00	cps
Nickel	60-2	134340	133923	134044	134102	0.16	cps
Phosphorus	31-2	273	257	253	261	4.10	cps
Potassium	39-2	12485206	12291206	12436375	12404262	0.81	cps
Rhodium	103-1	7990630	8037414	7963971	7997338	0.46	cps
Rhodium	103-2	2980308	2957169	2975214	2970897	0.41	cps
Scandium	45-1	6582630	6582616	6563262	6576170	0.17	cps
Scandium	45-2	105711	105265	105033	105337	0.33	cps
Selenium	82-1	353	517	537	469	21.45	cps
Selenium	77-2	3	7	3	4	43.40	cps
Selenium	78-2	10	3	0	4	114.60	cps
Silicon	28-1	19218476	20089035	20509769	19939093	3.30	cps
Silver	107-1	500	430	377	436	14.20	cps
Silver	109-1	360	277	297	311	13.98	cps
Sodium	23-2	33277368	33200869	32903009	33127082	0.60	cps
Strontium	86-1	1482172	1509551	1503352	1498358	0.96	cps
Strontium	88-1	12826736	13047646	12787002	12887128	1.09	cps
Sulfur	34-1	1048159	1053040	1061648	1054282	0.65	cps
Terbium	159-1	11738070	11808751	11809748	11785523	0.35	cps
Terbium	159-2	3749204	3757306	3744915	3750475	0.17	cps
Thallium	203-1	413	357	383	384	7.37	cps
Thallium	205-1	910	923	820	884	6.35	cps
Tin	118-1	2544	2497	2577	2539	1.58	cps
Titanium	47-1	847	957	813	872	8.60	cps
Uranium	238-1	333	303	297	311	6.28	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-12	Instrumnet Name :	P8
Client Sample ID :	ME2938	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:07:56	DataFile Name :	046AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	7035	7179	6985	7066	1.42	cps
Ytterbium	172-1	77	87	67	77	13.04	cps
Ytterbium	172-2	17	17	17	17	0.00	cps
Ytterbium	176-1	1557	1550	1450	1519	3.93	cps
Ytterbium	176-2	210	243	180	211	15.01	cps
Yttrium	89-1	16647291	16850757	16896184	16798078	0.79	cps
Yttrium	89-2	1029283	1033654	1020031	1027656	0.68	cps
Zinc	66-2	910	847	797	851	6.67	cps
Zirconium	90-1	1627	1227	1140	1331	19.50	cps
Zirconium	91-1	357	237	240	278	24.60	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-13	Instrumnet Name :	P8
Client Sample ID :	ME2939	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:11:14	DataFile Name :	047AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	52943	53033	53441	53139	0.50	cps
Antimony	121-1	2114	1917	2104	2045	5.42	cps
Arsenic	75-2	630	737	687	684	7.80	cps
Barium	135-1	140284	141836	141568	141229	0.59	cps
Barium	137-1	245078	247446	247172	246565	0.53	cps
Beryllium	9-1	342	365	324	344	6.01	cps
Bismuth	209-1	6670048	6757139	6820483	6749223	1.12	cps
Bismuth	209-2	2550121	2567039	2477741	2531634	1.87	cps
Bromine	81-1	476362	559276	599063	544900	11.49	cps
Cadmium	108-1	257	317	263	279	11.79	cps
Cadmium	106-1	5494	5271	5198	5321	2.91	cps
Cadmium	111-1	4286	4018	4094	4133	3.35	cps
Calcium	43-1	417272	419263	423603	420046	0.77	cps
Calcium	44-1	6856997	6926107	6872822	6885309	0.53	cps
Carbon	12-1	11958700	13189989	13724234	12957641	6.99	cps
Carbon	12-2	96618	96413	97520	96850	0.61	cps
Chlorine	35-1	5789917	6303088	6522496	6205167	6.06	cps
Chlorine	35-2	22648	23212	23633	23164	2.13	cps
Chromium	52-2	623	723	707	684	7.83	cps
Cobalt	59-2	353	370	373	366	2.93	cps
Copper	63-2	4824	4467	4617	4636	3.86	cps
Dysprosium	156-1	63	77	53	64	18.17	cps
Dysprosium	156-2	13	3	0	6	124.93	cps
Erbium	164-1	77	70	103	83	21.16	cps
Erbium	164-2	17	23	20	20	16.65	cps
Gadolinium	160-1	60	77	53	63	18.98	cps
Gadolinium	160-2	17	17	13	16	12.40	cps
Holmium	165-1	11338945	11552892	11446258	11446032	0.93	cps
Holmium	165-2	3891322	3836313	3745525	3824387	1.93	cps
Indium	115-1	8999435	8943890	8932674	8958666	0.40	cps
Indium	115-2	792462	790947	775724	786378	1.18	cps
Iron	54-2	2134	2187	2043	2121	3.42	cps
Iron	56-2	38776	39184	39070	39010	0.54	cps
Iron	57-2	973	1020	970	988	2.83	cps
Krypton	83-1	123	193	107	141	32.59	cps
Lead	206-1	2980	3137	3100	3073	2.67	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-13	Instrumnet Name :	P8
Client Sample ID :	ME2939	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:11:14	DataFile Name :	047AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2414	2474	2594	2494	3.68	cps
Lead	208-1	11959	12046	12189	12065	0.96	cps
Lithium	6-1	5795283	5685816	5713694	5731598	0.99	cps
Magnesium	24-2	7242	7225	7482	7316	1.96	cps
Manganese	55-2	2920	2914	2710	2848	4.19	cps
Molybdenum	94-1	331926	334661	332147	332912	0.46	cps
Molybdenum	95-1	576947	584632	584242	581940	0.74	cps
Molybdenum	96-1	617578	623961	622481	621340	0.54	cps
Molybdenum	97-1	361788	362153	363376	362439	0.23	cps
Molybdenum	98-1	941139	938275	938459	939291	0.17	cps
Neodymium	150-1	63	60	47	57	15.56	cps
Neodymium	150-2	10	0	13	8	89.21	cps
Nickel	60-2	135208	134784	135218	135070	0.18	cps
Phosphorus	31-2	280	280	207	256	16.57	cps
Potassium	39-2	12404272	12444314	12507627	12452071	0.42	cps
Rhodium	103-1	7975180	8064526	7916960	7985555	0.93	cps
Rhodium	103-2	2946492	2867344	2872455	2895431	1.53	cps
Scandium	45-1	6591879	6495573	6497468	6528307	0.84	cps
Scandium	45-2	103714	102136	101478	102443	1.12	cps
Selenium	82-1	400	437	503	447	11.73	cps
Selenium	77-2	3	0	3	2	86.60	cps
Selenium	78-2	10	23	17	17	39.99	cps
Silicon	28-1	19916185	20007836	20743690	20222570	2.24	cps
Silver	107-1	317	290	257	288	10.45	cps
Silver	109-1	227	153	247	209	23.52	cps
Sodium	23-2	33764971	33350440	32985375	33366929	1.17	cps
Strontium	86-1	1575301	1572371	1609118	1585596	1.29	cps
Strontium	88-1	13664104	13410135	13933694	13669311	1.92	cps
Sulfur	34-1	1043396	1028043	1032765	1034735	0.76	cps
Terbium	159-1	11798615	11738379	11734915	11757303	0.30	cps
Terbium	159-2	3770810	3721740	3671118	3721223	1.34	cps
Thallium	203-1	227	277	263	256	10.13	cps
Thallium	205-1	597	613	497	569	11.09	cps
Tin	118-1	6412	6582	6268	6420	2.44	cps
Titanium	47-1	1277	1167	1190	1211	4.79	cps
Uranium	238-1	333	347	267	316	13.58	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-13	Instrumnet Name :	P8
Client Sample ID :	ME2939	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:11:14	DataFile Name :	047AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	7295	7382	7235	7304	1.01	cps
Ytterbium	172-1	103	47	53	68	45.69	cps
Ytterbium	172-2	20	17	10	16	32.73	cps
Ytterbium	176-1	1370	1533	1640	1515	8.98	cps
Ytterbium	176-2	163	260	130	184	36.61	cps
Yttrium	89-1	16576059	16463184	16861761	16633668	1.24	cps
Yttrium	89-2	1026529	1024777	1007767	1019691	1.02	cps
Zinc	66-2	793	707	737	746	5.90	cps
Zirconium	90-1	973	1050	913	979	7.00	cps
Zirconium	91-1	287	223	193	234	20.32	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-14	Instrumnet Name :	P8
Client Sample ID :	ME2932	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:14:30	DataFile Name :	048AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	10898	10978	10671	10849	1.47	cps
Antimony	121-1	7716	7746	7746	7736	0.22	cps
Arsenic	75-2	697	827	753	759	8.59	cps
Barium	135-1	245445	244905	248716	246355	0.84	cps
Barium	137-1	431062	431429	433932	432141	0.36	cps
Beryllium	9-1	291	342	319	317	8.08	cps
Bismuth	209-1	6873527	6799453	6778403	6817127	0.73	cps
Bismuth	209-2	2505876	2394410	2531041	2477109	2.94	cps
Bromine	81-1	133097	126030	121228	126785	4.71	cps
Cadmium	108-1	67	80	77	74	9.32	cps
Cadmium	106-1	5251	5308	5001	5187	3.15	cps
Cadmium	111-1	3909	3879	3674	3821	3.36	cps
Calcium	43-1	6780164	6819862	6853358	6817794	0.54	cps
Calcium	44-1	110716422	108262568	109506598	109495196	1.12	cps
Carbon	12-1	12239389	13504220	14079851	13274486	7.09	cps
Carbon	12-2	99792	99722	100417	99977	0.38	cps
Chlorine	35-1	2472430	2573825	2660345	2568867	3.66	cps
Chlorine	35-2	9590	9080	9296	9322	2.75	cps
Chromium	52-2	7836	7729	7595	7720	1.56	cps
Cobalt	59-2	7652	7582	7579	7604	0.54	cps
Copper	63-2	68122	66689	66213	67008	1.48	cps
Dysprosium	156-1	173	137	177	162	13.68	cps
Dysprosium	156-2	70	47	53	57	21.21	cps
Erbium	164-1	170	170	210	183	12.60	cps
Erbium	164-2	27	53	40	40	33.33	cps
Gadolinium	160-1	143	123	133	133	7.50	cps
Gadolinium	160-2	40	70	43	51	32.17	cps
Holmium	165-1	11612600	11433770	11253855	11433408	1.57	cps
Holmium	165-2	3712313	3617295	3785387	3704998	2.27	cps
Indium	115-1	8989224	8984111	8861218	8944851	0.81	cps
Indium	115-2	768927	733302	776367	759532	3.03	cps
Iron	54-2	6311	6492	6455	6419	1.48	cps
Iron	56-2	115906	115190	113856	114984	0.90	cps
Iron	57-2	3134	3027	2954	3038	2.98	cps
Krypton	83-1	127	153	117	132	14.34	cps
Lead	206-1	4131	4247	4187	4189	1.39	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-14	Instrumnet Name :	P8
Client Sample ID :	ME2932	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:14:30	DataFile Name :	048AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	3591	3477	3277	3448	4.60	cps
Lead	208-1	16257	15947	15747	15984	1.61	cps
Lithium	6-1	5435538	5464751	5390069	5430119	0.69	cps
Magnesium	24-2	197967	197376	194532	196625	0.93	cps
Manganese	55-2	6211	6208	5908	6109	2.85	cps
Molybdenum	94-1	67673	67107	66870	67217	0.61	cps
Molybdenum	95-1	112826	114607	113034	113489	0.86	cps
Molybdenum	96-1	120157	120561	121626	120781	0.63	cps
Molybdenum	97-1	70210	70692	69965	70289	0.53	cps
Molybdenum	98-1	180402	183438	183884	182575	1.04	cps
Neodymium	150-1	207	153	207	189	16.30	cps
Neodymium	150-2	30	53	53	46	29.57	cps
Nickel	60-2	21326	21677	21159	21387	1.23	cps
Phosphorus	31-2	367	367	393	376	4.10	cps
Potassium	39-2	2980459	2895965	2955430	2943951	1.47	cps
Rhodium	103-1	7919185	7884687	7759349	7854407	1.07	cps
Rhodium	103-2	2819737	2669055	2893249	2794014	4.09	cps
Scandium	45-1	6572090	6431659	6441231	6481660	1.21	cps
Scandium	45-2	99118	95186	102341	98882	3.62	cps
Selenium	82-1	267	223	213	234	12.09	cps
Selenium	77-2	0	3	3	2	86.60	cps
Selenium	78-2	3	13	3	7	86.65	cps
Silicon	28-1	60470707	60576004	60372364	60473025	0.17	cps
Silver	107-1	200	193	197	197	1.69	cps
Silver	109-1	107	93	60	87	27.74	cps
Sodium	23-2	18503511	18401166	18435289	18446655	0.28	cps
Strontium	86-1	9700795	9760118	9714430	9725114	0.32	cps
Strontium	88-1	84112507	84536520	83389885	84012971	0.69	cps
Sulfur	34-1	715508	707468	711082	711353	0.57	cps
Terbium	159-1	11823674	11830129	11668768	11774190	0.78	cps
Terbium	159-2	3650570	3478340	3676666	3601859	2.99	cps
Thallium	203-1	237	320	250	269	16.65	cps
Thallium	205-1	637	730	713	693	7.18	cps
Tin	118-1	6735	6598	6425	6586	2.36	cps
Titanium	47-1	3954	3854	3767	3858	2.42	cps
Uranium	238-1	15630	16501	15960	16030	2.74	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-14	Instrumnet Name :	P8
Client Sample ID :	ME2932	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:14:30	DataFile Name :	048AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	22838	22598	23289	22908	1.53	cps
Ytterbium	172-1	90	107	93	97	9.13	cps
Ytterbium	172-2	43	57	47	49	14.20	cps
Ytterbium	176-1	1543	1400	1560	1501	5.86	cps
Ytterbium	176-2	193	180	243	206	16.24	cps
Yttrium	89-1	16470223	16514087	16270622	16418311	0.79	cps
Yttrium	89-2	987196	950606	1003424	980409	2.76	cps
Zinc	66-2	5271	5251	5131	5218	1.45	cps
Zirconium	90-1	5388	5274	5444	5369	1.61	cps
Zirconium	91-1	1153	1253	1233	1213	4.36	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-15	Instrumnet Name :	P8
Client Sample ID :	ME2936	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:17:47	DataFile Name :	049AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	283	203	277	254	17.44	cps
Antimony	121-1	220	157	183	187	17.03	cps
Arsenic	75-2	7	30	17	18	65.83	cps
Barium	135-1	37148	36399	36974	36840	1.06	cps
Barium	137-1	64174	65203	65186	64854	0.91	cps
Beryllium	9-1	290	285	284	286	1.16	cps
Bismuth	209-1	6847083	6928232	6936519	6903945	0.72	cps
Bismuth	209-2	2638566	2611779	2619545	2623297	0.53	cps
Bromine	81-1	66624	69420	71571	69205	3.58	cps
Cadmium	108-1	30	33	37	33	10.01	cps
Cadmium	106-1	5238	5251	5658	5382	4.44	cps
Cadmium	111-1	3699	3692	3972	3788	4.21	cps
Calcium	43-1	6831693	6941707	6999564	6924321	1.23	cps
Calcium	44-1	109510105	109866085	111827775	110401322	1.13	cps
Carbon	12-1	7309315	8080332	8320268	7903305	6.68	cps
Carbon	12-2	58543	59500	58365	58802	1.04	cps
Chlorine	35-1	1256982	1337277	1370964	1321741	4.43	cps
Chlorine	35-2	4694	4768	4667	4710	1.10	cps
Chromium	52-2	653	553	620	609	8.36	cps
Cobalt	59-2	260	243	170	224	21.33	cps
Copper	63-2	2547	2390	2704	2547	6.15	cps
Dysprosium	156-1	123	110	120	118	5.89	cps
Dysprosium	156-2	30	43	33	36	19.51	cps
Erbium	164-1	190	200	107	166	30.95	cps
Erbium	164-2	40	57	40	46	21.13	cps
Gadolinium	160-1	127	117	87	110	18.92	cps
Gadolinium	160-2	40	50	37	42	16.43	cps
Holmium	165-1	11418196	11543543	11458068	11473269	0.56	cps
Holmium	165-2	3984437	3828573	3861675	3891562	2.11	cps
Indium	115-1	8944808	8964272	9007465	8972182	0.36	cps
Indium	115-2	809789	795466	799805	801686	0.92	cps
Iron	54-2	23319	23189	22224	22911	2.61	cps
Iron	56-2	426805	427280	422010	425365	0.69	cps
Iron	57-2	10781	10431	10591	10601	1.65	cps
Krypton	83-1	143	130	170	148	13.78	cps
Lead	206-1	1700	1570	1657	1642	4.03	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-15	Instrumnet Name :	P8
Client Sample ID :	ME2936	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:17:47	DataFile Name :	049AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1360	1437	1303	1367	4.90	cps
Lead	208-1	6574	6374	6251	6400	2.55	cps
Lithium	6-1	5327478	5343849	5319278	5330202	0.23	cps
Magnesium	24-2	6988482	6958596	6912895	6953324	0.55	cps
Manganese	55-2	26578	26060	26137	26259	1.06	cps
Molybdenum	94-1	870	853	1003	909	9.05	cps
Molybdenum	95-1	1020	1107	970	1032	6.70	cps
Molybdenum	96-1	1300	1173	1223	1232	5.18	cps
Molybdenum	97-1	687	653	653	664	2.90	cps
Molybdenum	98-1	1730	1713	1680	1708	1.49	cps
Neodymium	150-1	70	63	57	63	10.52	cps
Neodymium	150-2	7	0	3	3	100.05	cps
Nickel	60-2	1143	967	1013	1041	8.79	cps
Phosphorus	31-2	73	63	27	54	45.12	cps
Potassium	39-2	211404	211626	207777	210269	1.03	cps
Rhodium	103-1	7843221	7903578	7943341	7896714	0.64	cps
Rhodium	103-2	2968913	2935413	2944252	2949526	0.59	cps
Scandium	45-1	6392277	6482001	6382158	6418812	0.86	cps
Scandium	45-2	105580	104180	102677	104146	1.39	cps
Selenium	82-1	30	47	47	41	23.41	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	3	3	0	2	86.60	cps
Silicon	28-1	39964132	40537034	41027111	40509426	1.31	cps
Silver	107-1	250	250	277	259	5.95	cps
Silver	109-1	67	87	63	72	17.48	cps
Sodium	23-2	4517927	4503201	4462790	4494640	0.64	cps
Strontium	86-1	54530644	54461578	55089878	54694033	0.63	cps
Strontium	88-1	467590833	470606273	472388233	470195113	0.52	cps
Sulfur	34-1	8334993	8511603	8613819	8486805	1.66	cps
Terbium	159-1	11556546	11790745	11959667	11768986	1.72	cps
Terbium	159-2	3829078	3781942	3726375	3779131	1.36	cps
Thallium	203-1	230	227	173	210	15.14	cps
Thallium	205-1	443	510	503	486	7.56	cps
Tin	118-1	2907	2840	2914	2887	1.41	cps
Titanium	47-1	1117	1110	1177	1135	3.24	cps
Uranium	238-1	4221	4147	4231	4200	1.08	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-15	Instrumnet Name :	P8
Client Sample ID :	ME2936	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:17:47	DataFile Name :	049AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	93	83	110	96	14.10	cps
Ytterbium	172-1	123	167	90	127	30.35	cps
Ytterbium	172-2	43	50	50	48	8.06	cps
Ytterbium	176-1	1660	1690	1500	1617	6.32	cps
Ytterbium	176-2	187	207	210	201	6.27	cps
Yttrium	89-1	16155772	16613180	16670087	16479680	1.71	cps
Yttrium	89-2	1044978	1020520	1024063	1029853	1.28	cps
Zinc	66-2	527	593	543	554	6.26	cps
Zirconium	90-1	1013	947	1053	1004	5.37	cps
Zirconium	91-1	183	270	250	234	19.36	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-16	Instrumnet Name :	P8
Client Sample ID :	ME2934	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:21:02	DataFile Name :	050AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	33341	33799	32389	33177	2.17	cps
Antimony	121-1	27868	28480	28309	28219	1.12	cps
Arsenic	75-2	1560	1633	1673	1622	3.54	cps
Barium	135-1	145592	146064	147981	146546	0.86	cps
Barium	137-1	253195	253896	258805	255299	1.20	cps
Beryllium	9-1	292	272	260	275	5.96	cps
Bismuth	209-1	6747327	6854998	6930323	6844216	1.34	cps
Bismuth	209-2	2602830	2632002	2583867	2606233	0.93	cps
Bromine	81-1	56175	56835	57621	56877	1.27	cps
Cadmium	108-1	160	180	160	167	6.93	cps
Cadmium	106-1	5581	5348	5398	5442	2.26	cps
Cadmium	111-1	4012	3821	3883	3905	2.49	cps
Calcium	43-1	4220646	4240132	4233763	4231514	0.23	cps
Calcium	44-1	66959946	68059629	68245207	67754927	1.03	cps
Carbon	12-1	17712685	21060242	23023881	20598936	13.04	cps
Carbon	12-2	168550	171618	173642	171270	1.50	cps
Chlorine	35-1	1046569	1120338	1145779	1104229	4.67	cps
Chlorine	35-2	3827	4131	4104	4021	4.18	cps
Chromium	52-2	1680	1793	1623	1699	5.10	cps
Cobalt	59-2	4424	4898	4501	4607	5.52	cps
Copper	63-2	20992	21269	20792	21018	1.14	cps
Dysprosium	156-1	90	120	83	98	19.98	cps
Dysprosium	156-2	30	17	10	19	53.91	cps
Erbium	164-1	100	120	90	103	14.78	cps
Erbium	164-2	27	30	17	24	28.38	cps
Gadolinium	160-1	107	83	83	91	14.79	cps
Gadolinium	160-2	30	27	40	32	21.53	cps
Holmium	165-1	11310129	11463853	11569935	11447972	1.14	cps
Holmium	165-2	3793237	3828850	3868084	3830057	0.98	cps
Indium	115-1	8840500	9001634	9032653	8958262	1.15	cps
Indium	115-2	791994	787170	789154	789440	0.31	cps
Iron	54-2	5238	5268	5154	5220	1.13	cps
Iron	56-2	97110	96396	98061	97189	0.86	cps
Iron	57-2	2684	2380	2444	2502	6.40	cps
Krypton	83-1	130	83	143	119	26.50	cps
Lead	206-1	3517	3504	3747	3589	3.81	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-16	Instrumnet Name :	P8
Client Sample ID :	ME2934	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:21:02	DataFile Name :	050AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	3130	2920	3077	3043	3.59	cps
Lead	208-1	13720	13800	14820	14113	4.35	cps
Lithium	6-1	5219002	5327833	5309815	5285550	1.10	cps
Magnesium	24-2	7355	7175	7028	7186	2.28	cps
Manganese	55-2	1703	1603	1557	1621	4.62	cps
Molybdenum	94-1	165771	167690	167819	167093	0.69	cps
Molybdenum	95-1	289624	295157	293745	292842	0.98	cps
Molybdenum	96-1	309515	310399	312768	310894	0.54	cps
Molybdenum	97-1	179234	181570	183515	181440	1.18	cps
Molybdenum	98-1	464138	473541	473621	470433	1.16	cps
Neodymium	150-1	110	117	90	106	13.15	cps
Neodymium	150-2	23	10	23	19	40.75	cps
Nickel	60-2	41083	42189	41072	41448	1.55	cps
Phosphorus	31-2	417	533	450	467	12.88	cps
Potassium	39-2	3207254	3186534	3137861	3177216	1.12	cps
Rhodium	103-1	7904413	7869098	7916439	7896650	0.31	cps
Rhodium	103-2	2931825	2902788	2930337	2921650	0.56	cps
Scandium	45-1	6336911	6587065	6448669	6457548	1.94	cps
Scandium	45-2	102582	101505	102264	102117	0.54	cps
Selenium	82-1	300	410	307	339	18.20	cps
Selenium	77-2	7	7	13	9	43.25	cps
Selenium	78-2	23	13	33	23	42.86	cps
Silicon	28-1	42473558	42595104	42379821	42482828	0.25	cps
Silver	107-1	193	200	187	193	3.45	cps
Silver	109-1	70	103	83	86	19.61	cps
Sodium	23-2	26291722	26432993	26156607	26293774	0.53	cps
Strontium	86-1	8176722	8258648	8163187	8199519	0.63	cps
Strontium	88-1	70970374	70814427	70648889	70811230	0.23	cps
Sulfur	34-1	963390	956455	963797	961214	0.43	cps
Terbium	159-1	11479520	11830038	11961699	11757086	2.12	cps
Terbium	159-2	3782872	3748036	3673801	3734903	1.49	cps
Thallium	203-1	227	237	240	234	2.96	cps
Thallium	205-1	617	700	517	611	15.02	cps
Tin	118-1	7329	6915	7262	7169	3.10	cps
Titanium	47-1	2104	2150	2177	2144	1.73	cps
Uranium	238-1	1153	1217	1083	1151	5.79	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-16	Instrumnet Name :	P8
Client Sample ID :	ME2934	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:21:02	DataFile Name :	050AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	12642	12833	12739	12738	0.75	cps
Ytterbium	172-1	70	50	60	60	16.67	cps
Ytterbium	172-2	33	20	23	26	27.15	cps
Ytterbium	176-1	1523	1537	1547	1536	0.76	cps
Ytterbium	176-2	200	140	173	171	17.57	cps
Yttrium	89-1	16239307	16639134	16711238	16529893	1.54	cps
Yttrium	89-2	1013885	1014631	1017080	1015199	0.16	cps
Zinc	66-2	590	570	653	604	7.20	cps
Zirconium	90-1	1430	1427	1370	1409	2.39	cps
Zirconium	91-1	363	320	350	344	6.44	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-17	Instrumnet Name :	P8
Client Sample ID :	ME2935	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:24:19	DataFile Name :	051AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	660	720	657	679	5.25	cps
Antimony	121-1	270	340	347	319	13.32	cps
Arsenic	75-2	10	20	23	18	39.03	cps
Barium	135-1	25370	26443	25861	25891	2.07	cps
Barium	137-1	44416	45145	45526	45029	1.25	cps
Beryllium	9-1	282	291	266	280	4.53	cps
Bismuth	209-1	7020541	6710114	6659103	6796586	2.88	cps
Bismuth	209-2	2516711	2457235	2442418	2472121	1.59	cps
Bromine	81-1	79562	96069	105483	93705	14.00	cps
Cadmium	108-1	43	17	43	34	44.69	cps
Cadmium	106-1	5888	5758	5641	5762	2.14	cps
Cadmium	111-1	4168	4062	3965	4065	2.49	cps
Calcium	43-1	15031780	15371085	15810390	15404418	2.53	cps
Calcium	44-1	242452803	247374443	249496250	246441165	1.47	cps
Carbon	12-1	8547468	9030661	9269408	8949179	4.11	cps
Carbon	12-2	62452	63148	62572	62724	0.59	cps
Chlorine	35-1	1471066	1672371	1778914	1640784	9.53	cps
Chlorine	35-2	6191	6562	5968	6240	4.80	cps
Chromium	52-2	690	710	650	683	4.47	cps
Cobalt	59-2	273	277	280	277	1.21	cps
Copper	63-2	3540	3804	3624	3656	3.68	cps
Dysprosium	156-1	130	137	143	137	4.88	cps
Dysprosium	156-2	27	20	13	20	33.35	cps
Erbium	164-1	123	103	100	109	11.59	cps
Erbium	164-2	50	43	30	41	24.77	cps
Gadolinium	160-1	123	103	103	110	10.50	cps
Gadolinium	160-2	27	33	20	27	24.99	cps
Holmium	165-1	12135079	11691096	11462402	11762859	2.91	cps
Holmium	165-2	3679064	3778811	3817934	3758603	1.91	cps
Indium	115-1	9384157	9007691	9032365	9141404	2.30	cps
Indium	115-2	772366	770918	766588	769957	0.39	cps
Iron	54-2	195029	195241	195396	195222	0.09	cps
Iron	56-2	3873173	3765647	3760947	3799922	1.67	cps
Iron	57-2	92239	90837	90552	91209	0.99	cps
Krypton	83-1	117	197	147	153	26.36	cps
Lead	206-1	2477	2370	2580	2476	4.24	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-17	Instrumnet Name :	P8
Client Sample ID :	ME2935	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:24:19	DataFile Name :	051AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1957	2020	2027	2001	1.93	cps
Lead	208-1	9438	9435	9338	9404	0.60	cps
Lithium	6-1	5643320	5445210	5384550	5491026	2.46	cps
Magnesium	24-2	17017261	17057164	16965442	17013289	0.27	cps
Manganese	55-2	38201	37793	38592	38195	1.05	cps
Molybdenum	94-1	7759	8416	8146	8107	4.07	cps
Molybdenum	95-1	12723	13563	13387	13224	3.35	cps
Molybdenum	96-1	14261	14818	14658	14579	1.97	cps
Molybdenum	97-1	8209	7879	8453	8180	3.52	cps
Molybdenum	98-1	21500	21336	22118	21651	1.90	cps
Neodymium	150-1	127	83	107	106	20.55	cps
Neodymium	150-2	17	10	0	9	94.38	cps
Nickel	60-2	1190	1387	1297	1291	7.63	cps
Phosphorus	31-2	40	47	43	43	7.70	cps
Potassium	39-2	312904	312948	313158	313003	0.04	cps
Rhodium	103-1	8093914	7800416	7840510	7911613	2.01	cps
Rhodium	103-2	2853447	2826300	2850927	2843558	0.53	cps
Scandium	45-1	6741531	6640439	6616454	6666141	1.00	cps
Scandium	45-2	101962	102918	102257	102379	0.48	cps
Selenium	82-1	87	77	113	92	20.55	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	0	3	10	4	114.60	cps
Silicon	28-1	53986918	55055858	55793163	54945313	1.65	cps
Silver	107-1	347	363	383	364	5.04	cps
Silver	109-1	233	160	257	217	23.28	cps
Sodium	23-2	8721484	8711212	8783030	8738576	0.44	cps
Strontium	86-1	38320580	39204588	39376146	38967105	1.45	cps
Strontium	88-1	327040975	337580268	340697648	335106297	2.14	cps
Sulfur	34-1	22920454	23361760	24130744	23470986	2.61	cps
Terbium	159-1	12313450	11775206	11845487	11978047	2.44	cps
Terbium	159-2	3666483	3668983	3617924	3651130	0.79	cps
Thallium	203-1	180	270	240	230	19.93	cps
Thallium	205-1	520	520	560	533	4.33	cps
Tin	118-1	2017	2087	1963	2022	3.06	cps
Titanium	47-1	1853	1857	1777	1829	2.47	cps
Uranium	238-1	2880	2884	2754	2839	2.61	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-17	Instrumnet Name :	P8
Client Sample ID :	ME2935	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:24:19	DataFile Name :	051AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	247	200	240	229	11.03	cps
Ytterbium	172-1	70	97	53	73	29.81	cps
Ytterbium	172-2	20	20	17	19	10.18	cps
Ytterbium	176-1	1597	1590	1750	1646	5.50	cps
Ytterbium	176-2	183	193	163	180	8.49	cps
Yttrium	89-1	17063829	16584234	16869310	16839124	1.43	cps
Yttrium	89-2	1007156	1010899	1000957	1006337	0.50	cps
Zinc	66-2	390	477	407	424	10.83	cps
Zirconium	90-1	1250	1360	1310	1307	4.22	cps
Zirconium	91-1	247	250	317	271	14.57	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-18	Instrumnet Name :	P8
Client Sample ID :	ME2950	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:27:34	DataFile Name :	052AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1180	1260	1247	1229	3.49	cps
Antimony	121-1	420	493	400	438	11.23	cps
Arsenic	75-2	73	103	50	76	35.38	cps
Barium	135-1	49808	50714	50912	50478	1.17	cps
Barium	137-1	86678	89782	88715	88392	1.78	cps
Beryllium	9-1	296	284	294	291	2.27	cps
Bismuth	209-1	6405179	6705912	6772716	6627936	2.95	cps
Bismuth	209-2	2505554	2475238	2542572	2507788	1.34	cps
Bromine	81-1	84973	100785	109875	98544	12.79	cps
Cadmium	108-1	43	47	30	40	22.05	cps
Cadmium	106-1	5324	5561	5411	5432	2.21	cps
Cadmium	111-1	3737	3910	3783	3810	2.35	cps
Calcium	43-1	11146821	11402316	11391225	11313454	1.28	cps
Calcium	44-1	178189111	182728704	182743757	181220524	1.45	cps
Carbon	12-1	7598626	8454591	8942244	8331820	8.16	cps
Carbon	12-2	63784	62810	62582	63059	1.01	cps
Chlorine	35-1	2186000	2444819	2557649	2396156	7.95	cps
Chlorine	35-2	8963	9386	9153	9167	2.31	cps
Chromium	52-2	597	610	663	623	5.66	cps
Cobalt	59-2	387	333	447	389	14.58	cps
Copper	63-2	2394	2304	2624	2440	6.76	cps
Dysprosium	156-1	123	177	113	138	24.71	cps
Dysprosium	156-2	30	30	50	37	31.49	cps
Erbium	164-1	167	107	193	156	28.54	cps
Erbium	164-2	77	73	37	62	35.67	cps
Gadolinium	160-1	93	137	147	126	22.58	cps
Gadolinium	160-2	50	33	60	48	28.20	cps
Holmium	165-1	10900933	11364768	11278411	11181371	2.21	cps
Holmium	165-2	3719185	3735292	3691311	3715262	0.60	cps
Indium	115-1	8435361	8662813	8975462	8691212	3.12	cps
Indium	115-2	762958	764880	765567	764469	0.18	cps
Iron	54-2	15939	16012	16072	16008	0.42	cps
Iron	56-2	292105	293979	294492	293526	0.43	cps
Iron	57-2	7866	7389	7742	7665	3.23	cps
Krypton	83-1	160	137	140	146	8.67	cps
Lead	206-1	1493	1360	1500	1451	5.44	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-18	Instrumnet Name :	P8
Client Sample ID :	ME2950	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:27:34	DataFile Name :	052AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1313	1183	1170	1222	6.48	cps
Lead	208-1	5527	5464	5484	5492	0.59	cps
Lithium	6-1	5000160	5279662	5267987	5182603	3.05	cps
Magnesium	24-2	12505467	12373983	12435921	12438457	0.53	cps
Manganese	55-2	29784	29370	29754	29636	0.78	cps
Molybdenum	94-1	2234	2250	2264	2249	0.67	cps
Molybdenum	95-1	1997	1944	1927	1956	1.87	cps
Molybdenum	96-1	2290	2290	2160	2247	3.34	cps
Molybdenum	97-1	1050	1140	1190	1127	6.30	cps
Molybdenum	98-1	2947	3050	3084	3027	2.35	cps
Neodymium	150-1	153	127	130	137	10.63	cps
Neodymium	150-2	27	40	30	32	21.53	cps
Nickel	60-2	1507	1550	1383	1480	5.84	cps
Phosphorus	31-2	43	50	50	48	8.06	cps
Potassium	39-2	242870	241643	245483	243332	0.81	cps
Rhodium	103-1	7463245	7711800	7690911	7621985	1.81	cps
Rhodium	103-2	2799171	2777503	2827876	2801516	0.90	cps
Scandium	45-1	6005888	6339956	6315957	6220600	3.00	cps
Scandium	45-2	100860	100535	100716	100704	0.16	cps
Selenium	82-1	23	110	87	73	61.15	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	3	7	0	3	100.05	cps
Silicon	28-1	45832724	47289598	47353919	46825414	1.84	cps
Silver	107-1	200	253	197	217	14.68	cps
Silver	109-1	70	57	67	64	10.76	cps
Sodium	23-2	9572957	9374691	9452629	9466759	1.06	cps
Strontium	86-1	41303954	41931025	42500356	41911778	1.43	cps
Strontium	88-1	356226261	366197755	365004955	362476323	1.50	cps
Sulfur	34-1	15045240	15547837	15522488	15371855	1.84	cps
Terbium	159-1	11172211	11724906	11733556	11543557	2.79	cps
Terbium	159-2	3562959	3571426	3597905	3577430	0.51	cps
Thallium	203-1	277	270	227	258	10.53	cps
Thallium	205-1	583	473	530	529	10.40	cps
Tin	118-1	2164	2184	2327	2225	4.01	cps
Titanium	47-1	1927	1920	1977	1941	1.60	cps
Uranium	238-1	8623	8420	8513	8518	1.20	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-18	Instrumnet Name :	P8
Client Sample ID :	ME2950	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:27:34	DataFile Name :	052AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	153	137	207	166	22.09	cps
Ytterbium	172-1	100	137	120	119	15.44	cps
Ytterbium	172-2	37	37	40	38	5.09	cps
Ytterbium	176-1	1540	1567	1640	1582	3.27	cps
Ytterbium	176-2	170	163	203	179	11.98	cps
Yttrium	89-1	15440837	16338564	16402905	16060769	3.35	cps
Yttrium	89-2	990683	984914	1002713	992770	0.91	cps
Zinc	66-2	487	420	433	447	7.90	cps
Zirconium	90-1	3274	3234	3290	3266	0.89	cps
Zirconium	91-1	607	637	780	674	13.74	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-19	Instrumnet Name :	P8
Client Sample ID :	ME2951	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:30:54	DataFile Name :	053AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	233	243	243	240	2.41	cps
Antimony	121-1	533	420	430	461	13.61	cps
Arsenic	75-2	77	50	27	51	48.95	cps
Barium	135-1	48480	50550	50146	49725	2.21	cps
Barium	137-1	84666	86262	87195	86041	1.49	cps
Beryllium	9-1	280	269	269	272	2.38	cps
Bismuth	209-1	6507710	6670536	6694166	6624137	1.53	cps
Bismuth	209-2	2453575	2469623	2459350	2460849	0.33	cps
Bromine	81-1	83853	99906	108310	97356	12.76	cps
Cadmium	108-1	33	47	57	46	25.70	cps
Cadmium	106-1	5534	5281	5474	5430	2.44	cps
Cadmium	111-1	3907	3701	3856	3821	2.82	cps
Calcium	43-1	11093671	11270441	11314204	11226105	1.04	cps
Calcium	44-1	176572084	180458204	179603831	178878040	1.14	cps
Carbon	12-1	6891099	7698524	8064829	7551484	7.95	cps
Carbon	12-2	55902	56843	56180	56308	0.86	cps
Chlorine	35-1	2276245	2546890	2676691	2499942	8.17	cps
Chlorine	35-2	9046	9270	9590	9302	2.94	cps
Chromium	52-2	567	543	583	564	3.56	cps
Cobalt	59-2	303	383	353	347	11.66	cps
Copper	63-2	3630	3767	3961	3786	4.38	cps
Dysprosium	156-1	130	143	140	138	5.04	cps
Dysprosium	156-2	20	27	27	24	15.75	cps
Erbium	164-1	157	143	143	148	5.21	cps
Erbium	164-2	43	60	43	49	19.69	cps
Gadolinium	160-1	123	117	153	131	14.90	cps
Gadolinium	160-2	33	37	37	36	5.42	cps
Holmium	165-1	11029239	11330626	11524131	11294665	2.21	cps
Holmium	165-2	3681521	3701858	3705719	3696366	0.35	cps
Indium	115-1	8622901	8790172	8870648	8761240	1.44	cps
Indium	115-2	751810	755442	766790	758014	1.03	cps
Iron	54-2	15191	15305	14838	15111	1.61	cps
Iron	56-2	280229	277306	280627	279387	0.65	cps
Iron	57-2	7275	7179	7295	7250	0.86	cps
Krypton	83-1	120	143	93	119	21.05	cps
Lead	206-1	1173	1190	1250	1205	3.35	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-19	Instrumnet Name :	P8
Client Sample ID :	ME2951	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:30:54	DataFile Name :	053AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	950	1057	1043	1017	5.72	cps
Lead	208-1	4557	4747	4784	4696	2.59	cps
Lithium	6-1	5026380	5107833	5226451	5120221	1.96	cps
Magnesium	24-2	12124587	12252095	12248348	12208343	0.59	cps
Manganese	55-2	25212	25493	26131	25612	1.84	cps
Molybdenum	94-1	2130	1984	2117	2077	3.91	cps
Molybdenum	95-1	1747	1803	1870	1807	3.42	cps
Molybdenum	96-1	2080	2200	2004	2095	4.73	cps
Molybdenum	97-1	1100	1013	940	1018	7.87	cps
Molybdenum	98-1	2880	2830	2887	2866	1.08	cps
Neodymium	150-1	140	130	147	139	6.04	cps
Neodymium	150-2	37	20	20	26	37.66	cps
Nickel	60-2	2480	2517	2554	2517	1.46	cps
Phosphorus	31-2	70	33	53	52	35.16	cps
Potassium	39-2	239427	236263	239407	238366	0.76	cps
Rhodium	103-1	7523620	7673184	7677355	7624720	1.15	cps
Rhodium	103-2	2765426	2784836	2773530	2774597	0.35	cps
Scandium	45-1	6142923	6255018	6439448	6279130	2.38	cps
Scandium	45-2	99350	98689	100092	99377	0.71	cps
Selenium	82-1	73	130	117	107	27.77	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	3	10	10	8	49.52	cps
Silicon	28-1	45499863	45825381	45838761	45721335	0.42	cps
Silver	107-1	173	257	233	221	19.44	cps
Silver	109-1	27	47	57	43	35.25	cps
Sodium	23-2	9330345	9310199	9294689	9311745	0.19	cps
Strontium	86-1	40270158	41695277	41510915	41158783	1.88	cps
Strontium	88-1	348349435	357618808	361628595	355865612	1.91	cps
Sulfur	34-1	14851316	15128798	14962075	14980730	0.93	cps
Terbium	159-1	11366572	11603129	11562276	11510659	1.10	cps
Terbium	159-2	3592157	3562849	3625278	3593428	0.87	cps
Thallium	203-1	183	210	200	198	6.81	cps
Thallium	205-1	550	433	473	486	12.21	cps
Tin	118-1	2097	1943	2030	2024	3.80	cps
Titanium	47-1	1313	1390	1250	1318	5.32	cps
Uranium	238-1	7979	8269	8466	8238	2.97	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-19	Instrumnet Name :	P8
Client Sample ID :	ME2951	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:30:54	DataFile Name :	053AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	197	167	133	166	19.13	cps
Ytterbium	172-1	113	113	130	119	8.09	cps
Ytterbium	172-2	37	53	47	46	18.41	cps
Ytterbium	176-1	1710	1740	1543	1665	6.37	cps
Ytterbium	176-2	180	270	213	221	20.58	cps
Yttrium	89-1	15825352	16051087	16220738	16032392	1.24	cps
Yttrium	89-2	973809	970728	987036	977191	0.89	cps
Zinc	66-2	180	220	193	198	10.30	cps
Zirconium	90-1	3090	2947	3024	3020	2.37	cps
Zirconium	91-1	683	643	633	653	4.05	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-20	Instrumnet Name :	P8
Client Sample ID :	ME2953	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:34:11	DataFile Name :	054AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5061	5228	5134	5141	1.63	cps
Antimony	121-1	3127	3270	3017	3138	4.05	cps
Arsenic	75-2	457	407	467	443	7.25	cps
Barium	135-1	153168	155578	157138	155295	1.29	cps
Barium	137-1	269075	268526	274546	270716	1.23	cps
Beryllium	9-1	262	227	225	238	8.80	cps
Bismuth	209-1	6835903	6619877	6649897	6701893	1.75	cps
Bismuth	209-2	2458703	2445187	2528918	2477603	1.81	cps
Bromine	81-1	352413	426316	473040	417256	14.58	cps
Cadmium	108-1	197	207	227	210	7.27	cps
Cadmium	106-1	5501	5535	5221	5419	3.18	cps
Cadmium	111-1	4013	3993	3783	3930	3.25	cps
Calcium	43-1	3420079	3480198	3431840	3444039	0.93	cps
Calcium	44-1	54815469	54912469	55426614	55051518	0.60	cps
Carbon	12-1	8935422	9698823	10357405	9663883	7.36	cps
Carbon	12-2	71791	71790	73630	72404	1.47	cps
Chlorine	35-1	6395886	6981225	7200632	6859248	6.06	cps
Chlorine	35-2	26050	25629	25990	25890	0.88	cps
Chromium	52-2	3821	3817	3974	3871	2.31	cps
Cobalt	59-2	530	613	550	564	7.71	cps
Copper	63-2	12989	13410	13193	13197	1.59	cps
Dysprosium	156-1	87	93	87	89	4.33	cps
Dysprosium	156-2	10	10	17	12	31.50	cps
Erbium	164-1	110	90	140	113	22.21	cps
Erbium	164-2	30	27	30	29	6.65	cps
Gadolinium	160-1	103	87	130	107	20.49	cps
Gadolinium	160-2	40	17	23	27	45.07	cps
Holmium	165-1	11373052	11324216	11331342	11342870	0.23	cps
Holmium	165-2	3705959	3702302	3704259	3704173	0.05	cps
Indium	115-1	8738563	8637256	8569878	8648566	0.98	cps
Indium	115-2	740286	745889	754460	746878	0.96	cps
Iron	54-2	5254	5331	5221	5269	1.07	cps
Iron	56-2	95182	95649	98924	96585	2.11	cps
Iron	57-2	2610	2460	2497	2522	3.10	cps
Krypton	83-1	130	113	107	117	10.30	cps
Lead	206-1	5011	5178	5181	5123	1.90	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-20	Instrumnet Name :	P8
Client Sample ID :	ME2953	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:34:11	DataFile Name :	054AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	4327	4171	4224	4241	1.88	cps
Lead	208-1	19799	19529	19783	19704	0.77	cps
Lithium	6-1	5121720	5073403	5018335	5071153	1.02	cps
Magnesium	24-2	143615	143214	145615	144148	0.89	cps
Manganese	55-2	2810	2794	2697	2767	2.21	cps
Molybdenum	94-1	296812	298917	302843	299524	1.02	cps
Molybdenum	95-1	517111	527174	531593	525293	1.41	cps
Molybdenum	96-1	551405	565976	563280	560220	1.38	cps
Molybdenum	97-1	324915	329678	328283	327625	0.75	cps
Molybdenum	98-1	833952	851328	854172	846484	1.29	cps
Neodymium	150-1	97	97	117	103	11.17	cps
Neodymium	150-2	20	13	3	12	68.66	cps
Nickel	60-2	7976	8296	8733	8335	4.56	cps
Phosphorus	31-2	127	80	120	109	23.18	cps
Potassium	39-2	5647006	5565207	5553824	5588679	0.91	cps
Rhodium	103-1	7614252	7607092	7600331	7607225	0.09	cps
Rhodium	103-2	2739662	2758407	2778185	2758751	0.70	cps
Scandium	45-1	6096538	6060721	6062700	6073320	0.33	cps
Scandium	45-2	95179	95125	95635	95313	0.29	cps
Selenium	82-1	423	563	757	581	28.80	cps
Selenium	77-2	13	0	7	7	99.98	cps
Selenium	78-2	23	37	37	32	23.90	cps
Silicon	28-1	38868079	39077958	39750824	39232287	1.18	cps
Silver	107-1	737	793	813	781	5.09	cps
Silver	109-1	733	657	727	706	6.02	cps
Sodium	23-2	26687939	26346364	27054660	26696321	1.33	cps
Strontium	86-1	1788549	1828211	1799462	1805407	1.13	cps
Strontium	88-1	15416774	15543483	15719671	15559976	0.98	cps
Sulfur	34-1	3344998	3431834	3362921	3379918	1.36	cps
Terbium	159-1	11627226	11542221	11395258	11521569	1.02	cps
Terbium	159-2	3497629	3546371	3570368	3538123	1.05	cps
Thallium	203-1	320	327	253	300	13.52	cps
Thallium	205-1	667	707	710	694	3.47	cps
Tin	118-1	2417	2317	2310	2348	2.55	cps
Titanium	47-1	1350	1433	1487	1423	4.84	cps
Uranium	238-1	11509	11786	11902	11732	1.72	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-20	Instrumnet Name :	P8
Client Sample ID :	ME2953	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:34:11	DataFile Name :	054AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	11822	11665	12005	11831	1.44	cps
Ytterbium	172-1	77	60	77	71	13.53	cps
Ytterbium	172-2	37	43	23	34	29.57	cps
Ytterbium	176-1	1560	1527	1570	1552	1.46	cps
Ytterbium	176-2	227	163	207	199	16.28	cps
Yttrium	89-1	16128339	16039920	15944642	16037634	0.57	cps
Yttrium	89-2	953295	958447	972280	961340	1.02	cps
Zinc	66-2	437	473	493	468	6.14	cps
Zirconium	90-1	1007	1073	1137	1072	6.06	cps
Zirconium	91-1	207	273	220	233	15.12	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-21	Instrumnet Name :	P8
Client Sample ID :	ME2954	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:37:27	DataFile Name :	055AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3030	3124	3114	3089	1.66	cps
Antimony	121-1	3140	3467	3104	3237	6.18	cps
Arsenic	75-2	417	487	410	438	9.70	cps
Barium	135-1	130080	131160	130393	130544	0.43	cps
Barium	137-1	226779	227846	229741	228122	0.66	cps
Beryllium	9-1	191	217	207	205	6.45	cps
Bismuth	209-1	6541796	6740252	6759171	6680406	1.80	cps
Bismuth	209-2	2543537	2479052	2481743	2501444	1.46	cps
Bromine	81-1	409161	474199	508805	464055	10.90	cps
Cadmium	108-1	180	230	187	199	13.65	cps
Cadmium	106-1	5224	4871	5111	5069	3.56	cps
Cadmium	111-1	3781	3552	3724	3686	3.23	cps
Calcium	43-1	3073957	3060422	3007929	3047436	1.14	cps
Calcium	44-1	48835741	48468433	47960493	48421555	0.91	cps
Carbon	12-1	9068613	9587387	10078748	9578250	5.27	cps
Carbon	12-2	69456	71167	71141	70588	1.39	cps
Chlorine	35-1	6647737	7152325	7407406	7069156	5.47	cps
Chlorine	35-2	25913	25786	26301	26000	1.03	cps
Chromium	52-2	4071	3977	3947	3998	1.61	cps
Cobalt	59-2	513	547	497	519	4.91	cps
Copper	63-2	12716	12656	12492	12621	0.92	cps
Dysprosium	156-1	63	40	60	54	23.18	cps
Dysprosium	156-2	7	7	13	9	43.25	cps
Erbium	164-1	50	80	67	66	22.93	cps
Erbium	164-2	17	30	10	19	53.91	cps
Gadolinium	160-1	23	63	47	44	45.21	cps
Gadolinium	160-2	3	20	17	13	66.16	cps
Holmium	165-1	10717162	11153687	11335824	11068891	2.87	cps
Holmium	165-2	3779032	3731912	3756977	3755974	0.63	cps
Indium	115-1	8455990	8734919	8748382	8646430	1.91	cps
Indium	115-2	756319	752483	756243	755015	0.29	cps
Iron	54-2	2434	2480	2454	2456	0.95	cps
Iron	56-2	41280	41607	42099	41662	0.99	cps
Iron	57-2	1153	1137	1183	1158	2.04	cps
Krypton	83-1	130	130	93	118	17.98	cps
Lead	206-1	3050	3024	2840	2971	3.85	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-21	Instrumnet Name :	P8
Client Sample ID :	ME2954	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:37:27	DataFile Name :	055AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2364	2474	2307	2381	3.56	cps
Lead	208-1	11245	11212	10902	11120	1.70	cps
Lithium	6-1	4960774	5031241	5137704	5043240	1.77	cps
Magnesium	24-2	1170563	1160007	1159399	1163323	0.54	cps
Manganese	55-2	2557	2417	2447	2474	2.98	cps
Molybdenum	94-1	302362	308089	306704	305718	0.98	cps
Molybdenum	95-1	533457	534677	536297	534810	0.27	cps
Molybdenum	96-1	565033	570961	574039	570011	0.80	cps
Molybdenum	97-1	332797	335415	335132	334448	0.43	cps
Molybdenum	98-1	855570	869703	867301	864191	0.88	cps
Neodymium	150-1	53	37	20	37	45.45	cps
Neodymium	150-2	0	3	0	1	173.21	cps
Nickel	60-2	8069	8066	8232	8122	1.17	cps
Phosphorus	31-2	133	107	70	103	30.77	cps
Potassium	39-2	5725361	5678806	5642323	5682163	0.73	cps
Rhodium	103-1	7465139	7620717	7591502	7559120	1.09	cps
Rhodium	103-2	2812526	2772637	2765793	2783652	0.91	cps
Scandium	45-1	5859001	5992850	6071991	5974614	1.80	cps
Scandium	45-2	97296	95974	97316	96862	0.79	cps
Selenium	82-1	570	603	670	614	8.29	cps
Selenium	77-2	3	3	10	6	69.34	cps
Selenium	78-2	33	30	23	29	17.63	cps
Silicon	28-1	37889481	38621808	38699995	38403761	1.16	cps
Silver	107-1	897	747	817	820	9.15	cps
Silver	109-1	780	710	707	732	5.66	cps
Sodium	23-2	27630280	27459590	27372879	27487583	0.48	cps
Strontium	86-1	1779147	1791871	1784432	1785150	0.36	cps
Strontium	88-1	15178624	15126442	15339626	15214898	0.73	cps
Sulfur	34-1	3523107	3514171	3505484	3514254	0.25	cps
Terbium	159-1	11205538	11454079	11478541	11379386	1.33	cps
Terbium	159-2	3636975	3583945	3648344	3623088	0.95	cps
Thallium	203-1	387	390	437	404	6.91	cps
Thallium	205-1	1023	1027	1090	1047	3.59	cps
Tin	118-1	2804	2544	2497	2615	6.32	cps
Titanium	47-1	1177	1020	1053	1083	7.62	cps
Uranium	238-1	15463	15596	15513	15524	0.43	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-21	Instrumnet Name :	P8
Client Sample ID :	ME2954	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:37:27	DataFile Name :	055AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	10310	9923	9837	10024	2.52	cps
Ytterbium	172-1	67	53	130	83	49.15	cps
Ytterbium	172-2	20	17	20	19	10.18	cps
Ytterbium	176-1	1487	1520	1520	1509	1.28	cps
Ytterbium	176-2	213	163	203	193	13.68	cps
Yttrium	89-1	15532907	15896386	15811372	15746889	1.21	cps
Yttrium	89-2	979058	967800	971218	972692	0.59	cps
Zinc	66-2	247	233	247	242	3.18	cps
Zirconium	90-1	897	940	783	873	9.26	cps
Zirconium	91-1	187	223	167	192	14.95	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-01	Instrumnet Name :	P8
Client Sample ID :	ME2946	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:40:40	DataFile Name :	056AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	494091	498980	502882	498651	0.88	cps
Antimony	121-1	14047	14394	14344	14262	1.32	cps
Arsenic	75-2	2874	2824	2950	2883	2.21	cps
Barium	135-1	367170	373644	372996	371270	0.96	cps
Barium	137-1	636160	647491	650221	644624	1.16	cps
Beryllium	9-1	4225	4094	4311	4210	2.60	cps
Bismuth	209-1	7085429	6917756	6855526	6952904	1.71	cps
Bismuth	209-2	2636216	2610230	2583000	2609815	1.02	cps
Bromine	81-1	98738	88269	79313	88773	10.95	cps
Cadmium	108-1	897	933	950	927	2.94	cps
Cadmium	106-1	7022	6838	7039	6966	1.59	cps
Cadmium	111-1	12617	12703	12768	12696	0.60	cps
Calcium	43-1	4156923	4194595	4199512	4183677	0.56	cps
Calcium	44-1	66574854	67051614	67424491	67016986	0.64	cps
Carbon	12-1	3426545	3342241	3303512	3357433	1.87	cps
Carbon	12-2	22591	22000	22708	22433	1.69	cps
Chlorine	35-1	84055280	88591579	90582255	87743038	3.81	cps
Chlorine	35-2	323686	330725	336634	330348	1.96	cps
Chromium	52-2	758181	761561	766093	761945	0.52	cps
Cobalt	59-2	58228	59028	60297	59185	1.76	cps
Copper	63-2	232102	232564	235521	233396	0.79	cps
Dysprosium	156-1	36714	36302	36309	36442	0.65	cps
Dysprosium	156-2	11031	10628	10741	10800	1.93	cps
Erbium	164-1	30238	30799	31053	30696	1.36	cps
Erbium	164-2	9477	9557	9577	9537	0.56	cps
Gadolinium	160-1	32860	33826	33185	33290	1.48	cps
Gadolinium	160-2	12870	12800	12186	12618	2.98	cps
Holmium	165-1	11539705	11472118	11434045	11481956	0.47	cps
Holmium	165-2	3762925	3849686	3795177	3802596	1.15	cps
Indium	115-1	8889172	8872080	8786933	8849395	0.62	cps
Indium	115-2	778229	776785	783515	779510	0.45	cps
Iron	54-2	14415669	14655647	14622384	14564566	0.89	cps
Iron	56-2	267976349	268517516	269826189	268773352	0.35	cps
Iron	57-2	6694139	6771705	6876064	6780636	1.35	cps
Krypton	83-1	170	200	187	186	8.10	cps
Lead	206-1	4791259	4818033	4859149	4822814	0.71	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-01	Instrumnet Name :	P8
Client Sample ID :	ME2946	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:40:40	DataFile Name :	056AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	3850435	3875450	3917096	3880993	0.87	cps
Lead	208-1	18148203	18182800	18245174	18192059	0.27	cps
Lithium	6-1	5175223	5161900	5248581	5195234	0.90	cps
Magnesium	24-2	4232525	4266056	4286103	4261562	0.64	cps
Manganese	55-2	6574369	6573974	6654232	6600858	0.70	cps
Molybdenum	94-1	113847	112093	115921	113954	1.68	cps
Molybdenum	95-1	64442	63923	64847	64404	0.72	cps
Molybdenum	96-1	84887	84776	85222	84962	0.27	cps
Molybdenum	97-1	38924	39924	39626	39492	1.30	cps
Molybdenum	98-1	101205	103566	103264	102678	1.25	cps
Neodymium	150-1	49755	49739	49906	49800	0.18	cps
Neodymium	150-2	11555	11115	11312	11327	1.95	cps
Nickel	60-2	179216	179047	180539	179601	0.45	cps
Phosphorus	31-2	1827	1803	1993	1875	5.53	cps
Potassium	39-2	118572	120111	121887	120190	1.38	cps
Rhodium	103-1	7835226	7842752	7751373	7809784	0.65	cps
Rhodium	103-2	2837345	2892356	2866189	2865297	0.96	cps
Scandium	45-1	6296771	6339128	6246625	6294175	0.74	cps
Scandium	45-2	101542	102294	101529	101788	0.43	cps
Selenium	82-1	153	57	127	112	44.49	cps
Selenium	77-2	47	47	57	50	11.55	cps
Selenium	78-2	30	40	47	39	21.57	cps
Silicon	28-1	58148606	57217079	57071202	57478962	1.02	cps
Silver	107-1	23156	23527	23534	23406	0.92	cps
Silver	109-1	22161	22819	22629	22536	1.50	cps
Sodium	23-2	151697	152477	153798	152657	0.70	cps
Strontium	86-1	456783	460604	463631	460340	0.75	cps
Strontium	88-1	4121780	4179703	4193186	4164889	0.91	cps
Sulfur	34-1	389766	391699	395368	392278	0.73	cps
Terbium	159-1	11696946	11716656	11787971	11733858	0.41	cps
Terbium	159-2	3625387	3617887	3666027	3636434	0.71	cps
Thallium	203-1	6538	7055	7309	6967	5.64	cps
Thallium	205-1	15833	16674	17639	16715	5.41	cps
Tin	118-1	61423	61671	62224	61773	0.66	cps
Titanium	47-1	641383	652177	663722	652427	1.71	cps
Uranium	238-1	56635	56304	55323	56088	1.22	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-01	Instrumnet Name :	P8
Client Sample ID :	ME2946	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:40:40	DataFile Name :	056AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	111711	113498	113230	112813	0.85	cps
Ytterbium	172-1	9804	9954	9647	9801	1.57	cps
Ytterbium	172-2	3674	3457	3901	3677	6.03	cps
Ytterbium	176-1	8019	8103	8039	8054	0.54	cps
Ytterbium	176-2	2590	2607	2594	2597	0.34	cps
Yttrium	89-1	16432543	16611108	16522261	16521971	0.54	cps
Yttrium	89-2	1029347	1031365	1037810	1032841	0.43	cps
Zinc	66-2	366136	364856	366595	365862	0.25	cps
Zirconium	90-1	210931	211590	214337	212286	0.85	cps
Zirconium	91-1	47156	47306	48049	47504	1.01	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02	Instrumnet Name :	P8
Client Sample ID :	ME2947	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:43:54	DataFile Name :	057AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	523306	521931	518232	521157	0.50	cps
Antimony	121-1	4618	4658	4821	4699	2.29	cps
Arsenic	75-2	2397	2440	2374	2404	1.41	cps
Barium	135-1	326895	326474	324127	325832	0.46	cps
Barium	137-1	565119	567488	569472	567359	0.38	cps
Beryllium	9-1	3489	3600	3575	3555	1.64	cps
Bismuth	209-1	7009108	7011043	7119769	7046640	0.90	cps
Bismuth	209-2	2719127	2603500	2776290	2699639	3.26	cps
Bromine	81-1	38018	37046	34659	36574	4.73	cps
Cadmium	108-1	237	243	230	237	2.82	cps
Cadmium	106-1	5865	5918	6091	5958	1.99	cps
Cadmium	111-1	5630	5682	5676	5663	0.51	cps
Calcium	43-1	5621811	5724157	5610888	5652285	1.11	cps
Calcium	44-1	92142439	92145462	92314265	92200722	0.11	cps
Carbon	12-1	2891334	2902897	2887056	2893762	0.28	cps
Carbon	12-2	19667	19126	19326	19373	1.41	cps
Chlorine	35-1	95046332	99392829	101323948	98587703	3.26	cps
Chlorine	35-2	357327	359235	353816	356793	0.77	cps
Chromium	52-2	115309	115018	114413	114913	0.40	cps
Cobalt	59-2	64401	64529	64920	64617	0.42	cps
Copper	63-2	126833	125276	122714	124941	1.66	cps
Dysprosium	156-1	56191	56040	56482	56238	0.40	cps
Dysprosium	156-2	16981	17198	16767	16982	1.27	cps
Erbium	164-1	46675	46524	45665	46288	1.18	cps
Erbium	164-2	15025	14161	13951	14379	3.96	cps
Gadolinium	160-1	52021	52864	52740	52542	0.87	cps
Gadolinium	160-2	20089	20182	19314	19862	2.40	cps
Holmium	165-1	11824123	11333766	11857512	11671800	2.51	cps
Holmium	165-2	3930685	3744472	4035160	3903439	3.77	cps
Indium	115-1	9111418	9123567	9312529	9182505	1.23	cps
Indium	115-2	819351	783252	842283	814962	3.65	cps
Iron	54-2	3751763	3714014	3687406	3717727	0.87	cps
Iron	56-2	69817494	68664287	68031177	68837653	1.32	cps
Iron	57-2	1793034	1755551	1704795	1751127	2.53	cps
Krypton	83-1	163	133	193	163	18.37	cps
Lead	206-1	462842	465050	469276	465722	0.70	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02	Instrumnet Name :	P8
Client Sample ID :	ME2947	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:43:54	DataFile Name :	057AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	373344	375532	375310	374729	0.32	cps
Lead	208-1	1754511	1765496	1770842	1763616	0.47	cps
Lithium	6-1	5426189	5426899	5565163	5472750	1.46	cps
Magnesium	24-2	3360119	3403335	3334184	3365879	1.04	cps
Manganese	55-2	1071154	1060249	1042759	1058054	1.35	cps
Molybdenum	94-1	52452	52592	52920	52655	0.46	cps
Molybdenum	95-1	46066	46069	45196	45777	1.10	cps
Molybdenum	96-1	54704	54650	53696	54350	1.04	cps
Molybdenum	97-1	28790	28326	28890	28668	1.05	cps
Molybdenum	98-1	73684	74214	74951	74283	0.86	cps
Neodymium	150-1	76409	77324	76627	76787	0.62	cps
Neodymium	150-2	17018	16747	16630	16798	1.18	cps
Nickel	60-2	51744	52289	51259	51764	1.00	cps
Phosphorus	31-2	1720	1630	1657	1669	2.77	cps
Potassium	39-2	136734	133551	133527	134604	1.37	cps
Rhodium	103-1	8137761	7938510	8234702	8103658	1.86	cps
Rhodium	103-2	3092676	2936848	3171193	3066906	3.89	cps
Scandium	45-1	6597816	6516246	6766317	6626793	1.92	cps
Scandium	45-2	109987	104930	112568	109161	3.56	cps
Selenium	82-1	193	240	230	221	11.11	cps
Selenium	77-2	83	83	50	72	26.65	cps
Selenium	78-2	73	53	50	59	21.43	cps
Silicon	28-1	24918776	25336995	25324768	25193513	0.94	cps
Silver	107-1	4007	4334	4041	4127	4.36	cps
Silver	109-1	3724	3924	3971	3873	3.38	cps
Sodium	23-2	161010	161762	158116	160296	1.20	cps
Strontium	86-1	704233	707860	711655	707916	0.52	cps
Strontium	88-1	6387977	6357406	6440009	6395131	0.65	cps
Sulfur	34-1	317895	318525	320783	319068	0.48	cps
Terbium	159-1	11831217	11730799	12177946	11913321	1.97	cps
Terbium	159-2	3819862	3709495	3871925	3800427	2.18	cps
Thallium	203-1	5695	6412	6552	6219	7.39	cps
Thallium	205-1	13497	15219	15987	14901	8.56	cps
Tin	118-1	12639	13080	13056	12925	1.92	cps
Titanium	47-1	285065	285383	286975	285808	0.36	cps
Uranium	238-1	65849	66747	65997	66198	0.73	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02	Instrumnet Name :	P8
Client Sample ID :	ME2947	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:43:54	DataFile Name :	057AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	59295	59791	58773	59286	0.86	cps
Ytterbium	172-1	13026	13027	13033	13029	0.03	cps
Ytterbium	172-2	4868	4861	4868	4865	0.08	cps
Ytterbium	176-1	9710	9507	10101	9773	3.09	cps
Ytterbium	176-2	3334	3430	3074	3279	5.63	cps
Yttrium	89-1	17627879	17163300	17668980	17486720	1.61	cps
Yttrium	89-2	1095907	1049213	1171777	1105632	5.59	cps
Zinc	66-2	60756	59856	59183	59932	1.32	cps
Zirconium	90-1	72115	72953	72916	72661	0.65	cps
Zirconium	91-1	16089	15582	16043	15905	1.76	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-03	Instrumnet Name :	P8
Client Sample ID :	ME2947D	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:47:08	DataFile Name :	058AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	521836	525231	522316	523127	0.35	cps
Antimony	121-1	4681	4884	4567	4711	3.41	cps
Arsenic	75-2	2340	2227	2320	2296	2.64	cps
Barium	135-1	320390	321792	326534	322905	1.00	cps
Barium	137-1	564608	568937	565020	566189	0.42	cps
Beryllium	9-1	3566	3570	3660	3599	1.47	cps
Bismuth	209-1	7131242	6983074	7064771	7059696	1.05	cps
Bismuth	209-2	2608546	2605767	2559346	2591220	1.07	cps
Bromine	81-1	24341	23653	22992	23662	2.85	cps
Cadmium	108-1	243	217	217	226	6.83	cps
Cadmium	106-1	6025	6045	5875	5981	1.55	cps
Cadmium	111-1	5617	5656	5574	5616	0.73	cps
Calcium	43-1	5647666	5752331	5686079	5695359	0.93	cps
Calcium	44-1	92034869	92242815	92345412	92207699	0.17	cps
Carbon	12-1	2814571	2867233	2860733	2847512	1.01	cps
Carbon	12-2	19102	19490	18772	19121	1.88	cps
Chlorine	35-1	95326662	101370698	103221612	99972991	4.13	cps
Chlorine	35-2	360336	360717	358806	359953	0.28	cps
Chromium	52-2	116751	116590	116005	116449	0.34	cps
Cobalt	59-2	65607	64478	64857	64981	0.88	cps
Copper	63-2	126577	126056	127431	126688	0.55	cps
Dysprosium	156-1	56388	56492	56506	56462	0.11	cps
Dysprosium	156-2	16934	17148	16887	16990	0.82	cps
Erbium	164-1	45972	46725	46183	46294	0.84	cps
Erbium	164-2	14074	14228	14495	14265	1.49	cps
Gadolinium	160-1	52142	52295	52981	52473	0.85	cps
Gadolinium	160-2	20002	20018	20092	20037	0.24	cps
Holmium	165-1	11693907	11689701	11703751	11695786	0.06	cps
Holmium	165-2	3788010	3772863	3754964	3771946	0.44	cps
Indium	115-1	8989238	9011218	9080193	9026883	0.53	cps
Indium	115-2	776517	780867	776715	778033	0.32	cps
Iron	54-2	3752206	3742635	3737801	3744214	0.20	cps
Iron	56-2	69570596	69258727	69104591	69311305	0.34	cps
Iron	57-2	1785146	1798635	1802716	1795499	0.51	cps
Krypton	83-1	163	233	213	203	17.73	cps
Lead	206-1	457987	464998	463132	462039	0.79	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-03	Instrumnet Name :	P8
Client Sample ID :	ME2947D	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:47:08	DataFile Name :	058AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	369165	372294	372728	371396	0.52	cps
Lead	208-1	1738630	1758467	1761492	1752863	0.71	cps
Lithium	6-1	5401952	5456478	5504273	5454234	0.94	cps
Magnesium	24-2	3398237	3393815	3402774	3398275	0.13	cps
Manganese	55-2	1066583	1057898	1058917	1061133	0.45	cps
Molybdenum	94-1	52472	51997	52683	52384	0.67	cps
Molybdenum	95-1	45775	46146	45965	45962	0.40	cps
Molybdenum	96-1	52981	55263	54071	54105	2.11	cps
Molybdenum	97-1	27938	28362	27855	28052	0.97	cps
Molybdenum	98-1	72880	72649	74592	73374	1.45	cps
Neodymium	150-1	75517	75802	76067	75796	0.36	cps
Neodymium	150-2	17421	17448	17061	17310	1.25	cps
Nickel	60-2	52158	53403	52707	52756	1.18	cps
Phosphorus	31-2	1623	1720	1630	1658	3.26	cps
Potassium	39-2	133847	134728	133917	134164	0.37	cps
Rhodium	103-1	8130966	8121512	8072173	8108217	0.39	cps
Rhodium	103-2	2912047	2924771	2915880	2917566	0.22	cps
Scandium	45-1	6690094	6650572	6661505	6667391	0.31	cps
Scandium	45-2	102707	105248	102717	103557	1.41	cps
Selenium	82-1	93	67	73	78	17.84	cps
Selenium	77-2	63	83	110	86	27.37	cps
Selenium	78-2	43	57	33	44	26.35	cps
Silicon	28-1	25253264	25501504	25332687	25362485	0.50	cps
Silver	107-1	3924	4301	4217	4147	4.77	cps
Silver	109-1	4004	3637	4187	3943	7.10	cps
Sodium	23-2	157476	159804	159932	159070	0.87	cps
Strontium	86-1	704468	715041	719612	713040	1.09	cps
Strontium	88-1	6314669	6494979	6493961	6434536	1.61	cps
Sulfur	34-1	320027	324439	324907	323124	0.83	cps
Terbium	159-1	12042479	11943494	11966321	11984098	0.43	cps
Terbium	159-2	3627778	3656793	3693546	3659372	0.90	cps
Thallium	203-1	5938	5545	6135	5872	5.12	cps
Thallium	205-1	13147	14168	14341	13885	4.65	cps
Tin	118-1	12683	13363	13046	13031	2.61	cps
Titanium	47-1	283668	286148	287582	285799	0.69	cps
Uranium	238-1	65112	66228	65333	65558	0.90	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-03	Instrumnet Name :	P8
Client Sample ID :	ME2947D	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:47:08	DataFile Name :	058AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	58820	59342	58897	59020	0.48	cps
Ytterbium	172-1	12676	13047	12713	12812	1.59	cps
Ytterbium	172-2	4894	4801	4944	4880	1.49	cps
Ytterbium	176-1	9630	9664	9714	9669	0.43	cps
Ytterbium	176-2	3320	3370	3274	3322	1.46	cps
Yttrium	89-1	17352392	17387687	17498178	17412752	0.44	cps
Yttrium	89-2	1046996	1047710	1043696	1046134	0.20	cps
Zinc	66-2	60023	59488	60548	60020	0.88	cps
Zirconium	90-1	71358	73097	72370	72275	1.21	cps
Zirconium	91-1	15616	16440	16233	16096	2.66	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02LX5	Instrumnet Name :	P8
Client Sample ID :	ME2947L	Dilution Factor :	5
Date & Time Acquired :	2025-01-28 15:50:24	DataFile Name :	059AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	105223	105052	103894	104723	0.69	cps
Antimony	121-1	940	740	933	871	13.04	cps
Arsenic	75-2	523	487	447	486	7.90	cps
Barium	135-1	64358	65276	65615	65083	1.00	cps
Barium	137-1	112244	114119	112836	113066	0.85	cps
Beryllium	9-1	927	919	825	890	6.38	cps
Bismuth	209-1	7121939	7242353	7191987	7185426	0.84	cps
Bismuth	209-2	2708148	2679329	2741736	2709738	1.15	cps
Bromine	81-1	15429	14744	14738	14970	2.65	cps
Cadmium	108-1	63	80	90	78	17.32	cps
Cadmium	106-1	5374	5311	5238	5308	1.29	cps
Cadmium	111-1	4061	4015	3957	4011	1.30	cps
Calcium	43-1	1093002	1098363	1106673	1099346	0.63	cps
Calcium	44-1	18267643	18233371	18436751	18312588	0.59	cps
Carbon	12-1	2218935	2185608	2177836	2194126	1.00	cps
Carbon	12-2	14324	14674	14310	14436	1.43	cps
Chlorine	35-1	23255371	23721601	23970992	23649322	1.54	cps
Chlorine	35-2	82882	81525	80452	81620	1.49	cps
Chromium	52-2	22798	23626	23810	23411	2.30	cps
Cobalt	59-2	13400	13236	13323	13320	0.61	cps
Copper	63-2	27587	27841	27984	27804	0.72	cps
Dysprosium	156-1	11405	11648	11258	11437	1.72	cps
Dysprosium	156-2	3304	3494	3410	3403	2.80	cps
Erbium	164-1	9060	9550	9237	9282	2.68	cps
Erbium	164-2	2784	2804	2807	2798	0.45	cps
Gadolinium	160-1	10401	10337	10591	10443	1.26	cps
Gadolinium	160-2	4077	3974	3984	4012	1.42	cps
Holmium	165-1	11407010	11563030	11438086	11469375	0.72	cps
Holmium	165-2	3723710	3763202	3750198	3745704	0.54	cps
Indium	115-1	8923623	9163657	9011762	9033014	1.34	cps
Indium	115-2	787706	788829	792405	789647	0.31	cps
Iron	54-2	726012	736137	725995	729381	0.80	cps
Iron	56-2	13940480	14099643	13980247	14006790	0.59	cps
Iron	57-2	339534	339136	336607	338426	0.47	cps
Krypton	83-1	83	127	193	134	41.22	cps
Lead	206-1	93437	95834	95673	94981	1.41	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02LX5	Instrumnet Name :	P8
Client Sample ID :	ME2947L	Dilution Factor :	5
Date & Time Acquired :	2025-01-28 15:50:24	DataFile Name :	059AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	76269	76823	76403	76498	0.38	cps
Lead	208-1	356555	363114	362533	360734	1.01	cps
Lithium	6-1	5328595	5371143	5304619	5334785	0.63	cps
Magnesium	24-2	656987	660942	652748	656892	0.62	cps
Manganese	55-2	216229	216293	213725	215416	0.68	cps
Molybdenum	94-1	10561	10841	10134	10512	3.39	cps
Molybdenum	95-1	9160	9493	9300	9318	1.80	cps
Molybdenum	96-1	10617	11235	10638	10830	3.24	cps
Molybdenum	97-1	5711	5671	5641	5675	0.62	cps
Molybdenum	98-1	14671	14698	14835	14735	0.60	cps
Neodymium	150-1	14928	15446	15336	15237	1.79	cps
Neodymium	150-2	3487	3354	3464	3435	2.07	cps
Nickel	60-2	11568	11418	11181	11389	1.71	cps
Phosphorus	31-2	337	367	363	356	4.63	cps
Potassium	39-2	30288	30669	30563	30507	0.64	cps
Rhodium	103-1	8216297	8183033	8275612	8224981	0.57	cps
Rhodium	103-2	2954264	3026427	3011078	2997256	1.27	cps
Scandium	45-1	6344728	6368054	6418242	6377008	0.59	cps
Scandium	45-2	101377	102545	100478	101467	1.02	cps
Selenium	82-1	33	23	-83	-9	-727.44	cps
Selenium	77-2	27	10	7	14	74.18	cps
Selenium	78-2	13	3	7	8	65.47	cps
Silicon	28-1	5596370	5239678	5310402	5382150	3.51	cps
Silver	107-1	877	1013	823	904	10.84	cps
Silver	109-1	843	893	827	854	4.06	cps
Sodium	23-2	43167	43214	42766	43049	0.57	cps
Strontium	86-1	139932	141601	142487	141340	0.92	cps
Strontium	88-1	1221662	1236021	1236419	1231367	0.68	cps
Sulfur	34-1	256015	258786	256890	257230	0.55	cps
Terbium	159-1	11862912	11751760	11849948	11821540	0.51	cps
Terbium	159-2	3647687	3633946	3655205	3645613	0.30	cps
Thallium	203-1	1397	1253	1400	1350	6.20	cps
Thallium	205-1	3377	3247	3150	3258	3.49	cps
Tin	118-1	5348	5818	5832	5666	4.86	cps
Titanium	47-1	55684	57434	56009	56376	1.65	cps
Uranium	238-1	12753	13377	13300	13144	2.59	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02LX5	Instrumnet Name :	P8
Client Sample ID :	ME2947L	Dilution Factor :	5
Date & Time Acquired :	2025-01-28 15:50:24	DataFile Name :	059AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	11792	12072	11845	11903	1.25	cps
Ytterbium	172-1	2714	2610	2790	2705	3.34	cps
Ytterbium	172-2	980	1060	910	983	7.63	cps
Ytterbium	176-1	3117	2987	3250	3118	4.22	cps
Ytterbium	176-2	810	767	760	779	3.49	cps
Yttrium	89-1	16484121	16759279	16677373	16640258	0.85	cps
Yttrium	89-2	1007019	1020629	1006705	1011451	0.79	cps
Zinc	66-2	12499	12549	12285	12444	1.12	cps
Zirconium	90-1	14835	14594	15195	14875	2.03	cps
Zirconium	91-1	3324	3234	3230	3263	1.62	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-04	Instrumnet Name :	P8
Client Sample ID :	ME2947S	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:53:42	DataFile Name :	060AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	550049	545223	549997	548423	0.51	cps
Antimony	121-1	180535	182409	185206	182716	1.29	cps
Arsenic	75-2	3560	3534	3791	3628	3.89	cps
Barium	135-1	1258393	1278726	1290681	1275933	1.28	cps
Barium	137-1	2331634	2378865	2374015	2361505	1.10	cps
Beryllium	9-1	37770	39102	39246	38706	2.10	cps
Bismuth	209-1	6875677	7147034	7064556	7029089	1.98	cps
Bismuth	209-2	2546613	2685775	2668193	2633527	2.88	cps
Bromine	81-1	14317	14091	13670	14026	2.34	cps
Cadmium	108-1	1727	1820	1823	1790	3.07	cps
Cadmium	106-1	8273	8082	7789	8048	3.03	cps
Cadmium	111-1	28994	29159	29098	29084	0.29	cps
Calcium	43-1	5633391	5689432	5705034	5675952	0.66	cps
Calcium	44-1	90234902	92642059	92406815	91761259	1.45	cps
Carbon	12-1	2690738	2755302	2717895	2721311	1.19	cps
Carbon	12-2	18722	18648	18639	18670	0.24	cps
Chlorine	35-1	102061212	106360955	108806268	105742812	3.23	cps
Chlorine	35-2	385821	383900	387443	385721	0.46	cps
Chromium	52-2	187748	189314	190849	189304	0.82	cps
Cobalt	59-2	406459	402169	404079	404235	0.53	cps
Copper	63-2	256289	255105	257386	256260	0.45	cps
Dysprosium	156-1	55110	56545	56562	56072	1.49	cps
Dysprosium	156-2	16927	16680	16761	16789	0.75	cps
Erbium	164-1	45518	45381	47063	45987	2.03	cps
Erbium	164-2	14315	14481	14358	14385	0.60	cps
Gadolinium	160-1	51024	52352	52841	52072	1.81	cps
Gadolinium	160-2	19855	19518	19665	19679	0.86	cps
Holmium	165-1	11481301	11813305	11811652	11702086	1.63	cps
Holmium	165-2	3684329	3927433	3814313	3808692	3.19	cps
Indium	115-1	9142697	9279169	9105859	9175909	1.00	cps
Indium	115-2	765955	808438	794682	789692	2.74	cps
Iron	54-2	3796294	3746565	3736771	3759877	0.85	cps
Iron	56-2	70562609	69608302	69788799	69986570	0.72	cps
Iron	57-2	1786750	1784603	1773961	1781771	0.38	cps
Krypton	83-1	137	170	177	161	13.30	cps
Lead	206-1	489312	493183	494384	492293	0.54	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-04	Instrumnet Name :	P8
Client Sample ID :	ME2947S	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:53:42	DataFile Name :	060AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	398420	400781	401824	400342	0.44	cps
Lead	208-1	1872356	1887336	1883300	1880997	0.41	cps
Lithium	6-1	5519819	5606876	5644155	5590283	1.14	cps
Magnesium	24-2	3387315	3406381	3416640	3403445	0.44	cps
Manganese	55-2	1148593	1140084	1151579	1146752	0.52	cps
Molybdenum	94-1	51485	52204	52796	52162	1.26	cps
Molybdenum	95-1	45029	46236	45688	45651	1.32	cps
Molybdenum	96-1	53379	54794	54774	54316	1.49	cps
Molybdenum	97-1	28085	28613	29314	28671	2.15	cps
Molybdenum	98-1	72223	73309	73959	73164	1.20	cps
Neodymium	150-1	75709	76949	77572	76743	1.24	cps
Neodymium	150-2	17241	17281	17291	17271	0.15	cps
Nickel	60-2	144155	144905	144636	144565	0.26	cps
Phosphorus	31-2	1613	1733	1800	1716	5.51	cps
Potassium	39-2	135906	134729	136283	135639	0.60	cps
Rhodium	103-1	8067637	8170329	8155175	8131047	0.68	cps
Rhodium	103-2	2889713	3066841	3008540	2988365	3.02	cps
Scandium	45-1	6628468	6666488	6726149	6673701	0.74	cps
Scandium	45-2	102758	108741	106013	105837	2.83	cps
Selenium	82-1	793	723	667	728	8.72	cps
Selenium	77-2	80	73	73	76	5.10	cps
Selenium	78-2	43	53	77	58	29.61	cps
Silicon	28-1	25085835	25409001	25277547	25257461	0.64	cps
Silver	107-1	116970	119287	121065	119107	1.72	cps
Silver	109-1	110482	113133	115412	113009	2.18	cps
Sodium	23-2	158635	158978	159527	159047	0.28	cps
Strontium	86-1	703265	710740	717280	710428	0.99	cps
Strontium	88-1	6421086	6444432	6378316	6414611	0.52	cps
Sulfur	34-1	312320	313807	315832	313986	0.56	cps
Terbium	159-1	11880120	12049604	12031907	11987211	0.78	cps
Terbium	159-2	3629457	3767452	3776686	3724532	2.21	cps
Thallium	203-1	98241	99561	99383	99062	0.72	cps
Thallium	205-1	236688	237212	237486	237129	0.17	cps
Tin	118-1	12759	13712	12896	13123	3.93	cps
Titanium	47-1	281475	284918	286749	284381	0.94	cps
Uranium	238-1	65467	65370	66972	65937	1.36	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-04	Instrumnet Name :	P8
Client Sample ID :	ME2947S	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 15:53:42	DataFile Name :	060AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	199087	197949	200811	199282	0.72	cps
Ytterbium	172-1	12559	13016	13217	12931	2.61	cps
Ytterbium	172-2	4884	4931	4868	4894	0.67	cps
Ytterbium	176-1	9590	9654	9857	9700	1.44	cps
Ytterbium	176-2	3294	3297	3481	3357	3.18	cps
Yttrium	89-1	17574393	17662269	17274071	17503578	1.16	cps
Yttrium	89-2	1032648	1088161	1075540	1065450	2.73	cps
Zinc	66-2	96844	96747	96072	96555	0.44	cps
Zirconium	90-1	71137	71479	71428	71348	0.26	cps
Zirconium	91-1	15559	16220	16423	16067	2.81	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-01DLX2	Instrumnet Name :	P8
Client Sample ID :	ME2931	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 15:56:58	DataFile Name :	061AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	183	160	153	166	9.52	cps
Antimony	121-1	923	967	997	962	3.83	cps
Arsenic	75-2	283	370	367	340	14.44	cps
Barium	135-1	31787	31831	32058	31892	0.46	cps
Barium	137-1	55811	56163	56089	56021	0.33	cps
Beryllium	9-1	251	224	251	242	6.56	cps
Bismuth	209-1	6993843	6600254	6556904	6717001	3.58	cps
Bismuth	209-2	2495738	2470585	2450604	2472309	0.91	cps
Bromine	81-1	161876	181838	188930	177548	7.90	cps
Cadmium	108-1	343	303	310	319	6.72	cps
Cadmium	106-1	5685	5228	5274	5396	4.66	cps
Cadmium	111-1	4236	3924	4088	4083	3.82	cps
Calcium	43-1	8219434	8488366	8554227	8420676	2.11	cps
Calcium	44-1	135190861	137274395	136835655	136433637	0.81	cps
Carbon	12-1	8050962	8645210	8902433	8532868	5.12	cps
Carbon	12-2	62050	62492	63235	62592	0.96	cps
Chlorine	35-1	18365226	18881522	18938647	18728465	1.69	cps
Chlorine	35-2	64007	63780	63783	63857	0.20	cps
Chromium	52-2	573	577	603	584	2.81	cps
Cobalt	59-2	2897	3024	3020	2980	2.42	cps
Copper	63-2	2890	2980	2827	2899	2.66	cps
Dysprosium	156-1	150	103	130	128	18.32	cps
Dysprosium	156-2	0	7	0	2	173.21	cps
Erbium	164-1	43	60	63	56	19.29	cps
Erbium	164-2	23	7	43	24	75.09	cps
Gadolinium	160-1	47	50	53	50	6.66	cps
Gadolinium	160-2	13	10	7	10	33.30	cps
Holmium	165-1	11956009	11509181	11498657	11654616	2.24	cps
Holmium	165-2	3810859	3791464	3780640	3794321	0.40	cps
Indium	115-1	9449440	8944547	8868408	9087465	3.47	cps
Indium	115-2	770551	775422	774042	773338	0.32	cps
Iron	54-2	27901	28485	27810	28065	1.30	cps
Iron	56-2	526842	529479	529924	528748	0.32	cps
Iron	57-2	13106	13803	13450	13453	2.59	cps
Krypton	83-1	170	153	130	151	13.30	cps
Lead	206-1	1803	1673	1637	1705	5.14	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-01DLX2	Instrumnet Name :	P8
Client Sample ID :	ME2931	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 15:56:58	DataFile Name :	061AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1450	1330	1250	1343	7.49	cps
Lead	208-1	7008	6274	6151	6477	7.15	cps
Lithium	6-1	5655579	5352988	5406470	5471679	2.95	cps
Magnesium	24-2	6844292	6867830	6875235	6862452	0.24	cps
Manganese	55-2	392059	396465	394523	394349	0.56	cps
Molybdenum	94-1	576662	588642	589712	585005	1.24	cps
Molybdenum	95-1	1025009	1036140	1047686	1036278	1.09	cps
Molybdenum	96-1	1075854	1106066	1102806	1094909	1.51	cps
Molybdenum	97-1	627307	644520	647535	639787	1.71	cps
Molybdenum	98-1	1753923	1794851	1772594	1773789	1.16	cps
Neodymium	150-1	27	13	20	20	33.35	cps
Neodymium	150-2	3	0	0	1	173.21	cps
Nickel	60-2	10277	10381	10087	10248	1.45	cps
Phosphorus	31-2	50	47	90	62	38.75	cps
Potassium	39-2	10212871	10326384	10366628	10301961	0.77	cps
Rhodium	103-1	8219113	7698644	7728728	7882162	3.71	cps
Rhodium	103-2	2850769	2784906	2842386	2826020	1.27	cps
Scandium	45-1	6771004	6439897	6467854	6559585	2.80	cps
Scandium	45-2	101988	102415	103220	102541	0.61	cps
Selenium	82-1	87	90	157	111	35.54	cps
Selenium	77-2	0	0	7	2	173.21	cps
Selenium	78-2	0	0	3	1	173.21	cps
Silicon	28-1	8445740	8713294	8807127	8655387	2.17	cps
Silver	107-1	430	447	350	409	12.64	cps
Silver	109-1	300	290	283	291	2.88	cps
Sodium	23-2	26101773	25935685	26120337	26052599	0.39	cps
Strontium	86-1	2721505	2804627	2779283	2768472	1.54	cps
Strontium	88-1	23329233	23699298	23603662	23544064	0.82	cps
Sulfur	34-1	11973441	12191587	12313454	12159494	1.42	cps
Terbium	159-1	12090874	11544869	11602240	11745994	2.55	cps
Terbium	159-2	3683034	3694695	3623435	3667055	1.04	cps
Thallium	203-1	377	390	303	357	13.08	cps
Thallium	205-1	863	800	773	812	5.69	cps
Tin	118-1	3240	3154	3244	3213	1.59	cps
Titanium	47-1	683	613	587	628	7.95	cps
Uranium	238-1	60	43	87	63	34.52	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-01DLX2	Instrumnet Name :	P8
Client Sample ID :	ME2931	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 15:56:58	DataFile Name :	061AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	140	123	130	131	6.40	cps
Ytterbium	172-1	53	47	50	50	6.66	cps
Ytterbium	172-2	27	30	10	22	48.22	cps
Ytterbium	176-1	1693	1520	1483	1566	7.16	cps
Ytterbium	176-2	143	183	217	181	20.27	cps
Yttrium	89-1	17606695	16667406	16504581	16926227	3.51	cps
Yttrium	89-2	1008231	1009516	1009582	1009110	0.08	cps
Zinc	66-2	327	383	340	350	8.46	cps
Zirconium	90-1	843	740	820	801	6.76	cps
Zirconium	91-1	197	170	180	182	7.39	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01	Instrumnet Name :	P8
Client Sample ID :	MH2GX1	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:00:11	DataFile Name :	062AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1813192	1789425	1855844	1819487	1.85	cps
Antimony	121-1	165892	166537	168460	166963	0.80	cps
Arsenic	75-2	43688	45179	44868	44578	1.76	cps
Barium	135-1	7844733	7925637	7865869	7878746	0.53	cps
Barium	137-1	13635508	13412799	13783311	13610539	1.37	cps
Beryllium	9-1	26429	27123	27001	26851	1.38	cps
Bismuth	209-1	7199238	7151353	7080993	7143861	0.83	cps
Bismuth	209-2	2656504	2630013	2624335	2636951	0.65	cps
Bromine	81-1	30433	29033	28005	29157	4.18	cps
Cadmium	108-1	3234	3414	3240	3296	3.10	cps
Cadmium	106-1	10974	10494	11145	10871	3.10	cps
Cadmium	111-1	43087	44055	45381	44174	2.61	cps
Calcium	43-1	6213049	6307894	6181173	6234039	1.06	cps
Calcium	44-1	100140989	101740882	100728409	100870093	0.80	cps
Carbon	12-1	5066494	5235366	5105107	5135656	1.72	cps
Carbon	12-2	34327	34774	33822	34308	1.39	cps
Chlorine	35-1	78769329	83257327	84882719	82303125	3.85	cps
Chlorine	35-2	296285	303219	303756	301087	1.38	cps
Chromium	52-2	132274	133946	131554	132592	0.93	cps
Cobalt	59-2	134481	130969	132930	132793	1.33	cps
Copper	63-2	4891797	4924602	4923490	4913296	0.38	cps
Dysprosium	156-1	160224	160885	161923	161011	0.53	cps
Dysprosium	156-2	43725	43260	43918	43634	0.78	cps
Erbium	164-1	131731	131940	133774	132482	0.85	cps
Erbium	164-2	40171	40224	40518	40304	0.46	cps
Gadolinium	160-1	133059	135106	135442	134536	0.96	cps
Gadolinium	160-2	50077	50033	49923	50011	0.16	cps
Holmium	165-1	11851120	11920342	11931601	11901021	0.37	cps
Holmium	165-2	3808033	3848006	3791556	3815865	0.76	cps
Indium	115-1	9217356	9269858	9208435	9231883	0.36	cps
Indium	115-2	796811	811377	791445	799878	1.29	cps
Iron	54-2	7728037	7723679	7725454	7725724	0.03	cps
Iron	56-2	143770038	145618325	142663471	144017278	1.04	cps
Iron	57-2	3678036	3682590	3591699	3650775	1.40	cps
Krypton	83-1	333	353	307	331	7.07	cps
Lead	206-1	63706536	63269857	64423037	63799810	0.91	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01	Instrumnet Name :	P8
Client Sample ID :	MH2GX1	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:00:11	DataFile Name :	062AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	52825119	52805998	53191976	52941031	0.41	cps
Lead	208-1	246728240	246413410	246373125	246504925	0.08	cps
Lithium	6-1	5394326	5494685	5510106	5466372	1.15	cps
Magnesium	24-2	1779198	1804292	1751836	1778442	1.48	cps
Manganese	55-2	6479972	6406571	6352539	6413027	1.00	cps
Molybdenum	94-1	120096	121891	123646	121878	1.46	cps
Molybdenum	95-1	90589	91186	92109	91295	0.84	cps
Molybdenum	96-1	111731	111012	109806	110850	0.88	cps
Molybdenum	97-1	56564	56695	56896	56718	0.29	cps
Molybdenum	98-1	144214	147137	146823	146058	1.10	cps
Neodymium	150-1	224591	230367	227235	227398	1.27	cps
Neodymium	150-2	50709	50374	51244	50775	0.86	cps
Nickel	60-2	118105	118968	118478	118517	0.37	cps
Phosphorus	31-2	7215	7135	7045	7132	1.19	cps
Potassium	39-2	445081	449762	446420	447088	0.54	cps
Rhodium	103-1	8132495	8205974	8118887	8152452	0.57	cps
Rhodium	103-2	2940804	3001416	2904240	2948820	1.66	cps
Scandium	45-1	6701743	6837894	6818217	6785951	1.08	cps
Scandium	45-2	106474	108845	106554	107291	1.25	cps
Selenium	82-1	547	650	590	596	8.71	cps
Selenium	77-2	217	237	230	228	4.47	cps
Selenium	78-2	150	120	123	131	12.54	cps
Silicon	28-1	61942104	61960389	62625376	62175956	0.63	cps
Silver	107-1	374360	374066	383196	377208	1.38	cps
Silver	109-1	355908	362220	364132	360753	1.19	cps
Sodium	23-2	587005	584549	584694	585416	0.24	cps
Strontium	86-1	3480876	3540929	3557271	3526359	1.14	cps
Strontium	88-1	30003007	30151774	30514114	30222965	0.87	cps
Sulfur	34-1	363840	367789	368005	366545	0.64	cps
Terbium	159-1	12068698	12091037	12266505	12142080	0.89	cps
Terbium	159-2	3711721	3758802	3753529	3741351	0.69	cps
Thallium	203-1	10998	11258	11018	11091	1.31	cps
Thallium	205-1	26303	27265	26881	26817	1.81	cps
Tin	118-1	350905	349065	351984	350651	0.42	cps
Titanium	47-1	1734479	1763877	1740269	1746208	0.89	cps
Uranium	238-1	474872	474808	475334	475005	0.06	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01	Instrumnet Name :	P8
Client Sample ID :	MH2GX1	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:00:11	DataFile Name :	062AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	198790	202318	199739	200283	0.91	cps
Ytterbium	172-1	48736	48435	48452	48541	0.35	cps
Ytterbium	172-2	18109	17825	17211	17715	2.59	cps
Ytterbium	176-1	30773	31528	31324	31208	1.25	cps
Ytterbium	176-2	11699	11615	11252	11522	2.06	cps
Yttrium	89-1	19046187	19150791	19399765	19198914	0.95	cps
Yttrium	89-2	1163057	1177985	1159707	1166916	0.83	cps
Zinc	66-2	3066325	3035829	3019391	3040515	0.78	cps
Zirconium	90-1	190459	192499	194178	192378	0.97	cps
Zirconium	91-1	43003	42652	43765	43140	1.32	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-02	Instrumnet Name :	P8
Client Sample ID :	MH2GX1D	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:03:18	DataFile Name :	063AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1830866	1843940	1881803	1852203	1.43	cps
Antimony	121-1	171541	170232	169429	170401	0.63	cps
Arsenic	75-2	45884	45560	45075	45507	0.90	cps
Barium	135-1	8036641	8097341	7997739	8043907	0.62	cps
Barium	137-1	13960387	13821146	13867239	13882924	0.51	cps
Beryllium	9-1	27293	27540	27278	27370	0.54	cps
Bismuth	209-1	7144298	6696277	7071338	6970637	3.45	cps
Bismuth	209-2	2664469	2767656	2580635	2670920	3.51	cps
Bromine	81-1	20538	20745	20862	20715	0.79	cps
Cadmium	108-1	3300	3537	3384	3407	3.52	cps
Cadmium	106-1	10874	10724	11195	10931	2.20	cps
Cadmium	111-1	45711	44738	44730	45060	1.25	cps
Calcium	43-1	6425493	6434252	6418286	6426010	0.12	cps
Calcium	44-1	102792995	104929965	103118422	103613794	1.11	cps
Carbon	12-1	4936697	5088208	5081378	5035428	1.70	cps
Carbon	12-2	33698	34176	33715	33863	0.80	cps
Chlorine	35-1	83158829	87411692	88576325	86382282	3.30	cps
Chlorine	35-2	305207	312398	311884	309829	1.29	cps
Chromium	52-2	134791	133825	134660	134426	0.39	cps
Cobalt	59-2	135584	134737	133461	134594	0.79	cps
Copper	63-2	4994938	4893604	4987553	4958699	1.14	cps
Dysprosium	156-1	163205	162974	161515	162565	0.56	cps
Dysprosium	156-2	44473	43467	43681	43874	1.21	cps
Erbium	164-1	134003	134710	133146	133953	0.58	cps
Erbium	164-2	41006	40421	40776	40734	0.72	cps
Gadolinium	160-1	136499	135736	136361	136199	0.30	cps
Gadolinium	160-2	50452	51124	50813	50796	0.66	cps
Holmium	165-1	11753486	11260890	12018950	11677775	3.29	cps
Holmium	165-2	3892485	3932402	3825175	3883354	1.40	cps
Indium	115-1	9349364	8774079	9308694	9144046	3.51	cps
Indium	115-2	808652	815147	791307	805035	1.53	cps
Iron	54-2	7800001	7818717	7871093	7829937	0.47	cps
Iron	56-2	145032088	147078838	144282565	145464497	1.00	cps
Iron	57-2	3724881	3678052	3699841	3700925	0.63	cps
Krypton	83-1	360	290	383	344	14.10	cps
Lead	206-1	63772932	64125666	64140139	64012912	0.32	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-02	Instrumnet Name :	P8
Client Sample ID :	MH2GX1D	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:03:18	DataFile Name :	063AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	52633478	53480213	53572436	53228709	0.97	cps
Lead	208-1	247110128	249388110	248889196	248462478	0.48	cps
Lithium	6-1	5565194	5345142	5674474	5528270	3.03	cps
Magnesium	24-2	1780320	1803846	1771399	1785188	0.94	cps
Manganese	55-2	6459481	6488771	6506118	6484790	0.36	cps
Molybdenum	94-1	124457	124285	124151	124298	0.12	cps
Molybdenum	95-1	93193	92995	94149	93445	0.66	cps
Molybdenum	96-1	112272	114460	114604	113779	1.15	cps
Molybdenum	97-1	57582	59259	57113	57985	1.95	cps
Molybdenum	98-1	149687	152066	149549	150434	0.94	cps
Neodymium	150-1	231151	231414	229354	230640	0.49	cps
Neodymium	150-2	49989	51154	50909	50684	1.21	cps
Nickel	60-2	119006	120363	119099	119489	0.63	cps
Phosphorus	31-2	7379	7805	7489	7558	2.93	cps
Potassium	39-2	454231	451971	450237	452146	0.44	cps
Rhodium	103-1	8047008	7671846	8185779	7968211	3.34	cps
Rhodium	103-2	3011795	3012565	2919380	2981247	1.80	cps
Scandium	45-1	6851339	6639372	6929863	6806858	2.21	cps
Scandium	45-2	108976	109718	108371	109022	0.62	cps
Selenium	82-1	603	577	433	538	17.00	cps
Selenium	77-2	237	243	207	229	8.53	cps
Selenium	78-2	123	167	193	161	21.93	cps
Silicon	28-1	63979276	63502197	65010886	64164120	1.20	cps
Silver	107-1	382275	384593	386415	384427	0.54	cps
Silver	109-1	370118	370696	367629	369481	0.44	cps
Sodium	23-2	587344	588879	587069	587764	0.17	cps
Strontium	86-1	3565326	3590952	3637138	3597805	1.01	cps
Strontium	88-1	30863401	31089317	31056130	31002950	0.39	cps
Sulfur	34-1	371528	371906	370318	371251	0.22	cps
Terbium	159-1	11940302	11474352	12284601	11899751	3.42	cps
Terbium	159-2	3745937	3807161	3669567	3740888	1.84	cps
Thallium	203-1	11058	11375	11338	11257	1.54	cps
Thallium	205-1	27426	27282	27583	27430	0.55	cps
Tin	118-1	357544	359720	359067	358777	0.31	cps
Titanium	47-1	1793934	1819217	1791121	1801424	0.86	cps
Uranium	238-1	480391	472887	475425	476234	0.80	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-02	Instrumnet Name :	P8
Client Sample ID :	MH2GX1D	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:03:18	DataFile Name :	063AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	205597	203634	204185	204472	0.50	cps
Ytterbium	172-1	48000	48920	48903	48608	1.08	cps
Ytterbium	172-2	18486	17862	18193	18180	1.72	cps
Ytterbium	176-1	31086	31437	30806	31110	1.02	cps
Ytterbium	176-2	11502	11772	11809	11694	1.43	cps
Yttrium	89-1	19418071	18373998	19550732	19114267	3.37	cps
Yttrium	89-2	1188250	1194652	1164622	1182508	1.34	cps
Zinc	66-2	3103996	3118157	3060892	3094348	0.96	cps
Zirconium	90-1	196351	198429	196574	197118	0.58	cps
Zirconium	91-1	43397	44026	44311	43911	1.06	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01LX5	Instrumnet Name :	P8
Client Sample ID :	MH2GX1L	Dilution Factor :	5
Date & Time Acquired :	2025-01-28 16:06:24	DataFile Name :	064AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	342529	341741	340951	341740	0.23	cps
Antimony	121-1	33364	33965	33294	33541	1.10	cps
Arsenic	75-2	9130	8796	8850	8925	2.01	cps
Barium	135-1	1486720	1604648	1494525	1528631	4.31	cps
Barium	137-1	2698255	2756126	2728167	2727516	1.06	cps
Beryllium	9-1	5723	5583	5528	5611	1.79	cps
Bismuth	209-1	7222594	7271572	7159816	7217994	0.78	cps
Bismuth	209-2	2648067	2685775	2713233	2682359	1.22	cps
Bromine	81-1	11558	11632	11114	11435	2.45	cps
Cadmium	108-1	773	767	700	747	5.43	cps
Cadmium	106-1	5871	6098	6211	6060	2.86	cps
Cadmium	111-1	11251	11684	11774	11570	2.42	cps
Calcium	43-1	1257312	1273092	1262310	1264238	0.64	cps
Calcium	44-1	20194173	20365861	20233622	20264552	0.44	cps
Carbon	12-1	2596423	2559578	2543043	2566348	1.06	cps
Carbon	12-2	17053	16940	16953	16982	0.37	cps
Chlorine	35-1	19497507	20058112	19826124	19793914	1.42	cps
Chlorine	35-2	67540	68193	67436	67723	0.61	cps
Chromium	52-2	27092	26909	26538	26846	1.05	cps
Cobalt	59-2	27420	26835	27784	27346	1.75	cps
Copper	63-2	976509	972244	978620	975791	0.33	cps
Dysprosium	156-1	31520	31437	31708	31555	0.44	cps
Dysprosium	156-2	8840	8786	8509	8712	2.03	cps
Erbium	164-1	25672	25768	25718	25719	0.19	cps
Erbium	164-2	8209	7839	8199	8083	2.61	cps
Gadolinium	160-1	26065	26790	26844	26566	1.64	cps
Gadolinium	160-2	10284	9714	10237	10078	3.14	cps
Holmium	165-1	11480493	11546041	11528539	11518358	0.29	cps
Holmium	165-2	3849225	3806315	3814055	3823198	0.60	cps
Indium	115-1	9232213	9244616	9343372	9273400	0.66	cps
Indium	115-2	794659	795728	798481	796289	0.25	cps
Iron	54-2	1589023	1566741	1589654	1581806	0.83	cps
Iron	56-2	29239531	28945744	28984472	29056582	0.55	cps
Iron	57-2	702353	696538	695912	698268	0.51	cps
Krypton	83-1	127	177	167	157	16.89	cps
Lead	206-1	12483186	13000795	12713041	12732341	2.04	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01LX5	Instrumnet Name :	P8
Client Sample ID :	MH2GX1L	Dilution Factor :	5
Date & Time Acquired :	2025-01-28 16:06:24	DataFile Name :	064AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	10479986	10688254	10599574	10589272	0.99	cps
Lead	208-1	49367548	50254076	49353876	49658500	1.04	cps
Lithium	6-1	5298682	5347845	5357673	5334733	0.59	cps
Magnesium	24-2	335064	336144	338986	336731	0.60	cps
Manganese	55-2	1222207	1209812	1215545	1215855	0.51	cps
Molybdenum	94-1	24211	24622	24495	24443	0.86	cps
Molybdenum	95-1	18609	18426	18990	18675	1.54	cps
Molybdenum	96-1	22191	22255	22181	22209	0.18	cps
Molybdenum	97-1	11468	11428	11308	11401	0.73	cps
Molybdenum	98-1	29037	30079	29582	29566	1.76	cps
Neodymium	150-1	44651	44423	44995	44690	0.64	cps
Neodymium	150-2	9874	9980	10091	9982	1.09	cps
Nickel	60-2	25316	25152	24965	25144	0.70	cps
Phosphorus	31-2	1443	1343	1343	1377	4.19	cps
Potassium	39-2	92433	90753	91575	91587	0.92	cps
Rhodium	103-1	8269286	8321701	8341982	8310990	0.45	cps
Rhodium	103-2	3043983	2996498	3040307	3026929	0.87	cps
Scandium	45-1	6431224	6590827	6567417	6529822	1.32	cps
Scandium	45-2	102237	102421	101569	102076	0.44	cps
Selenium	82-1	167	93	87	116	38.41	cps
Selenium	77-2	43	33	20	32	36.33	cps
Selenium	78-2	40	37	23	33	26.47	cps
Silicon	28-1	12791943	12835341	12803401	12810228	0.18	cps
Silver	107-1	77928	78860	79122	78637	0.80	cps
Silver	109-1	75485	74587	75837	75303	0.86	cps
Sodium	23-2	125625	126005	124179	125270	0.77	cps
Strontium	86-1	661326	669632	672172	667710	0.85	cps
Strontium	88-1	6034317	6046081	6071580	6050659	0.31	cps
Sulfur	34-1	264654	261827	263360	263280	0.54	cps
Terbium	159-1	11657181	11908606	11849041	11804943	1.11	cps
Terbium	159-2	3646756	3711667	3680699	3679707	0.88	cps
Thallium	203-1	2354	2390	2474	2406	2.56	cps
Thallium	205-1	5855	6045	5855	5918	1.85	cps
Tin	118-1	73482	74897	74243	74207	0.95	cps
Titanium	47-1	331209	331388	335033	332543	0.65	cps
Uranium	238-1	92000	91469	93000	92157	0.84	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01LX5	Instrumnet Name :	P8
Client Sample ID :	MH2GX1L	Dilution Factor :	5
Date & Time Acquired :	2025-01-28 16:06:24	DataFile Name :	064AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	39795	40333	38793	39640	1.97	cps
Ytterbium	172-1	9407	9483	9113	9334	2.09	cps
Ytterbium	172-2	3457	3664	3641	3587	3.16	cps
Ytterbium	176-1	7285	7049	7089	7141	1.78	cps
Ytterbium	176-2	2464	2504	2374	2447	2.72	cps
Yttrium	89-1	17111854	17161886	17265238	17179659	0.46	cps
Yttrium	89-2	1042155	1037447	1045994	1041865	0.41	cps
Zinc	66-2	596390	598003	601475	598623	0.43	cps
Zirconium	90-1	38252	38670	38092	38338	0.78	cps
Zirconium	91-1	8359	8890	8733	8661	3.15	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-03	Instrumnet Name :	P8
Client Sample ID :	MH2GX1S	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:09:39	DataFile Name :	065AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1809385	1792935	1809237	1803852	0.52	cps
Antimony	121-1	343859	348492	347788	346713	0.72	cps
Arsenic	75-2	46456	46623	46356	46479	0.29	cps
Barium	135-1	8875583	8851561	8884690	8870611	0.19	cps
Barium	137-1	15372945	15423870	15129419	15308745	1.03	cps
Beryllium	9-1	62033	61984	62121	62046	0.11	cps
Bismuth	209-1	7042627	7195524	7107593	7115248	1.08	cps
Bismuth	209-2	2538722	2627626	2620747	2595698	1.91	cps
Bromine	81-1	16677	16663	16790	16710	0.42	cps
Cadmium	108-1	4591	4948	5071	4870	5.12	cps
Cadmium	106-1	12713	12970	13010	12897	1.25	cps
Cadmium	111-1	67185	68113	66729	67342	1.05	cps
Calcium	43-1	6395936	6345399	6351726	6364354	0.43	cps
Calcium	44-1	102066312	102353218	102460918	102293483	0.20	cps
Carbon	12-1	4594650	4707028	4909491	4737056	3.37	cps
Carbon	12-2	31230	31938	31307	31492	1.23	cps
Chlorine	35-1	85042149	89749992	91869882	88887341	3.93	cps
Chlorine	35-2	317702	317805	317177	317561	0.11	cps
Chromium	52-2	204016	204834	203245	204032	0.39	cps
Cobalt	59-2	470453	471420	467360	469744	0.45	cps
Copper	63-2	5123431	5116220	5030350	5090000	1.02	cps
Dysprosium	156-1	158918	160305	160720	159981	0.59	cps
Dysprosium	156-2	43755	43136	43009	43300	0.92	cps
Erbium	164-1	130805	131381	132818	131668	0.79	cps
Erbium	164-2	40538	40207	40221	40322	0.46	cps
Gadolinium	160-1	135432	135459	134786	135226	0.28	cps
Gadolinium	160-2	51191	50586	50562	50780	0.70	cps
Holmium	165-1	11654163	11757361	12077446	11829657	1.87	cps
Holmium	165-2	3734036	3830310	3817103	3793816	1.38	cps
Indium	115-1	9231373	9268453	9340036	9279954	0.60	cps
Indium	115-2	775032	791261	794821	787038	1.34	cps
Iron	54-2	7857100	7738116	7792949	7796055	0.76	cps
Iron	56-2	145918964	143728888	142972795	144206882	1.06	cps
Iron	57-2	3659899	3678068	3644612	3660860	0.46	cps
Krypton	83-1	363	243	287	298	20.41	cps
Lead	206-1	63234846	62600412	62624141	62819800	0.57	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-03	Instrumnet Name :	P8
Client Sample ID :	MH2GX1S	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:09:39	DataFile Name :	065AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	51647303	51995433	52856771	52166502	1.19	cps
Lead	208-1	243538303	242414096	244600016	243517472	0.45	cps
Lithium	6-1	5483219	5546779	5680995	5570331	1.81	cps
Magnesium	24-2	1752766	1776343	1750064	1759725	0.82	cps
Manganese	55-2	6622761	6414865	6435103	6490910	1.77	cps
Molybdenum	94-1	121346	122261	122809	122139	0.60	cps
Molybdenum	95-1	90173	93525	91723	91807	1.83	cps
Molybdenum	96-1	110652	113398	111301	111784	1.28	cps
Molybdenum	97-1	57431	57244	56859	57178	0.51	cps
Molybdenum	98-1	146424	148720	149138	148094	0.99	cps
Neodymium	150-1	226177	227964	226483	226875	0.42	cps
Neodymium	150-2	50718	50879	50605	50734	0.27	cps
Nickel	60-2	211226	210070	210215	210504	0.30	cps
Phosphorus	31-2	7125	7088	7329	7181	1.80	cps
Potassium	39-2	444732	443019	440539	442763	0.48	cps
Rhodium	103-1	8009173	8229106	8180236	8139505	1.42	cps
Rhodium	103-2	2880384	2970629	2932525	2927846	1.55	cps
Scandium	45-1	6892727	6920811	6857851	6890463	0.46	cps
Scandium	45-2	105574	106581	105081	105745	0.72	cps
Selenium	82-1	1093	1147	1197	1146	4.51	cps
Selenium	77-2	203	190	177	190	7.02	cps
Selenium	78-2	180	173	167	173	3.85	cps
Silicon	28-1	63120912	63802737	64013812	63645821	0.73	cps
Silver	107-1	491636	497219	493602	494152	0.57	cps
Silver	109-1	471955	471907	475339	473067	0.42	cps
Sodium	23-2	578992	573554	575546	576031	0.48	cps
Strontium	86-1	3537209	3529819	3549981	3539003	0.29	cps
Strontium	88-1	30413101	30734389	30520571	30556020	0.54	cps
Sulfur	34-1	362779	364218	363793	363597	0.20	cps
Terbium	159-1	12007429	12160847	12136712	12101663	0.68	cps
Terbium	159-2	3626811	3716977	3671246	3671678	1.23	cps
Thallium	203-1	103320	104445	103945	103904	0.54	cps
Thallium	205-1	248332	250371	247710	248804	0.56	cps
Tin	118-1	348874	350614	352039	350509	0.45	cps
Titanium	47-1	1745723	1752479	1788058	1762087	1.29	cps
Uranium	238-1	468398	468957	471371	469575	0.34	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-03	Instrumnet Name :	P8
Client Sample ID :	MH2GX1S	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:09:39	DataFile Name :	065AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	336247	336792	339111	337383	0.45	cps
Ytterbium	172-1	48227	47946	48234	48136	0.34	cps
Ytterbium	172-2	18049	17902	17822	17924	0.64	cps
Ytterbium	176-1	31762	31120	31544	31475	1.04	cps
Ytterbium	176-2	11599	11589	11695	11627	0.51	cps
Yttrium	89-1	19311791	19240361	19441985	19331379	0.53	cps
Yttrium	89-2	1140154	1158271	1165936	1154787	1.15	cps
Zinc	66-2	3042401	3044350	3036071	3040941	0.14	cps
Zirconium	90-1	192807	194229	194888	193975	0.55	cps
Zirconium	91-1	42695	43568	43367	43210	1.06	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-04	Instrumnet Name :	P8
Client Sample ID :	MH2H17	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:12:45	DataFile Name :	066AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	594420	608604	604120	602381	1.20	cps
Antimony	121-1	36318	36061	35787	36055	0.74	cps
Arsenic	75-2	7062	7459	7068	7196	3.16	cps
Barium	135-1	2024171	2002345	1984339	2003619	1.00	cps
Barium	137-1	3508996	3472920	3456685	3479534	0.77	cps
Beryllium	9-1	8852	8822	8740	8804	0.65	cps
Bismuth	209-1	6762689	6961517	6990951	6905052	1.80	cps
Bismuth	209-2	2577257	2007475	2150378	2245036	13.20	cps
Bromine	81-1	17177	17478	18028	17561	2.46	cps
Cadmium	108-1	2360	2410	2417	2396	1.29	cps
Cadmium	106-1	8623	8906	8953	8827	2.02	cps
Cadmium	111-1	35205	35048	35777	35343	1.09	cps
Calcium	43-1	13812638	13775132	13982869	13856880	0.80	cps
Calcium	44-1	222984730	223025490	223474103	223161441	0.12	cps
Carbon	12-1	6044963	6233592	6259443	6179333	1.89	cps
Carbon	12-2	41726	42087	42628	42147	1.08	cps
Chlorine	35-1	95319805	98372595	99868059	97853486	2.37	cps
Chlorine	35-2	345023	349242	354773	349680	1.40	cps
Chromium	52-2	86895	86040	86060	86332	0.56	cps
Cobalt	59-2	90894	91407	91005	91102	0.30	cps
Copper	63-2	733556	744290	734597	737481	0.80	cps
Dysprosium	156-1	94745	95434	94490	94890	0.51	cps
Dysprosium	156-2	26226	27398	26857	26827	2.19	cps
Erbium	164-1	76713	77611	75948	76757	1.08	cps
Erbium	164-2	23170	24062	23344	23525	2.01	cps
Gadolinium	160-1	84099	82982	83187	83423	0.71	cps
Gadolinium	160-2	31049	31206	31761	31339	1.19	cps
Holmium	165-1	11695339	11894519	12273246	11954368	2.46	cps
Holmium	165-2	3868103	3026241	3259806	3384716	12.84	cps
Indium	115-1	9031365	9188233	9418364	9212654	2.11	cps
Indium	115-2	797939	620050	665076	694355	13.32	cps
Iron	54-2	5539666	5594293	5542075	5558678	0.56	cps
Iron	56-2	101486468	102970602	102883932	102447001	0.81	cps
Iron	57-2	2613598	2612713	2612938	2613083	0.02	cps
Krypton	83-1	260	290	277	276	5.45	cps
Lead	206-1	8158151	8031380	8195471	8128334	1.06	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-04	Instrumnet Name :	P8
Client Sample ID :	MH2H17	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:12:45	DataFile Name :	066AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	6785825	6793606	6840270	6806567	0.43	cps
Lead	208-1	31453381	31566240	31565357	31528326	0.21	cps
Lithium	6-1	5445377	5619532	5736752	5600553	2.62	cps
Magnesium	24-2	19789339	20136038	19764997	19896791	1.04	cps
Manganese	55-2	3409688	3504023	3464810	3459507	1.37	cps
Molybdenum	94-1	39492	39035	39202	39243	0.59	cps
Molybdenum	95-1	31081	30797	31175	31018	0.63	cps
Molybdenum	96-1	38253	37952	37093	37766	1.59	cps
Molybdenum	97-1	18372	19097	18699	18723	1.94	cps
Molybdenum	98-1	49180	48996	48531	48902	0.68	cps
Neodymium	150-1	136415	136007	137320	136581	0.49	cps
Neodymium	150-2	29489	30154	30478	30040	1.68	cps
Nickel	60-2	92706	93276	93052	93011	0.31	cps
Phosphorus	31-2	6221	6478	6485	6395	2.35	cps
Potassium	39-2	364208	367221	366352	365927	0.42	cps
Rhodium	103-1	7856742	8146416	8233277	8078811	2.44	cps
Rhodium	103-2	2955506	2304892	2430275	2563558	13.46	cps
Scandium	45-1	6627710	6808056	6939659	6791808	2.31	cps
Scandium	45-2	107907	85597	89646	94383	12.59	cps
Selenium	82-1	303	327	340	323	5.74	cps
Selenium	77-2	113	167	110	130	24.46	cps
Selenium	78-2	127	73	73	91	33.80	cps
Silicon	28-1	31479202	31403175	31399356	31427245	0.14	cps
Silver	107-1	53035	52356	53098	52829	0.78	cps
Silver	109-1	50850	49779	50271	50300	1.07	cps
Sodium	23-2	438634	444130	439690	440818	0.66	cps
Strontium	86-1	1925881	1900222	1897766	1907956	0.82	cps
Strontium	88-1	16327535	16533093	16366401	16409009	0.67	cps
Sulfur	34-1	327426	328755	333016	329732	0.89	cps
Terbium	159-1	12021372	12139288	12462897	12207852	1.87	cps
Terbium	159-2	3782799	2946705	3166833	3298779	13.14	cps
Thallium	203-1	8940	9330	9007	9092	2.30	cps
Thallium	205-1	21765	22523	22633	22307	2.12	cps
Tin	118-1	125723	128344	126982	127016	1.03	cps
Titanium	47-1	441690	440373	442519	441527	0.25	cps
Uranium	238-1	150268	154679	151100	152016	1.54	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-04	Instrumnet Name :	P8
Client Sample ID :	MH2H17	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:12:45	DataFile Name :	066AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	131776	134582	131874	132744	1.20	cps
Ytterbium	172-1	23064	22803	23157	23008	0.80	cps
Ytterbium	172-2	8359	8530	8439	8443	1.01	cps
Ytterbium	176-1	14925	15279	16167	15457	4.14	cps
Ytterbium	176-2	5688	5531	5468	5562	2.04	cps
Yttrium	89-1	18160598	18363324	18810403	18444775	1.80	cps
Yttrium	89-2	1117918	896127	941723	985256	11.89	cps
Zinc	66-2	779969	785247	781183	782133	0.35	cps
Zirconium	90-1	60002	60467	60085	60185	0.41	cps
Zirconium	91-1	13340	13590	13220	13383	1.41	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-05	Instrumnet Name :	P8
Client Sample ID :	MH2H18	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:15:57	DataFile Name :	067AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	731554	729435	735714	732234	0.44	cps
Antimony	121-1	28800	28974	29181	28985	0.66	cps
Arsenic	75-2	8152	8636	8403	8397	2.88	cps
Barium	135-1	1774396	1832828	1792922	1800048	1.66	cps
Barium	137-1	3057043	3102409	3136851	3098767	1.29	cps
Beryllium	9-1	8942	9108	9113	9054	1.08	cps
Bismuth	209-1	6920473	7031174	6981608	6977752	0.79	cps
Bismuth	209-2	2563959	2587802	2610655	2587472	0.90	cps
Bromine	81-1	15228	15779	15709	15572	1.92	cps
Cadmium	108-1	2050	2140	2140	2110	2.46	cps
Cadmium	106-1	8840	8589	8503	8644	2.02	cps
Cadmium	111-1	32795	32483	32846	32708	0.60	cps
Calcium	43-1	4320464	4381548	4358849	4353620	0.71	cps
Calcium	44-1	69299431	70614046	70800439	70237972	1.16	cps
Carbon	12-1	4523941	4719334	4801317	4681531	3.04	cps
Carbon	12-2	32496	32062	32586	32381	0.87	cps
Chlorine	35-1	88647842	93318495	95341662	92436000	3.71	cps
Chlorine	35-2	330114	329866	333198	331060	0.56	cps
Chromium	52-2	61505	60520	61307	61111	0.85	cps
Cobalt	59-2	88218	88060	88650	88309	0.35	cps
Copper	63-2	639920	647238	643457	643538	0.57	cps
Dysprosium	156-1	122952	124570	124927	124149	0.85	cps
Dysprosium	156-2	35443	35808	36022	35758	0.82	cps
Erbium	164-1	99153	101268	101372	100598	1.25	cps
Erbium	164-2	30508	31915	30555	30993	2.58	cps
Gadolinium	160-1	109787	110408	110738	110311	0.44	cps
Gadolinium	160-2	41193	41896	41778	41622	0.90	cps
Holmium	165-1	11364217	11641894	11489749	11498620	1.21	cps
Holmium	165-2	3829201	3779697	3759471	3789457	0.95	cps
Indium	115-1	9159303	9017783	9126851	9101312	0.81	cps
Indium	115-2	777921	779463	780067	779150	0.14	cps
Iron	54-2	5140895	5145047	5181892	5155945	0.44	cps
Iron	56-2	94385282	95077802	94516419	94659834	0.39	cps
Iron	57-2	2430964	2424076	2396945	2417328	0.74	cps
Krypton	83-1	247	320	237	268	16.99	cps
Lead	206-1	5739564	5877017	5894723	5837101	1.46	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-05	Instrumnet Name :	P8
Client Sample ID :	MH2H18	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:15:57	DataFile Name :	067AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	4822862	4938619	4838715	4866732	1.29	cps
Lead	208-1	22136313	22715215	22608708	22486745	1.37	cps
Lithium	6-1	5358706	5411864	5459556	5410042	0.93	cps
Magnesium	24-2	3155698	3095137	3162771	3137869	1.18	cps
Manganese	55-2	2373574	2348786	2383622	2368661	0.76	cps
Molybdenum	94-1	34810	35462	35669	35314	1.27	cps
Molybdenum	95-1	29294	29772	29759	29608	0.92	cps
Molybdenum	96-1	34596	35305	35375	35092	1.23	cps
Molybdenum	97-1	18095	18402	17958	18152	1.25	cps
Molybdenum	98-1	46715	46732	46829	46758	0.13	cps
Neodymium	150-1	182540	186591	186226	185119	1.21	cps
Neodymium	150-2	42119	41400	41140	41553	1.22	cps
Nickel	60-2	98454	99242	99262	98986	0.47	cps
Phosphorus	31-2	5101	5191	4981	5091	2.07	cps
Potassium	39-2	437209	440893	440047	439383	0.44	cps
Rhodium	103-1	7969532	8133764	8247614	8116970	1.72	cps
Rhodium	103-2	2942117	2958902	2901335	2934118	1.01	cps
Scandium	45-1	6442031	6593577	6695792	6577133	1.94	cps
Scandium	45-2	103868	104681	103405	103985	0.62	cps
Selenium	82-1	280	313	403	332	19.20	cps
Selenium	77-2	157	180	137	158	13.74	cps
Selenium	78-2	113	123	130	122	6.87	cps
Silicon	28-1	27025189	27319295	27335174	27226553	0.64	cps
Silver	107-1	50281	51352	51302	50978	1.19	cps
Silver	109-1	48264	48886	49833	48995	1.61	cps
Sodium	23-2	447004	445235	448363	446868	0.35	cps
Strontium	86-1	1355902	1464133	1481452	1433829	4.75	cps
Strontium	88-1	12392106	12443387	12575219	12470237	0.76	cps
Sulfur	34-1	399578	409618	408214	405803	1.34	cps
Terbium	159-1	11913085	11861154	11953194	11909144	0.39	cps
Terbium	159-2	3673801	3702506	3674421	3683576	0.45	cps
Thallium	203-1	11198	11652	11475	11442	2.00	cps
Thallium	205-1	26764	26988	26965	26906	0.46	cps
Tin	118-1	88279	88997	91385	89554	1.82	cps
Titanium	47-1	314516	316668	318892	316692	0.69	cps
Uranium	238-1	125664	127351	127072	126696	0.71	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-05	Instrumnet Name :	P8
Client Sample ID :	MH2H18	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:15:57	DataFile Name :	067AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	143386	144063	142871	143440	0.42	cps
Ytterbium	172-1	28170	29680	29680	29177	2.99	cps
Ytterbium	172-2	10858	10858	10794	10837	0.34	cps
Ytterbium	176-1	19187	19164	19384	19245	0.63	cps
Ytterbium	176-2	7215	7249	6999	7154	1.90	cps
Yttrium	89-1	18003940	18065666	18258951	18109519	0.73	cps
Yttrium	89-2	1089308	1098913	1099489	1095903	0.52	cps
Zinc	66-2	505608	510610	507344	507854	0.50	cps
Zirconium	90-1	50478	51866	51766	51370	1.51	cps
Zirconium	91-1	11435	11805	11795	11678	1.81	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-06	Instrumnet Name :	P8
Client Sample ID :	MH2H19	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:19:05	DataFile Name :	068AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	901415	882091	884375	889294	1.19	cps
Antimony	121-1	16080	15709	15375	15721	2.24	cps
Arsenic	75-2	5618	5665	5878	5720	2.42	cps
Barium	135-1	2041980	2073659	2066286	2060641	0.80	cps
Barium	137-1	3551094	3554469	3516137	3540566	0.60	cps
Beryllium	9-1	8900	8739	8912	8850	1.09	cps
Bismuth	209-1	7105424	7052985	7053454	7070621	0.43	cps
Bismuth	209-2	2619906	2602396	2574445	2598916	0.88	cps
Bromine	81-1	20819	21907	22114	21613	3.22	cps
Cadmium	108-1	873	953	967	931	5.42	cps
Cadmium	106-1	6932	7109	7045	7029	1.27	cps
Cadmium	111-1	16510	16771	16811	16697	0.98	cps
Calcium	43-1	5142613	5146482	5132081	5140392	0.14	cps
Calcium	44-1	82407232	83052679	83073349	82844420	0.46	cps
Carbon	12-1	4236464	4365765	4405633	4335954	2.04	cps
Carbon	12-2	29510	29553	30221	29761	1.34	cps
Chlorine	35-1	99249815	104361832	106861648	103491098	3.75	cps
Chlorine	35-2	372585	368398	371837	370940	0.60	cps
Chromium	52-2	68955	70308	70914	70059	1.43	cps
Cobalt	59-2	84774	84723	85005	84834	0.18	cps
Copper	63-2	312093	314402	314696	313730	0.45	cps
Dysprosium	156-1	151975	152451	155000	153142	1.06	cps
Dysprosium	156-2	43537	43999	43006	43514	1.14	cps
Erbium	164-1	118781	119396	118599	118925	0.35	cps
Erbium	164-2	36637	36447	36954	36679	0.70	cps
Gadolinium	160-1	132507	135463	135018	134330	1.19	cps
Gadolinium	160-2	50770	49960	50391	50374	0.80	cps
Holmium	165-1	11692750	11591424	11710657	11664944	0.55	cps
Holmium	165-2	3818802	3729233	3783595	3777210	1.19	cps
Indium	115-1	9299452	9240769	9229388	9256536	0.41	cps
Indium	115-2	789145	788256	786558	787986	0.17	cps
Iron	54-2	4127302	4118253	4097001	4114185	0.38	cps
Iron	56-2	75130257	75540416	75188844	75286506	0.29	cps
Iron	57-2	1932422	1933180	1914292	1926631	0.56	cps
Krypton	83-1	253	250	303	269	11.11	cps
Lead	206-1	1583835	1603443	1600812	1596030	0.67	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-06	Instrumnet Name :	P8
Client Sample ID :	MH2H19	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:19:05	DataFile Name :	068AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1321738	1329077	1334212	1328342	0.47	cps
Lead	208-1	6370990	6404896	6373270	6383052	0.30	cps
Lithium	6-1	5368263	5465513	5547092	5460289	1.64	cps
Magnesium	24-2	2700811	2676189	2635216	2670739	1.24	cps
Manganese	55-2	1178650	1187596	1177349	1181198	0.47	cps
Molybdenum	94-1	34175	35124	34506	34602	1.39	cps
Molybdenum	95-1	30400	30253	30343	30332	0.24	cps
Molybdenum	96-1	35880	36742	36705	36442	1.34	cps
Molybdenum	97-1	17968	19000	19334	18767	3.79	cps
Molybdenum	98-1	48190	49478	49210	48959	1.39	cps
Neodymium	150-1	233221	234423	236796	234813	0.77	cps
Neodymium	150-2	52114	52469	53553	52712	1.42	cps
Nickel	60-2	94165	94749	96467	95127	1.26	cps
Phosphorus	31-2	5131	5221	5281	5211	1.45	cps
Potassium	39-2	471833	466708	468665	469069	0.55	cps
Rhodium	103-1	8135780	8236561	8234267	8202203	0.70	cps
Rhodium	103-2	2956854	2911189	2922653	2930232	0.81	cps
Scandium	45-1	6699764	6706879	6744226	6716956	0.36	cps
Scandium	45-2	105621	104892	105735	105416	0.43	cps
Selenium	82-1	337	453	380	390	15.12	cps
Selenium	77-2	233	227	187	216	11.71	cps
Selenium	78-2	157	140	123	140	11.90	cps
Silicon	28-1	24129165	24406928	24513942	24350012	0.82	cps
Silver	107-1	21210	22241	22124	21858	2.58	cps
Silver	109-1	20552	20899	21033	20828	1.19	cps
Sodium	23-2	379659	374555	379881	378032	0.80	cps
Strontium	86-1	1236267	1229766	1249116	1238383	0.80	cps
Strontium	88-1	11342554	11209237	11362329	11304706	0.74	cps
Sulfur	34-1	395498	400319	404836	400218	1.17	cps
Terbium	159-1	11956186	11845360	12209496	12003681	1.55	cps
Terbium	159-2	3756211	3668344	3666027	3696861	1.39	cps
Thallium	203-1	10538	10558	10251	10449	1.64	cps
Thallium	205-1	25071	25649	25752	25491	1.44	cps
Tin	118-1	31984	32228	33043	32418	1.71	cps
Titanium	47-1	269779	271022	272007	270936	0.41	cps
Uranium	238-1	132116	132681	133052	132616	0.36	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-06	Instrumnet Name :	P8
Client Sample ID :	MH2H19	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:19:05	DataFile Name :	068AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	170640	171463	172778	171627	0.63	cps
Ytterbium	172-1	32961	33736	33850	33516	1.44	cps
Ytterbium	172-2	12756	12423	12526	12568	1.36	cps
Ytterbium	176-1	22095	22032	22379	22169	0.83	cps
Ytterbium	176-2	7999	7862	8086	7982	1.41	cps
Yttrium	89-1	18600704	18578500	19121400	18766868	1.64	cps
Yttrium	89-2	1131600	1132664	1133425	1132563	0.08	cps
Zinc	66-2	172539	172800	174091	173143	0.48	cps
Zirconium	90-1	46658	47464	47936	47352	1.36	cps
Zirconium	91-1	10938	10474	10624	10679	2.22	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-07	Instrumnet Name :	P8
Client Sample ID :	MH2H20	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:22:19	DataFile Name :	069AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	518834	514771	517016	516874	0.39	cps
Antimony	121-1	19711	19798	20031	19847	0.84	cps
Arsenic	75-2	3187	3274	3367	3276	2.75	cps
Barium	135-1	1177055	1181960	1179198	1179404	0.21	cps
Barium	137-1	2168795	2196579	2174727	2180034	0.67	cps
Beryllium	9-1	8430	8234	8410	8358	1.29	cps
Bismuth	209-1	6714199	6544728	6447278	6568735	2.06	cps
Bismuth	209-2	2394421	2454738	2448154	2432438	1.36	cps
Bromine	81-1	19434	19363	20024	19607	1.85	cps
Cadmium	108-1	1423	1530	1490	1481	3.64	cps
Cadmium	106-1	7339	7322	7012	7224	2.55	cps
Cadmium	111-1	13604	13561	13515	13560	0.33	cps
Calcium	43-1	12476845	12400172	12419561	12432193	0.32	cps
Calcium	44-1	199571824	200603717	199863617	200013053	0.27	cps
Carbon	12-1	14033046	14433304	14498258	14321536	1.76	cps
Carbon	12-2	97024	98275	96990	97430	0.75	cps
Chlorine	35-1	93074262	98644212	99604455	97107643	3.63	cps
Chlorine	35-2	344450	346708	348953	346703	0.65	cps
Chromium	52-2	209964	211480	209463	210302	0.50	cps
Cobalt	59-2	56455	56060	56167	56227	0.36	cps
Copper	63-2	388691	387841	389226	388586	0.18	cps
Dysprosium	156-1	81091	81869	82445	81802	0.83	cps
Dysprosium	156-2	22329	22529	22362	22407	0.48	cps
Erbium	164-1	61464	61451	61685	61533	0.21	cps
Erbium	164-2	18476	18216	18977	18556	2.08	cps
Gadolinium	160-1	69078	67044	67067	67729	1.72	cps
Gadolinium	160-2	25648	24953	25291	25297	1.37	cps
Holmium	165-1	11496141	11311323	11039027	11282164	2.04	cps
Holmium	165-2	3611717	3690166	3690627	3664170	1.24	cps
Indium	115-1	8874337	8824427	8642708	8780491	1.39	cps
Indium	115-2	742987	766547	759140	756225	1.59	cps
Iron	54-2	3795137	3750986	3727421	3757848	0.91	cps
Iron	56-2	68803236	68760536	69475369	69013047	0.58	cps
Iron	57-2	1774004	1782006	1765915	1773975	0.45	cps
Krypton	83-1	260	293	277	277	6.03	cps
Lead	206-1	2878379	2954591	2898484	2910485	1.36	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-07	Instrumnet Name :	P8
Client Sample ID :	MH2H20	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:22:19	DataFile Name :	069AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2358723	2394012	2393662	2382132	0.85	cps
Lead	208-1	11057910	11054967	11070944	11061274	0.08	cps
Lithium	6-1	5286318	5338277	5308093	5310896	0.49	cps
Magnesium	24-2	20981069	20676911	20842806	20833595	0.73	cps
Manganese	55-2	2966454	2976913	3008953	2984106	0.74	cps
Molybdenum	94-1	32124	33086	32749	32653	1.49	cps
Molybdenum	95-1	22391	22742	22919	22684	1.18	cps
Molybdenum	96-1	28419	28853	28636	28636	0.76	cps
Molybdenum	97-1	14204	14201	13994	14133	0.85	cps
Molybdenum	98-1	35997	36388	35953	36112	0.66	cps
Neodymium	150-1	122308	123279	122227	122605	0.48	cps
Neodymium	150-2	26790	27355	27184	27110	1.07	cps
Nickel	60-2	57713	57907	57887	57836	0.18	cps
Phosphorus	31-2	5785	5745	6008	5846	2.43	cps
Potassium	39-2	282332	281097	281225	281551	0.24	cps
Rhodium	103-1	7738321	7784115	7546126	7689520	1.64	cps
Rhodium	103-2	2764498	2906936	2845186	2838873	2.52	cps
Scandium	45-1	6491727	6469932	6303915	6421858	1.60	cps
Scandium	45-2	99821	102297	101639	101252	1.27	cps
Selenium	82-1	410	380	403	398	3.96	cps
Selenium	77-2	110	130	130	123	9.36	cps
Selenium	78-2	73	60	80	71	14.32	cps
Silicon	28-1	49932928	50127736	50427423	50162695	0.50	cps
Silver	107-1	14758	15739	15599	15365	3.45	cps
Silver	109-1	14307	14538	14721	14522	1.43	cps
Sodium	23-2	241738	241530	244686	242651	0.73	cps
Strontium	86-1	1459201	1488573	1504838	1484204	1.56	cps
Strontium	88-1	12637314	12879268	12722187	12746256	0.96	cps
Sulfur	34-1	372226	376678	377990	375631	0.80	cps
Terbium	159-1	11790891	11637544	11245412	11557949	2.43	cps
Terbium	159-2	3556371	3612522	3641464	3603452	1.20	cps
Thallium	203-1	3971	3771	4267	4003	6.24	cps
Thallium	205-1	9310	9807	9547	9555	2.60	cps
Tin	118-1	57831	60278	58755	58955	2.10	cps
Titanium	47-1	434534	436104	437040	435892	0.29	cps
Uranium	238-1	139473	140187	141886	140515	0.88	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-07	Instrumnet Name :	P8
Client Sample ID :	MH2H20	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:22:19	DataFile Name :	069AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	95680	95063	96103	95615	0.55	cps
Ytterbium	172-1	18226	17845	18109	18060	1.08	cps
Ytterbium	172-2	6685	6482	6575	6581	1.55	cps
Ytterbium	176-1	12533	12626	12563	12574	0.38	cps
Ytterbium	176-2	4497	4517	4497	4504	0.26	cps
Yttrium	89-1	17595972	17682664	17133285	17470640	1.69	cps
Yttrium	89-2	1037609	1068827	1059586	1055341	1.52	cps
Zinc	66-2	371711	368129	371402	370414	0.54	cps
Zirconium	90-1	55594	54911	56072	55526	1.05	cps
Zirconium	91-1	12139	12199	12819	12386	3.04	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-08	Instrumnet Name :	P8
Client Sample ID :	MH2H21	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:25:29	DataFile Name :	070AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	742495	751889	741193	745192	0.78	cps
Antimony	121-1	20839	21253	21367	21153	1.31	cps
Arsenic	75-2	4617	4451	4791	4620	3.68	cps
Barium	135-1	1724493	1737085	1739340	1733639	0.46	cps
Barium	137-1	3021695	3034964	3005922	3020860	0.48	cps
Beryllium	9-1	10225	10249	10240	10238	0.12	cps
Bismuth	209-1	6709743	7165641	6905619	6927001	3.30	cps
Bismuth	209-2	2524910	2567139	2529998	2540683	0.91	cps
Bromine	81-1	19554	20488	20749	20264	3.10	cps
Cadmium	108-1	1070	1283	1313	1222	10.86	cps
Cadmium	106-1	7125	7305	7392	7274	1.87	cps
Cadmium	111-1	19911	20285	20218	20138	0.99	cps
Calcium	43-1	5837901	5857499	6042705	5912702	1.91	cps
Calcium	44-1	93905709	94316349	96038465	94753507	1.19	cps
Carbon	12-1	7574368	7900483	8024705	7833185	2.97	cps
Carbon	12-2	54102	54236	54688	54342	0.56	cps
Chlorine	35-1	92531719	97387199	100659639	96859519	4.22	cps
Chlorine	35-2	348318	352648	352577	351181	0.71	cps
Chromium	52-2	113949	113606	114604	114053	0.44	cps
Cobalt	59-2	74869	74440	73937	74415	0.63	cps
Copper	63-2	441400	441362	446554	443105	0.67	cps
Dysprosium	156-1	117706	116730	118994	117810	0.96	cps
Dysprosium	156-2	33328	32489	32820	32879	1.28	cps
Erbium	164-1	90921	92659	93408	92329	1.38	cps
Erbium	164-2	28160	27983	27859	28001	0.54	cps
Gadolinium	160-1	100122	100898	103350	101456	1.66	cps
Gadolinium	160-2	37780	38897	38515	38397	1.48	cps
Holmium	165-1	11212330	11997498	11545454	11585094	3.40	cps
Holmium	165-2	3792147	3705423	3697683	3731751	1.41	cps
Indium	115-1	8795301	9460498	9025791	9093863	3.71	cps
Indium	115-2	765587	764993	768890	766490	0.27	cps
Iron	54-2	4225176	4276380	4205367	4235641	0.87	cps
Iron	56-2	77619731	77877581	78279992	77925768	0.43	cps
Iron	57-2	2012076	2021073	2013219	2015456	0.24	cps
Krypton	83-1	240	273	320	278	14.47	cps
Lead	206-1	3714333	3719153	3687303	3706929	0.46	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-08	Instrumnet Name :	P8
Client Sample ID :	MH2H21	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:25:29	DataFile Name :	070AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	3049533	3038445	3097345	3061774	1.02	cps
Lead	208-1	14188804	14227154	14230522	14215493	0.16	cps
Lithium	6-1	5177831	5478012	5443373	5366406	3.06	cps
Magnesium	24-2	4896293	4939956	4954561	4930270	0.61	cps
Manganese	55-2	2157605	2170718	2201952	2176758	1.05	cps
Molybdenum	94-1	31860	32197	32779	32279	1.44	cps
Molybdenum	95-1	27167	27537	28245	27650	1.98	cps
Molybdenum	96-1	32338	33687	33497	33174	2.20	cps
Molybdenum	97-1	17064	17234	17378	17225	0.91	cps
Molybdenum	98-1	42946	44351	44789	44028	2.19	cps
Neodymium	150-1	169758	168521	171500	169926	0.88	cps
Neodymium	150-2	38408	38348	38014	38257	0.56	cps
Nickel	60-2	69977	69261	69780	69673	0.53	cps
Phosphorus	31-2	5214	5608	5361	5394	3.69	cps
Potassium	39-2	328083	328566	329178	328609	0.17	cps
Rhodium	103-1	7719864	8247110	8033104	8000026	3.31	cps
Rhodium	103-2	2899900	2929059	2873996	2900985	0.95	cps
Scandium	45-1	6272912	6833417	6507867	6538065	4.31	cps
Scandium	45-2	101797	102539	101763	102033	0.43	cps
Selenium	82-1	503	430	483	472	8.03	cps
Selenium	77-2	170	183	187	180	4.90	cps
Selenium	78-2	120	127	117	121	4.20	cps
Silicon	28-1	32806586	33309093	34643794	33586491	2.83	cps
Silver	107-1	23333	22832	23153	23106	1.10	cps
Silver	109-1	21407	21761	22472	21880	2.48	cps
Sodium	23-2	242515	243448	242917	242960	0.19	cps
Strontium	86-1	1579759	1632004	1640618	1617460	2.04	cps
Strontium	88-1	13846600	13999209	13954836	13933548	0.56	cps
Sulfur	34-1	323581	327858	328206	326548	0.79	cps
Terbium	159-1	11508550	12449933	12062877	12007120	3.94	cps
Terbium	159-2	3647340	3636501	3556846	3613562	1.37	cps
Thallium	203-1	7662	7932	7692	7762	1.91	cps
Thallium	205-1	18190	18463	19141	18598	2.63	cps
Tin	118-1	59917	60667	61216	60600	1.08	cps
Titanium	47-1	429645	433032	439443	434040	1.15	cps
Uranium	238-1	136646	136642	138394	137228	0.74	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-08	Instrumnet Name :	P8
Client Sample ID :	MH2H21	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:25:29	DataFile Name :	070AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	133454	133445	133475	133458	0.01	cps
Ytterbium	172-1	27706	27626	27853	27728	0.42	cps
Ytterbium	172-2	10474	10287	10034	10265	2.15	cps
Ytterbium	176-1	17769	18410	18333	18170	1.93	cps
Ytterbium	176-2	6625	6665	6468	6586	1.58	cps
Yttrium	89-1	17234203	18669567	18208064	18037278	4.06	cps
Yttrium	89-2	1089941	1069530	1083053	1080841	0.96	cps
Zinc	66-2	360565	360915	359303	360261	0.24	cps
Zirconium	90-1	44976	46383	45781	45714	1.55	cps
Zirconium	91-1	10110	10277	10200	10196	0.82	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-09	Instrumnet Name :	P8
Client Sample ID :	MH2H22	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:28:39	DataFile Name :	071AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	759118	763520	753641	758760	0.65	cps
Antimony	121-1	15939	16627	17064	16543	3.43	cps
Arsenic	75-2	4581	4337	4464	4461	2.73	cps
Barium	135-1	1862315	1930498	1925755	1906189	2.00	cps
Barium	137-1	3251988	3335952	3295276	3294405	1.27	cps
Beryllium	9-1	8436	8443	8440	8440	0.04	cps
Bismuth	209-1	6882615	6809421	6739822	6810619	1.05	cps
Bismuth	209-2	2549589	2511073	2592442	2551035	1.60	cps
Bromine	81-1	14217	14965	15155	14779	3.35	cps
Cadmium	108-1	967	1030	1033	1010	3.72	cps
Cadmium	106-1	6975	7309	6732	7005	4.13	cps
Cadmium	111-1	17279	17381	17325	17329	0.30	cps
Calcium	43-1	6898182	6935003	7003057	6945414	0.77	cps
Calcium	44-1	111749192	112327538	113732595	112603108	0.91	cps
Carbon	12-1	4081443	4293990	4353722	4243052	3.37	cps
Carbon	12-2	28281	29379	28795	28818	1.91	cps
Chlorine	35-1	93128555	98494402	100245129	97289362	3.81	cps
Chlorine	35-2	345402	348461	348776	347546	0.54	cps
Chromium	52-2	66165	64930	66838	65978	1.47	cps
Cobalt	59-2	77258	77104	76943	77101	0.20	cps
Copper	63-2	326413	327647	326294	326784	0.23	cps
Dysprosium	156-1	130554	129722	132539	130938	1.11	cps
Dysprosium	156-2	37319	36647	36961	36975	0.91	cps
Erbium	164-1	104352	103767	103008	103709	0.65	cps
Erbium	164-2	31871	31604	31564	31680	0.53	cps
Gadolinium	160-1	113501	113370	114008	113626	0.30	cps
Gadolinium	160-2	42019	42932	42738	42563	1.13	cps
Holmium	165-1	11477573	11397295	11276060	11383643	0.89	cps
Holmium	165-2	3674853	3787326	3670770	3710983	1.78	cps
Indium	115-1	8917428	9152574	8869445	8979816	1.69	cps
Indium	115-2	760777	768366	769818	766320	0.63	cps
Iron	54-2	3926450	3856467	3967194	3916704	1.43	cps
Iron	56-2	72912924	72841579	72257106	72670536	0.50	cps
Iron	57-2	1821599	1885646	1846865	1851370	1.74	cps
Krypton	83-1	273	293	287	284	3.58	cps
Lead	206-1	2629460	2655290	2640575	2641775	0.49	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-09	Instrumnet Name :	P8
Client Sample ID :	MH2H22	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:28:39	DataFile Name :	071AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2199636	2184063	2183563	2189087	0.42	cps
Lead	208-1	10155839	10209302	10215121	10193421	0.32	cps
Lithium	6-1	5298672	5327687	5306643	5311001	0.28	cps
Magnesium	24-2	2263881	2256286	2227254	2249140	0.86	cps
Manganese	55-2	1441389	1453064	1457700	1450717	0.58	cps
Molybdenum	94-1	34543	35014	35378	34978	1.20	cps
Molybdenum	95-1	32287	32822	33306	32805	1.55	cps
Molybdenum	96-1	38607	38199	39309	38705	1.45	cps
Molybdenum	97-1	19798	19744	20258	19933	1.42	cps
Molybdenum	98-1	51525	52275	51753	51851	0.74	cps
Neodymium	150-1	192176	194176	198096	194816	1.55	cps
Neodymium	150-2	44276	43373	43326	43658	1.23	cps
Nickel	60-2	83781	83946	83727	83818	0.14	cps
Phosphorus	31-2	5338	5304	5228	5290	1.07	cps
Potassium	39-2	355842	357225	354348	355805	0.40	cps
Rhodium	103-1	7978673	7926849	7888111	7931211	0.57	cps
Rhodium	103-2	2874678	2860658	2918908	2884748	1.05	cps
Scandium	45-1	6557340	6507980	6417512	6494277	1.09	cps
Scandium	45-2	102160	102871	102582	102538	0.35	cps
Selenium	82-1	297	267	360	308	15.48	cps
Selenium	77-2	193	180	170	181	6.47	cps
Selenium	78-2	137	110	123	123	10.81	cps
Silicon	28-1	24801776	25621992	25841994	25421921	2.16	cps
Silver	107-1	16290	16687	16974	16650	2.06	cps
Silver	109-1	15529	15859	16910	16099	4.48	cps
Sodium	23-2	405116	405777	404779	405224	0.13	cps
Strontium	86-1	1963752	1978113	1956066	1965977	0.57	cps
Strontium	88-1	16649690	16855098	17151637	16885475	1.49	cps
Sulfur	34-1	295764	294593	295254	295204	0.20	cps
Terbium	159-1	11703764	11658831	11595259	11652618	0.47	cps
Terbium	159-2	3617358	3658946	3598744	3625016	0.85	cps
Thallium	203-1	8636	8806	8640	8694	1.12	cps
Thallium	205-1	20122	20790	20580	20497	1.67	cps
Tin	118-1	55047	55127	55432	55202	0.37	cps
Titanium	47-1	384488	391339	390858	388895	0.98	cps
Uranium	238-1	150267	151394	152311	151324	0.68	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-09	Instrumnet Name :	P8
Client Sample ID :	MH2H22	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:28:39	DataFile Name :	071AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	153997	154608	154813	154473	0.27	cps
Ytterbium	172-1	29216	30592	29937	29915	2.30	cps
Ytterbium	172-2	11121	11405	10771	11099	2.86	cps
Ytterbium	176-1	19281	19578	20202	19687	2.39	cps
Ytterbium	176-2	7249	7275	7192	7239	0.59	cps
Yttrium	89-1	18206797	18035584	17675591	17972658	1.51	cps
Yttrium	89-2	1088194	1093887	1096243	1092775	0.38	cps
Zinc	66-2	234491	235938	235138	235189	0.31	cps
Zirconium	90-1	45521	45517	45273	45437	0.31	cps
Zirconium	91-1	10257	10521	10397	10392	1.27	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV011	Instrumnet Name :	P8
Client Sample ID :	CCV011	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:31:47	DataFile Name :	072CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1735799	1744473	1754566	1744946	0.54	cps
Antimony	121-1	4289124	4409820	4383236	4360727	1.45	cps
Arsenic	75-2	70616	70837	70823	70758	0.18	cps
Barium	135-1	5600556	5713173	5670776	5661502	1.00	cps
Barium	137-1	9824635	9879770	9742465	9815623	0.70	cps
Beryllium	9-1	1607176	1640722	1624164	1624021	1.03	cps
Bismuth	209-1	6063559	6010398	5987785	6020580	0.65	cps
Bismuth	209-2	2234648	2195736	2221960	2217448	0.89	cps
Bromine	81-1	6288	6732	6625	6548	3.54	cps
Cadmium	108-1	85046	85261	84809	85039	0.27	cps
Cadmium	106-1	124892	125127	125914	125311	0.43	cps
Cadmium	111-1	1047444	1048031	1051427	1048967	0.21	cps
Calcium	43-1	8017074	8096540	8063142	8058919	0.50	cps
Calcium	44-1	131972811	131313558	131883031	131723134	0.27	cps
Carbon	12-1	2169461	2201631	2217795	2196296	1.12	cps
Carbon	12-2	17217	17067	17077	17120	0.49	cps
Chlorine	35-1	5097402	4663458	4419682	4726847	7.26	cps
Chlorine	35-2	13643	13119	11945	12903	6.74	cps
Chromium	52-2	821870	822749	814747	819789	0.54	cps
Cobalt	59-2	1604148	1614378	1574564	1597697	1.29	cps
Copper	63-2	11317614	11409982	11257981	11328525	0.68	cps
Dysprosium	156-1	647	753	767	722	9.11	cps
Dysprosium	156-2	50	70	120	80	45.07	cps
Erbium	164-1	293	283	260	279	6.13	cps
Erbium	164-2	80	63	117	87	31.49	cps
Gadolinium	160-1	237	273	203	238	14.72	cps
Gadolinium	160-2	77	67	97	80	19.09	cps
Holmium	165-1	10794391	10725536	10470689	10663539	1.60	cps
Holmium	165-2	3453877	3509643	3463427	3475649	0.86	cps
Indium	115-1	8160372	7988779	7989407	8046186	1.23	cps
Indium	115-2	684525	688782	695459	689589	0.80	cps
Iron	54-2	8381162	8418039	8379863	8393021	0.26	cps
Iron	56-2	156029374	155917408	153215194	155053992	1.03	cps
Iron	57-2	3915641	3895703	3973381	3928242	1.03	cps
Krypton	83-1	127	123	120	123	2.70	cps
Lead	206-1	17707205	17691132	17755600	17717979	0.19	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV011	Instrumnet Name :	P8
Client Sample ID :	CCV011	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:31:47	DataFile Name :	072CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	15257077	15189989	15207904	15218323	0.23	cps
Lead	208-1	69966488	69466481	69837271	69756747	0.37	cps
Lithium	6-1	4815853	4722453	4811961	4783422	1.10	cps
Magnesium	24-2	29743561	29880939	29829498	29817999	0.23	cps
Manganese	55-2	3609163	3608531	3578940	3598878	0.48	cps
Molybdenum	94-1	16075429	16191067	16009142	16091879	0.57	cps
Molybdenum	95-1	23262971	23632853	23326279	23407368	0.85	cps
Molybdenum	96-1	25441790	25560785	25252983	25418520	0.61	cps
Molybdenum	97-1	14430708	14413839	14262029	14368859	0.65	cps
Molybdenum	98-1	37573814	37450798	37650183	37558265	0.27	cps
Neodymium	150-1	707	657	583	649	9.56	cps
Neodymium	150-2	40	47	33	40	16.68	cps
Nickel	60-2	399579	399651	397985	399072	0.24	cps
Phosphorus	31-2	14841	15061	14701	14868	1.22	cps
Potassium	39-2	8445970	8501819	8428132	8458641	0.45	cps
Rhodium	103-1	7099206	6909462	6886052	6964906	1.68	cps
Rhodium	103-2	2520001	2521367	2529033	2523467	0.19	cps
Scandium	45-1	5938465	5892445	5915476	5915462	0.39	cps
Scandium	45-2	93293	92951	94357	93534	0.78	cps
Selenium	82-1	67066	67442	67428	67312	0.32	cps
Selenium	77-2	963	1013	1040	1006	3.87	cps
Selenium	78-2	3350	3464	3220	3345	3.64	cps
Silicon	28-1	23401745	23577443	23461731	23480307	0.38	cps
Silver	107-1	5435135	5437913	5481122	5451390	0.47	cps
Silver	109-1	5240186	5164855	5296597	5233879	1.26	cps
Sodium	23-2	59626336	59333091	59214797	59391408	0.36	cps
Strontium	86-1	1670432	1681586	1687139	1679719	0.51	cps
Strontium	88-1	14291109	14223591	14239745	14251482	0.25	cps
Sulfur	34-1	752103	752628	751228	751986	0.09	cps
Terbium	159-1	10851611	10820912	10911810	10861444	0.43	cps
Terbium	159-2	3344305	3365236	3347334	3352291	0.34	cps
Thallium	203-1	4592297	4544057	4588407	4574920	0.59	cps
Thallium	205-1	10816105	10919619	10783657	10839794	0.66	cps
Tin	118-1	3833555	3846369	3768530	3816151	1.09	cps
Titanium	47-1	7024254	7046562	7132919	7067912	0.81	cps
Uranium	238-1	14507285	14643250	14780033	14643523	0.93	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV011	Instrumnet Name :	P8
Client Sample ID :	CCV011	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:31:47	DataFile Name :	072CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	650070	651825	650265	650720	0.15	cps
Ytterbium	172-1	327	260	250	279	14.94	cps
Ytterbium	172-2	147	117	100	121	19.53	cps
Ytterbium	176-1	21621	22195	22880	22232	2.83	cps
Ytterbium	176-2	7179	7112	6985	7092	1.39	cps
Yttrium	89-1	15456906	15197109	15216187	15290067	0.95	cps
Yttrium	89-2	920392	923738	936190	926773	0.90	cps
Zinc	66-2	1116693	1128929	1124235	1123285	0.55	cps
Zirconium	90-1	8168578	8094460	8116089	8126375	0.47	cps
Zirconium	91-1	1846521	1860861	1838837	1848740	0.60	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB011	Instrumnet Name :	P8
Client Sample ID :	CCB011	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:42:42	DataFile Name :	075CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	20	33	37	30	29.40	cps
Antimony	121-1	177	150	180	169	9.74	cps
Arsenic	75-2	0	0	3	1	173.21	cps
Barium	135-1	403	417	467	429	7.79	cps
Barium	137-1	780	667	707	718	8.01	cps
Beryllium	9-1	245	271	260	259	5.09	cps
Bismuth	209-1	7020307	6944845	6964566	6976572	0.56	cps
Bismuth	209-2	2606173	2639963	2618676	2621604	0.65	cps
Bromine	81-1	5898	5411	6011	5773	5.52	cps
Cadmium	108-1	23	17	20	20	16.65	cps
Cadmium	106-1	4828	5001	4758	4862	2.58	cps
Cadmium	111-1	3383	3512	3336	3411	2.67	cps
Calcium	43-1	337	397	250	328	22.50	cps
Calcium	44-1	4851	4954	4834	4880	1.33	cps
Carbon	12-1	1797366	1806641	1810614	1804873	0.38	cps
Carbon	12-2	12399	11978	11958	12112	2.05	cps
Chlorine	35-1	983446	958603	922403	954818	3.21	cps
Chlorine	35-2	3187	2960	2927	3025	4.68	cps
Chromium	52-2	407	463	453	441	6.86	cps
Cobalt	59-2	107	150	90	116	26.80	cps
Copper	63-2	2140	2207	1957	2101	6.16	cps
Dysprosium	156-1	330	353	317	333	5.57	cps
Dysprosium	156-2	13	13	7	11	34.61	cps
Erbium	164-1	50	73	30	51	42.43	cps
Erbium	164-2	20	13	20	18	21.66	cps
Gadolinium	160-1	33	33	33	33	0.00	cps
Gadolinium	160-2	3	10	7	7	50.03	cps
Holmium	165-1	10948244	10944368	10756245	10882952	1.01	cps
Holmium	165-2	3613176	3594557	3601557	3603097	0.26	cps
Indium	115-1	8925001	8807778	8679703	8804161	1.39	cps
Indium	115-2	742462	740159	743448	742023	0.23	cps
Iron	54-2	413	420	417	417	0.80	cps
Iron	56-2	6061	5681	7849	6530	17.72	cps
Iron	57-2	147	167	110	141	20.37	cps
Krypton	83-1	133	60	90	94	39.04	cps
Lead	206-1	1920	1944	1847	1903	2.65	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB011	Instrumnet Name :	P8
Client Sample ID :	CCB011	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:42:42	DataFile Name :	075CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1583	1733	1550	1622	6.02	cps
Lead	208-1	7718	7771	7384	7624	2.75	cps
Lithium	6-1	4909066	4822771	4811930	4847922	1.10	cps
Magnesium	24-2	417	397	323	379	12.97	cps
Manganese	55-2	337	340	290	322	8.67	cps
Molybdenum	94-1	247	313	317	292	13.51	cps
Molybdenum	95-1	290	267	247	268	8.10	cps
Molybdenum	96-1	363	327	303	331	9.13	cps
Molybdenum	97-1	140	130	130	133	4.33	cps
Molybdenum	98-1	417	470	370	419	11.94	cps
Neodymium	150-1	20	23	27	23	14.29	cps
Neodymium	150-2	7	0	0	2	173.21	cps
Nickel	60-2	743	700	670	704	5.23	cps
Phosphorus	31-2	23	13	13	17	34.65	cps
Potassium	39-2	3861	3600	3677	3713	3.60	cps
Rhodium	103-1	7901649	7867708	7886582	7885313	0.22	cps
Rhodium	103-2	2898815	2873471	2839585	2870623	1.04	cps
Scandium	45-1	5957566	5856180	5959475	5924407	1.00	cps
Scandium	45-2	91029	92032	92807	91956	0.97	cps
Selenium	82-1	-50	40	47	12	441.86	cps
Selenium	77-2	0	0	3	1	173.21	cps
Selenium	78-2	3	0	0	1	173.21	cps
Silicon	28-1	247535	248758	247613	247969	0.28	cps
Silver	107-1	177	160	217	184	15.79	cps
Silver	109-1	130	163	133	142	12.91	cps
Sodium	23-2	9984	10387	10300	10224	2.08	cps
Strontium	86-1	260	300	293	284	7.53	cps
Strontium	88-1	1080	1130	1123	1111	2.44	cps
Sulfur	34-1	228968	227689	227268	227975	0.39	cps
Terbium	159-1	11277724	11128802	11207913	11204813	0.66	cps
Terbium	159-2	3510841	3483523	3497374	3497246	0.39	cps
Thallium	203-1	537	450	463	483	9.66	cps
Thallium	205-1	1243	1357	1140	1247	8.69	cps
Tin	118-1	3520	3521	3634	3558	1.84	cps
Titanium	47-1	100	53	100	84	31.91	cps
Uranium	238-1	53	53	30	46	29.57	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB011	Instrumnet Name :	P8
Client Sample ID :	CCB011	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:42:42	DataFile Name :	075CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	3	10	7	7	50.03	cps
Ytterbium	172-1	43	57	103	68	46.48	cps
Ytterbium	172-2	23	13	20	19	26.96	cps
Ytterbium	176-1	1470	1403	1293	1389	6.42	cps
Ytterbium	176-2	117	170	200	162	26.02	cps
Yttrium	89-1	15718101	15587874	15476511	15594162	0.78	cps
Yttrium	89-2	934007	933724	925894	931208	0.49	cps
Zinc	66-2	180	153	180	171	9.00	cps
Zirconium	90-1	503	507	473	494	3.71	cps
Zirconium	91-1	103	70	87	87	19.23	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-10	Instrumnet Name :	P8
Client Sample ID :	MH2H23	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:46:03	DataFile Name :	076AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	730963	724359	728590	727970	0.46	cps
Antimony	121-1	12196	12312	11942	12150	1.56	cps
Arsenic	75-2	3791	3751	4037	3859	4.02	cps
Barium	135-1	3045132	3078028	3093589	3072250	0.81	cps
Barium	137-1	5266825	5290893	5350593	5302770	0.81	cps
Beryllium	9-1	7140	7277	7267	7228	1.06	cps
Bismuth	209-1	6714942	6714062	6809186	6746063	0.81	cps
Bismuth	209-2	2447679	2504923	2466681	2473095	1.18	cps
Bromine	81-1	13870	14434	14578	14294	2.62	cps
Cadmium	108-1	867	763	753	794	7.90	cps
Cadmium	106-1	6145	6605	6315	6355	3.66	cps
Cadmium	111-1	14089	14893	14507	14496	2.78	cps
Calcium	43-1	8535928	8547201	8670429	8584519	0.87	cps
Calcium	44-1	137860518	138644318	139865458	138790098	0.73	cps
Carbon	12-1	3695620	3799416	3856976	3784004	2.16	cps
Carbon	12-2	26364	26377	26380	26374	0.03	cps
Chlorine	35-1	85291832	91513775	95804012	90869873	5.82	cps
Chlorine	35-2	334936	337332	342624	338297	1.16	cps
Chromium	52-2	65710	66293	66152	66051	0.46	cps
Cobalt	59-2	75425	76896	75056	75792	1.28	cps
Copper	63-2	251495	249810	251254	250853	0.36	cps
Dysprosium	156-1	130789	130792	131047	130876	0.11	cps
Dysprosium	156-2	36914	37322	37442	37226	0.74	cps
Erbium	164-1	102534	104523	103935	103664	0.99	cps
Erbium	164-2	31751	31387	32035	31724	1.02	cps
Gadolinium	160-1	112038	113814	116157	114003	1.81	cps
Gadolinium	160-2	42648	43019	43380	43016	0.85	cps
Holmium	165-1	11171061	11341976	11203275	11238771	0.81	cps
Holmium	165-2	3678325	3630447	3670567	3659780	0.70	cps
Indium	115-1	8562376	8772384	8820741	8718500	1.58	cps
Indium	115-2	741912	748470	749722	746701	0.56	cps
Iron	54-2	3459788	3535269	3502180	3499079	1.08	cps
Iron	56-2	64665401	65246286	64934366	64948684	0.45	cps
Iron	57-2	1645730	1648534	1654914	1649726	0.29	cps
Krypton	83-1	233	323	290	282	16.12	cps
Lead	206-1	1381724	1385976	1387305	1385002	0.21	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-10	Instrumnet Name :	P8
Client Sample ID :	MH2H23	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:46:03	DataFile Name :	076AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1146873	1162702	1177556	1162377	1.32	cps
Lead	208-1	5537214	5645550	5694667	5625810	1.43	cps
Lithium	6-1	5077597	5213618	5162661	5151292	1.33	cps
Magnesium	24-2	2257917	2292595	2275351	2275288	0.76	cps
Manganese	55-2	985801	986232	994948	988994	0.52	cps
Molybdenum	94-1	31636	32615	32668	32306	1.80	cps
Molybdenum	95-1	32314	33514	33300	33043	1.94	cps
Molybdenum	96-1	37490	37454	38403	37782	1.42	cps
Molybdenum	97-1	19951	20198	20231	20127	0.76	cps
Molybdenum	98-1	52264	52893	52706	52621	0.61	cps
Neodymium	150-1	194271	199651	199962	197962	1.62	cps
Neodymium	150-2	44309	43594	44152	44019	0.85	cps
Nickel	60-2	132399	134141	135251	133930	1.07	cps
Phosphorus	31-2	4818	4994	5081	4964	2.70	cps
Potassium	39-2	367136	369067	370053	368752	0.40	cps
Rhodium	103-1	7663799	7721602	7719829	7701744	0.43	cps
Rhodium	103-2	2785326	2757234	2812001	2784854	0.98	cps
Scandium	45-1	6283115	6373331	6286414	6314287	0.81	cps
Scandium	45-2	98484	99581	99679	99248	0.67	cps
Selenium	82-1	297	200	237	244	19.96	cps
Selenium	77-2	207	193	197	199	3.49	cps
Selenium	78-2	90	103	113	102	11.45	cps
Silicon	28-1	33032362	33963446	33991156	33662321	1.62	cps
Silver	107-1	12302	12839	12279	12474	2.54	cps
Silver	109-1	11788	11668	11762	11740	0.54	cps
Sodium	23-2	318002	320380	322979	320454	0.78	cps
Strontium	86-1	2193462	2261156	2281683	2245434	2.06	cps
Strontium	88-1	19012175	19158492	19592938	19254535	1.57	cps
Sulfur	34-1	289852	292973	294996	292607	0.89	cps
Terbium	159-1	11245538	11398105	11561641	11401761	1.39	cps
Terbium	159-2	3528579	3564273	3577083	3556645	0.71	cps
Thallium	203-1	9607	9263	9320	9397	1.96	cps
Thallium	205-1	23101	23541	23378	23340	0.95	cps
Tin	118-1	36933	36976	36719	36876	0.37	cps
Titanium	47-1	290494	291825	293882	292067	0.58	cps
Uranium	238-1	175363	177733	175226	176107	0.80	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-10	Instrumnet Name :	P8
Client Sample ID :	MH2H23	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:46:03	DataFile Name :	076AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	171976	171963	173183	172374	0.41	cps
Ytterbium	172-1	29289	29102	29890	29427	1.40	cps
Ytterbium	172-2	11205	11041	11021	11089	0.91	cps
Ytterbium	176-1	19204	19648	20019	19624	2.08	cps
Ytterbium	176-2	7009	6805	6892	6902	1.48	cps
Yttrium	89-1	17092216	17440186	17596235	17376212	1.48	cps
Yttrium	89-2	1053207	1063055	1060745	1059002	0.49	cps
Zinc	66-2	133895	134631	134796	134441	0.36	cps
Zirconium	90-1	36187	37293	38022	37167	2.49	cps
Zirconium	91-1	8293	8213	8316	8274	0.66	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-11	Instrumnet Name :	P8
Client Sample ID :	MH2H24	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:49:18	DataFile Name :	077AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	738792	729695	727452	731979	0.82	cps
Antimony	121-1	38919	39129	39233	39094	0.41	cps
Arsenic	75-2	7372	7599	7202	7391	2.69	cps
Barium	135-1	2002930	2008200	1986374	1999168	0.57	cps
Barium	137-1	3519494	3486846	3465531	3490624	0.78	cps
Beryllium	9-1	9933	10155	10294	10127	1.79	cps
Bismuth	209-1	6953914	6897391	7003166	6951490	0.76	cps
Bismuth	209-2	2572015	2575799	2529759	2559191	1.00	cps
Bromine	81-1	11688	12549	12522	12253	3.99	cps
Cadmium	108-1	2100	2124	2044	2089	1.97	cps
Cadmium	106-1	7982	8353	8409	8248	2.81	cps
Cadmium	111-1	31051	31300	31142	31164	0.41	cps
Calcium	43-1	5607619	5716698	5714156	5679491	1.10	cps
Calcium	44-1	90039802	91839952	92651132	91510295	1.46	cps
Carbon	12-1	4257186	4473831	4530912	4420643	3.27	cps
Carbon	12-2	30609	30679	30395	30561	0.48	cps
Chlorine	35-1	89849375	94167489	96291309	93436058	3.51	cps
Chlorine	35-2	337851	335747	336215	336604	0.33	cps
Chromium	52-2	112921	111573	111090	111861	0.85	cps
Cobalt	59-2	88472	88238	88700	88470	0.26	cps
Copper	63-2	747363	750179	750427	749323	0.23	cps
Dysprosium	156-1	120994	122632	123315	122314	0.98	cps
Dysprosium	156-2	34601	34234	34157	34331	0.69	cps
Erbium	164-1	96026	97027	97679	96911	0.86	cps
Erbium	164-2	30375	30164	29713	30084	1.12	cps
Gadolinium	160-1	106404	106921	107855	107060	0.69	cps
Gadolinium	160-2	40491	39679	40137	40102	1.02	cps
Holmium	165-1	11368735	11327944	11552194	11416291	1.05	cps
Holmium	165-2	3720053	3768947	3665340	3718113	1.39	cps
Indium	115-1	9034775	8788208	9088055	8970346	1.78	cps
Indium	115-2	765667	759665	757747	761027	0.54	cps
Iron	54-2	5875745	5847156	5769471	5830791	0.94	cps
Iron	56-2	109576928	109785345	108646885	109336386	0.55	cps
Iron	57-2	2809556	2784951	2711521	2768676	1.84	cps
Krypton	83-1	210	207	243	220	9.22	cps
Lead	206-1	7334355	7232745	7195229	7254110	0.99	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-11	Instrumnet Name :	P8
Client Sample ID :	MH2H24	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:49:18	DataFile Name :	077AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	6019061	6059928	6077707	6052232	0.50	cps
Lead	208-1	27946820	28012559	28051182	28003520	0.19	cps
Lithium	6-1	5313498	5262822	5325861	5300727	0.63	cps
Magnesium	24-2	1952267	1938363	1898346	1929659	1.45	cps
Manganese	55-2	3333680	3295732	3261859	3297090	1.09	cps
Molybdenum	94-1	56143	57023	58000	57055	1.63	cps
Molybdenum	95-1	57635	59065	59205	58635	1.48	cps
Molybdenum	96-1	66756	67068	67134	66986	0.30	cps
Molybdenum	97-1	35509	36311	35997	35939	1.12	cps
Molybdenum	98-1	92445	93180	93462	93029	0.56	cps
Neodymium	150-1	179236	182229	183283	181583	1.16	cps
Neodymium	150-2	41608	40578	40070	40752	1.92	cps
Nickel	60-2	88543	88124	88151	88272	0.27	cps
Phosphorus	31-2	6305	6201	6088	6198	1.75	cps
Potassium	39-2	484622	480905	478987	481505	0.59	cps
Rhodium	103-1	7833228	7911017	7973651	7905965	0.89	cps
Rhodium	103-2	2885162	2883885	2860501	2876516	0.48	cps
Scandium	45-1	6504415	6441202	6489552	6478390	0.51	cps
Scandium	45-2	101491	100891	100350	100911	0.57	cps
Selenium	82-1	293	413	333	347	17.62	cps
Selenium	77-2	207	157	147	170	18.91	cps
Selenium	78-2	103	90	130	108	18.90	cps
Silicon	28-1	35485317	35466564	35981864	35644582	0.82	cps
Silver	107-1	46511	46950	47612	47024	1.18	cps
Silver	109-1	44034	45411	45318	44921	1.71	cps
Sodium	23-2	188905	190341	190236	189828	0.42	cps
Strontium	86-1	1914224	1896897	1925014	1912045	0.74	cps
Strontium	88-1	16188794	16378999	16261552	16276448	0.59	cps
Sulfur	34-1	323448	328708	331407	327854	1.23	cps
Terbium	159-1	11800192	11767464	11897999	11821885	0.57	cps
Terbium	159-2	3612212	3616902	3599474	3609529	0.25	cps
Thallium	203-1	7272	7392	7342	7335	0.82	cps
Thallium	205-1	17842	17559	17836	17746	0.91	cps
Tin	118-1	147851	150874	152285	150337	1.51	cps
Titanium	47-1	467819	476450	479020	474429	1.24	cps
Uranium	238-1	146776	147714	148520	147670	0.59	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-11	Instrumnet Name :	P8
Client Sample ID :	MH2H24	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:49:18	DataFile Name :	077AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	151242	148888	150417	150182	0.80	cps
Ytterbium	172-1	28421	29145	28758	28775	1.26	cps
Ytterbium	172-2	10768	10621	10571	10653	0.96	cps
Ytterbium	176-1	18566	18964	18703	18744	1.08	cps
Ytterbium	176-2	6972	6855	6725	6851	1.80	cps
Yttrium	89-1	17977082	17875258	17977016	17943119	0.33	cps
Yttrium	89-2	1076092	1071635	1073340	1073689	0.21	cps
Zinc	66-2	782061	777467	779454	779661	0.30	cps
Zirconium	90-1	63259	65513	64425	64399	1.75	cps
Zirconium	91-1	13860	14691	14701	14418	3.35	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-12	Instrumnet Name :	P8
Client Sample ID :	MH2H25	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:52:26	DataFile Name :	078AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	635873	628423	636516	633604	0.71	cps
Antimony	121-1	15969	15823	15953	15915	0.50	cps
Arsenic	75-2	4697	4254	4451	4467	4.97	cps
Barium	135-1	1321541	1344153	1342675	1336123	0.95	cps
Barium	137-1	2409239	2435403	2472047	2438896	1.29	cps
Beryllium	9-1	6156	6211	6228	6198	0.61	cps
Bismuth	209-1	7236588	6989328	6994586	7073501	2.00	cps
Bismuth	209-2	2571272	2560076	2536758	2556035	0.69	cps
Bromine	81-1	13590	14504	14388	14161	3.51	cps
Cadmium	108-1	857	717	860	811	10.09	cps
Cadmium	106-1	6625	6565	6422	6537	1.60	cps
Cadmium	111-1	14942	15162	14888	14997	0.97	cps
Calcium	43-1	4311930	4366881	4307194	4328668	0.77	cps
Calcium	44-1	69058621	70496432	70260254	69938436	1.10	cps
Carbon	12-1	3626167	3742245	3766585	3711665	2.02	cps
Carbon	12-2	25041	25265	25395	25234	0.71	cps
Chlorine	35-1	92029782	97057269	98953555	96013535	3.73	cps
Chlorine	35-2	338735	342065	343501	341434	0.72	cps
Chromium	52-2	47071	46846	46833	46917	0.28	cps
Cobalt	59-2	63457	65165	65329	64650	1.60	cps
Copper	63-2	297335	299217	299250	298600	0.37	cps
Dysprosium	156-1	116331	117887	119774	117997	1.46	cps
Dysprosium	156-2	33415	33890	33555	33620	0.72	cps
Erbium	164-1	93435	96110	95959	95168	1.58	cps
Erbium	164-2	29192	29035	29276	29168	0.42	cps
Gadolinium	160-1	101693	102835	103722	102750	0.99	cps
Gadolinium	160-2	38769	38465	38475	38570	0.45	cps
Holmium	165-1	12116290	11635191	11521633	11757705	2.68	cps
Holmium	165-2	3744361	3692438	3725982	3720927	0.71	cps
Indium	115-1	9459262	9202296	9064593	9242050	2.17	cps
Indium	115-2	765982	767865	769740	767862	0.24	cps
Iron	54-2	3284181	3268571	3292041	3281598	0.36	cps
Iron	56-2	60557257	60324609	60421122	60434330	0.19	cps
Iron	57-2	1539977	1555141	1515520	1536879	1.30	cps
Krypton	83-1	240	247	243	243	1.37	cps
Lead	206-1	2104184	2170760	2136387	2137110	1.56	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-12	Instrumnet Name :	P8
Client Sample ID :	MH2H25	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:52:26	DataFile Name :	078AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1731942	1780285	1778683	1763637	1.56	cps
Lead	208-1	8131846	8335352	8215985	8227728	1.24	cps
Lithium	6-1	5407795	5271367	5316430	5331864	1.30	cps
Magnesium	24-2	1461634	1417803	1436620	1438686	1.53	cps
Manganese	55-2	1177546	1180594	1181540	1179893	0.18	cps
Molybdenum	94-1	23533	24695	24495	24241	2.56	cps
Molybdenum	95-1	21767	22695	21914	22125	2.26	cps
Molybdenum	96-1	26889	26388	26786	26688	0.99	cps
Molybdenum	97-1	13487	13927	13970	13795	1.94	cps
Molybdenum	98-1	34817	35662	35582	35354	1.32	cps
Neodymium	150-1	175581	177925	177240	176916	0.68	cps
Neodymium	150-2	39227	39929	40347	39835	1.42	cps
Nickel	60-2	79289	80174	79758	79740	0.56	cps
Phosphorus	31-2	5061	4934	5018	5004	1.29	cps
Potassium	39-2	390066	391257	391461	390928	0.19	cps
Rhodium	103-1	8324916	7960738	8116142	8133932	2.25	cps
Rhodium	103-2	2929392	2902193	2906218	2912601	0.50	cps
Scandium	45-1	6677323	6543417	6491783	6570841	1.46	cps
Scandium	45-2	99944	101542	100541	100676	0.80	cps
Selenium	82-1	250	247	247	248	0.78	cps
Selenium	77-2	177	190	187	184	3.76	cps
Selenium	78-2	120	73	80	91	27.70	cps
Silicon	28-1	28303366	28552315	28679739	28511807	0.67	cps
Silver	107-1	15849	16373	16210	16144	1.66	cps
Silver	109-1	15262	15265	15976	15501	2.65	cps
Sodium	23-2	102365	100966	102708	102013	0.90	cps
Strontium	86-1	992779	1013299	1015689	1007256	1.25	cps
Strontium	88-1	8950364	9226411	9224142	9133639	1.74	cps
Sulfur	34-1	276533	281149	280025	279236	0.86	cps
Terbium	159-1	12259905	11670364	11759666	11896645	2.67	cps
Terbium	159-2	3641683	3625862	3474672	3580739	2.57	cps
Thallium	203-1	6658	6805	6929	6797	1.99	cps
Thallium	205-1	16764	17262	17075	17033	1.47	cps
Tin	118-1	52500	53414	53152	53022	0.89	cps
Titanium	47-1	314083	323174	321015	319424	1.49	cps
Uranium	238-1	114479	117188	116914	116194	1.28	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-12	Instrumnet Name :	P8
Client Sample ID :	MH2H25	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:52:26	DataFile Name :	078AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	123998	124075	123705	123926	0.16	cps
Ytterbium	172-1	26841	27258	27158	27086	0.80	cps
Ytterbium	172-2	9810	10531	9877	10073	3.95	cps
Ytterbium	176-1	17775	18423	17952	18050	1.85	cps
Ytterbium	176-2	6825	6428	6452	6568	3.39	cps
Yttrium	89-1	18544290	18216995	18244182	18335156	0.99	cps
Yttrium	89-2	1070033	1072597	1075473	1072701	0.25	cps
Zinc	66-2	200561	199598	202059	200739	0.62	cps
Zirconium	90-1	32535	32474	32855	32621	0.63	cps
Zirconium	91-1	7202	7389	7189	7260	1.54	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-13	Instrumnet Name :	P8
Client Sample ID :	MH2H26	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:55:40	DataFile Name :	079AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	696105	701683	691179	696322	0.75	cps
Antimony	121-1	29532	30778	30026	30112	2.08	cps
Arsenic	75-2	10451	10828	10708	10662	1.81	cps
Barium	135-1	1866461	1878218	1901694	1882124	0.95	cps
Barium	137-1	3198363	3256287	3309681	3254777	1.71	cps
Beryllium	9-1	8659	9148	8785	8864	2.86	cps
Bismuth	209-1	7506538	7063676	7112538	7227584	3.36	cps
Bismuth	209-2	2535594	2623765	2634033	2597797	2.08	cps
Bromine	81-1	14808	15222	15505	15178	2.31	cps
Cadmium	108-1	1987	2127	2147	2087	4.18	cps
Cadmium	106-1	8596	8299	8429	8442	1.76	cps
Cadmium	111-1	32385	32316	33004	32568	1.16	cps
Calcium	43-1	4641485	4832865	4812695	4762348	2.21	cps
Calcium	44-1	75277757	78133227	77840799	77083928	2.04	cps
Carbon	12-1	4041161	4227601	4251207	4173323	2.76	cps
Carbon	12-2	28451	28504	29139	28698	1.33	cps
Chlorine	35-1	128528801	135865168	137816445	134070138	3.65	cps
Chlorine	35-2	478445	482720	477430	479532	0.59	cps
Chromium	52-2	63316	63620	64582	63839	1.03	cps
Cobalt	59-2	83912	83768	83667	83782	0.15	cps
Copper	63-2	795839	805108	794812	798586	0.71	cps
Dysprosium	156-1	119498	122202	123736	121812	1.76	cps
Dysprosium	156-2	35059	34571	34194	34608	1.25	cps
Erbium	164-1	96618	99777	99085	98493	1.69	cps
Erbium	164-2	30311	30665	30211	30396	0.79	cps
Gadolinium	160-1	106188	106605	106679	106491	0.25	cps
Gadolinium	160-2	40244	40859	40591	40565	0.76	cps
Holmium	165-1	12009639	11561211	11649185	11740012	2.02	cps
Holmium	165-2	3687303	3713976	3715601	3705626	0.43	cps
Indium	115-1	9461529	9135691	9195471	9264231	1.87	cps
Indium	115-2	762364	775378	774536	770759	0.94	cps
Iron	54-2	5213080	5223540	5077362	5171327	1.58	cps
Iron	56-2	96473602	95765872	96090919	96110131	0.37	cps
Iron	57-2	2452866	2466786	2459110	2459587	0.28	cps
Krypton	83-1	233	270	310	271	14.14	cps
Lead	206-1	6686354	6813617	6900020	6799997	1.58	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-13	Instrumnet Name :	P8
Client Sample ID :	MH2H26	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:55:40	DataFile Name :	079AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	5659652	5799451	5784668	5747924	1.34	cps
Lead	208-1	26179641	26798780	26699458	26559293	1.25	cps
Lithium	6-1	5494998	5302877	5415172	5404349	1.79	cps
Magnesium	24-2	1612386	1623410	1594110	1609969	0.92	cps
Manganese	55-2	2930022	2980562	2923703	2944762	1.06	cps
Molybdenum	94-1	35946	35545	36448	35980	1.26	cps
Molybdenum	95-1	25587	26706	26816	26369	2.58	cps
Molybdenum	96-1	32298	33313	32415	32675	1.70	cps
Molybdenum	97-1	15949	16043	16563	16185	2.04	cps
Molybdenum	98-1	41525	41462	42582	41856	1.50	cps
Neodymium	150-1	177459	181357	179889	179568	1.10	cps
Neodymium	150-2	40160	39504	40080	39915	0.90	cps
Nickel	60-2	121127	122307	121114	121516	0.56	cps
Phosphorus	31-2	5998	5815	6031	5948	1.96	cps
Potassium	39-2	462982	467320	462702	464335	0.56	cps
Rhodium	103-1	8415635	8091081	8120034	8208917	2.19	cps
Rhodium	103-2	2893791	2948138	2889345	2910425	1.12	cps
Scandium	45-1	6869766	6629338	6619794	6706299	2.11	cps
Scandium	45-2	100891	103284	102018	102064	1.17	cps
Selenium	82-1	400	290	283	324	20.19	cps
Selenium	77-2	270	170	167	202	29.04	cps
Selenium	78-2	103	110	97	103	6.45	cps
Silicon	28-1	32355357	33185206	33268244	32936269	1.53	cps
Silver	107-1	53396	54621	54855	54291	1.44	cps
Silver	109-1	51175	53801	53640	52872	2.78	cps
Sodium	23-2	161792	162628	162331	162250	0.26	cps
Strontium	86-1	1361077	1468075	1480848	1436667	4.58	cps
Strontium	88-1	12348084	12716080	12715396	12593187	1.69	cps
Sulfur	34-1	290453	296280	298235	294989	1.37	cps
Terbium	159-1	12412598	11874409	11857708	12048238	2.62	cps
Terbium	159-2	3626646	3647158	3579437	3617747	0.96	cps
Thallium	203-1	8510	8626	8566	8567	0.68	cps
Thallium	205-1	20683	21374	21034	21030	1.64	cps
Tin	118-1	152235	155743	156634	154871	1.50	cps
Titanium	47-1	422336	429036	428908	426760	0.90	cps
Uranium	238-1	122794	123105	124476	123458	0.73	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-13	Instrumnet Name :	P8
Client Sample ID :	MH2H26	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 16:55:40	DataFile Name :	079AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	137573	137294	138973	137947	0.65	cps
Ytterbium	172-1	28608	29650	29667	29308	2.07	cps
Ytterbium	172-2	10998	10738	11125	10954	1.80	cps
Ytterbium	176-1	19151	19608	19658	19472	1.44	cps
Ytterbium	176-2	7189	7029	7159	7125	1.19	cps
Yttrium	89-1	19232252	18153476	18380807	18588845	3.06	cps
Yttrium	89-2	1080274	1096375	1094314	1090321	0.80	cps
Zinc	66-2	666117	666833	662720	665223	0.33	cps
Zirconium	90-1	56467	58174	59536	58059	2.65	cps
Zirconium	91-1	13133	12953	13240	13108	1.11	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01DLX2	Instrumnet Name :	P8
Client Sample ID :	MH2GX1	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 16:58:49	DataFile Name :	080AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	790179	783264	785385	786276	0.45	cps
Antimony	121-1	79328	79576	80139	79681	0.52	cps
Arsenic	75-2	20949	20742	20582	20758	0.89	cps
Barium	135-1	3779525	3812582	3745876	3779328	0.88	cps
Barium	137-1	6338322	6526322	6501365	6455336	1.58	cps
Beryllium	9-1	12391	12709	12753	12618	1.56	cps
Bismuth	209-1	7057774	7083162	7040946	7060627	0.30	cps
Bismuth	209-2	2644164	2574721	2536649	2585178	2.11	cps
Bromine	81-1	9650	9947	10127	9908	2.43	cps
Cadmium	108-1	1593	1610	1660	1621	2.14	cps
Cadmium	106-1	7876	7545	7792	7738	2.22	cps
Cadmium	111-1	22683	23088	23309	23027	1.38	cps
Calcium	43-1	2910611	2917051	2919747	2915803	0.16	cps
Calcium	44-1	46710473	46976299	46809374	46832049	0.29	cps
Carbon	12-1	3039409	3073446	3018926	3043927	0.90	cps
Carbon	12-2	20378	20711	20655	20581	0.87	cps
Chlorine	35-1	41844235	43272689	43666838	42927921	2.23	cps
Chlorine	35-2	149176	148833	149176	149062	0.13	cps
Chromium	52-2	62529	62278	62174	62327	0.29	cps
Cobalt	59-2	62754	62155	63273	62727	0.89	cps
Copper	63-2	2378056	2374858	2324191	2359035	1.28	cps
Dysprosium	156-1	75254	75930	75696	75627	0.45	cps
Dysprosium	156-2	20276	20529	20703	20502	1.05	cps
Erbium	164-1	61863	61813	62590	62088	0.70	cps
Erbium	164-2	18874	18593	19090	18852	1.32	cps
Gadolinium	160-1	63657	63852	63671	63727	0.17	cps
Gadolinium	160-2	23811	23835	23618	23755	0.50	cps
Holmium	165-1	11624483	11321020	11299219	11414907	1.59	cps
Holmium	165-2	3716839	3678916	3686360	3694039	0.54	cps
Indium	115-1	9051047	9072115	8985723	9036295	0.50	cps
Indium	115-2	763563	762250	760573	762129	0.20	cps
Iron	54-2	3669989	3606853	3672763	3649868	1.02	cps
Iron	56-2	67587954	66966869	66845981	67133601	0.59	cps
Iron	57-2	1742237	1703057	1740740	1728678	1.28	cps
Krypton	83-1	180	263	180	208	23.16	cps
Lead	206-1	30214195	30460989	30446806	30373996	0.46	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01DLX2	Instrumnet Name :	P8
Client Sample ID :	MH2GX1	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 16:58:49	DataFile Name :	080AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	25446417	25004572	25208017	25219669	0.88	cps
Lead	208-1	118990287	118245243	118510787	118582106	0.32	cps
Lithium	6-1	5176694	5070440	5022498	5089877	1.55	cps
Magnesium	24-2	788216	779647	785424	784429	0.56	cps
Manganese	55-2	3037154	3006535	3024214	3022634	0.51	cps
Molybdenum	94-1	57850	58412	57655	57972	0.68	cps
Molybdenum	95-1	43491	43728	43036	43419	0.81	cps
Molybdenum	96-1	51957	52843	52914	52571	1.01	cps
Molybdenum	97-1	26368	26799	26449	26539	0.86	cps
Molybdenum	98-1	68957	69791	69740	69496	0.67	cps
Neodymium	150-1	107664	106797	108161	107541	0.64	cps
Neodymium	150-2	23928	23858	23748	23845	0.38	cps
Nickel	60-2	56020	56361	56769	56383	0.67	cps
Phosphorus	31-2	3087	3314	3417	3273	5.16	cps
Potassium	39-2	206026	204862	203295	204728	0.67	cps
Rhodium	103-1	8068679	8004220	8049823	8040908	0.41	cps
Rhodium	103-2	2855320	2903330	2853360	2870670	0.99	cps
Scandium	45-1	6417217	6271004	6300687	6329636	1.22	cps
Scandium	45-2	99632	97924	98169	98575	0.94	cps
Selenium	82-1	270	227	230	242	9.96	cps
Selenium	77-2	97	127	103	109	14.47	cps
Selenium	78-2	90	60	57	69	26.65	cps
Silicon	28-1	28890353	29452585	29056825	29133254	0.99	cps
Silver	107-1	180275	182243	182713	181743	0.71	cps
Silver	109-1	172594	174786	174236	173872	0.66	cps
Sodium	23-2	270096	271994	270824	270971	0.35	cps
Strontium	86-1	1664298	1714834	1661217	1680116	1.79	cps
Strontium	88-1	14255448	14320146	14415098	14330230	0.56	cps
Sulfur	34-1	285873	286084	284333	285430	0.33	cps
Terbium	159-1	11700028	11643582	11630399	11658003	0.32	cps
Terbium	159-2	3573671	3577211	3574036	3574973	0.05	cps
Thallium	203-1	5141	5111	5298	5183	1.93	cps
Thallium	205-1	12900	12856	12289	12682	2.69	cps
Tin	118-1	168009	169542	171201	169584	0.94	cps
Titanium	47-1	773385	781045	777934	777454	0.50	cps
Uranium	238-1	219561	224980	223349	222630	1.25	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01DLX2	Instrumnet Name :	P8
Client Sample ID :	MH2GX1	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 16:58:49	DataFile Name :	080AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	93388	92308	93278	92991	0.64	cps
Ytterbium	172-1	22336	23080	22930	22782	1.73	cps
Ytterbium	172-2	8413	8063	8623	8366	3.38	cps
Ytterbium	176-1	15332	15679	15319	15444	1.32	cps
Ytterbium	176-2	5795	5521	5671	5662	2.42	cps
Yttrium	89-1	17295090	17415828	17322162	17344360	0.37	cps
Yttrium	89-2	1037715	1040514	1035358	1037863	0.25	cps
Zinc	66-2	1378321	1380136	1374975	1377811	0.19	cps
Zirconium	90-1	90236	91377	92172	91261	1.07	cps
Zirconium	91-1	19911	20308	20181	20134	1.01	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-02DLX2	Instrumnet Name :	P8
Client Sample ID :	MH2GX1D	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 17:02:00	DataFile Name :	081AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	760418	770948	766058	765808	0.69	cps
Antimony	121-1	76922	78245	78537	77901	1.11	cps
Arsenic	75-2	19994	20118	20108	20073	0.34	cps
Barium	135-1	3656869	3668199	3689712	3671593	0.45	cps
Barium	137-1	6284110	6281641	6295922	6287225	0.12	cps
Beryllium	9-1	12037	12360	12063	12153	1.47	cps
Bismuth	209-1	6875305	6906870	6881990	6888055	0.24	cps
Bismuth	209-2	3187399	2662732	2588836	2812989	11.60	cps
Bromine	81-1	9650	10127	9443	9740	3.60	cps
Cadmium	108-1	1527	1637	1583	1582	3.48	cps
Cadmium	106-1	7662	7375	7319	7452	2.47	cps
Cadmium	111-1	21990	22136	22210	22112	0.51	cps
Calcium	43-1	2872282	2854417	2853048	2859916	0.38	cps
Calcium	44-1	45699936	45555549	45511279	45588922	0.22	cps
Carbon	12-1	2960449	2996658	3017249	2991452	0.96	cps
Carbon	12-2	20681	20798	20441	20640	0.88	cps
Chlorine	35-1	37216741	39126953	40187716	38843803	3.88	cps
Chlorine	35-2	137876	139669	141050	139532	1.14	cps
Chromium	52-2	59600	61009	60270	60293	1.17	cps
Cobalt	59-2	59457	60873	61442	60590	1.69	cps
Copper	63-2	2237643	2307841	2283654	2276379	1.57	cps
Dysprosium	156-1	72686	73959	74881	73842	1.49	cps
Dysprosium	156-2	19735	20269	19852	19952	1.41	cps
Erbium	164-1	60801	60108	60674	60528	0.61	cps
Erbium	164-2	18330	18853	19027	18737	1.94	cps
Gadolinium	160-1	61879	62197	61638	61905	0.45	cps
Gadolinium	160-2	22846	23080	23234	23053	0.85	cps
Holmium	165-1	11526298	11209759	11221109	11319055	1.59	cps
Holmium	165-2	4600096	3829054	3645298	4024816	12.59	cps
Indium	115-1	8900941	8811197	8860234	8857458	0.51	cps
Indium	115-2	941179	792752	760282	831404	11.60	cps
Iron	54-2	3521498	3514937	3536157	3524197	0.31	cps
Iron	56-2	64506934	65916997	64665889	65029940	1.19	cps
Iron	57-2	1645791	1678605	1672596	1665664	1.05	cps
Krypton	83-1	133	267	207	202	33.02	cps
Lead	206-1	29428839	30022464	30041664	29830989	1.17	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-02DLX2	Instrumnet Name :	P8
Client Sample ID :	MH2GX1D	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 17:02:00	DataFile Name :	081AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	24291377	24872554	24886850	24683594	1.38	cps
Lead	208-1	114279500	115715617	116038687	115344601	0.81	cps
Lithium	6-1	5045191	5046891	4938519	5010201	1.24	cps
Magnesium	24-2	750356	757648	756425	754810	0.52	cps
Manganese	55-2	2875895	2938143	2929580	2914539	1.16	cps
Molybdenum	94-1	55791	56561	56728	56360	0.89	cps
Molybdenum	95-1	41585	41475	42398	41819	1.21	cps
Molybdenum	96-1	50471	50722	51846	51013	1.44	cps
Molybdenum	97-1	25393	25517	25383	25431	0.29	cps
Molybdenum	98-1	66639	67161	67175	66992	0.46	cps
Neodymium	150-1	104798	103622	104933	104451	0.69	cps
Neodymium	150-2	22586	23187	23167	22980	1.49	cps
Nickel	60-2	54009	55253	55150	54804	1.26	cps
Phosphorus	31-2	3044	3214	3270	3176	3.71	cps
Potassium	39-2	197462	199942	199225	198876	0.64	cps
Rhodium	103-1	7918159	7756847	7698506	7791171	1.46	cps
Rhodium	103-2	3482866	3023242	2826808	3110972	10.82	cps
Scandium	45-1	6192030	6208886	6217349	6206088	0.21	cps
Scandium	45-2	122039	104389	98135	108188	11.46	cps
Selenium	82-1	357	217	213	262	31.20	cps
Selenium	77-2	53	73	100	76	30.99	cps
Selenium	78-2	53	63	77	64	18.17	cps
Silicon	28-1	27947963	28892011	28004888	28281621	1.87	cps
Silver	107-1	174896	178759	180284	177980	1.56	cps
Silver	109-1	168621	168655	169307	168861	0.23	cps
Sodium	23-2	257627	259576	260638	259280	0.59	cps
Strontium	86-1	1588615	1632180	1574392	1598396	1.88	cps
Strontium	88-1	13832700	14059902	13770839	13887813	1.10	cps
Sulfur	34-1	281657	281361	284215	282411	0.56	cps
Terbium	159-1	11745160	11410072	11380172	11511801	1.76	cps
Terbium	159-2	4393050	3657961	3565933	3872315	11.71	cps
Thallium	203-1	4938	5465	5224	5209	5.06	cps
Thallium	205-1	12373	12663	12469	12502	1.18	cps
Tin	118-1	163655	164256	163617	163842	0.22	cps
Titanium	47-1	747468	753836	755010	752104	0.54	cps
Uranium	238-1	213488	218563	219794	217282	1.54	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-02DLX2	Instrumnet Name :	P8
Client Sample ID :	MH2GX1D	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 17:02:00	DataFile Name :	081AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	89994	90731	90449	90392	0.41	cps
Ytterbium	172-1	21414	22152	22613	22060	2.74	cps
Ytterbium	172-2	8373	8349	8236	8319	0.88	cps
Ytterbium	176-1	14992	14678	15235	14969	1.87	cps
Ytterbium	176-2	5531	5398	5615	5515	1.98	cps
Yttrium	89-1	17186852	17187214	16997563	17123877	0.64	cps
Yttrium	89-2	1263412	1076271	1030894	1123526	10.97	cps
Zinc	66-2	1319494	1342178	1345657	1335777	1.06	cps
Zirconium	90-1	88696	89062	89293	89017	0.34	cps
Zirconium	91-1	19490	20061	19597	19716	1.54	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01LDLX10	Instrumnet Name :	P8
Client Sample ID :	MH2GX1L	Dilution Factor :	10
Date & Time Acquired :	2025-01-28 17:05:08	DataFile Name :	082AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	154295	154476	154439	154403	0.06	cps
Antimony	121-1	15345	15616	15542	15501	0.90	cps
Arsenic	75-2	3987	4081	4207	4092	2.70	cps
Barium	135-1	696074	701471	700174	699240	0.40	cps
Barium	137-1	1221311	1230293	1229111	1226905	0.40	cps
Beryllium	9-1	2626	2619	2607	2617	0.36	cps
Bismuth	209-1	6948852	6853493	6966109	6922818	0.88	cps
Bismuth	209-2	2630839	2563151	2571370	2588453	1.43	cps
Bromine	81-1	6675	6435	6505	6538	1.89	cps
Cadmium	108-1	290	317	313	307	4.74	cps
Cadmium	106-1	5151	5334	5174	5220	1.91	cps
Cadmium	111-1	7250	7376	7127	7251	1.72	cps
Calcium	43-1	549419	552259	554048	551909	0.42	cps
Calcium	44-1	9144661	9204942	9236027	9195210	0.51	cps
Carbon	12-1	2049906	2024153	2023203	2032421	0.75	cps
Carbon	12-2	13950	13640	13356	13649	2.18	cps
Chlorine	35-1	9762892	9945714	9997472	9902026	1.24	cps
Chlorine	35-2	33318	33923	32737	33326	1.78	cps
Chromium	52-2	12245	12599	12439	12428	1.42	cps
Cobalt	59-2	12716	12259	12556	12510	1.85	cps
Copper	63-2	450300	444773	448460	447844	0.63	cps
Dysprosium	156-1	14715	15429	15245	15130	2.45	cps
Dysprosium	156-2	4081	3991	3891	3987	2.38	cps
Erbium	164-1	11789	12126	11742	11885	1.76	cps
Erbium	164-2	3917	3704	3774	3798	2.86	cps
Gadolinium	160-1	12179	12873	12696	12583	2.87	cps
Gadolinium	160-2	4858	4774	4587	4740	2.92	cps
Holmium	165-1	11091959	11045786	10932486	11023410	0.74	cps
Holmium	165-2	3605270	3578486	3626863	3603540	0.67	cps
Indium	115-1	8740069	8718343	8732454	8730288	0.13	cps
Indium	115-2	739847	743461	742483	741930	0.25	cps
Iron	54-2	681308	680448	681583	681113	0.09	cps
Iron	56-2	13401891	13135026	13040134	13192350	1.42	cps
Iron	57-2	320574	318405	318169	319050	0.42	cps
Krypton	83-1	123	113	117	118	4.33	cps
Lead	206-1	6102369	6225579	6163492	6163813	1.00	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01LDLX10	Instrumnet Name :	P8
Client Sample ID :	MH2GX1L	Dilution Factor :	10
Date & Time Acquired :	2025-01-28 17:05:08	DataFile Name :	082AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	5079468	5160504	5130684	5123552	0.80	cps
Lead	208-1	23424182	23721504	23780055	23641914	0.81	cps
Lithium	6-1	4855845	4883890	4844086	4861274	0.42	cps
Magnesium	24-2	152946	154866	152133	153315	0.92	cps
Manganese	55-2	555532	552276	553779	553863	0.29	cps
Molybdenum	94-1	11038	11335	11138	11170	1.35	cps
Molybdenum	95-1	8930	8659	8743	8777	1.58	cps
Molybdenum	96-1	10497	10037	10698	10411	3.25	cps
Molybdenum	97-1	5401	5434	5471	5436	0.64	cps
Molybdenum	98-1	13800	13577	13647	13675	0.84	cps
Neodymium	150-1	21260	21400	21340	21334	0.33	cps
Neodymium	150-2	4618	4718	4571	4635	1.62	cps
Nickel	60-2	11912	11745	12035	11897	1.22	cps
Phosphorus	31-2	637	670	613	640	4.45	cps
Potassium	39-2	42646	42292	42205	42381	0.55	cps
Rhodium	103-1	7871879	7879543	7813190	7854871	0.46	cps
Rhodium	103-2	2846901	2837765	2809585	2831417	0.69	cps
Scandium	45-1	5990983	5986885	6027263	6001710	0.37	cps
Scandium	45-2	93230	92938	92508	92892	0.39	cps
Selenium	82-1	63	83	63	70	16.50	cps
Selenium	77-2	33	37	33	34	5.60	cps
Selenium	78-2	7	17	40	21	81.01	cps
Silicon	28-1	5852497	5830920	6084614	5922677	2.37	cps
Silver	107-1	36004	36929	36381	36438	1.28	cps
Silver	109-1	34924	35028	34760	34904	0.39	cps
Sodium	23-2	59146	58831	59059	59012	0.28	cps
Strontium	86-1	305763	310168	312016	309316	1.04	cps
Strontium	88-1	2848329	2828738	2851967	2843012	0.44	cps
Sulfur	34-1	229357	229516	228477	229117	0.24	cps
Terbium	159-1	11332121	11421894	11272755	11342257	0.66	cps
Terbium	159-2	3477738	3479873	3486990	3481534	0.14	cps
Thallium	203-1	1183	1157	1173	1171	1.15	cps
Thallium	205-1	2877	2807	2830	2838	1.26	cps
Tin	118-1	36054	36385	36896	36445	1.16	cps
Titanium	47-1	150055	151460	151688	151068	0.59	cps
Uranium	238-1	44277	44070	45016	44454	1.12	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01LDLX10	Instrumnet Name :	P8
Client Sample ID :	MH2GX1L	Dilution Factor :	10
Date & Time Acquired :	2025-01-28 17:05:08	DataFile Name :	082AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	17945	17868	18055	17956	0.52	cps
Ytterbium	172-1	4591	4481	4814	4629	3.67	cps
Ytterbium	172-2	1770	1593	1690	1685	5.25	cps
Ytterbium	176-1	4271	4041	4444	4252	4.76	cps
Ytterbium	176-2	1263	1257	1213	1245	2.18	cps
Yttrium	89-1	15939839	15858361	15802556	15866919	0.44	cps
Yttrium	89-2	953106	952825	950752	952228	0.14	cps
Zinc	66-2	274336	274976	276892	275402	0.48	cps
Zirconium	90-1	17932	17815	17908	17885	0.35	cps
Zirconium	91-1	3887	4054	3927	3956	2.20	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-03DLX2	Instrumnet Name :	P8
Client Sample ID :	MH2GX1S	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 17:08:26	DataFile Name :	083AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	843004	839842	840287	841044	0.20	cps
Antimony	121-1	173187	174471	175689	174449	0.72	cps
Arsenic	75-2	22094	22481	22869	22481	1.72	cps
Barium	135-1	4478459	4432243	4501369	4470690	0.79	cps
Barium	137-1	7692760	7716669	7867314	7758914	1.22	cps
Beryllium	9-1	29846	30063	30367	30092	0.87	cps
Bismuth	209-1	6814541	6789602	6909469	6837871	0.92	cps
Bismuth	209-2	2565150	2516629	2568887	2550222	1.14	cps
Bromine	81-1	9393	9627	9570	9530	1.28	cps
Cadmium	108-1	2404	2564	2317	2428	5.15	cps
Cadmium	106-1	8346	8416	8549	8437	1.23	cps
Cadmium	111-1	35188	35459	35394	35347	0.40	cps
Calcium	43-1	3086389	3104995	3074949	3088778	0.49	cps
Calcium	44-1	48858183	49570011	49751468	49393220	0.96	cps
Carbon	12-1	2896604	2946928	2986276	2943270	1.53	cps
Carbon	12-2	20648	20381	20171	20400	1.17	cps
Chlorine	35-1	40503544	42991341	44331061	42608649	4.56	cps
Chlorine	35-2	154720	153190	156647	154852	1.12	cps
Chromium	52-2	101258	100687	100268	100738	0.49	cps
Cobalt	59-2	233957	233646	232663	233422	0.29	cps
Copper	63-2	2595354	2588578	2602635	2595522	0.27	cps
Dysprosium	156-1	78297	81057	79719	79691	1.73	cps
Dysprosium	156-2	22322	22158	22008	22163	0.71	cps
Erbium	164-1	66652	67198	66170	66674	0.77	cps
Erbium	164-2	20526	20753	20416	20565	0.84	cps
Gadolinium	160-1	67040	67587	67915	67514	0.65	cps
Gadolinium	160-2	25782	25742	25491	25671	0.61	cps
Holmium	165-1	11073648	11109131	11032728	11071835	0.35	cps
Holmium	165-2	3569103	3614580	3618902	3600862	0.77	cps
Indium	115-1	8653081	8762861	8820663	8745535	0.97	cps
Indium	115-2	746736	744131	760294	750387	1.16	cps
Iron	54-2	3897576	3822268	3859795	3859880	0.98	cps
Iron	56-2	71660444	70686737	72081837	71476339	1.00	cps
Iron	57-2	1826248	1841938	1815879	1828022	0.72	cps
Krypton	83-1	210	170	217	199	12.69	cps
Lead	206-1	32639610	32535815	32553482	32576302	0.17	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-03DLX2	Instrumnet Name :	P8
Client Sample ID :	MH2GX1S	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 17:08:26	DataFile Name :	083AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	26754695	26786985	26859559	26800413	0.20	cps
Lead	208-1	125794042	125413686	126155831	125787853	0.30	cps
Lithium	6-1	4897526	4945280	4858922	4900576	0.88	cps
Magnesium	24-2	826819	828512	826097	827142	0.15	cps
Manganese	55-2	3219503	3203214	3246440	3223052	0.68	cps
Molybdenum	94-1	60474	61157	60470	60700	0.65	cps
Molybdenum	95-1	45250	45524	45668	45481	0.47	cps
Molybdenum	96-1	55115	55427	56032	55525	0.84	cps
Molybdenum	97-1	27838	28683	28469	28330	1.55	cps
Molybdenum	98-1	73081	73654	73942	73559	0.60	cps
Neodymium	150-1	113464	113585	113652	113567	0.08	cps
Neodymium	150-2	25822	24993	25825	25547	1.88	cps
Nickel	60-2	105651	105450	105373	105492	0.14	cps
Phosphorus	31-2	3617	3504	3417	3513	2.86	cps
Potassium	39-2	217420	217957	216448	217275	0.35	cps
Rhodium	103-1	7737313	7712496	7627373	7692394	0.75	cps
Rhodium	103-2	2756272	2788914	2862934	2802707	1.95	cps
Scandium	45-1	6096959	6171090	6167750	6145267	0.68	cps
Scandium	45-2	96776	94659	96716	96050	1.26	cps
Selenium	82-1	497	597	610	568	10.91	cps
Selenium	77-2	117	97	83	99	16.97	cps
Selenium	78-2	63	107	50	73	40.40	cps
Silicon	28-1	30401390	30648748	30833450	30627863	0.71	cps
Silver	107-1	245915	251366	251425	249569	1.27	cps
Silver	109-1	240172	238839	240290	239767	0.34	cps
Sodium	23-2	281297	280770	283597	281888	0.53	cps
Strontium	86-1	1762675	1785382	1811671	1786576	1.37	cps
Strontium	88-1	15194945	15198766	15206309	15200007	0.04	cps
Sulfur	34-1	275022	278316	275827	276388	0.62	cps
Terbium	159-1	11233879	11275330	11241205	11250138	0.20	cps
Terbium	159-2	3501078	3527119	3481260	3503152	0.66	cps
Thallium	203-1	53275	53004	53061	53114	0.27	cps
Thallium	205-1	125504	128173	128132	127269	1.20	cps
Tin	118-1	179250	178730	180546	179509	0.52	cps
Titanium	47-1	813264	821208	824146	819539	0.69	cps
Uranium	238-1	238440	239757	240166	239454	0.38	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-03DLX2	Instrumnet Name :	P8
Client Sample ID :	MH2GX1S	Dilution Factor :	2
Date & Time Acquired :	2025-01-28 17:08:26	DataFile Name :	083AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	166529	166772	165581	166294	0.38	cps
Ytterbium	172-1	23748	24142	24903	24265	2.42	cps
Ytterbium	172-2	8813	8606	8916	8779	1.80	cps
Ytterbium	176-1	16377	16387	16447	16404	0.23	cps
Ytterbium	176-2	6075	5825	6055	5985	2.32	cps
Yttrium	89-1	16897648	16940756	17115077	16984494	0.68	cps
Yttrium	89-2	1021980	1016463	1037166	1025203	1.05	cps
Zinc	66-2	1531248	1524533	1558839	1538207	1.18	cps
Zirconium	90-1	94793	95457	95863	95371	0.57	cps
Zirconium	91-1	21193	21871	21867	21644	1.80	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV012	Instrumnet Name :	P8
Client Sample ID :	CCV012	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:17:04	DataFile Name :	086CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1529288	1546440	1526003	1533910	0.72	cps
Antimony	121-1	3903438	3919538	3944718	3922565	0.53	cps
Arsenic	75-2	62802	63191	62374	62789	0.65	cps
Barium	135-1	5103067	5022808	5173054	5099643	1.47	cps
Barium	137-1	8739798	8741894	8787278	8756323	0.31	cps
Beryllium	9-1	1403540	1403642	1419091	1408757	0.64	cps
Bismuth	209-1	5357999	5685293	5590795	5544695	3.04	cps
Bismuth	209-2	2117567	2139464	2148312	2135115	0.74	cps
Bromine	81-1	5171	5058	5314	5181	2.48	cps
Cadmium	108-1	85342	83796	84788	84642	0.93	cps
Cadmium	106-1	123096	124152	122968	123405	0.53	cps
Cadmium	111-1	1064092	1073629	1076654	1071458	0.61	cps
Calcium	43-1	7182368	7100234	7089814	7124139	0.71	cps
Calcium	44-1	115714632	115061942	114371462	115049345	0.58	cps
Carbon	12-1	1884436	1919795	1965428	1923220	2.11	cps
Carbon	12-2	15452	15478	15331	15420	0.51	cps
Chlorine	35-1	245308	244460	246142	245303	0.34	cps
Chlorine	35-2	820	887	880	862	4.26	cps
Chromium	52-2	724150	722916	715235	720767	0.67	cps
Cobalt	59-2	1345126	1339506	1322532	1335721	0.88	cps
Copper	63-2	10022073	9897004	9880584	9933221	0.78	cps
Dysprosium	156-1	303	350	363	339	9.30	cps
Dysprosium	156-2	80	77	33	63	41.11	cps
Erbium	164-1	273	303	280	286	5.52	cps
Erbium	164-2	90	67	67	74	18.09	cps
Gadolinium	160-1	183	180	127	163	19.47	cps
Gadolinium	160-2	80	53	63	66	20.55	cps
Holmium	165-1	9304387	9927255	9893994	9708545	3.61	cps
Holmium	165-2	3317926	3281463	3300729	3300039	0.55	cps
Indium	115-1	6916509	7396976	7358555	7224014	3.70	cps
Indium	115-2	642314	642580	641552	642149	0.08	cps
Iron	54-2	7466347	7289013	7343671	7366344	1.23	cps
Iron	56-2	138205021	136877861	135367525	136816802	1.04	cps
Iron	57-2	3482946	3478939	3503175	3488353	0.37	cps
Krypton	83-1	143	147	103	131	18.40	cps
Lead	206-1	15836523	16018634	16121109	15992089	0.90	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV012	Instrumnet Name :	P8
Client Sample ID :	CCV012	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:17:04	DataFile Name :	086CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	13829385	13716098	13763560	13769681	0.41	cps
Lead	208-1	63508887	62961631	63375960	63282159	0.45	cps
Lithium	6-1	4152244	4216556	4191859	4186886	0.77	cps
Magnesium	24-2	26494652	26080062	26139233	26237982	0.85	cps
Manganese	55-2	3214337	3200292	3109670	3174766	1.79	cps
Molybdenum	94-1	14293496	14531420	14344594	14389836	0.87	cps
Molybdenum	95-1	20640776	20837928	20834003	20770902	0.54	cps
Molybdenum	96-1	22373155	22409756	22699761	22494224	0.80	cps
Molybdenum	97-1	12704910	12760183	12696930	12720674	0.27	cps
Molybdenum	98-1	33400534	33490115	33468076	33452908	0.14	cps
Neodymium	150-1	677	590	610	626	7.25	cps
Neodymium	150-2	40	43	13	32	51.04	cps
Nickel	60-2	354718	355064	350077	353286	0.79	cps
Phosphorus	31-2	13560	12686	12699	12981	3.86	cps
Potassium	39-2	7477176	7306417	7381501	7388365	1.16	cps
Rhodium	103-1	5924799	6310840	6431728	6222456	4.26	cps
Rhodium	103-2	2305400	2293130	2289174	2295901	0.37	cps
Scandium	45-1	5022448	5366017	5301331	5229932	3.49	cps
Scandium	45-2	85676	85277	85972	85642	0.41	cps
Selenium	82-1	59871	60159	59774	59934	0.33	cps
Selenium	77-2	903	817	947	889	7.45	cps
Selenium	78-2	3157	2960	3217	3111	4.32	cps
Silicon	28-1	20788253	20628007	20578262	20664841	0.53	cps
Silver	107-1	4913134	4946820	4865155	4908370	0.84	cps
Silver	109-1	4671085	4707103	4719594	4699261	0.54	cps
Sodium	23-2	52128308	51758379	51971951	51952879	0.36	cps
Strontium	86-1	1460419	1478151	1497188	1478586	1.24	cps
Strontium	88-1	12711441	12638950	12759134	12703175	0.48	cps
Sulfur	34-1	666384	664354	664853	665197	0.16	cps
Terbium	159-1	9432237	9960871	10071479	9821529	3.48	cps
Terbium	159-2	3146983	3121745	3107931	3125553	0.63	cps
Thallium	203-1	4177943	4162853	4201515	4180770	0.47	cps
Thallium	205-1	9698966	9781412	9911422	9797267	1.09	cps
Tin	118-1	3369947	3415309	3417474	3400910	0.79	cps
Titanium	47-1	6180960	6218471	6226470	6208634	0.39	cps
Uranium	238-1	13372322	13266957	13358455	13332578	0.43	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV012	Instrumnet Name :	P8
Client Sample ID :	CCV012	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:17:04	DataFile Name :	086CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	576581	571805	572158	573515	0.46	cps
Ytterbium	172-1	313	243	223	260	18.18	cps
Ytterbium	172-2	137	107	90	111	21.28	cps
Ytterbium	176-1	19715	20236	19728	19893	1.49	cps
Ytterbium	176-2	6388	6282	6375	6348	0.92	cps
Yttrium	89-1	13016136	14161571	13950770	13709492	4.45	cps
Yttrium	89-2	863545	861136	853579	859420	0.61	cps
Zinc	66-2	1004232	1000314	1000431	1001659	0.22	cps
Zirconium	90-1	7299569	7378672	7216268	7298170	1.11	cps
Zirconium	91-1	1630037	1631944	1629723	1630568	0.07	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB012	Instrumnet Name :	P8
Client Sample ID :	CCB012	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:19:57	DataFile Name :	087CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	147	110	100	119	20.67	cps
Antimony	121-1	1517	1327	1240	1361	10.40	cps
Arsenic	75-2	7	10	0	6	91.64	cps
Barium	135-1	970	970	897	946	4.48	cps
Barium	137-1	1657	1587	1510	1585	4.63	cps
Beryllium	9-1	854	731	715	767	9.89	cps
Bismuth	209-1	6646731	6629923	6560911	6612522	0.69	cps
Bismuth	209-2	2361641	2605845	2530469	2499319	5.00	cps
Bromine	81-1	5071	5541	5448	5353	4.65	cps
Cadmium	108-1	33	47	23	34	34.00	cps
Cadmium	106-1	4527	4467	4441	4479	0.99	cps
Cadmium	111-1	3246	3208	3196	3216	0.82	cps
Calcium	43-1	650	663	670	661	1.54	cps
Calcium	44-1	11795	10784	10801	11127	5.20	cps
Carbon	12-1	1703415	1671302	1702052	1692256	1.07	cps
Carbon	12-2	11565	11635	11071	11423	2.69	cps
Chlorine	35-1	267384	270019	274915	270773	1.41	cps
Chlorine	35-2	987	923	1057	989	6.74	cps
Chromium	52-2	553	477	503	511	7.61	cps
Cobalt	59-2	190	230	177	199	13.95	cps
Copper	63-2	2210	2184	2174	2189	0.87	cps
Dysprosium	156-1	90	63	73	76	17.83	cps
Dysprosium	156-2	10	0	0	3	173.21	cps
Erbium	164-1	77	43	37	52	41.04	cps
Erbium	164-2	13	17	10	13	25.01	cps
Gadolinium	160-1	47	10	20	26	74.17	cps
Gadolinium	160-2	3	3	10	6	69.34	cps
Holmium	165-1	10426996	10516127	10389437	10444187	0.62	cps
Holmium	165-2	3355719	3477631	3504637	3445996	2.30	cps
Indium	115-1	8339779	8362086	8406862	8369576	0.41	cps
Indium	115-2	687995	731827	733889	717904	3.61	cps
Iron	54-2	717	820	720	752	7.81	cps
Iron	56-2	13680	12425	12406	12837	5.69	cps
Iron	57-2	310	303	330	314	4.41	cps
Krypton	83-1	103	80	90	91	12.85	cps
Lead	206-1	3280	2830	2730	2947	9.94	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB012	Instrumnet Name :	P8
Client Sample ID :	CCB012	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:19:57	DataFile Name :	087CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2677	2310	2447	2478	7.48	cps
Lead	208-1	12359	11102	11212	11558	6.02	cps
Lithium	6-1	4468565	4437964	4460104	4455544	0.35	cps
Magnesium	24-2	1697	1620	1537	1618	4.95	cps
Manganese	55-2	443	370	430	414	9.42	cps
Molybdenum	94-1	1507	1273	1243	1341	10.75	cps
Molybdenum	95-1	1793	1600	1520	1638	8.58	cps
Molybdenum	96-1	2094	1787	1710	1863	10.89	cps
Molybdenum	97-1	1100	967	1050	1039	6.48	cps
Molybdenum	98-1	3030	2474	2647	2717	10.49	cps
Neodymium	150-1	10	23	20	18	39.03	cps
Neodymium	150-2	0	7	0	2	173.21	cps
Nickel	60-2	617	710	717	681	8.21	cps
Phosphorus	31-2	17	37	17	23	49.48	cps
Potassium	39-2	4227	4047	4151	4142	2.18	cps
Rhodium	103-1	7506693	7573828	7561281	7547267	0.47	cps
Rhodium	103-2	2673606	2810618	2770712	2751645	2.56	cps
Scandium	45-1	5613365	5636803	5655273	5635147	0.37	cps
Scandium	45-2	84518	89674	90197	88130	3.56	cps
Selenium	82-1	33	27	30	30	11.12	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	0	3	0	1	173.21	cps
Silicon	28-1	240044	239236	238036	239105	0.42	cps
Silver	107-1	1097	773	727	866	23.28	cps
Silver	109-1	883	670	627	727	18.91	cps
Sodium	23-2	15051	14664	14210	14642	2.87	cps
Strontium	86-1	307	353	337	332	7.12	cps
Strontium	88-1	1420	1200	1367	1329	8.64	cps
Sulfur	34-1	209181	210599	209026	209602	0.41	cps
Terbium	159-1	10516269	10583522	10590068	10563286	0.39	cps
Terbium	159-2	3277916	3393667	3368612	3346732	1.82	cps
Thallium	203-1	820	740	830	797	6.19	cps
Thallium	205-1	2047	1780	1683	1837	10.25	cps
Tin	118-1	3811	3864	4011	3895	2.66	cps
Titanium	47-1	517	470	373	453	16.13	cps
Uranium	238-1	920	703	793	806	13.51	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB012	Instrumnet Name :	P8
Client Sample ID :	CCB012	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:19:57	DataFile Name :	087CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	27	40	47	38	26.95	cps
Ytterbium	172-1	57	93	47	66	37.47	cps
Ytterbium	172-2	23	27	10	20	44.10	cps
Ytterbium	176-1	1350	1343	1437	1377	3.78	cps
Ytterbium	176-2	190	160	193	181	10.14	cps
Yttrium	89-1	14689356	14697514	14986176	14791015	1.14	cps
Yttrium	89-2	856672	918882	908939	894831	3.73	cps
Zinc	66-2	230	250	187	222	14.57	cps
Zirconium	90-1	1187	1163	1107	1152	3.57	cps
Zirconium	91-1	240	293	240	258	11.94	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02ARE	Instrumnet Name :	P8
Client Sample ID :	ME2947A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:44:49	DataFile Name :	088AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	454097	454133	455221	454484	0.14	cps
Antimony	121-1	3631	3884	3627	3714	3.97	cps
Arsenic	75-2	2154	2114	2134	2134	0.94	cps
Barium	135-1	282105	287607	284558	284757	0.97	cps
Barium	137-1	492176	505983	497900	498686	1.39	cps
Beryllium	9-1	3072	2985	3007	3022	1.50	cps
Bismuth	209-1	6358604	6364233	6268211	6330350	0.85	cps
Bismuth	209-2	2405958	2417819	2406938	2410238	0.27	cps
Bromine	81-1	7682	8112	7615	7803	3.46	cps
Cadmium	108-1	203	193	213	203	4.92	cps
Cadmium	106-1	4631	4834	4791	4752	2.25	cps
Cadmium	111-1	4466	4795	4681	4647	3.60	cps
Calcium	43-1	4804509	4772591	4822403	4799834	0.53	cps
Calcium	44-1	77345371	77313986	77652316	77437224	0.24	cps
Carbon	12-1	2037599	2023657	2057810	2039689	0.84	cps
Carbon	12-2	14280	14654	14871	14602	2.05	cps
Chlorine	35-1	75897957	81569827	84110982	80526255	5.22	cps
Chlorine	35-2	297124	303040	305642	301935	1.45	cps
Chromium	52-2	100550	101883	101419	101284	0.67	cps
Cobalt	59-2	55638	56662	57629	56643	1.76	cps
Copper	63-2	108544	108728	110398	109223	0.94	cps
Dysprosium	156-1	48471	49314	50451	49412	2.01	cps
Dysprosium	156-2	15072	15335	15082	15163	0.99	cps
Erbium	164-1	40398	41070	41511	40993	1.37	cps
Erbium	164-2	12816	12463	12529	12603	1.49	cps
Gadolinium	160-1	46454	47384	46190	46676	1.34	cps
Gadolinium	160-2	17672	18136	17712	17840	1.44	cps
Holmium	165-1	10421247	10543584	10397610	10454147	0.75	cps
Holmium	165-2	3515923	3441963	3422493	3460126	1.42	cps
Indium	115-1	8024955	8084696	7837257	7982303	1.62	cps
Indium	115-2	709270	702753	708121	706715	0.49	cps
Iron	54-2	3188398	3258413	3276289	3241033	1.43	cps
Iron	56-2	59657571	59578681	60023161	59753137	0.40	cps
Iron	57-2	1518429	1538089	1528887	1528468	0.64	cps
Krypton	83-1	133	153	183	157	16.06	cps
Lead	206-1	407818	412983	409682	410161	0.64	cps

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02ARE	Instrumnet Name :	P8
Client Sample ID :	ME2947A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:44:49	DataFile Name :	088AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	328088	331277	332054	330473	0.64	cps
Lead	208-1	1548952	1569283	1557789	1558675	0.65	cps
Lithium	6-1	4493950	4539429	4544302	4525894	0.61	cps
Magnesium	24-2	2885300	2873740	2883694	2880911	0.22	cps
Manganese	55-2	922481	929082	926466	926010	0.36	cps
Molybdenum	94-1	43688	45625	44748	44687	2.17	cps
Molybdenum	95-1	38353	39389	39422	39055	1.56	cps
Molybdenum	96-1	46073	47093	46755	46640	1.11	cps
Molybdenum	97-1	24351	24542	23837	24243	1.50	cps
Molybdenum	98-1	61027	63692	63571	62763	2.40	cps
Neodymium	150-1	66507	68142	67298	67315	1.21	cps
Neodymium	150-2	15879	15449	15382	15570	1.73	cps
Nickel	60-2	45777	45359	46532	45889	1.30	cps
Phosphorus	31-2	1460	1450	1410	1440	1.84	cps
Potassium	39-2	114110	114479	116908	115166	1.32	cps
Rhodium	103-1	6991977	7030784	7046895	7023219	0.40	cps
Rhodium	103-2	2619452	2612994	2590258	2607568	0.59	cps
Scandium	45-1	5636579	5694977	5600102	5643886	0.85	cps
Scandium	45-2	91515	90925	91717	91386	0.45	cps
Selenium	82-1	2027	1830	1807	1888	6.40	cps
Selenium	77-2	67	77	100	81	21.09	cps
Selenium	78-2	90	110	127	109	16.86	cps
Silicon	28-1	24092225	24152962	24194728	24146638	0.21	cps
Silver	107-1	3450	3110	3377	3313	5.40	cps
Silver	109-1	3184	3120	3404	3236	4.60	cps
Sodium	23-2	127562	128772	130501	128945	1.15	cps
Strontium	86-1	605737	618211	618214	614054	1.17	cps
Strontium	88-1	5595148	5564076	5557718	5572314	0.36	cps
Sulfur	34-1	264871	268308	270068	267749	0.99	cps
Terbium	159-1	10790323	10569034	10637756	10665704	1.06	cps
Terbium	159-2	3348940	3294833	3301366	3315046	0.89	cps
Thallium	203-1	5398	5271	5388	5352	1.32	cps
Thallium	205-1	13394	13023	12583	13000	3.12	cps
Tin	118-1	10394	10287	10331	10337	0.52	cps
Titanium	47-1	233601	238385	238110	236699	1.13	cps
Uranium	238-1	59023	59023	59361	59136	0.33	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02ARE	Instrumnet Name :	P8
Client Sample ID :	ME2947A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:44:49	DataFile Name :	088AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	52225	50863	51757	51615	1.34	cps
Ytterbium	172-1	11682	11875	11482	11680	1.69	cps
Ytterbium	172-2	4311	4384	4524	4406	2.46	cps
Ytterbium	176-1	8353	8369	8379	8367	0.16	cps
Ytterbium	176-2	3124	2917	3007	3016	3.44	cps
Yttrium	89-1	15232979	15093328	14967179	15097829	0.88	cps
Yttrium	89-2	941546	935608	935740	937631	0.36	cps
Zinc	66-2	52042	52430	52079	52183	0.41	cps
Zirconium	90-1	60270	62918	62754	61980	2.39	cps
Zirconium	91-1	13193	13583	13507	13428	1.54	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-09A	Instrumnet Name :	P8
Client Sample ID :	ME2944A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:48:04	DataFile Name :	089AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	257	250	183	230	17.63	cps
Antimony	121-1	127	103	110	113	10.61	cps
Arsenic	75-2	13	17	17	16	12.40	cps
Barium	135-1	14855	14958	14401	14738	2.01	cps
Barium	137-1	25257	26179	25578	25671	1.82	cps
Beryllium	9-1	227	244	244	238	3.94	cps
Bismuth	209-1	5291782	6015812	6881286	6062960	13.13	cps
Bismuth	209-2	2221367	2204568	2226054	2217330	0.51	cps
Bromine	81-1	57869	71049	77127	68682	14.33	cps
Cadmium	108-1	27	40	23	30	29.40	cps
Cadmium	106-1	4251	4544	5114	4636	9.47	cps
Cadmium	111-1	2984	3203	3620	3269	9.90	cps
Calcium	43-1	12205915	12366621	12382125	12318220	0.79	cps
Calcium	44-1	195890164	198019904	201402417	198437495	1.40	cps
Carbon	12-1	4340458	5122460	5483215	4982044	11.73	cps
Carbon	12-2	41478	42104	43618	42400	2.59	cps
Chlorine	35-1	4548688	4250965	3975735	4258463	6.73	cps
Chlorine	35-2	12072	12078	11478	11876	2.90	cps
Chromium	52-2	490	480	510	493	3.10	cps
Cobalt	59-2	153	143	167	154	7.58	cps
Copper	63-2	2097	2020	2154	2090	3.20	cps
Dysprosium	156-1	203	130	123	152	29.16	cps
Dysprosium	156-2	17	3	17	12	63.01	cps
Erbium	164-1	90	90	87	89	2.16	cps
Erbium	164-2	27	17	20	21	24.12	cps
Gadolinium	160-1	83	67	57	69	19.55	cps
Gadolinium	160-2	17	37	20	24	43.83	cps
Holmium	165-1	9099642	10064137	11847301	10337027	13.49	cps
Holmium	165-2	3416490	3396523	3338226	3383746	1.20	cps
Indium	115-1	6931225	7852592	9158778	7980865	14.02	cps
Indium	115-2	685271	684125	685869	685088	0.13	cps
Iron	54-2	27724	27653	28021	27799	0.70	cps
Iron	56-2	513218	521789	521590	518866	0.94	cps
Iron	57-2	13220	13350	13116	13228	0.88	cps
Krypton	83-1	107	110	110	109	1.77	cps
Lead	206-1	1670	1483	1443	1532	7.90	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-09A	Instrumnet Name :	P8
Client Sample ID :	ME2944A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:48:04	DataFile Name :	089AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1527	1257	1253	1346	11.66	cps
Lead	208-1	6737	5697	5731	6055	9.76	cps
Lithium	6-1	3995262	4324427	4997813	4439167	11.51	cps
Magnesium	24-2	13848742	13810942	13932039	13863908	0.45	cps
Manganese	55-2	24525	24625	24257	24469	0.78	cps
Molybdenum	94-1	2240	2304	2390	2311	3.26	cps
Molybdenum	95-1	3217	3114	3107	3146	1.96	cps
Molybdenum	96-1	3664	3801	3557	3674	3.32	cps
Molybdenum	97-1	1953	2003	2030	1996	1.95	cps
Molybdenum	98-1	4844	5121	4914	4960	2.90	cps
Neodymium	150-1	63	50	60	58	12.01	cps
Neodymium	150-2	13	10	7	10	33.30	cps
Nickel	60-2	813	840	923	859	6.68	cps
Phosphorus	31-2	33	27	30	30	11.10	cps
Potassium	39-2	210272	209748	209755	209925	0.14	cps
Rhodium	103-1	6036164	6841457	7868542	6915388	13.28	cps
Rhodium	103-2	2530381	2507592	2489441	2509138	0.82	cps
Scandium	45-1	4905931	5509901	6351605	5589146	12.99	cps
Scandium	45-2	87672	88561	86468	87567	1.20	cps
Selenium	82-1	2050	2087	2114	2084	1.53	cps
Selenium	77-2	30	40	47	39	21.57	cps
Selenium	78-2	83	90	110	94	14.70	cps
Silicon	28-1	36734914	37480571	37844809	37353431	1.51	cps
Silver	107-1	407	427	350	394	10.08	cps
Silver	109-1	243	233	223	233	4.29	cps
Sodium	23-2	7196839	7303432	7385534	7295269	1.30	cps
Strontium	86-1	33556239	34056896	33821997	33811711	0.74	cps
Strontium	88-1	290078902	292228369	296954409	293087227	1.20	cps
Sulfur	34-1	18338452	18813559	18593458	18581823	1.28	cps
Terbium	159-1	9117965	10485752	11843094	10482270	13.00	cps
Terbium	159-2	3272606	3234740	3278190	3261845	0.72	cps
Thallium	203-1	407	383	343	378	8.48	cps
Thallium	205-1	947	777	710	811	15.05	cps
Tin	118-1	2450	2370	2520	2447	3.07	cps
Titanium	47-1	1050	1037	933	1007	6.34	cps
Uranium	238-1	1213	1180	1163	1186	2.15	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1176-09A	Instrumnet Name :	P8
Client Sample ID :	ME2944A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:48:04	DataFile Name :	089AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	43	37	53	44	18.87	cps
Ytterbium	172-1	80	100	70	83	18.33	cps
Ytterbium	172-2	20	23	27	23	14.29	cps
Ytterbium	176-1	1307	1433	1607	1449	10.40	cps
Ytterbium	176-2	203	163	190	186	10.98	cps
Yttrium	89-1	12800910	14401649	16536175	14579578	12.85	cps
Yttrium	89-2	883960	890379	892117	888819	0.48	cps
Zinc	66-2	197	280	217	231	18.82	cps
Zirconium	90-1	1327	1497	1353	1392	6.57	cps
Zirconium	91-1	343	317	337	332	4.18	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01A	Instrumnet Name :	P8
Client Sample ID :	MH2GX1A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:51:23	DataFile Name :	090AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1519564	1533262	1546252	1533026	0.87	cps
Antimony	121-1	149396	150962	149817	150058	0.54	cps
Arsenic	75-2	39789	38974	39248	39337	1.06	cps
Barium	135-1	7002044	7030888	7103941	7045624	0.75	cps
Barium	137-1	12021308	12269736	12336471	12209172	1.36	cps
Beryllium	9-1	22387	22803	23045	22745	1.46	cps
Bismuth	209-1	6429766	6365328	6441298	6412131	0.64	cps
Bismuth	209-2	2374651	2381132	2395549	2383777	0.45	cps
Bromine	81-1	28593	24622	22254	25156	12.73	cps
Cadmium	108-1	2887	2940	3080	2969	3.36	cps
Cadmium	106-1	9617	9677	9904	9732	1.55	cps
Cadmium	111-1	39846	39687	39554	39695	0.37	cps
Calcium	43-1	5322944	5386682	5386696	5365441	0.69	cps
Calcium	44-1	86670305	87302999	87127192	87033499	0.38	cps
Carbon	12-1	4005621	4051932	4024064	4027206	0.58	cps
Carbon	12-2	27132	27432	27406	27323	0.61	cps
Chlorine	35-1	64124416	68798577	71064954	67995982	5.21	cps
Chlorine	35-2	252394	253810	256851	254351	0.90	cps
Chromium	52-2	114984	115051	115790	115275	0.39	cps
Cobalt	59-2	116011	117379	117042	116811	0.61	cps
Copper	63-2	4291714	4246798	4314181	4284231	0.80	cps
Dysprosium	156-1	141995	144723	144501	143740	1.05	cps
Dysprosium	156-2	40217	39976	39491	39895	0.93	cps
Erbium	164-1	118861	119945	119558	119454	0.46	cps
Erbium	164-2	37112	36898	36871	36960	0.36	cps
Gadolinium	160-1	120101	122719	121342	121387	1.08	cps
Gadolinium	160-2	45862	46096	45775	45911	0.36	cps
Holmium	165-1	10750202	10722671	10489863	10654245	1.34	cps
Holmium	165-2	3507352	3471887	3529906	3503048	0.83	cps
Indium	115-1	8260897	8279783	8317820	8286167	0.35	cps
Indium	115-2	711603	705537	715253	710797	0.69	cps
Iron	54-2	6614922	6709405	6680214	6668180	0.73	cps
Iron	56-2	125038695	123977211	124160385	124392097	0.46	cps
Iron	57-2	3179683	3165168	3200523	3181791	0.56	cps
Krypton	83-1	257	357	343	319	17.03	cps
Lead	206-1	57100177	58322457	57277742	57566792	1.15	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01A	Instrumnet Name :	P8
Client Sample ID :	MH2GX1A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:51:23	DataFile Name :	090AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	47485569	48262968	47750924	47833154	0.83	cps
Lead	208-1	221702155	224706273	222763832	223057420	0.68	cps
Lithium	6-1	4468618	4552638	4547035	4522764	1.04	cps
Magnesium	24-2	1501575	1513122	1493616	1502771	0.65	cps
Manganese	55-2	5538018	5511176	5518064	5522419	0.25	cps
Molybdenum	94-1	107962	108244	109735	108647	0.88	cps
Molybdenum	95-1	80491	81772	82140	81468	1.06	cps
Molybdenum	96-1	97428	99200	98445	98358	0.90	cps
Molybdenum	97-1	50220	51207	50853	50760	0.98	cps
Molybdenum	98-1	129278	130806	130173	130086	0.59	cps
Neodymium	150-1	203232	207627	208564	206474	1.38	cps
Neodymium	150-2	46069	45624	46594	46095	1.05	cps
Nickel	60-2	104167	103328	104043	103846	0.44	cps
Phosphorus	31-2	6231	6468	6171	6290	2.49	cps
Potassium	39-2	380281	383801	382097	382060	0.46	cps
Rhodium	103-1	7064952	7161302	7157183	7127812	0.76	cps
Rhodium	103-2	2612399	2604627	2589715	2602247	0.44	cps
Scandium	45-1	5772968	5865709	5782497	5807058	0.88	cps
Scandium	45-2	90888	92146	92854	91963	1.08	cps
Selenium	82-1	2394	2447	2144	2328	6.96	cps
Selenium	77-2	203	230	207	213	6.81	cps
Selenium	78-2	257	187	277	240	19.69	cps
Silicon	28-1	52460859	53678506	53921286	53353550	1.47	cps
Silver	107-1	330235	335270	338504	334669	1.25	cps
Silver	109-1	318178	323015	321648	320947	0.78	cps
Sodium	23-2	500102	496648	501064	499271	0.47	cps
Strontium	86-1	3116055	3134539	3146048	3132214	0.48	cps
Strontium	88-1	26240658	27284788	27084201	26869882	2.06	cps
Sulfur	34-1	319084	319983	319025	319364	0.17	cps
Terbium	159-1	10856705	10889399	10758645	10834916	0.63	cps
Terbium	159-2	3320727	3284449	3413029	3339402	1.99	cps
Thallium	203-1	10104	10451	10398	10317	1.81	cps
Thallium	205-1	24183	25301	24673	24719	2.27	cps
Tin	118-1	309819	316156	315753	313909	1.13	cps
Titanium	47-1	1476390	1487799	1516891	1493693	1.40	cps
Uranium	238-1	428108	432303	432657	431023	0.59	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1179-01A	Instrumnet Name :	P8
Client Sample ID :	MH2GX1A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:51:23	DataFile Name :	090AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	174499	173396	175851	174582	0.70	cps
Ytterbium	172-1	42672	44240	43752	43555	1.84	cps
Ytterbium	172-2	16467	16494	16601	16520	0.43	cps
Ytterbium	176-1	28668	28390	28644	28568	0.54	cps
Ytterbium	176-2	11075	10858	10818	10917	1.27	cps
Yttrium	89-1	16776549	16998879	16860527	16878652	0.67	cps
Yttrium	89-2	1029245	1026269	1028039	1027851	0.15	cps
Zinc	66-2	2667399	2654617	2668485	2663500	0.29	cps
Zirconium	90-1	170147	172110	173197	171818	0.90	cps
Zirconium	91-1	37474	39065	39118	38552	2.42	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02A	Instrumnet Name :	P8
Client Sample ID :	ME2947A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:55:40	DataFile Name :	091AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	456440	455423	452983	454949	0.39	cps
Antimony	121-1	3691	3827	3724	3747	1.90	cps
Arsenic	75-2	2144	2234	2187	2188	2.06	cps
Barium	135-1	292037	296037	294897	294324	0.70	cps
Barium	137-1	507698	515007	518003	513569	1.03	cps
Beryllium	9-1	3020	3110	3092	3074	1.55	cps
Bismuth	209-1	6124910	6016769	6245304	6128994	1.87	cps
Bismuth	209-2	2451308	2418440	2401359	2423702	1.05	cps
Bromine	81-1	9783	9727	9687	9732	0.50	cps
Cadmium	108-1	240	243	250	244	2.08	cps
Cadmium	106-1	4901	4891	5001	4931	1.23	cps
Cadmium	111-1	4769	4670	4842	4761	1.82	cps
Calcium	43-1	4973093	4966612	4988333	4976012	0.22	cps
Calcium	44-1	79670560	80842180	80287719	80266820	0.73	cps
Carbon	12-1	2228260	2276759	2268863	2257961	1.15	cps
Carbon	12-2	15555	15759	15719	15677	0.69	cps
Chlorine	35-1	80321870	86066785	88154065	84847574	4.78	cps
Chlorine	35-2	309568	310260	315208	311679	0.99	cps
Chromium	52-2	102654	102920	103471	103015	0.40	cps
Cobalt	59-2	58061	57823	57770	57885	0.27	cps
Copper	63-2	112508	112470	112266	112415	0.12	cps
Dysprosium	156-1	50686	50301	50772	50586	0.50	cps
Dysprosium	156-2	15616	15386	15346	15449	0.94	cps
Erbium	164-1	41448	42033	41912	41798	0.74	cps
Erbium	164-2	12699	12626	12923	12750	1.21	cps
Gadolinium	160-1	46722	47317	47123	47054	0.65	cps
Gadolinium	160-2	17969	18546	17668	18061	2.47	cps
Holmium	165-1	10003603	9616684	10374928	9998405	3.79	cps
Holmium	165-2	3681410	3511933	3496380	3563241	2.88	cps
Indium	115-1	7783331	7558794	7935073	7759066	2.44	cps
Indium	115-2	746507	708689	705319	720172	3.18	cps
Iron	54-2	3338285	3269094	3320377	3309252	1.09	cps
Iron	56-2	61584927	60852717	60652416	61030020	0.80	cps
Iron	57-2	1563984	1549698	1544871	1552851	0.64	cps
Krypton	83-1	150	187	170	169	10.87	cps
Lead	206-1	415224	421049	421251	419175	0.82	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02A	Instrumnet Name :	P8
Client Sample ID :	ME2947A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:55:40	DataFile Name :	091AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	334448	339834	339893	338058	0.92	cps
Lead	208-1	1573144	1605159	1596475	1591593	1.04	cps
Lithium	6-1	4456504	4305302	4567213	4443007	2.96	cps
Magnesium	24-2	2951354	2942777	2917008	2937046	0.61	cps
Manganese	55-2	939441	934936	934536	936304	0.29	cps
Molybdenum	94-1	46367	46253	46668	46429	0.46	cps
Molybdenum	95-1	40392	40576	40699	40556	0.38	cps
Molybdenum	96-1	47718	47615	48267	47866	0.73	cps
Molybdenum	97-1	25096	25089	25403	25196	0.71	cps
Molybdenum	98-1	64445	65570	65497	65171	0.97	cps
Neodymium	150-1	68085	69860	69050	68998	1.29	cps
Neodymium	150-2	15582	14825	15209	15205	2.49	cps
Nickel	60-2	47091	46790	46800	46894	0.36	cps
Phosphorus	31-2	1403	1397	1380	1393	0.86	cps
Potassium	39-2	116976	116216	117560	116917	0.58	cps
Rhodium	103-1	6963684	6761288	7191367	6972113	3.09	cps
Rhodium	103-2	2792432	2670823	2646722	2703326	2.89	cps
Scandium	45-1	5619414	5501593	5717517	5612841	1.93	cps
Scandium	45-2	96142	92770	91398	93437	2.61	cps
Selenium	82-1	2047	2084	1937	2022	3.77	cps
Selenium	77-2	147	110	90	116	24.87	cps
Selenium	78-2	133	160	100	131	22.93	cps
Silicon	28-1	24632840	24920450	24787761	24780350	0.58	cps
Silver	107-1	3791	3757	3751	3766	0.57	cps
Silver	109-1	3684	3764	3434	3627	4.75	cps
Sodium	23-2	134741	137181	134789	135570	1.03	cps
Strontium	86-1	628480	642051	637310	635947	1.08	cps
Strontium	88-1	5714181	5854323	5804695	5791066	1.23	cps
Sulfur	34-1	268353	275586	275598	273179	1.53	cps
Terbium	159-1	10414853	10062540	10671591	10382995	2.94	cps
Terbium	159-2	3548050	3371258	3295891	3405066	3.80	cps
Thallium	203-1	4417	4421	4694	4511	3.52	cps
Thallium	205-1	10251	11098	11095	10815	4.51	cps
Tin	118-1	10597	10678	10804	10693	0.98	cps
Titanium	47-1	240761	248143	246123	245009	1.56	cps
Uranium	238-1	59123	60282	59796	59734	0.97	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	Q1163-02A	Instrumnet Name :	P8
Client Sample ID :	ME2947A	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 18:55:40	DataFile Name :	091AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	52436	52074	52165	52225	0.36	cps
Ytterbium	172-1	11625	12169	11545	11780	2.88	cps
Ytterbium	172-2	4321	4151	4578	4350	4.94	cps
Ytterbium	176-1	8623	8346	8813	8594	2.73	cps
Ytterbium	176-2	2907	3047	3104	3019	3.35	cps
Yttrium	89-1	14984646	14548340	15405262	14979416	2.86	cps
Yttrium	89-2	993077	948368	947499	962981	2.71	cps
Zinc	66-2	168525	167216	167193	167645	0.45	cps
Zirconium	90-1	62753	63109	63233	63032	0.39	cps
Zirconium	91-1	13987	14337	14354	14226	1.46	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV013	Instrumnet Name :	P8
Client Sample ID :	CCV013	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 19:06:28	DataFile Name :	094CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1419968	1442828	1431250	1431349	0.80	cps
Antimony	121-1	3740982	3812099	3764528	3772536	0.96	cps
Arsenic	75-2	60703	58986	59066	59585	1.63	cps
Barium	135-1	4939699	4940775	4894649	4925041	0.53	cps
Barium	137-1	8400620	8508102	8419662	8442795	0.68	cps
Beryllium	9-1	1333965	1378448	1341819	1351411	1.76	cps
Bismuth	209-1	5450386	5416105	5412040	5426177	0.39	cps
Bismuth	209-2	2071939	2124555	2013311	2069935	2.69	cps
Bromine	81-1	5481	5498	5618	5532	1.35	cps
Cadmium	108-1	73240	73830	73511	73527	0.40	cps
Cadmium	106-1	107404	109308	107558	108090	0.98	cps
Cadmium	111-1	904279	911867	905644	907264	0.45	cps
Calcium	43-1	6774716	6833271	6602235	6736741	1.78	cps
Calcium	44-1	108270842	109705348	108127575	108701255	0.80	cps
Carbon	12-1	1837176	1909991	1931969	1893046	2.62	cps
Carbon	12-2	15261	15215	15885	15454	2.42	cps
Chlorine	35-1	937935	920189	909884	922669	1.54	cps
Chlorine	35-2	3107	3020	2940	3023	2.76	cps
Chromium	52-2	686620	682005	680705	683110	0.46	cps
Cobalt	59-2	1263236	1263614	1258445	1261765	0.23	cps
Copper	63-2	9549649	9462145	9452033	9487942	0.57	cps
Dysprosium	156-1	347	323	390	353	9.57	cps
Dysprosium	156-2	53	37	73	54	33.71	cps
Erbium	164-1	193	233	180	202	13.73	cps
Erbium	164-2	70	70	83	74	10.34	cps
Gadolinium	160-1	213	177	200	197	9.44	cps
Gadolinium	160-2	60	70	60	63	9.12	cps
Holmium	165-1	9572440	9525643	9412453	9503512	0.87	cps
Holmium	165-2	3157020	3307452	3063128	3175867	3.88	cps
Indium	115-1	7053282	7060795	7096092	7070056	0.32	cps
Indium	115-2	631159	632667	598828	620885	3.08	cps
Iron	54-2	7006182	6954614	6922761	6961186	0.60	cps
Iron	56-2	130165698	128382235	129127375	129225103	0.69	cps
Iron	57-2	3312285	3277655	3243490	3277810	1.05	cps
Krypton	83-1	100	100	120	107	10.83	cps
Lead	206-1	15594253	15374470	15381709	15450144	0.81	cps

1000

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV013	Instrumnet Name :	P8
Client Sample ID :	CCV013	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 19:06:28	DataFile Name :	094CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	13452470	13250387	13221481	13308113	0.95	cps
Lead	208-1	61762817	61343695	60693150	61266554	0.88	cps
Lithium	6-1	3943168	3941112	3932651	3938977	0.14	cps
Magnesium	24-2	24441397	24256528	24140363	24279429	0.63	cps
Manganese	55-2	3042320	3063221	3037011	3047517	0.45	cps
Molybdenum	94-1	13755856	13822209	13730186	13769417	0.34	cps
Molybdenum	95-1	19937166	19926681	19863373	19909073	0.20	cps
Molybdenum	96-1	21785103	21811061	21537521	21711228	0.70	cps
Molybdenum	97-1	12150034	12190405	12183969	12174803	0.18	cps
Molybdenum	98-1	31951072	32094108	32199125	32081435	0.39	cps
Neodymium	150-1	593	577	570	580	2.07	cps
Neodymium	150-2	43	23	27	31	34.44	cps
Nickel	60-2	335591	334750	333775	334705	0.27	cps
Phosphorus	31-2	12689	12616	12162	12489	2.29	cps
Potassium	39-2	6975388	6875938	6881398	6910908	0.81	cps
Rhodium	103-1	6144140	6124189	6077039	6115123	0.56	cps
Rhodium	103-2	2261030	2275977	2178154	2238387	2.35	cps
Scandium	45-1	5102095	5082881	5077337	5087438	0.26	cps
Scandium	45-2	82230	81771	77889	80630	2.96	cps
Selenium	82-1	57919	57692	57866	57825	0.21	cps
Selenium	77-2	813	843	837	831	1.90	cps
Selenium	78-2	2890	2900	3007	2933	2.21	cps
Silicon	28-1	19456941	19471459	19327659	19418686	0.41	cps
Silver	107-1	4746037	4788478	4702974	4745830	0.90	cps
Silver	109-1	4541074	4532607	4499594	4524425	0.48	cps
Sodium	23-2	48188186	48393536	48325199	48302307	0.22	cps
Strontium	86-1	1345874	1341841	1344544	1344086	0.15	cps
Strontium	88-1	12099054	11946846	12112438	12052780	0.76	cps
Sulfur	34-1	635151	633555	627171	631959	0.67	cps
Terbium	159-1	9804098	9526435	9595230	9641921	1.50	cps
Terbium	159-2	3101453	3171491	3005502	3092815	2.69	cps
Thallium	203-1	4000172	3970892	4015027	3995364	0.56	cps
Thallium	205-1	9407469	9406438	9486938	9433615	0.49	cps
Tin	118-1	3245984	3301142	3280094	3275740	0.85	cps
Titanium	47-1	5892421	5888764	5845376	5875521	0.45	cps
Uranium	238-1	12976260	12987315	12823104	12928893	0.71	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCV013	Instrumnet Name :	P8
Client Sample ID :	CCV013	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 19:06:28	DataFile Name :	094CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	544382	539989	538223	540865	0.59	cps
Ytterbium	172-1	253	283	277	271	5.81	cps
Ytterbium	172-2	93	147	70	103	38.03	cps
Ytterbium	176-1	19555	19224	19491	19423	0.90	cps
Ytterbium	176-2	6015	6115	5921	6017	1.61	cps
Yttrium	89-1	13592110	13299781	13420387	13437426	1.09	cps
Yttrium	89-2	834833	843058	797570	825154	2.94	cps
Zinc	66-2	956754	953965	948136	952952	0.46	cps
Zirconium	90-1	6949081	6932919	6947762	6943254	0.13	cps
Zirconium	91-1	1566043	1563130	1585801	1571658	0.78	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB013	Instrumnet Name :	P8
Client Sample ID :	CCB013	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 19:10:47	DataFile Name :	095CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	67	40	47	51	27.15	cps
Antimony	121-1	783	627	693	701	11.21	cps
Arsenic	75-2	0	7	3	3	100.05	cps
Barium	135-1	647	537	707	630	13.69	cps
Barium	137-1	1253	1217	1143	1205	4.65	cps
Beryllium	9-1	616	620	609	615	0.93	cps
Bismuth	209-1	6369237	6238190	6244601	6284009	1.18	cps
Bismuth	209-2	2484051	2445277	2399723	2443017	1.73	cps
Bromine	81-1	5321	5318	5428	5356	1.17	cps
Cadmium	108-1	17	23	13	18	28.64	cps
Cadmium	106-1	4307	4081	4147	4178	2.79	cps
Cadmium	111-1	3077	2883	2907	2956	3.57	cps
Calcium	43-1	360	363	343	356	3.01	cps
Calcium	44-1	5251	4791	4684	4909	6.14	cps
Carbon	12-1	1330196	1295680	1289560	1305145	1.68	cps
Carbon	12-2	8936	8819	8449	8735	2.91	cps
Chlorine	35-1	608496	593868	576442	592935	2.71	cps
Chlorine	35-2	1740	1863	1707	1770	4.66	cps
Chromium	52-2	443	423	407	424	4.32	cps
Cobalt	59-2	143	133	143	140	4.12	cps
Copper	63-2	1667	1590	1777	1678	5.59	cps
Dysprosium	156-1	97	113	93	101	10.60	cps
Dysprosium	156-2	10	0	0	3	173.21	cps
Erbium	164-1	40	43	40	41	4.68	cps
Erbium	164-2	10	20	17	16	32.73	cps
Gadolinium	160-1	33	37	27	32	15.80	cps
Gadolinium	160-2	3	10	0	4	114.60	cps
Holmium	165-1	10044467	9733364	9680965	9819599	2.00	cps
Holmium	165-2	3404336	3335326	3277344	3339002	1.90	cps
Indium	115-1	7938167	7802684	7985104	7908652	1.20	cps
Indium	115-2	699097	688321	673225	686881	1.89	cps
Iron	54-2	417	413	367	399	7.01	cps
Iron	56-2	6041	5858	5381	5760	5.92	cps
Iron	57-2	157	170	153	160	5.51	cps
Krypton	83-1	110	77	90	92	18.19	cps
Lead	206-1	2160	1900	1853	1971	8.38	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB013	Instrumnet Name :	P8
Client Sample ID :	CCB013	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 19:10:47	DataFile Name :	095CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1880	1630	1703	1738	7.40	cps
Lead	208-1	8448	7614	7601	7888	6.15	cps
Lithium	6-1	4185161	4095173	4049213	4109849	1.68	cps
Magnesium	24-2	530	583	600	571	6.40	cps
Manganese	55-2	260	237	287	261	9.58	cps
Molybdenum	94-1	553	530	523	536	2.94	cps
Molybdenum	95-1	677	550	573	600	11.24	cps
Molybdenum	96-1	783	570	720	691	15.85	cps
Molybdenum	97-1	427	283	270	327	26.59	cps
Molybdenum	98-1	1157	777	803	912	23.25	cps
Neodymium	150-1	23	17	20	20	16.65	cps
Neodymium	150-2	0	0	0	0	0.00	cps
Nickel	60-2	627	793	727	716	11.72	cps
Phosphorus	31-2	20	17	33	23	37.78	cps
Potassium	39-2	3557	3664	3507	3576	2.24	cps
Rhodium	103-1	7331356	7064900	6988432	7128229	2.53	cps
Rhodium	103-2	2660181	2651412	2555742	2622445	2.21	cps
Scandium	45-1	5280349	5169742	5242077	5230723	1.07	cps
Scandium	45-2	83403	82455	80353	82070	1.90	cps
Selenium	82-1	0	-7	13	2	458.26	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	13	3	0	6	124.93	cps
Silicon	28-1	219704	216679	218796	218393	0.71	cps
Silver	107-1	317	490	430	412	21.35	cps
Silver	109-1	310	347	307	321	6.91	cps
Sodium	23-2	10687	10861	10501	10683	1.69	cps
Strontium	86-1	257	233	223	238	7.19	cps
Strontium	88-1	750	817	920	829	10.34	cps
Sulfur	34-1	198666	196267	197170	197368	0.61	cps
Terbium	159-1	10282450	9938496	10021905	10080950	1.78	cps
Terbium	159-2	3283281	3275106	3169538	3242642	1.96	cps
Thallium	203-1	533	540	493	522	4.83	cps
Thallium	205-1	1260	1237	1367	1288	5.38	cps
Tin	118-1	2497	2664	2680	2614	3.88	cps
Titanium	47-1	163	147	130	147	11.37	cps
Uranium	238-1	200	140	203	181	19.68	cps

Reviewed By:Mohan
On:1/31/2025 7:33:54 AM
Inst Id :P8

LB Number :	LB134459	Operator :	Jaswal
Lab Sample ID :	CCB013	Instrumnet Name :	P8
Client Sample ID :	CCB013	Dilution Factor :	1
Date & Time Acquired :	2025-01-28 19:10:47	DataFile Name :	095CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	13	7	3	8	65.47	cps
Ytterbium	172-1	67	33	43	48	35.81	cps
Ytterbium	172-2	13	10	17	13	25.01	cps
Ytterbium	176-1	1207	1353	1317	1292	5.91	cps
Ytterbium	176-2	173	153	200	176	13.33	cps
Yttrium	89-1	13991723	14028433	13890179	13970112	0.51	cps
Yttrium	89-2	874210	849343	836568	853374	2.24	cps
Zinc	66-2	193	197	140	177	18.00	cps
Zirconium	90-1	677	563	673	638	10.11	cps
Zirconium	91-1	143	123	140	136	7.90	cps

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

Prep Standard - Chemical Standard Summary

Order ID : Q1163

Test : Metals CLP MS FULL

Prepbatch ID : PB166230,

Sequence ID/Qc Batch ID: LB134459,

Standard ID :
MP82128,MP84041,MP84042,MP84043,MP84044,MP84045,MP84046,MP84047,MP84048,MP84049,MP84050,MP84051,MP84052,MP84053,MP84054,MP84055,MP84056,MP84057,MP84073,MP84118,MP84119,MP84251,

Chemical ID :
M5288,M5289,M5295,M5298,M5304,M5476,M5496,M5497,M5498,M5513,M5519,M5658,M5739,M5751,M5798,M5799,M5800,M5801,M5802,M5806,M5815,M5816,M5817,M5819,M5820,M5873,M5874,M5961,M5962,M5976,M5977,M5978,M5981,M5983,M5994,M5999,M6021,M6023,M6025,M6028,M6030,M6032,M6040,M6055,M6121,M6126,M6127,M6128,W3112,

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
169	1:1HNO3	MP84041	01/14/2025	07/14/2025	Eman Mughal	None	None	Sarabjit Jaswal 01/16/2025

FROM 1250.00000ml of M6126 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1122	ICPMS CALIB BLANK(S0/ICB/CCB)	MP84042	01/14/2025	01/31/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 25.00000ml of M6121 + 4925.00000ml of W3112 + 50.00000ml of M6126 = Final Quantity: 5000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3947	S7(SFAM,6020,200.8)	MP84043	01/14/2025	01/31/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 1.00000ml of M5476 + 1.00000ml of M5799 + 1.00000ml of M5981 + 1.00000ml of M5983 + 1.90000ml of M5496 + 10.00000ml of M5976 + 10.00000ml of M5978 + 10.00000ml of M6126 + 2.00000ml of M5815 + 2.00000ml of M5817 + 4.00000ml of M6025 + 4.00000ml of M6032 + 4.90000ml of M5298 + 4.90000ml of M5519 + 5.00000ml of M6121 + 50.00000ml of M5304 + 830.60000ml of W3112 + 9.00000ml of M5751 + 9.00000ml of M5819 + 9.00000ml of M6128 + 9.90000ml of M5497 + 9.90000ml of M5806 + 9.90000ml of M6127 = Final Quantity: 1000.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3948	S6(SFAM,6020,200.8)	MP84044	01/14/2025	01/31/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 48.50000ml of W3112 + 50.00000ml of MP84043 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3949	S5(SFAM,6020,200.8)	MP84045	01/14/2025	01/31/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 73.50000ml of W3112 + 25.00000ml of MP84043 = Final Quantity: 100.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3954	S4(SFAM,6020,200.8)	MP84046	01/14/2025	01/31/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 86.00000ml of W3112 + 12.50000ml of MP84043 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3951	S3(SFAM, 6020,200.8)	MP84047	01/14/2025	01/31/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 88.50000ml of W3112 + 10.00000ml of MP84044 = Final Quantity: 100.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3955	S2CONC(SFAM,6020,200.8)	MP84048	01/14/2025	01/31/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 0.05000ml of M5476 + 0.05000ml of M5798 + 0.05000ml of M5800 + 0.05000ml of M5801 + 0.05000ml of M5961 + 0.05000ml of M5981 + 0.05000ml of M5983 + 0.05000ml of M6023 + 0.05000ml of M6025 + 0.05000ml of M6028 + 0.05000ml of M6030 + 0.05000ml of M6128 + 0.10000ml of M5496 + 0.10000ml of M5658 + 0.10000ml of M5751 + 0.10000ml of M5802 + 0.25000ml of M5298 + 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 M6032 + 2.00000ml of M5815 + 2.00000ml of M5817 + 2.50000ml of M5498 + 2.50000ml of M5519 + 2.50000ml of M5806 + 2.50000ml of M6121 + 2.50000ml of M6127 + 225.25000ml of W3112 + 5.00000ml of M6126 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3956	S2(SFAM,6020,200.8)	MP84049	01/14/2025	01/31/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 98.00000ml of W3112 + 0.50000ml of MP84048 = Final Quantity: 100.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3957	S1(SFAM,6020,200.8)	MP84050	01/14/2025	01/31/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 88.50000ml of W3112 + 10.00000ml of MP84049 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3958	ICV(SFAM)	MP84051	01/14/2025	01/31/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 2.00000ml of M5295 + 98.00000ml of MP84042 = Final Quantity: 100.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3961	CCV	MP84052	01/14/2025	01/31/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 0.20000ml of M5513 + 0.50000ml of M5476 + 0.50000ml of M5799 + 0.50000ml of M5981 + 0.50000ml of M5983 + 1.00000ml of M5815 + 1.00000ml of M5817 + 10.00000ml of M6126 + 12.45000ml of M5298 + 12.45000ml of M5519 + 2.00000ml of M6032 + 24.95000ml of M5498 + 24.95000ml of M5806 + 24.95000ml of M6127 + 25.00000ml of M5304 + 4.50000ml of M5751 + 4.50000ml of M5819 + 4.50000ml of M6128 + 4.95000ml of M5496 + 5.00000ml of M5976 + 5.00000ml of M6121 + 830.60000ml of W3112 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1142	ICSA ICPMS	MP84053	01/14/2025	01/31/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 10.00000ml of M5873 + 90.00000ml of MP84042 = Final Quantity: 100.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1143	ICSAB ICPMS	MP84054	01/14/2025	01/31/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 10.00000ml of M5873 + 10.00000ml of M5874 + 80.00000ml of MP84042 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3962	MG 10PPM FOR TUNE	MP84055	01/14/2025	01/31/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 0.01000ml of M6127 + 9.99000ml of MP84042 = Final Quantity: 100.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3894	TUNE 200PPB	MP84056	01/14/2025	01/31/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 2.00000ml of M6055 + 2.00000ml of MP84055 + 96.00000ml of MP84042 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3903	ISS 3PPM	MP84057	01/14/2025	01/31/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 5.00000ml of M6126 + 75.00000ml of M5739 + 170.00000ml of MP84042 = Final Quantity: 250.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2902	S8 ICPMS	MP84073	01/14/2025	01/31/2025	Janvi Patel	None	None	Mohan Bera 01/16/2025

FROM 1.00000ml of M5496 + 2.50000ml of M5288 + 2.50000ml of M5298 + 5.00000ml of M5497 + 5.00000ml of M5806 + 5.00000ml of M6127 + 79.00000ml of MP84042 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3964	CONC.LCSS SPIKE	MP84118	01/21/2025	02/04/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/22/2025

FROM 0.25000ml of M5798 + 0.25000ml of M5800 + 0.25000ml of M5801 + 0.25000ml of M5961 + 0.25000ml of M5981 + 0.25000ml of M5983 + 0.25000ml of M6023 + 0.25000ml of M6025 + 0.25000ml of M6028 + 0.25000ml of M6030 + 0.25000ml of M6128 + 0.50000ml of M5289 + 0.50000ml of M5658 + 0.50000ml of M5751 + 0.50000ml of M5802 + 1.00000ml of M5977 + 1.25000ml of M5799 + 1.25000ml of M5819 + 1.25000ml of M5962 + 1.25000ml of M5978 + 1.25000ml of M6021 + 12.50000ml of M5498 + 12.50000ml of M5519 + 12.50000ml of M5806 + 12.50000ml of M6127 + 155.70000ml of W3112 + 2.50000ml of M6032 + 2.50000ml of M6121 + 4.80000ml of M5476 + 5.00000ml of M5298 + 5.00000ml of M6126 + 6.25000ml of M5816 + 6.25000ml of M5820 = Final Quantity: 250.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
870	ICPMS SPIKE SOL.B	MP84119	01/21/2025	01/31/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/22/2025

FROM 0.02500ml of M5977 + 0.05000ml of M5476 + 5.00000ml of M5994 + 5.00000ml of M5999 + 39.92500ml of MP84042 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1883	SE 10PPM	MP84251	01/28/2025	01/31/2025	Sarabjit Jaswal	None	None	Mohan Bera 01/30/2025

FROM 0.10000ml of M5962 + 9.90000ml of MP84042 = Final Quantity: 10.000 ml

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

CHEMICAL RECEIPT LOG BOOK

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	02/05/2025	08/07/2024 / jaswal	04/20/2021 / bin	M5295

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	020422	02/04/2025	05/02/2023 / jaswal	06/15/2022 / jaswal	M5298

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.	57138 / Sr, 10000 PPM, 125 ml	082922	08/29/2025	07/29/2024 / jaswal	03/16/2023 / jaswal	M5476

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

CHEMICAL RECEIPT LOG BOOK

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	08/15/2023 / jaswal	03/17/2023 / bin	M5496

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	03/18/2023 / bin	03/17/2023 / bin	M5497

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.	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

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

CHEMICAL RECEIPT LOG BOOK

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.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	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

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.	58030 / Zinc, Zn, 500 ml, 1000 PPM	111623	11/16/2026	03/20/2024 / jaswal	02/09/2024 / jaswal	M5819

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

CHEMICAL RECEIPT LOG BOOK

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

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

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

CHEMICAL RECEIPT LOG BOOK

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	01/16/2025 / JANVI	02/22/2024 / Jaswal	M5977

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.	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	M5994

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

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57023 / V, 1000 PPM, 125 ml	062424	06/24/2027	09/28/2024 / jaswal	08/05/2024 / Jaswal	M6021

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57081 / Tl, 1000 PPM, 125 ml	0624724	06/27/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6023

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57082 / Pb, 1000 PPM, 125 ml	061224	11/09/2026	08/05/2024 / Jaswal	08/05/2024 / Jaswal	M6025

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	08/05/2024 / 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.	57056 / Ba, 1000 PPM, 125 ml	010924	01/09/2027	01/14/2025 / Jaswal	08/05/2024 / Jaswal	M6032

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

CHEMICAL RECEIPT LOG BOOK

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)	0000275677	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6121

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	06/03/2025	12/03/2024 / Janvi	11/12/2024 / Janvi	M6126

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	112124	11/21/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6127

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	101124	10/11/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6128

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

INORGANIC VENTURES™

Refine your results. Redefine your industry.

Certificate of Analysis

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

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).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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:

1027

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, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

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

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6032

R: 8/5/24

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

1031

CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Lot #**		
Lot Number:	**010924**	**Solvent:**	24002546	Nitric Acid	
Description:	**Barium (Ba)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	010927				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

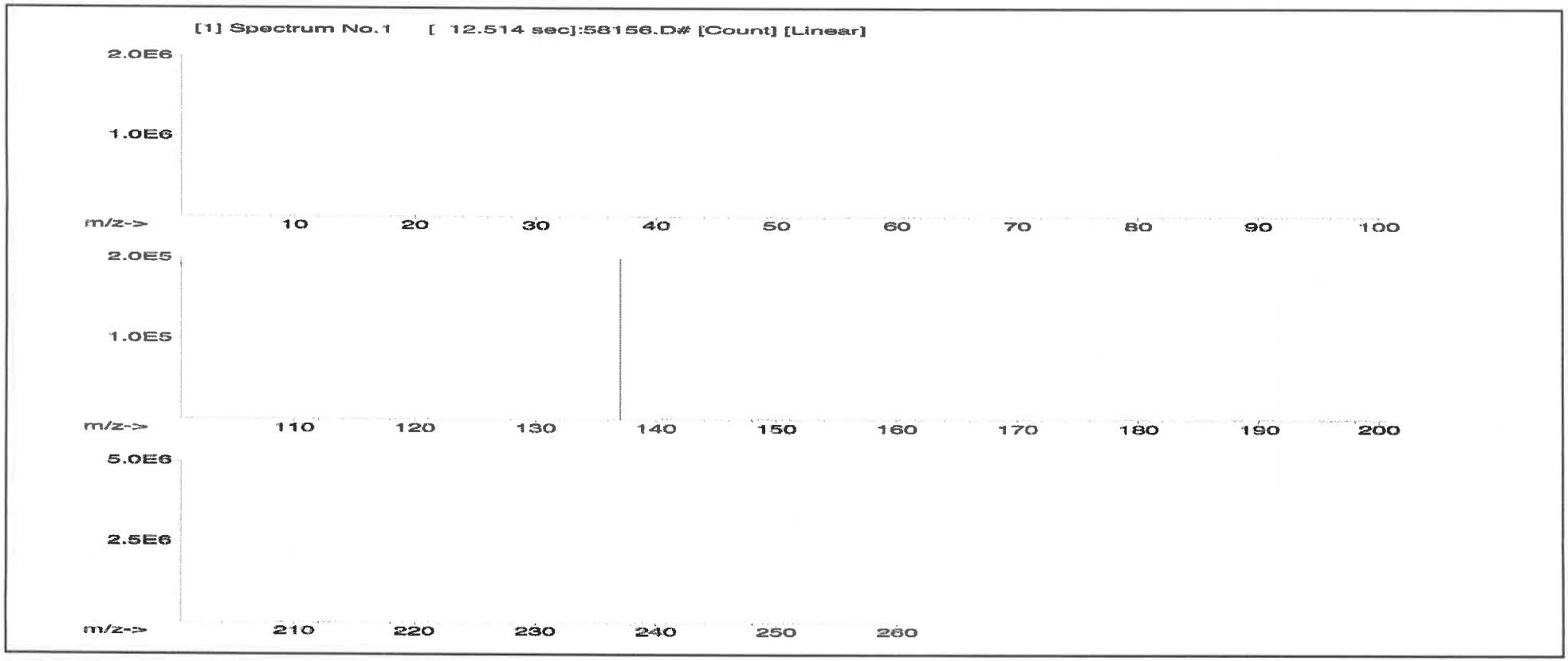
Giovanni Esposito

Formulated By:	Giovanni Esposito	010924

Pedro Rentas

Reviewed By:	Pedro L. Rentas	010924

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Barium nitrate (Ba)	IN023	BAD022019A1	1000	99.999	0.10	52.3	3.82417	3.82441	**1000.1**	**2.0**	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



1032

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R 8/15/24

M6028

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

1033

CERTIFIED WEIGHT REPORT:

Part Number: 57048
Lot Number: 070124
Description: Cadmium (Cd)

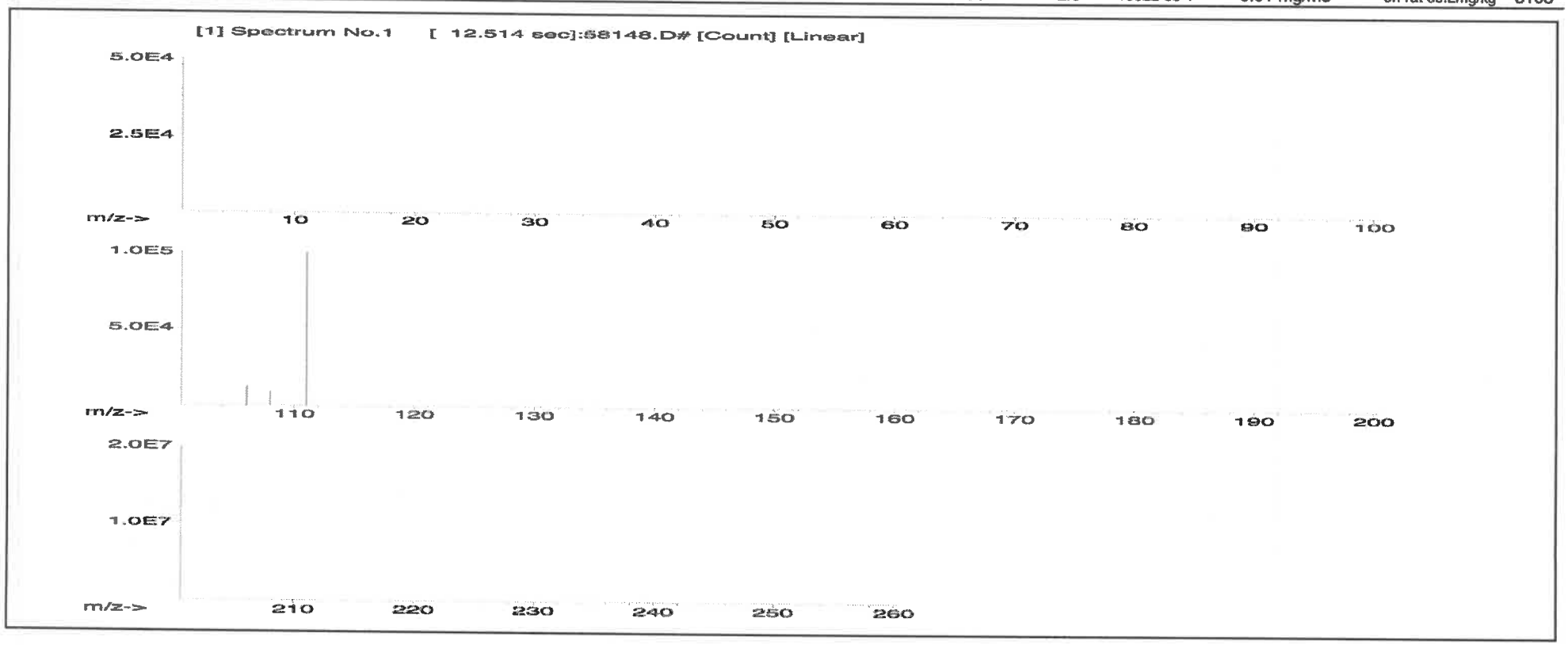
Expiration Date: 070127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB 5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): 2000.07 0.100 Flask Uncertainty

	Lot #	
Solvent:	24002546	Nitric Acid
2%	40.0 (mL)	Nitric Acid

Aleah O'Brady
Formulated By: Aleah O'Brady 070124

Pedro Rentas
Reviewed By: Pedro L. Rentas 070124

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	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



1034

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

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

Al	<0.02	Cd	T	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	<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:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 8/5/24 M6025

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

1035

CERTIFIED WEIGHT REPORT:

Part Number: 57182
Lot Number: 110923
Description: Lead (Pb)

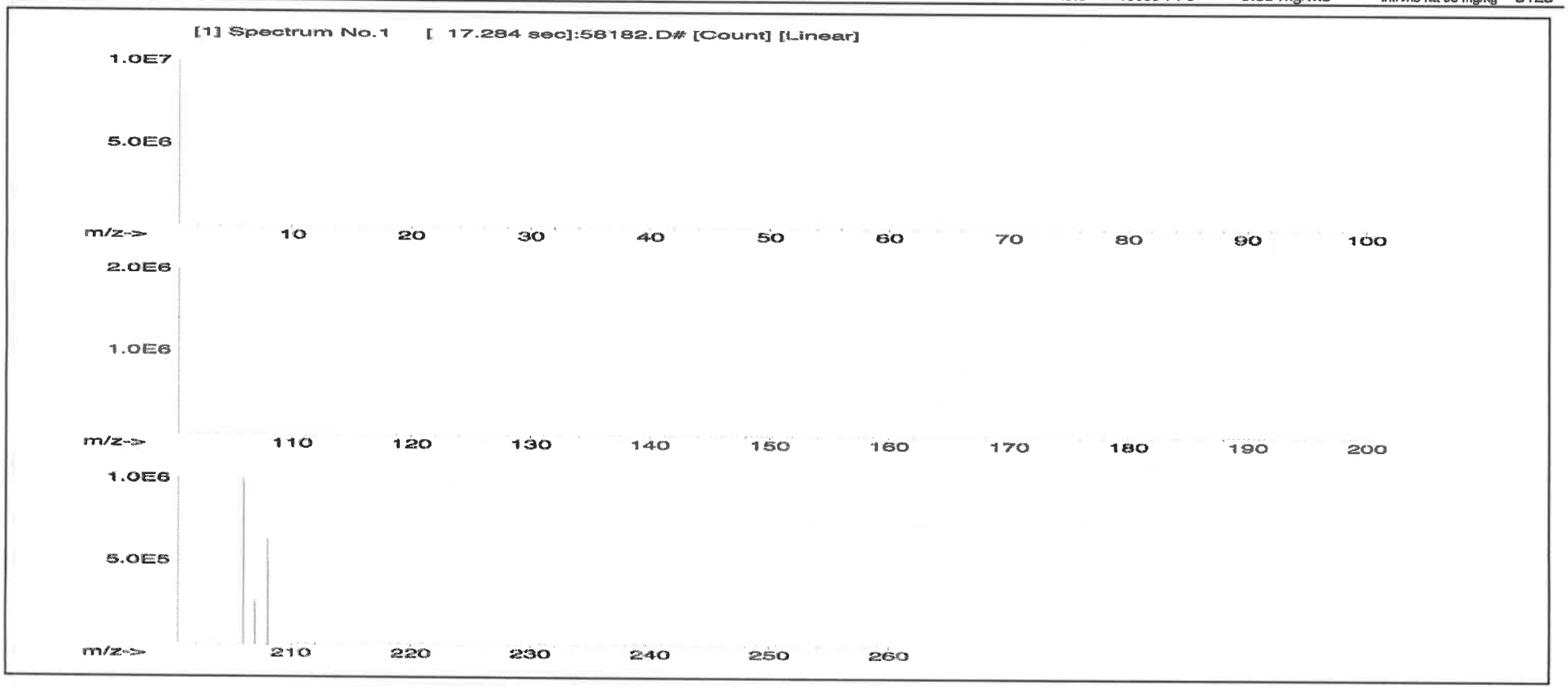
Expiration Date: 110926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawence Barry	110923
Reviewed By:	Pedro L. Rentas	110923

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	10000	99.999	0.10	62.5	32.0006	32.0040	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



1036

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5288 R: 07/21/2022

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

1037

CERTIFIED WEIGHT REPORT:

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

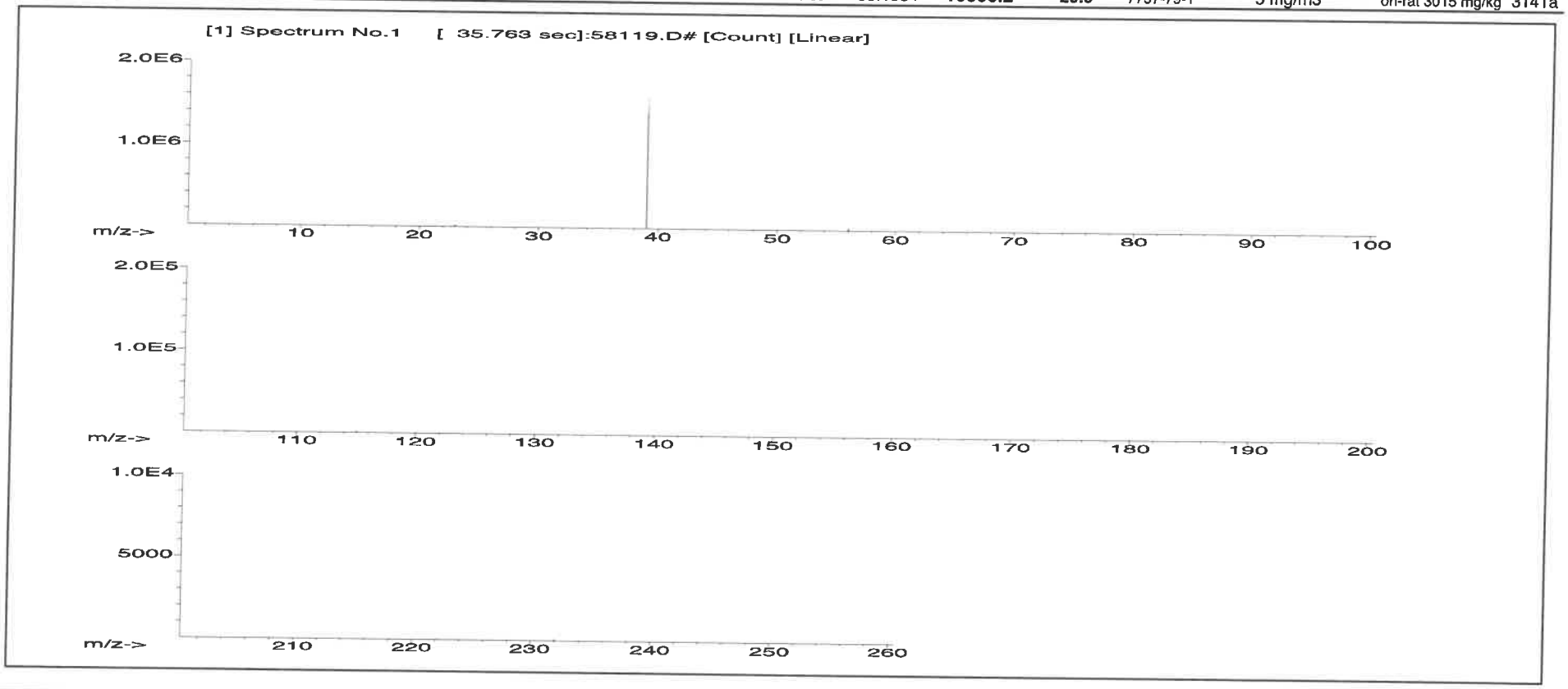
Expiration Date: 071125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By: Lawrence Barry 071122

Reviewed By: Pedro L. Rentas 071122

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Potassium nitrate (K)	IN034	KD022021A1	10000	99.999	0.10	37.6	53.1925	53.1934	**10000.2**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3015 mg/kg	3141a



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

M5289 R: 07/12/22 BH

Certified Reference Material CRM

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

1039

CERTIFIED WEIGHT REPORT:

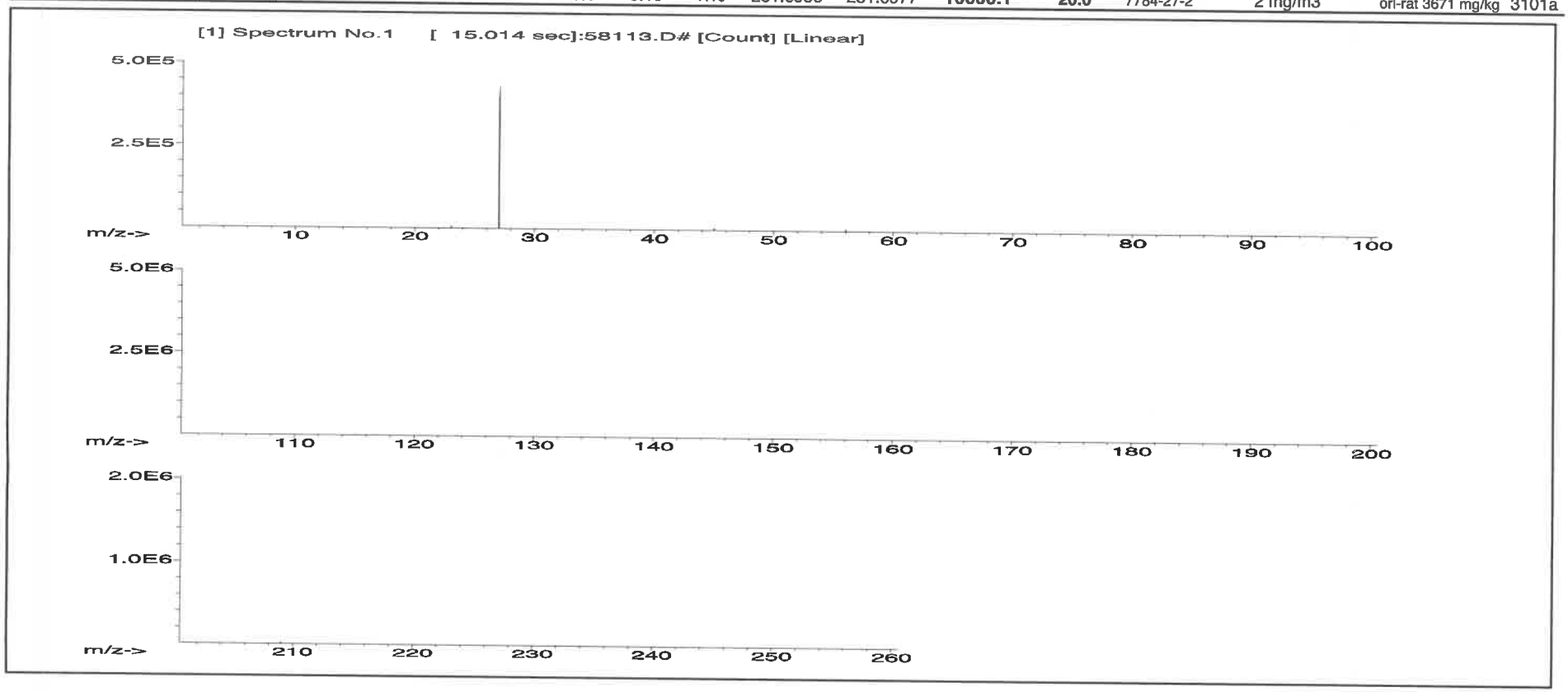
Part Number: 58113
Lot Number: 070622
Description: Aluminum (Al)

Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	20370011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

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

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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	orl-rat 3671 mg/kg	3101a



1040

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	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

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 certifed (+/-) 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).

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.

Contains Metals in Dilute Acidic or Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets Available Upon Request

M5291
M5292
M5293
M5294
M5295

(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.

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

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

SJ 6/15/22

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 020422
Description: Iron (Fe)

M5298

Expiration Date: 020425
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

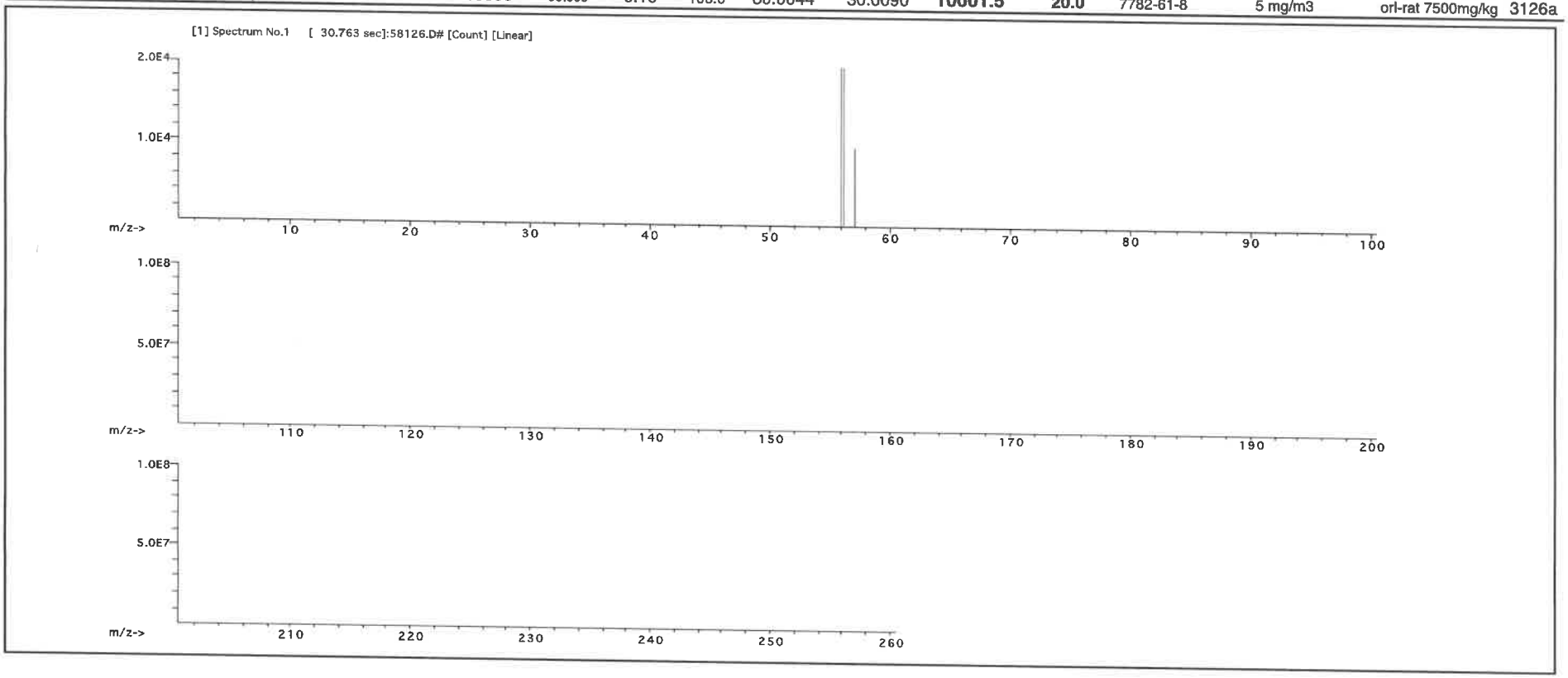
	Lot #		
Solvent:	20370011	Nitric Acid	
5.0%	150.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Giovanni Esposito
Formulated By: Giovanni Esposito 020422

Pedro Rentas
Reviewed By: Pedro L. Rentas 020422

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Iron(III) nitrate nonahydrate (Fe)	IN346	221035107	10000	99.999	0.10	100.0	30.0044	30.0090	**10001.5**	**20.0**	7782-61-8	5 mg/m3	orl-rat 7500mg/kg	3126a



1043

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	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	<0.10	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.5	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	<0.02
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:



* 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 certifed (+/-) 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).

1044

INORGANIC VENTURES™
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).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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 ºC)

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, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5496 R 7/20/23

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

1049

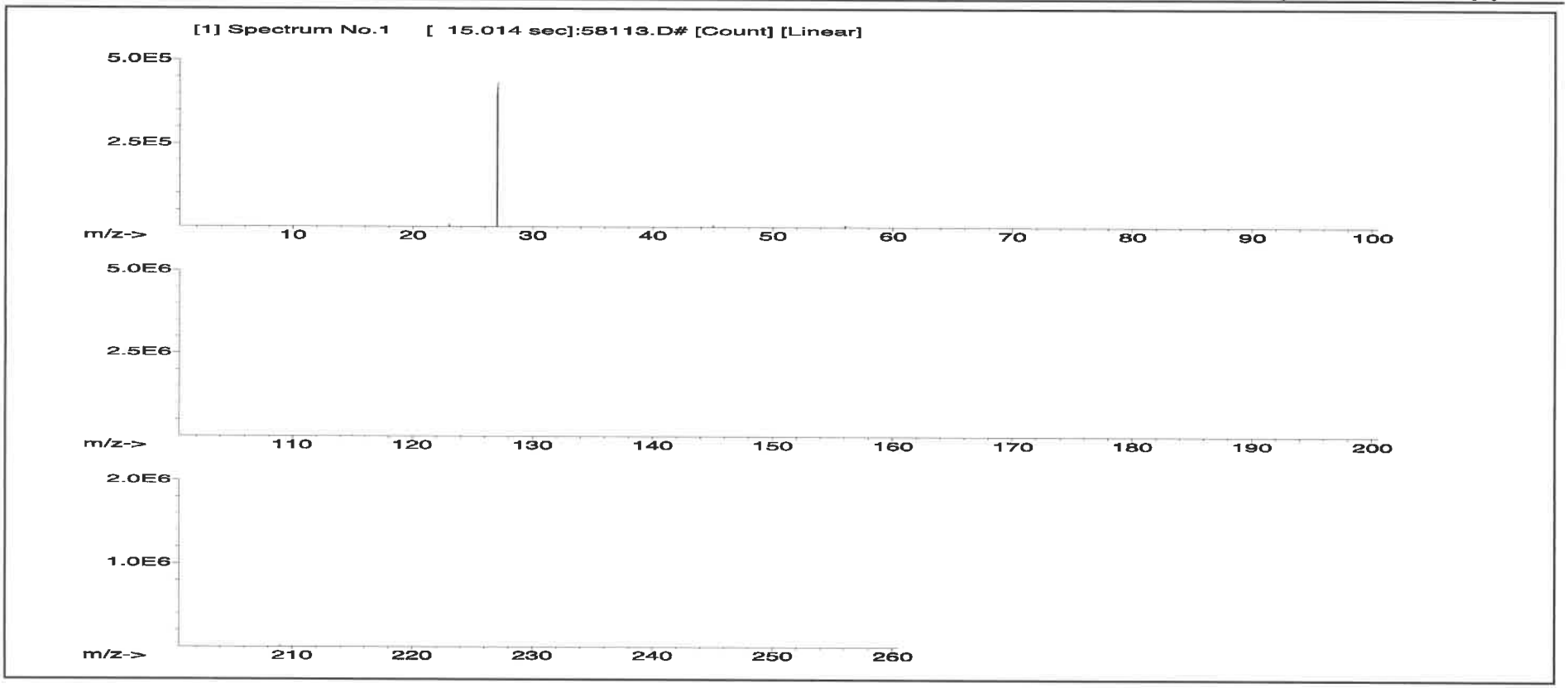
CERTIFIED WEIGHT REPORT:

Part Number:	**58113**		**Lot #**		
Lot Number:	**011623**	**Solvent:**	20510011	Nitric Acid	
Description:	**Aluminum (Al)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	011626				
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		

Giovanni Esposito

Formulated By:	Giovanni Esposito	011623
Reviewed By:	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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Aluminum nitrate nonahydrate (Al)	IN022	ALM112021A1	10000	99.999	0.10	7.30	273.9779	274.0078	**10001.1**	**20.0**	7784-27-2	2 mg/m3	orl-rat 3671 mg/kg	3101a



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

IN5497 - IN5498 R: 03/17/23 BH

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

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 ± 0.058 Flask Uncertainty

	Lot #		
Solvent:	21110221	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

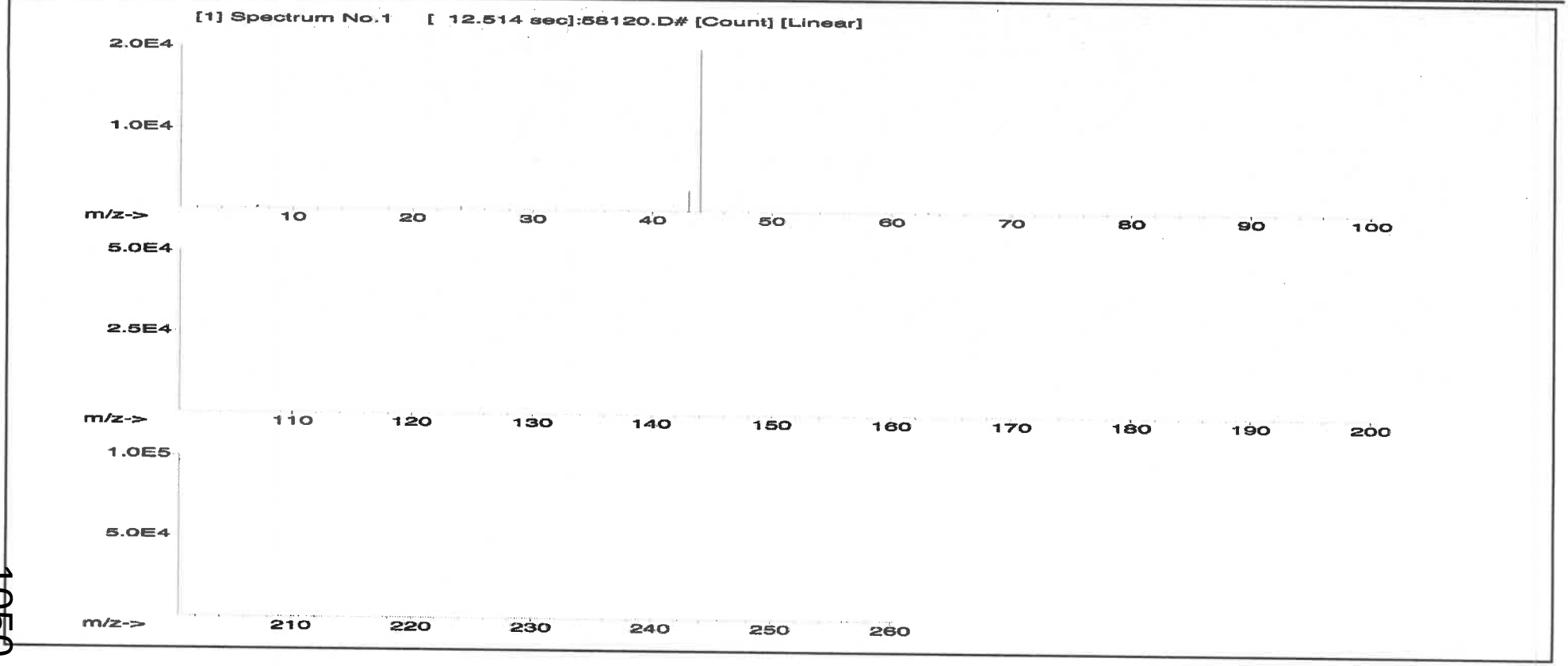
5E-05 Balance Uncertainty

Giovanni Esposito

Formulated By: Giovanni Esposito 031523

Reviewed By: Pedro L. Rentas 031523

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Calcium carbonate (Ca)	IN014	CAD072022A1	10000	99.999	0.10	39.9	75.1990	75.2093	**10001.4**	**20.0**	471-34-1	5 mg/m3	orl-rat >2000mg/kg	3109a



1050

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	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<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:

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 certifed (+/-) 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).

T051

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5497 - M5498 R: 03/17/23 BH

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

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 ± 0.058 Flask Uncertainty

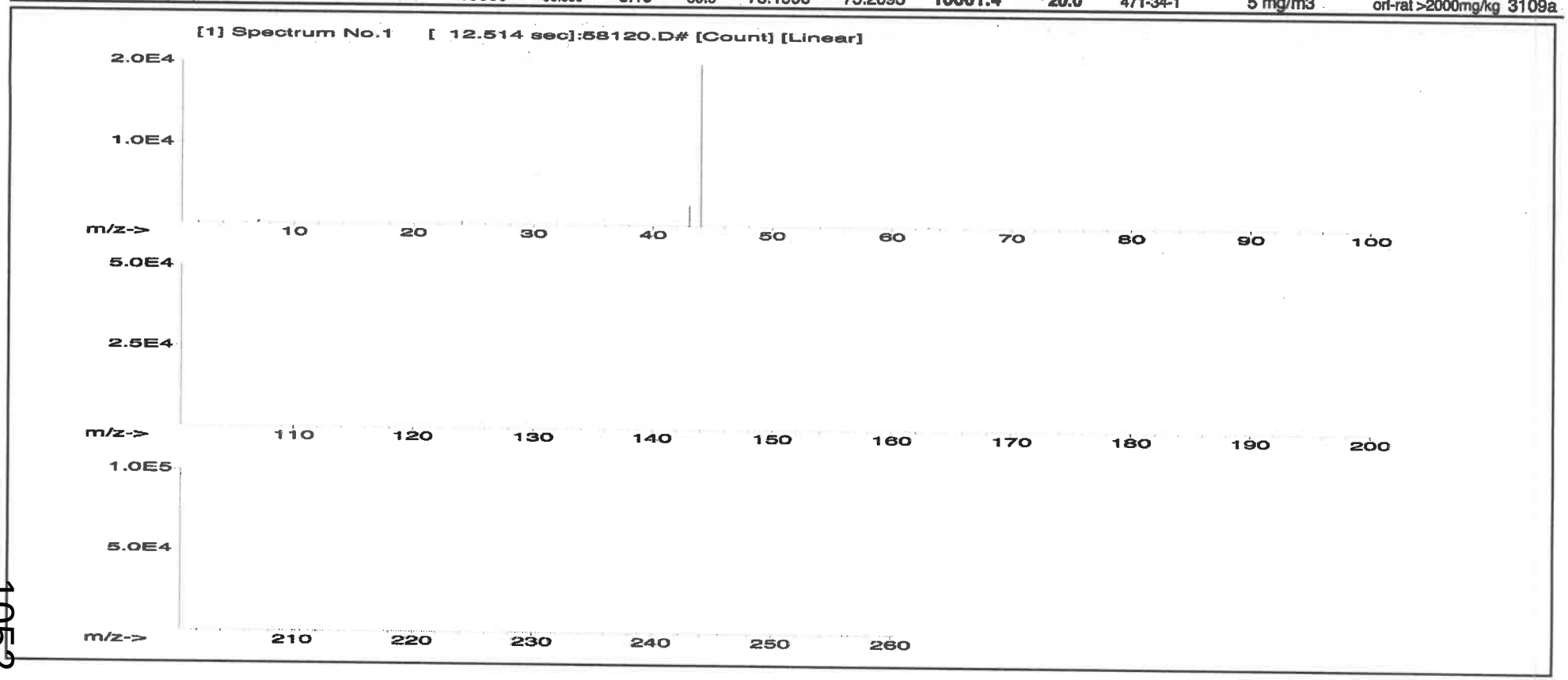
	Lot #	
Solvent:	21110221	Nitric Acid
2%	60.0 (mL)	Nitric Acid

5E-05 Balance Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	031523
Reviewed By:	Pedro L. Rentas	031523

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Calcium carbonate (Ca)	IN014	CAD072022A1	10000	99.999	0.10	39.9	75.1990	75.2093	**10001.4**	**20.0**	471-34-1	5 mg/m3	orl-rat >2000mg/kg	3109a



1052

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	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<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:

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 certifed (+/-) 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).

10053

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

MS513 R:03/17/23 BF

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

CERTIFIED WEIGHT REPORT:

Part Number: 57182
Lot Number: 061522
Description: Lead (Pb)

Expiration Date: 061525
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

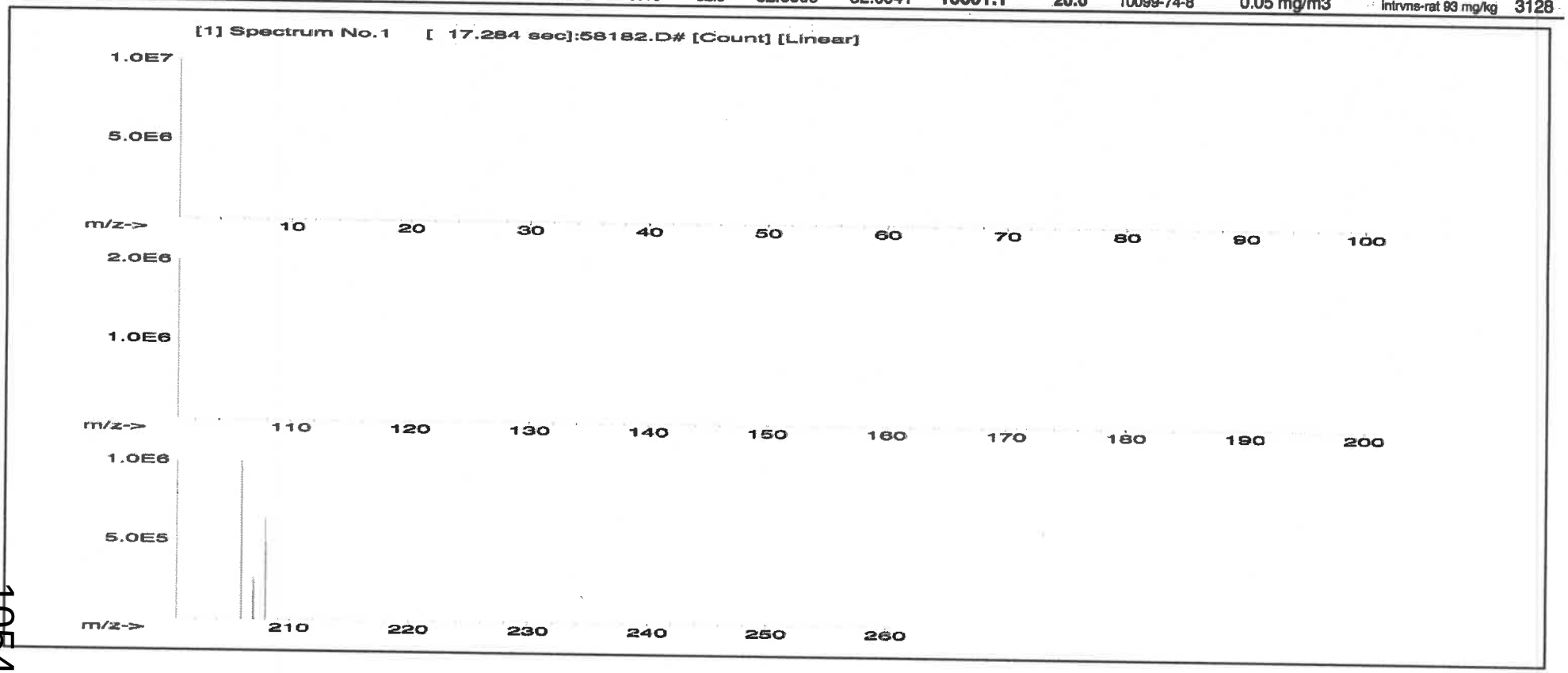
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	061522
Reviewed By:	Pedro L. Rentas	061522

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	10000	99.999	0.10	62.5	32.0006	32.0041	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	Intrvns-rat 93 mg/kg	3128



1054

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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(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 certifed (+/-) 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).

T055

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5519. M5520 (BH) R:03/17/23

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

1056

CERTIFIED WEIGHT REPORT:

Part Number: 58119
Lot Number: 120822
Description: Potassium (K)

Expiration Date: 120825
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.4

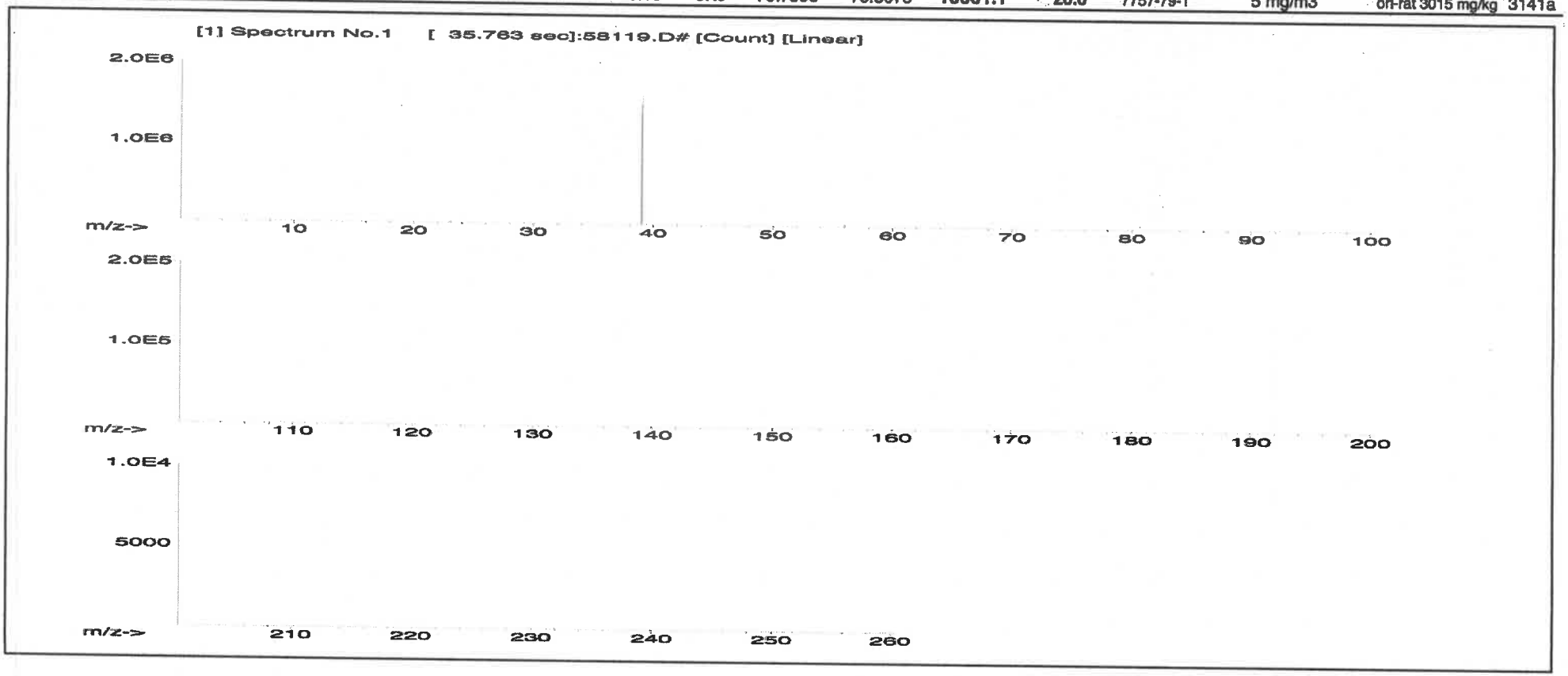
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.06 Flask Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	120822
Reviewed By:	Pedro L. Rentas	120822

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Potassium nitrate (K)	IN034	KD022021A1	10000	99.999	0.10	37.6	79.7990	79.8075	**10001.1**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3015 mg/kg	3141a



1057

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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5658 R ! 8/25/23

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

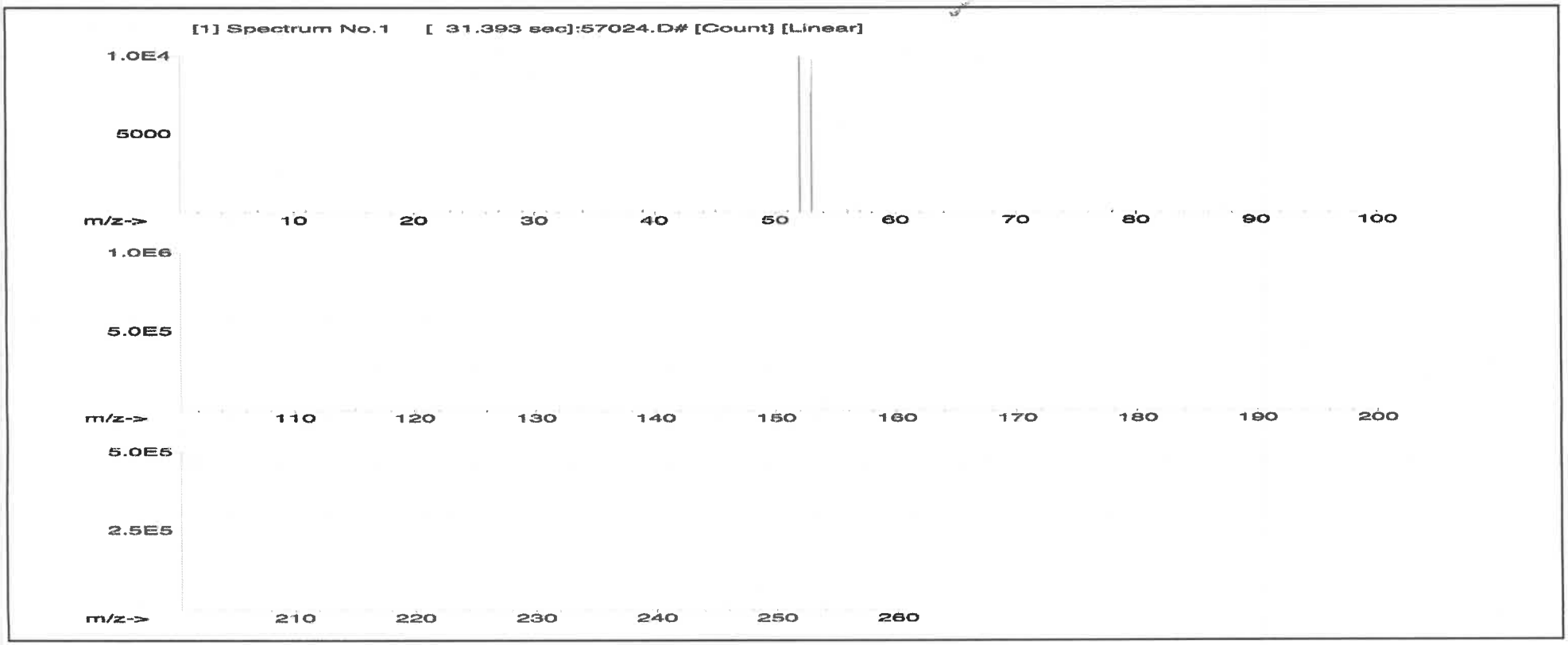
1058

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

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.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 8/25/23 M5751

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

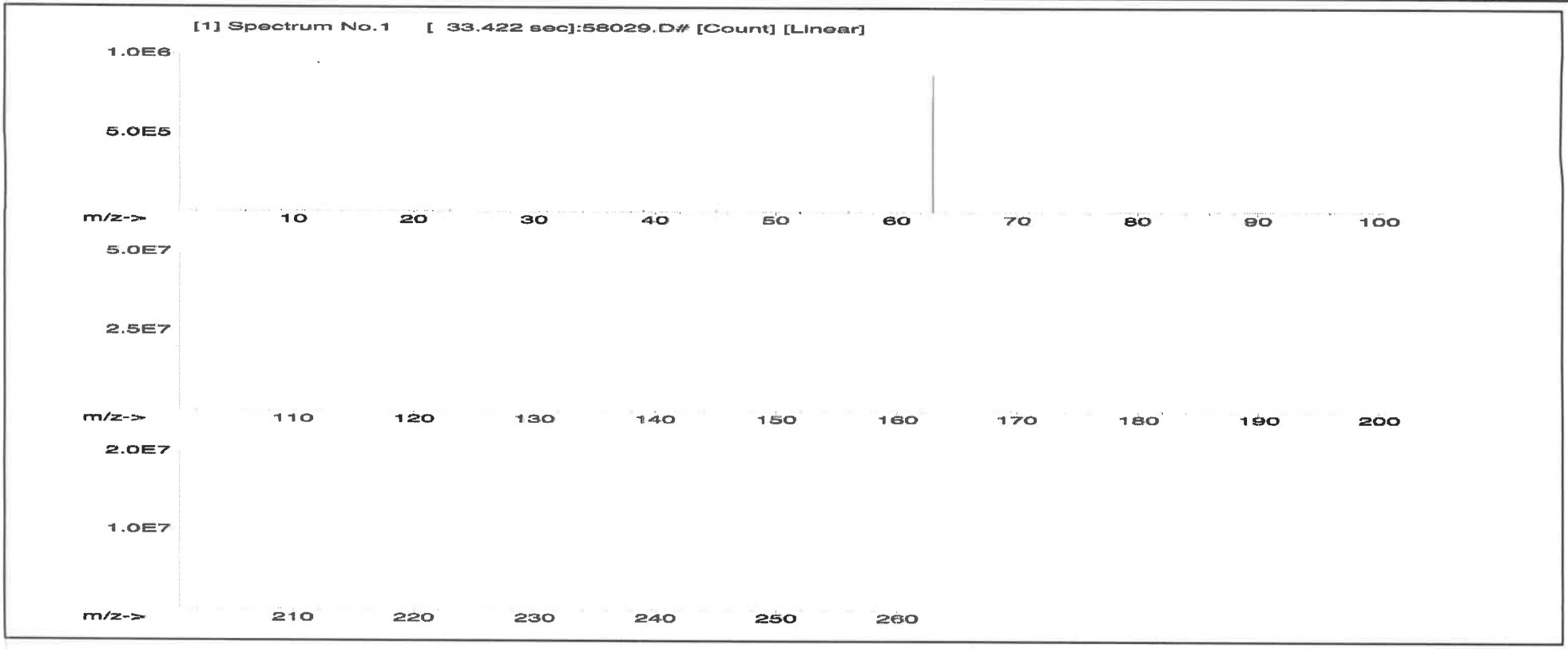
1060

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	21110221	Nitric Acid	
Lot Number:	**071723**			
Description:	**Copper (Cu)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071726			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	071723
Reviewed By:	Pedro L. Rentas	071723

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.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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	orl-rat 794 mg/kg	3114



10611

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5798

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

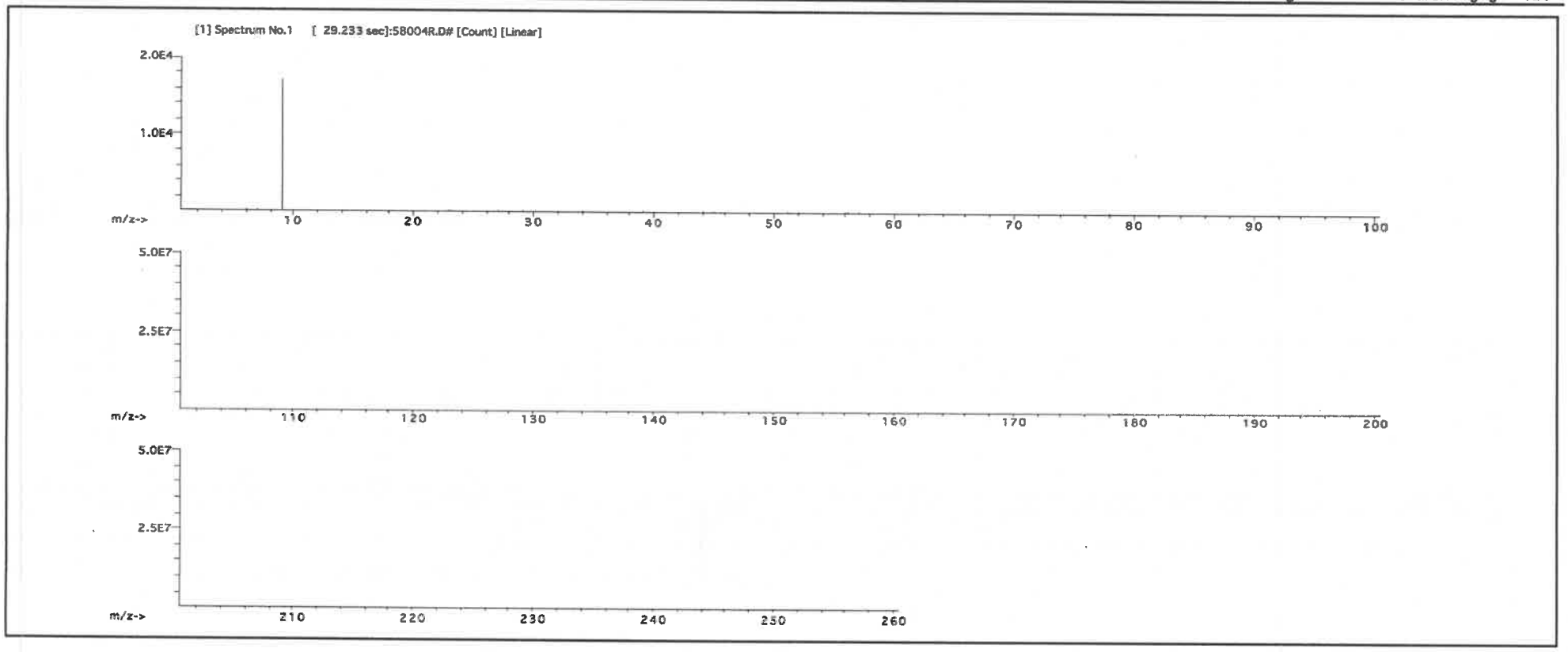
1062

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57004**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Beryllium (Be)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

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.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13597-99-4	0.2ug/m3	intrvns-rat 3.16mg/kg	NA



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	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	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:

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 certifed (+/-) 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).

1063

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R? 02/09/24 IM5799 BA

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

1064

CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

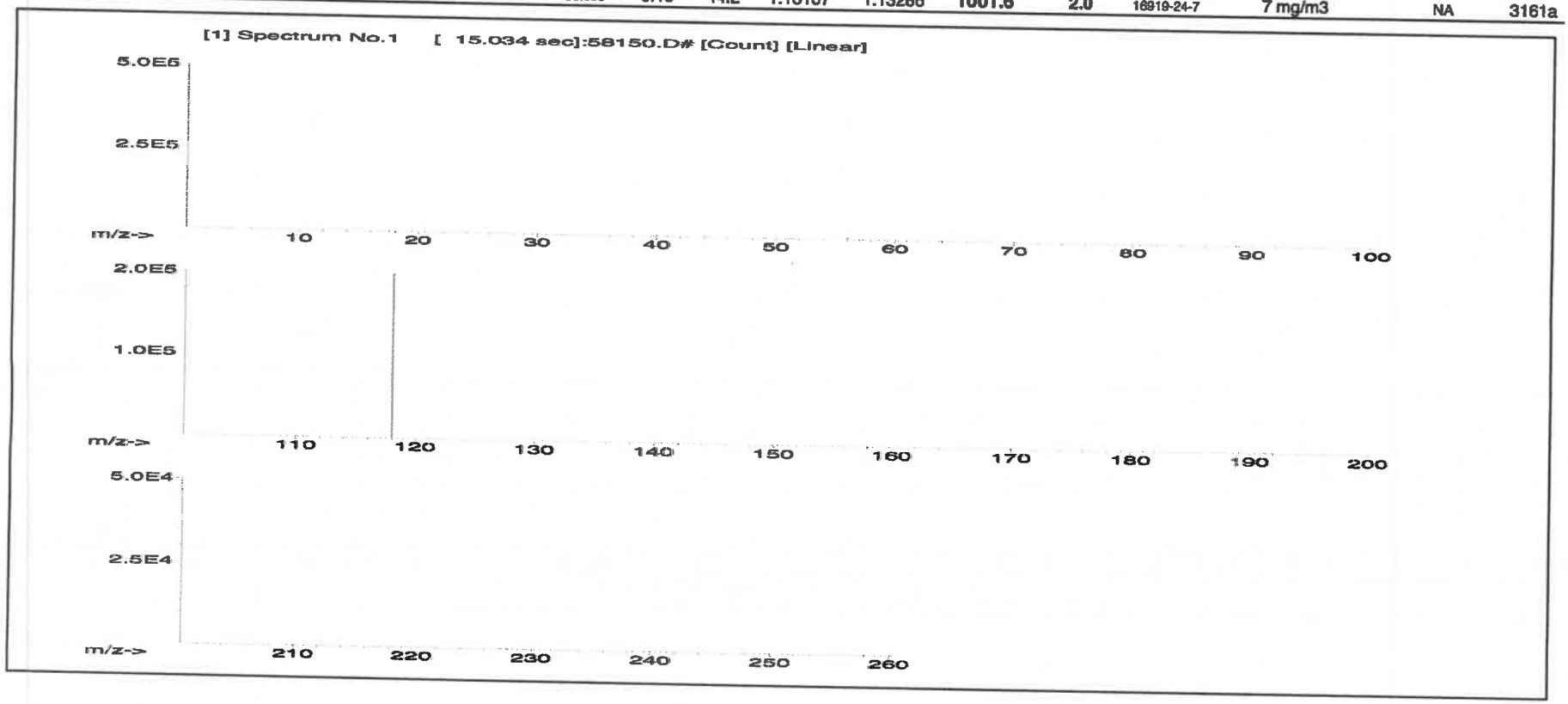
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	Lot #	
Solvents:	21110221	Nitric Acid
	22D0562008	Hydrochloric acid
2%	10.0	Nitric Acid
6%	30.0	Hydrochloric acid
	(mL)	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorostannate(IV) (Sn)	IN010	SND042023A1	1000	99.999	0.10	44.2	1.13107	1.13286	**1001.6**	**2.0**	16919-24-7	7 mg/m3	NA	3161a



1065

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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 IM5800 BH

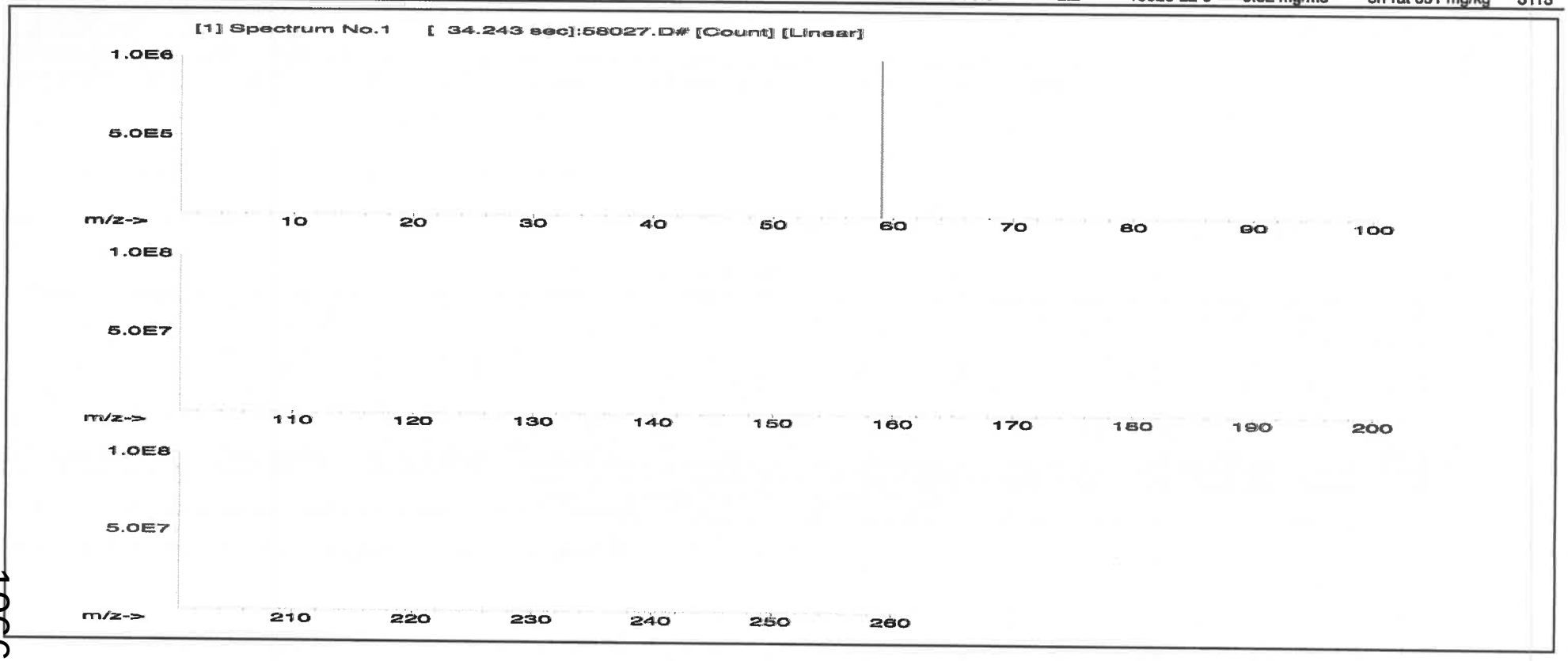
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091923
Reviewed By:	Pedro L. Rentas	091923

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.) 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	orl-rat 691 mg/kg	3113



1066

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	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Gé	<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:

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 certifed (+/-) 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).

1067

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 IM5801 BH

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

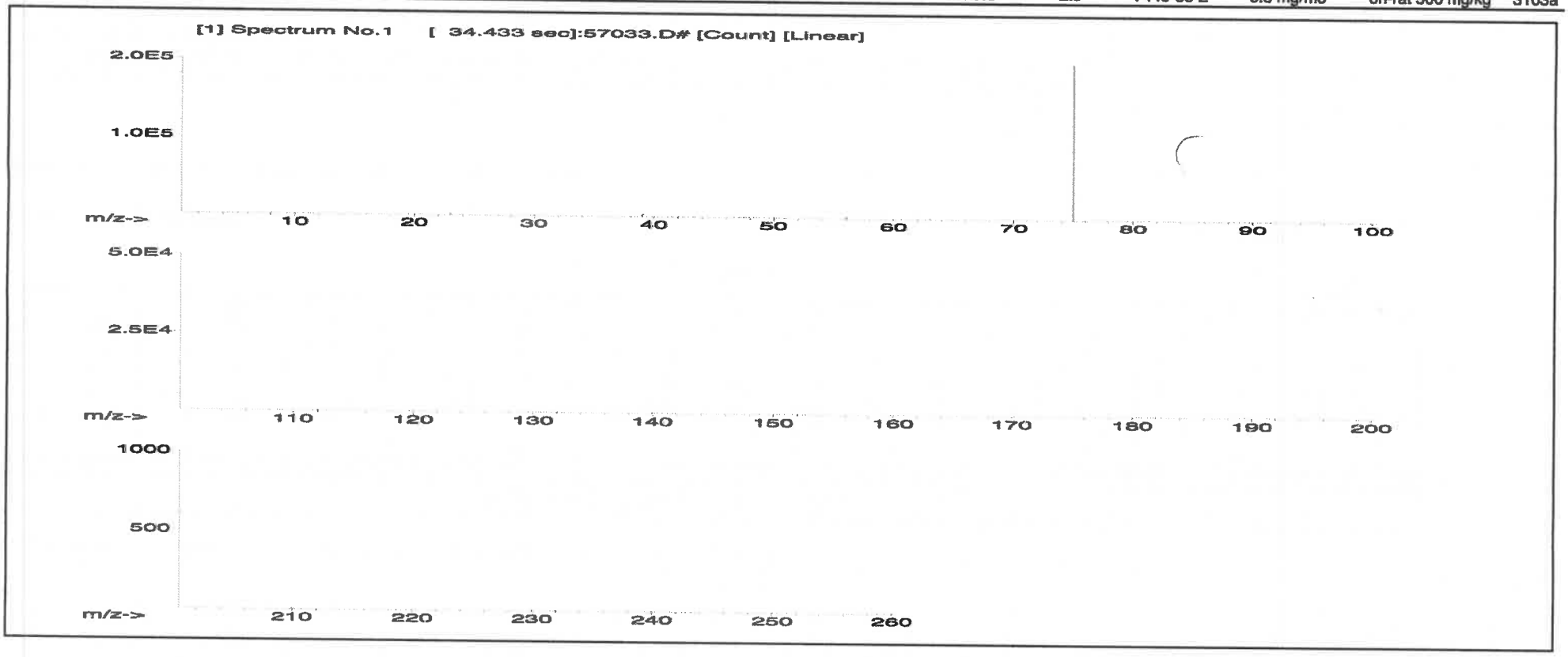
1068

CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**				
Lot Number:	**111323**	24002546	Nitric Acid		
Description:	**Arsenic (As)**				
		2.0%	80.0 (mL)	Nitric Acid	
Expiration Date:	111326				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty		

Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rentas	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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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	orl-rat 500 mg/kg	3103a



1069

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	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:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R1 02/09/24. M5815

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

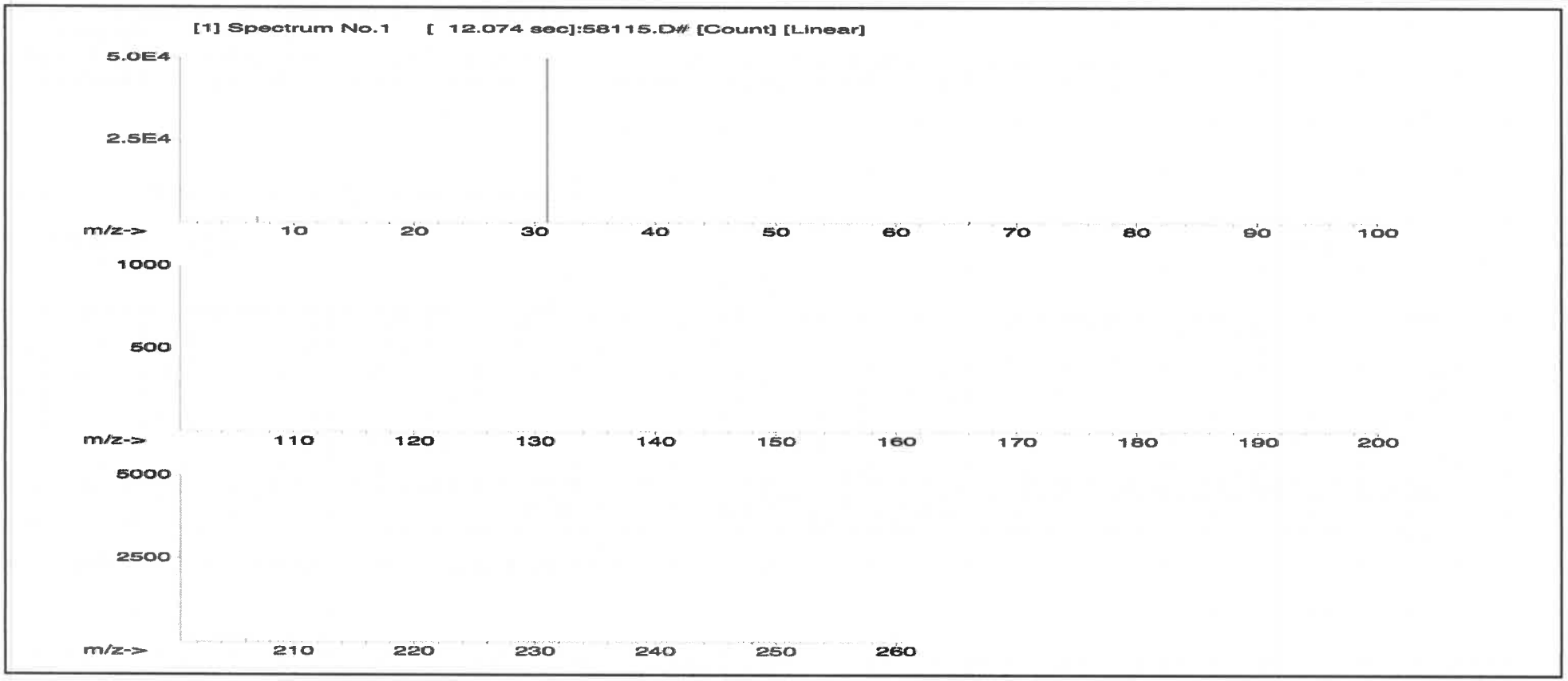
1070

CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**57115**	**Solvent:**	21110221	Nitric Acid
Lot Number:	**041723**			
Description:	**Phosphorous (P)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	041726			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	041723
Reviewed By:	Pedro L. Rentas	041723

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	10000	99.999	0.10	27.5	72.7287	72.7289	**10000.0**	**20.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/kg	3186



10711

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	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:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5816

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

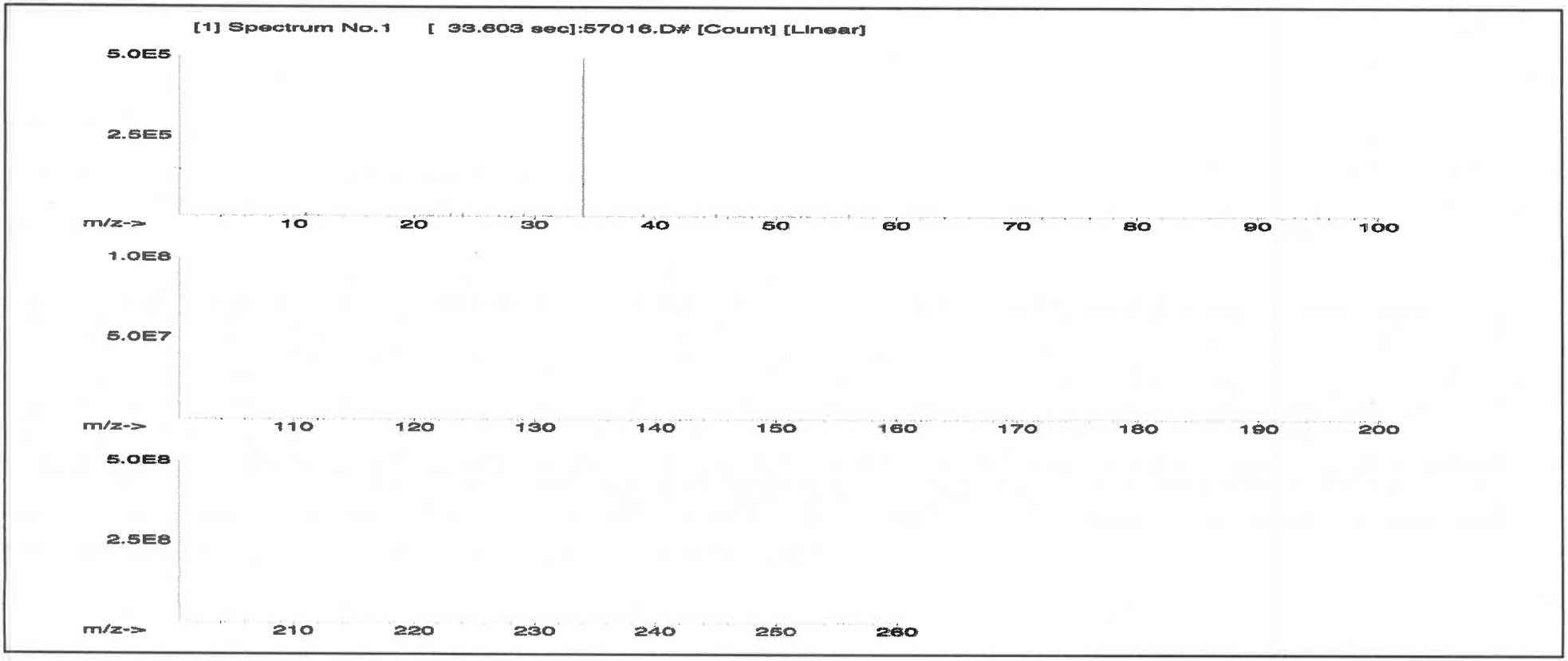
1072

CERTIFIED WEIGHT REPORT:

Part Number:	**57016**	**Solvent:**	**Lot #** 122923	ASTM Type 1 Water
Lot Number:	**122923**			
Description:	**Sulfur (S)**			
Expiration Date:	122926			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty	

Formulated By:	Benson Chan	122923
Reviewed By:	Pedro L. Rentas	122923

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	1000	99.9	0.10	24.3	16.4979	16.4980	**1000.0**	**2.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



1073

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<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

(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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5817

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

1074

CERTIFIED WEIGHT REPORT:

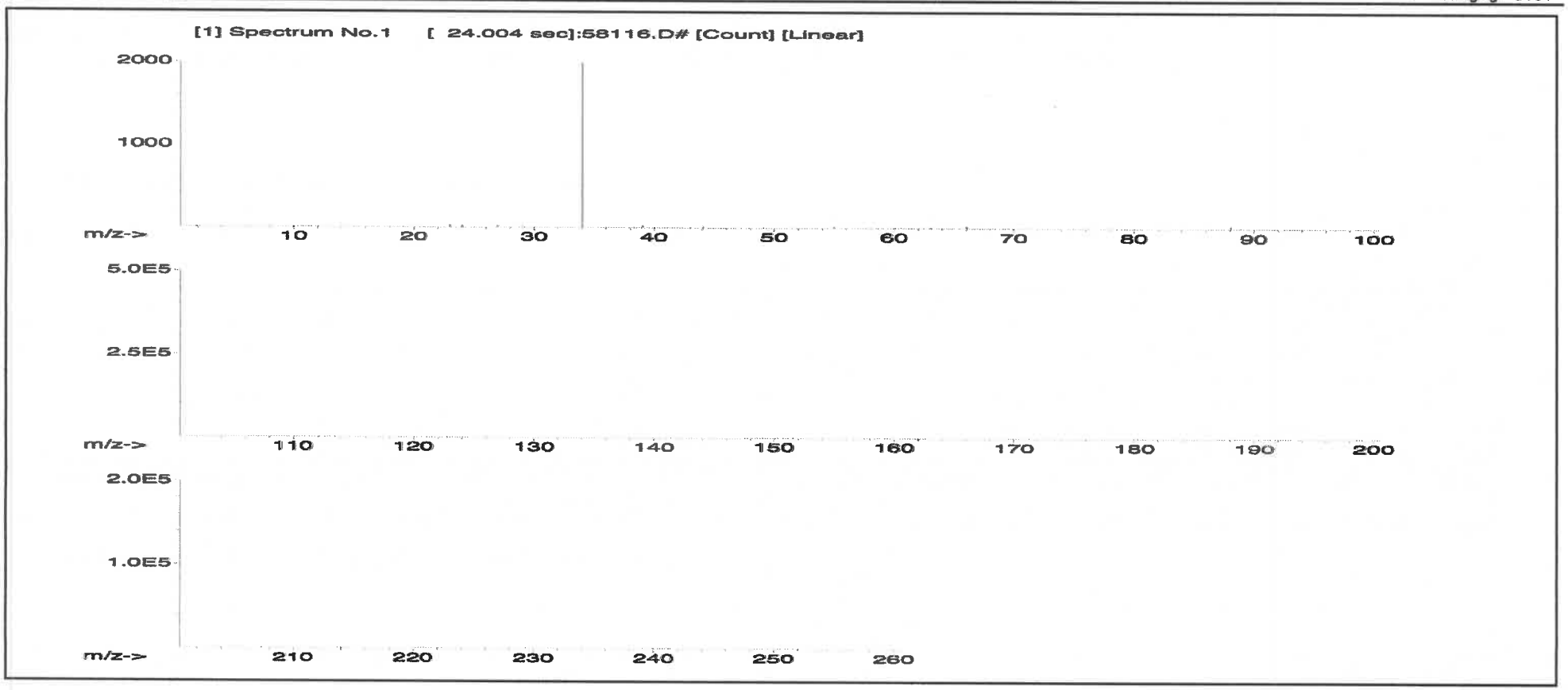
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

Lot #
Solvent: 071123 ASTM Type 1 Water

Expiration Date: 071126
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): 1999.48 0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	071123
Reviewed By:	Pedro L. Rentas	071123

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	10000	99.9	0.10	24.3	82.4675	82.4682	**10000.1**	**20.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



1075

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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<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

(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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5819

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

1076

CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 111623
Description: Zinc (Zn)

Expiration Date: 111626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

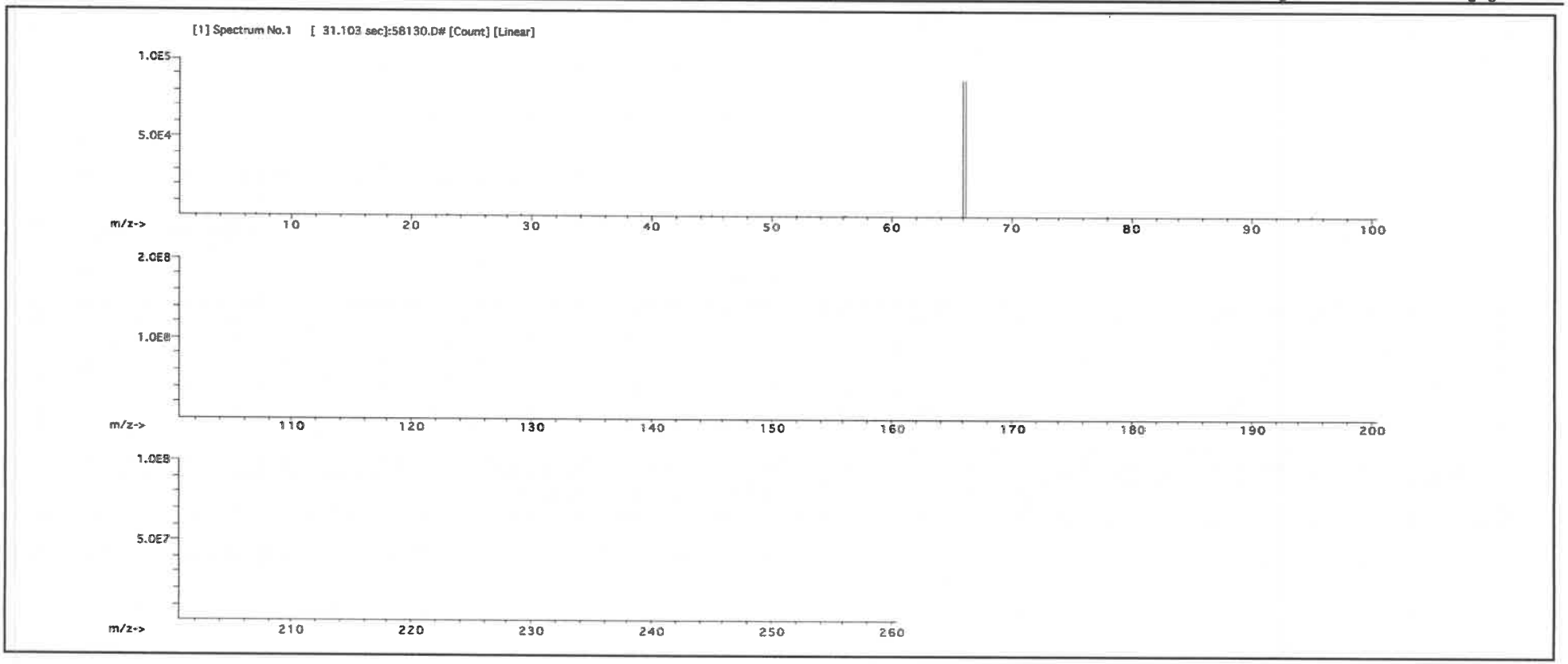
Weight shown below was diluted to (mL): 3000.4 0.06 Flask Uncertainty

		Lot #	
Solvent:	24002546	Nitric Acid	
	2%	60.0 (mL)	Nitric Acid

5E-05 Balance Uncertainty

Formulated By:	Benson Chan	111623
Reviewed By:	Pedro L. Rentas	111623

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hexahydrate (Zn)	IN016	ZNE032021A1	1000	99.999	0.10	24.3	12.3475	12.3502	**1000.2**	**2.0**	10196-18-6	1 mg/m3	orl-rat 1190mg/kg	3168



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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<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	T
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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5820

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

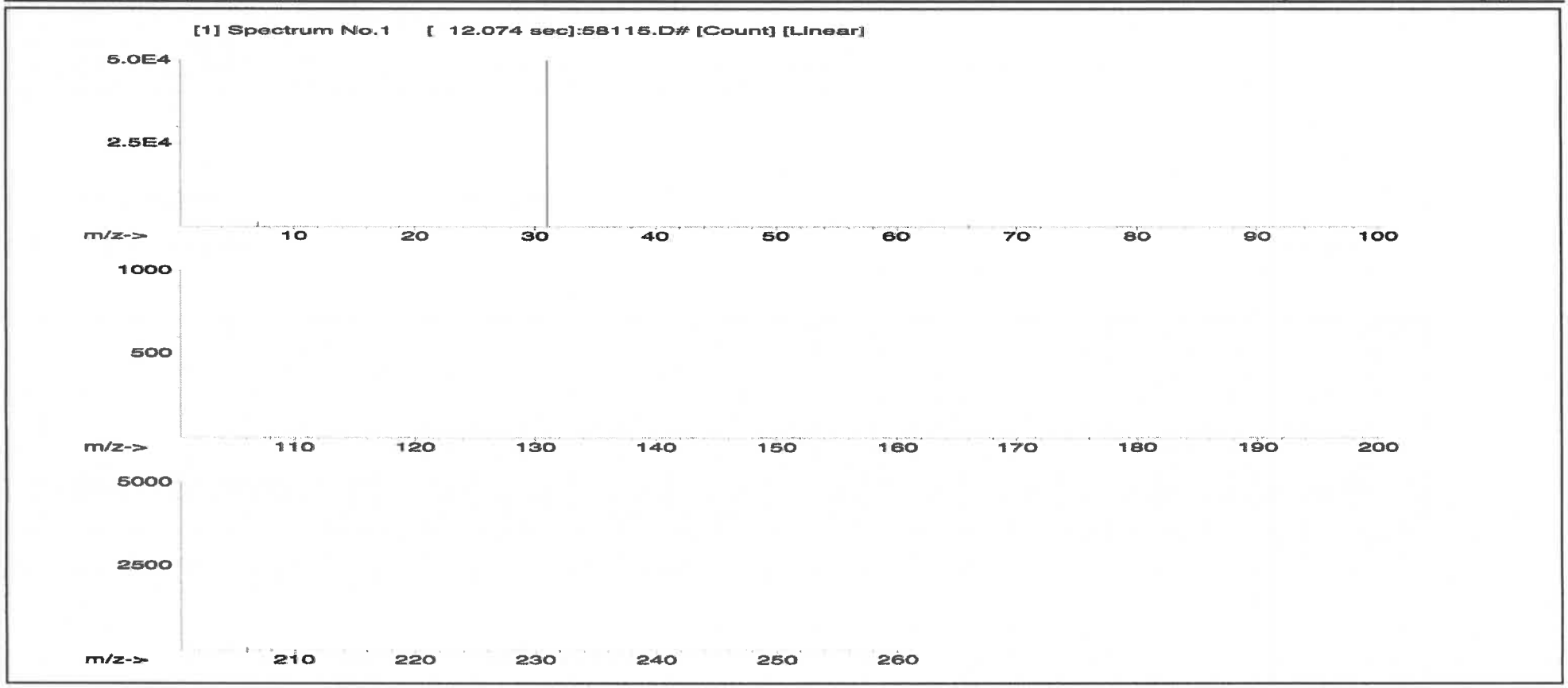
1078

CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Lot #**		
Lot Number:	**091123**	**Solvent:**	24002546	Nitric Acid	
Description:	**Phosphorous (P)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	091126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091123
Reviewed By:	Pedro L. Rentas	091123

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	1000	99.999	0.10	27.5	7.2729	7.2730	**1000.0**	**2.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/k	3186



10759

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<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:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5961 R: 6/11/24

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

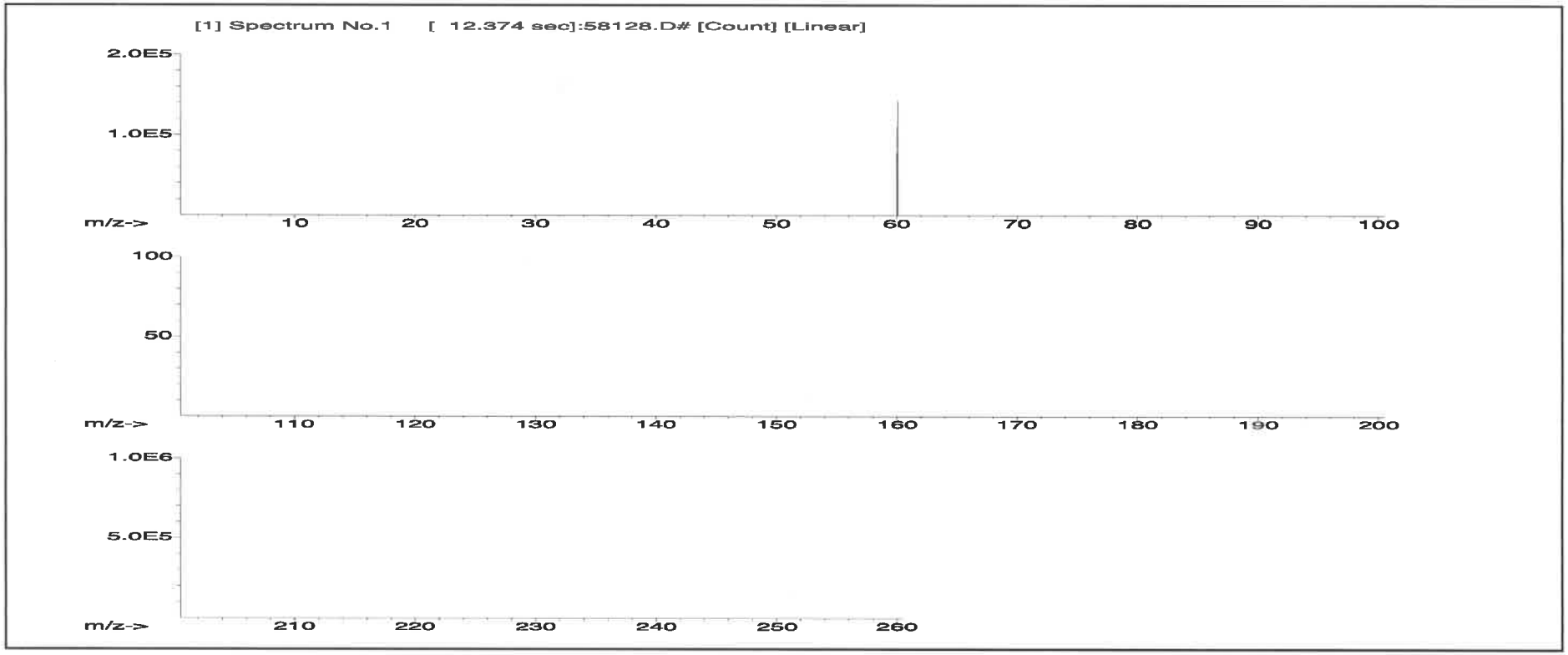
1080

CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**57028**	**Solvent:**	24002546	Nitric Acid
Lot Number:	**041124**			
Description:	**Nickel (Ni)**			
		2%	5.0 (mL)	Nitric Acid
Expiration Date:	041127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	249.85	0.002	Flask Uncertainty	

Formulated By:	Brian Geddes	041124
Reviewed By:	Pedro L. Rentas	041124

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST 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	orl-rat 1620 mg/kg	3136



1081

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5962 R! 06/14/24.

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

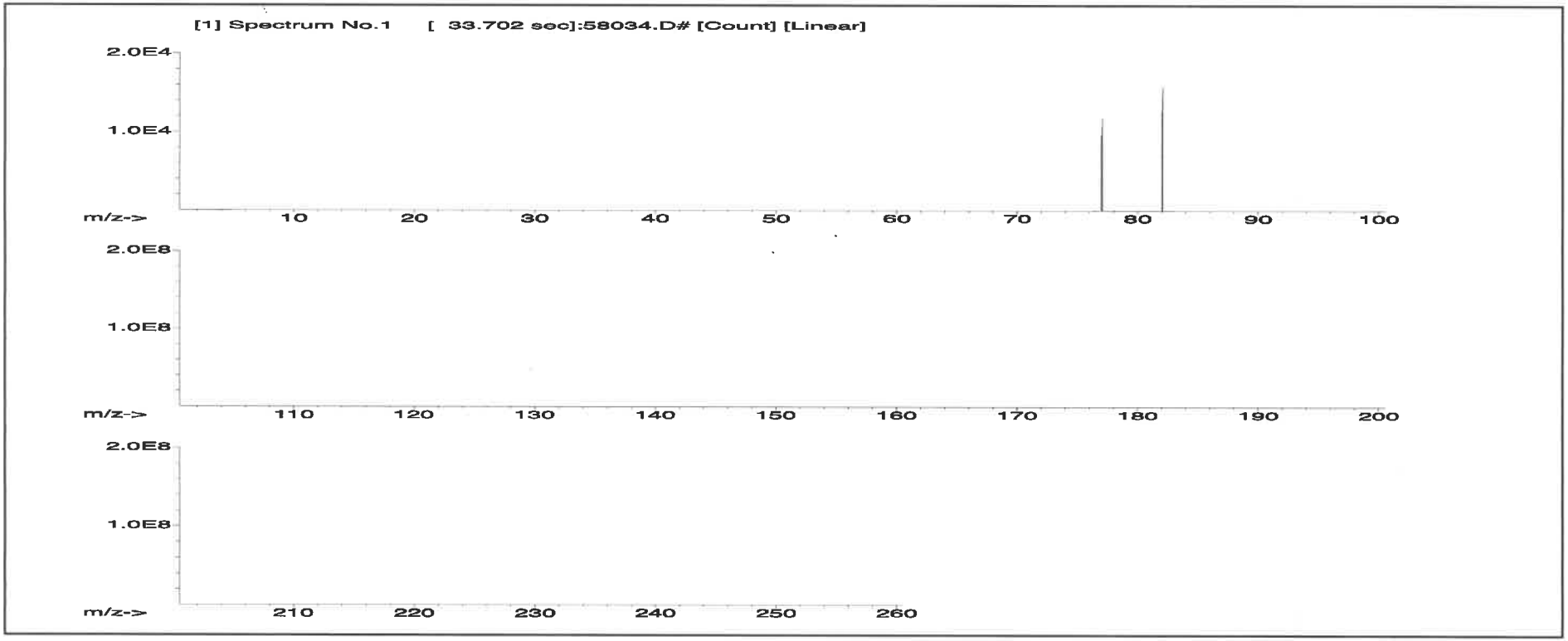
1082

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

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.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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	orl-rat 6700 mg/kg	3149



1083

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	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 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).

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

M5976, M5977
R: 02/22/24

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).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	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:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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	Tl	<	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,79Br1 6O,190Os2+,190Pt 2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

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



INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

M5976, M5977
R: 02/22/24

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).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	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:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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

1088

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	Tl	<	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,79Br1 6O,190Os2+,190Pt 2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

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



1092

M5978, M5979

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

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).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO_3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	Ti Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 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:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$
w_i = the weighting factors for each method calculated using the inverse square of the variance

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma(w_i)^2\ (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with
$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	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		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
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	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

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 - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - 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); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 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 crystalline 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 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

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 Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

H5981 R:6/11/24

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

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57092**	24002546	Nitric Acid		
Lot Number:	**060724**				
Description:	**Uranium (U)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	060727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

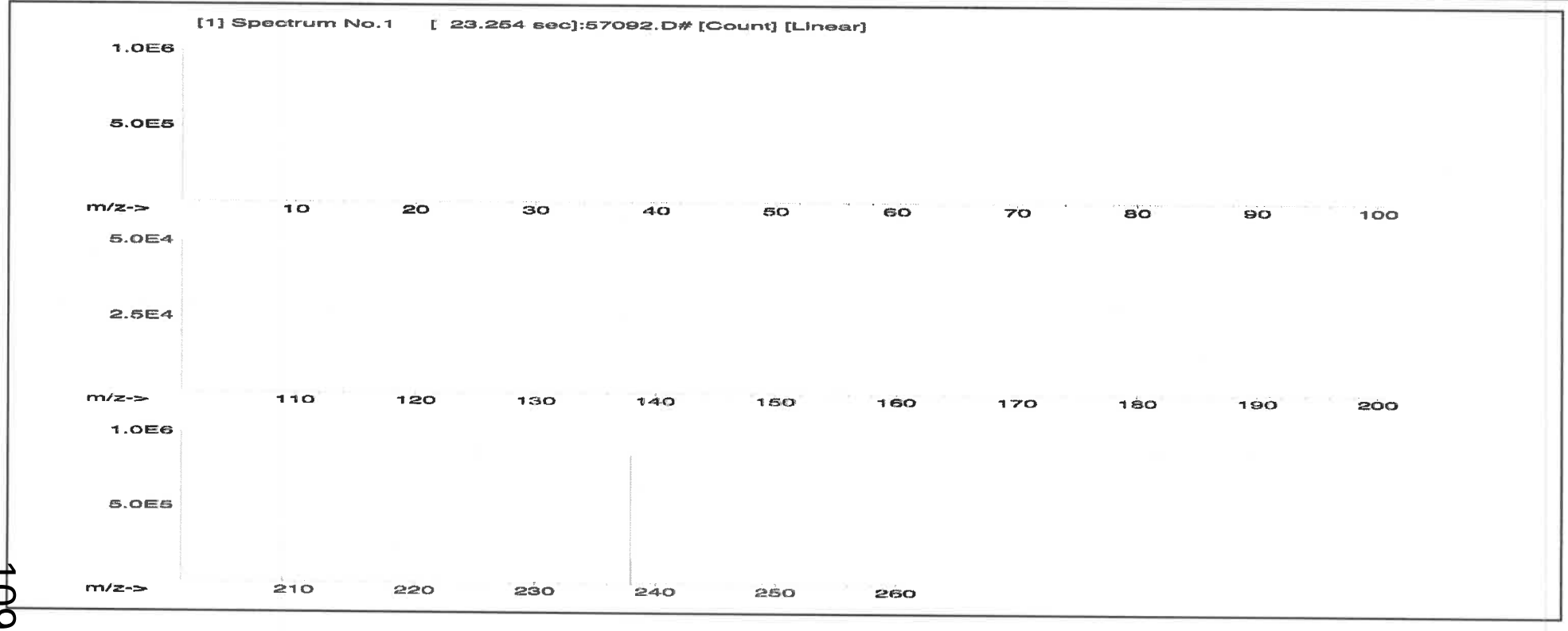
Giovanni Esposito

Formulated By:	Giovanni Esposito	060724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	060724

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.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Uranyl nitrate hexahydrate (U)	58192	041524	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13520-83-7	0.05 mg/m3	orl-rat 1040 mg/kg	3164



1096

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	T
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 certifed (+/-) 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).

1097

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5983 R: 6/11/24

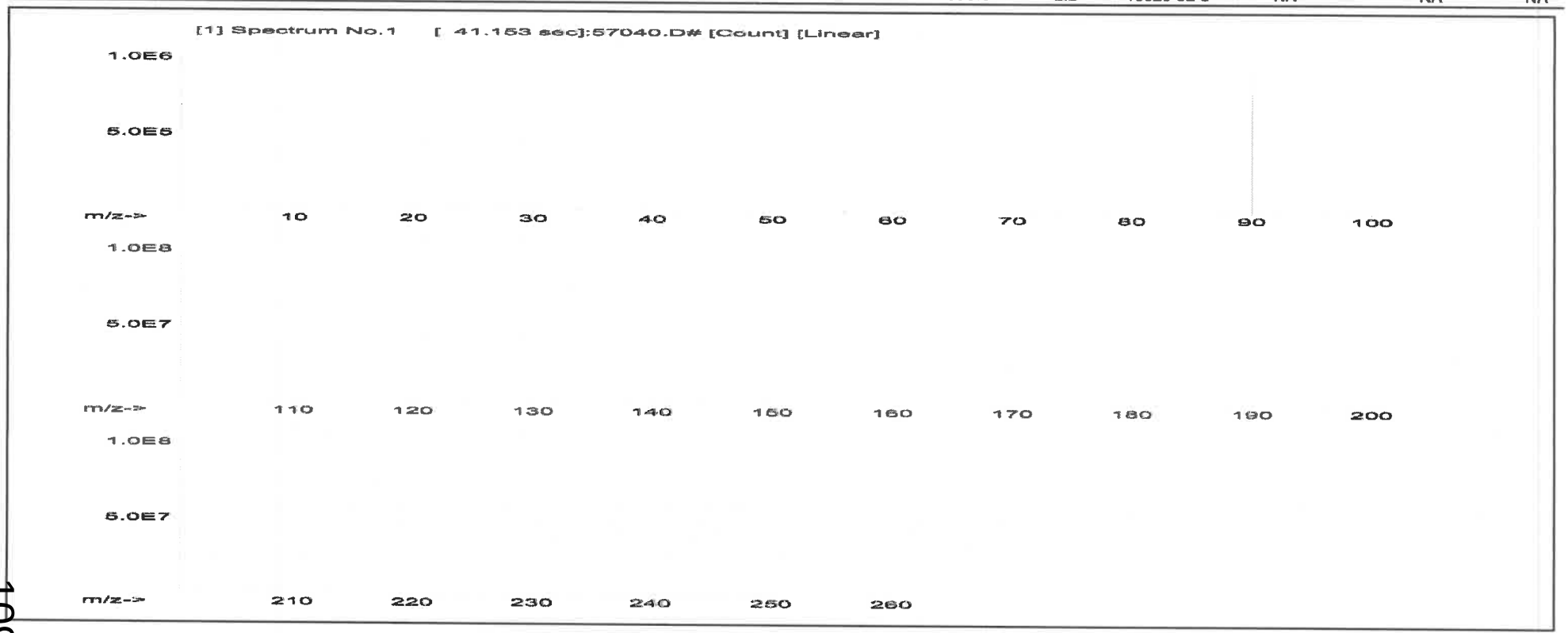
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	57040	21110221	Nitric Acid	
Lot Number:	071423			
Description:	Zirconium (Zr)	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071426			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	1000			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	071423
Reviewed By:	Pedro L. Rentas	071423

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) 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



1098

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<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	T

(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 certifed (+/-) 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).

1099

INORGANIC VENTURES™
Refine your results. Redefine your industry.

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).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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:

1100

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, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

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

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



Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Received — 08/01/2024
paper
M6039
M6040

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

avantor™ | J.T.Baker®

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™ | J.T.Baker®

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

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

R 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).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

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™ | J.T.Baker®

R → 10/13/24
Met dig

M 6121

Material No.: 9530-33
Batch No.: 0000275677
Manufactured Date: 2020/12/16
Retest Date: 2025/12/15
Revision No: 1

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
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.190
ACS - Bromide (Br)	<= 0.005 %	< 0.005
ACS - Extractable Organic Substances	<= 5 ppm	1
ACS - Free Chlorine (as Cl_2)	<= 0.5 ppm	< 0.5
Phosphate (PO_4)	<= 0.05 ppm	< 0.03
Sulfate (SO_4)	<= 0.5 ppm	< 0.3
Sulfite (SO_3)	<= 0.8 ppm	0.3
Ammonium (NH_4)	<= 3 ppm	< 1
Trace Impurities - Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities - Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	29.7
Trace Impurities - Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 1.0 ppb	< 0.2

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

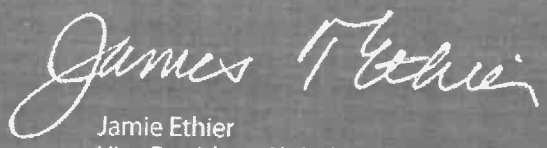
1111

Material No.: 9530-33
Batch No.: 0000275677

Test	Specification	Result
Trace Impurities - Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 15.0 ppb	<1
Trace Impurities - Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	0.2
Trace Impurities - Magnesium (Mg)	<= 10.0 ppb	0.4
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 4.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	< 0.2
Trace Impurities - Potassium (K)	<= 9.0 ppb	< 2.0
Trace Impurities - Selenium (Se), For Information Only	ppb	1.0
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 100.0 ppb	< 5.0
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 1.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 1.0 ppb	0.2
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

1112

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R -> 11/12/24

M6126

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

1115

CERTIFIED WEIGHT REPORT:

R -> 1/13/25

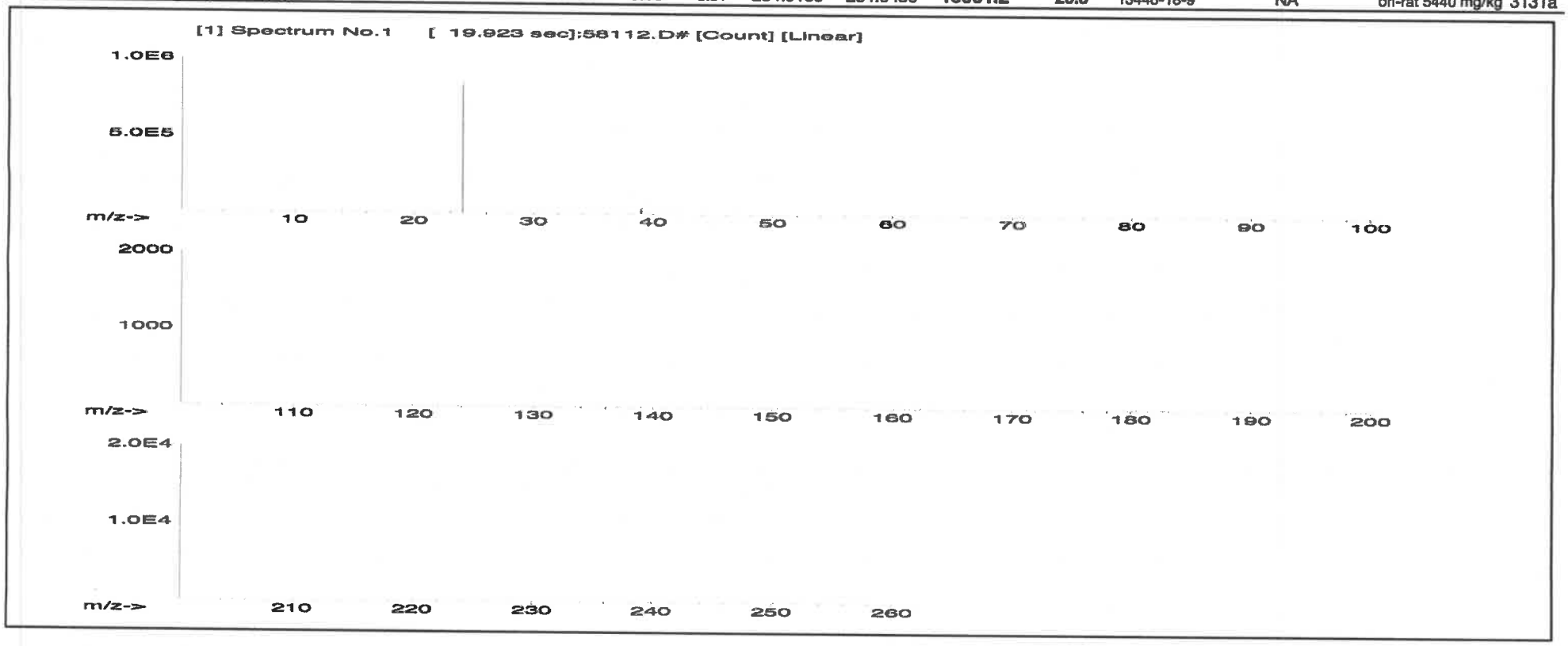
M 6127

			Lot #	
Part Number:	**58112**	**Solvent:**	24012496	Nitric Acid
Lot Number:	**112124**			
Description:	**Magnesium (Mg)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	112127			
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):	2000.07	0.100	Flask Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	112124
Reviewed By:	Pedro L. Rentas	112124

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	IN030	MGD052023A1	10000	99.999	0.10	8.51	234.9183	234.9459	**10001.2**	**20.0**	13446-18-9	NA	orl-rat 5440 mg/kg	3131a



1116

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:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

1117

CERTIFIED WEIGHT REPORT:

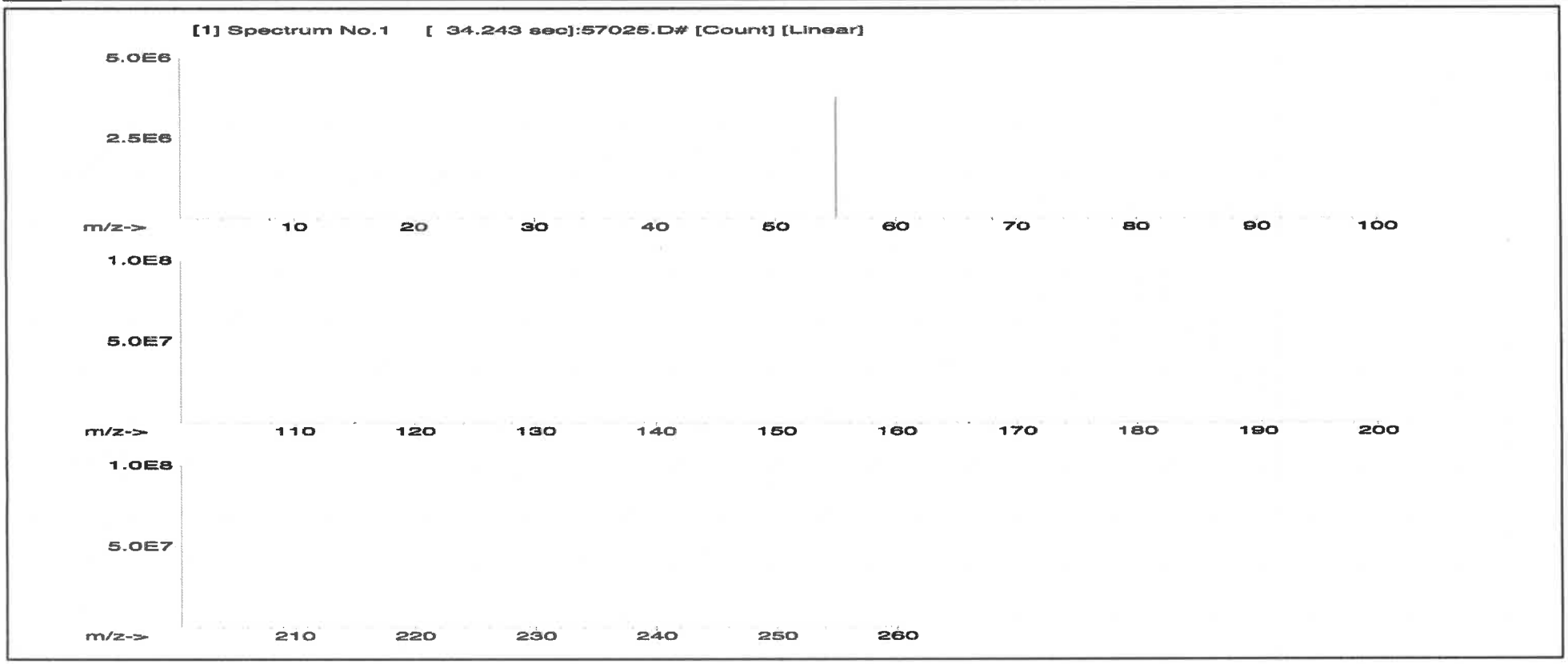
R->1/13/25
M6928

Part Number:	**58025**	**Solvent:**	**Lot #** 24002546	Nitric Acid
Lot Number:	**101124**			
Description:	**Manganese (Mn)**	2%	80.0 (mL)	Nitric Acid
Expiration Date:	101127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.2	0.10	Flask Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	101124
Reviewed By:	Pedro L. Rentas	101124

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Manganese(II) nitrate hydrate (Mn)	IN031	MNM092020A1	1000	99.999	0.10	20.8	19.2322	19.2344	**1000.1**	**2.0**	15710-66-4	5 mg/m3	orl-rat >300mg/kg	3132



1118

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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 01/03/24 M5806, M5807

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

1119

CERTIFIED WEIGHT REPORT:

Part Number: 58111
Lot Number: 122223
Description: Sodium (Na)

Expiration Date: 122226
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 3000.4 ± 0.06 Flask Uncertainty

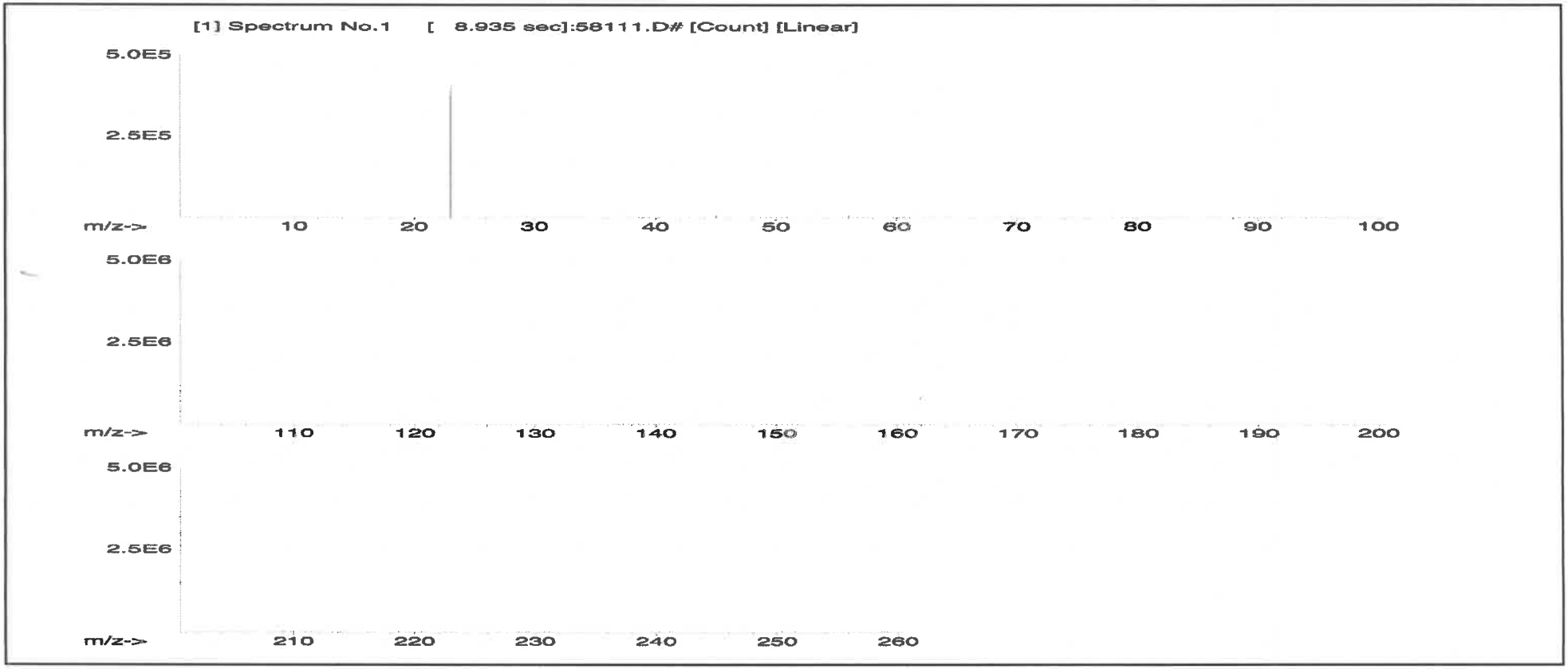
	Lot #	
Solvent:	24002546	Nitric Acid
2%	60.0 (mL)	Nitric Acid

5E-05 Balance Uncertainty

Aleah O'Brady
Formulated By: Aleah O'Brady 122223

Pedro Rentas
Reviewed By: Pedro L. Rentas 122223

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	111.5406	111.5479	**10000.7**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



1120

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	T	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 certifed (+/-) 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).

INORGANIC VENTURES
Refine your results. Redefine your industry.

A: 4/11/22

Certificate of Analysis

M5738, M5739, M5740, M5741, M5742, M5743

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).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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:

1121

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:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
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, Inferferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO_3. 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 HNO_3. 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

ICSA: M5873

ICSB: M5874

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
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, Inferferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO_3. 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 HNO_3. 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

ICSA: M5873

ICSB: M5874

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.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

R: 01/03/24 M5802, M5803

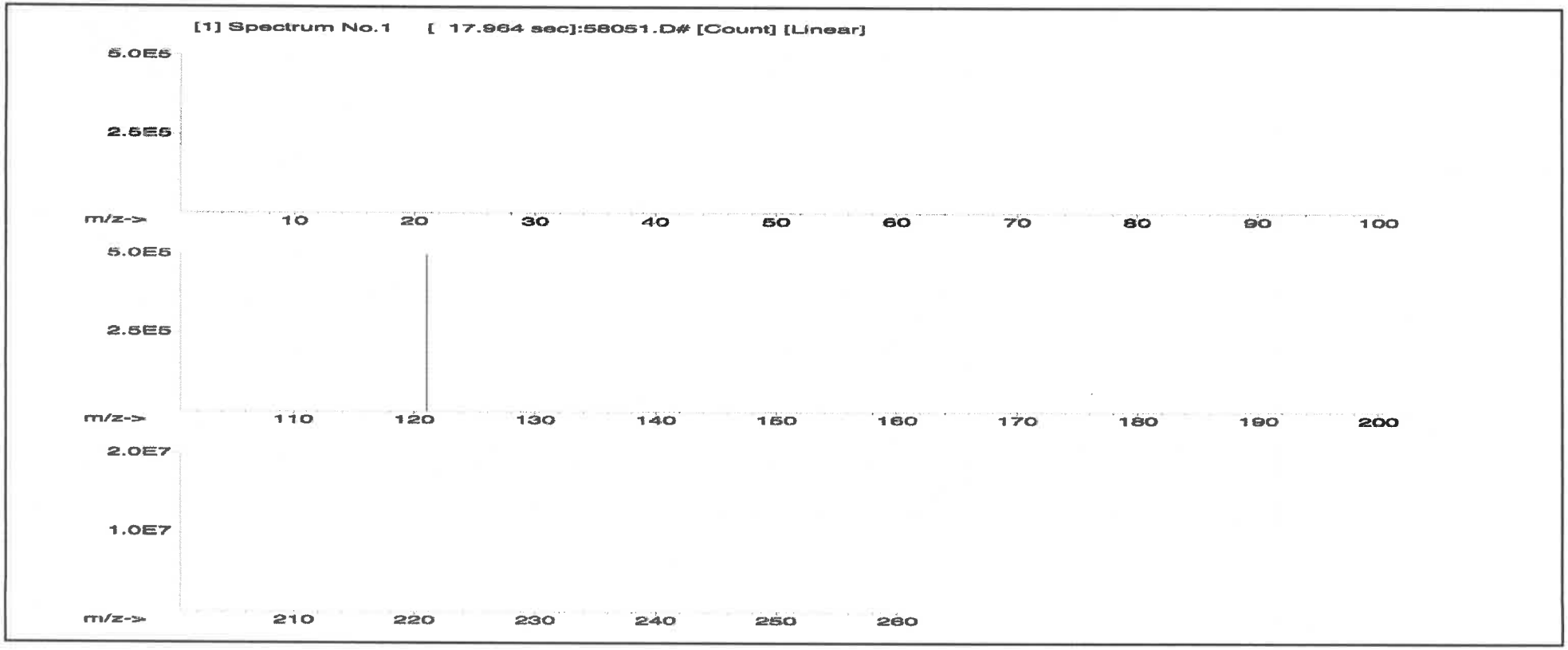
1129

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57051**	24002546	Nitric Acid		
Lot Number:	**120523**				
Description:	**Antimony (Sb)**				
		2.0%	60.0 (mL)	Nitric Acid	
Expiration Date:	120526				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	120523
Reviewed By:	Pedro L. Rentas	120523

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.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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	orl-rat 7000 mg/kg	3102a



11130

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	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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6030

R: 8/5/24

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

1131

CERTIFIED WEIGHT REPORT:

Part Number: 57047
Lot Number: 122823
Description: Silver (Ag)

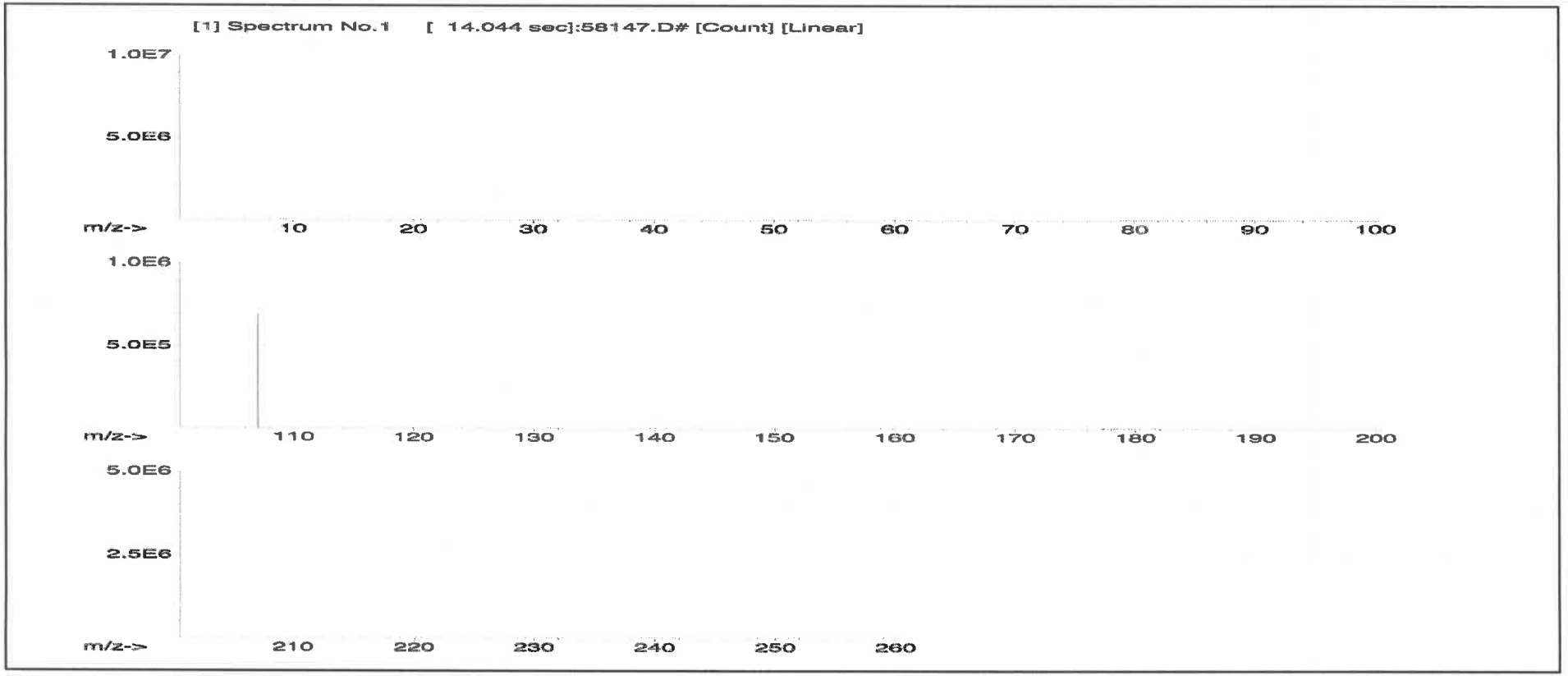
Expiration Date: 122826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 4000.30 5E-05 Balance Uncertainty 0.058 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	80.0 (mL)	Nitric Acid	

Formulated By:	Benson Chan	122823
Reviewed By:	Pedro L. Rentas	122823

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9999	0.10	63.7	6.27992	6.27998	**1000.0**	**2.0**	7761-88-8	10 ug/m3	NA	3151



1132

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	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

(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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 03/16/23 M5473, M5474, M5475, M5476

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

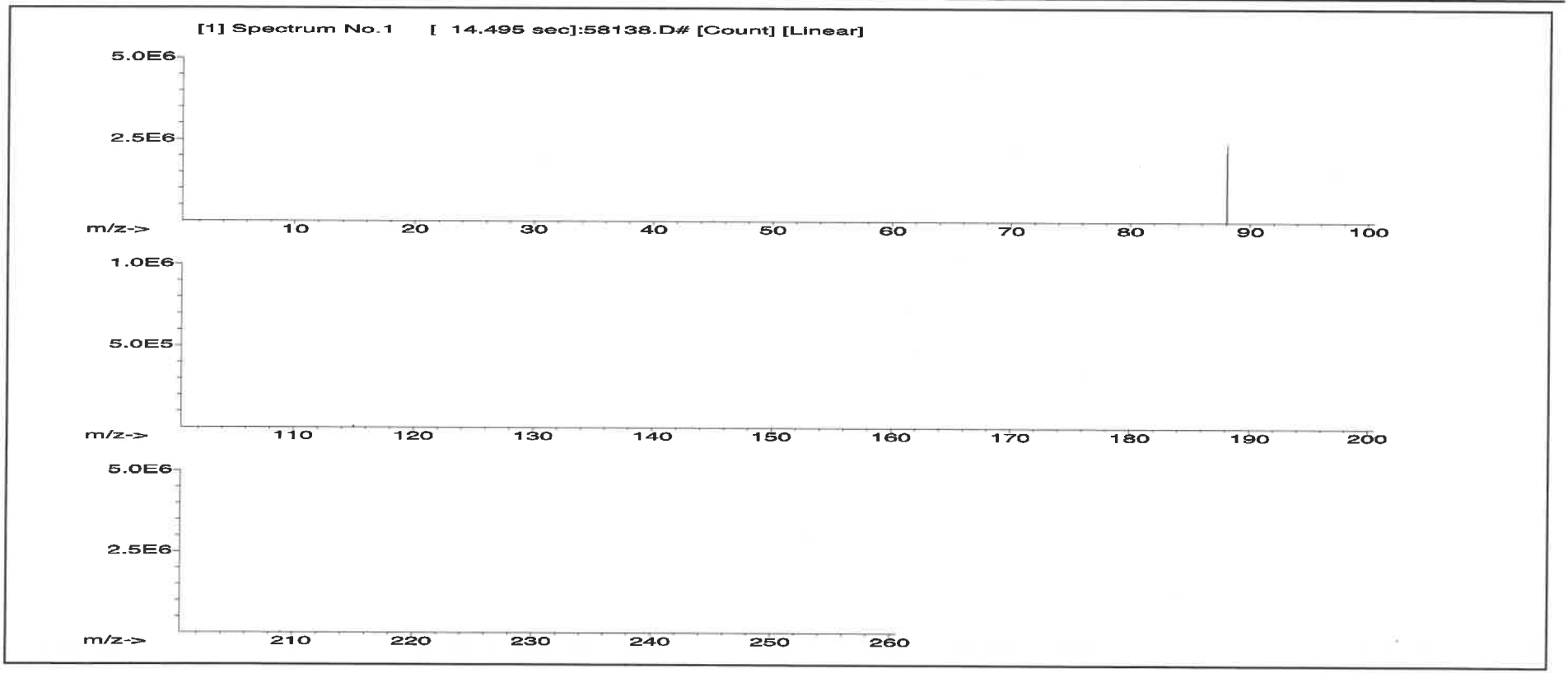
1133

CERTIFIED WEIGHT REPORT:

Part Number:	**56138**		**Lot #**		
Lot Number:	**082922**	**Solvent:**	20510011	Nitric Acid	
Description:	**Strontium (Sr)**	2%	20.0 (mL)	Nitric Acid	
Expiration Date:	082925				
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):	1000.12	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	082922
Reviewed By:	Pedro L. Rentas	082922

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Strontium nitrate (Sr)	IN017	SRZ022018A1	10000	99.997	0.10	41.2	24.2756	24.2758	**10000.1**	**20.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



1134

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:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R ! 8/5/24

M6023

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

1135

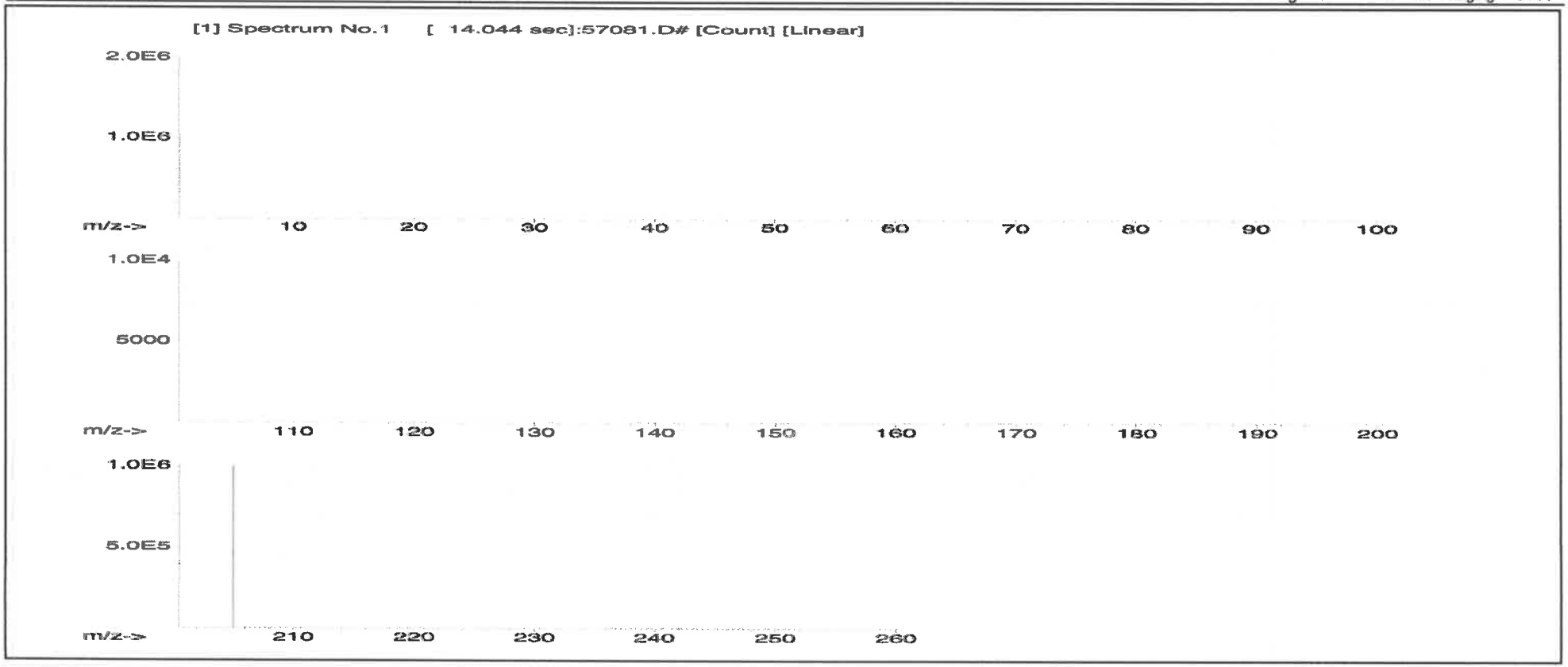
CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

Aleah O'Brady

Formulated By:	Aleah O'Brady	062724
Reviewed By:	Pedro L. Rentas	062724

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	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



1136

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	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	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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6021

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

Rc. 8/5/24

1137

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**			
Lot Number:	**062424**			
Description:	**Vanadium (V)**	24002546	Nitric Acid	
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.3	0.06	Flask Uncertainty	

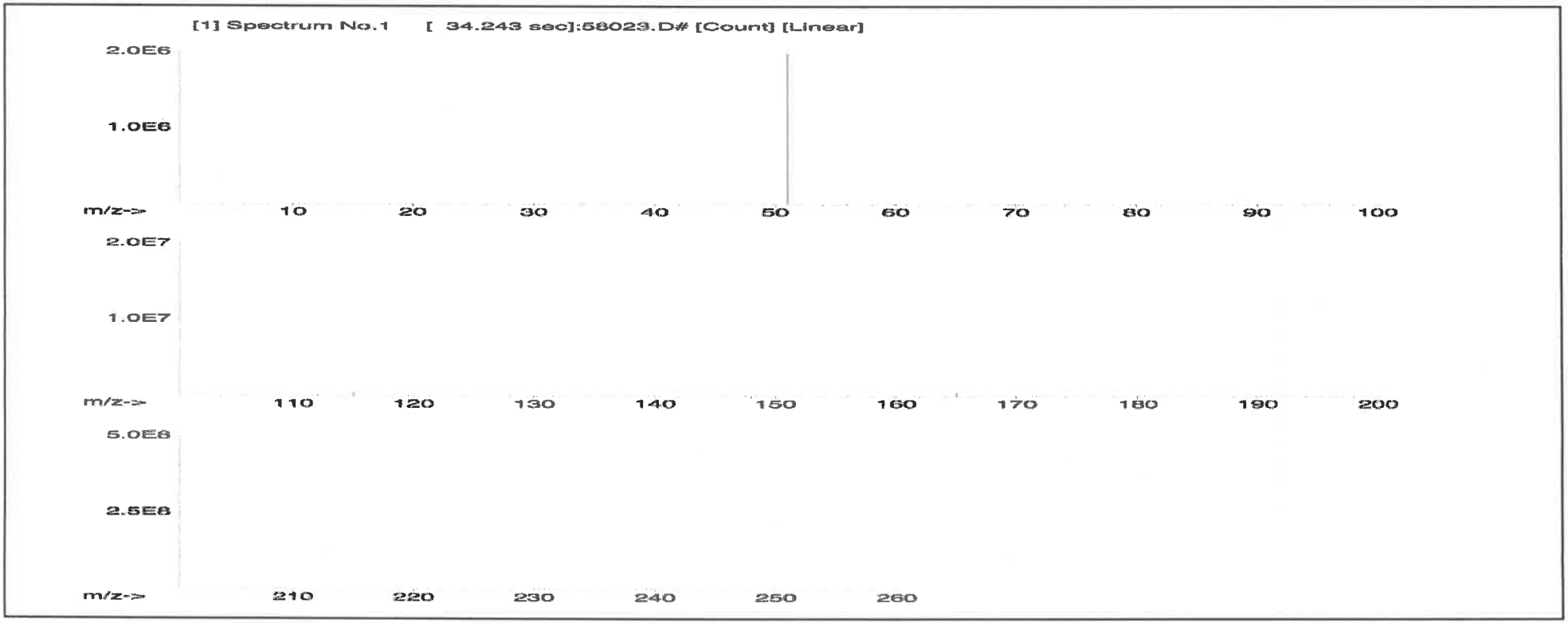
Aleah O'Brady

Formulated By:	Aleah O'Brady	062424

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062424

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.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)	58123	021224	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	7803-55-6	0.05 mg/m3	orl-rat 58.1mg/kg	3165



1138

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* 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 certifed (+/-) 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).

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB166230

SOP ID : M3050B-Digestion-20, MSFAM01.1-Metals ICPMS-2

SDG No : ME2946

Matrix : SOIL

Pippete ID: ICP A

Balance ID : M SC-2

Filter paper ID : N/A

pH Strip ID : N/A

Hood ID : #3

Block ID: 1. HOT BLOCK #3 2. N/A

Start Digest Date: 01/24/2025 **Time :** 10:35 **Temp :** 95 °C

End Digest Date: 01/24/2025 **Time :** 11:05 **Temp :** 96 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. # 3

Dig Technician Signature:

Supervisor Signature:

Temp : 1. 95°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LCSS	1.00	MP84118
Spike Sol. B	1.00	MP84119
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	MP84041
1.4 HCL SOLN	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 #3 Cell #34 Temp: 95 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
01/24/25 12:05	SKD. met digestion	
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB166230

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
PB166230BL	PBS230	N/A	1.00	500	Colorless	Colorless	Fine	N/A	N/A	1
PB166230BS	LCS230	N/A	1.00	500	Colorless	Colorless	Fine	N/A	MP84092	2
Q1163-01	ME2946	N/A	1.16	500	Brown	Yellow	Medium	N/A	N/A	3
Q1163-02	ME2947	N/A	1.19	500	Brown	Yellow	Medium	N/A	N/A	4
Q1163-03	ME2947D	N/A	1.30	500	Brown	Yellow	Medium	N/A	N/A	5
Q1163-04	ME2947S	N/A	1.21	500	Brown	Yellow	Medium	N/A	MP84074	6

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

Instrument ID: P8

Daily Analysis Runlog For Sequence/QCBatch ID # LB134459

Review By	Sarabjit Jaswal	Review On	1/29/2025 12:19:58 PM
Supervise By	Mohan Bera	Supervise On	1/31/2025 7:33:54 AM

STD. NAME	STD REF.#
ICAL Standard	MP84042,MP84050,MP84049,MP84047,MP84046,MP84045,MP84044,MP84043,MP84073
ICV Standard	MP84051
CCV Standard	MP84052
ICSA Standard	MP84053,MP84054
CRI Standard	
LCS Standard	MP84099
Chk Standard	MP84057,MP84056

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	TUNE	TUNE002	TUNE	01/28/25 11:32		Jaswal	OK
2	S00	S0	CAL1	01/28/25 12:10		Jaswal	OK
3	S02	S02	CAL3	01/28/25 12:16		Jaswal	OK
4	S03	S03	CAL4	01/28/25 12:20		Jaswal	OK
5	S04	S04	CAL5	01/28/25 12:23		Jaswal	OK
6	S05	S05	CAL6	01/28/25 12:26		Jaswal	OK
7	S06	S06	CAL7	01/28/25 12:29		Jaswal	OK
8	S07	S07	CAL8	01/28/25 12:32		Jaswal	OK
9	S08	S08	CAL9	01/28/25 12:35		Jaswal	OK
10	ICV002	ICV002	ICV	01/28/25 13:07	Inst. paused for calibration review	Jaswal	OK
11	ICB002	ICB002	ICB	01/28/25 13:19	Inst. paused for review	Jaswal	OK
12	ICSA002	ICSA002	ICSA	01/28/25 13:22		Jaswal	OK
13	ICSAB002	ICSAB002	ICSAB	01/28/25 13:25		Jaswal	OK
14	CCV009	CCV009	CCV	01/28/25 13:28		Jaswal	OK
15	CCB009	CCB009	CCB	01/28/25 13:32		Jaswal	OK
16	Q1135-02A	YE8F7A	PS	01/28/25 13:38	Not Use	Jaswal	Not Ok
17	PB166238BL	PBW238	MB	01/28/25 13:41		Jaswal	OK
18	PB166238BS	LCS238	LCS	01/28/25 13:44		Jaswal	OK

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

Instrument ID: P8

Daily Analysis Runlog For Sequence/QCBatch ID # LB134459

Review By	Sarabjit Jaswal	Review On	1/29/2025 12:19:58 PM
Supervise By	Mohan Bera	Supervise On	1/31/2025 7:33:54 AM

STD. NAME	STD REF.#
ICAL Standard	MP84042,MP84050,MP84049,MP84047,MP84046,MP84045,MP84044,MP84043,MP84073
ICV Standard	MP84051
CCV Standard	MP84052
ICSA Standard	MP84053,MP84054
CRI Standard	
LCS Standard	MP84099
Chk Standard	MP84057,MP84056

19	PB166230BL	PBS230	MB	01/28/25 13:51		Jaswal	OK
20	PB166230BS	LCS230	LCS	01/28/25 13:55		Jaswal	OK
21	PB166241BL	PBS241	MB	01/28/25 13:58		Jaswal	OK
22	PB166241BS	LCS241	LCS	01/28/25 14:02		Jaswal	OK
23	PB166280BL	PBS280	MB	01/28/25 14:05	Not Use	Jaswal	Not Ok
24	PB166280BS	LCS280	LCS	01/28/25 14:08	Not Use	Jaswal	Not Ok
25	PB166279BS	LCS279	LCS	01/28/25 14:15	Not Use	Jaswal	Not Ok
26	PB166279BL	PBS279	MB	01/28/25 14:19	Not Use	Jaswal	Not Ok
27	Q1176-01	ME2931	SAM	01/28/25 14:22	K High	Jaswal	Dilution
28	Q1176-02	ME2933	SAM	01/28/25 14:25		Jaswal	OK
29	Q1176-03	ME2937	SAM	01/28/25 14:28		Jaswal	OK
30	Q1176-04	ME2945	SAM	01/28/25 14:32		Jaswal	OK
31	Q1176-05	ME2942	SAM	01/28/25 14:35		Jaswal	OK
32	Q1176-06	ME2943	SAM	01/28/25 14:38		Jaswal	OK
33	Q1176-07	ME2940	SAM	01/28/25 14:42		Jaswal	OK
34	Q1176-08	ME2941	SAM	01/28/25 14:45		Jaswal	OK
35	Q1176-09	ME2944	SAM	01/28/25 14:48		Jaswal	OK
36	Q1176-10	ME2944D	DUP	01/28/25 14:51		Jaswal	OK
37	Q1176-09L	ME2944L	SD	01/28/25 14:55		Jaswal	OK
38	Q1176-11	ME2944S	MS	01/28/25 14:58	MS Fail For Se(Below RL)	Jaswal	OK

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

Instrument ID: P8

Daily Analysis Runlog For Sequence/QCBatch ID # LB134459

Review By	Sarabjit Jaswal	Review On	1/29/2025 12:19:58 PM
Supervise By	Mohan Bera	Supervise On	1/31/2025 7:33:54 AM

STD. NAME	STD REF.#
ICAL Standard	MP84042,MP84050,MP84049,MP84047,MP84046,MP84045,MP84044,MP84043,MP84073
ICV Standard	MP84051
CCV Standard	MP84052
ICSA Standard	MP84053,MP84054
CRI Standard	
LCS Standard	MP84099
Chk Standard	MP84057,MP84056

39	CCV010	CCV010	CCV	01/28/25 15:01		Jaswal	OK
40	CCB010	CCB010	CCB	01/28/25 15:04		Jaswal	OK
41	Q1176-12	ME2938	SAM	01/28/25 15:07		Jaswal	OK
42	Q1176-13	ME2939	SAM	01/28/25 15:11		Jaswal	OK
43	Q1176-14	ME2932	SAM	01/28/25 15:14		Jaswal	OK
44	Q1176-15	ME2936	SAM	01/28/25 15:17		Jaswal	OK
45	Q1176-16	ME2934	SAM	01/28/25 15:21		Jaswal	OK
46	Q1176-17	ME2935	SAM	01/28/25 15:24		Jaswal	OK
47	Q1176-18	ME2950	SAM	01/28/25 15:27		Jaswal	OK
48	Q1176-19	ME2951	SAM	01/28/25 15:30		Jaswal	OK
49	Q1176-20	ME2953	SAM	01/28/25 15:34		Jaswal	OK
50	Q1176-21	ME2954	SAM	01/28/25 15:37		Jaswal	OK
51	Q1163-01	ME2946	SAM	01/28/25 15:40		Jaswal	OK
52	Q1163-02	ME2947	SAM	01/28/25 15:43		Jaswal	OK
53	Q1163-03	ME2947D	DUP	01/28/25 15:47		Jaswal	OK
54	Q1163-02L	ME2947L	SD	01/28/25 15:50		Jaswal	OK
55	Q1163-04	ME2947S	MS	01/28/25 15:53	MS Fail For Se(Below RL), Zn(214.11ppb)	Jaswal	OK
56	Q1176-01DL	ME2931	SAM	01/28/25 15:56	2X For K	Jaswal	Confirms
57	Q1179-01	MH2GX1	SAM	01/28/25 16:00	Pb,Zn High	Jaswal	Dilution

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

Instrument ID: P8

Daily Analysis Runlog For Sequence/QCBatch ID # LB134459

Review By	Sarabjit Jaswal	Review On	1/29/2025 12:19:58 PM
Supervise By	Mohan Bera	Supervise On	1/31/2025 7:33:54 AM

STD. NAME	STD REF.#
ICAL Standard	MP84042,MP84050,MP84049,MP84047,MP84046,MP84045,MP84044,MP84043,MP84073
ICV Standard	MP84051
CCV Standard	MP84052
ICSA Standard	MP84053,MP84054
CRI Standard	
LCS Standard	MP84099
Chk Standard	MP84057,MP84056

58	Q1179-02	MH2GX1D	DUP	01/28/25 16:03	Pb,Zn High	Jaswal	Dilution
59	Q1179-01L	MH2GX1L	SD	01/28/25 16:06	Pb,Zn High	Jaswal	Dilution
60	Q1179-03	MH2GX1S	MS	01/28/25 16:09	Pb,Zn High ,MS Fail For Se(Below RL)	Jaswal	Dilution
61	Q1179-04	MH2H17	SAM	01/28/25 16:12		Jaswal	OK
62	Q1179-05	MH2H18	SAM	01/28/25 16:15		Jaswal	OK
63	Q1179-06	MH2H19	SAM	01/28/25 16:19		Jaswal	OK
64	Q1179-07	MH2H20	SAM	01/28/25 16:22		Jaswal	OK
65	Q1179-08	MH2H21	SAM	01/28/25 16:25		Jaswal	OK
66	Q1179-09	MH2H22	SAM	01/28/25 16:28		Jaswal	OK
67	CCV011	CCV011	CCV	01/28/25 16:31		Jaswal	OK
68	CCB011	CCB011	CCB	01/28/25 16:42	Inst. paused for review	Jaswal	OK
69	Q1179-10	MH2H23	SAM	01/28/25 16:46		Jaswal	OK
70	Q1179-11	MH2H24	SAM	01/28/25 16:49		Jaswal	OK
71	Q1179-12	MH2H25	SAM	01/28/25 16:52		Jaswal	OK
72	Q1179-13	MH2H26	SAM	01/28/25 16:55		Jaswal	OK
73	Q1179-01DL	MH2GX1	SAM	01/28/25 16:58	2X For Pb,Zn	Jaswal	Confirms
74	Q1179-02DL	MH2GX1D	DUP	01/28/25 17:02	2X For Pb,Zn	Jaswal	Confirms
75	Q1179-01LDL	MH2GX1L	SD	01/28/25 17:05	10X For Pb,Zn	Jaswal	Confirms
76	Q1179-03DL	MH2GX1S	MS	01/28/25 17:08	2X For Pb,Zn	Jaswal	Confirms

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

Instrument ID: P8

Daily Analysis Runlog For Sequence/QCBatch ID # LB134459

Review By	Sarabjit Jaswal	Review On	1/29/2025 12:19:58 PM
Supervise By	Mohan Bera	Supervise On	1/31/2025 7:33:54 AM

STD. NAME	STD REF.#
ICAL Standard	MP84042,MP84050,MP84049,MP84047,MP84046,MP84045,MP84044,MP84043,MP84073
ICV Standard	MP84051
CCV Standard	MP84052
ICSA Standard	MP84053,MP84054
CRI Standard	
LCS Standard	MP84099
Chk Standard	MP84057,MP84056

77	CCV012	CCV012	CCV	01/28/25 18:17		Jaswal	OK
78	CCB012	CCB012	CCB	01/28/25 18:19		Jaswal	OK
79	Q1163-02ARE	ME2947A	PS	01/28/25 18:44	Not Use	Jaswal	Not Ok
80	Q1176-09A	ME2944A	PS	01/28/25 18:48	PS For Se(0.01ML MP84251-10ML SAMPLE)	Jaswal	OK
81	Q1179-01A	MH2GX1A	PS	01/28/25 18:51	PS For Se(0.01ML MP84251-10ML SAMPLE)	Jaswal	OK
82	Q1163-02A	ME2947A	PS	01/28/25 18:55	PS For Se,Zn(0.01ml mp84251,0.004ml m5819-10ml sample)	Jaswal	OK
83	CCV013	CCV013	CCV	01/28/25 19:06		Jaswal	OK
84	CCB013	CCB013	CCB	01/28/25 19:10		Jaswal	OK

EPA SAMPLE NO.

ME2946

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51900 MA No. : SDG No.: ME2946

Matrix: SOIL Lab Sample ID: Q1163-01

% Solids: 90.8 Date Received: 01/22/2025

Analytical Method: Hg

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
7439-97-6	Mercury	0.25		02/03/2025	1331

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

Comments:

EPA SAMPLE NO.

ME2947

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51900 MA No. : SDG No.: ME2946

Matrix: SOIL Lab Sample ID: Q1163-02

% Solids: 88.8 Date Received: 01/22/2025

Analytical Method: Hg

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
7439-97-6	Mercury	0.055	J	02/03/2025	1333

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

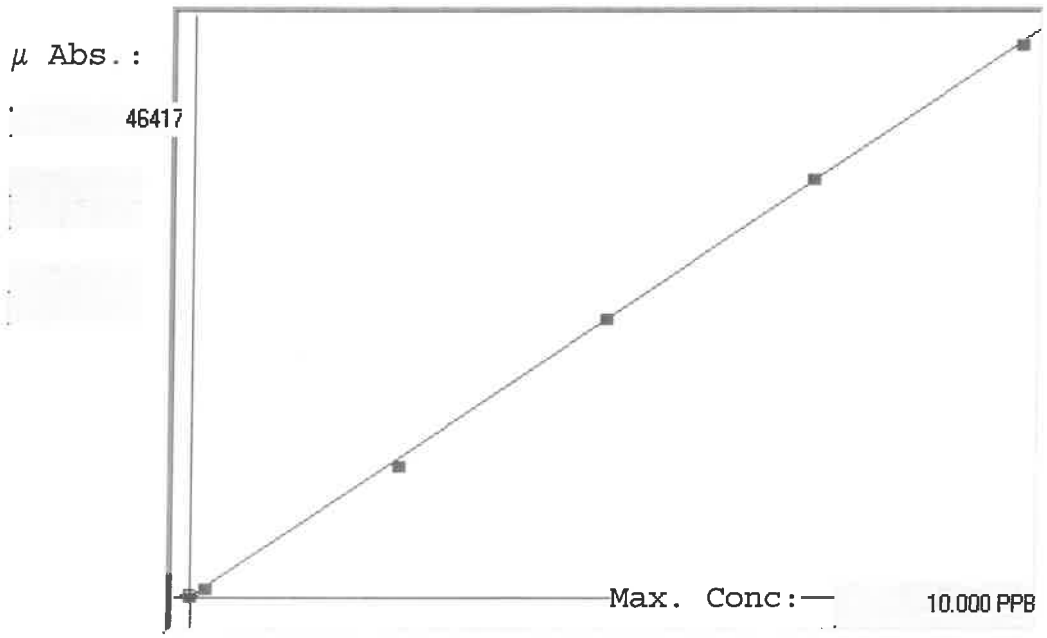
Comments:

Reviewed By:
On:
Inst Id :CV1

LB1341528

SFAM01.1 Instrument ID: CV1

Linear



A= 0.0000e+000

B= 2.1452e-004 slope

C= 5.0198e-004 y=mx+c

Rho= 0.9998348

Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	G/CV
0.00	0.000	0.062	0.062	285	0.000	285					7
0.05	0.050										6
0.20	0.200	0.188	-0.012	874	0.0 %	874					5
2.50	2.500	2.379	-0.121	11085	0.0 %	11085					1
5.00	5.000	5.062	0.062	23594	0.0 %	23594					1
7.50	7.500	7.552	0.052	35200	0.0 %	35200					0
10.0	10.000	9.958	-0.042	46417	0.0 %	46417					

Reviewed By:
On:
Inst Id :CV1

LB134528

INSTRUMENT ID : CV1

Sample ID	Extended ID	µ Abs.	Conc.		Stnd Conc	Method	Units	Date	Type
0	S0	285	-		0	SFAM01.1	PPB	2/3/2025 13:00	Std
0.2	S01	874	-		0.2	SFAM01.1	PPB	2/3/2025 13:02	Std
2.5	S02	11085	-		2.5	SFAM01.1	PPB	2/3/2025 13:05	Std
5	S03	23594	-		5	SFAM01.1	PPB	2/3/2025 13:07	Std
7.5	S04	35200	-		7.5	SFAM01.1	PPB	2/3/2025 13:09	Std
10	S05	46417	-		10	SFAM01.1	PPB	2/3/2025 13:14	Std
ICV080	ICV080	18086	3.8804	-		SFAM01.1	PPB	2/3/2025 13:20	SMPL
ICB080	ICB080	-35	-0.007	-		SFAM01.1	PPB	2/3/2025 13:22	SMPL
CCV007	CCV007	23664	5.077	-		SFAM01.1	PPB	2/3/2025 13:24	SMPL
CCB007	CCB007	27	0.0063	-		SFAM01.1	PPB	2/3/2025 13:26	SMPL
PB166499BL	PBS499	217	0.0471	-		SFAM01.1	PPB	2/3/2025 13:29	SMPL
Q1163-01	ME2946	5299	1.1373	-		SFAM01.1	PPB	2/3/2025 13:31	SMPL
Q1163-02	ME2947	1282	0.2755	-		SFAM01.1	PPB	2/3/2025 13:33	SMPL
Q1163-03	ME2947D	1538	0.3304	-		SFAM01.1	PPB	2/3/2025 13:35	SMPL
Q1163-04	ME2947S	12973	2.7835	-		SFAM01.1	PPB	2/3/2025 13:42	SMPL
Q1246-01	A6313	208658	44.7628	-		SFAM01.1	PPB	2/3/2025 13:45	SMPL
Q1246-02	A6314	371900	HIGH	-		SFAM01.1	PPB	2/3/2025 13:47	
Q1246-03	A6325	2566	0.551	-		SFAM01.1	PPB	2/3/2025 13:49	SMPL
Q1246-04	A6326	1320	0.2837	-		SFAM01.1	PPB	2/3/2025 13:51	SMPL
Q1246-05	A6331	4596	0.9865	-		SFAM01.1	PPB	2/3/2025 13:54	SMPL
Q1246-06	A6332	1400	0.3008	-		SFAM01.1	PPB	2/3/2025 13:56	SMPL
Q1246-07	A6333	5665	1.2158	-		SFAM01.1	PPB	2/3/2025 13:58	SMPL
Q1246-08	A6334	4683	1.0051	-		SFAM01.1	PPB	2/3/2025 14:01	SMPL
Q1246-09	A6342	807	0.1736	-		SFAM01.1	PPB	2/3/2025 14:03	SMPL
Q1246-10	A6342D	915	0.1968	-		SFAM01.1	PPB	2/3/2025 14:05	SMPL
Q1246-11	A6342S	12091	2.5943	-		SFAM01.1	PPB	2/3/2025 14:07	SMPL
Q1246-12	A6343	1171	0.2517	-		SFAM01.1	PPB	2/3/2025 14:10	SMPL
Q1246-13	A6344	850	0.1828	-		SFAM01.1	PPB	2/3/2025 14:12	SMPL
Q1246-14	A6345	685	0.1475	-		SFAM01.1	PPB	2/3/2025 14:14	SMPL
Q1246-15	A6346	540	0.1163	-		SFAM01.1	PPB	2/3/2025 14:16	SMPL
CCV008	CCV008	24221	5.1965	-		SFAM01.1	PPB	2/3/2025 14:19	SMPL
CCB008	CCB008	-36	-0.0072	-		SFAM01.1	PPB	2/3/2025 14:21	SMPL
Q1246-16	A6347	933	0.2007	-		SFAM01.1	PPB	2/3/2025 14:23	SMPL
Q1246-01DLX10	A6313	23939	5.136	-		SFAM01.1	PPB	2/3/2025 14:39	SMPL
Q1246-02DLX25	A6314	23691	5.0828	-		SFAM01.1	PPB	2/3/2025 14:53	SMPL
CCV009	CCV009	23484	5.0384	-		SFAM01.1	PPB	2/3/2025 14:57	SMPL
CCB009	CCB009	-91	-0.019	-		SFAM01.1	PPB	2/3/2025 15:00	SMPL

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

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB134528

Review By	Sarabjit Jaswal	Review On	2/3/2025 8:20:37 PM
Supervise By		Supervise On	

STD. NAME	STD REF.#
ICAL Standard	MP84320,MP84321,MP84322,MP84323,MP84324,MP84325
ICV Standard	MP84326
CCV Standard	MP84328
ICSA Standard	
CRI Standard	
LCS Standard	
Chk Standard	MP84327,MP84329,MP84333

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	02/03/25 13:00		Mohan	OK
2	S0.2	S01	CAL2	02/03/25 13:02		Mohan	OK
3	S2.5	S02	CAL3	02/03/25 13:05		Mohan	OK
4	S5	S03	CAL4	02/03/25 13:07		Mohan	OK
5	S7.5	S04	CAL5	02/03/25 13:09		Mohan	OK
6	S10	S05	CAL6	02/03/25 13:14		Mohan	OK
7	ICV080	ICV080	ICV	02/03/25 13:20		Mohan	OK
8	ICB080	ICB080	ICB	02/03/25 13:22		Mohan	OK
9	CCV007	CCV007	CCV	02/03/25 13:24		Mohan	OK
10	CCB007	CCB007	CCB	02/03/25 13:26		Mohan	OK
11	PB166499BL	PBS499	MB	02/03/25 13:29		Mohan	OK
12	Q1163-01	ME2946	SAM	02/03/25 13:31		Mohan	OK
13	Q1163-02	ME2947	SAM	02/03/25 13:33		Mohan	OK
14	Q1163-03	ME2947D	DUP	02/03/25 13:35		Mohan	OK
15	Q1163-04	ME2947S	MS	02/03/25 13:42		Mohan	OK
16	Q1246-01	A6313	SAM	02/03/25 13:45	High	Mohan	Dilution
17	Q1246-02	A6314	SAM	02/03/25 13:47	High	Mohan	Dilution
18	Q1246-03	A6325	SAM	02/03/25 13:49		Mohan	OK

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

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB134528

Review By	Sarabjit Jaswal	Review On	2/3/2025 8:20:37 PM
Supervise By		Supervise On	

STD. NAME	STD REF.#
ICAL Standard	MP84320,MP84321,MP84322,MP84323,MP84324,MP84325
ICV Standard	MP84326
CCV Standard	MP84328
ICSA Standard	
CRI Standard	
LCS Standard	
Chk Standard	MP84327,MP84329,MP84333

19	Q1246-04	A6326	SAM	02/03/25 13:51		Mohan	OK
20	Q1246-05	A6331	SAM	02/03/25 13:54		Mohan	OK
21	Q1246-06	A6332	SAM	02/03/25 13:56		Mohan	OK
22	Q1246-07	A6333	SAM	02/03/25 13:58		Mohan	OK
23	Q1246-08	A6334	SAM	02/03/25 14:01	Need to Conform initial weight	Mohan	OK
24	Q1246-09	A6342	SAM	02/03/25 14:03		Mohan	OK
25	Q1246-10	A6342D	DUP	02/03/25 14:05		Mohan	OK
26	Q1246-11	A6342S	MS	02/03/25 14:07		Mohan	OK
27	Q1246-12	A6343	SAM	02/03/25 14:10		Mohan	OK
28	Q1246-13	A6344	SAM	02/03/25 14:12		Mohan	OK
29	Q1246-14	A6345	SAM	02/03/25 14:14		Mohan	OK
30	Q1246-15	A6346	SAM	02/03/25 14:16		Mohan	OK
31	CCV008	CCV008	CCV	02/03/25 14:19		Mohan	OK
32	CCB008	CCB008	CCB	02/03/25 14:21		Mohan	OK
33	Q1246-16	A6347	SAM	02/03/25 14:23		Mohan	OK
34	Q1246-01DL	A6313	SAM	02/03/25 14:39	Report 10X	Mohan	Confirms
35	Q1246-02DL	A6314	SAM	02/03/25 14:53	Report 25X	Mohan	Confirms
36	CCV009	CCV009	CCV	02/03/25 14:57		Mohan	OK
37	CCB009	CCB009	CCB	02/03/25 15:00		Mohan	OK

ATTN GUEST: JOHN FILOON
2153846932
TOWN PLACE SUITES,
1440 N DIXIE HWY
MONROE MI 48162

30 LBS

2 OF 13

CR
1-22-25
11:05
2.1

SHIP TO:
ALLIANCE TECHNICAL GROUP LLC
908 7898900
ALLIANCE TECHNICAL GROUP LLC
284 SHEFFIELD ST # 1
MOUNTAINSIDE NJ 07092

NJ 078 9-41

UPS NEXT DAY AIR

1

TRACKING #: 1Z 939 47Y 01 1986 7065

BILLING: P/P

Reference No.1: 108413.003.010.001.000

XOL 25.01.06 NV45 3.0A 01/2025*

1152

Alliance TECHNICAL GROUP 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Login Summary Report

Order ID :	Q1163	Order Date :	1/22/2025 11:05:00 AM	Project Mgr :	Deepak
Client :	USEPA CLP SMO	Project :	51900	Report Type :	USEPA CLP
Contact :	Anita Kapadia	Receive Date :	1/22/2025 11:05:00 AM	EDD Type :	EPA CLP
Date Sign Off :	1/24/2025 8:20:38 AM				

Sample ID	Client ID	Matrix	Sampling Date	Test	Test Group	Method	TAT Days	Fax Due Date	HC Due Date
Q1163-01	ME2946	Solid	01/21/2025						
				Mercury		SFAM_HG	10	02/05/2025	02/05/2025
				Metals CLP MS FULL		SFAM_MS	10	02/05/2025	02/05/2025
				Metals CLP12		SFAM_AES	10	02/05/2025	02/05/2025
				Percent Solids		Chemtech -SOP	10	02/05/2025	02/05/2025
Q1163-02	ME2947	Solid	01/21/2025						
				Mercury		SFAM_HG	10	02/05/2025	02/05/2025
				Metals CLP MS FULL		SFAM_MS	10	02/05/2025	02/05/2025
				Metals CLP12		SFAM_AES	10	02/05/2025	02/05/2025
				Percent Solids		Chemtech -SOP	10	02/05/2025	02/05/2025
Q1163-03	ME2947D	Solid	01/21/2025						
				Mercury		SFAM_HG	10	02/05/2025	02/05/2025
				Metals CLP MS FULL		SFAM_MS	10	02/05/2025	02/05/2025
				Metals CLP12		SFAM_AES	10	02/05/2025	02/05/2025
				Percent Solids		Chemtech -SOP	10	02/05/2025	02/05/2025
Q1163-04	ME2947S	Solid	01/21/2025						
				Mercury		SFAM_HG	10	02/05/2025	02/05/2025
				Metals CLP MS FULL		SFAM_MS	10	02/05/2025	02/05/2025
				Metals CLP12		SFAM_AES	10	02/05/2025	02/05/2025
				Percent Solids		Chemtech -SOP	10	02/05/2025	02/05/2025

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB166229

SOP ID : M3050B-Digestion-20, MSFAM01.1-Trace Metals-2

SDG No : MC0AZ0,ME2946

Matrix : SOIL

Pippete ID: ICP A

Balance ID : M SC-2

Filter paper ID : N/A

pH Strip ID : N/A

Hood ID : #3

Block ID: 1. HOT BLOCK #5 2. N/A

Start Digest Date: 01/24/2025 **Time :** 10:40 **Temp :** 96 °C

End Digest Date: 01/24/2025 **Time :** 12:45 **Temp :** 96 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. #5

Dig Technician Signature: GLD.

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LCSS	1.00	MP84063
Spike Sol 6	1.00	MP84070
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	10.00	MP84041
Conc. HNO3	5.00	M6126
30% H2O2	3.00	M6125
Conc. HCL	10.00	M6121
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 #35 : 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
01/24/25 13:45	SPD. met digestion	
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB166229

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
PB166229BL	PBS229	N/A	1.00	100	Colorless	Colorless	Fine	N/A	N/A	1
PB166229BS	LCS229	N/A	1.00	100	Colorless	Colorless	Fine	N/A	MP84063	2
Q1151-01	MC0AZ0	N/A	1.20	100	Black	Yellow	Medium	N/A	N/A	3
Q1151-02	MC0AZ1	N/A	1.17	100	Brown	Yellow	Medium	N/A	N/A	4
Q1151-03	MC0AZ2	N/A	1.04	100	Brown	Yellow	Medium	N/A	N/A	5
Q1151-04	MC0AZ3	N/A	1.24	100	Brown	Yellow	Medium	N/A	N/A	6
Q1151-05	MC0AZ4	N/A	1.45	100	Black	Yellow	Medium	N/A	N/A	7
Q1151-06	MC0AZ5	N/A	1.24	100	Brown	Yellow	Medium	N/A	N/A	8
Q1151-07	MC0AZ6	N/A	1.15	100	Brown	Yellow	Medium	N/A	N/A	9
Q1151-08	MC0AZ7	N/A	1.10	100	Black	Yellow	Medium	N/A	N/A	10
Q1151-09	MC0AZ7D	N/A	1.28	100	Black	Yellow	Medium	N/A	N/A	11
Q1151-10	MC0AZ7S	N/A	1.28	100	Black	Yellow	Medium	N/A	MP84070	12
Q1151-11	MC0B00	N/A	1.12	100	Black	Yellow	Medium	N/A	N/A	13
Q1151-12	MC0B01	N/A	1.44	100	Brown	Yellow	Medium	N/A	N/A	14
Q1163-01	ME2946	N/A	1.39	100	Brown	Yellow	Medium	N/A	N/A	15
Q1163-02	ME2947	N/A	1.27	100	Brown	Yellow	Medium	N/A	N/A	16
Q1163-03	ME2947D	N/A	1.17	100	Brown	Yellow	Medium	N/A	N/A	17
Q1163-04	ME2947S	N/A	1.29	100	Brown	Yellow	Medium	N/A	MP84070	18

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB166230 **WorkList ID :** 187129 **Department :** Digestion **Date :** 01-24-2025 09:54:26

1159

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1163-01	ME2946	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	C31	01/21/2025	SFAM_MS
Q1163-02	ME2947	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	C31	01/21/2025	SFAM_MS
Q1163-03	ME2947D	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	C31	01/21/2025	SFAM_MS
Q1163-04	ME2947S	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	C31	01/21/2025	SFAM_MS

Date/Time 01/24/25 10:15
Raw Sample Received by: SRD. met. dlz.
Raw Sample Relinquished by: CW

Date/Time 01/24/25 11:15
Raw Sample Received by: CW
Raw Sample Relinquished by: SRD. met. dlz