SDG COVER PAGE

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

Lab Code: ACE Case No.: 51900 MA No.: 3114.1 SDG No.: ME29C5

SOW No. : SFAM01.1

EPA Sample No.	Lab Sample Id	Analysis Method ICP-AES	ICP-MS	Mercury	Cyanide
ME29C5	Q1339-01		X	X	X
ME29C7	Q1339-02		X	X	
ME29C6	Q1339-03		X	X	X
ME29C9	Q1339-04		X	X	
ME29D1	Q1339-05		X	X	X
ME29D2	Q1339-06		X	X	X
ME29D4	Q1339-07		X	X	
ME29D2D	Q1339-08		X	X	X
ME29D2S	Q1339-09		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: _____

68HERH20D0011 SDG # ME29C5

USEPA CLP COC (LAB COPY)
DateShipped: 2/5/2025
CarrierName: UPS
AirbillNo: 1Z93947Y0125694696

CHAIN OF CUSTODY RECORD

Case #: 51900
Cooler #: 48

No: 5-020425-125921-0383
Lab: Alliance Technical Group LLC
Lab Contact: Mohammad Ahmed
Lab Phone: 312-353-9083

2

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
MW-112-25	E29C5	Water/	Grab	SVSIM(21), 1,4-DSIM(21), PEST(21), ARO(21)	5731, 5732, 5733, 5734 (8)	MW-112	02/04/2025 10:20	SDG
A02D	E29C7	Water/	Grab	SVSIM(21), 1,4-DSIM(21), PEST(21), ARO(21)	5752, 5753, 5754, 5755 (4)	A02D	02/04/2025 10:45	LV
MW-112-25	ME29C5	Water/	Grab	CN(21), ICP-MS+HG+HARD(21)	5735 (NaOH), 5736 (HN03) (2)	MW-112	02/04/2025 10:20	
A02D	ME29C7	Water/	Grab	ICP-MS+HG+HARD(21)	5757 (HN03) (1)	A02D	02/04/2025 10:45	

Special Instructions: Please return cooler with enclosed airbill ASAP (1Z93947Y0321380635). Note reduced volume for sample A02D. Please coordinate with USACE on analyses to be run.

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: SVSIM=Semivolatiles + SIM, 1,4-DSIM=1,4-Dioxane by SIM, PEST=Pesticides, ARO=Aroclors, CN=Cyanide, ICP-MS+HG+HARD=ICP-MS 11+ Metals+HG+Hardness

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Rivers	2/5/25 18:30	UPS	2/5/25 18:30	
				2-7-25 1030	IR Gun #1 Temp 2.6°C
					custody seal intact Temp blank present

68HERH20D0011 SDG # ME29C5

USEPA CLP COC (LAB COPY)
DateShipped: 2/5/2025
CarrierName: UPS
AirbillNo: 1Z93947Y0120587301

CHAIN OF CUSTODY RECORD

Case #: 51900
Cooler #: 49

No: 5-020425-155340-0384
Lab: Alliance Technical Group LLC
Lab Contact: Mohammad Ahmed
Lab Phone: 312-353-9083

3

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
MW-104-25	E29C6	Water/	Grab	SVSIM(21), 1,4-DSIM(21), PEST(21), ARO(21)	5745, 5746, 5747, 5748 (8)	MW-104	02/04/2025 10:35	
IA-11-MW-06S	E29C9	Water/	Grab	SVSIM(21), 1,4-DSIM(21), PEST(21), ARO(21)	5766, 5767, 5768, 5769 (3)	IA-11-MW-06S	02/04/2025 15:20	LV
MW-104-25	ME29C6	Water/	Grab	CN(21), ICP-MS+HG+HARD(21)	5749 (NaOH), 5750 (HN03) (2)	MW-104	02/04/2025 10:35	
IA-11-MW-06S	ME29C9	Water/	Grab	ICP-MS+HG+HARD(21)	5771 (HN03) (1)	IA-11-MW-06S	02/04/2025 15:20	

Special Instructions: Please return cooler with enclosed airbill ASAP (1Z93947Y0336090046). Note reduced volume for sample IA-11-MW-06S. Please coordinate with USACE on analyses to be run.

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: SVSIM=Semivolatiles + SIM, 1,4-DSIM=1,4-Dioxane by SIM, PEST=Pesticides, ARO=Aroclors, CN=Cyanide, ICP-MS+HG+HARD=ICP-MS 11+ Metals+HG+Hardness

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Alexis	2/5/25 18:30	UPS	2/5/25 18:30	
				2.7.2025 10:30am	I.R Gun # 1 Temp 3.0°c
					Custody seal intact Temp BIL present

68HERH20D0011 SDG # ME29C5

USEPA CLP COC (LAB COPY)

DateShipped: 2/5/2025
CarrierName: UPS
AirbillNo: 1Z93947Y0133664122

CHAIN OF CUSTODY RECORD

Case #: 51900
Cooler #: 51

No: 5-020525-115932-0389

Lab: Alliance Technical Group LLC
Lab Contact: Mohammad Ahmed
Lab Phone: 312-353-9083

4

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
A01UR-25	E29D1	Water/	Grab	SVSIM(21), 1,4-DSIM(21), PEST(21), ARO(21)	5780, 5781, 5782, 5783 (6)	A01UR	02/05/2025 10:00	
MW-114R	E29D2	Water/	Grab	SVSIM(21), 1,4-DSIM(21), PEST(21), ARO(21)	5787, 5788, 5789, 5790 (8)	MW-114R	02/05/2025 10:20	
A01UR-25	ME29D1	Water/	Grab	CN(21), ICP-MS+HG+HARD(21)	5784 (NaOH), 5785 (HN03) (2)	A01UR	02/05/2025 10:00	
MW-114R	ME29D2	Water/	Grab	CN(21), ICP-MS+HG+HARD(21)	5791 (NaOH), 5792 (HN03) (2)	MW-114R	02/05/2025 10:20	

Special Instructions: Please return cooler with enclosed airbill ASAP (1Z93947Y0331185471). Note reduced volume for sample A01UR. Please coordinate with USACE on analyses to be run.

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: SVSIM=Semivolatiles + SIM, 1,4-DSIM=1,4-Dioxane by SIM, PEST=Pesticides, ARO=Aroclors, CN=Cyanide, ICP-MS+HG+HARD=ICP-MS 11+ Metals+HG+Hardness

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Alexis	2/5/25 18:30	UPS	2/5/25 18:30	—
				10:30 2-7-25	IR Gun #1 2.6°C Custody Seal Intact Temp Blank present

USEPA CLP COC (LAB COPY)
DateShipped: 2/6/2025
CarrierName: UPS
AirbillNo: 1Z93947Y0135976336

CHAIN OF CUSTODY RECORD

Case #: 51900
Cooler #: 53

No: 5-020525-162119-0392
Lab: Alliance Technical Group LLC
Lab Contact: Mohammad Ahmed
Lab Phone: 312-353-9083

5

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
GMW5	E29D4	Water/	Grab	SVSIM(21), 1,4-DSIM(21), PEST(21), ARO(21)	5808, 5809, 5810, 5811 (8)	GMW5	02/05/2025 15:05	
GMW5	ME29D4	Water/	Grab	ICP-MS+HG+HARD(21)	5813 (HN03) (1)	GMW5	02/05/2025 15:05	

Special Instructions: Please return cooler with enclosed airbill ASAP (1Z93947Y0330219687).

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

Analysis Key: SVSIM=Semivolatiles + SIM, 1,4-DSIM=1,4-Dioxane by SIM, PEST=Pesticides, ARO=Aroclors, ICP-MS+HG+HARD=ICP-MS 11+ Metals+HG+Hardness

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Alexis	2/6/25 12:30	UPS	2/6/25 12:30	—
—				10:30 2-7-25	Ice Can # 1 2.3 ~~Custody Seal Intact~~ Temp Blank present

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page 1 of 4
Received By (Print Name) Gagandeep Kaur		Log-in Date 2/7/2025
Received By (Signature)		
Case Number 51900	SDG No. ME29C5	MA No. 3114.1

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.	1Z93947Y0125694696 1
6. Shipping Container Temperature Indicator Bottle	Present
7. Shipping Container Temperature	2.6 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	02/07/2025
12.Time Received	10:30

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	ME29C5	1.0,12	5735,36	Q1339-01	Intact
2	ME29C7	1.0	5757	Q1339-02	Intact
3	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
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	2/11/25	Logbook Page No.	N/A

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page 2 of 4
Received By (Print Name) Roxanna Ruiz		Log-in Date 2/7/2025
Received By (Signature)		
Case Number 51900	SDG No. ME29C5	MA No. 3114.1

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.	1Z93947Y0120587301 2
6. Shipping Container Temperature Indicator Bottle	Present
7. Shipping Container Temperature	3.0 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	02/07/2025
12.Time Received	10:30

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	ME29C6	1.0,12	5749,50	Q1339-03	Intact
2	ME29C9	1.0	5771	Q1339-04	Intact
3	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
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	2/11/25	Logbook Page No.	N/A

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page 3 of 4
Received By (Print Name)		Log-in Date 2/7/2025
Received By (Signature)		
Case Number 51900	SDG No. ME29C5	MA No. 3114.1

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.	1Z93947Y0133664122 3
6. Shipping Container Temperature Indicator Bottle	Present
7. Shipping Container Temperature	2.6 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	02/07/2025
12. Time Received	10:30

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	ME29D1	1.0,12	5784,85	Q1339-05	Intact
2	ME29D2	1.0,12	5791,92	Q1339-06	Intact
3	ME29D2D	1.0,12	5791,92	Q1339-08	Intact
4	ME29D2S	1.0,12	5791,92	Q1339-09	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	2/11/25	Logbook Page No.	N/A

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page 4 of 4
Received By (Print Name)		Log-in Date 2/7/2025
Received By (Signature)		
Case Number 51900	SDG No. ME29C5	MA No. 3114.1

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.	1Z93947Y0135976336 4
6. Shipping Container Temperature Indicator Bottle	Present
7. Shipping Container Temperature	2.3 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	02/07/2025
12.Time Received	10:30

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	ME29D4	1.0	5813	Q1339-07	Intact
2	N/A	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
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	2/11/25	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.	**ME29C5**
MA NO.	**3114.1**	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	5	✓	
3 . Sample Log-In Sheet (DC-1)	6	9	✓	
4 . CSF Inventory Sheet (DC-2)	10	12	✓	
5 . SDG Narrative	13	17	✓	
6 . Communication Logs	18	19	✓	
7 . Percent Solids Log	NA	NA	✓	
Analysis Forms and Data (ICP-AES)				
8 . Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	NA	NA	✓	
9 . Instrument raw data by instrument in analysis order	NA	NA	✓	
Other Data				
10 . Standard and Reagent Preparation Logs	NA	NA	✓	
11 . Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	NA	NA	✓	
12 . Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	NA	NA	✓	
13 . Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	
14 . Extraction Logs for TCLP and SPLP	NA	NA	✓	
15 . Raw GPC Data	NA	NA	✓	
16 . Raw Florisil Data	NA	NA	✓	
Analysis Forms and Data (ICP-MS)				
17 . Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	20	26	✓	
18 . Instrument raw data by instrument in analysis order	27	366	✓	
Other Data				
19 . Standard and Reagent Preparation Logs	367	507	✓	
20 . Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	508	509	✓	
21 . Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	510	512	✓	
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	513	519	✓	
27. Instrument raw data by instrument in analysis order	520	522	✓	
Other Data				
28. Standard and Reagent Preparation Logs	523	550	✓	
29. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	551	552	✓	
30. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	553	556	✓	
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	557	560	✓	
36. Instrument raw data by instrument in analysis order	561	563	✓	
Other Data				
37. Standard and Reagent Preparation Logs	564	592	✓	
38. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	593	594	✓	
39. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	595	596	✓	
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 4)	597	600	✓	
Sample Tags	NA	NA	✓	
Sample Log-In Sheet (Lab)	601	602	✓	
45. Misc. Shipping/Receiving Records (list all individual records)				
	NA	NA	✓	
46. Internal Lab Sample Transfer Records and Tracking Sheets (describe or list)				
	603	606	✓	
47. Other Records and related Communication Logs (describe or list)				
	NA	NA	✓	

48. Comments:

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

284 Sheffield Street
Mountainside, NJ 07092

SDG NARRATIVE

USEPA
SDG # ME29C5
CASE # 51900
CONTRACT # 68HERH20D0011
SOW# SFAM01.1
LAB NAME: Alliance Technical Group, LLC
LAB CODE: ACE
LAB ORDER ID # Q1339
MODIFIED ANALYSIS # 3114.1

A. Number of Samples and Date of Receipt

07 Water samples were delivered to the laboratory intact on 02/07/2025.

B. Parameters

Test requested for Metals CLP MS = Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Hardness, Total, Mercury, Cyanide.

C. Cooler Temp

Indicator Bottle**: Presence/**Absence

Cooler: 2.6^{o}C, 3.0^{o}C, 2.3^{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: Laboratory QC is required for SDG ME29C5 for ICP-MS, Hg, and CN analysis for water samples, but a sample was not designated for Laboratory QC on the COC. The laboratory selected sample ME29D2 for Laboratory QC and confirmed the sample is not a blank, rinsate or PT sample.

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 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.

284 Sheffield Street
Mountainside, NJ 07092

F. Analytical Techniques:

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

G. Calculation:

Calculation for ICP-MS Water Sample:

$$\text{Concentration or Result } (\mu g/L) = C \times \frac{Vf}{Vi} \times DF$$

Where,

C = Instrument value in ppb (The average of all replicate integrations)
Vf = Final digestion volume (mL)
Vi = Initial aliquot amount (mL) (Sample amount taken in prep)
DF = Dilution Factor

Example Calculation For Sample ME29C5 For Arsenic:

If C = 2.27 ppb
Vf = 50 ml
Vi = 50 ml
DF = 1

$$\text{Concentration or Result } (\mu g/L) = 2.27 \times \frac{50}{50} \times 1$$

$$= 2.27\ \mu g/L$$

$$= 2.3\ \mu g/L \text{ (Reported Result with Signification)}$$

Calculation for Hg Water Sample:

$$\text{Concentration or Result } (\mu g/L) = C \times DF$$

Where,

C = Instrument response in µg/L from the calibration curve.
DF = Dilution Factor

Example Calculation For ME29C6 :

If C = 0.0246 ppb
DF = 1

$$\text{Concentration or Result } (\mu g/L) = 0.0246 \times 1$$

$$= 0.0246\ \mu g/L$$

$$= 0.025\ \mu g/L \text{ (Reported Result with Signification)}$$

Calculation for CN Water Sample:

$$\text{Concentration or Result } (\mu g/L) = C \times \frac{Vf}{Vi} \times DF$$

Where,

C = Instrument response in µg/L CN from the calibration curve.
Vf = Final prepared (absorbing solution) volume (mL)
Vi = Initial aliquot amount (mL) (Sample amount taken in prep)
DF = Dilution Factor

Example Calculation For Cyanide:

If C = 4.1106 ppb
Vf = 50 ml
Vi = 50 ml
DF = 1

$$\text{Concentration or Result } (\mu g/L) = 4.1106 \times \frac{50}{50} \times 1$$

$$= 4.1106 \ \mu g/L$$

$$= 4.1 \ \mu g/L \text{(Reported Result with Signification)}$$

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. Matrix Spike sample did meet requirements except for Mercury. Duplicate sample did meet requirements except for Manganese, Potassium, Zinc. 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
Aluminum	45Sc
Antimony	159Tb
Arsenic	89Y

284 Sheffield Street
Mountainside, NJ 07092

Barium	159Tb
Beryllium	6Li
Cadmium	159Tb
Calcium	45Sc
Chromium	45Sc
Cobalt	45Sc
Copper	45Sc
Iron	45Sc
Lead	209Bi
Magnesium	45Sc
Manganese	45Sc
Nickel	45Sc
Potassium	45Sc
Selenium	89Y
Silver	159Tb
Sodium	45Sc
Thallium	209Bi
Vanadium	45Sc
Zinc	45Sc

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

Signature_____ Name: Nimisha Pandya

Date _____ Title: Document Control Officer

Date: 08/08/2023	**MA:** 3114.1	**Title:** ICP-MS Analysis with Hardness
Method Source: SFAM01.1	**Method:** ICP-MS	
Matrix: Aqueous/Water		

Summary of Modification

The purpose of this modified analysis is to analyze aqueous/water samples by ICP-MS with the additional calculated analyte Hardness. Unless specifically modified by this modification, all analyses, Quality Control (QC), and reporting requirements specified in the SOW listed in your current EPA agreement remain unchanged and in full force and effect.

I. Analyte Modifications **Not applicable** ☐

Analyte	CAS Number	CRQL (mg/L)
Hardness (total)	Hardness	3.3

II. Calibration and QC Requirements **Not applicable** ☒

III. Preparation and Method Modifications **Not applicable** ☒

IV. Special Reporting Requirements **Not applicable** ☐

The Laboratory shall:

- Report Hardness (total) in units of mg/L on Form 1, calculated from the calcium and magnesium results using Equation 4F in Exhibit G, Section 3.2.
- The instructions for reporting Hardness by ICP-AES apply to these ICP-MS analyses. All applicable AnalyteGroupID and AnalysisGroupID data elements shall be reported. Report AnalyteGroup for Hardness, and any necessary AnalysisGroup nodes.
- Report the reported results for Hardness (total) in the EDD with AnalyteType = “Derived” and ClientAnalyteID = “Hardness” for the field samples, field blanks, and PT samples only.
- Ensure the SDG Narrative is updated as stated in the SOW, including any technical and administrative problems encountered and the resolution or corrective actions taken. These problems may include interference problems encountered during analysis, dilutions, re-analyses and/or re-preparations performed, and problems with the analysis of samples. Also, include a discussion of any SOW Modified Analyses, including a copy of the approved modification form with the SDG Narrative.
- Report the “J” and “U” qualifiers in accordance with the requirements in Exhibit B, Section 3.4.3.2.4.2, using the modified CRQL.

From: Zafar, Tasmia (NE) <Tasmia.Zafar@gdit.com>
Sent: Tuesday, February 11, 2025 2:48 PM
To: Deepak Parmar; Sohil Jodhani; Mohammad Ahmed
Cc: R5RSCC; Bauer, Heather E; Johnson, Matthew; Helen Britz; Moody, Brett; Gambrah, Derrick; patel.bhavita@epa.gov; vargas.magda@epa.gov
Subject: Task Area SST | Region 05 | Case 51900 | Lab ACE | Issue Insufficient/inappropriate designation of laboratory QC | FINAL
Attachments: SKM_95825020710470.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: Laboratory QC is required for SDG ME29C5 for ICP-MS, Hg, and CN analysis for water samples, but a sample was not designated for Laboratory QC on the COC. The laboratory selected sample ME29D2 for Laboratory QC and confirmed the sample is not a blank, rinsate or PT sample.
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



Leave Alert: None

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From: Deepak Parmar <Deepak.Parmar@alliancetg.com>
Sent: Tuesday, February 11, 2025 9:43 AM

To: Zafar, Tasmia (NE) <Tasmia.Zafar@gdit.com>
Cc: Sohil Jodhani <Sohil.Jodhani@AllianceTG.com>
Subject: Task Area SST | 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,

Lab has open SDG ME29C5 for water sample for ICP-MS,HG,CN without lab QC. However, a sample was not designated for Laboratory QC. Lab like to use samples ME29D2 for Lab QC. these samples are not blanks, rinsates or PE samples.

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

EPA SAMPLE NO.

ME29C5

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51900 MA No. : 3114.1 SDG No.: ME29C5

Matrix: Water Lab Sample ID: Q1339-01

% Solids: Date Received: 02/07/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	1200		02/13/2025	1320
7440-36-0	Antimony	2.0	U	02/13/2025	1320
7440-38-2	Arsenic	2.3		02/13/2025	1320
7440-39-3	Barium	32		02/13/2025	1320
7440-41-7	Beryllium	0.10	J	02/13/2025	1320
7440-43-9	Cadmium	1.0	U	02/13/2025	1320
7440-70-2	Calcium	470000		02/13/2025	1320
7440-47-3	Chromium	2.2		02/13/2025	1320
7440-48-4	Cobalt	0.90	J	02/13/2025	1320
7440-50-8	Copper	2.6		02/13/2025	1320
7439-89-6	Iron	5300		02/13/2025	1320
7439-92-1	Lead	1.7		02/13/2025	1320
7439-95-4	Magnesium	150000		02/13/2025	1320
7439-96-5	Manganese	82	*	02/13/2025	1320
7440-02-0	Nickel	3.3		02/13/2025	1320
7440-09-7	Potassium	5600	*	02/13/2025	1320
7782-49-2	Selenium	5.0	U	02/13/2025	1320
7440-22-4	Silver	1.0	U	02/13/2025	1320
7440-23-5	Sodium	530000	D	02/13/2025	1353
7440-28-0	Thallium	1.0	U	02/13/2025	1320
7440-62-2	Vanadium	3.6	J	02/13/2025	1320
7440-66-6	Zinc	8.5	*	02/13/2025	1320
Hardness	Hardness (total)	1800		02/13/2025	1320

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

Comments:

EPA SAMPLE NO.

ME29C6

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51900 MA No. : 3114.1 SDG No.: ME29C5

Matrix: Water Lab Sample ID: Q1339-03

% Solids: Date Received: 02/07/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	11	J	02/13/2025	1327
7440-36-0	Antimony	2.0	U	02/13/2025	1327
7440-38-2	Arsenic	0.39	J	02/13/2025	1327
7440-39-3	Barium	39		02/13/2025	1327
7440-41-7	Beryllium	1.0	U	02/13/2025	1327
7440-43-9	Cadmium	1.0	U	02/13/2025	1327
7440-70-2	Calcium	240000		02/13/2025	1327
7440-47-3	Chromium	2.0	U	02/13/2025	1327
7440-48-4	Cobalt	1.0	U	02/13/2025	1327
7440-50-8	Copper	2.0	U	02/13/2025	1327
7439-89-6	Iron	170	J	02/13/2025	1327
7439-92-1	Lead	0.23	J	02/13/2025	1327
7439-95-4	Magnesium	69000		02/13/2025	1327
7439-96-5	Manganese	42	*	02/13/2025	1327
7440-02-0	Nickel	1.0	U	02/13/2025	1327
7440-09-7	Potassium	3200	*	02/13/2025	1327
7782-49-2	Selenium	5.0	U	02/13/2025	1327
7440-22-4	Silver	1.0	U	02/13/2025	1327
7440-23-5	Sodium	89000		02/13/2025	1327
7440-28-0	Thallium	1.0	U	02/13/2025	1327
7440-62-2	Vanadium	0.20	J	02/13/2025	1327
7440-66-6	Zinc	1.1	J*	02/13/2025	1327
Hardness	Hardness (total)	880		02/13/2025	1327

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

Comments:

EPA SAMPLE NO.

ME29C7

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51900 MA No. : 3114.1 SDG No.: ME29C5

Matrix: Water Lab Sample ID: Q1339-02

% Solids: Date Received: 02/07/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	210		02/13/2025	1324
7440-36-0	Antimony	0.49	J	02/13/2025	1324
7440-38-2	Arsenic	1.4		02/13/2025	1324
7440-39-3	Barium	210		02/13/2025	1324
7440-41-7	Beryllium	1.0	U	02/13/2025	1324
7440-43-9	Cadmium	0.33	J	02/13/2025	1324
7440-70-2	Calcium	300000		02/13/2025	1324
7440-47-3	Chromium	0.31	J	02/13/2025	1324
7440-48-4	Cobalt	1.5		02/13/2025	1324
7440-50-8	Copper	1.4	J	02/13/2025	1324
7439-89-6	Iron	1100		02/13/2025	1324
7439-92-1	Lead	0.77	J	02/13/2025	1324
7439-95-4	Magnesium	58000		02/13/2025	1324
7439-96-5	Manganese	260	*	02/13/2025	1324
7440-02-0	Nickel	4.7		02/13/2025	1324
7440-09-7	Potassium	2000	*	02/13/2025	1324
7782-49-2	Selenium	2.1	J	02/13/2025	1324
7440-22-4	Silver	1.0	U	02/13/2025	1324
7440-23-5	Sodium	100000		02/13/2025	1324
7440-28-0	Thallium	1.0	U	02/13/2025	1324
7440-62-2	Vanadium	0.66	J	02/13/2025	1324
7440-66-6	Zinc	13	*	02/13/2025	1324
Hardness	Hardness (total)	990		02/13/2025	1324

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

Comments:

EPA SAMPLE NO.

ME29C9

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51900 MA No. : 3114.1 SDG No.: ME29C5

Matrix: Water Lab Sample ID: Q1339-04

% Solids: Date Received: 02/07/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	5100		02/13/2025	1330
7440-36-0	Antimony	0.77	J	02/13/2025	1330
7440-38-2	Arsenic	5.6		02/13/2025	1330
7440-39-3	Barium	130		02/13/2025	1330
7440-41-7	Beryllium	0.27	J	02/13/2025	1330
7440-43-9	Cadmium	0.38	J	02/13/2025	1330
7440-70-2	Calcium	480000		02/13/2025	1330
7440-47-3	Chromium	11		02/13/2025	1330
7440-48-4	Cobalt	18		02/13/2025	1330
7440-50-8	Copper	12		02/13/2025	1330
7439-89-6	Iron	10000		02/13/2025	1330
7439-92-1	Lead	5.2		02/13/2025	1330
7439-95-4	Magnesium	200000		02/13/2025	1330
7439-96-5	Manganese	3300	*	02/13/2025	1330
7440-02-0	Nickel	32		02/13/2025	1330
7440-09-7	Potassium	14000	*	02/13/2025	1330
7782-49-2	Selenium	2.3	J	02/13/2025	1330
7440-22-4	Silver	1.0	U	02/13/2025	1330
7440-23-5	Sodium	65000		02/13/2025	1330
7440-28-0	Thallium	0.21	J	02/13/2025	1330
7440-62-2	Vanadium	14		02/13/2025	1330
7440-66-6	Zinc	35	*	02/13/2025	1330
Hardness	Hardness (total)	2000		02/13/2025	1330

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

Comments:

EPA SAMPLE NO.

ME29D1

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51900 MA No. : 3114.1 SDG No.: ME29C5

Matrix: Water Lab Sample ID: Q1339-05

% Solids: Date Received: 02/07/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	57		02/13/2025	1333
7440-36-0	Antimony	0.98	J	02/13/2025	1333
7440-38-2	Arsenic	0.24	J	02/13/2025	1333
7440-39-3	Barium	15		02/13/2025	1333
7440-41-7	Beryllium	1.0	U	02/13/2025	1333
7440-43-9	Cadmium	1.0	U	02/13/2025	1333
7440-70-2	Calcium	330000		02/13/2025	1333
7440-47-3	Chromium	0.65	J	02/13/2025	1333
7440-48-4	Cobalt	16		02/13/2025	1333
7440-50-8	Copper	44		02/13/2025	1333
7439-89-6	Iron	540		02/13/2025	1333
7439-92-1	Lead	1.5		02/13/2025	1333
7439-95-4	Magnesium	110000		02/13/2025	1333
7439-96-5	Manganese	71	*	02/13/2025	1333
7440-02-0	Nickel	1.2		02/13/2025	1333
7440-09-7	Potassium	6400	*	02/13/2025	1333
7782-49-2	Selenium	5.0	U	02/13/2025	1333
7440-22-4	Silver	1.0	U	02/13/2025	1333
7440-23-5	Sodium	120000		02/13/2025	1333
7440-28-0	Thallium	1.0	U	02/13/2025	1333
7440-62-2	Vanadium	0.24	J	02/13/2025	1333
7440-66-6	Zinc	15	*	02/13/2025	1333
Hardness	Hardness (total)	1300		02/13/2025	1333

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

Comments:

EPA SAMPLE NO.

ME29D2

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51900 MA No. : 3114.1 SDG No.: ME29C5

Matrix: Water Lab Sample ID: Q1339-06

% Solids: Date Received: 02/07/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	20	U	02/13/2025	1616
7440-36-0	Antimony	2.0	U	02/13/2025	1616
7440-38-2	Arsenic	1.0	U	02/13/2025	1616
7440-39-3	Barium	21		02/13/2025	1616
7440-41-7	Beryllium	1.0	U	02/13/2025	1616
7440-43-9	Cadmium	1.0	U	02/13/2025	1616
7440-70-2	Calcium	240000		02/13/2025	1616
7440-47-3	Chromium	2.0	U	02/13/2025	1616
7440-48-4	Cobalt	1.0	U	02/13/2025	1616
7440-50-8	Copper	2.0	U	02/13/2025	1616
7439-89-6	Iron	29	J	02/13/2025	1616
7439-92-1	Lead	0.32	J	02/13/2025	1616
7439-95-4	Magnesium	67000		02/13/2025	1616
7439-96-5	Manganese	16	*	02/13/2025	1616
7440-02-0	Nickel	1.0	U	02/13/2025	1616
7440-09-7	Potassium	2800	*	02/13/2025	1616
7782-49-2	Selenium	1.1	J	02/13/2025	1616
7440-22-4	Silver	1.0	U	02/13/2025	1616
7440-23-5	Sodium	60000		02/13/2025	1616
7440-28-0	Thallium	1.0	U	02/13/2025	1616
7440-62-2	Vanadium	0.11	J	02/13/2025	1616
7440-66-6	Zinc	2.3	J*	02/13/2025	1616
Hardness	Hardness (total)	880		02/13/2025	1616

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

Comments:

EPA SAMPLE NO.

ME29D4

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51900 MA No. : 3114.1 SDG No.: ME29C5

Matrix: Water Lab Sample ID: Q1339-07

% Solids: Date Received: 02/07/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	110		02/13/2025	1340
7440-36-0	Antimony	1.3	J	02/13/2025	1340
7440-38-2	Arsenic	2.3		02/13/2025	1340
7440-39-3	Barium	48		02/13/2025	1340
7440-41-7	Beryllium	1.0	U	02/13/2025	1340
7440-43-9	Cadmium	1.6		02/13/2025	1340
7440-70-2	Calcium	230000		02/13/2025	1340
7440-47-3	Chromium	2.1		02/13/2025	1340
7440-48-4	Cobalt	3.5		02/13/2025	1340
7440-50-8	Copper	24		02/13/2025	1340
7439-89-6	Iron	540		02/13/2025	1340
7439-92-1	Lead	4.0		02/13/2025	1340
7439-95-4	Magnesium	190000		02/13/2025	1340
7439-96-5	Manganese	2100	*	02/13/2025	1340
7440-02-0	Nickel	19		02/13/2025	1340
7440-09-7	Potassium	16000	*	02/13/2025	1340
7782-49-2	Selenium	3.0	J	02/13/2025	1340
7440-22-4	Silver	0.11	J	02/13/2025	1340
7440-23-5	Sodium	120000		02/13/2025	1340
7440-28-0	Thallium	0.24	J	02/13/2025	1340
7440-62-2	Vanadium	1.5	J	02/13/2025	1340
7440-66-6	Zinc	54	*	02/13/2025	1340
Hardness	Hardness (total)	1400		02/13/2025	1340

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

Comments:

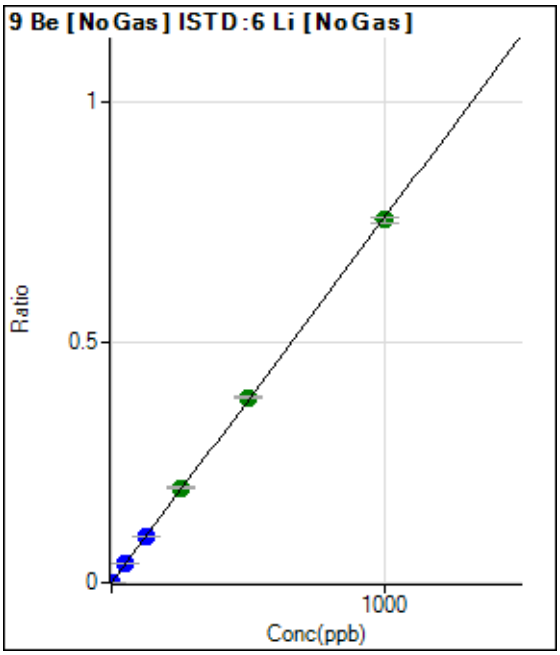
Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

Calibration for 008CALS.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\P8021325MS.b\
Analysis File: P8021325MS.batch.bin
DA Date-Time: 2025-02-13 15:32:18
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	004CALB.d	S00	2025-02-13 11:45:07
2	005CALS.d	S02	2025-02-13 11:48:29
3	006CALB.d	S03	2025-02-13 11:51:52
4	007CALS.d	S04	2025-02-13 11:54:56
5	008CALS.d	S05	2025-02-13 11:57:55
6	009CALS.d	S06	2025-02-13 12:00:43
7	010CALS.d	S07	2025-02-13 12:03:30
8	011CALS.d	S08	2025-02-13 12:06:15

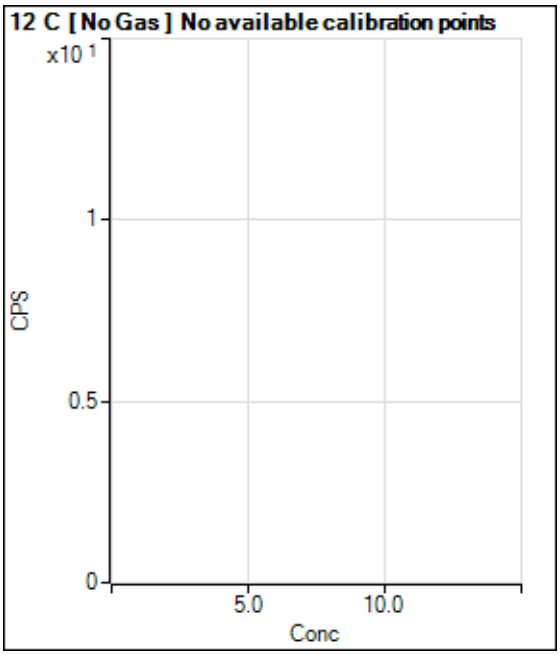
Reviewed By:kareem
On:2/18/2025 11:55:14 AM
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	467.87	0.0001	P	10.1
2	☐	1.000	1.083	7495.98	0.0009	P	1.9
3	☐	50.000	52.166	340332.13	0.0397	P	1.2
4	☐	125.000	125.533	825399.27	0.0955	P	0.3
5	☐	250.000	258.680	1700586.97	0.1967	A	2.0
6	☐	500.000	507.491	3280808.81	0.3859	A	0.5
7	☐	1000.000	993.909	6411033.53	0.7557	A	1.9
8	☐			2299.07	0.0003	P	9.7

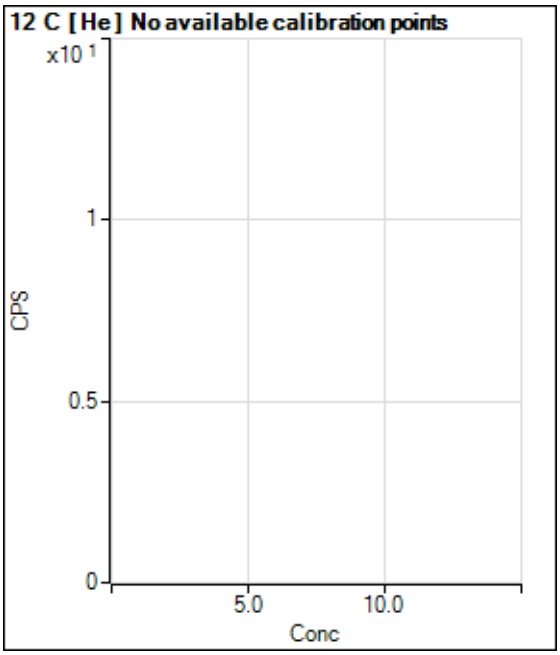
y = 7.6031E-004 * x + 5.5312E-005
R = 0.9999
DL = 0.022
BEC = 0.07275

Weight: <None>
Min Conc: 0

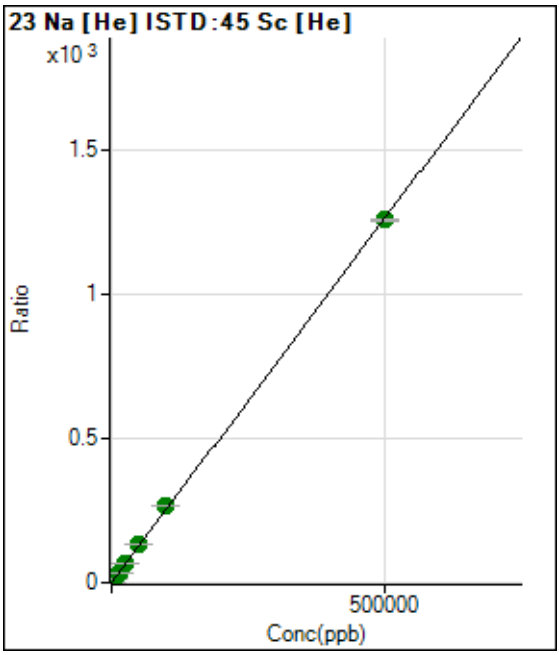


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			4258293.24		A	7.2
2	☐			4316811.18		A	6.2
3	☐			4431942.05		A	4.7
4	☐			4764631.52		A	3.1
5	☐			5086718.67		A	3.0
6	☐			5660189.57		A	1.4
7	☐			6557476.50		A	1.3
8	☐			5885192.62		A	0.8

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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			25377.55		P	1.7
2	☐			25886.17		P	1.0
3	☐			26734.39		P	0.9
4	☐			29802.40		P	0.6
5	☐			32246.46		P	1.3
6	☐			36435.00		P	0.7
7	☐			45224.86		P	0.6
8	☐			49907.70		P	1.0

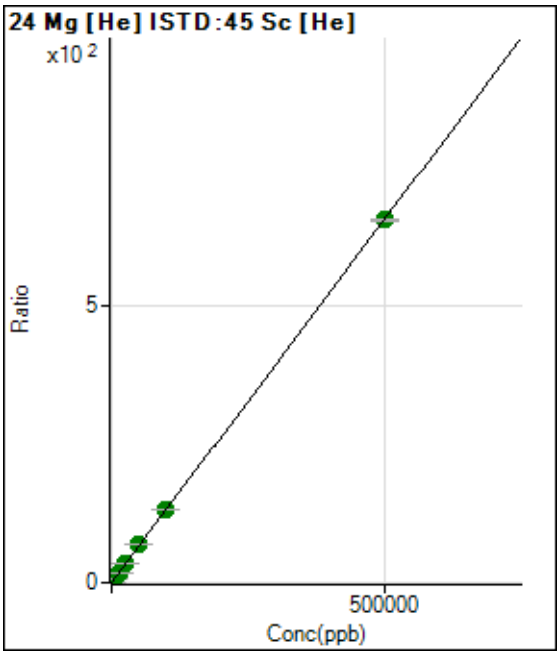


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43774.25	0.2272	P	0.9
2	☐	500.000	553.704	314158.15	1.6251	P	1.2
3	☐	5000.000	5677.015	2843880.89	14.5600	A	0.7
4	☐	12500.000	13666.469	6774806.50	34.7311	A	1.5
5	☐	25000.000	27323.974	13738882.85	69.2124	A	0.9
6	☐	50000.000	53298.913	26845444.60	134.7916	A	0.5
7	☐	100000.00	104788.99	53571101.98	264.7893	A	0.7
8	☐	500000.00	498560.12	243384963.0	1,258.948	A	0.8

y = 0.0025 * x + 0.2272
R = 0.9999
DL = 2.364
BEC = 89.97

Weight: <None>
Min Conc: 0

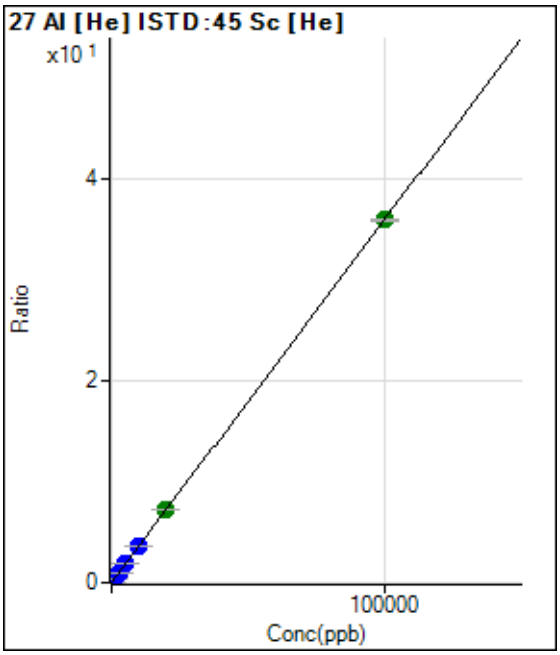
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5233.22	0.0272	P	0.7
2	☐	500.000	547.024	144109.75	0.7455	P	1.6
3	☐	5000.000	5595.979	1440571.61	7.3756	A	1.1
4	☐	12500.000	13513.818	3466972.17	17.7729	A	1.0
5	☐	25000.000	26466.717	6904211.49	34.7822	A	2.0
6	☐	50000.000	51938.464	13588428.83	68.2306	A	0.3
7	☐	100000.00	101539.07	26983536.82	133.3641	A	0.6
8	☐	500000.00	499393.65	126788454.7	655.8103	A	0.4

y = 0.0013 * x + 0.0272
R = 1.0000
DL = 0.437
BEC = 20.68

Weight: <None>
Min Conc: 0

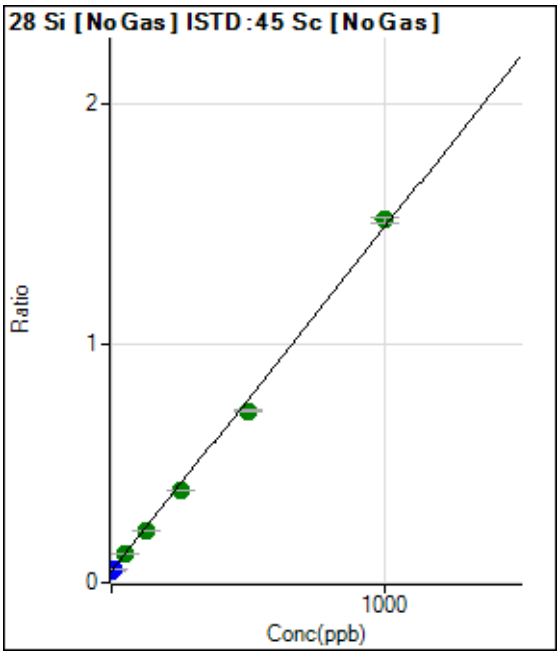


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	71.11	0.0004	P	35.5
2	☐	20.000	21.840	1588.99	0.0082	P	7.3
3	☐	1000.000	1043.991	73399.42	0.3758	P	1.3
4	☐	2500.000	2558.257	179521.69	0.9204	P	2.0
5	☐	5000.000	5057.295	361092.74	1.8191	P	0.9
6	☐	10000.000	9833.030	704306.93	3.5365	P	0.5
7	☐	20000.000	20203.969	1470049.32	7.2661	A	0.9
8	☐	100000.00	99971.142	6950438.51	35.9520	A	0.7

y = 3.5962E-004 * x + 3.6927E-004
R = 1.0000
DL = 1.092
BEC = 1.027

Weight: <None>
Min Conc: 0

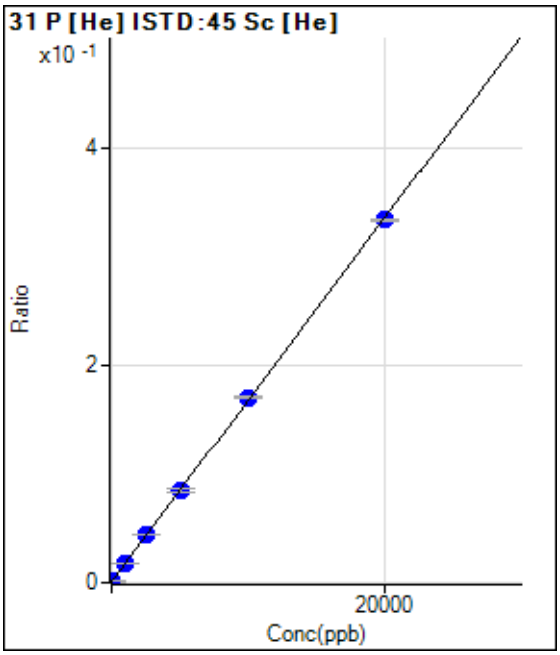
Reviewed By:kareem
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	540549.12	0.0491	P	0.7
2	☐	10.000	4.837	623218.36	0.0560	P	1.3
3	☐	50.000	47.615	1318389.43	0.1175	A	1.4
4	☐	125.000	118.299	2472493.09	0.2190	A	0.8
5	☐	250.000	234.092	4358986.15	0.3853	A	1.0
6	☐	500.000	466.382	8055985.78	0.7190	A	1.1
7	☐	1000.000	1021.795	17257298.08	1.5168	A	1.9
8	☐			742583.48	0.0708	P	2.2

y = 0.0014 * x + 0.0491
R = 0.9991
DL = 0.7419
BEC = 34.17

Weight: <None>
Min Conc: 0

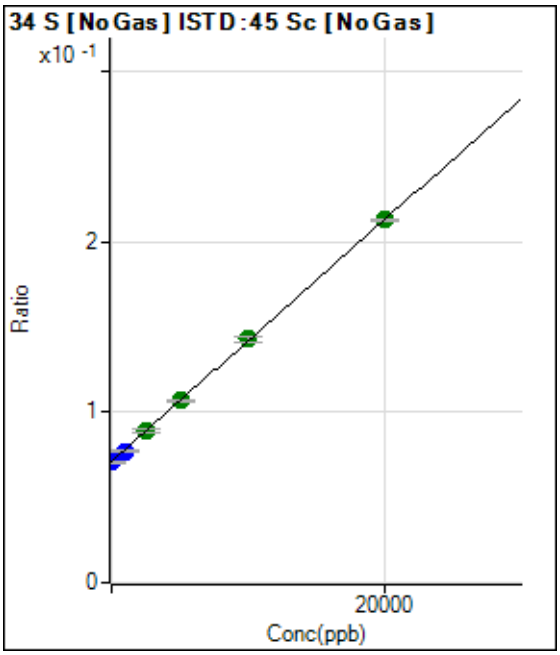


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-11.419	108.89	0.0006	P	12.6
2	☐	0.000	11.419	183.34	0.0009	P	10.2
3	☐	1000.000	1031.081	3521.57	0.0180	P	1.2
4	☐	2500.000	2588.002	8607.06	0.0441	P	2.4
5	☐	5000.000	5029.899	16876.62	0.0850	P	2.8
6	☐	10000.000	10139.780	33978.65	0.1706	P	1.5
7	☐	20000.000	19910.081	67638.80	0.3343	P	0.8
8	☐			113.33	0.0006	P	2.8

y = 1.6753E-005 * x + 7.5646E-004
R = 1.0000
DL = 15
BEC = 45.15

Weight: <None>
Min Conc: 0

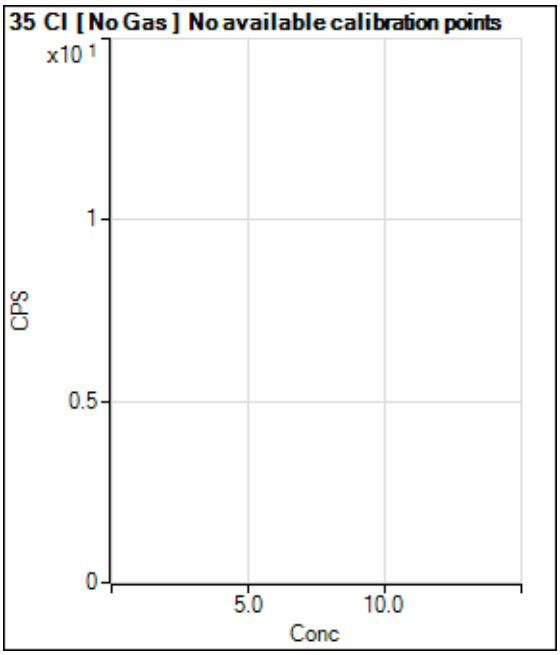
Reviewed By:kareem
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	89.125	791648.30	0.0719	P	0.9
2	☐	0.000	-89.125	785479.09	0.0706	P	0.9
3	☐	1000.000	852.737	867563.30	0.0773	P	0.3
4	☐	2500.000	2505.892	1004948.64	0.0890	A	2.4
5	☐	5000.000	4997.646	1207108.60	0.1067	A	1.2
6	☐	10000.000	10079.878	1599414.75	0.1428	A	1.9
7	☐	20000.000	19967.276	2422473.92	0.2129	A	0.3
8	☐			700195.55	0.0668	P	1.2

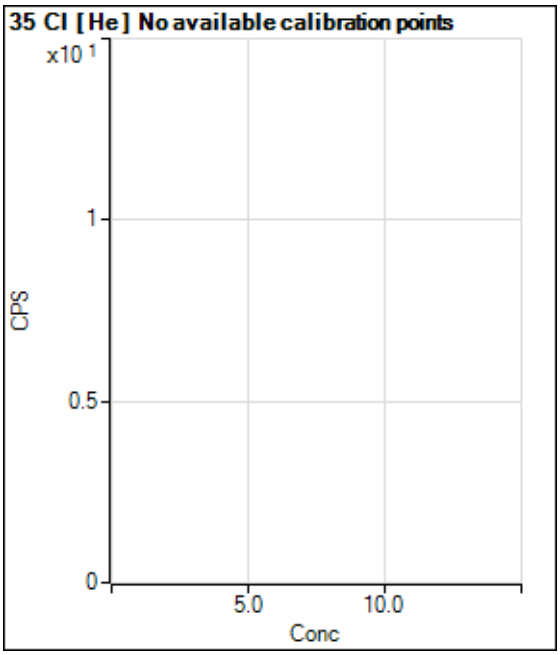
y = 7.0947E-006 * x + 0.0712
R = 0.9999
DL = 281
BEC = 1.004E+04

Weight: <None>
Min Conc: 0

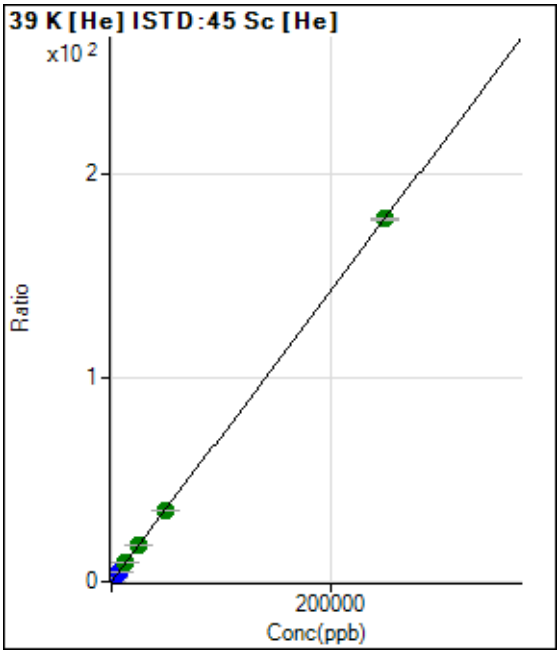


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			141635.75		P	1.2
2	☐			139963.95		P	0.3
3	☐			138255.65		P	0.5
4	☐			142829.50		P	0.4
5	☐			146119.46		P	0.6
6	☐			158251.75		P	0.6
7	☐			185136.81		P	1.5
8	☐			132023.12		P	2.2

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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			478.90		P	3.4
2	☐			453.35		P	4.8
3	☐			468.90		P	14.7
4	☐			440.01		P	6.5
5	☐			550.02		P	12.6
6	☐			543.35		P	9.6
7	☐			685.58		P	12.2
8	☐			442.24		P	5.3

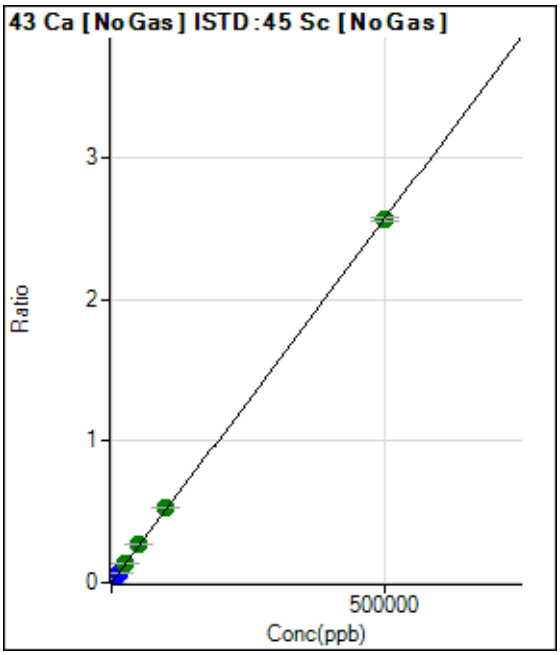


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8861.69	0.0460	P	1.1
2	☐	500.000	504.118	78011.65	0.4035	P	0.8
3	☐	2500.000	2497.318	354922.69	1.8172	P	0.3
4	☐	6250.000	6117.055	855242.55	4.3844	P	1.3
5	☐	12500.000	12739.500	1802749.59	9.0812	A	1.7
6	☐	25000.000	24654.945	3491372.83	17.5320	A	1.4
7	☐	50000.000	48564.121	6977995.52	34.4891	A	0.2
8	☐	250000.00	250313.04	34330501.44	177.5755	A	0.4

y = 7.0923E-004 * x + 0.0460
R = 1.0000
DL = 2.064
BEC = 64.84

Weight: <None>
Min Conc: 0

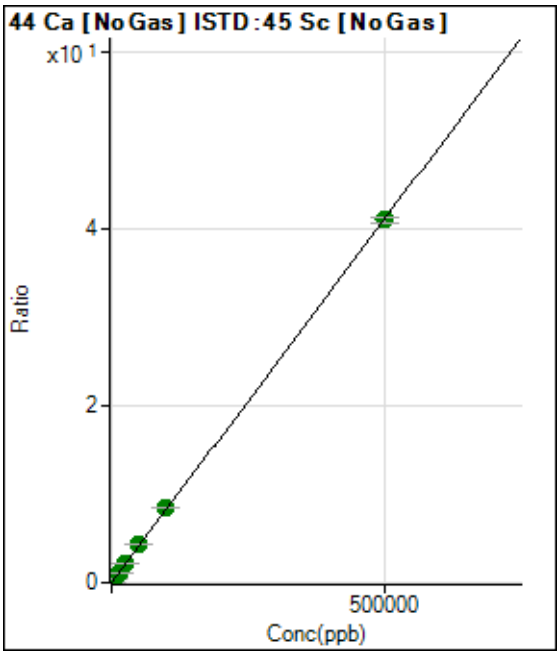
Reviewed By:kareem
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	540.02	0.0000	P	7.7
2	☐	500.000	541.453	31477.75	0.0028	P	1.0
3	☐	5000.000	5276.266	304669.13	0.0271	P	1.3
4	☐	12500.000	12858.600	746090.15	0.0661	P	1.1
5	☐	25000.000	26807.410	1558085.64	0.1377	A	0.9
6	☐	50000.000	52345.357	3012906.28	0.2689	A	0.3
7	☐	100000.00	103662.18	6057967.69	0.5325	A	0.9
8	☐	500000.00	498930.88	26860437.10	2.5626	A	1.1

y = 5.1360E-006 * x + 4.9007E-005
R = 1.0000
DL = 2.217
BEC = 9.542

Weight: <None>
Min Conc: 0

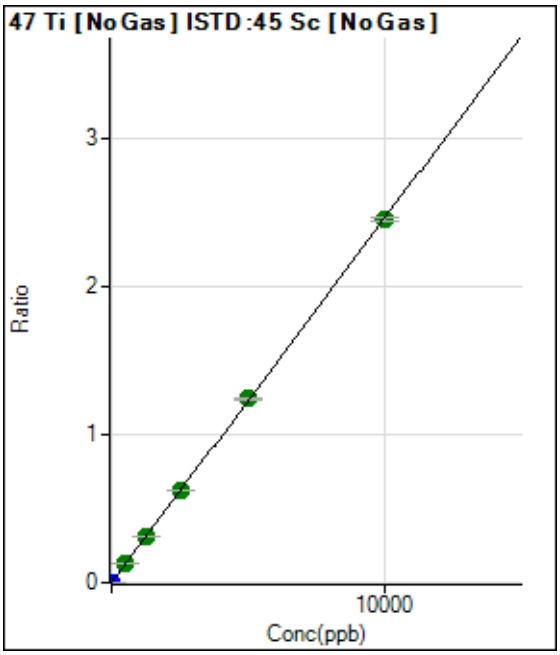


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27309.31	0.0025	P	0.2
2	☐	500.000	545.654	527188.03	0.0474	P	0.1
3	☐	5000.000	5410.040	5025721.70	0.4478	A	0.6
4	☐	12500.000	13170.686	12266574.40	1.0866	A	1.2
5	☐	25000.000	26344.589	24558607.69	2.1710	A	0.7
6	☐	50000.000	51873.319	47870903.17	4.2724	A	0.8
7	☐	100000.00	102965.51	96456457.45	8.4779	A	1.2
8	☐	500000.00	499131.42	430653242.4	41.0878	A	1.9

y = 8.2314E-005 * x + 0.0025
R = 1.0000
DL = 0.219
BEC = 30.12

Weight: <None>
Min Conc: 0

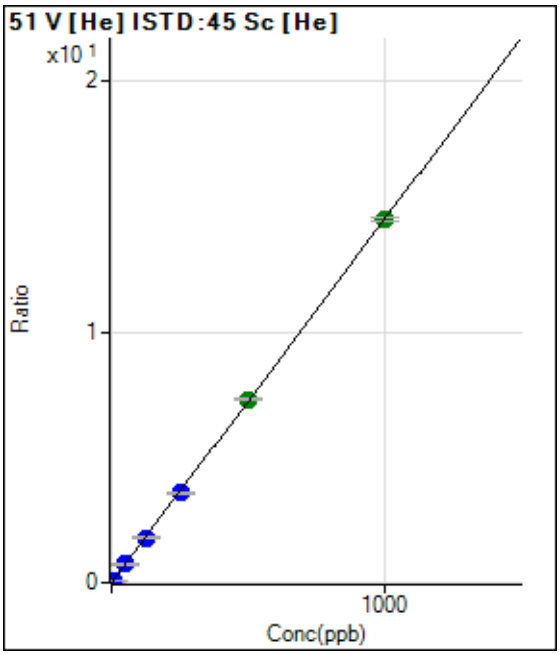
Reviewed By:kareem
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Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	283.34	0.0000	P	9.8
2	☐	5.000	5.122	14274.99	0.0013	P	0.7
3	☐	500.000	522.248	1439492.91	0.1283	A	1.6
4	☐	1250.000	1265.233	3507383.04	0.3107	A	1.5
5	☐	2500.000	2517.858	6994198.44	0.6183	A	0.5
6	☐	5000.000	5064.942	13934860.49	1.2437	A	1.0
7	☐	10000.000	9960.048	27826272.36	2.4457	A	1.0
8	☐			6750.56	0.0006	P	4.8

y = 2.4555E-004 * x + 2.5709E-005
R = 1.0000
DL = 0.03085
BEC = 0.1047

Weight: <None>
Min Conc: 0

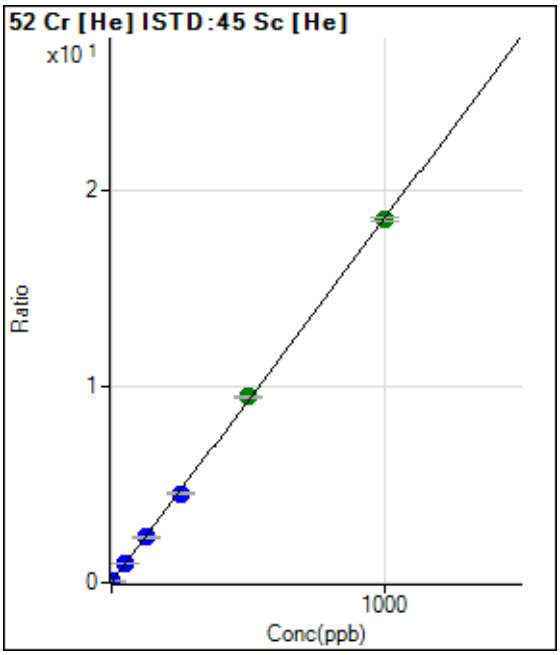


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24.44	0.0001	P	41.6
2	☐	5.000	5.234	14687.64	0.0760	P	2.8
3	☐	50.000	50.307	142424.55	0.7292	P	1.5
4	☐	125.000	124.201	351135.56	1.8002	P	1.8
5	☐	250.000	246.584	709434.85	3.5739	P	0.6
6	☐	500.000	504.028	1454811.99	7.3050	A	0.9
7	☐	1000.000	998.924	2928988.40	14.4776	A	1.0
8	☐			761.14	0.0039	P	1.2

y = 0.0145 * x + 1.2683E-004
R = 1.0000
DL = 0.01091
BEC = 0.008751

Weight: <None>
Min Conc: 0

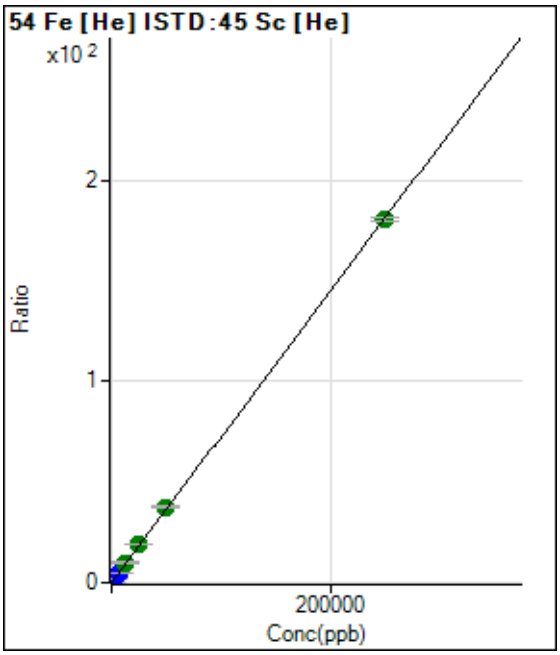
Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2411.34	0.0125	P	2.3
2	☐	2.000	2.083	9902.40	0.0512	P	0.7
3	☐	50.000	50.379	185321.44	0.9489	P	1.2
4	☐	125.000	123.540	450326.15	2.3086	P	1.4
5	☐	250.000	244.942	906163.98	4.5649	P	0.5
6	☐	500.000	510.039	1890477.87	9.4920	A	0.8
7	☐	1000.000	996.409	3749578.25	18.5315	A	1.0
8	☐			11841.64	0.0612	P	0.8

y = 0.0186 * x + 0.0125
R = 0.9999
DL = 0.04656
BEC = 0.6733

Weight: <None>
Min Conc: 0

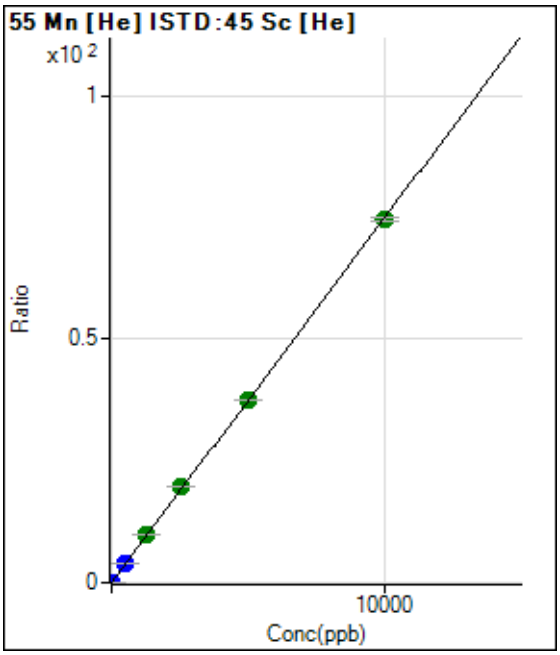


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	940.04	0.0049	P	1.8
2	☐	50.000	57.140	8930.62	0.0462	P	2.4
3	☐	2500.000	2729.489	386469.47	1.9787	P	0.4
4	☐	6250.000	6673.696	942344.96	4.8309	P	1.1
5	☐	12500.000	13834.041	1986773.67	10.0088	A	1.3
6	☐	25000.000	26738.502	3851433.17	19.3405	A	1.6
7	☐	50000.000	52169.886	7633327.18	37.7309	A	1.3
8	☐	250000.00	249312.58	34854722.26	180.2922	A	1.1

y = 7.2314E-004 * x + 0.0049
R = 0.9999
DL = 0.3726
BEC = 6.745

Weight: <None>
Min Conc: 0

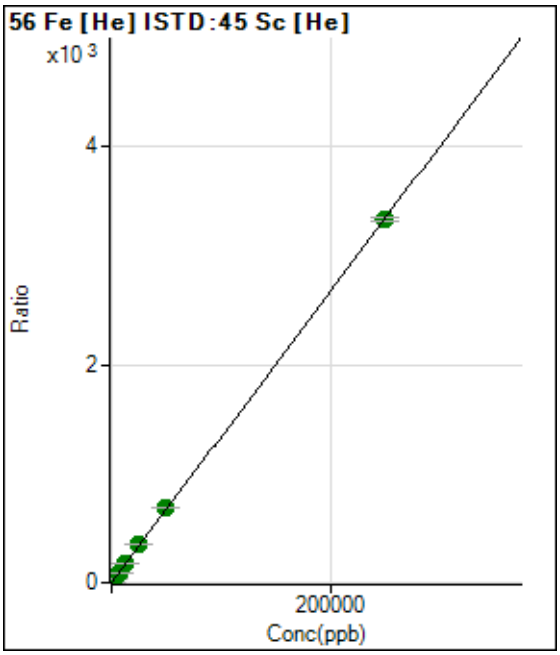
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	297.78	0.0015	P	9.8
2	☐	1.000	1.118	1916.82	0.0099	P	6.8
3	☐	500.000	515.267	753937.92	3.8601	P	0.7
4	☐	1250.000	1325.080	1936045.06	9.9243	A	2.8
5	☐	2500.000	2629.265	3908697.23	19.6906	A	0.5
6	☐	5000.000	5019.532	7486531.55	37.5900	A	0.6
7	☐	10000.000	9947.769	15071215.61	74.4948	A	1.1
8	☐			7003.99	0.0362	P	3.7

y = 0.0075 * x + 0.0015
R = 0.9999
DL = 0.06076
BEC = 0.2064

Weight: <None>
Min Conc: 0

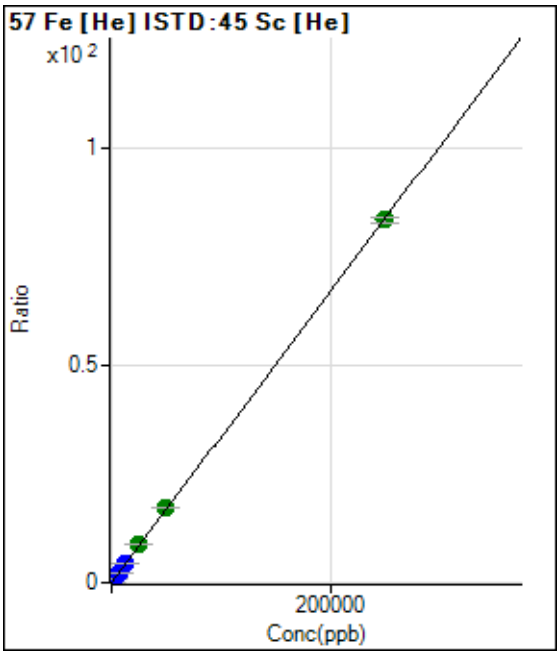


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13704.43	0.0711	P	0.8
2	☐	50.000	55.492	156918.78	0.8117	P	1.0
3	☐	2500.000	2781.141	7263276.49	37.1883	A	1.3
4	☐	6250.000	6752.603	17593125.15	90.1916	A	1.3
5	☐	12500.000	13439.839	35619474.47	179.4397	A	0.8
6	☐	25000.000	26163.877	69560257.30	349.2552	A	0.8
7	☐	50000.000	51386.944	138761192.3	685.8832	A	1.5
8	☐	250000.00	249543.85	643852408.1	3,330.492	A	1.1

y = 0.0133 * x + 0.0711
R = 1.0000
DL = 0.1342
BEC = 5.329

Weight: <None>
Min Conc: 0

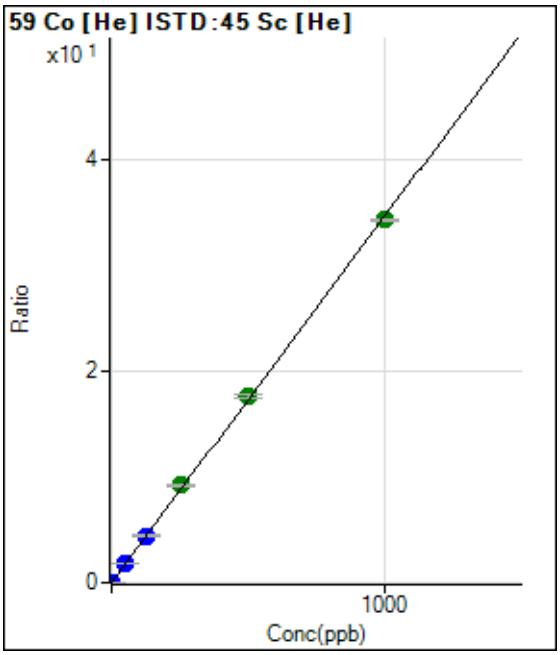
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	310.01	0.0016	P	6.3
2	☐	50.000	59.124	4135.08	0.0214	P	0.7
3	☐	2500.000	2693.497	176306.03	0.9027	P	0.5
4	☐	6250.000	6548.399	427636.97	2.1922	P	1.0
5	☐	12500.000	12871.041	855038.51	4.3074	P	0.5
6	☐	25000.000	26480.742	1764547.65	8.8602	A	0.9
7	☐	50000.000	51424.323	3480784.60	17.2046	A	0.7
8	☐	250000.00	249539.11	16137824.90	83.4799	A	1.7

y = 3.3453E-004 * x + 0.0016
R = 1.0000
DL = 0.9042
BEC = 4.808

Weight: <None>
Min Conc: 0

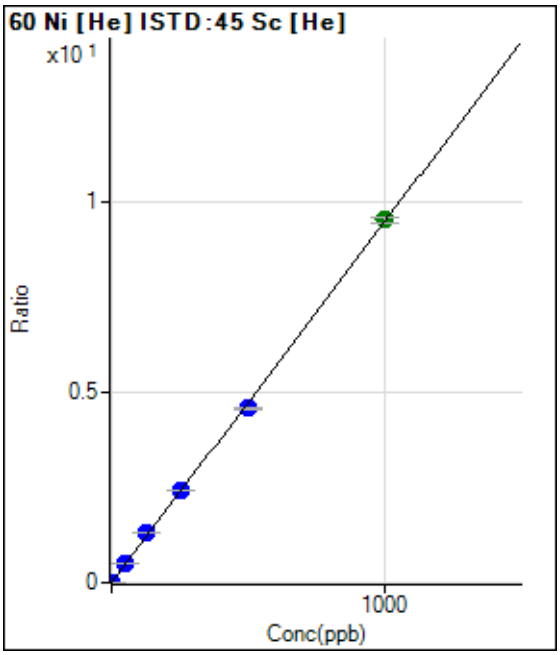


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	291.12	0.0015	P	5.6
2	☐	1.000	1.162	8085.72	0.0418	P	0.3
3	☐	50.000	52.694	357271.98	1.8292	P	0.0
4	☐	125.000	128.543	870000.01	4.4600	P	1.0
5	☐	250.000	265.566	1828731.34	9.2125	A	0.6
6	☐	500.000	509.470	3519226.41	17.6722	A	1.5
7	☐	1000.000	990.796	6953019.69	34.3667	A	0.7
8	☐			14055.91	0.0727	P	1.0

y = 0.0347 * x + 0.0015
R = 0.9998
DL = 0.007295
BEC = 0.04356

Weight: <None>
Min Conc: 0

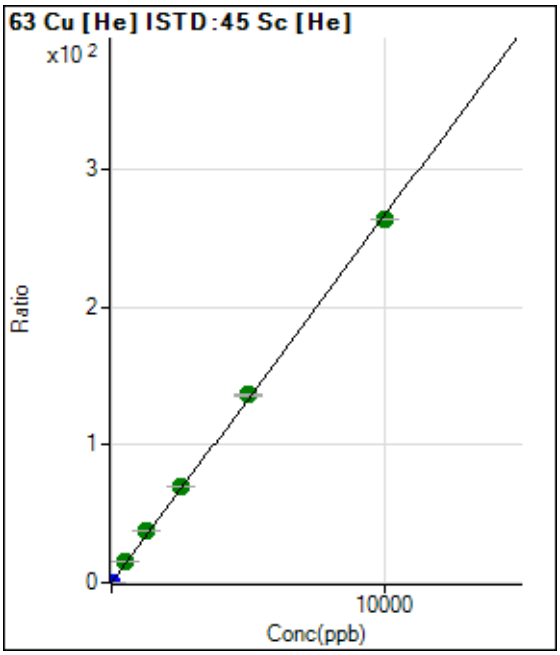
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1582.33	0.0082	P	5.2
2	☐	1.000	0.997	3413.78	0.0177	P	4.3
3	☐	50.000	53.542	100720.90	0.5157	P	1.2
4	☐	125.000	137.681	256156.81	1.3132	P	1.3
5	☐	250.000	253.762	479075.15	2.4134	P	0.7
6	☐	500.000	482.492	912373.04	4.5814	P	0.9
7	☐	1000.000	1006.051	1930846.88	9.5438	A	1.3
8	☐			6960.66	0.0360	P	3.4

y = 0.0095 * x + 0.0082
R = 0.9997
DL = 0.1343
BEC = 0.8663

Weight: <None>
Min Conc: 0

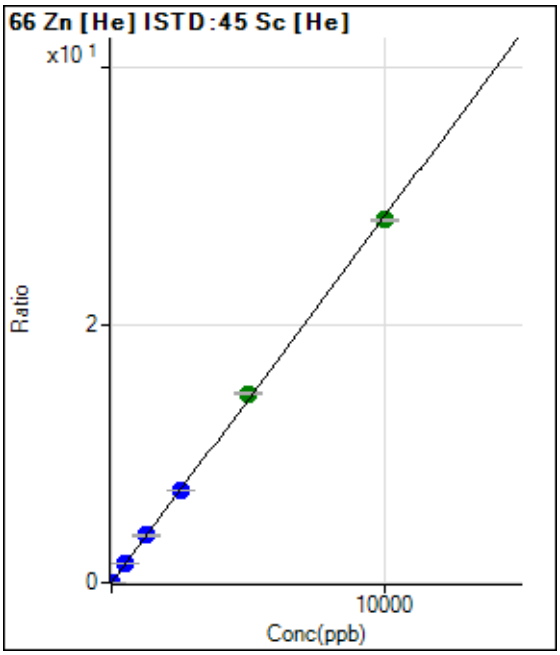


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3182.61	0.0165	P	4.8
2	☐	2.000	2.199	14541.99	0.0752	P	1.3
3	☐	500.000	566.051	2954698.53	15.1280	A	0.9
4	☐	1250.000	1423.897	7418343.92	38.0293	A	1.0
5	☐	2500.000	2640.562	13996619.37	70.5098	A	0.2
6	☐	5000.000	5119.581	27221595.15	136.6904	A	1.2
7	☐	10000.000	9880.030	53368512.54	263.7767	A	0.1
8	☐			13270.72	0.0687	P	2.7

y = 0.0267 * x + 0.0165
R = 0.9997
DL = 0.08985
BEC = 0.6187

Weight: <None>
Min Conc: 0

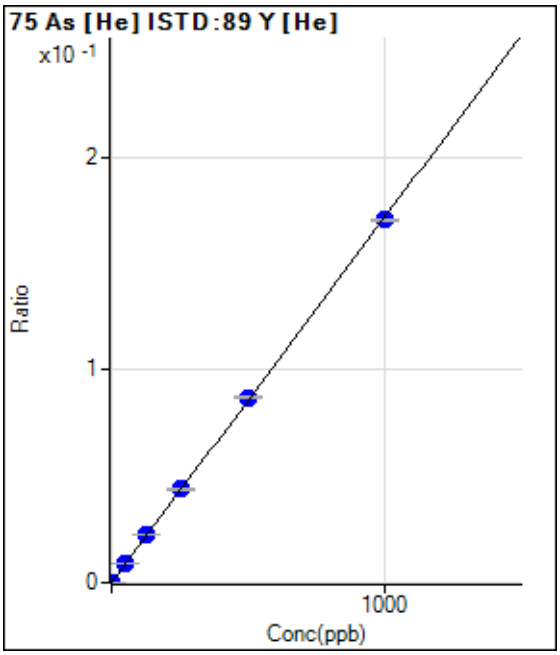
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	177.78	0.0009	P	13.3
2	☐	2.000	5.574	3244.85	0.0168	P	3.8
3	☐	500.000	528.713	294121.75	1.5059	P	0.6
4	☐	1250.000	1291.270	717172.07	3.6765	P	0.8
5	☐	2500.000	2521.283	1424799.16	7.1776	P	0.3
6	☐	5000.000	5159.377	2924903.36	14.6868	A	1.2
7	☐	10000.000	9908.395	5706257.83	28.2046	A	0.7
8	☐			3107.04	0.0161	P	4.1

y = 0.0028 * x + 9.2263E-004
R = 0.9998
DL = 0.129
BEC = 0.3241

Weight: <None>
Min Conc: 0

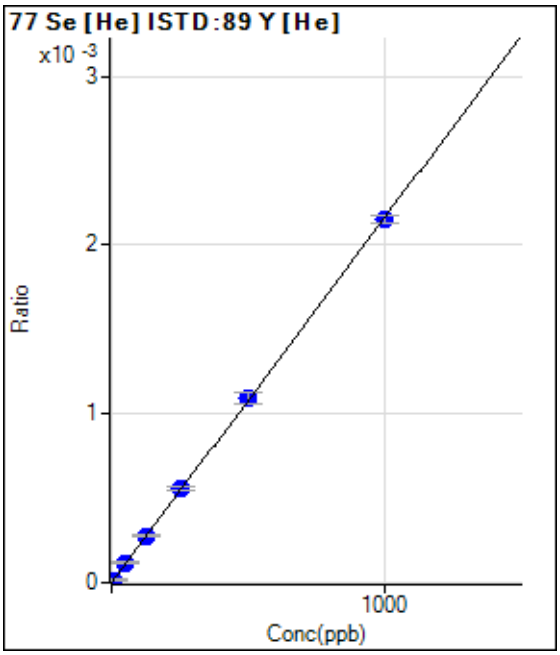


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.66	0.0000	P	87.7
2	☐	1.000	1.117	354.45	0.0002	P	6.6
3	☐	50.000	52.212	16152.68	0.0090	P	1.4
4	☐	125.000	129.606	40567.09	0.0223	P	0.4
5	☐	250.000	256.749	81845.65	0.0441	P	1.2
6	☐	500.000	507.472	160165.29	0.0871	P	0.7
7	☐	1000.000	993.890	318860.84	0.1707	P	0.5
8	☐			158.89	0.0001	P	15.6

y = 1.7171E-004 * x + 3.6894E-006
R = 0.9999
DL = 0.05655
BEC = 0.02149

Weight: <None>
Min Conc: 0

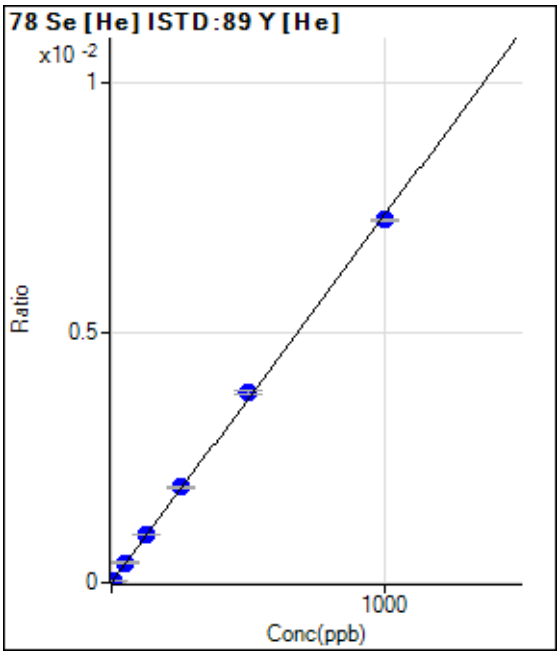
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	5.000	7.372	28.89	0.0000	P	23.7
3	☐	50.000	54.276	211.12	0.0001	P	5.3
4	☐	125.000	128.160	504.46	0.0003	P	4.9
5	☐	250.000	257.213	1031.16	0.0006	P	4.6
6	☐	500.000	505.671	2007.94	0.0011	P	6.0
7	☐	1000.000	994.741	4013.94	0.0021	P	2.2
8	☐			4.44	0.0000	P	43.6

y = 2.1599E-006 * x + 0.0000E+000
R = 1.0000
DL = 0
BEC = 0

Weight: <None>
Min Conc: 0

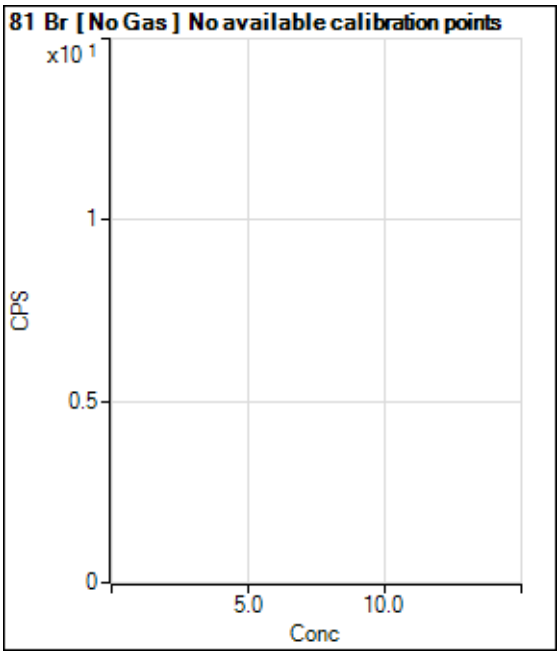


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.6
2	☐	5.000	5.837	84.44	0.0000	P	12.7
3	☐	50.000	53.876	720.03	0.0004	P	9.0
4	☐	125.000	131.773	1772.36	0.0010	P	0.5
5	☐	250.000	259.531	3548.26	0.0019	P	2.9
6	☐	500.000	518.620	7015.14	0.0038	P	1.9
7	☐	1000.000	987.263	13567.73	0.0073	P	0.5
8	☐			16.66	0.0000	P	34.9

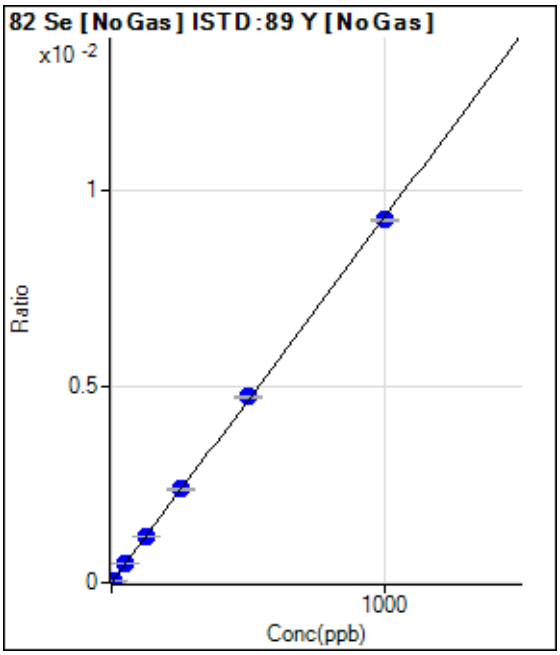
y = 7.3517E-006 * x + 3.6831E-006
R = 0.9997
DL = 1.302
BEC = 0.501

Weight: <None>
Min Conc: 0

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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			4248.47		P	3.2
2	☐			4062.86		P	7.2
3	☐			4245.13		P	2.4
4	☐			4021.73		P	4.8
5	☐			4286.26		P	1.2
6	☐			4410.74		P	2.5
7	☐			4522.99		P	0.5
8	☐			4737.51		P	0.7

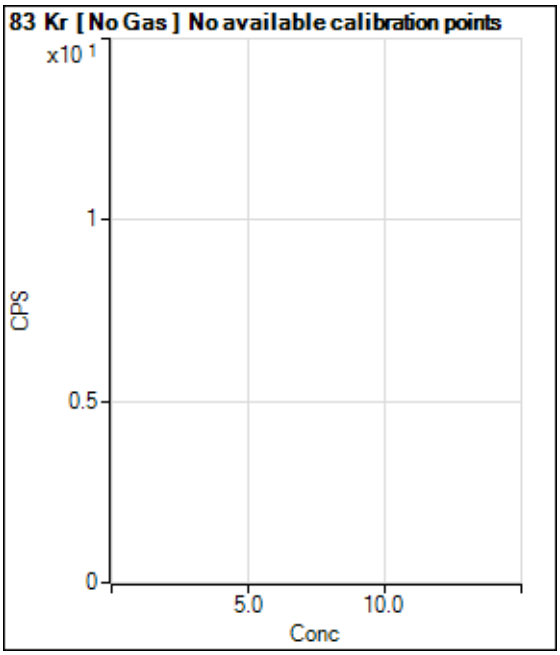


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-10.00	0.0000	P	-326.
2	☐	5.000	5.430	1429.00	0.0001	P	8.0
3	☐	50.000	53.598	14237.63	0.0005	P	2.6
4	☐	125.000	127.196	34454.16	0.0012	P	0.6
5	☐	250.000	257.137	68978.97	0.0024	P	1.7
6	☐	500.000	509.196	135678.18	0.0047	P	1.3
7	☐	1000.000	993.161	267436.29	0.0092	P	0.6
8	☐			-35.56	0.0000	P	-82.2

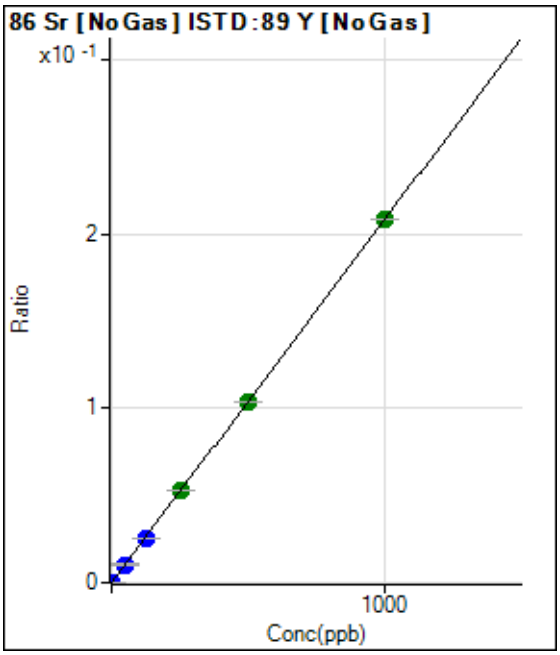
y = 9.2912E-006 * x - 3.5107E-007
R = 0.9999
DL = 0.3698
BEC = -0.03779

Weight: <None>
Min Conc: 0

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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			302.23		P	14.0
2	☐			277.78		P	4.2
3	☐			301.12		P	14.6
4	☐			323.34		P	11.9
5	☐			320.01		P	13.8
6	☐			307.78		P	3.1
7	☐			392.23		P	12.2
8	☐			454.46		P	6.7

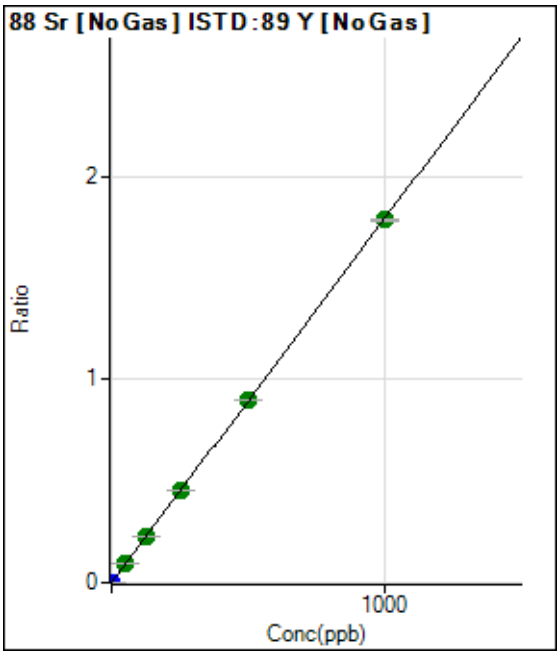


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	760.03	0.0000	P	8.6
2	☐	1.000	1.040	6924.01	0.0002	P	1.6
3	☐	50.000	50.112	298985.81	0.0105	P	1.1
4	☐	125.000	119.820	727600.10	0.0250	P	0.7
5	☐	250.000	255.034	1532833.28	0.0531	A	1.3
6	☐	500.000	498.992	2977806.41	0.1038	A	0.7
7	☐	1000.000	999.887	6029046.58	0.2080	A	0.2
8	☐			17527.74	0.0007	P	2.4

y = 2.0801E-004 * x + 2.6575E-005
R = 1.0000
DL = 0.03303
BEC = 0.1278

Weight: <None>
Min Conc: 0

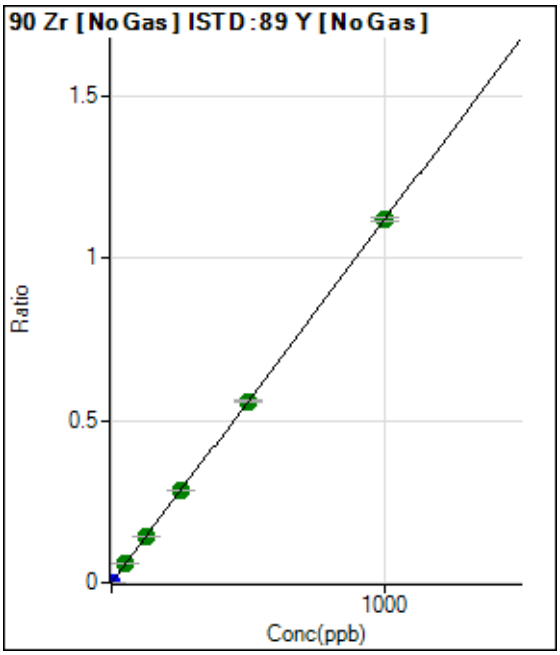
Reviewed By:kareem
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Inst Id :P8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2519.14	0.0001	P	3.8
2	☐	1.000	1.034	55269.88	0.0019	P	1.0
3	☐	50.000	53.039	2717709.68	0.0950	A	0.5
4	☐	125.000	126.647	6611146.92	0.2267	A	0.6
5	☐	250.000	253.943	13124014.67	0.4545	A	1.7
6	☐	500.000	502.630	25797808.23	0.8995	A	0.8
7	☐	1000.000	997.341	51726355.89	1.7847	A	0.3
8	☐			147615.04	0.0055	P	0.5

y = 0.0018 * x + 8.8084E-005
R = 1.0000
DL = 0.00558
BEC = 0.04923

Weight: <None>
Min Conc: 0

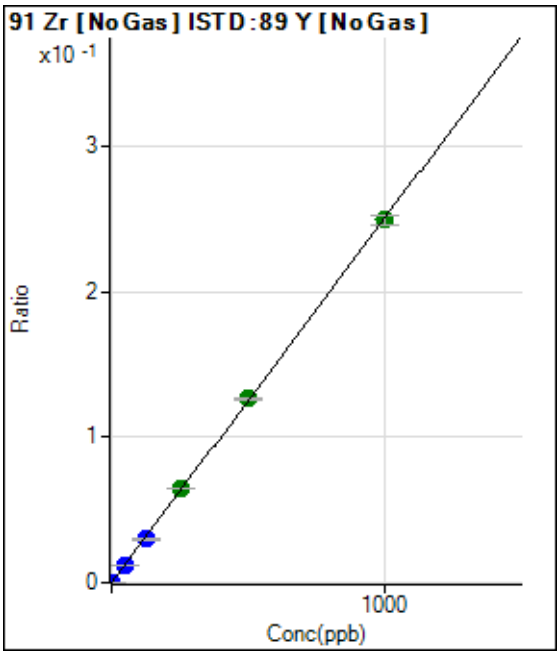


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	965.60	0.0000	P	5.1
2	☐	1.000	1.011	33222.83	0.0012	P	0.3
3	☐	50.000	52.764	1690984.39	0.0591	A	1.3
4	☐	125.000	125.857	4109488.03	0.1409	A	2.0
5	☐	250.000	253.096	8183881.68	0.2834	A	0.7
6	☐	500.000	498.384	16003637.82	0.5580	A	1.0
7	☐	1000.000	999.789	32441605.90	1.1193	A	1.0
8	☐			50619.19	0.0019	P	0.2

y = 0.0011 * x + 3.3753E-005
R = 1.0000
DL = 0.004572
BEC = 0.03015

Weight: <None>
Min Conc: 0

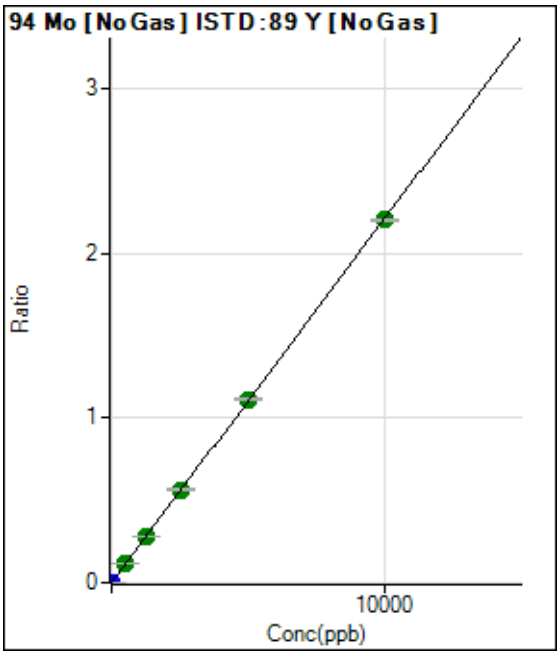
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	163.34	0.0000	P	2.6
2	☐	1.000	0.995	7257.51	0.0003	P	2.5
3	☐	50.000	49.156	351847.29	0.0123	P	1.0
4	☐	125.000	118.951	867541.09	0.0298	P	1.6
5	☐	250.000	258.803	1869052.66	0.0647	A	1.3
6	☐	500.000	504.570	3619160.19	0.1262	A	0.3
7	☐	1000.000	996.313	7220876.01	0.2492	A	2.3
8	☐			11103.40	0.0004	P	2.1

y = 2.5007E-004 * x + 5.7111E-006
R = 0.9999
DL = 0.001756
BEC = 0.02284

Weight: <None>
Min Conc: 0

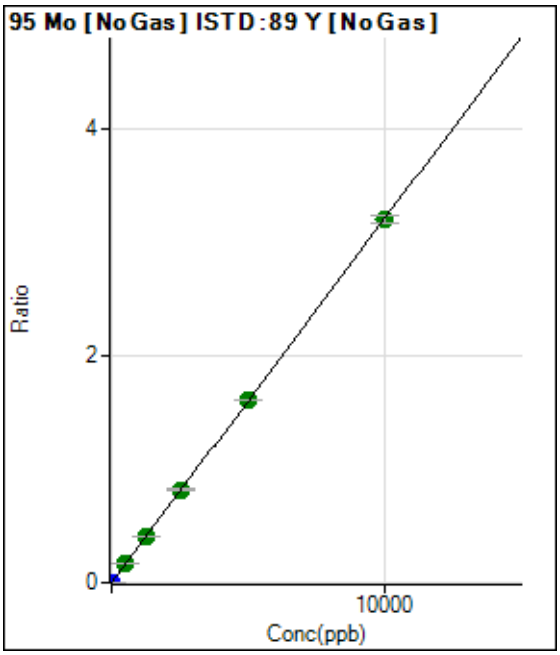


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	635.58	0.0000	P	0.8
2	☐	5.000	6.082	38950.00	0.0014	P	1.4
3	☐	500.000	525.941	3325209.15	0.1162	A	0.7
4	☐	1250.000	1255.324	8088192.45	0.2774	A	2.1
5	☐	2500.000	2557.772	16320761.56	0.5652	A	0.9
6	☐	5000.000	5024.081	31837496.75	1.1101	A	1.0
7	☐	10000.000	9971.553	63855563.49	2.2032	A	0.7
8	☐			44728.46	0.0017	P	1.8

y = 2.2095E-004 * x + 2.2220E-005
R = 1.0000
DL = 0.002436
BEC = 0.1006

Weight: <None>
Min Conc: 0

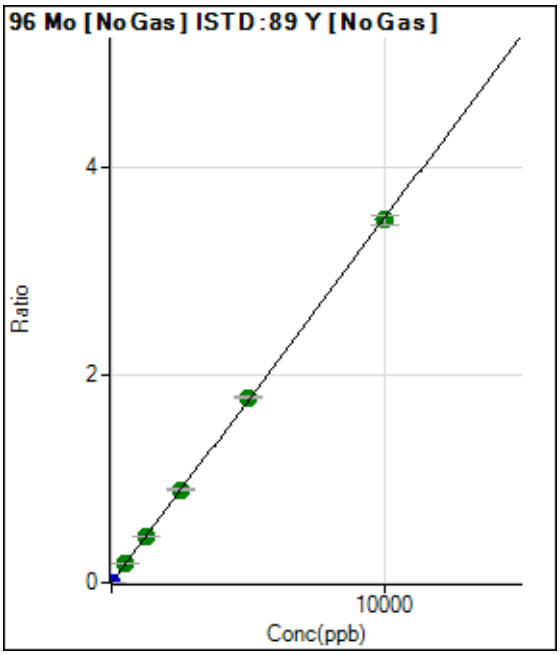
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	563.35	0.0000	P	4.4
2	☐	5.000	5.055	46720.54	0.0016	P	1.3
3	☐	500.000	524.431	4805117.43	0.1680	A	1.1
4	☐	1250.000	1264.363	11807110.24	0.4049	A	1.1
5	☐	2500.000	2557.750	23651638.26	0.8191	A	1.7
6	☐	5000.000	5017.180	46080458.76	1.6066	A	0.6
7	☐	10000.000	9973.956	92565740.84	3.1939	A	2.2
8	☐			46685.98	0.0017	P	1.3

y = 3.2022E-004 * x + 1.9699E-005
R = 1.0000
DL = 0.008057
BEC = 0.06152

Weight: <None>
Min Conc: 0

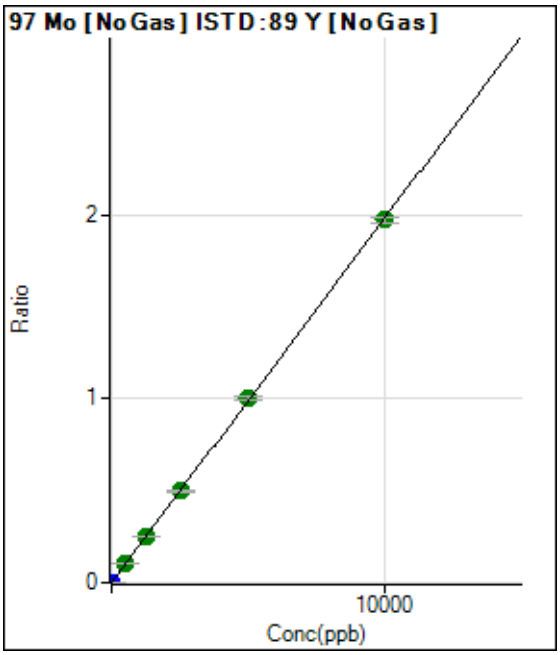


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	678.91	0.0000	P	6.2
2	☐	5.000	5.123	51936.49	0.0018	P	1.3
3	☐	500.000	527.831	5299606.69	0.1852	A	0.4
4	☐	1250.000	1263.631	12930351.61	0.4434	A	1.4
5	☐	2500.000	2548.486	25821340.45	0.8943	A	2.5
6	☐	5000.000	5068.475	51012053.68	1.7785	A	0.9
7	☐	10000.000	9950.546	101193576.2	3.4916	A	2.4
8	☐			52954.93	0.0020	P	1.0

y = 3.5090E-004 * x + 2.3741E-005
R = 1.0000
DL = 0.01251
BEC = 0.06766

Weight: <None>
Min Conc: 0

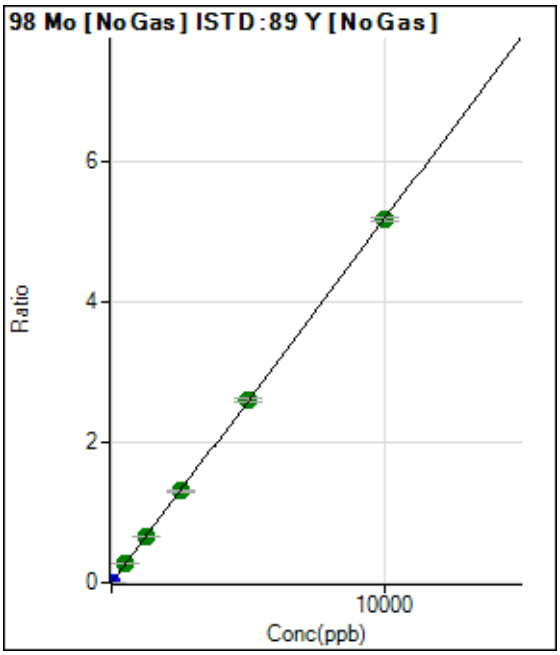
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	375.57	0.0000	P	9.5
2	☐	5.000	5.057	28924.57	0.0010	P	1.3
3	☐	500.000	531.192	3009434.68	0.1052	A	0.5
4	☐	1250.000	1252.798	7233380.24	0.2481	A	1.8
5	☐	2500.000	2533.277	14483760.34	0.5016	A	2.2
6	☐	5000.000	5055.891	28709459.57	1.0011	A	1.9
7	☐	10000.000	9961.826	57166441.92	1.9724	A	1.3
8	☐			27688.79	0.0010	P	2.6

y = 1.9800E-004 * x + 1.3129E-005
R = 1.0000
DL = 0.01891
BEC = 0.06631

Weight: <None>
Min Conc: 0

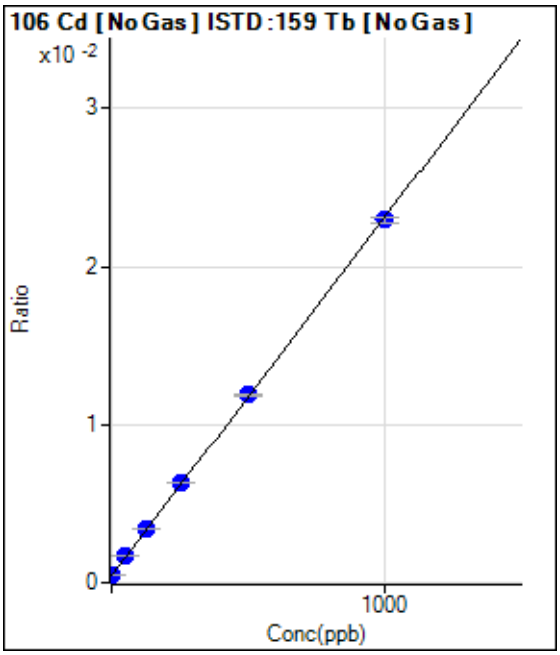


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	911.15	0.0000	P	4.2
2	☐	5.000	5.045	75457.98	0.0026	P	1.1
3	☐	500.000	523.988	7768947.59	0.2715	A	0.6
4	☐	1250.000	1256.603	18987132.91	0.6512	A	2.1
5	☐	2500.000	2533.761	37913013.32	1.3130	A	1.9
6	☐	5000.000	5029.896	74745072.77	2.6064	A	2.4
7	☐	10000.000	9974.587	149801503.3	5.1686	A	1.0
8	☐			71449.53	0.0027	P	1.2

y = 5.1818E-004 * x + 3.1860E-005
R = 1.0000
DL = 0.007771
BEC = 0.06148

Weight: <None>
Min Conc: 0

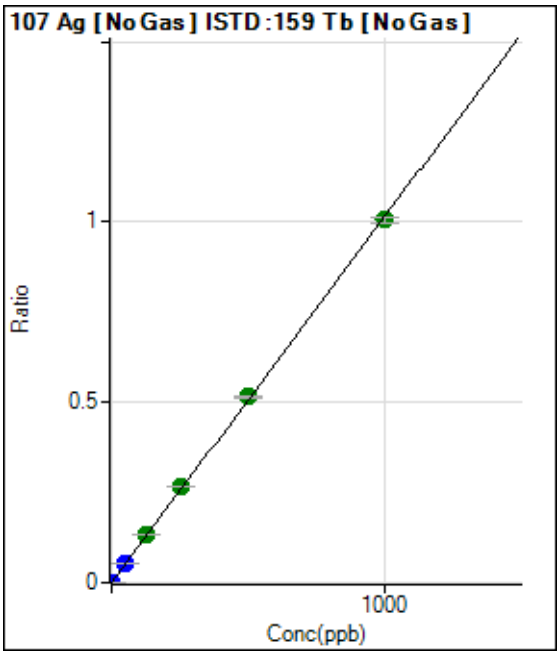
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9663.49	0.0004	P	1.3
2	☐	1.000	0.521	9875.85	0.0004	P	2.1
3	☐	50.000	54.097	36940.52	0.0017	P	1.0
4	☐	125.000	129.854	76428.85	0.0034	P	1.5
5	☐	250.000	259.922	142870.45	0.0063	P	0.1
6	☐	500.000	506.184	266382.51	0.0119	P	0.9
7	☐	1000.000	993.617	515991.81	0.0229	P	1.6
8	☐			8886.27	0.0004	P	0.5

y = 2.2657E-005 * x + 4.3249E-004
R = 0.9999
DL = 0.7371
BEC = 19.09

Weight: <None>
Min Conc: 0

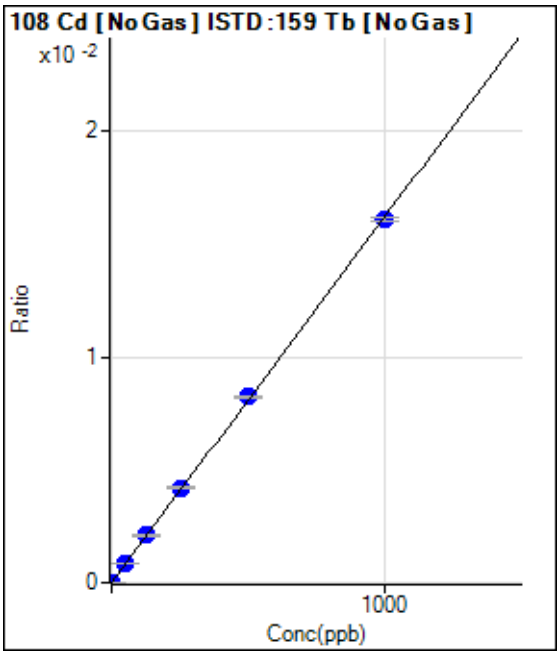


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	231.12	0.0000	P	17.9
2	☐	1.000	1.030	23431.12	0.0011	P	1.5
3	☐	50.000	52.372	1182757.49	0.0531	P	0.8
4	☐	125.000	132.794	3048447.00	0.1346	A	0.3
5	☐	250.000	262.527	6013577.06	0.2661	A	1.4
6	☐	500.000	507.672	11516918.58	0.5145	A	1.1
7	☐	1000.000	991.940	22609496.05	1.0054	A	1.2
8	☐			3906.15	0.0002	P	4.7

y = 0.0010 * x + 1.0349E-005
R = 0.9999
DL = 0.005469
BEC = 0.01021

Weight: <None>
Min Conc: 0

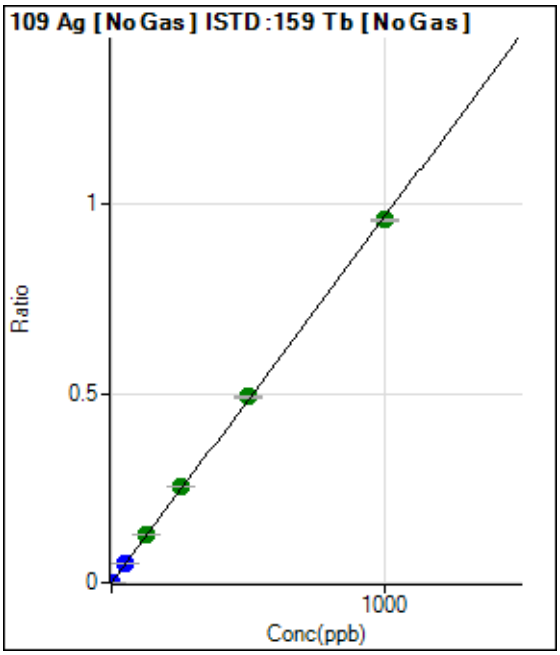
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25.55	0.0000	P	41.9
2	☐	1.000	1.110	424.45	0.0000	P	16.0
3	☐	50.000	54.618	19708.65	0.0009	P	1.7
4	☐	125.000	128.967	47274.06	0.0021	P	0.8
5	☐	250.000	258.843	94653.05	0.0042	P	1.4
6	☐	500.000	508.375	184089.89	0.0082	P	0.6
7	☐	1000.000	992.875	361208.50	0.0161	P	1.1
8	☐			282.23	0.0000	P	6.8

y = 1.6176E-005 * x + 1.1437E-006
R = 0.9999
DL = 0.08884
BEC = 0.0707

Weight: <None>
Min Conc: 0

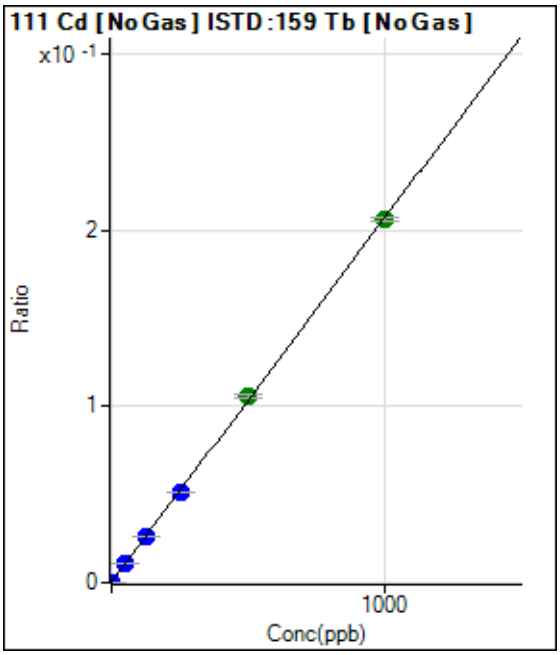


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	108.89	0.0000	P	15.3
2	☐	1.000	1.034	22313.70	0.0010	P	0.6
3	☐	50.000	52.502	1130740.35	0.0508	P	1.1
4	☐	125.000	132.617	2903513.88	0.1282	A	0.8
5	☐	250.000	262.121	5726750.75	0.2534	A	1.3
6	☐	500.000	507.529	10981570.32	0.4906	A	0.7
7	☐	1000.000	992.128	21569063.99	0.9591	A	0.6
8	☐			3597.18	0.0002	P	2.2

y = 9.6667E-004 * x + 4.8711E-006
R = 0.9999
DL = 0.002314
BEC = 0.005039

Weight: <None>
Min Conc: 0

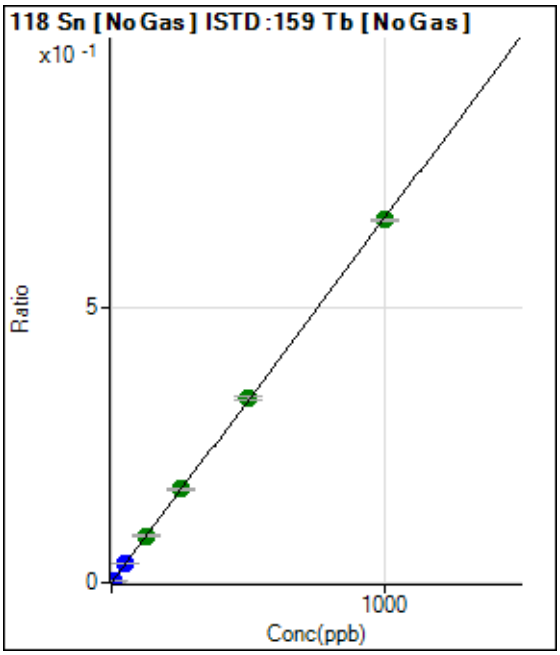
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6776.56	0.0003	P	1.2
2	☐	1.000	1.032	11481.32	0.0005	P	2.1
3	☐	50.000	51.819	245204.72	0.0110	P	1.6
4	☐	125.000	123.440	584347.45	0.0258	P	1.0
5	☐	250.000	245.641	1153619.21	0.0510	P	0.7
6	☐	500.000	511.663	2372546.08	0.1060	A	1.4
7	☐	1000.000	995.362	4630678.07	0.2059	A	1.0
8	☐			7069.55	0.0003	P	1.3

y = 2.0656E-004 * x + 3.0328E-004
R = 0.9999
DL = 0.05212
BEC = 1.468

Weight: <None>
Min Conc: 0

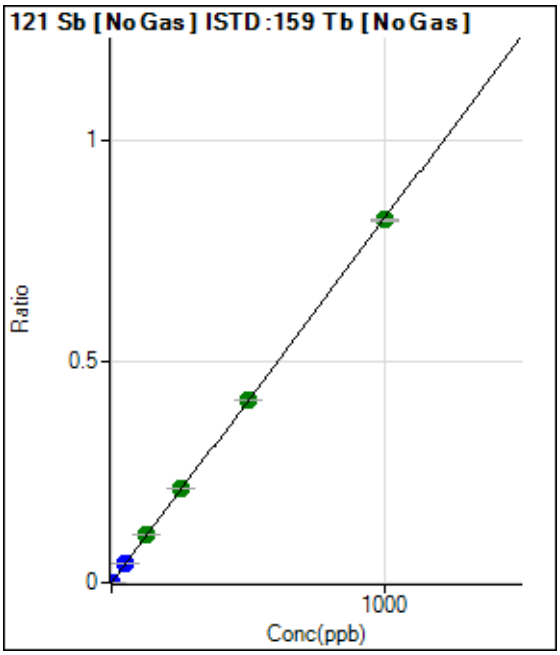


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2545.82	0.0001	P	4.5
2	☐	5.000	5.282	80462.18	0.0036	P	1.1
3	☐	50.000	51.040	757387.27	0.0340	P	1.2
4	☐	125.000	129.001	1942159.66	0.0858	A	0.6
5	☐	250.000	255.920	3842346.09	0.1700	A	0.8
6	☐	500.000	504.868	7504292.67	0.3353	A	2.2
7	☐	1000.000	995.533	14865999.08	0.6610	A	0.7
8	☐			4287.39	0.0002	P	4.7

y = 6.6387E-004 * x + 1.1394E-004
R = 1.0000
DL = 0.02334
BEC = 0.1716

Weight: <None>
Min Conc: 0

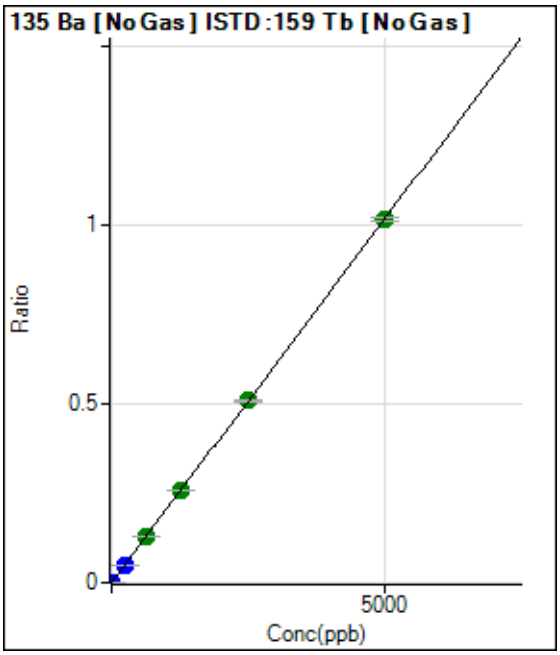
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	47.78	0.0000	P	15.6
2	☐	2.000	2.077	38149.80	0.0017	P	1.3
3	☐	50.000	50.804	934041.99	0.0419	P	1.3
4	☐	125.000	130.240	2434251.56	0.1075	A	0.6
5	☐	250.000	258.140	4814561.91	0.2130	A	1.1
6	☐	500.000	502.441	9280938.75	0.4146	A	0.4
7	☐	1000.000	996.049	18486348.06	0.8220	A	0.7
8	☐			12985.16	0.0006	P	1.0

y = 8.2524E-004 * x + 2.1372E-006
R = 1.0000
DL = 0.001215
BEC = 0.00259

Weight: <None>
Min Conc: 0

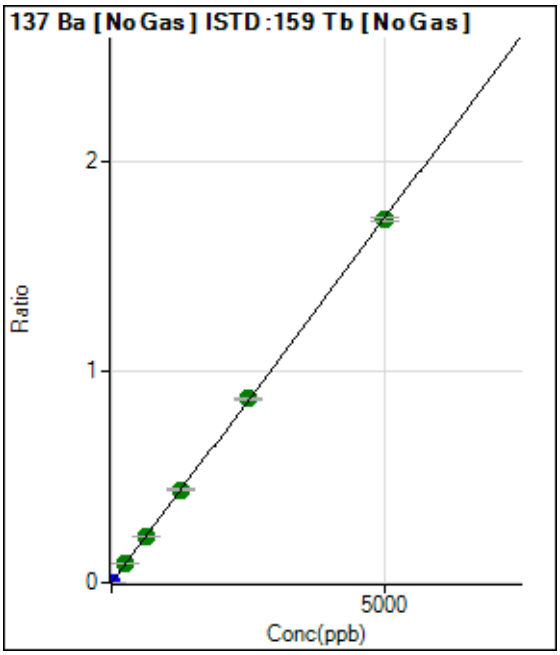


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	475.57	0.0000	P	8.0
2	☐	10.000	10.100	46160.48	0.0021	P	2.0
3	☐	250.000	249.005	1129521.36	0.0507	P	0.7
4	☐	625.000	645.688	2976813.08	0.1314	A	0.4
5	☐	1250.000	1274.333	5862127.27	0.2594	A	1.2
6	☐	2500.000	2500.524	11391818.30	0.5089	A	0.3
7	☐	5000.000	4991.119	22845508.27	1.0158	A	1.0
8	☐			8426.04	0.0004	P	3.1

y = 2.0353E-004 * x + 2.1282E-005
R = 1.0000
DL = 0.02507
BEC = 0.1046

Weight: <None>
Min Conc: 0

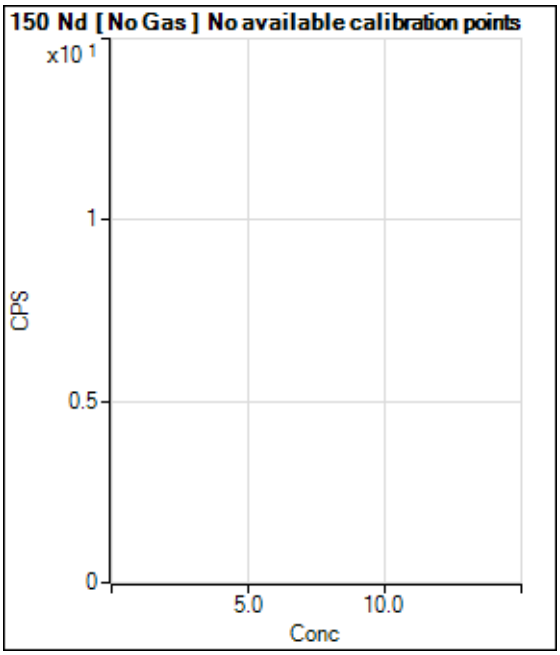
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	791.14	0.0000	P	5.3
2	☐	10.000	10.301	79966.69	0.0036	P	0.4
3	☐	250.000	263.543	2031270.60	0.0912	A	1.5
4	☐	625.000	641.998	5029201.80	0.2221	A	1.1
5	☐	1250.000	1275.916	9973356.03	0.4413	A	0.7
6	☐	2500.000	2523.737	19535843.60	0.8728	A	1.4
7	☐	5000.000	4978.850	38724544.15	1.7219	A	0.9
8	☐			14325.49	0.0007	P	3.5

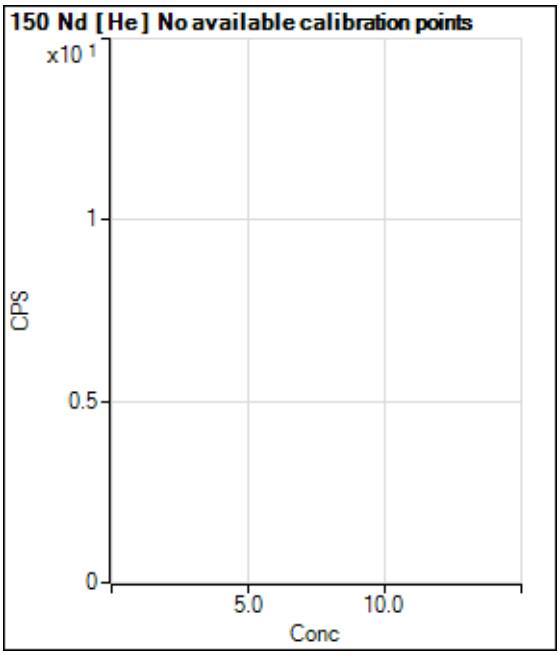
y = 3.4583E-004 * x + 3.5414E-005
R = 1.0000
DL = 0.01625
BEC = 0.1024

Weight: <None>
Min Conc: 0

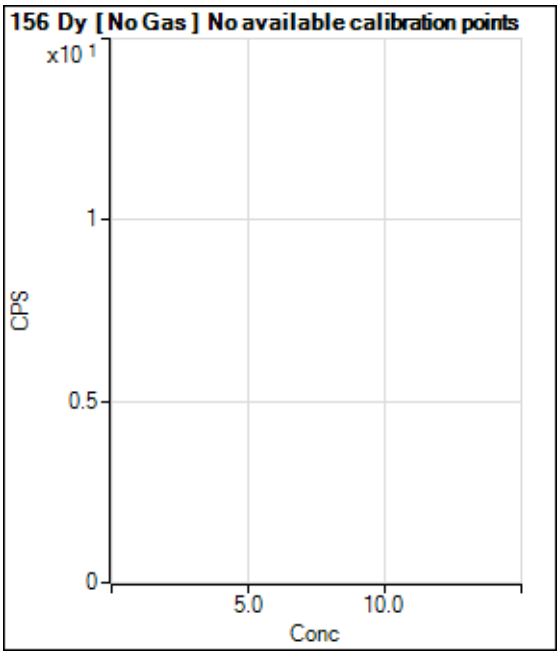


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			21.11		P	39.7
2	☐			27.78		P	42.1
3	☐			112.22		P	30.5
4	☐			238.90		P	17.4
5	☐			436.68		P	11.6
6	☐			836.70		P	6.7
7	☐			1645.68		P	7.2
8	☐			350.01		P	7.8

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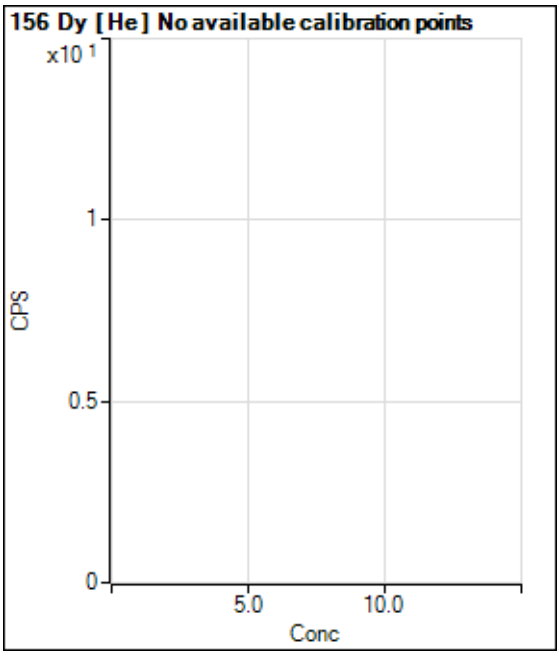


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			5.56		P	34.7
2	☐			3.33		P	100.1
3	☐			3.33		P	100.1
4	☐			6.67		P	50.0
5	☐			17.78		P	28.6
6	☐			13.33		P	25.0
7	☐			47.78		P	21.3
8	☐			86.67		P	16.8

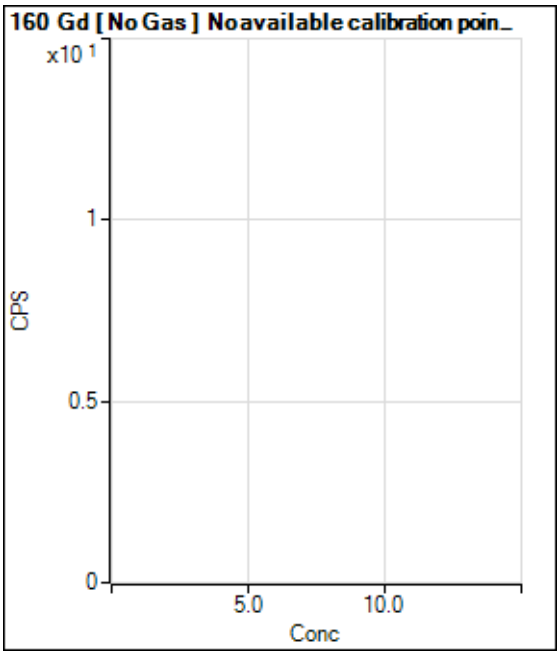


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			104.45		P	28.6
2	☐			70.00		P	4.8
3	☐			114.45		P	6.7
4	☐			121.11		P	19.5
5	☐			162.23		P	7.8
6	☐			284.45		P	8.0
7	☐			507.79		P	10.6
8	☐			670.02		P	1.8

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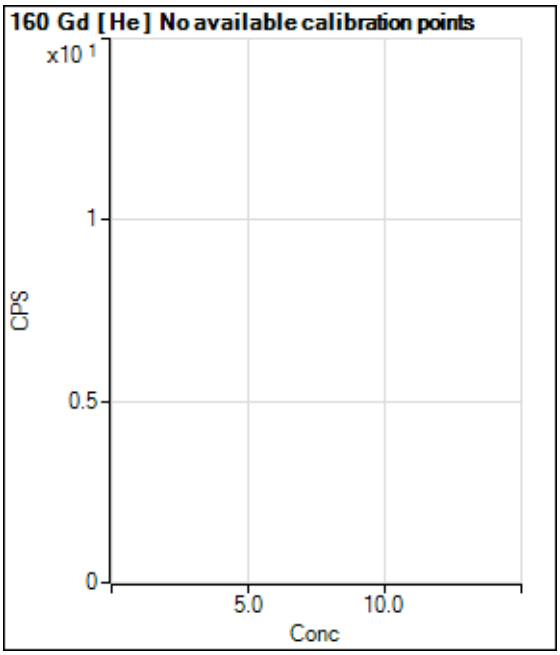


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1	☐			2.22		P	173.2
2	☐			12.22		P	87.7
3	☐			10.00		P	88.2
4	☐			16.67		P	52.9
5	☐			18.89		P	27.0
6	☐			32.22		P	41.8
7	☐			44.44		P	33.8
8	☐			221.11		P	28.9

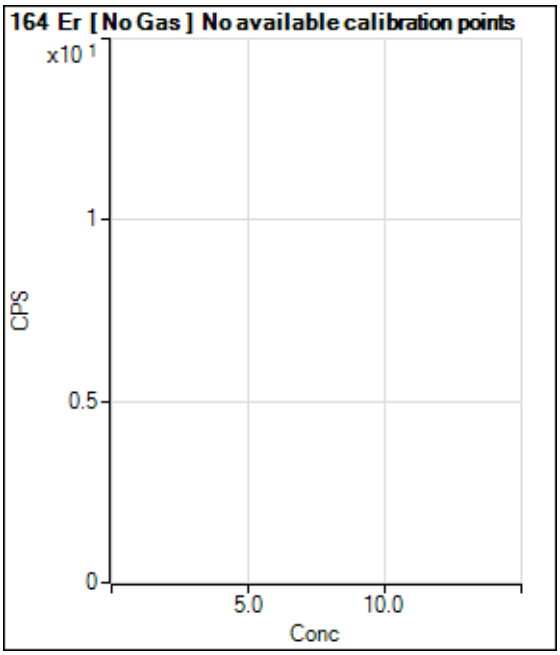


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1	☐			123.33		P	25.8
2	☐			150.00		P	13.3
3	☐			140.00		P	16.5
4	☐			128.89		P	25.9
5	☐			163.34		P	4.1
6	☐			226.67		P	7.4
7	☐			282.23		P	8.3
8	☐			683.36		P	2.6

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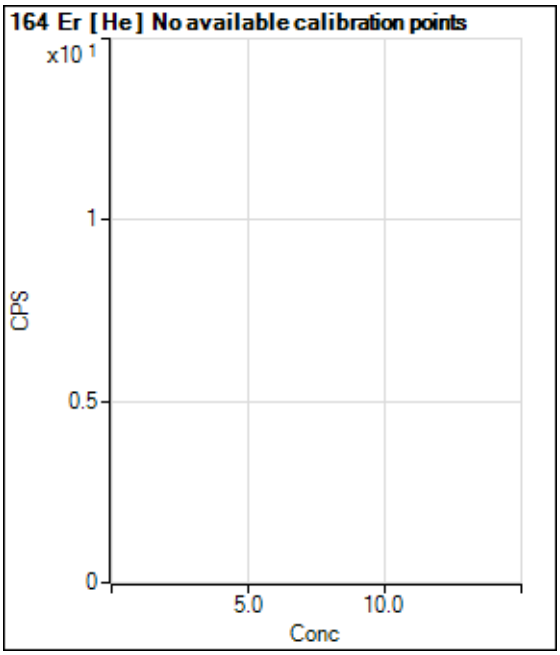


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			21.11		P	32.9
2	☐			20.00		P	57.7
3	☐			24.45		P	15.8
4	☐			31.11		P	27.0
5	☐			31.11		P	83.2
6	☐			46.67		P	18.9
7	☐			91.11		P	11.8
8	☐			230.00		P	2.5

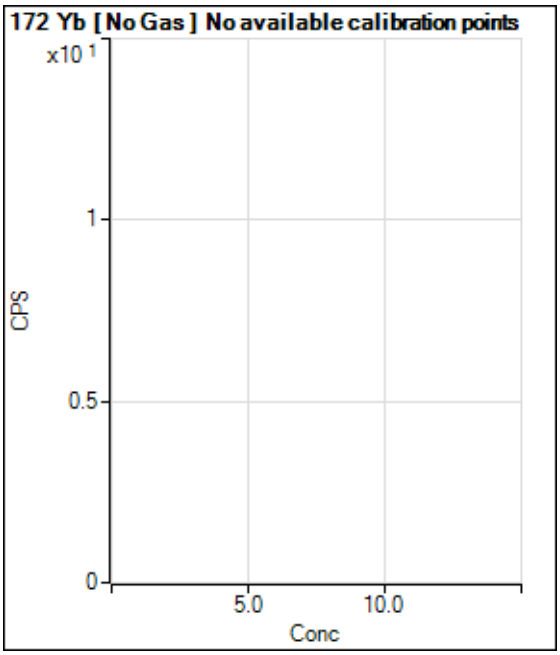


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			98.89		P	7.0
2	☐			102.22		P	16.1
3	☐			125.56		P	9.3
4	☐			125.56		P	12.5
5	☐			160.01		P	9.5
6	☐			190.00		P	7.6
7	☐			287.78		P	11.0
8	☐			824.48		P	11.6

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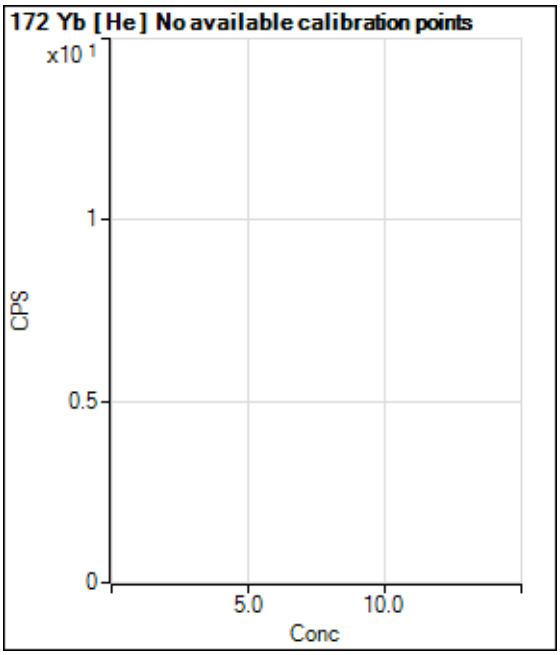


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1	☐			21.11		P	24.1
2	☐			28.89		P	24.0
3	☐			37.78		P	18.4
4	☐			27.78		P	36.7
5	☐			64.44		P	3.0
6	☐			47.78		P	28.2
7	☐			94.45		P	20.7
8	☐			232.22		P	12.0

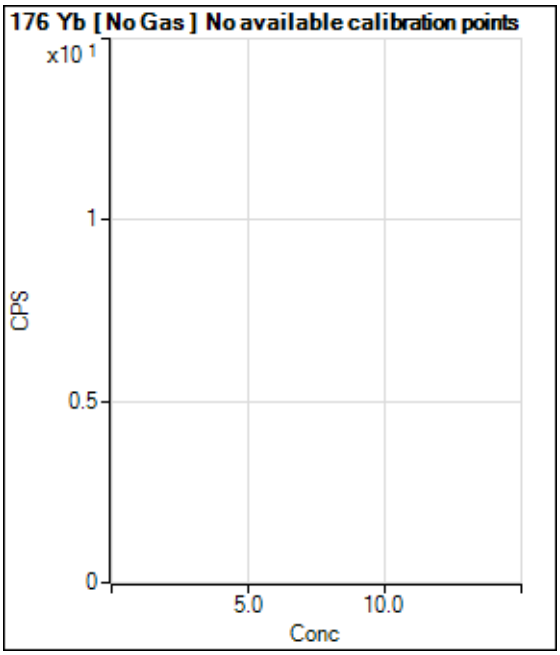


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1	☐			97.78		P	7.9
2	☐			111.11		P	13.5
3	☐			130.00		P	9.2
4	☐			163.34		P	19.5
5	☐			166.67		P	12.5
6	☐			210.00		P	18.7
7	☐			270.01		P	17.3
8	☐			855.59		P	6.2

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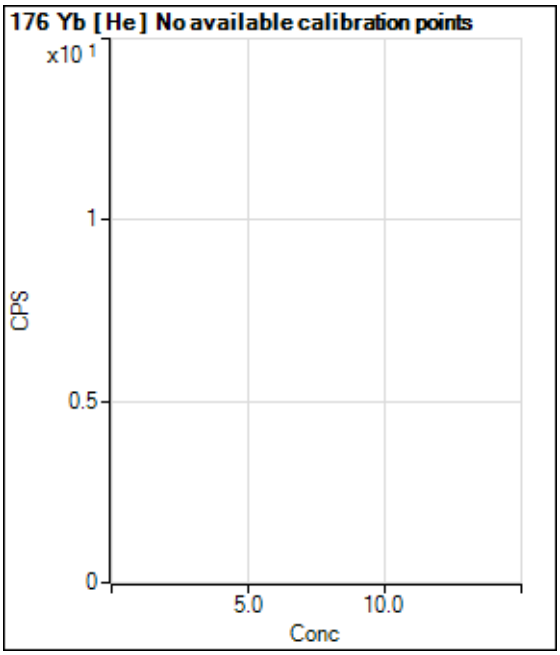


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			54.44		P	15.4
2	☐			51.11		P	19.9
3	☐			42.22		P	12.1
4	☐			47.78		P	28.2
5	☐			72.22		P	18.7
6	☐			68.89		P	10.1
7	☐			133.33		P	11.5
8	☐			336.67		P	9.4

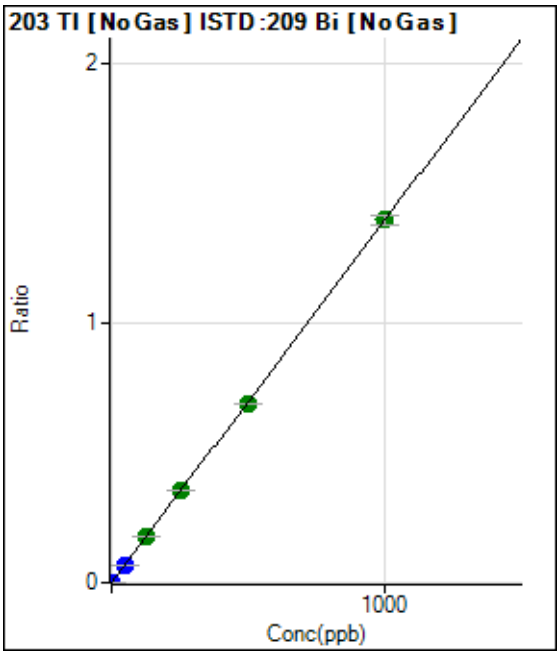


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			2582.50		P	4.0
2	☐			2490.26		P	1.6
3	☐			7010.82		P	3.2
4	☐			13372.44		P	1.2
5	☐			23610.07		P	1.7
6	☐			44868.05		P	1.3
7	☐			86846.23		P	1.0
8	☐			2937.03		P	3.0

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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			377.79		P	4.9
2	☐			405.57		P	4.5
3	☐			1792.36		P	1.9
4	☐			3695.00		P	1.4
5	☐			7183.11		P	1.1
6	☐			13565.96		P	1.2
7	☐			26659.16		P	1.4
8	☐			583.35		P	8.4

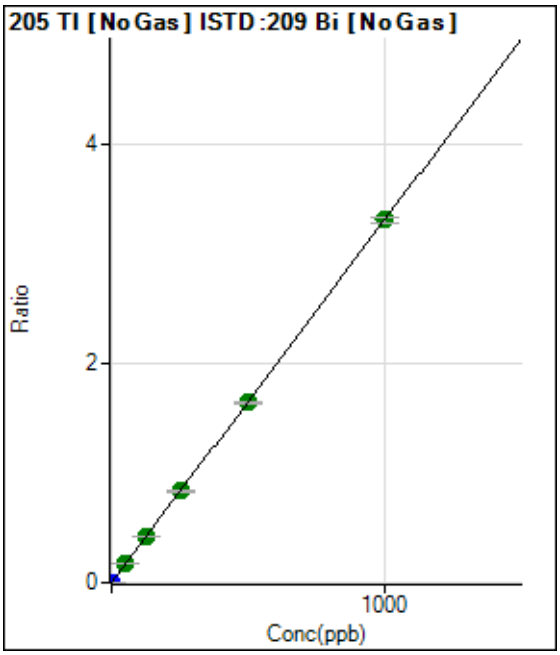


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	360.01	0.0000	P	6.7
2	☐	1.000	0.974	19583.78	0.0014	P	2.4
3	☐	50.000	49.138	959486.71	0.0687	P	1.7
4	☐	125.000	126.632	2472915.31	0.1769	A	0.6
5	☐	250.000	254.341	4898405.48	0.3553	A	1.3
6	☐	500.000	494.220	9353887.08	0.6905	A	0.5
7	☐	1000.000	1001.644	18661958.75	1.3993	A	2.6
8	☐			1905.72	0.0002	P	18.1

y = 0.0014 * x + 2.5448E-005
R = 1.0000
DL = 0.00366
BEC = 0.01822

Weight: <None>
Min Conc: 0

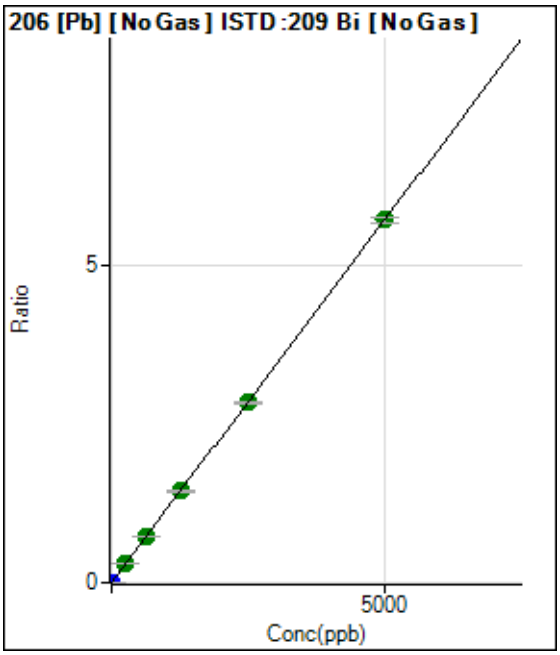
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	942.27	0.0001	P	1.7
2	☐	1.000	0.988	47234.47	0.0033	P	0.4
3	☐	50.000	52.225	2420211.61	0.1732	A	0.8
4	☐	125.000	125.474	5814337.27	0.4160	A	0.1
5	☐	250.000	253.087	11566000.38	0.8390	A	1.7
6	☐	500.000	496.807	22311967.72	1.6470	A	0.5
7	☐	1000.000	1000.654	44243566.57	3.3172	A	1.4
8	☐			4861.03	0.0004	P	16.1

y = 0.0033 * x + 6.6599E-005
R = 1.0000
DL = 0.001016
BEC = 0.02009

Weight: <None>
Min Conc: 0

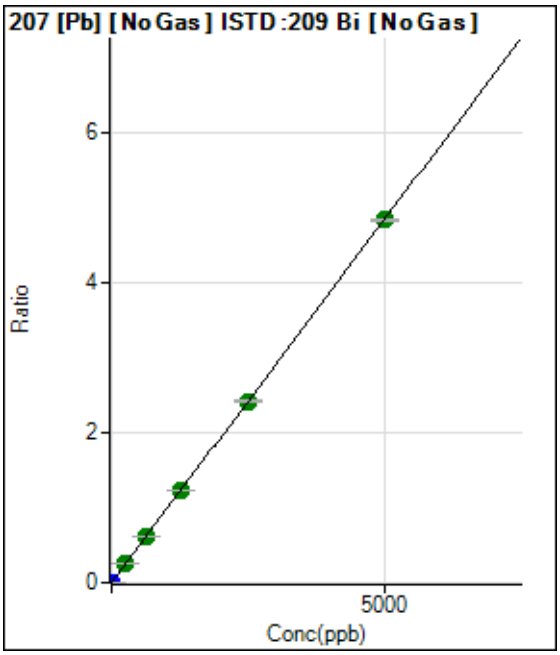


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1536.78	0.0001	P	8.0
2	☐	1.000	0.983	17362.83	0.0012	P	2.9
3	☐	250.000	262.492	4181875.53	0.2993	A	0.6
4	☐	625.000	626.595	9982149.58	0.7142	A	0.7
5	☐	1250.000	1260.798	19808897.48	1.4370	A	1.3
6	☐	2500.000	2481.981	38321944.70	2.8288	A	1.3
7	☐	5000.000	5005.486	76086671.09	5.7047	A	1.6
8	☐			19604.98	0.0017	P	3.3

y = 0.0011 * x + 1.0862E-004
R = 1.0000
DL = 0.02294
BEC = 0.09531

Weight: <None>
Min Conc: 0

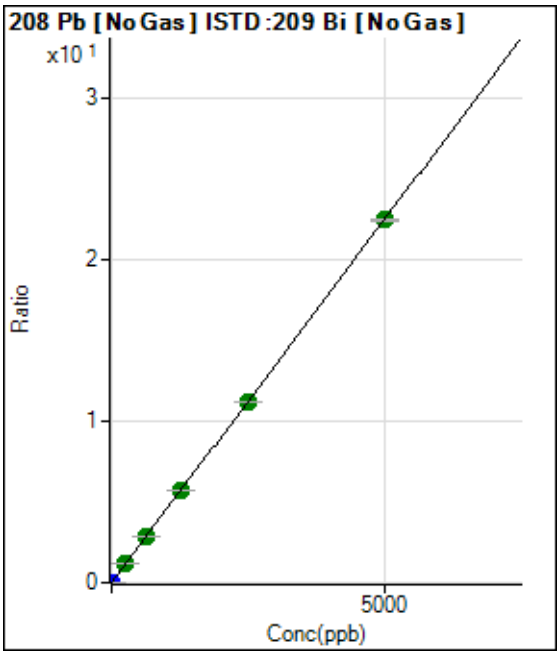
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1366.75	0.0001	P	0.3
2	☐	1.000	1.002	15117.80	0.0011	P	0.8
3	☐	250.000	265.497	3603353.52	0.2579	A	0.8
4	☐	625.000	636.083	8632811.33	0.6177	A	0.9
5	☐	1250.000	1273.193	17042213.91	1.2363	A	0.2
6	☐	2500.000	2498.090	32859653.12	2.4255	A	0.5
7	☐	5000.000	4992.997	64661607.37	4.8479	A	0.7
8	☐			16786.56	0.0015	P	6.1

y = 9.7092E-004 * x + 9.6602E-005
R = 1.0000
DL = 0.0008174
BEC = 0.0995

Weight: <None>
Min Conc: 0

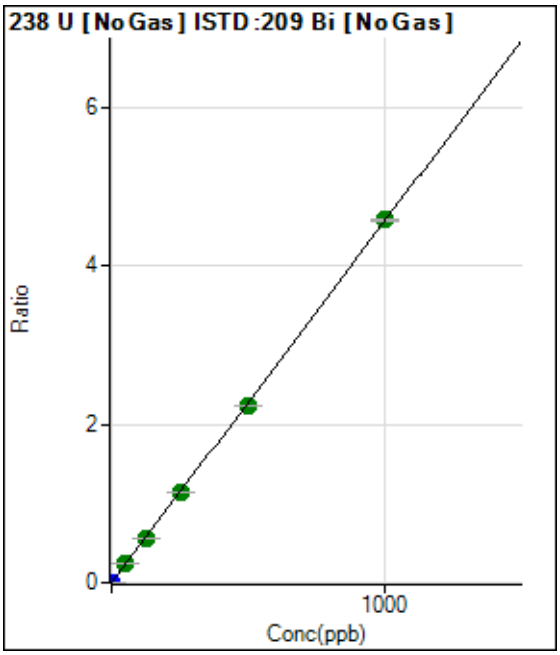


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6189.54	0.0004	P	1.6
2	☐	1.000	0.994	69298.43	0.0049	P	1.1
3	☐	250.000	262.378	16482717.53	1.1796	A	0.6
4	☐	625.000	634.531	39861235.17	2.8521	A	0.9
5	☐	1250.000	1270.246	78700425.22	5.7091	A	0.4
6	☐	2500.000	2495.977	151969126.0	11.2177	A	0.5
7	☐	5000.000	4995.140	299436140.5	22.4492	A	0.4
8	☐			77686.53	0.0068	P	4.4

y = 0.0045 * x + 4.3748E-004
R = 1.0000
DL = 0.004712
BEC = 0.09734

Weight: <None>
Min Conc: 0

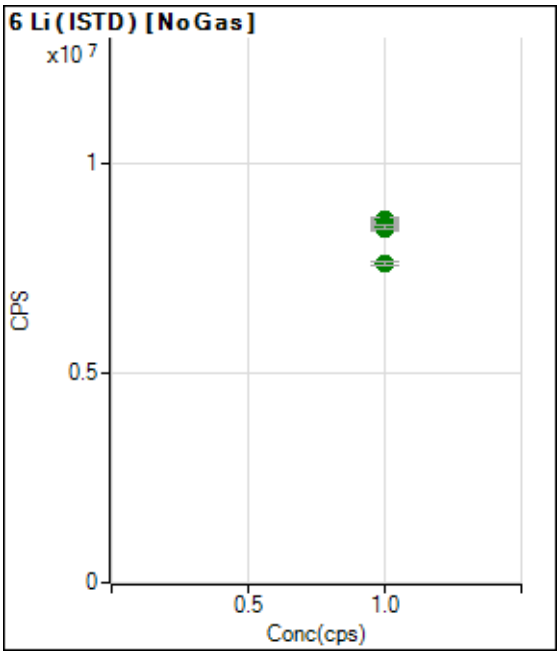
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	215.56	0.0000	P	20.9
2	☐	1.000	0.943	60917.59	0.0043	P	1.6
3	☐	50.000	51.856	3302146.48	0.2363	A	1.5
4	☐	125.000	123.517	7867269.05	0.5629	A	1.3
5	☐	250.000	249.902	15699992.68	1.1389	A	0.7
6	☐	500.000	490.384	30275906.77	2.2348	A	0.7
7	☐	1000.000	1004.925	61086659.64	4.5797	A	0.3
8	☐			3725.10	0.0003	P	6.6

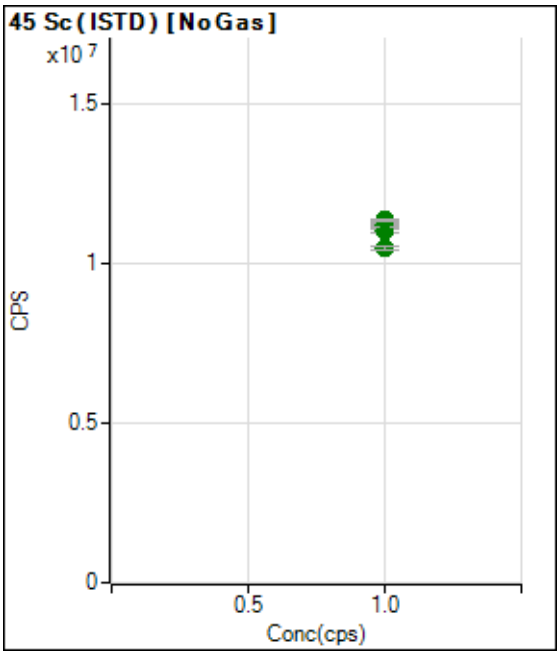
y = 0.0046 * x + 1.5238E-005
R = 0.9999
DL = 0.002095
BEC = 0.003344

Weight: <None>
Min Conc: 0

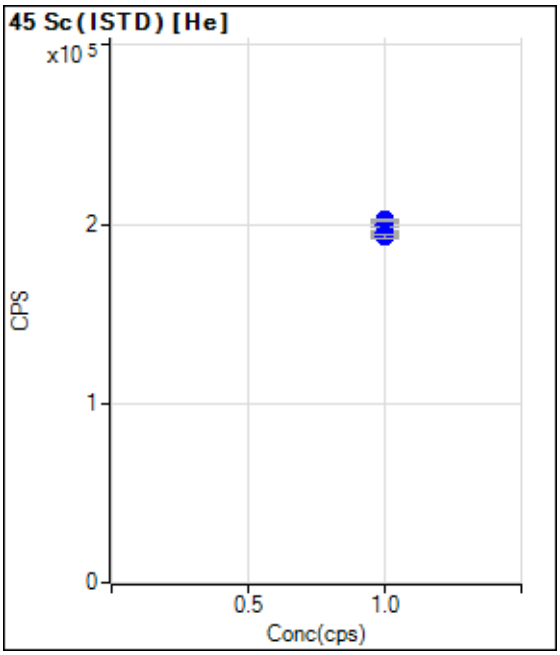


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8450103.75		A	1.7
2	☐	1.000		8532625.41		A	0.8
3	☐	1.000		8569750.98		A	1.4
4	☐	1.000		8643188.68		A	0.9
5	☐	1.000		8644757.23		A	1.2
6	☐	1.000		8501516.39		A	0.4
7	☐	1.000		8484064.61		A	1.0
8	☐	1.000		7596424.52		A	1.0

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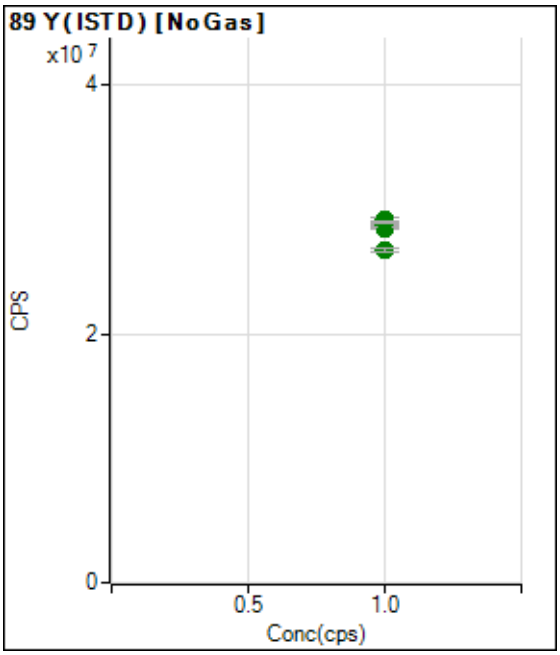


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		11013833.03		A	1.0
2	☐	1.000		11123467.61		A	0.6
3	☐	1.000		11223553.58		A	1.1
4	☐	1.000		11289914.28		A	1.2
5	☐	1.000		11312332.61		A	0.5
6	☐	1.000		11205046.50		A	1.2
7	☐	1.000		11377776.50		A	0.5
8	☐	1.000		10482385.19		A	0.8

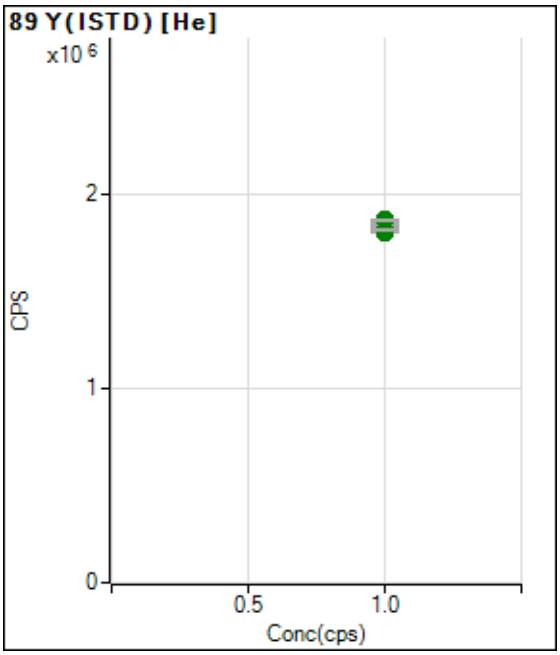


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		192709.90		P	0.3
2	☐	1.000		193333.97		P	1.1
3	☐	1.000		195319.51		P	0.6
4	☐	1.000		195082.98		P	1.1
5	☐	1.000		198506.95		P	0.3
6	☐	1.000		199158.09		P	0.9
7	☐	1.000		202324.01		P	0.8
8	☐	1.000		193334.07		P	1.0

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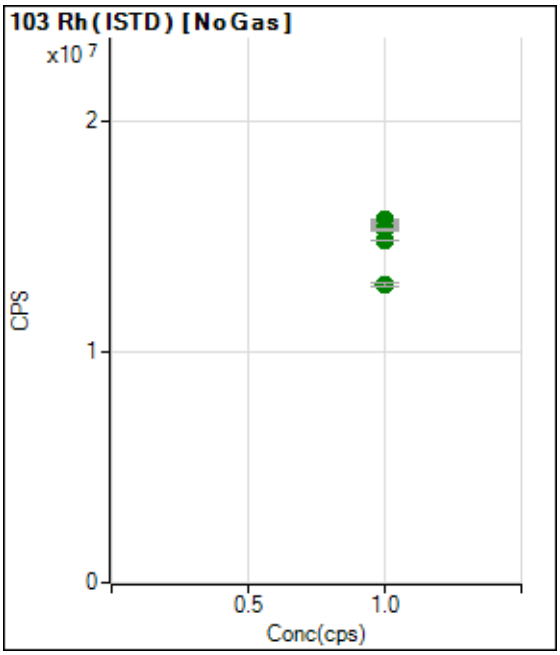


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1	☐	1.000		28602582.35		A	0.6
2	☐	1.000		28514832.63		A	0.6
3	☐	1.000		28609853.46		A	0.2
4	☐	1.000		29163102.62		A	1.1
5	☐	1.000		28880747.90		A	1.4
6	☐	1.000		28682594.02		A	1.1
7	☐	1.000		28983667.35		A	0.4
8	☐	1.000		26762436.83		A	0.9

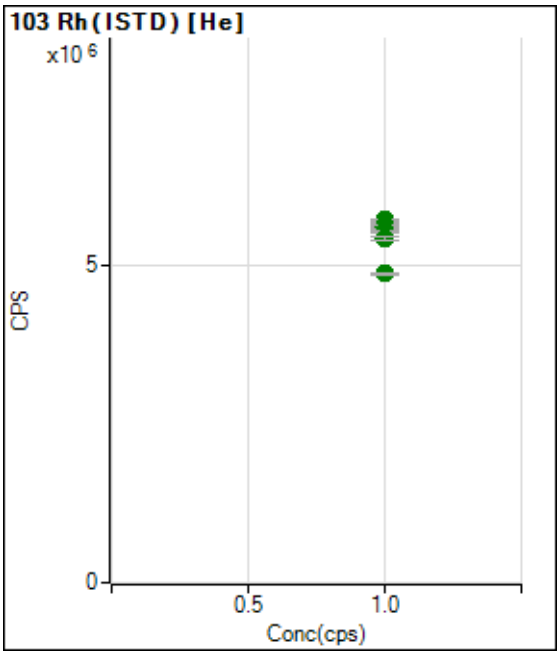


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1817584.02		A	1.1
2	☐	1.000		1813327.28		A	1.2
3	☐	1.000		1800966.60		A	0.2
4	☐	1.000		1822571.36		A	0.9
5	☐	1.000		1856417.96		A	1.0
6	☐	1.000		1837984.90		A	0.7
7	☐	1.000		1868376.27		A	0.6
8	☐	1.000		1815722.82		A	0.6

Reviewed By:kareem
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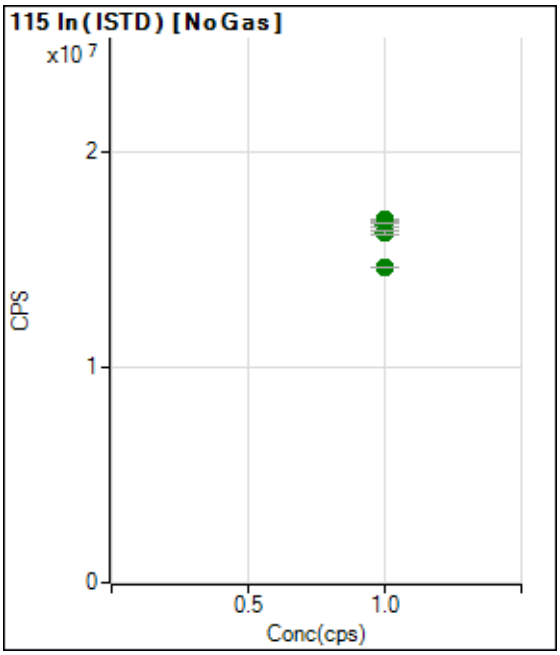


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		15731100.04		A	0.5
2	☐	1.000		15699342.68		A	1.2
3	☐	1.000		15648196.16		A	0.4
4	☐	1.000		15583812.41		A	0.6
5	☐	1.000		15380205.19		A	0.8
6	☐	1.000		15311934.63		A	0.7
7	☐	1.000		14832243.67		A	0.3
8	☐	1.000		12934589.53		A	1.3

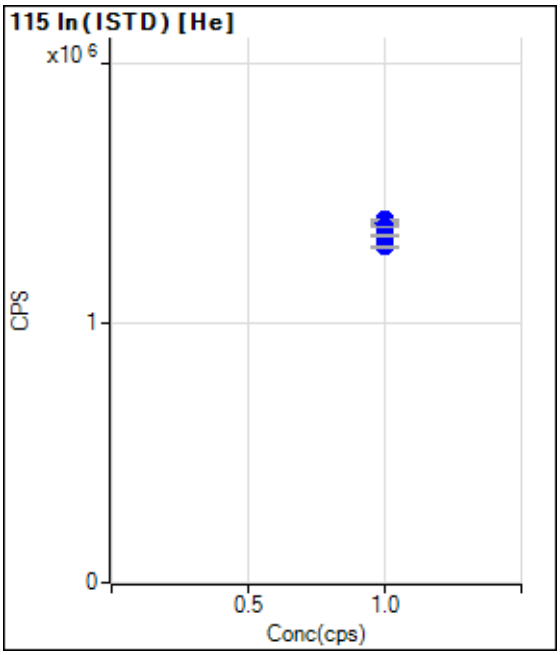


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1	☐	1.000		5651177.28		A	1.0
2	☐	1.000		5716433.59		A	0.4
3	☐	1.000		5624800.54		A	1.0
4	☐	1.000		5603523.04		A	1.2
5	☐	1.000		5598622.21		A	0.9
6	☐	1.000		5530810.47		A	0.7
7	☐	1.000		5429965.20		A	1.0
8	☐	1.000		4865791.46		A	0.2

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
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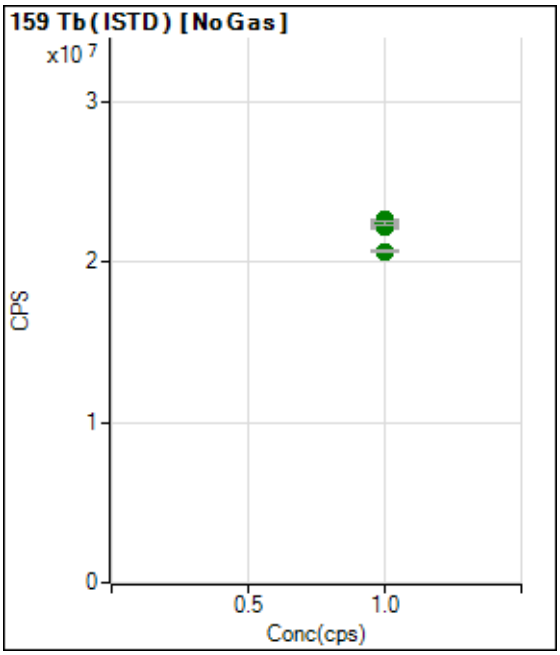


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1	☐	1.000		16790609.72		A	0.9
2	☐	1.000		16788579.04		A	0.9
3	☐	1.000		16841994.14		A	0.6
4	☐	1.000		16746707.57		A	0.6
5	☐	1.000		16765884.01		A	0.3
6	☐	1.000		16566118.66		A	1.0
7	☐	1.000		16230067.72		A	0.9
8	☐	1.000		14644802.76		A	0.3

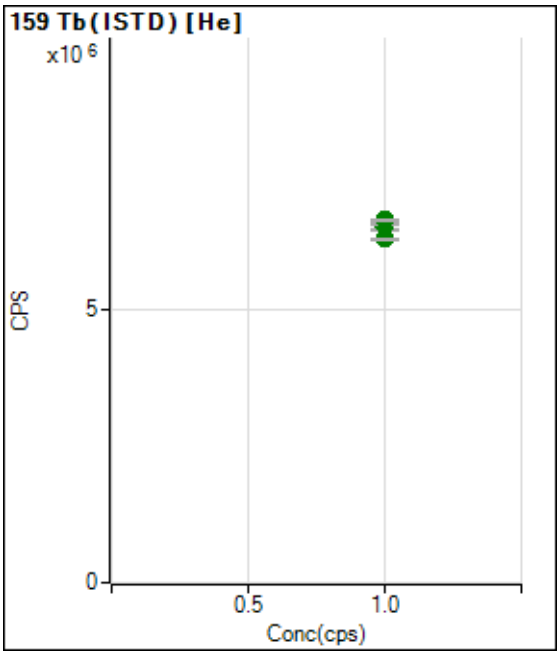


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1378037.77		P	0.2
2	☐	1.000		1391630.68		P	0.8
3	☐	1.000		1395616.37		P	0.2
4	☐	1.000		1383778.43		P	1.9
5	☐	1.000		1394312.82		P	0.4
6	☐	1.000		1367002.72		P	0.3
7	☐	1.000		1331672.68		P	0.5
8	☐	1.000		1293848.04		P	0.7

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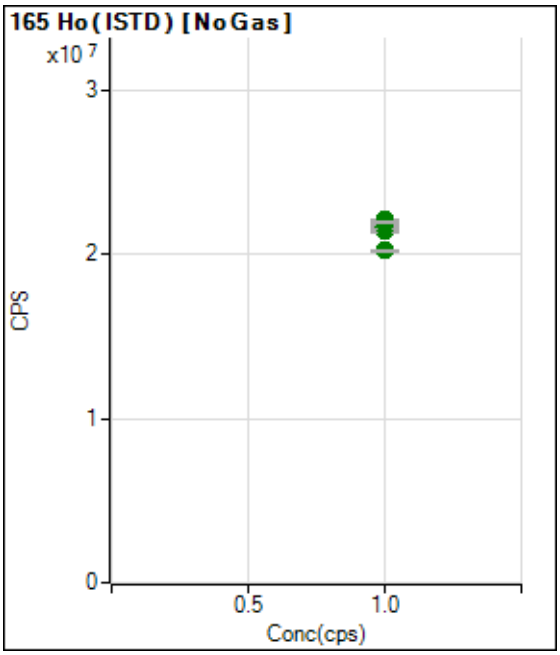


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		22344657.17		A	0.6
2	☐	1.000		22225810.50		A	0.6
3	☐	1.000		22279730.22		A	1.3
4	☐	1.000		22648460.50		A	0.3
5	☐	1.000		22600856.61		A	0.3
6	☐	1.000		22383158.00		A	0.3
7	☐	1.000		22490563.00		A	1.0
8	☐	1.000		20693133.72		A	0.7

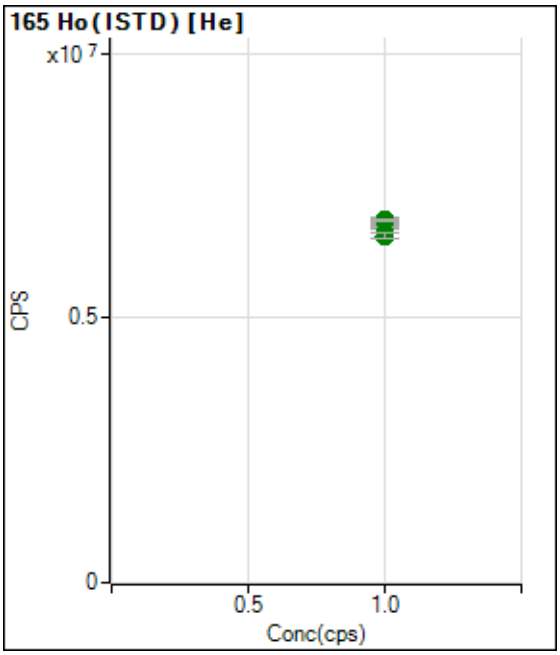


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6505630.88		A	0.6
2	☐	1.000		6513301.36		A	0.9
3	☐	1.000		6503666.22		A	0.9
4	☐	1.000		6518410.94		A	2.4
5	☐	1.000		6580979.28		A	0.3
6	☐	1.000		6548423.86		A	0.1
7	☐	1.000		6636035.25		A	0.7
8	☐	1.000		6280023.79		A	0.8

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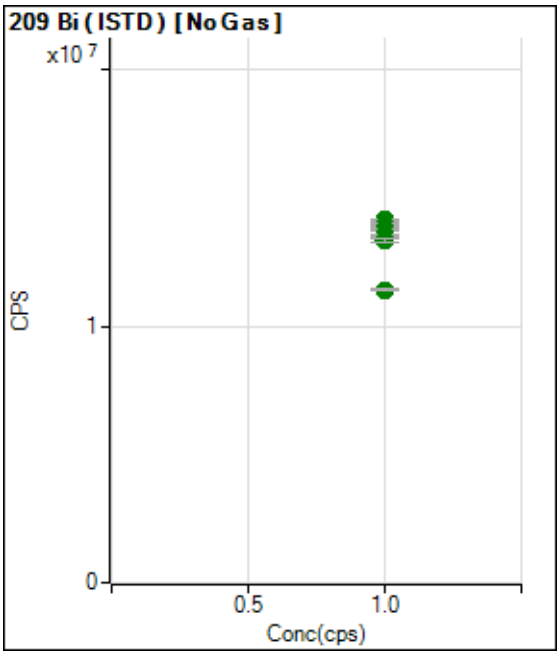


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		21431372.18		A	0.6
2	☐	1.000		21537810.23		A	1.6
3	☐	1.000		21688718.01		A	0.7
4	☐	1.000		22112049.95		A	0.3
5	☐	1.000		21952748.84		A	0.2
6	☐	1.000		21899377.45		A	1.1
7	☐	1.000		21960811.34		A	0.6
8	☐	1.000		20236554.84		A	0.8

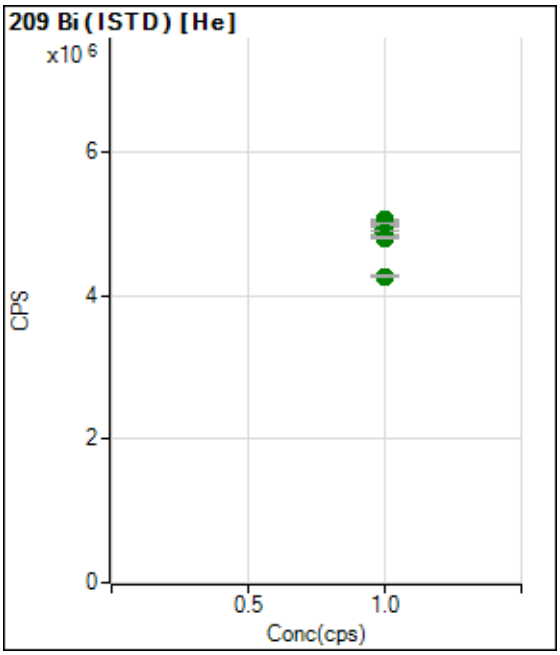


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6700046.50		A	1.0
2	☐	1.000		6781660.11		A	0.7
3	☐	1.000		6741152.05		A	0.2
4	☐	1.000		6772596.70		A	1.7
5	☐	1.000		6846797.26		A	1.1
6	☐	1.000		6827611.50		A	0.7
7	☐	1.000		6849746.63		A	0.4
8	☐	1.000		6551602.47		A	1.2

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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		14148382.43		A	0.4
2	☐	1.000		14130844.51		A	0.8
3	☐	1.000		13973751.46		A	1.1
4	☐	1.000		13976455.35		A	0.4
5	☐	1.000		13785250.21		A	0.4
6	☐	1.000		13547236.19		A	0.2
7	☐	1.000		13338779.66		A	1.2
8	☐	1.000		11427968.16		A	1.0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5063835.76		A	0.6
2	☐	1.000		5037343.61		A	0.3
3	☐	1.000		5020700.66		A	0.5
4	☐	1.000		4946697.50		A	1.2
5	☐	1.000		5013236.59		A	0.7
6	☐	1.000		4884008.71		A	0.6
7	☐	1.000		4813021.42		A	0.4
8	☐	1.000		4269512.82		A	0.7

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8
ClientSampleId :TUNE007

US EPA Tune Check Report

Operator Name	Jaswal
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\P8021325MS.b
Acq. Date-Time	2025-02-13 11:12:41
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		38305	383054.75			0.476	5.000
24		365201	3652007.51			0.475	5.000
25		48051	480514.05			0.205	5.000
26		54753	547527.68			0.191	5.000
59		204003	2040034.67			0.311	5.000
113		23566	235658.76			0.331	5.000
115		317976	3179764.45			0.301	5.000
206		75631	756312.95			0.441	5.000
207		65988	659883.98			0.466	5.000
208		165839	1658390.01			0.775	5.000
220		0	4.00			44.194	

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	38486	38380	38040	38420	38201
24	364575	367369	366491	364585	362983
25	48193	48055	48016	48072	47921
26	54581	54850	54772	54817	54744
59	204488	203561	203557	204876	203535
113	23634	23596	23507	23631	23461
115	316367	318364	318757	318518	317876
206	75097	75941	75643	75595	75881
207	65482	66120	66302	65969	66069
208	164805	165190	166954	167486	164760

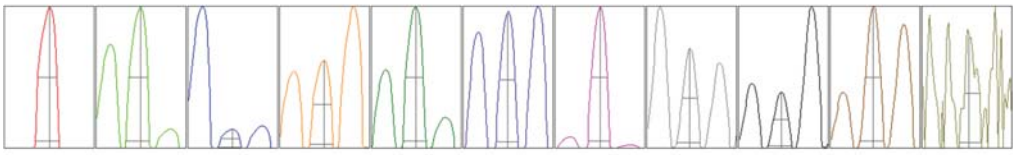
Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8
ClientSampleId :TUNE007

US EPA Tune Check Report

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

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	65292.39	9.05	8.90 - 9.10	
24	621277.19	24.00	23.90 - 24.10	
25	82577.53	25.00	24.90 - 25.10	
26	94537.41	26.00	25.90 - 26.10	
59	368945.23	59.00	58.90 - 59.10	
113	46652.25	113.00	112.90 - 113.10	
115	625617.72	115.05	114.90 - 115.10	
206	151416.29	205.95	205.90 - 206.10	
207	129560.42	206.95	206.90 - 207.10	
208	327143.20	207.95	207.90 - 208.10	
220	0.70	220.10	-	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.63	0.788	0.900	
24	0.63	0.788	0.900	
25	0.63	0.779	0.900	
26	0.62	0.782	0.900	
59	0.58	0.776	0.900	
113	0.52	0.731	0.900	
115	0.53	0.733	0.900	
206	0.50	0.781	0.900	
207	0.50	0.788	0.900	
208	0.51	0.799	0.900	
220	0.53	0.738		

Integration Time [sec] 0.1
Acquisition Time [sec] 256.770000000002
Y Axis Linear

Tune Parameters

Plasma Parameters

Plasma Mode --- Nebulizer Gas 0.72 L/min Dilution Gas 0.40 L/min

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8
ClientSampleId :TUNE007

US EPA Tune Check Report

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

Lens Parameters

Extract 1	-6.0 V	Omega Lens	8.4 V	Deflect	14.2 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-50 V
Omega Bias	-95 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	103	Axis Gain	0.9960	QP Bias	-4.0 V
Mass Offset	125	Axis Offset	0.03		

Hardware Settings

Torch

Torch H	0.0 mm	Torch V	1.5 mm		

EM

Discriminator	4.2 mV	Analog HV	2182 V	Pulse HV	1093 V

[He]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
59		35660	356599.48			0.302	
89		34221	342209.61			0.645	
205		38840	388402.88			0.580	

Mass	RSD% (Flag)
59	
89	
205	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	35815	35557	35672	35698	35558
89	34465	34303	34348	34066	33923
205	38771	39053	39048	38820	38509

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.72 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	8.4 V	Deflect	3.0 V

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8
ClientSampleId :TUNE007

US EPA Tune Check Report

Extract 2	-200.0 V	Cell Entrance	-50 V	Plate Bias	-60 V
Omega Bias	-95 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	200 V		

QP Parameters

Mass Gain	103	Axis Gain	0.9960	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.03		

Hardware Settings

Torch

Torch H	0.0 mm	Torch V	1.5 mm

EM

Discriminator	4.2 mV	Analog HV	2182 V	Pulse HV	1093 V

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:45:07	DataFile Name :	004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.02	-0.36	0.37	0.00	N/A	ppb
Antimony	121-1	0.00	0.00	0.00	0.00	N/A	ppb
Arsenic	75-2	-0.01	0.02	-0.01	0.00	N/A	ppb
Barium	135-1	0.00	0.01	0.00	0.00	N/A	ppb
Barium	137-1	0.00	0.00	0.01	0.00	N/A	ppb
Beryllium	9-1	0.00	0.01	-0.01	0.00	N/A	ppb
Bismuth	209-1				100		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Cadmium	108-1	0.02	-0.03	0.01	0.00	N/A	ppb
Cadmium	106-1	-0.28	0.16	0.13	0.00	N/A	ppb
Cadmium	111-1	-0.02	0.01	0.01	0.00	N/A	ppb
Calcium	43-1	0.79	-0.67	-0.13	0.00	N/A	ppb
Calcium	44-1	0.08	-0.05	-0.03	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	-0.01	0.02	0.00	N/A	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	N/A	ppb
Copper	63-2	0.02	-0.03	0.01	0.00	N/A	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				100		%
Indium	115-1				100		%
Indium	115-2				100		%
Iron	54-2	0.00	0.13	-0.12	0.00	N/A	ppb
Iron	56-2	-0.03	-0.02	0.05	0.00	N/A	ppb
Iron	57-2	0.15	0.19	-0.35	0.00	N/A	ppb
Krypton	83-1						cps
Lead	206-1	-0.01	0.01	0.00	0.00	N/A	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:45:07	DataFile Name :	004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.00	0.00	0.00	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	0.02	0.14	-0.15	0.00	N/A	ppb
Manganese	55-2	0.00	-0.02	0.02	0.00	N/A	ppb
Molybdenum	94-1	0.00	0.00	0.00	0.00	N/A	ppb
Molybdenum	95-1	0.00	0.00	0.00	0.00	N/A	ppb
Molybdenum	96-1	0.00	0.00	0.00	0.00	N/A	ppb
Molybdenum	97-1	0.00	0.01	-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	0.02	0.03	0.00	N/A	ppb
Phosphorus	31-2	-9.04	-16.32	-8.90	-11.42		ppb
Potassium	39-2	-0.59	-0.16	0.75	0.00	N/A	ppb
Rhodium	103-1				100		%
Rhodium	103-2				100		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	82-1	-0.04	0.14	-0.10	0.00	N/A	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.50	0.26	0.24	0.00	N/A	ppb
Silicon	28-1	-0.16	0.29	-0.13	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	-0.22	-0.65	0.87	0.00	N/A	ppb
Strontium	86-1	0.00	-0.01	0.01	0.00	N/A	ppb
Strontium	88-1	0.00	0.00	0.00	0.00	N/A	ppb
Sulfur	34-1	50.51	198.12	18.75	89.12	107.40	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	0.01	0.00	0.00	N/A	ppb
Titanium	47-1	0.01	-0.01	0.00	0.00	N/A	ppb
Uranium	238-1	0.00	0.00	0.00	0.00	N/A	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:45:07	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	0.04	-0.05	0.01	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:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P8
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:48:29	DataFile Name :	005CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	23.73	21.15	20.63	21.84	7.60	ppb
Antimony	121-1	2.07	2.06	2.11	2.08	1.29	ppb
Arsenic	75-2	1.08	1.07	1.20	1.12	6.68	ppb
Barium	135-1	10.09	9.90	10.31	10.10	2.04	ppb
Barium	137-1	10.29	10.27	10.35	10.30	0.41	ppb
Beryllium	9-1	1.06	1.09	1.10	1.08	1.98	ppb
Bismuth	209-1				100		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	1.29	1.13	0.91	1.11	17.07	ppb
Cadmium	106-1	0.22	0.98	0.37	0.52	77.20	ppb
Cadmium	111-1	1.04	1.08	0.98	1.03	5.15	ppb
Calcium	43-1	546.64	536.02	541.70	541.45	0.98	ppb
Calcium	44-1	545.98	545.16	545.82	545.65	0.08	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.08	2.06	2.10	2.08	0.92	ppb
Cobalt	59-2	1.16	1.17	1.16	1.16	0.28	ppb
Copper	63-2	2.24	2.19	2.17	2.20	1.69	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				101		%
Indium	115-1				100		%
Indium	115-2				101		%
Iron	54-2	58.53	55.52	57.36	57.14	2.65	ppb
Iron	56-2	56.15	55.44	54.89	55.49	1.14	ppb
Iron	57-2	58.66	59.17	59.54	59.12	0.75	ppb
Krypton	83-1						cps
Lead	206-1	0.95	1.01	0.99	0.98	3.15	ppb

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P8
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:48:29	DataFile Name :	005CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1.00	1.01	1.00	1.00	0.83	ppb
Lead	208-1	0.98	1.00	1.00	0.99	1.24	ppb
Lithium	6-1				101		%
Magnesium	24-2	557.56	543.87	539.64	547.02	1.71	ppb
Manganese	55-2	1.16	1.18	1.01	1.12	8.07	ppb
Molybdenum	94-1	6.07	6.00	6.17	6.08	1.40	ppb
Molybdenum	95-1	5.10	4.98	5.09	5.06	1.31	ppb
Molybdenum	96-1	5.10	5.08	5.20	5.12	1.28	ppb
Molybdenum	97-1	5.07	4.99	5.12	5.06	1.32	ppb
Molybdenum	98-1	5.10	5.03	5.00	5.05	1.07	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.01	1.07	0.91	1.00	7.98	ppb
Phosphorus	31-2	7.99	8.20	18.06	11.42	50.41	ppb
Potassium	39-2	505.78	507.47	499.11	504.12	0.88	ppb
Rhodium	103-1				100		%
Rhodium	103-2				101		%
Scandium	45-1				101		%
Scandium	45-2				100		%
Selenium	82-1	4.98	5.84	5.48	5.43	7.95	ppb
Selenium	77-2	9.35	6.74	6.03	7.37	23.69	ppb
Selenium	78-2	6.49	4.94	6.08	5.84	13.74	ppb
Silicon	28-1	5.24	4.98	4.29	4.84	10.15	ppb
Silver	107-1	1.01	1.04	1.03	1.03	1.48	ppb
Silver	109-1	1.03	1.03	1.04	1.03	0.61	ppb
Sodium	23-2	562.22	552.25	546.64	553.70	1.42	ppb
Strontium	86-1	1.06	1.03	1.03	1.04	1.83	ppb
Strontium	88-1	1.05	1.03	1.03	1.03	1.04	ppb
Sulfur	34-1	-22.15	-51.65	-193.57	-89.12		ppb
Terbium	159-1				99		%
Terbium	159-2				100		%
Thallium	203-1	0.95	1.00	0.98	0.97	2.40	ppb
Thallium	205-1	0.99	0.99	0.99	0.99	0.37	ppb
Tin	118-1	5.35	5.23	5.27	5.28	1.19	ppb
Titanium	47-1	5.14	5.08	5.14	5.12	0.71	ppb
Uranium	238-1	0.93	0.94	0.96	0.94	1.64	ppb

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P8
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:48:29	DataFile Name :	005CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	5.38	5.23	5.09	5.23	2.76	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	5.82	5.39	5.50	5.57	3.99	ppb
Zirconium	90-1	1.01	1.01	1.01	1.01	0.35	ppb
Zirconium	91-1	0.98	0.98	1.02	1.00	2.59	ppb

Reviewed By:kareem
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LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P8
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:51:52	DataFile Name :	006CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1028.51	1051.36	1052.10	1043.99	1.28	ppb
Antimony	121-1	51.20	51.15	50.07	50.80	1.25	ppb
Arsenic	75-2	51.59	52.05	52.99	52.21	1.36	ppb
Barium	135-1	250.63	249.26	247.13	249.01	0.71	ppb
Barium	137-1	262.93	267.67	260.03	263.54	1.46	ppb
Beryllium	9-1	51.50	52.70	52.30	52.17	1.17	ppb
Bismuth	209-1				99		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	54.27	55.64	53.94	54.62	1.65	ppb
Cadmium	106-1	54.40	54.64	53.26	54.10	1.37	ppb
Cadmium	111-1	52.57	51.98	50.91	51.82	1.62	ppb
Calcium	43-1	5209.50	5273.55	5345.75	5276.27	1.29	ppb
Calcium	44-1	5383.37	5399.89	5446.86	5410.04	0.61	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	49.70	50.82	50.62	50.38	1.19	ppb
Cobalt	59-2	52.71	52.68	52.69	52.69	0.03	ppb
Copper	63-2	561.48	564.81	571.86	566.05	0.94	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				101		%
Holmium	165-2				101		%
Indium	115-1				100		%
Indium	115-2				101		%
Iron	54-2	2718.99	2741.31	2728.17	2729.49	0.41	ppb
Iron	56-2	2739.96	2813.25	2790.21	2781.14	1.35	ppb
Iron	57-2	2687.04	2684.58	2708.87	2693.50	0.50	ppb
Krypton	83-1						cps
Lead	206-1	264.05	260.83	262.59	262.49	0.61	ppb

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P8
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:51:52	DataFile Name :	006CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	263.10	267.03	266.36	265.50	0.79	ppb
Lead	208-1	260.61	262.68	263.85	262.38	0.63	ppb
Lithium	6-1				101		%
Magnesium	24-2	5585.03	5538.42	5664.49	5595.98	1.14	ppb
Manganese	55-2	512.19	518.86	514.75	515.27	0.65	ppb
Molybdenum	94-1	525.09	529.91	522.81	525.94	0.69	ppb
Molybdenum	95-1	521.75	530.97	520.57	524.43	1.09	ppb
Molybdenum	96-1	527.25	529.99	526.26	527.83	0.37	ppb
Molybdenum	97-1	528.42	531.75	533.40	531.19	0.48	ppb
Molybdenum	98-1	524.77	526.52	520.67	523.99	0.57	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	53.00	53.35	54.27	53.54	1.23	ppb
Phosphorus	31-2	1028.87	1019.85	1044.53	1031.08	1.21	ppb
Potassium	39-2	2488.89	2502.62	2500.45	2497.32	0.30	ppb
Rhodium	103-1				99		%
Rhodium	103-2				100		%
Scandium	45-1				102		%
Scandium	45-2				101		%
Selenium	82-1	52.42	53.26	55.11	53.60	2.57	ppb
Selenium	77-2	52.13	57.51	53.19	54.28	5.25	ppb
Selenium	78-2	57.75	55.49	48.39	53.88	9.06	ppb
Silicon	28-1	46.32	48.16	48.36	47.61	2.37	ppb
Silver	107-1	52.82	52.25	52.05	52.37	0.76	ppb
Silver	109-1	53.06	52.55	51.90	52.50	1.11	ppb
Sodium	23-2	5688.03	5710.61	5632.40	5677.01	0.71	ppb
Strontium	86-1	49.55	50.18	50.61	50.11	1.06	ppb
Strontium	88-1	53.14	53.25	52.73	53.04	0.52	ppb
Sulfur	34-1	830.90	891.94	835.38	852.74	3.99	ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	48.45	48.88	50.08	49.14	1.72	ppb
Thallium	205-1	52.19	52.67	51.81	52.22	0.83	ppb
Tin	118-1	51.49	51.30	50.34	51.04	1.21	ppb
Titanium	47-1	519.51	515.53	531.70	522.25	1.61	ppb
Uranium	238-1	51.27	51.59	52.71	51.86	1.46	ppb

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P8
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:51:52	DataFile Name :	006CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	49.50	50.38	51.04	50.31	1.54	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				99		%
Zinc	66-2	526.20	527.44	532.50	528.71	0.63	ppb
Zirconium	90-1	52.08	53.44	52.77	52.76	1.28	ppb
Zirconium	91-1	48.57	49.49	49.41	49.16	1.03	ppb

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P8
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:54:56	DataFile Name :	007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2513.97	2544.70	2616.10	2558.26	2.05	ppb
Antimony	121-1	129.66	131.09	129.97	130.24	0.58	ppb
Arsenic	75-2	130.25	129.37	129.20	129.61	0.44	ppb
Barium	135-1	643.82	644.26	648.99	645.69	0.44	ppb
Barium	137-1	636.48	639.49	650.03	642.00	1.11	ppb
Beryllium	9-1	125.23	126.01	125.35	125.53	0.34	ppb
Bismuth	209-1				99		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Cadmium	108-1	128.96	128.00	129.95	128.97	0.76	ppb
Cadmium	106-1	129.51	127.82	132.23	129.85	1.72	ppb
Cadmium	111-1	122.09	124.69	123.53	123.44	1.05	ppb
Calcium	43-1	12933.99	12953.50	12688.31	12858.60	1.15	ppb
Calcium	44-1	13249.05	13269.55	12993.46	13170.69	1.17	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	121.88	123.49	125.25	123.54	1.36	ppb
Cobalt	59-2	127.32	128.39	129.92	128.54	1.02	ppb
Copper	63-2	1409.74	1423.58	1438.38	1423.90	1.01	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				103		%
Holmium	165-2				101		%
Indium	115-1				100		%
Indium	115-2				100		%
Iron	54-2	6602.85	6663.81	6754.43	6673.70	1.14	ppb
Iron	56-2	6695.21	6705.65	6856.96	6752.60	1.34	ppb
Iron	57-2	6493.72	6526.94	6624.54	6548.40	1.04	ppb
Krypton	83-1						cps
Lead	206-1	625.63	631.68	622.48	626.60	0.75	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P8
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:54:56	DataFile Name :	007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	630.30	641.53	636.42	636.08	0.88	ppb
Lead	208-1	629.00	639.99	634.60	634.53	0.87	ppb
Lithium	6-1				102		%
Magnesium	24-2	13482.93	13393.55	13664.98	13513.82	1.02	ppb
Manganese	55-2	1291.25	1364.81	1319.18	1325.08	2.80	ppb
Molybdenum	94-1	1264.41	1225.60	1275.97	1255.32	2.10	ppb
Molybdenum	95-1	1257.84	1254.94	1280.31	1264.36	1.10	ppb
Molybdenum	96-1	1252.49	1253.69	1284.72	1263.63	1.45	ppb
Molybdenum	97-1	1241.96	1237.73	1278.71	1252.80	1.80	ppb
Molybdenum	98-1	1249.95	1233.91	1285.95	1256.60	2.12	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	136.01	137.49	139.54	137.68	1.29	ppb
Phosphorus	31-2	2606.68	2640.20	2517.13	2588.00	2.46	ppb
Potassium	39-2	6042.15	6112.24	6196.77	6117.05	1.27	ppb
Rhodium	103-1				99		%
Rhodium	103-2				99		%
Scandium	45-1				103		%
Scandium	45-2				101		%
Selenium	82-1	127.82	126.43	127.35	127.20	0.56	ppb
Selenium	77-2	123.42	125.70	135.36	128.16	4.95	ppb
Selenium	78-2	132.29	131.96	131.06	131.77	0.48	ppb
Silicon	28-1	119.39	118.44	117.07	118.30	0.99	ppb
Silver	107-1	132.75	132.37	133.26	132.79	0.33	ppb
Silver	109-1	131.69	133.70	132.46	132.62	0.76	ppb
Sodium	23-2	13635.75	13473.26	13890.40	13666.47	1.54	ppb
Strontium	86-1	119.15	119.57	120.74	119.82	0.69	ppb
Strontium	88-1	126.17	126.31	127.46	126.65	0.56	ppb
Sulfur	34-1	2576.77	2761.48	2179.43	2505.89	11.87	ppb
Terbium	159-1				101		%
Terbium	159-2				100		%
Thallium	203-1	126.04	126.31	127.54	126.63	0.63	ppb
Thallium	205-1	125.53	125.37	125.52	125.47	0.07	ppb
Tin	118-1	128.12	129.47	129.41	129.00	0.59	ppb
Titanium	47-1	1284.29	1266.16	1245.25	1265.23	1.54	ppb
Uranium	238-1	121.83	125.05	123.66	123.52	1.31	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P8
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:54:56	DataFile Name :	007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	122.18	123.74	126.68	124.20	1.84	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				102		%
Yttrium	89-2				100		%
Zinc	66-2	1284.09	1286.83	1302.90	1291.27	0.79	ppb
Zirconium	90-1	125.51	123.53	128.53	125.86	2.00	ppb
Zirconium	91-1	118.15	117.59	121.11	118.95	1.59	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P8
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:57:55	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	5006.31	5092.38	5073.19	5057.29	0.89	ppb
Antimony	121-1	257.08	261.37	255.97	258.14	1.11	ppb
Arsenic	75-2	253.24	258.65	258.36	256.75	1.18	ppb
Barium	135-1	1264.53	1292.18	1266.29	1274.33	1.21	ppb
Barium	137-1	1280.44	1281.12	1266.18	1275.92	0.66	ppb
Beryllium	9-1	260.50	252.91	262.63	258.68	1.98	ppb
Bismuth	209-1				97		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	257.94	262.79	255.80	258.84	1.38	ppb
Cadmium	106-1	259.71	260.31	259.75	259.92	0.13	ppb
Cadmium	111-1	243.58	246.91	246.43	245.64	0.73	ppb
Calcium	43-1	26889.22	26532.37	27000.64	26807.41	0.91	ppb
Calcium	44-1	26565.12	26229.16	26239.48	26344.59	0.73	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	244.50	246.23	244.10	244.94	0.46	ppb
Cobalt	59-2	263.85	265.99	266.86	265.57	0.58	ppb
Copper	63-2	2635.40	2645.48	2640.81	2640.56	0.19	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				102		%
Indium	115-1				100		%
Indium	115-2				101		%
Iron	54-2	13798.81	14032.94	13670.37	13834.04	1.33	ppb
Iron	56-2	13330.02	13528.31	13461.18	13439.84	0.75	ppb
Iron	57-2	12813.79	12858.70	12940.64	12871.04	0.50	ppb
Krypton	83-1						cps
Lead	206-1	1246.41	1278.01	1257.97	1260.80	1.27	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P8
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:57:55	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1274.22	1275.05	1270.31	1273.19	0.20	ppb
Lead	208-1	1265.87	1274.90	1269.97	1270.25	0.36	ppb
Lithium	6-1				102		%
Magnesium	24-2	25905.88	26951.48	26542.79	26466.72	1.99	ppb
Manganese	55-2	2614.08	2634.32	2639.40	2629.26	0.51	ppb
Molybdenum	94-1	2539.72	2551.01	2582.58	2557.77	0.87	ppb
Molybdenum	95-1	2529.86	2534.90	2608.49	2557.75	1.72	ppb
Molybdenum	96-1	2513.96	2508.36	2623.13	2548.49	2.54	ppb
Molybdenum	97-1	2521.30	2485.69	2592.84	2533.28	2.15	ppb
Molybdenum	98-1	2525.43	2489.87	2585.98	2533.76	1.92	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	253.19	255.80	252.29	253.76	0.72	ppb
Phosphorus	31-2	4863.47	5102.72	5123.51	5029.90	2.87	ppb
Potassium	39-2	12936.97	12516.14	12765.39	12739.50	1.66	ppb
Rhodium	103-1				98		%
Rhodium	103-2				99		%
Scandium	45-1				103		%
Scandium	45-2				103		%
Selenium	82-1	253.19	256.33	261.89	257.14	1.71	ppb
Selenium	77-2	259.93	244.32	267.39	257.21	4.58	ppb
Selenium	78-2	256.74	253.80	268.05	259.53	2.90	ppb
Silicon	28-1	236.25	235.09	230.93	234.09	1.19	ppb
Silver	107-1	260.44	266.70	260.44	262.53	1.38	ppb
Silver	109-1	263.87	264.44	258.05	262.12	1.35	ppb
Sodium	23-2	27029.34	27519.01	27423.57	27323.97	0.95	ppb
Strontium	86-1	257.58	251.38	256.15	255.03	1.27	ppb
Strontium	88-1	249.88	253.67	258.28	253.94	1.65	ppb
Sulfur	34-1	5090.75	4782.40	5119.78	4997.65	3.74	ppb
Terbium	159-1				101		%
Terbium	159-2				101		%
Thallium	203-1	253.75	257.84	251.44	254.34	1.27	ppb
Thallium	205-1	252.88	257.39	248.99	253.09	1.66	ppb
Tin	118-1	254.80	258.14	254.82	255.92	0.75	ppb
Titanium	47-1	2530.59	2505.30	2517.68	2517.86	0.50	ppb
Uranium	238-1	249.03	248.66	252.02	249.90	0.74	ppb

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P8
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:57:55	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	245.07	246.87	247.82	246.58	0.57	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				101		%
Yttrium	89-2				102		%
Zinc	66-2	2515.09	2528.62	2520.14	2521.28	0.27	ppb
Zirconium	90-1	251.60	252.66	255.03	253.10	0.69	ppb
Zirconium	91-1	256.91	256.86	262.64	258.80	1.28	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P8
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:00:43	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9879.68	9835.09	9784.33	9833.03	0.49	ppb
Antimony	121-1	502.41	500.35	504.57	502.44	0.42	ppb
Arsenic	75-2	508.46	503.68	510.28	507.47	0.67	ppb
Barium	135-1	2502.90	2491.71	2506.97	2500.52	0.32	ppb
Barium	137-1	2559.23	2523.33	2488.65	2523.74	1.40	ppb
Beryllium	9-1	504.85	509.81	507.82	507.49	0.49	ppb
Bismuth	209-1				96		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Cadmium	108-1	505.84	511.58	507.70	508.37	0.58	ppb
Cadmium	106-1	508.40	500.81	509.35	506.18	0.92	ppb
Cadmium	111-1	505.55	509.91	519.53	511.66	1.40	ppb
Calcium	43-1	52339.46	52170.99	52525.62	52345.36	0.34	ppb
Calcium	44-1	51644.71	51633.33	52341.92	51873.32	0.78	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	505.57	511.62	512.93	510.04	0.77	ppb
Cobalt	59-2	517.23	509.71	501.47	509.47	1.55	ppb
Copper	63-2	5119.57	5182.76	5056.41	5119.58	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				102		%
Holmium	165-2				102		%
Indium	115-1				99		%
Indium	115-2				99		%
Iron	54-2	27084.67	26870.53	26260.30	26738.50	1.60	ppb
Iron	56-2	25953.77	26177.14	26360.72	26163.88	0.78	ppb
Iron	57-2	26727.16	26246.58	26468.48	26480.74	0.91	ppb
Krypton	83-1						cps
Lead	206-1	2507.07	2444.45	2494.43	2481.98	1.33	ppb

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P8
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:00:43	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2486.02	2497.39	2510.85	2498.09	0.50	ppb
Lead	208-1	2493.98	2485.43	2508.52	2495.98	0.47	ppb
Lithium	6-1				101		%
Magnesium	24-2	51998.57	52078.09	51738.74	51938.46	0.34	ppb
Manganese	55-2	5019.99	4989.60	5049.01	5019.53	0.59	ppb
Molybdenum	94-1	4973.14	5025.31	5073.79	5024.08	1.00	ppb
Molybdenum	95-1	4993.78	5004.51	5053.26	5017.18	0.63	ppb
Molybdenum	96-1	5025.16	5116.71	5063.55	5068.47	0.91	ppb
Molybdenum	97-1	4961.76	5054.40	5151.51	5055.89	1.88	ppb
Molybdenum	98-1	4930.01	4993.65	5166.02	5029.90	2.43	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	484.14	485.88	477.45	482.49	0.92	ppb
Phosphorus	31-2	10250.09	10199.97	9969.28	10139.78	1.48	ppb
Potassium	39-2	25024.17	24569.69	24370.98	24654.95	1.36	ppb
Rhodium	103-1				97		%
Rhodium	103-2				98		%
Scandium	45-1				102		%
Scandium	45-2				103		%
Selenium	82-1	501.46	512.96	513.17	509.20	1.32	ppb
Selenium	77-2	471.15	527.33	518.53	505.67	5.97	ppb
Selenium	78-2	507.31	523.24	525.31	518.62	1.90	ppb
Silicon	28-1	471.74	461.21	466.19	466.38	1.13	ppb
Silver	107-1	514.12	502.81	506.09	507.67	1.15	ppb
Silver	109-1	510.23	503.32	509.04	507.53	0.73	ppb
Sodium	23-2	53289.91	53026.25	53580.57	53298.91	0.52	ppb
Strontium	86-1	498.74	495.59	502.64	498.99	0.71	ppb
Strontium	88-1	498.27	503.91	505.70	502.63	0.77	ppb
Sulfur	34-1	10331.60	9645.05	10262.98	10079.88	3.75	ppb
Terbium	159-1				100		%
Terbium	159-2				101		%
Thallium	203-1	491.55	496.94	494.17	494.22	0.55	ppb
Thallium	205-1	494.60	496.64	499.17	496.81	0.46	ppb
Tin	118-1	512.55	509.69	492.36	504.87	2.16	ppb
Titanium	47-1	5082.97	5008.02	5103.84	5064.94	0.99	ppb
Uranium	238-1	492.12	486.64	492.39	490.38	0.66	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P8
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:00:43	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	508.92	500.27	502.89	504.03	0.88	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	5137.21	5231.96	5108.97	5159.38	1.25	ppb
Zirconium	90-1	495.93	494.97	504.25	498.38	1.02	ppb
Zirconium	91-1	503.77	503.44	506.50	504.57	0.33	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P8
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:03:30	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	20016.71	20361.11	20234.08	20203.97	0.86	ppb
Antimony	121-1	997.26	988.27	1002.62	996.05	0.73	ppb
Arsenic	75-2	988.43	995.66	997.58	993.89	0.49	ppb
Barium	135-1	4961.65	4964.89	5046.81	4991.12	0.97	ppb
Barium	137-1	4929.18	5021.56	4985.81	4978.85	0.94	ppb
Beryllium	9-1	981.42	984.89	1015.42	993.91	1.88	ppb
Bismuth	209-1				94		%
Bismuth	209-2				95		%
Bromine	81-1						cps
Cadmium	108-1	982.86	992.00	1003.76	992.87	1.06	ppb
Cadmium	106-1	974.77	1003.03	1003.05	993.62	1.64	ppb
Cadmium	111-1	986.47	994.01	1005.61	995.36	0.97	ppb
Calcium	43-1	103343.48	102891.93	104751.14	103662.18	0.94	ppb
Calcium	44-1	103104.86	101691.14	104100.53	102965.51	1.18	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1007.71	991.91	989.60	996.41	0.99	ppb
Cobalt	59-2	986.10	987.64	998.65	990.80	0.69	ppb
Copper	63-2	9886.09	9873.35	9880.65	9880.03	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				102		%
Holmium	165-2				102		%
Indium	115-1				97		%
Indium	115-2				97		%
Iron	54-2	51441.34	52314.84	52753.48	52169.89	1.28	ppb
Iron	56-2	50747.99	51134.85	52277.99	51386.94	1.55	ppb
Iron	57-2	51097.20	51382.35	51793.42	51424.32	0.68	ppb
Krypton	83-1						cps
Lead	206-1	4921.39	5083.44	5011.64	5005.49	1.62	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P8
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:03:30	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	4950.34	5018.70	5009.95	4993.00	0.75	ppb
Lead	208-1	4974.93	4994.85	5015.64	4995.14	0.41	ppb
Lithium	6-1				100		%
Magnesium	24-2	102181.49	100988.66	101447.06	101539.07	0.59	ppb
Manganese	55-2	9835.74	9962.01	10045.55	9947.77	1.06	ppb
Molybdenum	94-1	9944.12	10048.13	9922.41	9971.55	0.67	ppb
Molybdenum	95-1	9910.49	10215.04	9796.34	9973.96	2.17	ppb
Molybdenum	96-1	9823.74	10221.74	9806.16	9950.55	2.36	ppb
Molybdenum	97-1	9910.40	10111.30	9863.77	9961.83	1.32	ppb
Molybdenum	98-1	9961.78	10079.35	9882.63	9974.59	0.99	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	997.89	998.78	1021.49	1006.05	1.33	ppb
Phosphorus	31-2	19955.09	19728.40	20046.75	19910.08	0.82	ppb
Potassium	39-2	48581.72	48642.04	48468.61	48564.12	0.18	ppb
Rhodium	103-1				94		%
Rhodium	103-2				96		%
Scandium	45-1				103		%
Scandium	45-2				105		%
Selenium	82-1	990.99	1000.26	988.23	993.16	0.63	ppb
Selenium	77-2	974.02	1018.23	991.96	994.74	2.24	ppb
Selenium	78-2	983.56	985.52	992.71	987.26	0.49	ppb
Silicon	28-1	1025.48	999.83	1040.08	1021.79	1.99	ppb
Silver	107-1	977.77	999.86	998.19	991.94	1.24	ppb
Silver	109-1	988.70	988.88	998.80	992.13	0.58	ppb
Sodium	23-2	103949.42	105035.00	105382.56	104788.99	0.71	ppb
Strontium	86-1	1001.74	999.21	998.71	999.89	0.16	ppb
Strontium	88-1	993.44	999.74	998.85	997.34	0.34	ppb
Sulfur	34-1	19942.21	20068.22	19891.40	19967.28	0.46	ppb
Terbium	159-1				101		%
Terbium	159-2				102		%
Thallium	203-1	971.92	1017.52	1015.50	1001.64	2.57	ppb
Thallium	205-1	986.23	1013.03	1002.70	1000.65	1.35	ppb
Tin	118-1	991.82	991.30	1003.48	995.53	0.69	ppb
Titanium	47-1	10040.36	9846.83	9992.95	9960.05	1.01	ppb
Uranium	238-1	1001.31	1006.04	1007.42	1004.93	0.32	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P8
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:03:30	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	987.40	1002.06	1007.31	998.92	1.03	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	9832.13	9932.35	9960.70	9908.40	0.68	ppb
Zirconium	90-1	997.31	1010.35	991.71	999.79	0.96	ppb
Zirconium	91-1	977.74	1022.16	989.03	996.31	2.32	ppb

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P8
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:06:15	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	100799.28	99626.32	99487.83	99971.14	0.72	ppb
Antimony	121-1	0.75	0.77	0.76	0.76	1.05	ppb
Arsenic	75-2	0.54	0.40	0.53	0.49	16.29	ppb
Barium	135-1	1.95	1.92	1.83	1.90	3.28	ppb
Barium	137-1	1.91	1.96	1.82	1.90	3.69	ppb
Beryllium	9-1	0.37	0.32	0.29	0.33	11.86	ppb
Bismuth	209-1				81		%
Bismuth	209-2				84		%
Bromine	81-1						cps
Cadmium	108-1	0.80	0.81	0.71	0.77	7.40	ppb
Cadmium	106-1	-0.09	-0.06	-0.25	-0.14		ppb
Cadmium	111-1	0.18	0.21	0.17	0.19	11.21	ppb
Calcium	43-1	504549.83	498456.42	493786.41	498930.89	1.08	ppb
Calcium	44-1	508816.33	489871.92	498706.03	499131.42	1.90	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.60	2.62	2.65	2.62	0.99	ppb
Cobalt	59-2	2.08	2.04	2.04	2.05	0.98	ppb
Copper	63-2	2.03	1.89	1.94	1.95	3.51	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				98		%
Indium	115-1				87		%
Indium	115-2				94		%
Iron	54-2	252219.02	247076.24	248642.48	249312.58	1.06	ppb
Iron	56-2	252517.17	248971.28	247143.11	249543.85	1.09	ppb
Iron	57-2	254287.96	247734.50	246594.87	249539.11	1.66	ppb
Krypton	83-1						cps
Lead	206-1	1.41	1.46	1.36	1.41	3.50	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P8
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:06:15	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1.38	1.52	1.34	1.41	6.53	ppb
Lead	208-1	1.42	1.48	1.35	1.42	4.67	ppb
Lithium	6-1				90		%
Magnesium	24-2	500080.28	501125.79	496974.89	499393.65	0.43	ppb
Manganese	55-2	4.83	4.59	4.48	4.63	3.89	ppb
Molybdenum	94-1	7.60	7.34	7.45	7.46	1.77	ppb
Molybdenum	95-1	5.47	5.34	5.35	5.39	1.29	ppb
Molybdenum	96-1	5.64	5.53	5.55	5.57	1.01	ppb
Molybdenum	97-1	5.31	5.09	5.07	5.16	2.61	ppb
Molybdenum	98-1	5.16	5.05	5.06	5.09	1.18	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	3.08	2.87	2.85	2.93	4.41	ppb
Phosphorus	31-2	-9.79	-11.26	-9.43	-10.16		ppb
Potassium	39-2	251536.95	249711.12	249691.07	250313.05	0.42	ppb
Rhodium	103-1				82		%
Rhodium	103-2				86		%
Scandium	45-1				95		%
Scandium	45-2				100		%
Selenium	82-1	0.02	-0.13	-0.20	-0.11		ppb
Selenium	77-2	0.85	1.70	0.84	1.13	43.60	ppb
Selenium	78-2	0.50	1.25	0.49	0.75	58.20	ppb
Silicon	28-1	16.38	14.68	14.39	15.15	7.10	ppb
Silver	107-1	0.19	0.17	0.17	0.18	4.95	ppb
Silver	109-1	0.18	0.18	0.17	0.17	2.31	ppb
Sodium	23-2	503395.56	496433.23	495851.60	498560.13	0.84	ppb
Strontium	86-1	3.05	2.94	3.08	3.02	2.51	ppb
Strontium	88-1	3.05	3.02	3.03	3.03	0.49	ppb
Sulfur	34-1	-495.74	-672.31	-712.69	-626.91		ppb
Terbium	159-1				93		%
Terbium	159-2				97		%
Thallium	203-1	0.12	0.10	0.08	0.10	21.38	ppb
Thallium	205-1	0.12	0.12	0.08	0.11	19.12	ppb
Tin	118-1	0.15	0.15	0.12	0.14	10.37	ppb
Titanium	47-1	2.45	2.44	2.66	2.52	4.98	ppb
Uranium	238-1	0.07	0.07	0.06	0.07	6.88	ppb

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P8
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:06:15	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.27	0.26	0.26	0.26	1.29	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				94		%
Yttrium	89-2				100		%
Zinc	66-2	5.56	5.32	5.09	5.32	4.37	ppb
Zirconium	90-1	1.66	1.66	1.66	1.66	0.25	ppb
Zirconium	91-1	1.65	1.60	1.66	1.64	2.10	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICV007	Instrumnet Name :	P8
Client Sample ID :	ICV007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:12:53	DataFile Name :	012ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	482.48	485.69	480.46	482.87	0.55	ppb
Antimony	121-1	201.90	202.77	204.52	203.06	0.66	ppb
Arsenic	75-2	203.63	203.22	202.49	203.11	0.29	ppb
Barium	135-1	95.40	95.46	96.13	95.67	0.42	ppb
Barium	137-1	97.17	97.71	97.65	97.51	0.30	ppb
Beryllium	9-1	98.70	99.59	99.08	99.12	0.45	ppb
Bismuth	209-1				102		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Cadmium	108-1	81.81	82.56	83.49	82.62	1.02	ppb
Cadmium	106-1	78.22	78.68	79.74	78.88	0.99	ppb
Cadmium	111-1	98.18	97.80	98.36	98.11	0.29	ppb
Calcium	43-1	1910.73	1968.48	1980.77	1953.33	1.91	ppb
Calcium	44-1	2038.09	2092.99	2047.73	2059.60	1.42	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	96.91	98.36	97.33	97.53	0.77	ppb
Cobalt	59-2	101.18	102.05	100.50	101.24	0.77	ppb
Copper	63-2	100.84	103.24	102.77	102.28	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				104		%
Holmium	165-2				107		%
Indium	115-1				107		%
Indium	115-2				112		%
Iron	54-2	2068.76	2097.62	2094.30	2086.89	0.76	ppb
Iron	56-2	2087.83	2108.07	2070.23	2088.71	0.91	ppb
Iron	57-2	1975.79	1993.63	1984.00	1984.47	0.45	ppb
Krypton	83-1						cps
Lead	206-1	208.09	201.61	204.58	204.76	1.58	ppb

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICV007	Instrumnet Name :	P8
Client Sample ID :	ICV007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:12:53	DataFile Name :	012ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	201.92	196.59	194.73	197.75	1.89	ppb
Lead	208-1	202.31	197.92	198.72	199.65	1.17	ppb
Lithium	6-1				110		%
Magnesium	24-2	1092.42	1121.53	1103.72	1105.89	1.33	ppb
Manganese	55-2	95.85	96.37	96.84	96.35	0.51	ppb
Molybdenum	94-1	0.14	0.11	0.11	0.12	12.73	ppb
Molybdenum	95-1	0.04	0.04	0.05	0.04	3.64	ppb
Molybdenum	96-1	0.14	0.12	0.14	0.13	9.65	ppb
Molybdenum	97-1	0.06	0.04	0.05	0.05	21.21	ppb
Molybdenum	98-1	0.07	0.05	0.06	0.06	10.20	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	101.96	103.47	102.87	102.77	0.74	ppb
Phosphorus	31-2	-19.07	-22.53	-15.08	-18.89		ppb
Potassium	39-2	1845.31	1877.19	1874.16	1865.55	0.94	ppb
Rhodium	103-1				106		%
Rhodium	103-2				107		%
Scandium	45-1				108		%
Scandium	45-2				110		%
Selenium	82-1	210.01	208.09	214.23	210.78	1.49	ppb
Selenium	77-2	208.20	213.54	230.41	217.38	5.33	ppb
Selenium	78-2	205.93	203.58	211.94	207.15	2.08	ppb
Silicon	28-1	0.76	0.71	1.03	0.84	20.87	ppb
Silver	107-1	47.03	47.37	47.43	47.28	0.46	ppb
Silver	109-1	47.69	47.36	47.57	47.54	0.35	ppb
Sodium	23-2	2120.53	2132.85	2121.50	2124.96	0.32	ppb
Strontium	86-1	0.19	0.21	0.21	0.20	4.83	ppb
Strontium	88-1	0.20	0.21	0.21	0.20	2.95	ppb
Sulfur	34-1	-1300.81	-1248.52	-1144.32	-1231.22		ppb
Terbium	159-1				104		%
Terbium	159-2				108		%
Thallium	203-1	205.21	200.43	200.15	201.93	1.41	ppb
Thallium	205-1	200.32	194.44	193.14	195.97	1.95	ppb
Tin	118-1	0.03	0.01	0.03	0.02	56.28	ppb
Titanium	47-1	0.01	0.02	0.02	0.02	15.73	ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICV007	Instrumnet Name :	P8
Client Sample ID :	ICV007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:12:53	DataFile Name :	012ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	94.86	96.24	94.69	95.27	0.89	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				106		%
Yttrium	89-2				109		%
Zinc	66-2	191.55	194.32	193.06	192.98	0.72	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	16.61	ppb
Zirconium	91-1	0.12	0.12	0.13	0.12	3.55	ppb

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LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICB007	Instrumnet Name :	P8
Client Sample ID :	ICB007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:16:15	DataFile Name :	013CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.07	0.12	-0.14	0.02	836.09	ppb
Antimony	121-1	0.06	0.07	0.06	0.06	7.85	ppb
Arsenic	75-2	0.00	0.01	-0.01	0.00		ppb
Barium	135-1	-0.03	-0.04	-0.03	-0.03		ppb
Barium	137-1	-0.04	-0.03	-0.03	-0.03		ppb
Beryllium	9-1	0.10	0.09	0.08	0.09	11.41	ppb
Bismuth	209-1				102		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Cadmium	108-1	0.06	-0.01	0.04	0.03	113.34	ppb
Cadmium	106-1	-1.91	-1.16	-1.33	-1.47		ppb
Cadmium	111-1	-0.14	-0.08	-0.09	-0.10		ppb
Calcium	43-1	0.90	0.15	-1.01	0.01	7516.25	ppb
Calcium	44-1	-1.67	-1.49	-2.12	-1.76		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.05	-0.10	-0.05	-0.07		ppb
Cobalt	59-2	0.00	-0.01	0.00	0.00		ppb
Copper	63-2	0.01	0.01	0.01	0.01	33.34	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				106		%
Holmium	165-2				107		%
Indium	115-1				107		%
Indium	115-2				111		%
Iron	54-2	0.21	0.55	0.56	0.44	45.25	ppb
Iron	56-2	0.82	0.60	0.50	0.64	25.32	ppb
Iron	57-2	1.06	2.29	1.28	1.54	42.67	ppb
Krypton	83-1						cps
Lead	206-1	0.24	0.21	0.22	0.22	7.22	ppb

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICB007	Instrumnet Name :	P8
Client Sample ID :	ICB007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:16:15	DataFile Name :	013CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.22	0.20	0.20	0.21	4.49	ppb
Lead	208-1	0.23	0.22	0.21	0.22	4.98	ppb
Lithium	6-1				110		%
Magnesium	24-2	-5.48	-5.35	-4.98	-5.27		ppb
Manganese	55-2	0.04	0.04	0.02	0.04	29.13	ppb
Molybdenum	94-1	0.02	0.02	0.02	0.02	6.42	ppb
Molybdenum	95-1	0.02	0.01	0.02	0.02	32.22	ppb
Molybdenum	96-1	0.03	0.01	0.02	0.02	36.49	ppb
Molybdenum	97-1	0.01	0.00	0.02	0.01	106.22	ppb
Molybdenum	98-1	0.02	0.02	0.01	0.02	18.65	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.19	-0.09	-0.05	-0.11		ppb
Phosphorus	31-2	-15.88	-20.57	-20.44	-18.97		ppb
Potassium	39-2	4.93	6.31	3.99	5.08	22.99	ppb
Rhodium	103-1				106		%
Rhodium	103-2				107		%
Scandium	45-1				109		%
Scandium	45-2				109		%
Selenium	82-1	-0.38	-0.44	-0.03	-0.28		ppb
Selenium	77-2	0.78	0.00	0.00	0.26	173.21	ppb
Selenium	78-2	-0.27	0.19	-0.05	-0.04		ppb
Silicon	28-1	-1.13	-0.26	-0.82	-0.74		ppb
Silver	107-1	0.02	0.02	0.02	0.02	12.70	ppb
Silver	109-1	0.02	0.02	0.02	0.02	19.22	ppb
Sodium	23-2	8.17	5.94	7.71	7.27	16.20	ppb
Strontium	86-1	-0.03	-0.03	-0.03	-0.03		ppb
Strontium	88-1	-0.02	-0.03	-0.02	-0.02		ppb
Sulfur	34-1	-1282.48	-978.86	-1062.31	-1107.88		ppb
Terbium	159-1				105		%
Terbium	159-2				106		%
Thallium	203-1	0.03	0.02	0.02	0.02	13.71	ppb
Thallium	205-1	0.02	0.02	0.02	0.02	11.10	ppb
Tin	118-1	0.00	0.00	0.01	0.01	51.57	ppb
Titanium	47-1	0.02	-0.01	-0.01	0.00	1601.34	ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICB007	Instrumnet Name :	P8
Client Sample ID :	ICB007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:16:15	DataFile Name :	013CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.00	0.00	0.00		ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				105		%
Yttrium	89-2				109		%
Zinc	66-2	0.23	0.31	0.29	0.28	16.00	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00	214.13	ppb
Zirconium	91-1	0.01	0.00	0.01	0.01	83.83	ppb

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICSA007	Instrumnet Name :	P8
Client Sample ID :	ICSA007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:19:42	DataFile Name :	014ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	95985.02	98958.55	99152.84	98032.14	1.81	ppb
Antimony	121-1	1.10	1.18	1.12	1.13	3.67	ppb
Arsenic	75-2	0.30	0.35	0.37	0.34	11.34	ppb
Barium	135-1	1.36	1.37	1.31	1.35	2.33	ppb
Barium	137-1	1.36	1.44	1.33	1.38	4.18	ppb
Beryllium	9-1	0.35	0.34	0.35	0.35	1.68	ppb
Bismuth	209-1				93		%
Bismuth	209-2				94		%
Bromine	81-1						cps
Cadmium	108-1	19.04	20.65	19.18	19.62	4.54	ppb
Cadmium	106-1	-2.42	-1.72	-2.85	-2.33		ppb
Cadmium	111-1	0.62	0.63	0.47	0.57	15.26	ppb
Calcium	43-1	105812.26	105254.24	104694.04	105253.52	0.53	ppb
Calcium	44-1	106605.75	106140.15	105557.20	106101.03	0.50	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	19.78	19.66	19.46	19.64	0.82	ppb
Cobalt	59-2	1.15	1.15	1.21	1.17	2.74	ppb
Copper	63-2	8.12	8.05	8.22	8.13	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				104		%
Holmium	165-2				104		%
Indium	115-1				100		%
Indium	115-2				102		%
Iron	54-2	108609.47	107567.01	110169.15	108781.88	1.20	ppb
Iron	56-2	108111.51	107795.17	108859.38	108255.35	0.50	ppb
Iron	57-2	108252.52	106544.29	109712.72	108169.85	1.47	ppb
Krypton	83-1						cps
Lead	206-1	4.77	4.89	4.72	4.80	1.84	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICSA007	Instrumnet Name :	P8
Client Sample ID :	ICSA007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:19:42	DataFile Name :	014ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	4.45	4.44	4.47	4.45	0.37	ppb
Lead	208-1	4.50	4.56	4.54	4.53	0.64	ppb
Lithium	6-1				100		%
Magnesium	24-2	98516.50	99025.20	99139.36	98893.69	0.34	ppb
Manganese	55-2	7.34	7.56	7.58	7.50	1.79	ppb
Molybdenum	94-1	1643.36	1675.97	1669.87	1663.06	1.04	ppb
Molybdenum	95-1	1999.09	2027.27	2059.37	2028.58	1.49	ppb
Molybdenum	96-1	1937.37	1981.40	2044.40	1987.72	2.71	ppb
Molybdenum	97-1	1990.72	2017.64	2065.22	2024.52	1.86	ppb
Molybdenum	98-1	2018.28	2031.95	2032.25	2027.49	0.39	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	5.23	5.09	5.14	5.15	1.36	ppb
Phosphorus	31-2	104475.02	105027.32	107231.37	105577.90	1.38	ppb
Potassium	39-2	99743.77	100884.13	102583.44	101070.45	1.41	ppb
Rhodium	103-1				96		%
Rhodium	103-2				98		%
Scandium	45-1				106		%
Scandium	45-2				106		%
Selenium	82-1	0.19	-0.08	0.22	0.11	152.20	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	0.43	0.19	-0.03	0.20	115.17	ppb
Silicon	28-1	23.83	23.54	23.60	23.66	0.66	ppb
Silver	107-1	0.11	0.11	0.08	0.10	14.74	ppb
Silver	109-1	0.11	0.10	0.09	0.10	9.51	ppb
Sodium	23-2	109601.45	110342.17	110673.17	110205.60	0.50	ppb
Strontium	86-1	32.80	33.09	33.54	33.14	1.13	ppb
Strontium	88-1	35.28	35.92	35.67	35.62	0.91	ppb
Sulfur	34-1	100158.07	98921.09	99787.87	99622.34	0.64	ppb
Terbium	159-1				102		%
Terbium	159-2				104		%
Thallium	203-1	0.14	0.15	0.17	0.15	10.17	ppb
Thallium	205-1	0.14	0.15	0.16	0.15	9.04	ppb
Tin	118-1	0.15	0.20	0.25	0.20	24.93	ppb
Titanium	47-1	2091.93	2143.91	2111.04	2115.63	1.24	ppb
Uranium	238-1	0.01	0.01	0.01	0.01	5.84	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICSA007	Instrumnet Name :	P8
Client Sample ID :	ICSA007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:19:42	DataFile Name :	014ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.12	0.10	0.16	0.13	22.40	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				103		%
Yttrium	89-2				107		%
Zinc	66-2	10.58	11.27	10.76	10.87	3.30	ppb
Zirconium	90-1	0.01	0.01	0.02	0.01	13.54	ppb
Zirconium	91-1	0.02	0.02	0.02	0.02	11.55	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICSAB007	Instrumnet Name :	P8
Client Sample ID :	ICSAB007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:28:49	DataFile Name :	016ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	92784.27	94650.54	94228.02	93887.61	1.04	ppb
Antimony	121-1	20.68	20.70	20.59	20.66	0.28	ppb
Arsenic	75-2	21.40	20.29	21.01	20.90	2.69	ppb
Barium	135-1	20.86	20.87	20.78	20.84	0.23	ppb
Barium	137-1	20.86	20.98	21.17	21.01	0.74	ppb
Beryllium	9-1	20.68	21.22	20.78	20.90	1.38	ppb
Bismuth	209-1				92		%
Bismuth	209-2				92		%
Bromine	81-1						cps
Cadmium	108-1	33.72	34.84	34.34	34.30	1.64	ppb
Cadmium	106-1	12.79	12.30	12.74	12.61	2.14	ppb
Cadmium	111-1	19.45	19.27	19.64	19.45	0.95	ppb
Calcium	43-1	102286.49	104605.56	103100.59	103330.88	1.14	ppb
Calcium	44-1	102762.05	104370.05	103442.73	103524.94	0.78	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	38.18	38.04	38.30	38.17	0.34	ppb
Cobalt	59-2	20.51	20.85	20.68	20.68	0.81	ppb
Copper	63-2	27.57	27.45	27.07	27.36	0.96	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				103		%
Indium	115-1				99		%
Indium	115-2				101		%
Iron	54-2	105860.43	104012.84	103741.52	104538.27	1.10	ppb
Iron	56-2	104660.75	104820.48	103408.96	104296.73	0.74	ppb
Iron	57-2	104416.95	104615.67	105655.31	104895.98	0.63	ppb
Krypton	83-1						cps
Lead	206-1	23.60	23.94	24.25	23.93	1.37	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICSAB007	Instrumnet Name :	P8
Client Sample ID :	ICSAB007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:28:49	DataFile Name :	016ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	22.77	23.45	23.66	23.29	1.99	ppb
Lead	208-1	22.93	23.33	23.69	23.32	1.62	ppb
Lithium	6-1				100		%
Magnesium	24-2	96009.00	95245.99	94080.86	95111.95	1.02	ppb
Manganese	55-2	26.47	26.47	26.56	26.50	0.19	ppb
Molybdenum	94-1	1631.60	1631.84	1593.72	1619.06	1.36	ppb
Molybdenum	95-1	1985.72	2015.03	1969.31	1990.02	1.16	ppb
Molybdenum	96-1	1942.19	1958.19	1908.14	1936.17	1.32	ppb
Molybdenum	97-1	1955.34	1996.57	1905.87	1952.60	2.33	ppb
Molybdenum	98-1	1960.77	1979.07	1930.35	1956.73	1.26	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	24.25	24.67	24.91	24.61	1.37	ppb
Phosphorus	31-2	102094.90	102828.72	102593.94	102505.85	0.37	ppb
Potassium	39-2	98901.12	98523.04	96984.72	98136.29	1.03	ppb
Rhodium	103-1				96		%
Rhodium	103-2				97		%
Scandium	45-1				105		%
Scandium	45-2				106		%
Selenium	82-1	20.68	21.26	20.69	20.88	1.58	ppb
Selenium	77-2	18.52	24.20	17.76	20.16	17.45	ppb
Selenium	78-2	22.92	17.99	18.48	19.80	13.73	ppb
Silicon	28-1	25.69	26.82	26.19	26.24	2.15	ppb
Silver	107-1	18.28	18.32	18.58	18.39	0.89	ppb
Silver	109-1	18.48	18.59	18.62	18.56	0.38	ppb
Sodium	23-2	106547.19	106183.71	105798.96	106176.62	0.35	ppb
Strontium	86-1	32.41	32.95	32.58	32.65	0.85	ppb
Strontium	88-1	34.12	34.75	34.34	34.41	0.93	ppb
Sulfur	34-1	97645.63	99961.68	96990.47	98199.26	1.59	ppb
Terbium	159-1				101		%
Terbium	159-2				102		%
Thallium	203-1	19.34	19.79	20.31	19.81	2.45	ppb
Thallium	205-1	19.62	19.81	20.16	19.86	1.36	ppb
Tin	118-1	0.16	0.17	0.17	0.17	4.01	ppb
Titanium	47-1	2042.95	2091.57	2046.03	2060.18	1.32	ppb
Uranium	238-1	0.01	0.01	0.01	0.01	3.42	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICSAB007	Instrumnet Name :	P8
Client Sample ID :	ICSAB007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:28:49	DataFile Name :	016ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	19.78	19.61	19.47	19.62	0.81	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				103		%
Yttrium	89-2				105		%
Zinc	66-2	30.47	30.13	29.69	30.10	1.29	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	3.94	ppb
Zirconium	91-1	0.02	0.03	0.02	0.02	26.22	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV027	Instrumnet Name :	P8
Client Sample ID :	CCV027	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:31:55	DataFile Name :	017CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	51386.42	51402.78	50620.18	51136.46	0.87	ppb
Antimony	121-1	491.47	504.91	494.35	496.91	1.42	ppb
Arsenic	75-2	489.62	493.67	493.37	492.22	0.46	ppb
Barium	135-1	2512.09	2557.48	2505.79	2525.12	1.12	ppb
Barium	137-1	2562.99	2567.68	2531.93	2554.20	0.76	ppb
Beryllium	9-1	516.39	510.79	510.53	512.57	0.65	ppb
Bismuth	209-1				87		%
Bismuth	209-2				89		%
Bromine	81-1						cps
Cadmium	108-1	484.20	494.09	487.66	488.65	1.03	ppb
Cadmium	106-1	493.68	493.53	492.64	493.28	0.11	ppb
Cadmium	111-1	497.25	491.34	482.73	490.44	1.49	ppb
Calcium	43-1	256735.35	257727.41	256601.42	257021.39	0.24	ppb
Calcium	44-1	261240.14	257136.35	257437.19	258604.56	0.88	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	507.39	500.89	485.08	497.79	2.31	ppb
Cobalt	59-2	489.17	487.87	478.46	485.16	1.20	ppb
Copper	63-2	4771.41	4750.88	4681.36	4734.55	1.00	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				98		%
Holmium	165-2				101		%
Indium	115-1				94		%
Indium	115-2				98		%
Iron	54-2	129463.45	127573.05	124821.41	127285.97	1.83	ppb
Iron	56-2	127907.46	128305.08	125426.51	127213.02	1.23	ppb
Iron	57-2	126435.53	125426.68	125427.35	125763.19	0.46	ppb
Krypton	83-1						cps
Lead	206-1	2480.24	2503.41	2515.59	2499.75	0.72	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV027	Instrumnet Name :	P8
Client Sample ID :	CCV027	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:31:55	DataFile Name :	017CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2492.81	2517.80	2528.49	2513.03	0.73	ppb
Lead	208-1	2502.00	2526.18	2528.91	2519.03	0.59	ppb
Lithium	6-1				96		%
Magnesium	24-2	248290.95	246179.71	244732.54	246401.07	0.73	ppb
Manganese	55-2	5011.70	5018.71	4878.03	4969.48	1.60	ppb
Molybdenum	94-1	4982.14	5017.81	5080.94	5026.96	1.00	ppb
Molybdenum	95-1	5100.69	4980.75	5013.73	5031.72	1.23	ppb
Molybdenum	96-1	5133.81	4966.19	5056.78	5052.26	1.66	ppb
Molybdenum	97-1	5147.96	4906.75	5062.40	5039.04	2.43	ppb
Molybdenum	98-1	5067.08	4934.78	5043.25	5015.04	1.41	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	455.43	451.92	447.83	451.73	0.84	ppb
Phosphorus	31-2	10081.67	9773.26	9780.23	9878.39	1.78	ppb
Potassium	39-2	123820.71	123640.09	120918.86	122793.22	1.32	ppb
Rhodium	103-1				91		%
Rhodium	103-2				93		%
Scandium	45-1				103		%
Scandium	45-2				106		%
Selenium	82-1	485.54	474.10	483.24	480.96	1.26	ppb
Selenium	77-2	498.89	486.13	492.51	492.51	1.30	ppb
Selenium	78-2	499.49	472.05	493.13	488.22	2.94	ppb
Silicon	28-1	634.22	619.18	620.18	624.53	1.35	ppb
Silver	107-1	485.53	502.63	492.08	493.41	1.75	ppb
Silver	109-1	482.52	494.88	483.05	486.82	1.44	ppb
Sodium	23-2	263255.22	259733.62	257653.39	260214.08	1.09	ppb
Strontium	86-1	494.26	506.19	500.40	500.28	1.19	ppb
Strontium	88-1	509.88	497.27	494.77	500.64	1.62	ppb
Sulfur	34-1	9227.47	9272.39	9331.31	9277.06	0.56	ppb
Terbium	159-1				96		%
Terbium	159-2				99		%
Thallium	203-1	505.58	494.92	506.26	502.25	1.27	ppb
Thallium	205-1	502.00	506.43	504.74	504.39	0.44	ppb
Tin	118-1	500.64	505.56	496.00	500.73	0.95	ppb
Titanium	47-1	5040.61	4941.22	4956.75	4979.53	1.07	ppb
Uranium	238-1	510.81	511.33	517.82	513.32	0.76	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV027	Instrumnet Name :	P8
Client Sample ID :	CCV027	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:31:55	DataFile Name :	017CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	511.97	501.27	496.92	503.39	1.54	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				99		%
Yttrium	89-2				104		%
Zinc	66-2	4814.02	4773.53	4824.73	4804.09	0.56	ppb
Zirconium	90-1	500.37	501.34	501.18	500.96	0.10	ppb
Zirconium	91-1	511.63	508.96	504.68	508.42	0.69	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB027	Instrumnet Name :	P8
Client Sample ID :	CCB027	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:34:42	DataFile Name :	018CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.98	1.52	1.43	1.31	22.06	ppb
Antimony	121-1	0.13	0.11	0.11	0.11	9.43	ppb
Arsenic	75-2	-0.01	0.02	0.00	0.00	1479.16	ppb
Barium	135-1	0.07	0.05	0.06	0.06	14.71	ppb
Barium	137-1	0.09	0.07	0.07	0.08	19.94	ppb
Beryllium	9-1	0.16	0.14	0.14	0.14	9.25	ppb
Bismuth	209-1				102		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Cadmium	108-1	0.09	0.05	0.03	0.05	59.04	ppb
Cadmium	106-1	-1.84	-0.80	-1.20	-1.28		ppb
Cadmium	111-1	-0.10	-0.04	-0.06	-0.07		ppb
Calcium	43-1	6.10	7.70	5.36	6.39	18.73	ppb
Calcium	44-1	7.00	4.91	5.02	5.64	20.84	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.15	0.22	0.25	0.21	23.00	ppb
Cobalt	59-2	0.00	0.00	-0.01	0.00		ppb
Copper	63-2	0.19	0.14	0.12	0.15	24.31	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				106		%
Indium	115-1				107		%
Indium	115-2				114		%
Iron	54-2	3.62	4.95	4.61	4.39	15.69	ppb
Iron	56-2	4.09	3.91	4.11	4.04	2.74	ppb
Iron	57-2	5.22	3.63	4.52	4.46	17.88	ppb
Krypton	83-1						cps
Lead	206-1	0.25	0.21	0.20	0.22	11.07	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB027	Instrumnet Name :	P8
Client Sample ID :	CCB027	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:34:42	DataFile Name :	018CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.23	0.25	0.22	0.23	5.87	ppb
Lead	208-1	0.25	0.23	0.21	0.23	7.60	ppb
Lithium	6-1				109		%
Magnesium	24-2	-5.44	-6.10	-5.94	-5.83		ppb
Manganese	55-2	0.19	0.17	0.13	0.16	19.74	ppb
Molybdenum	94-1	0.23	0.23	0.16	0.21	19.52	ppb
Molybdenum	95-1	0.21	0.19	0.18	0.19	8.69	ppb
Molybdenum	96-1	0.21	0.22	0.16	0.20	14.96	ppb
Molybdenum	97-1	0.22	0.20	0.17	0.20	13.22	ppb
Molybdenum	98-1	0.20	0.19	0.16	0.18	11.24	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.08	-0.15	-0.09	-0.11		ppb
Phosphorus	31-2	-15.20	-20.15	-21.64	-19.00		ppb
Potassium	39-2	22.81	23.91	20.67	22.46	7.31	ppb
Rhodium	103-1				108		%
Rhodium	103-2				109		%
Scandium	45-1				111		%
Scandium	45-2				111		%
Selenium	82-1	-0.19	0.08	-0.02	-0.04		ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	0.86	0.63	0.39	0.63	37.40	ppb
Silicon	28-1	0.10	0.25	0.28	0.21	46.68	ppb
Silver	107-1	0.06	0.05	0.04	0.05	14.16	ppb
Silver	109-1	0.06	0.05	0.05	0.05	19.15	ppb
Sodium	23-2	41.95	39.16	38.14	39.75	4.96	ppb
Strontium	86-1	-0.02	-0.02	-0.02	-0.02		ppb
Strontium	88-1	-0.02	-0.02	-0.02	-0.02		ppb
Sulfur	34-1	-1474.99	-1336.19	-1209.83	-1340.34		ppb
Terbium	159-1				104		%
Terbium	159-2				106		%
Thallium	203-1	0.08	0.06	0.06	0.07	15.06	ppb
Thallium	205-1	0.08	0.07	0.06	0.07	12.57	ppb
Tin	118-1	0.03	0.03	0.02	0.03	14.60	ppb
Titanium	47-1	0.17	0.15	0.11	0.14	22.61	ppb
Uranium	238-1	0.01	0.01	0.01	0.01	19.95	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB027	Instrumnet Name :	P8
Client Sample ID :	CCB027	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:34:42	DataFile Name :	018CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.01	0.01	0.00	0.01	107.03	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				109		%
Yttrium	89-2				111		%
Zinc	66-2	0.19	0.23	0.27	0.23	17.40	ppb
Zirconium	90-1	0.02	0.02	0.01	0.02	23.63	ppb
Zirconium	91-1	0.03	0.03	0.03	0.03	4.30	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1255-08A	Instrumnet Name :	P8
Client Sample ID :	MDCZN8A	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:38:02	DataFile Name :	019AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	33.07	35.85	34.36	34.43	4.05	ppb
Antimony	121-1	0.05	0.05	0.05	0.05	8.93	ppb
Arsenic	75-2	0.40	0.40	0.36	0.38	6.07	ppb
Barium	135-1	84.80	84.23	84.04	84.36	0.47	ppb
Barium	137-1	85.69	86.70	84.83	85.74	1.09	ppb
Beryllium	9-1	0.39	0.37	0.38	0.38	2.70	ppb
Bismuth	209-1				99		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Cadmium	108-1	0.23	0.19	0.32	0.25	27.36	ppb
Cadmium	106-1	-0.99	-0.84	-1.61	-1.15		ppb
Cadmium	111-1	0.16	0.14	0.09	0.13	30.58	ppb
Calcium	43-1	5135.57	5286.89	5267.91	5230.12	1.58	ppb
Calcium	44-1	5505.10	5629.11	5456.73	5530.32	1.61	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.13	0.23	0.16	0.17	26.68	ppb
Cobalt	59-2	3.52	3.47	3.47	3.49	0.93	ppb
Copper	63-2	0.55	0.56	0.54	0.55	1.93	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				104		%
Holmium	165-2				105		%
Indium	115-1				104		%
Indium	115-2				108		%
Iron	54-2	206.14	216.46	214.77	212.45	2.60	ppb
Iron	56-2	208.42	212.80	211.29	210.84	1.06	ppb
Iron	57-2	213.81	212.35	203.44	209.87	2.67	ppb
Krypton	83-1						cps
Lead	206-1	0.19	0.18	0.17	0.18	4.75	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1255-08A	Instrumnet Name :	P8
Client Sample ID :	MDCZN8A	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:38:02	DataFile Name :	019AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.18	0.17	0.15	0.17	6.72	ppb
Lead	208-1	0.19	0.17	0.16	0.17	7.65	ppb
Lithium	6-1				106		%
Magnesium	24-2	1615.70	1638.39	1613.64	1622.58	0.85	ppb
Manganese	55-2	207.87	212.98	212.85	211.23	1.38	ppb
Molybdenum	94-1	0.06	0.07	0.05	0.06	16.34	ppb
Molybdenum	95-1	0.04	0.03	0.01	0.03	43.06	ppb
Molybdenum	96-1	0.05	0.03	0.02	0.03	48.10	ppb
Molybdenum	97-1	0.02	0.02	0.01	0.02	26.94	ppb
Molybdenum	98-1	0.03	0.02	0.01	0.02	37.34	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	8.15	8.13	8.34	8.21	1.44	ppb
Phosphorus	31-2	3.77	8.13	8.63	6.84	39.10	ppb
Potassium	39-2	800.09	812.51	807.55	806.72	0.77	ppb
Rhodium	103-1				103		%
Rhodium	103-2				105		%
Scandium	45-1				110		%
Scandium	45-2				109		%
Selenium	82-1	11.31	11.69	11.66	11.55	1.85	ppb
Selenium	77-2	10.13	10.29	13.93	11.45	18.75	ppb
Selenium	78-2	8.20	10.66	10.18	9.68	13.46	ppb
Silicon	28-1	9324.33	9449.94	9553.90	9442.73	1.22	ppb
Silver	107-1	0.02	0.01	0.01	0.02	6.19	ppb
Silver	109-1	0.01	0.02	0.01	0.01	14.84	ppb
Sodium	23-2	28391.20	28686.71	28187.87	28421.93	0.88	ppb
Strontium	86-1	55.93	55.81	56.16	55.97	0.32	ppb
Strontium	88-1	60.62	59.77	59.67	60.02	0.86	ppb
Sulfur	34-1	7109.44	7347.98	7224.05	7227.16	1.65	ppb
Terbium	159-1				102		%
Terbium	159-2				105		%
Thallium	203-1	0.05	0.03	0.03	0.04	24.61	ppb
Thallium	205-1	0.05	0.04	0.03	0.04	15.68	ppb
Tin	118-1	0.18	0.17	0.15	0.17	8.79	ppb
Titanium	47-1	0.88	0.90	0.94	0.91	3.51	ppb
Uranium	238-1	0.02	0.01	0.01	0.02	10.86	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1255-08A	Instrumnet Name :	P8
Client Sample ID :	MDCZN8A	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:38:02	DataFile Name :	019AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.24	0.22	0.19	0.21	12.16	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				106		%
Yttrium	89-2				109		%
Zinc	66-2	11.36	11.91	11.86	11.71	2.61	ppb
Zirconium	90-1	0.02	0.02	0.01	0.02	11.28	ppb
Zirconium	91-1	0.02	0.02	0.02	0.02	12.51	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166671BL	Instrumnet Name :	P8
Client Sample ID :	PBW671	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:41:41	DataFile Name :	020CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.20	-0.11	0.49	0.20	151.86	ppb
Antimony	121-1	0.01	0.01	0.02	0.02	8.14	ppb
Arsenic	75-2	0.00	-0.01	-0.01	-0.01		ppb
Barium	135-1	0.01	-0.01	0.02	0.01	179.88	ppb
Barium	137-1	-0.01	0.01	-0.02	-0.01		ppb
Beryllium	9-1	0.04	0.04	0.04	0.04	8.50	ppb
Bismuth	209-1				102		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Cadmium	108-1	-0.01	0.02	-0.01	0.00	5931.43	ppb
Cadmium	106-1	-0.99	-0.73	-0.73	-0.82		ppb
Cadmium	111-1	-0.07	-0.06	-0.05	-0.06		ppb
Calcium	43-1	0.92	-0.67	0.69	0.31	274.87	ppb
Calcium	44-1	-1.34	-1.03	-2.13	-1.50		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.06	-0.06	-0.08	-0.07		ppb
Cobalt	59-2	-0.02	-0.01	-0.02	-0.02		ppb
Copper	63-2	-0.08	-0.04	-0.04	-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				105		%
Holmium	165-2				107		%
Indium	115-1				107		%
Indium	115-2				112		%
Iron	54-2	1.23	0.48	0.43	0.71	62.98	ppb
Iron	56-2	0.63	0.53	0.42	0.53	19.35	ppb
Iron	57-2	0.11	1.23	1.20	0.85	75.74	ppb
Krypton	83-1						cps
Lead	206-1	0.08	0.08	0.07	0.08	8.30	ppb

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166671BL	Instrumnet Name :	P8
Client Sample ID :	PBW671	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:41:41	DataFile Name :	020CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.09	0.09	0.08	0.08	7.94	ppb
Lead	208-1	0.08	0.08	0.07	0.08	6.74	ppb
Lithium	6-1				106		%
Magnesium	24-2	-6.73	-6.81	-6.66	-6.73		ppb
Manganese	55-2	0.02	0.02	0.02	0.02	17.83	ppb
Molybdenum	94-1	0.02	0.01	0.03	0.02	53.24	ppb
Molybdenum	95-1	0.02	0.02	0.01	0.02	21.68	ppb
Molybdenum	96-1	0.03	0.02	0.02	0.02	20.62	ppb
Molybdenum	97-1	0.03	0.02	0.02	0.02	29.90	ppb
Molybdenum	98-1	0.02	0.01	0.02	0.02	14.33	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.14	-0.15	-0.15	-0.15		ppb
Phosphorus	31-2	-13.07	-15.96	-20.03	-16.35		ppb
Potassium	39-2	11.60	13.14	12.58	12.44	6.29	ppb
Rhodium	103-1				107		%
Rhodium	103-2				108		%
Scandium	45-1				111		%
Scandium	45-2				110		%
Selenium	82-1	0.21	0.24	0.07	0.17	50.55	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.27	0.64	0.18	0.18	250.61	ppb
Silicon	28-1	0.22	-0.34	-0.44	-0.19		ppb
Silver	107-1	0.01	0.01	0.01	0.01	23.45	ppb
Silver	109-1	0.01	0.01	0.00	0.01	30.68	ppb
Sodium	23-2	21.63	20.43	17.59	19.88	10.43	ppb
Strontium	86-1	-0.04	-0.03	-0.03	-0.03		ppb
Strontium	88-1	-0.03	-0.03	-0.03	-0.03		ppb
Sulfur	34-1	-1306.03	-1323.20	-1248.19	-1292.47		ppb
Terbium	159-1				104		%
Terbium	159-2				106		%
Thallium	203-1	0.02	0.01	0.02	0.02	18.90	ppb
Thallium	205-1	0.02	0.02	0.02	0.02	7.48	ppb
Tin	118-1	0.00	0.00	0.00	0.00	33.53	ppb
Titanium	47-1	0.01	0.01	0.01	0.01	28.30	ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166671BL	Instrumnet Name :	P8
Client Sample ID :	PBW671	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:41:41	DataFile Name :	020CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	-0.01	0.00	-0.01	0.00		ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				107		%
Yttrium	89-2				109		%
Zinc	66-2	0.12	0.11	0.06	0.10	34.26	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00	415.93	ppb
Zirconium	91-1	0.00	0.01	0.01	0.00	51.71	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166671BS	Instrumnet Name :	P8
Client Sample ID :	LCS671	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:45:02	DataFile Name :	021LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	39.79	42.09	44.36	42.08	5.43	ppb
Antimony	121-1	4.05	4.15	4.21	4.13	1.91	ppb
Arsenic	75-2	1.93	2.22	2.20	2.12	7.83	ppb
Barium	135-1	19.77	20.32	20.12	20.07	1.39	ppb
Barium	137-1	20.01	20.45	20.38	20.28	1.17	ppb
Beryllium	9-1	2.12	2.15	2.11	2.13	1.00	ppb
Bismuth	209-1				101		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Cadmium	108-1	2.24	2.05	2.15	2.15	4.63	ppb
Cadmium	106-1	0.54	1.20	0.91	0.88	37.68	ppb
Cadmium	111-1	1.95	2.02	2.08	2.02	3.12	ppb
Calcium	43-1	1044.33	1047.95	1053.60	1048.63	0.45	ppb
Calcium	44-1	1037.77	1057.58	1044.52	1046.62	0.96	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	3.79	4.05	3.98	3.94	3.40	ppb
Cobalt	59-2	2.11	2.15	2.16	2.14	1.11	ppb
Copper	63-2	4.57	4.68	4.64	4.63	1.26	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				105		%
Indium	115-1				106		%
Indium	115-2				108		%
Iron	54-2	438.82	435.52	441.01	438.45	0.63	ppb
Iron	56-2	427.50	432.65	436.81	432.32	1.08	ppb
Iron	57-2	429.02	433.00	434.66	432.23	0.67	ppb
Krypton	83-1						cps
Lead	206-1	2.00	2.03	2.02	2.01	0.80	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166671BS	Instrumnet Name :	P8
Client Sample ID :	LCS671	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:45:02	DataFile Name :	021LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2.01	2.10	2.02	2.04	2.41	ppb
Lead	208-1	2.01	2.06	2.04	2.04	1.14	ppb
Lithium	6-1				106		%
Magnesium	24-2	986.01	1001.38	1009.25	998.88	1.18	ppb
Manganese	55-2	2.05	2.13	2.06	2.08	2.24	ppb
Molybdenum	94-1	11.56	11.94	11.70	11.73	1.60	ppb
Molybdenum	95-1	9.97	10.01	9.87	9.95	0.69	ppb
Molybdenum	96-1	9.93	10.05	9.98	9.99	0.60	ppb
Molybdenum	97-1	9.85	9.95	9.91	9.91	0.49	ppb
Molybdenum	98-1	9.80	9.93	9.83	9.85	0.68	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	2.07	2.04	2.11	2.07	1.76	ppb
Phosphorus	31-2	27.23	26.11	32.52	28.62	11.96	ppb
Potassium	39-2	1006.53	1016.65	1034.17	1019.12	1.37	ppb
Rhodium	103-1				106		%
Rhodium	103-2				107		%
Scandium	45-1				110		%
Scandium	45-2				109		%
Selenium	82-1	10.72	11.52	10.81	11.02	3.99	ppb
Selenium	77-2	11.62	11.68	18.26	13.85	27.54	ppb
Selenium	78-2	13.38	12.77	8.13	11.42	25.14	ppb
Silicon	28-1	19.65	20.95	19.77	20.13	3.58	ppb
Silver	107-1	2.04	2.05	2.08	2.06	1.06	ppb
Silver	109-1	2.04	2.12	2.09	2.08	1.96	ppb
Sodium	23-2	1080.77	1090.93	1094.91	1088.87	0.67	ppb
Strontium	86-1	1.97	1.97	1.93	1.96	1.34	ppb
Strontium	88-1	1.94	1.96	1.97	1.96	0.81	ppb
Sulfur	34-1	-1024.47	-812.58	-1013.98	-950.34		ppb
Terbium	159-1				104		%
Terbium	159-2				104		%
Thallium	203-1	1.96	1.99	1.96	1.97	0.64	ppb
Thallium	205-1	1.94	2.01	1.98	1.98	1.82	ppb
Tin	118-1	10.14	10.43	10.39	10.32	1.49	ppb
Titanium	47-1	2.46	2.58	2.45	2.50	2.90	ppb
Uranium	238-1	1.78	1.84	1.84	1.82	1.75	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166671BS	Instrumnet Name :	P8
Client Sample ID :	LCS671	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:45:02	DataFile Name :	021LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	10.36	10.60	10.55	10.50	1.21	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				107		%
Yttrium	89-2				109		%
Zinc	66-2	10.64	11.13	10.32	10.70	3.81	ppb
Zirconium	90-1	1.93	2.00	1.99	1.97	2.02	ppb
Zirconium	91-1	1.91	1.97	1.99	1.95	1.93	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-01	Instrumnet Name :	P8
Client Sample ID :	ME2993	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:48:25	DataFile Name :	022AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	12.73	12.02	11.72	12.16	4.27	ppb
Antimony	121-1	0.03	0.03	0.03	0.03	9.16	ppb
Arsenic	75-2	0.60	0.64	0.75	0.66	12.19	ppb
Barium	135-1	8.18	7.99	8.03	8.07	1.20	ppb
Barium	137-1	8.25	8.25	8.28	8.26	0.27	ppb
Beryllium	9-1	0.01	0.02	0.03	0.02	37.55	ppb
Bismuth	209-1				97		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Cadmium	108-1	0.06	0.07	0.01	0.05	70.75	ppb
Cadmium	106-1	-0.76	-1.58	-1.50	-1.28		ppb
Cadmium	111-1	-0.05	-0.12	-0.11	-0.09		ppb
Calcium	43-1	440581.38	442733.26	439531.40	440948.68	0.37	ppb
Calcium	44-1	437907.98	439468.75	434468.59	437281.77	0.59	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.42	-0.41	-0.40	-0.41		ppb
Cobalt	59-2	0.04	0.03	0.05	0.04	23.14	ppb
Copper	63-2	-0.06	-0.07	-0.05	-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				107		%
Holmium	165-2				107		%
Indium	115-1				105		%
Indium	115-2				108		%
Iron	54-2	5034.87	5080.24	5050.76	5055.29	0.46	ppb
Iron	56-2	5340.64	5328.16	5193.85	5287.55	1.54	ppb
Iron	57-2	5051.28	5061.35	4999.34	5037.32	0.66	ppb
Krypton	83-1						cps
Lead	206-1	0.34	0.27	0.26	0.29	15.54	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-01	Instrumnet Name :	P8
Client Sample ID :	ME2993	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:48:25	DataFile Name :	022AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.34	0.25	0.25	0.28	18.39	ppb
Lead	208-1	0.34	0.27	0.25	0.29	16.77	ppb
Lithium	6-1				107		%
Magnesium	24-2	164115.83	163311.38	161041.81	162823.01	0.98	ppb
Manganese	55-2	70.16	71.08	69.73	70.32	0.98	ppb
Molybdenum	94-1	1.24	1.26	1.28	1.26	1.79	ppb
Molybdenum	95-1	1.41	1.46	1.39	1.42	2.65	ppb
Molybdenum	96-1	1.40	1.33	1.42	1.38	3.74	ppb
Molybdenum	97-1	1.39	1.45	1.42	1.42	2.12	ppb
Molybdenum	98-1	1.40	1.39	1.42	1.40	1.28	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.30	-0.28	-0.38	-0.32		ppb
Phosphorus	31-2	1.34	-15.06	-10.94	-8.22		ppb
Potassium	39-2	4113.98	4126.76	4112.75	4117.83	0.19	ppb
Rhodium	103-1				100		%
Rhodium	103-2				103		%
Scandium	45-1				114		%
Scandium	45-2				114		%
Selenium	82-1	0.20	0.22	0.40	0.27	41.54	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	0.39	-0.50	0.18	0.02	2115.27	ppb
Silicon	28-1	8175.37	8258.68	8308.97	8247.67	0.82	ppb
Silver	107-1	0.02	0.01	0.02	0.02	11.58	ppb
Silver	109-1	0.01	0.01	0.01	0.01	15.43	ppb
Sodium	23-2	48300.42	47625.20	46961.26	47628.96	1.41	ppb
Strontium	86-1	12073.61	11962.26	12055.39	12030.42	0.50	ppb
Strontium	88-1	12151.15	12082.32	12218.81	12150.76	0.56	ppb
Sulfur	34-1	533723.09	536298.30	529853.80	533291.73	0.61	ppb
Terbium	159-1				105		%
Terbium	159-2				106		%
Thallium	203-1	0.04	0.03	0.03	0.03	6.73	ppb
Thallium	205-1	0.04	0.03	0.03	0.03	13.21	ppb
Tin	118-1	0.06	0.06	0.04	0.05	15.79	ppb
Titanium	47-1	1.06	1.07	1.02	1.05	2.32	ppb
Uranium	238-1	0.84	0.82	0.82	0.83	1.77	ppb

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-01	Instrumnet Name :	P8
Client Sample ID :	ME2993	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:48:25	DataFile Name :	022AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.03	0.04	0.04	0.04	11.89	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				110		%
Yttrium	89-2				111		%
Zinc	66-2	1.12	1.03	1.06	1.07	4.03	ppb
Zirconium	90-1	0.04	0.04	0.04	0.04	9.18	ppb
Zirconium	91-1	0.05	0.04	0.04	0.04	20.20	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-02	Instrumnet Name :	P8
Client Sample ID :	ME2993D	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:51:40	DataFile Name :	023AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	13.34	11.92	10.84	12.04	10.45	ppb
Antimony	121-1	0.03	0.03	0.03	0.03	4.31	ppb
Arsenic	75-2	0.50	0.52	0.68	0.57	17.90	ppb
Barium	135-1	7.92	8.02	7.97	7.97	0.66	ppb
Barium	137-1	8.19	8.13	8.29	8.20	0.98	ppb
Beryllium	9-1	0.02	0.01	0.02	0.02	21.84	ppb
Bismuth	209-1				98		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Cadmium	108-1	0.08	0.06	0.06	0.06	17.04	ppb
Cadmium	106-1	-0.48	-0.78	-0.97	-0.74		ppb
Cadmium	111-1	-0.04	-0.06	-0.08	-0.06		ppb
Calcium	43-1	442923.20	440220.76	443421.18	442188.38	0.39	ppb
Calcium	44-1	439355.75	447822.25	439119.64	442099.21	1.12	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.32	-0.33	-0.31	-0.32		ppb
Cobalt	59-2	0.04	0.04	0.04	0.04	4.86	ppb
Copper	63-2	-0.07	-0.06	-0.04	-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				110		%
Holmium	165-2				110		%
Indium	115-1				110		%
Indium	115-2				115		%
Iron	54-2	5052.52	4958.89	5013.51	5008.30	0.94	ppb
Iron	56-2	5344.69	5289.64	5262.88	5299.07	0.79	ppb
Iron	57-2	5019.01	4978.87	4944.63	4980.84	0.75	ppb
Krypton	83-1						cps
Lead	206-1	0.23	0.23	0.24	0.23	2.01	ppb

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-02	Instrumnet Name :	P8
Client Sample ID :	ME2993D	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:51:40	DataFile Name :	023AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.22	0.22	0.20	0.21	4.55	ppb
Lead	208-1	0.23	0.22	0.22	0.22	0.89	ppb
Lithium	6-1				110		%
Magnesium	24-2	163815.59	162978.23	164416.98	163736.93	0.44	ppb
Manganese	55-2	68.22	66.61	67.62	67.48	1.20	ppb
Molybdenum	94-1	1.18	1.18	1.23	1.20	2.19	ppb
Molybdenum	95-1	1.40	1.40	1.37	1.39	1.36	ppb
Molybdenum	96-1	1.36	1.41	1.35	1.38	2.42	ppb
Molybdenum	97-1	1.39	1.38	1.41	1.39	1.07	ppb
Molybdenum	98-1	1.40	1.37	1.40	1.39	1.21	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.35	-0.28	-0.22	-0.28		ppb
Phosphorus	31-2	-5.52	-11.17	-14.31	-10.33		ppb
Potassium	39-2	4170.04	4088.10	4104.74	4120.96	1.05	ppb
Rhodium	103-1				105		%
Rhodium	103-2				105		%
Scandium	45-1				120		%
Scandium	45-2				118		%
Selenium	82-1	0.32	0.47	0.23	0.34	34.99	ppb
Selenium	77-2	0.72	0.00	2.21	0.98	115.33	ppb
Selenium	78-2	-0.08	0.15	0.15	0.08	174.09	ppb
Silicon	28-1	8233.44	8383.34	8085.37	8234.05	1.81	ppb
Silver	107-1	0.01	0.01	0.01	0.01	7.36	ppb
Silver	109-1	0.01	0.01	0.01	0.01	19.90	ppb
Sodium	23-2	47541.39	46277.45	47480.18	47099.68	1.51	ppb
Strontium	86-1	12260.90	12315.77	12164.52	12247.06	0.63	ppb
Strontium	88-1	12231.63	12243.28	12343.89	12272.93	0.50	ppb
Sulfur	34-1	530648.73	537851.39	532263.23	533587.78	0.71	ppb
Terbium	159-1				108		%
Terbium	159-2				110		%
Thallium	203-1	0.03	0.03	0.02	0.02	13.50	ppb
Thallium	205-1	0.03	0.03	0.02	0.02	8.77	ppb
Tin	118-1	0.07	0.06	0.06	0.06	7.52	ppb
Titanium	47-1	0.98	1.04	1.16	1.06	8.66	ppb
Uranium	238-1	0.84	0.85	0.83	0.84	1.02	ppb

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-02	Instrumnet Name :	P8
Client Sample ID :	ME2993D	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:51:40	DataFile Name :	023AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.03	0.04	0.05	0.04	28.26	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				114		%
Yttrium	89-2				116		%
Zinc	66-2	0.86	0.96	1.01	0.94	8.41	ppb
Zirconium	90-1	0.03	0.03	0.03	0.03	6.10	ppb
Zirconium	91-1	0.04	0.03	0.04	0.04	12.83	ppb

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-01LX5	Instrumnet Name :	P8
Client Sample ID :	ME2993L	Dilution Factor :	5
Date & Time Acquired :	2025-02-13 12:54:57	DataFile Name :	024AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2.75	2.86	2.97	2.86	3.91	ppb
Antimony	121-1	0.01	0.01	0.01	0.01	31.19	ppb
Arsenic	75-2	0.09	0.06	0.14	0.10	40.44	ppb
Barium	135-1	1.62	1.58	1.62	1.61	1.26	ppb
Barium	137-1	1.62	1.62	1.62	1.62	0.05	ppb
Beryllium	9-1	0.01	0.01	0.02	0.01	47.74	ppb
Bismuth	209-1				101		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Cadmium	108-1	0.04	-0.03	0.04	0.02	214.09	ppb
Cadmium	106-1	-0.78	-0.73	-0.76	-0.76		ppb
Cadmium	111-1	-0.06	-0.05	-0.06	-0.06		ppb
Calcium	43-1	89709.49	89996.79	90077.47	89927.92	0.22	ppb
Calcium	44-1	88918.17	89107.26	88695.93	88907.12	0.23	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.13	-0.12	-0.17	-0.14		ppb
Cobalt	59-2	-0.01	-0.01	-0.01	-0.01		ppb
Copper	63-2	-0.05	-0.08	-0.07	-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				108		%
Holmium	165-2				109		%
Indium	115-1				109		%
Indium	115-2				117		%
Iron	54-2	1038.83	1030.32	1037.70	1035.61	0.45	ppb
Iron	56-2	1115.17	1096.61	1088.77	1100.18	1.23	ppb
Iron	57-2	1021.80	1046.82	1029.87	1032.83	1.24	ppb
Krypton	83-1						cps
Lead	206-1	0.12	0.13	0.13	0.13	2.38	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-01LX5	Instrumnet Name :	P8
Client Sample ID :	ME2993L	Dilution Factor :	5
Date & Time Acquired :	2025-02-13 12:54:57	DataFile Name :	024AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.13	0.12	0.13	0.13	2.59	ppb
Lead	208-1	0.12	0.13	0.13	0.13	1.42	ppb
Lithium	6-1				112		%
Magnesium	24-2	33498.70	34063.47	33582.84	33715.00	0.90	ppb
Manganese	55-2	14.40	14.18	14.33	14.30	0.80	ppb
Molybdenum	94-1	0.26	0.24	0.26	0.26	5.32	ppb
Molybdenum	95-1	0.31	0.30	0.31	0.31	2.10	ppb
Molybdenum	96-1	0.29	0.29	0.29	0.29	1.45	ppb
Molybdenum	97-1	0.31	0.32	0.30	0.31	3.52	ppb
Molybdenum	98-1	0.29	0.28	0.27	0.28	3.59	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.13	-0.16	-0.10	-0.13		ppb
Phosphorus	31-2	-21.75	-20.93	-15.66	-19.45		ppb
Potassium	39-2	837.93	833.53	839.87	837.11	0.39	ppb
Rhodium	103-1				108		%
Rhodium	103-2				108		%
Scandium	45-1				117		%
Scandium	45-2				115		%
Selenium	82-1	0.23	0.18	-0.09	0.11	155.87	ppb
Selenium	77-2	1.54	0.00	0.00	0.51	173.21	ppb
Selenium	78-2	-0.27	-0.06	-0.28	-0.21		ppb
Silicon	28-1	1664.99	1618.06	1655.15	1646.06	1.50	ppb
Silver	107-1	0.01	0.01	0.01	0.01	16.44	ppb
Silver	109-1	0.01	0.01	0.00	0.00	6.49	ppb
Sodium	23-2	9816.81	9786.72	9428.41	9677.31	2.23	ppb
Strontium	86-1	2510.10	2469.92	2449.70	2476.58	1.24	ppb
Strontium	88-1	2501.98	2511.49	2456.61	2490.03	1.18	ppb
Sulfur	34-1	107260.37	105311.88	104958.26	105843.50	1.17	ppb
Terbium	159-1				107		%
Terbium	159-2				108		%
Thallium	203-1	0.02	0.02	0.02	0.02	2.24	ppb
Thallium	205-1	0.01	0.01	0.02	0.02	15.14	ppb
Tin	118-1	0.03	0.02	0.02	0.02	18.58	ppb
Titanium	47-1	0.26	0.20	0.21	0.23	14.61	ppb
Uranium	238-1	0.16	0.16	0.15	0.16	1.92	ppb

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-01LX5	Instrumnet Name :	P8
Client Sample ID :	ME2993L	Dilution Factor :	5
Date & Time Acquired :	2025-02-13 12:54:57	DataFile Name :	024AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.01	0.01	0.00	121.87	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				111		%
Yttrium	89-2				112		%
Zinc	66-2	0.42	0.31	0.38	0.37	15.43	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	18.00	ppb
Zirconium	91-1	0.01	0.01	0.01	0.01	29.43	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-03	Instrumnet Name :	P8
Client Sample ID :	ME2993S	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:58:09	DataFile Name :	025AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1808.89	1818.94	1807.71	1811.85	0.34	ppb
Antimony	121-1	104.28	104.70	104.36	104.45	0.21	ppb
Arsenic	75-2	41.61	41.61	40.93	41.38	0.94	ppb
Barium	135-1	1950.34	1998.60	1947.05	1965.33	1.47	ppb
Barium	137-1	1961.00	2014.11	1976.76	1983.96	1.37	ppb
Beryllium	9-1	47.25	48.18	46.32	47.25	1.97	ppb
Bismuth	209-1				99		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Cadmium	108-1	37.94	39.26	39.18	38.79	1.90	ppb
Cadmium	106-1	37.47	37.12	38.21	37.60	1.47	ppb
Cadmium	111-1	46.62	46.89	46.69	46.73	0.30	ppb
Calcium	43-1	441688.46	430746.61	435623.91	436019.66	1.26	ppb
Calcium	44-1	440376.94	425455.29	430328.54	432053.59	1.76	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	187.04	186.61	185.48	186.38	0.43	ppb
Cobalt	59-2	486.48	490.96	488.14	488.53	0.46	ppb
Copper	63-2	232.62	231.43	230.79	231.61	0.40	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				110		%
Holmium	165-2				111		%
Indium	115-1				110		%
Indium	115-2				119		%
Iron	54-2	6092.16	6107.63	6073.58	6091.12	0.28	ppb
Iron	56-2	6243.73	6215.05	6158.61	6205.80	0.70	ppb
Iron	57-2	5901.48	5920.83	5825.68	5882.66	0.85	ppb
Krypton	83-1						cps
Lead	206-1	19.31	19.41	19.70	19.47	1.04	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-03	Instrumnet Name :	P8
Client Sample ID :	ME2993S	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:58:09	DataFile Name :	025AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	19.50	19.29	19.55	19.44	0.71	ppb
Lead	208-1	19.48	19.45	19.68	19.54	0.63	ppb
Lithium	6-1				112		%
Magnesium	24-2	162961.91	160261.70	160423.85	161215.82	0.94	ppb
Manganese	55-2	525.54	526.38	528.97	526.97	0.34	ppb
Molybdenum	94-1	1.24	1.23	1.25	1.24	0.71	ppb
Molybdenum	95-1	1.37	1.42	1.42	1.40	2.19	ppb
Molybdenum	96-1	1.37	1.39	1.39	1.38	0.58	ppb
Molybdenum	97-1	1.38	1.35	1.38	1.37	0.97	ppb
Molybdenum	98-1	1.36	1.42	1.40	1.39	2.21	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	461.93	459.33	456.70	459.32	0.57	ppb
Phosphorus	31-2	-12.99	-7.21	-11.09	-10.43		ppb
Potassium	39-2	4051.74	4073.97	4052.10	4059.27	0.31	ppb
Rhodium	103-1				105		%
Rhodium	103-2				107		%
Scandium	45-1				119		%
Scandium	45-2				120		%
Selenium	82-1	22.07	21.62	21.80	21.83	1.03	ppb
Selenium	77-2	24.03	25.39	26.77	25.39	5.40	ppb
Selenium	78-2	24.74	18.68	19.90	21.11	15.19	ppb
Silicon	28-1	8111.40	7881.75	7873.76	7955.64	1.70	ppb
Silver	107-1	42.89	43.52	43.77	43.39	1.05	ppb
Silver	109-1	43.36	44.28	44.52	44.05	1.39	ppb
Sodium	23-2	47597.99	47181.84	46415.14	47064.99	1.27	ppb
Strontium	86-1	11897.30	11997.22	12044.62	11979.71	0.63	ppb
Strontium	88-1	11912.82	11735.25	12015.56	11887.87	1.19	ppb
Sulfur	34-1	520307.50	509145.21	519425.05	516292.59	1.20	ppb
Terbium	159-1				109		%
Terbium	159-2				110		%
Thallium	203-1	47.07	47.28	48.31	47.55	1.40	ppb
Thallium	205-1	51.63	51.38	51.95	51.66	0.55	ppb
Tin	118-1	0.09	0.10	0.08	0.09	9.14	ppb
Titanium	47-1	0.99	0.96	1.00	0.98	2.10	ppb
Uranium	238-1	0.82	0.80	0.81	0.81	1.21	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-03	Instrumnet Name :	P8
Client Sample ID :	ME2993S	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:58:09	DataFile Name :	025AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	507.87	504.57	493.17	501.87	1.54	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				113		%
Yttrium	89-2				117		%
Zinc	66-2	452.60	451.63	447.72	450.65	0.57	ppb
Zirconium	90-1	0.05	0.05	0.04	0.05	7.41	ppb
Zirconium	91-1	0.08	0.08	0.07	0.08	7.03	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-04	Instrumnet Name :	P8
Client Sample ID :	ME29C1	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:01:25	DataFile Name :	026AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	51.63	52.50	49.55	51.22	2.96	ppb
Antimony	121-1	0.43	0.43	0.44	0.43	1.46	ppb
Arsenic	75-2	1.64	1.65	1.59	1.63	1.78	ppb
Barium	135-1	145.37	141.74	146.38	144.50	1.69	ppb
Barium	137-1	144.95	143.36	148.81	145.71	1.92	ppb
Beryllium	9-1	0.03	0.03	0.04	0.03	6.51	ppb
Bismuth	209-1				98		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Cadmium	108-1	0.40	0.46	0.41	0.42	7.96	ppb
Cadmium	106-1	-0.76	-0.67	-0.14	-0.53		ppb
Cadmium	111-1	0.02	0.02	0.06	0.04	68.42	ppb
Calcium	43-1	272917.68	272514.74	266704.82	270712.41	1.28	ppb
Calcium	44-1	270023.94	271620.01	263435.75	268359.90	1.62	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.02	-0.03	-0.06	-0.04		ppb
Cobalt	59-2	11.86	11.76	11.85	11.82	0.45	ppb
Copper	63-2	2.63	2.66	2.73	2.67	1.96	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				112		%
Holmium	165-2				112		%
Indium	115-1				112		%
Indium	115-2				124		%
Iron	54-2	1449.77	1456.74	1461.22	1455.91	0.40	ppb
Iron	56-2	1536.39	1555.24	1554.77	1548.80	0.69	ppb
Iron	57-2	1460.84	1450.36	1471.40	1460.86	0.72	ppb
Krypton	83-1						cps
Lead	206-1	0.88	0.91	0.93	0.91	2.84	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-04	Instrumnet Name :	P8
Client Sample ID :	ME29C1	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:01:25	DataFile Name :	026AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.86	0.86	0.89	0.87	2.25	ppb
Lead	208-1	0.86	0.89	0.91	0.88	3.16	ppb
Lithium	6-1				116		%
Magnesium	24-2	180308.14	179583.08	182656.03	180849.08	0.89	ppb
Manganese	55-2	2278.41	2307.98	2283.97	2290.12	0.69	ppb
Molybdenum	94-1	18.27	18.37	18.45	18.36	0.50	ppb
Molybdenum	95-1	20.87	20.62	20.87	20.79	0.70	ppb
Molybdenum	96-1	20.49	20.25	20.74	20.49	1.20	ppb
Molybdenum	97-1	20.76	20.56	20.96	20.76	0.97	ppb
Molybdenum	98-1	20.58	20.48	20.52	20.53	0.25	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	12.96	13.13	12.96	13.02	0.77	ppb
Phosphorus	31-2	77.99	77.43	76.12	77.18	1.25	ppb
Potassium	39-2	8100.18	8212.16	8356.38	8222.90	1.56	ppb
Rhodium	103-1				107		%
Rhodium	103-2				108		%
Scandium	45-1				124		%
Scandium	45-2				122		%
Selenium	82-1	6.96	7.28	7.36	7.20	2.92	ppb
Selenium	77-2	1.41	0.00	1.39	0.93	86.61	ppb
Selenium	78-2	-0.29	0.54	0.93	0.39	159.48	ppb
Silicon	28-1	6563.67	6652.87	6598.90	6605.15	0.68	ppb
Silver	107-1	0.09	0.08	0.08	0.08	7.58	ppb
Silver	109-1	0.08	0.07	0.08	0.08	7.62	ppb
Sodium	23-2	197226.33	200258.37	200037.11	199173.94	0.85	ppb
Strontium	86-1	3780.87	3740.47	3868.64	3796.66	1.73	ppb
Strontium	88-1	3819.19	3734.01	3798.55	3783.92	1.17	ppb
Sulfur	34-1	147121.35	148936.34	145553.83	147203.84	1.15	ppb
Terbium	159-1				109		%
Terbium	159-2				112		%
Thallium	203-1	0.12	0.14	0.15	0.14	12.14	ppb
Thallium	205-1	0.11	0.15	0.15	0.14	15.04	ppb
Tin	118-1	0.09	0.08	0.08	0.09	4.23	ppb
Titanium	47-1	2.01	2.10	2.94	2.35	21.85	ppb
Uranium	238-1	45.17	44.80	44.96	44.98	0.41	ppb

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-04	Instrumnet Name :	P8
Client Sample ID :	ME29C1	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:01:25	DataFile Name :	026AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.56	0.53	0.56	0.55	3.37	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				117		%
Yttrium	89-2				121		%
Zinc	66-2	6.05	6.22	6.22	6.17	1.60	ppb
Zirconium	90-1	0.56	0.57	0.56	0.56	1.59	ppb
Zirconium	91-1	0.58	0.58	0.59	0.58	1.21	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-05	Instrumnet Name :	P8
Client Sample ID :	ME29C2	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:04:37	DataFile Name :	027AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	18.50	20.27	20.14	19.64	5.01	ppb
Antimony	121-1	0.20	0.21	0.19	0.20	5.91	ppb
Arsenic	75-2	0.41	0.35	0.45	0.41	12.36	ppb
Barium	135-1	91.75	92.02	90.18	91.32	1.09	ppb
Barium	137-1	94.06	94.14	92.41	93.54	1.04	ppb
Beryllium	9-1	0.01	0.01	0.01	0.01	17.56	ppb
Bismuth	209-1				103		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Cadmium	108-1	1.47	1.33	1.41	1.40	5.16	ppb
Cadmium	106-1	-0.13	-1.08	0.11	-0.37		ppb
Cadmium	111-1	0.05	-0.05	0.06	0.02	328.19	ppb
Calcium	43-1	94652.44	96591.19	95494.38	95579.33	1.02	ppb
Calcium	44-1	94817.82	95207.93	95063.59	95029.78	0.21	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.37	-0.34	-0.33	-0.35		ppb
Cobalt	59-2	4.41	4.60	4.58	4.53	2.31	ppb
Copper	63-2	0.65	0.61	0.65	0.64	3.30	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				114		%
Holmium	165-2				113		%
Indium	115-1				115		%
Indium	115-2				123		%
Iron	54-2	2902.41	2925.42	2919.20	2915.68	0.41	ppb
Iron	56-2	2993.60	3034.66	3043.31	3023.86	0.88	ppb
Iron	57-2	2838.56	2887.86	2893.75	2873.39	1.05	ppb
Krypton	83-1						cps
Lead	206-1	1.31	1.34	1.34	1.33	1.14	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-05	Instrumnet Name :	P8
Client Sample ID :	ME29C2	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:04:37	DataFile Name :	027AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1.26	1.25	1.26	1.26	0.54	ppb
Lead	208-1	1.29	1.29	1.29	1.29	0.24	ppb
Lithium	6-1				120		%
Magnesium	24-2	111532.96	115116.79	112576.81	113075.52	1.63	ppb
Manganese	55-2	953.51	991.20	953.26	965.99	2.26	ppb
Molybdenum	94-1	91.41	93.58	94.59	93.19	1.75	ppb
Molybdenum	95-1	110.52	113.07	113.95	112.51	1.58	ppb
Molybdenum	96-1	108.28	110.33	110.85	109.82	1.24	ppb
Molybdenum	97-1	112.81	113.16	113.79	113.25	0.44	ppb
Molybdenum	98-1	122.72	121.19	120.46	121.46	0.95	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	6.70	6.94	7.04	6.89	2.52	ppb
Phosphorus	31-2	13.65	16.63	16.84	15.71	11.38	ppb
Potassium	39-2	11185.66	10993.35	11127.14	11102.05	0.89	ppb
Rhodium	103-1				111		%
Rhodium	103-2				110		%
Scandium	45-1				124		%
Scandium	45-2				122		%
Selenium	82-1	2.42	2.57	2.74	2.58	6.22	ppb
Selenium	77-2	0.71	0.00	0.71	0.47	86.60	ppb
Selenium	78-2	-0.29	0.12	0.96	0.27	241.50	ppb
Silicon	28-1	2864.34	2932.59	2962.86	2919.93	1.73	ppb
Silver	107-1	0.02	0.02	0.01	0.02	14.61	ppb
Silver	109-1	0.02	0.01	0.02	0.02	16.14	ppb
Sodium	23-2	81412.09	83121.33	82194.97	82242.80	1.04	ppb
Strontium	86-1	1111.10	1146.88	1121.27	1126.42	1.64	ppb
Strontium	88-1	1127.29	1125.76	1136.89	1129.98	0.53	ppb
Sulfur	34-1	87078.87	89191.25	89508.56	88592.89	1.49	ppb
Terbium	159-1				113		%
Terbium	159-2				113		%
Thallium	203-1	0.11	0.11	0.11	0.11	4.29	ppb
Thallium	205-1	0.11	0.10	0.11	0.11	3.15	ppb
Tin	118-1	0.63	0.63	0.61	0.62	1.85	ppb
Titanium	47-1	0.80	0.82	0.74	0.79	5.18	ppb
Uranium	238-1	3.11	3.16	3.17	3.14	1.05	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-05	Instrumnet Name :	P8
Client Sample ID :	ME29C2	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:04:37	DataFile Name :	027AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.09	0.08	0.08	0.08	6.56	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				119		%
Yttrium	89-2				120		%
Zinc	66-2	2.53	2.75	2.64	2.64	4.28	ppb
Zirconium	90-1	0.06	0.06	0.06	0.06	3.82	ppb
Zirconium	91-1	0.06	0.07	0.07	0.06	9.16	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-06	Instrumnet Name :	P8
Client Sample ID :	ME29C3	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:07:44	DataFile Name :	028AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	4.31	3.74	4.34	4.13	8.23	ppb
Antimony	121-1	0.14	0.12	0.13	0.13	7.76	ppb
Arsenic	75-2	0.59	0.59	0.61	0.60	2.66	ppb
Barium	135-1	48.07	48.35	49.20	48.54	1.21	ppb
Barium	137-1	48.96	48.93	49.31	49.07	0.43	ppb
Beryllium	9-1	0.01	0.02	0.02	0.02	15.28	ppb
Bismuth	209-1				102		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Cadmium	108-1	0.15	0.12	0.11	0.13	18.97	ppb
Cadmium	106-1	-0.68	-0.45	-0.01	-0.38		ppb
Cadmium	111-1	0.04	0.06	0.08	0.06	34.71	ppb
Calcium	43-1	177871.40	173204.55	176893.75	175989.90	1.40	ppb
Calcium	44-1	175302.78	174560.18	175506.82	175123.26	0.28	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.41	-0.43	-0.40	-0.41		ppb
Cobalt	59-2	0.13	0.14	0.15	0.14	4.14	ppb
Copper	63-2	0.64	0.68	0.66	0.66	3.28	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				110		%
Holmium	165-2				109		%
Indium	115-1				112		%
Indium	115-2				115		%
Iron	54-2	10.67	11.21	11.83	11.24	5.17	ppb
Iron	56-2	12.17	12.25	12.82	12.41	2.86	ppb
Iron	57-2	17.62	15.99	16.24	16.61	5.27	ppb
Krypton	83-1						cps
Lead	206-1	0.47	0.50	0.51	0.49	3.65	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-06	Instrumnet Name :	P8
Client Sample ID :	ME29C3	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:07:44	DataFile Name :	028AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.50	0.46	0.45	0.47	5.69	ppb
Lead	208-1	0.48	0.47	0.47	0.48	1.05	ppb
Lithium	6-1				114		%
Magnesium	24-2	41205.11	40890.41	42208.37	41434.63	1.66	ppb
Manganese	55-2	15.37	14.69	15.27	15.11	2.43	ppb
Molybdenum	94-1	1.50	1.54	1.52	1.52	1.11	ppb
Molybdenum	95-1	1.53	1.54	1.50	1.53	1.22	ppb
Molybdenum	96-1	1.50	1.53	1.52	1.52	1.03	ppb
Molybdenum	97-1	1.53	1.53	1.56	1.54	1.42	ppb
Molybdenum	98-1	1.50	1.54	1.56	1.53	1.87	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.95	0.95	1.04	0.98	5.58	ppb
Phosphorus	31-2	-1.08	0.69	0.75	0.12	893.21	ppb
Potassium	39-2	1930.22	1951.70	1998.35	1960.09	1.78	ppb
Rhodium	103-1				108		%
Rhodium	103-2				106		%
Scandium	45-1				120		%
Scandium	45-2				116		%
Selenium	82-1	0.36	0.44	0.38	0.39	11.08	ppb
Selenium	77-2	0.73	0.00	0.00	0.24	173.21	ppb
Selenium	78-2	-0.07	0.15	0.39	0.16	144.97	ppb
Silicon	28-1	3279.83	3229.25	3292.69	3267.26	1.03	ppb
Silver	107-1	0.01	0.01	0.01	0.01	23.58	ppb
Silver	109-1	0.01	0.01	0.01	0.01	17.10	ppb
Sodium	23-2	90478.93	90137.45	92517.14	91044.51	1.41	ppb
Strontium	86-1	1832.81	1875.93	1889.11	1865.95	1.58	ppb
Strontium	88-1	1862.74	1878.44	1874.19	1871.79	0.43	ppb
Sulfur	34-1	48245.95	47373.97	48471.69	48030.53	1.21	ppb
Terbium	159-1				109		%
Terbium	159-2				109		%
Thallium	203-1	0.03	0.02	0.03	0.03	10.22	ppb
Thallium	205-1	0.03	0.03	0.02	0.03	15.01	ppb
Tin	118-1	-0.01	-0.01	-0.01	-0.01		ppb
Titanium	47-1	0.42	0.46	0.44	0.44	3.68	ppb
Uranium	238-1	6.86	6.93	6.84	6.88	0.67	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-06	Instrumnet Name :	P8
Client Sample ID :	ME29C3	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:07:44	DataFile Name :	028AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.34	0.30	0.35	0.33	7.47	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				114		%
Yttrium	89-2				114		%
Zinc	66-2	1.22	1.20	1.29	1.23	3.76	ppb
Zirconium	90-1	0.12	0.14	0.18	0.15	20.72	ppb
Zirconium	91-1	0.13	0.13	0.13	0.13	1.27	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-07	Instrumnet Name :	P8
Client Sample ID :	ME29C4	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:10:57	DataFile Name :	029AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3.65	3.95	3.85	3.82	4.03	ppb
Antimony	121-1	0.01	0.01	0.01	0.01	26.36	ppb
Arsenic	75-2	0.08	-0.01	0.05	0.04	122.86	ppb
Barium	135-1	10.12	10.25	10.26	10.21	0.78	ppb
Barium	137-1	10.36	10.64	10.13	10.37	2.48	ppb
Beryllium	9-1	0.01	0.02	0.02	0.02	7.92	ppb
Bismuth	209-1				91		%
Bismuth	209-2				94		%
Bromine	81-1						cps
Cadmium	108-1	0.02	0.04	0.01	0.02	67.64	ppb
Cadmium	106-1	0.31	-0.31	-0.13	-0.04		ppb
Cadmium	111-1	0.03	-0.02	0.00	0.00	688.84	ppb
Calcium	43-1	461050.67	467621.20	455223.59	461298.49	1.34	ppb
Calcium	44-1	455419.68	460702.35	456636.06	457586.03	0.60	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.45	-0.45	-0.43	-0.45		ppb
Cobalt	59-2	-0.02	-0.02	-0.02	-0.02		ppb
Copper	63-2	0.00	0.01	0.00	0.01	65.55	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				104		%
Holmium	165-2				106		%
Indium	115-1				102		%
Indium	115-2				106		%
Iron	54-2	9.72	7.80	10.08	9.20	13.34	ppb
Iron	56-2	10.13	9.95	10.13	10.07	1.00	ppb
Iron	57-2	20.69	23.53	22.15	22.12	6.41	ppb
Krypton	83-1						cps
Lead	206-1	0.09	0.10	0.10	0.09	2.46	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-07	Instrumnet Name :	P8
Client Sample ID :	ME29C4	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:10:57	DataFile Name :	029AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.09	0.10	0.10	0.09	6.42	ppb
Lead	208-1	0.09	0.10	0.09	0.09	4.29	ppb
Lithium	6-1				107		%
Magnesium	24-2	127109.69	125141.67	122830.56	125027.31	1.71	ppb
Manganese	55-2	20.46	20.42	20.31	20.40	0.40	ppb
Molybdenum	94-1	0.06	0.05	0.07	0.06	20.76	ppb
Molybdenum	95-1	-0.02	-0.02	-0.02	-0.02		ppb
Molybdenum	96-1	-0.01	-0.02	-0.01	-0.01		ppb
Molybdenum	97-1	-0.03	-0.02	-0.03	-0.02		ppb
Molybdenum	98-1	-0.03	-0.03	-0.02	-0.03		ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.37	-0.33	-0.44	-0.38		ppb
Phosphorus	31-2	-13.50	-15.52	-9.02	-12.68		ppb
Potassium	39-2	4105.73	4039.87	4041.85	4062.48	0.92	ppb
Rhodium	103-1				97		%
Rhodium	103-2				100		%
Scandium	45-1				112		%
Scandium	45-2				114		%
Selenium	82-1	0.40	0.25	1.15	0.60	80.70	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	0.16	-0.06	0.40	0.17	134.02	ppb
Silicon	28-1	6203.23	6263.49	6236.52	6234.41	0.48	ppb
Silver	107-1	0.02	0.03	0.04	0.03	24.00	ppb
Silver	109-1	0.02	0.03	0.04	0.03	33.63	ppb
Sodium	23-2	245465.01	243549.13	237987.55	242333.90	1.60	ppb
Strontium	86-1	15123.34	15114.29	15102.63	15113.42	0.07	ppb
Strontium	88-1	15373.44	15034.94	15141.56	15183.31	1.14	ppb
Sulfur	34-1	400807.19	408206.32	394850.36	401287.96	1.67	ppb
Terbium	159-1				103		%
Terbium	159-2				105		%
Thallium	203-1	0.02	0.03	0.03	0.02	24.63	ppb
Thallium	205-1	0.02	0.02	0.03	0.02	22.12	ppb
Tin	118-1	-0.02	-0.02	-0.02	-0.02		ppb
Titanium	47-1	0.70	0.69	0.73	0.71	2.97	ppb
Uranium	238-1	0.04	0.04	0.04	0.04	2.71	ppb

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-07	Instrumnet Name :	P8
Client Sample ID :	ME29C4	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:10:57	DataFile Name :	029AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.08	0.07	0.07	0.08	8.68	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				107		%
Yttrium	89-2				112		%
Zinc	66-2	0.29	0.13	0.20	0.21	39.13	ppb
Zirconium	90-1	0.05	0.04	0.04	0.04	6.74	ppb
Zirconium	91-1	0.05	0.04	0.04	0.04	1.05	ppb

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166703BL	Instrumnet Name :	P8
Client Sample ID :	PBW703	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:14:15	DataFile Name :	030CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.24	-0.02	-0.06	0.06	291.20	ppb
Antimony	121-1	0.00	0.00	0.00	0.00	37.66	ppb
Arsenic	75-2	-0.02	0.01	-0.01	-0.01		ppb
Barium	135-1	-0.04	-0.04	-0.03	-0.04		ppb
Barium	137-1	-0.05	-0.05	-0.04	-0.05		ppb
Beryllium	9-1	0.01	0.00	0.01	0.01	64.05	ppb
Bismuth	209-1				101		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Cadmium	108-1	-0.01	0.02	0.04	0.02	152.97	ppb
Cadmium	106-1	-0.07	-0.16	-0.16	-0.13		ppb
Cadmium	111-1	0.00	-0.01	-0.02	-0.01		ppb
Calcium	43-1	22.55	18.36	16.03	18.98	17.41	ppb
Calcium	44-1	17.86	14.54	13.71	15.37	14.29	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.10	-0.02	-0.05	-0.06		ppb
Cobalt	59-2	-0.02	-0.02	-0.02	-0.02		ppb
Copper	63-2	0.03	0.02	-0.02	0.01	424.68	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				105		%
Indium	115-1				109		%
Indium	115-2				107		%
Iron	54-2	-1.18	-0.96	-0.92	-1.02		ppb
Iron	56-2	-0.77	-0.74	-0.79	-0.77		ppb
Iron	57-2	0.08	-0.42	0.31	-0.01		ppb
Krypton	83-1						cps
Lead	206-1	0.05	0.05	0.05	0.05	3.47	ppb

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166703BL	Instrumnet Name :	P8
Client Sample ID :	PBW703	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:14:15	DataFile Name :	030CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.04	0.05	0.04	0.04	6.67	ppb
Lead	208-1	0.05	0.05	0.04	0.04	1.62	ppb
Lithium	6-1				112		%
Magnesium	24-2	-1.43	-1.96	-2.92	-2.10		ppb
Manganese	55-2	-0.01	-0.03	-0.03	-0.02		ppb
Molybdenum	94-1	0.00	0.00	0.01	0.01	111.53	ppb
Molybdenum	95-1	0.01	0.01	0.02	0.02	27.74	ppb
Molybdenum	96-1	0.02	0.01	0.02	0.01	39.18	ppb
Molybdenum	97-1	0.01	0.01	0.01	0.01	30.66	ppb
Molybdenum	98-1	0.01	0.01	0.01	0.01	20.29	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.18	-0.09	-0.12	-0.13		ppb
Phosphorus	31-2	-23.56	-29.13	-26.23	-26.31		ppb
Potassium	39-2	10.07	9.28	10.52	9.96	6.30	ppb
Rhodium	103-1				107		%
Rhodium	103-2				108		%
Scandium	45-1				112		%
Scandium	45-2				110		%
Selenium	82-1	0.25	0.12	0.06	0.14	66.74	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	0.20	0.18	0.18	0.19	4.47	ppb
Silicon	28-1	5.18	4.90	4.63	4.90	5.59	ppb
Silver	107-1	0.01	0.01	0.01	0.01	28.42	ppb
Silver	109-1	0.01	0.01	0.01	0.01	11.73	ppb
Sodium	23-2	35.26	37.58	34.35	35.73	4.66	ppb
Strontium	86-1	0.72	0.52	0.43	0.56	26.21	ppb
Strontium	88-1	0.77	0.55	0.52	0.61	22.59	ppb
Sulfur	34-1	1099.32	1253.23	1231.41	1194.65	6.97	ppb
Terbium	159-1				105		%
Terbium	159-2				105		%
Thallium	203-1	0.02	0.02	0.03	0.02	17.26	ppb
Thallium	205-1	0.02	0.02	0.02	0.02	15.30	ppb
Tin	118-1	0.01	0.00	0.00	0.00		ppb
Titanium	47-1	-0.01	-0.01	0.00	0.00		ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166703BL	Instrumnet Name :	P8
Client Sample ID :	PBW703	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:14:15	DataFile Name :	030CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	-0.01	0.00	0.00	0.00		ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				108		%
Yttrium	89-2				109		%
Zinc	66-2	0.04	0.06	0.07	0.06	27.33	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00		ppb
Zirconium	91-1	0.00	0.00	0.00	0.00	14505.48	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166703BS	Instrumnet Name :	P8
Client Sample ID :	LCS703	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:17:35	DataFile Name :	031LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	43.25	41.16	42.41	42.27	2.48	ppb
Antimony	121-1	4.09	4.08	4.09	4.08	0.15	ppb
Arsenic	75-2	2.34	2.42	2.15	2.30	5.91	ppb
Barium	135-1	19.86	19.82	19.86	19.85	0.12	ppb
Barium	137-1	20.15	20.08	20.28	20.17	0.52	ppb
Beryllium	9-1	2.06	2.10	2.03	2.07	1.74	ppb
Bismuth	209-1				100		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Cadmium	108-1	1.93	2.50	2.14	2.19	13.12	ppb
Cadmium	106-1	1.70	1.49	2.42	1.87	26.12	ppb
Cadmium	111-1	2.07	2.16	2.09	2.11	2.23	ppb
Calcium	43-1	1037.57	1065.45	1052.15	1051.72	1.33	ppb
Calcium	44-1	1029.78	1049.07	1050.07	1042.97	1.10	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	3.69	3.84	4.01	3.85	4.14	ppb
Cobalt	59-2	2.10	2.14	2.07	2.10	1.74	ppb
Copper	63-2	4.56	4.61	4.64	4.60	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				105		%
Holmium	165-2				105		%
Indium	115-1				107		%
Indium	115-2				106		%
Iron	54-2	423.28	432.54	431.22	429.02	1.17	ppb
Iron	56-2	422.08	429.03	428.92	426.68	0.93	ppb
Iron	57-2	413.87	424.60	433.41	423.96	2.31	ppb
Krypton	83-1						cps
Lead	206-1	1.93	2.04	1.98	1.98	2.88	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166703BS	Instrumnet Name :	P8
Client Sample ID :	LCS703	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:17:35	DataFile Name :	031LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1.98	2.01	2.09	2.03	2.61	ppb
Lead	208-1	1.96	2.02	2.01	1.99	1.53	ppb
Lithium	6-1				111		%
Magnesium	24-2	988.02	997.88	1013.09	999.66	1.26	ppb
Manganese	55-2	2.02	2.13	1.97	2.04	4.12	ppb
Molybdenum	94-1	11.44	11.44	11.80	11.56	1.79	ppb
Molybdenum	95-1	9.75	9.73	9.96	9.81	1.28	ppb
Molybdenum	96-1	9.73	9.77	9.99	9.83	1.41	ppb
Molybdenum	97-1	9.77	9.85	9.90	9.84	0.65	ppb
Molybdenum	98-1	9.66	9.64	9.83	9.71	1.10	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.80	1.92	1.89	1.87	3.25	ppb
Phosphorus	31-2	29.55	39.27	25.97	31.60	21.78	ppb
Potassium	39-2	1003.92	1008.13	1013.61	1008.55	0.48	ppb
Rhodium	103-1				106		%
Rhodium	103-2				105		%
Scandium	45-1				111		%
Scandium	45-2				108		%
Selenium	82-1	11.09	11.18	11.04	11.10	0.65	ppb
Selenium	77-2	8.75	9.46	13.67	10.62	25.04	ppb
Selenium	78-2	11.18	10.15	11.55	10.96	6.58	ppb
Silicon	28-1	17.97	18.07	22.12	19.39	12.21	ppb
Silver	107-1	2.03	2.06	2.10	2.06	1.70	ppb
Silver	109-1	2.05	2.05	2.05	2.05	0.19	ppb
Sodium	23-2	1090.41	1106.22	1106.81	1101.15	0.84	ppb
Strontium	86-1	2.07	1.99	2.04	2.03	2.01	ppb
Strontium	88-1	2.07	2.03	2.07	2.06	1.15	ppb
Sulfur	34-1	740.07	901.39	731.06	790.84	12.12	ppb
Terbium	159-1				104		%
Terbium	159-2				104		%
Thallium	203-1	1.95	1.96	1.96	1.96	0.26	ppb
Thallium	205-1	1.95	1.99	1.98	1.97	1.15	ppb
Tin	118-1	10.27	10.22	10.41	10.30	0.95	ppb
Titanium	47-1	2.33	2.52	2.42	2.42	3.89	ppb
Uranium	238-1	1.79	1.80	1.83	1.81	0.99	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166703BS	Instrumnet Name :	P8
Client Sample ID :	LCS703	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:17:35	DataFile Name :	031LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	10.22	10.32	10.53	10.36	1.54	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				107		%
Yttrium	89-2				107		%
Zinc	66-2	10.68	10.35	10.41	10.48	1.66	ppb
Zirconium	90-1	1.93	1.93	1.96	1.94	0.74	ppb
Zirconium	91-1	2.00	1.88	1.94	1.94	3.01	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-01	Instrumnet Name :	P8
Client Sample ID :	ME29C5	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:20:56	DataFile Name :	032AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1206.21	1205.70	1218.43	1210.12	0.60	ppb
Antimony	121-1	0.07	0.07	0.07	0.07	1.37	ppb
Arsenic	75-2	2.27	2.55	1.99	2.27	12.31	ppb
Barium	135-1	30.30	31.19	31.50	31.00	2.01	ppb
Barium	137-1	30.53	31.90	32.15	31.52	2.77	ppb
Beryllium	9-1	0.10	0.11	0.10	0.10	4.55	ppb
Bismuth	209-1				87		%
Bismuth	209-2				88		%
Bromine	81-1						cps
Cadmium	108-1	0.27	0.42	0.44	0.38	23.74	ppb
Cadmium	106-1	-0.56	0.22	0.06	-0.09		ppb
Cadmium	111-1	0.09	0.13	0.13	0.12	19.37	ppb
Calcium	43-1	469247.30	474630.12	471522.60	471800.01	0.57	ppb
Calcium	44-1	462871.25	475809.03	466301.01	468327.09	1.43	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.23	2.14	2.20	2.19	2.24	ppb
Cobalt	59-2	0.92	0.86	0.91	0.90	3.35	ppb
Copper	63-2	2.55	2.52	2.57	2.55	1.00	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				101		%
Indium	115-1				97		%
Indium	115-2				99		%
Iron	54-2	5345.32	5338.86	5358.87	5347.68	0.19	ppb
Iron	56-2	5614.83	5664.14	5660.94	5646.63	0.49	ppb
Iron	57-2	5357.65	5316.59	5322.12	5332.12	0.42	ppb
Krypton	83-1						cps
Lead	206-1	1.79	1.86	1.81	1.82	2.13	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-01	Instrumnet Name :	P8
Client Sample ID :	ME29C5	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:20:56	DataFile Name :	032AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1.66	1.72	1.71	1.69	1.86	ppb
Lead	208-1	1.69	1.75	1.74	1.73	1.84	ppb
Lithium	6-1				101		%
Magnesium	24-2	146996.46	146044.89	143898.17	145646.51	1.09	ppb
Manganese	55-2	81.73	82.91	82.31	82.32	0.72	ppb
Molybdenum	94-1	6.40	5.42	5.40	5.74	9.99	ppb
Molybdenum	95-1	3.83	3.92	3.86	3.87	1.14	ppb
Molybdenum	96-1	4.03	4.03	4.03	4.03	0.08	ppb
Molybdenum	97-1	3.76	3.87	3.92	3.85	2.16	ppb
Molybdenum	98-1	3.78	3.81	3.94	3.84	2.17	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	3.23	3.29	3.30	3.27	1.17	ppb
Phosphorus	31-2	92.56	110.99	122.98	108.84	14.08	ppb
Potassium	39-2	5541.44	5546.19	5580.93	5556.19	0.39	ppb
Rhodium	103-1				92		%
Rhodium	103-2				93		%
Scandium	45-1				106		%
Scandium	45-2				107		%
Selenium	82-1	0.62	0.32	0.55	0.49	31.64	ppb
Selenium	77-2	3.22	3.16	2.38	2.92	15.94	ppb
Selenium	78-2	1.15	0.89	2.53	1.53	57.77	ppb
Silicon	28-1	8640.74	9029.83	8938.77	8869.78	2.29	ppb
Silver	107-1	0.08	0.07	0.07	0.08	7.93	ppb
Silver	109-1	0.07	0.06	0.06	0.06	11.33	ppb
Sodium	23-2	523690.23	513804.15	516908.72	518134.36	0.98	ppb
Strontium	86-1	22475.32	22566.70	23089.39	22710.47	1.46	ppb
Strontium	88-1	22423.94	22596.00	22917.93	22645.96	1.11	ppb
Sulfur	34-1	259028.84	263850.59	265207.18	262695.53	1.24	ppb
Terbium	159-1				99		%
Terbium	159-2				100		%
Thallium	203-1	0.09	0.11	0.11	0.10	8.17	ppb
Thallium	205-1	0.09	0.10	0.10	0.10	9.02	ppb
Tin	118-1	0.15	0.13	0.15	0.14	8.53	ppb
Titanium	47-1	34.02	42.47	43.07	39.85	12.70	ppb
Uranium	238-1	0.67	0.69	0.69	0.68	1.90	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-01	Instrumnet Name :	P8
Client Sample ID :	ME29C5	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:20:56	DataFile Name :	032AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	3.52	3.59	3.64	3.58	1.66	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				103		%
Yttrium	89-2				107		%
Zinc	66-2	8.42	8.44	8.48	8.45	0.35	ppb
Zirconium	90-1	1.32	1.18	1.32	1.27	6.32	ppb
Zirconium	91-1	1.19	1.19	1.26	1.21	3.02	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-02	Instrumnet Name :	P8
Client Sample ID :	ME29C7	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:24:13	DataFile Name :	033AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	201.26	206.28	210.20	205.91	2.18	ppb
Antimony	121-1	0.48	0.49	0.49	0.49	1.47	ppb
Arsenic	75-2	1.26	1.48	1.32	1.35	8.57	ppb
Barium	135-1	187.38	190.39	187.74	188.50	0.87	ppb
Barium	137-1	206.59	206.78	204.45	205.94	0.63	ppb
Beryllium	9-1	0.01	0.01	0.01	0.01	5.55	ppb
Bismuth	209-1				97		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Cadmium	108-1	0.55	0.62	0.61	0.59	6.59	ppb
Cadmium	106-1	0.28	0.25	0.13	0.22	35.82	ppb
Cadmium	111-1	0.30	0.36	0.32	0.33	9.50	ppb
Calcium	43-1	298261.99	305407.10	306091.89	303253.66	1.43	ppb
Calcium	44-1	295773.35	301235.77	307678.49	301562.54	1.98	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.33	0.28	0.33	0.31	8.62	ppb
Cobalt	59-2	1.48	1.44	1.48	1.47	1.75	ppb
Copper	63-2	1.42	1.42	1.46	1.43	1.84	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				107		%
Indium	115-1				106		%
Indium	115-2				108		%
Iron	54-2	1118.00	1115.22	1129.54	1120.92	0.68	ppb
Iron	56-2	1189.78	1176.25	1182.76	1182.93	0.57	ppb
Iron	57-2	1114.82	1104.32	1123.88	1114.34	0.88	ppb
Krypton	83-1						cps
Lead	206-1	0.80	0.79	0.81	0.80	1.30	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-02	Instrumnet Name :	P8
Client Sample ID :	ME29C7	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:24:13	DataFile Name :	033AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.78	0.77	0.74	0.76	3.07	ppb
Lead	208-1	0.76	0.78	0.76	0.77	1.24	ppb
Lithium	6-1				111		%
Magnesium	24-2	57445.77	58239.54	57709.25	57798.19	0.70	ppb
Manganese	55-2	262.50	262.38	263.71	262.86	0.28	ppb
Molybdenum	94-1	22.80	23.21	22.89	22.96	0.94	ppb
Molybdenum	95-1	26.48	27.04	27.03	26.85	1.20	ppb
Molybdenum	96-1	25.85	26.81	26.29	26.31	1.83	ppb
Molybdenum	97-1	26.41	27.09	26.82	26.77	1.28	ppb
Molybdenum	98-1	26.37	27.01	26.46	26.61	1.31	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	4.66	4.64	4.75	4.68	1.23	ppb
Phosphorus	31-2	58.22	36.26	48.69	47.72	23.08	ppb
Potassium	39-2	2022.19	2019.00	2047.73	2029.64	0.78	ppb
Rhodium	103-1				102		%
Rhodium	103-2				103		%
Scandium	45-1				113		%
Scandium	45-2				114		%
Selenium	82-1	1.81	2.07	2.32	2.07	12.31	ppb
Selenium	77-2	0.00	1.51	2.27	1.26	91.73	ppb
Selenium	78-2	1.27	1.05	2.83	1.72	56.50	ppb
Silicon	28-1	4186.54	4239.69	4253.06	4226.43	0.83	ppb
Silver	107-1	0.02	0.01	0.02	0.02	11.93	ppb
Silver	109-1	0.01	0.01	0.01	0.01	3.32	ppb
Sodium	23-2	100630.38	102433.15	100892.84	101318.79	0.96	ppb
Strontium	86-1	6354.46	6557.93	6453.26	6455.21	1.58	ppb
Strontium	88-1	6394.90	6569.08	6446.16	6470.05	1.38	ppb
Sulfur	34-1	131076.97	133870.60	136387.43	133778.33	1.99	ppb
Terbium	159-1				105		%
Terbium	159-2				106		%
Thallium	203-1	0.03	0.03	0.03	0.03	6.87	ppb
Thallium	205-1	0.03	0.03	0.03	0.03	10.25	ppb
Tin	118-1	-0.02	-0.01	0.00	-0.01		ppb
Titanium	47-1	5.03	4.87	5.32	5.07	4.45	ppb
Uranium	238-1	27.72	28.23	28.12	28.02	0.96	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-02	Instrumnet Name :	P8
Client Sample ID :	ME29C7	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:24:13	DataFile Name :	033AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.65	0.66	0.68	0.66	2.09	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				110		%
Yttrium	89-2				113		%
Zinc	66-2	12.58	12.88	12.12	12.53	3.04	ppb
Zirconium	90-1	0.50	0.52	0.50	0.51	2.81	ppb
Zirconium	91-1	0.53	0.53	0.49	0.52	3.98	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-03	Instrumnet Name :	P8
Client Sample ID :	ME29C6	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:27:28	DataFile Name :	034AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	12.26	9.69	12.00	11.32	12.48	ppb
Antimony	121-1	0.01	0.01	0.01	0.01	22.35	ppb
Arsenic	75-2	0.40	0.34	0.44	0.39	12.72	ppb
Barium	135-1	37.95	37.86	38.52	38.11	0.94	ppb
Barium	137-1	38.32	38.60	39.34	38.75	1.36	ppb
Beryllium	9-1	0.01	0.01	0.00	0.01	45.47	ppb
Bismuth	209-1				97		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Cadmium	108-1	0.12	0.06	0.15	0.11	38.69	ppb
Cadmium	106-1	0.52	-0.05	-0.23	0.08	473.78	ppb
Cadmium	111-1	0.09	0.05	0.03	0.06	48.33	ppb
Calcium	43-1	242346.50	235112.99	239053.74	238837.74	1.52	ppb
Calcium	44-1	236369.11	229813.95	237769.23	234650.76	1.81	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.10	-0.12	-0.15	-0.12		ppb
Cobalt	59-2	0.01	0.01	0.01	0.01	13.31	ppb
Copper	63-2	0.01	0.05	0.04	0.04	66.02	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				106		%
Holmium	165-2				106		%
Indium	115-1				107		%
Indium	115-2				107		%
Iron	54-2	169.12	167.60	163.00	166.57	1.91	ppb
Iron	56-2	167.91	167.74	166.59	167.41	0.43	ppb
Iron	57-2	173.54	171.94	172.61	172.69	0.47	ppb
Krypton	83-1						cps
Lead	206-1	0.24	0.25	0.24	0.24	3.02	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-03	Instrumnet Name :	P8
Client Sample ID :	ME29C6	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:27:28	DataFile Name :	034AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.24	0.23	0.22	0.23	5.54	ppb
Lead	208-1	0.24	0.23	0.23	0.23	1.83	ppb
Lithium	6-1				109		%
Magnesium	24-2	70199.39	69225.82	68047.99	69157.73	1.56	ppb
Manganese	55-2	42.31	42.47	40.98	41.92	1.96	ppb
Molybdenum	94-1	0.37	0.33	0.35	0.35	4.89	ppb
Molybdenum	95-1	0.07	0.06	0.07	0.06	6.71	ppb
Molybdenum	96-1	0.09	0.09	0.10	0.09	2.71	ppb
Molybdenum	97-1	0.06	0.06	0.07	0.06	8.88	ppb
Molybdenum	98-1	0.05	0.05	0.06	0.06	10.11	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.02	-0.05	-0.03	-0.03		ppb
Phosphorus	31-2	12.44	26.01	5.61	14.69	70.72	ppb
Potassium	39-2	3188.58	3203.93	3146.53	3179.68	0.93	ppb
Rhodium	103-1				102		%
Rhodium	103-2				102		%
Scandium	45-1				113		%
Scandium	45-2				112		%
Selenium	82-1	0.48	0.35	0.41	0.41	15.57	ppb
Selenium	77-2	0.76	0.00	0.00	0.25	173.21	ppb
Selenium	78-2	1.28	-0.27	0.18	0.39	202.14	ppb
Silicon	28-1	5884.08	5682.92	5850.52	5805.84	1.86	ppb
Silver	107-1	0.02	0.01	0.01	0.01	14.14	ppb
Silver	109-1	0.01	0.00	0.01	0.01	34.96	ppb
Sodium	23-2	89301.13	89086.99	87800.11	88729.41	0.92	ppb
Strontium	86-1	16951.92	16770.84	16789.61	16837.46	0.59	ppb
Strontium	88-1	16892.55	16827.93	16840.55	16853.68	0.20	ppb
Sulfur	34-1	162435.53	158840.41	161843.47	161039.80	1.20	ppb
Terbium	159-1				104		%
Terbium	159-2				105		%
Thallium	203-1	0.01	0.01	0.01	0.01	31.80	ppb
Thallium	205-1	0.01	0.00	0.01	0.01	13.48	ppb
Tin	118-1	0.00	0.01	0.02	0.01	78.67	ppb
Titanium	47-1	0.81	0.77	0.79	0.79	2.70	ppb
Uranium	238-1	0.16	0.16	0.17	0.16	1.25	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-03	Instrumnet Name :	P8
Client Sample ID :	ME29C6	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:27:28	DataFile Name :	034AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.20	0.19	0.20	0.20	2.98	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				108		%
Yttrium	89-2				111		%
Zinc	66-2	1.11	1.07	0.96	1.05	7.54	ppb
Zirconium	90-1	0.17	0.17	0.17	0.17	1.89	ppb
Zirconium	91-1	0.17	0.16	0.17	0.17	3.65	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-04	Instrumnet Name :	P8
Client Sample ID :	ME29C9	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:30:44	DataFile Name :	035AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	5117.56	5150.70	5155.91	5141.39	0.40	ppb
Antimony	121-1	0.76	0.79	0.77	0.77	2.10	ppb
Arsenic	75-2	5.74	5.45	5.63	5.61	2.58	ppb
Barium	135-1	123.26	123.32	124.70	123.76	0.66	ppb
Barium	137-1	125.79	125.87	127.45	126.37	0.74	ppb
Beryllium	9-1	0.27	0.28	0.27	0.27	2.03	ppb
Bismuth	209-1				94		%
Bismuth	209-2				94		%
Bromine	81-1						cps
Cadmium	108-1	1.30	1.23	1.26	1.26	2.64	ppb
Cadmium	106-1	1.05	0.53	0.88	0.82	32.86	ppb
Cadmium	111-1	0.38	0.36	0.40	0.38	6.36	ppb
Calcium	43-1	485801.84	476726.20	472169.21	478232.42	1.45	ppb
Calcium	44-1	483610.55	474805.22	467531.69	475315.82	1.69	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	10.89	11.06	10.89	10.95	0.93	ppb
Cobalt	59-2	18.27	18.33	18.27	18.29	0.21	ppb
Copper	63-2	11.73	11.82	11.77	11.77	0.38	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				105		%
Indium	115-1				103		%
Indium	115-2				104		%
Iron	54-2	10748.76	10779.83	10632.77	10720.45	0.72	ppb
Iron	56-2	10711.74	10761.25	10661.85	10711.61	0.46	ppb
Iron	57-2	10048.27	10145.23	10039.05	10077.52	0.58	ppb
Krypton	83-1						cps
Lead	206-1	5.48	5.44	5.38	5.43	0.97	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-04	Instrumnet Name :	P8
Client Sample ID :	ME29C9	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:30:44	DataFile Name :	035AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	5.12	5.10	5.07	5.10	0.51	ppb
Lead	208-1	5.25	5.23	5.18	5.22	0.70	ppb
Lithium	6-1				107		%
Magnesium	24-2	199653.21	199863.38	196935.16	198817.25	0.82	ppb
Manganese	55-2	3303.52	3271.84	3275.95	3283.77	0.52	ppb
Molybdenum	94-1	28.07	27.82	28.34	28.08	0.92	ppb
Molybdenum	95-1	22.69	22.86	23.00	22.85	0.68	ppb
Molybdenum	96-1	23.19	23.56	23.05	23.27	1.13	ppb
Molybdenum	97-1	22.73	22.60	22.92	22.75	0.71	ppb
Molybdenum	98-1	22.47	22.77	22.50	22.58	0.73	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	31.74	31.76	31.62	31.71	0.24	ppb
Phosphorus	31-2	285.12	311.19	326.37	307.56	6.78	ppb
Potassium	39-2	13858.48	13985.88	14178.05	14007.47	1.15	ppb
Rhodium	103-1				98		%
Rhodium	103-2				98		%
Scandium	45-1				114		%
Scandium	45-2				111		%
Selenium	82-1	2.14	2.43	2.21	2.26	6.74	ppb
Selenium	77-2	9.25	9.78	10.81	9.95	8.00	ppb
Selenium	78-2	3.80	1.71	1.77	2.43	49.07	ppb
Silicon	28-1	13817.75	13289.15	13162.40	13423.10	2.59	ppb
Silver	107-1	0.04	0.04	0.05	0.05	7.64	ppb
Silver	109-1	0.03	0.04	0.05	0.04	17.11	ppb
Sodium	23-2	65093.96	66351.15	63980.49	65141.86	1.82	ppb
Strontium	86-1	11253.55	11467.30	11290.71	11337.19	1.01	ppb
Strontium	88-1	11455.54	11429.78	11361.09	11415.47	0.43	ppb
Sulfur	34-1	547385.55	545041.43	537001.71	543142.89	1.00	ppb
Terbium	159-1				103		%
Terbium	159-2				104		%
Thallium	203-1	0.22	0.22	0.21	0.22	2.43	ppb
Thallium	205-1	0.21	0.21	0.21	0.21	1.54	ppb
Tin	118-1	0.89	0.87	0.85	0.87	2.17	ppb
Titanium	47-1	118.65	114.47	109.76	114.29	3.89	ppb
Uranium	238-1	22.73	22.66	22.38	22.59	0.82	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-04	Instrumnet Name :	P8
Client Sample ID :	ME29C9	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:30:44	DataFile Name :	035AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	14.54	14.22	14.22	14.33	1.28	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				109		%
Yttrium	89-2				111		%
Zinc	66-2	35.34	36.08	34.69	35.37	1.97	ppb
Zirconium	90-1	4.98	5.11	5.04	5.04	1.33	ppb
Zirconium	91-1	4.88	5.26	4.98	5.04	3.88	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-05	Instrumnet Name :	P8
Client Sample ID :	ME29D1	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:33:59	DataFile Name :	036AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	57.42	58.15	55.16	56.91	2.73	ppb
Antimony	121-1	0.96	0.96	1.00	0.98	2.07	ppb
Arsenic	75-2	0.23	0.24	0.25	0.24	4.48	ppb
Barium	135-1	14.89	14.76	14.61	14.75	0.97	ppb
Barium	137-1	15.21	14.85	14.94	15.00	1.23	ppb
Beryllium	9-1	0.00	0.01	0.01	0.01	59.84	ppb
Bismuth	209-1				94		%
Bismuth	209-2				95		%
Bromine	81-1						cps
Cadmium	108-1	0.11	0.26	0.21	0.20	37.74	ppb
Cadmium	106-1	-0.67	-0.88	-0.78	-0.78		ppb
Cadmium	111-1	0.16	0.13	0.16	0.15	12.48	ppb
Calcium	43-1	330406.65	335168.79	334889.63	333488.36	0.80	ppb
Calcium	44-1	327464.40	333505.89	334326.41	331765.57	1.13	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.64	0.61	0.68	0.65	5.24	ppb
Cobalt	59-2	15.75	15.56	15.85	15.72	0.94	ppb
Copper	63-2	44.37	43.90	44.32	44.20	0.59	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				105		%
Indium	115-1				105		%
Indium	115-2				106		%
Iron	54-2	537.26	536.97	540.93	538.38	0.41	ppb
Iron	56-2	570.60	571.44	576.49	572.84	0.56	ppb
Iron	57-2	545.44	539.07	546.44	543.65	0.74	ppb
Krypton	83-1						cps
Lead	206-1	1.46	1.46	1.46	1.46	0.30	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-05	Instrumnet Name :	P8
Client Sample ID :	ME29D1	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:33:59	DataFile Name :	036AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1.37	1.33	1.37	1.36	2.01	ppb
Lead	208-1	1.41	1.54	1.41	1.46	5.06	ppb
Lithium	6-1				110		%
Magnesium	24-2	107705.62	109999.64	109363.48	109022.91	1.09	ppb
Manganese	55-2	71.37	70.65	70.08	70.70	0.92	ppb
Molybdenum	94-1	0.73	0.69	0.72	0.71	2.28	ppb
Molybdenum	95-1	0.70	0.64	0.65	0.66	4.84	ppb
Molybdenum	96-1	0.67	0.65	0.68	0.67	2.71	ppb
Molybdenum	97-1	0.66	0.72	0.68	0.68	4.48	ppb
Molybdenum	98-1	0.64	0.64	0.65	0.64	1.16	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.29	1.17	1.21	1.22	4.76	ppb
Phosphorus	31-2	2451.62	2452.77	2438.64	2447.67	0.32	ppb
Potassium	39-2	6376.21	6344.87	6332.71	6351.26	0.35	ppb
Rhodium	103-1				100		%
Rhodium	103-2				101		%
Scandium	45-1				114		%
Scandium	45-2				113		%
Selenium	82-1	0.76	0.72	0.58	0.68	13.46	ppb
Selenium	77-2	0.00	1.56	0.00	0.52	173.21	ppb
Selenium	78-2	0.18	-0.27	-0.50	-0.20		ppb
Silicon	28-1	4375.51	4499.89	4548.83	4474.74	2.00	ppb
Silver	107-1	0.02	0.03	0.02	0.02	12.73	ppb
Silver	109-1	0.02	0.02	0.02	0.02	5.15	ppb
Sodium	23-2	117596.28	118505.87	117290.19	117797.45	0.54	ppb
Strontium	86-1	9307.12	8959.33	9292.60	9186.35	2.14	ppb
Strontium	88-1	9231.75	8922.98	9231.14	9128.62	1.95	ppb
Sulfur	34-1	342068.58	353284.51	351220.03	348857.71	1.71	ppb
Terbium	159-1				104		%
Terbium	159-2				104		%
Thallium	203-1	0.01	0.01	0.01	0.01	27.51	ppb
Thallium	205-1	0.01	0.01	0.01	0.01	15.59	ppb
Tin	118-1	1.03	1.08	1.07	1.06	2.69	ppb
Titanium	47-1	3.81	3.59	3.68	3.69	3.07	ppb
Uranium	238-1	0.21	0.20	0.21	0.20	2.52	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-05	Instrumnet Name :	P8
Client Sample ID :	ME29D1	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:33:59	DataFile Name :	036AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.24	0.23	0.26	0.24	6.56	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				108		%
Yttrium	89-2				110		%
Zinc	66-2	14.66	15.55	15.01	15.07	2.97	ppb
Zirconium	90-1	0.09	0.09	0.08	0.09	4.88	ppb
Zirconium	91-1	0.11	0.09	0.11	0.10	6.82	ppb

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-06RE	Instrumnet Name :	P8
Client Sample ID :	ME29D2	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:37:13	DataFile Name :	037AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	6.25	6.04	6.21	6.17	1.79	ppb
Antimony	121-1	0.01	0.01	0.01	0.01	0.90	ppb
Arsenic	75-2	0.07	0.06	0.01	0.04	72.57	ppb
Barium	135-1	20.51	20.29	20.57	20.46	0.72	ppb
Barium	137-1	20.57	21.06	20.82	20.82	1.17	ppb
Beryllium	9-1	0.01	0.01	0.01	0.01	5.84	ppb
Bismuth	209-1				96		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Cadmium	108-1	0.04	0.04	0.05	0.04	20.71	ppb
Cadmium	106-1	-0.51	-0.35	0.00	-0.29		ppb
Cadmium	111-1	0.02	0.02	0.06	0.04	54.08	ppb
Calcium	43-1	246984.63	244568.21	247107.15	246220.00	0.58	ppb
Calcium	44-1	241541.13	241122.24	239516.97	240726.78	0.44	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.13	-0.13	-0.13	-0.13		ppb
Cobalt	59-2	0.02	0.01	0.00	0.01	107.39	ppb
Copper	63-2	0.37	0.44	0.37	0.39	10.52	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				105		%
Indium	115-1				106		%
Indium	115-2				106		%
Iron	54-2	19.10	17.80	19.02	18.64	3.90	ppb
Iron	56-2	19.88	20.14	20.08	20.03	0.68	ppb
Iron	57-2	27.18	28.05	28.46	27.90	2.35	ppb
Krypton	83-1						cps
Lead	206-1	0.24	0.25	0.24	0.24	2.60	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-06RE	Instrumnet Name :	P8
Client Sample ID :	ME29D2	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:37:13	DataFile Name :	037AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.24	0.23	0.25	0.24	2.56	ppb
Lead	208-1	0.25	0.25	0.24	0.24	1.52	ppb
Lithium	6-1				111		%
Magnesium	24-2	66537.26	66454.76	66963.44	66651.82	0.41	ppb
Manganese	55-2	15.76	15.56	15.36	15.56	1.30	ppb
Molybdenum	94-1	0.07	0.08	0.07	0.08	5.43	ppb
Molybdenum	95-1	0.01	0.00	0.01	0.01	94.16	ppb
Molybdenum	96-1	0.00	0.01	0.00	0.00	157.66	ppb
Molybdenum	97-1	0.00	-0.01	-0.01	-0.01		ppb
Molybdenum	98-1	0.00	0.00	-0.01	0.00		ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.02	-0.04	0.02	-0.01		ppb
Phosphorus	31-2	-5.41	-12.77	-16.48	-11.55		ppb
Potassium	39-2	2831.94	2824.05	2845.22	2833.74	0.38	ppb
Rhodium	103-1				102		%
Rhodium	103-2				101		%
Scandium	45-1				114		%
Scandium	45-2				112		%
Selenium	82-1	1.21	1.23	1.53	1.32	13.67	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.27	-0.50	-0.28	-0.35		ppb
Silicon	28-1	5106.70	5157.14	5076.40	5113.41	0.80	ppb
Silver	107-1	0.02	0.02	0.02	0.02	8.84	ppb
Silver	109-1	0.01	0.00	0.01	0.01	29.07	ppb
Sodium	23-2	60134.36	59942.75	60013.56	60030.22	0.16	ppb
Strontium	86-1	21867.60	21742.70	21567.82	21726.04	0.69	ppb
Strontium	88-1	21758.31	21979.40	21817.40	21851.70	0.52	ppb
Sulfur	34-1	145289.50	143373.07	143290.24	143984.27	0.79	ppb
Terbium	159-1				104		%
Terbium	159-2				104		%
Thallium	203-1	0.00	0.00	0.00	0.00	31.69	ppb
Thallium	205-1	0.00	0.00	0.00	0.00	73.07	ppb
Tin	118-1	-0.03	-0.02	-0.03	-0.03		ppb
Titanium	47-1	0.54	0.60	0.55	0.56	4.96	ppb
Uranium	238-1	0.18	0.18	0.16	0.17	3.62	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-06RE	Instrumnet Name :	P8
Client Sample ID :	ME29D2	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:37:13	DataFile Name :	037AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.10	0.10	0.09	0.10	6.49	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				109		%
Yttrium	89-2				110		%
Zinc	66-2	2.48	2.25	2.24	2.32	5.90	ppb
Zirconium	90-1	0.04	0.04	0.05	0.04	7.35	ppb
Zirconium	91-1	0.04	0.05	0.04	0.04	6.52	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-07	Instrumnet Name :	P8
Client Sample ID :	ME29D4	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:40:33	DataFile Name :	038AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	117.24	108.06	111.41	112.24	4.14	ppb
Antimony	121-1	1.26	1.29	1.27	1.27	1.20	ppb
Arsenic	75-2	2.08	2.43	2.24	2.25	7.81	ppb
Barium	135-1	46.12	47.01	46.68	46.60	0.96	ppb
Barium	137-1	47.55	47.67	47.78	47.67	0.24	ppb
Beryllium	9-1	0.00	0.00	0.00	0.00	119.52	ppb
Bismuth	209-1				94		%
Bismuth	209-2				95		%
Bromine	81-1						cps
Cadmium	108-1	1.85	2.05	1.88	1.93	5.67	ppb
Cadmium	106-1	0.83	1.33	0.45	0.87	50.41	ppb
Cadmium	111-1	1.62	1.59	1.63	1.61	1.24	ppb
Calcium	43-1	224161.21	229129.16	228161.51	227150.63	1.16	ppb
Calcium	44-1	225125.58	226062.94	223177.99	224788.84	0.65	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.08	2.14	2.04	2.09	2.42	ppb
Cobalt	59-2	3.52	3.46	3.44	3.47	1.19	ppb
Copper	63-2	23.76	23.31	23.52	23.53	0.96	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				106		%
Indium	115-1				104		%
Indium	115-2				106		%
Iron	54-2	545.79	543.62	537.44	542.28	0.80	ppb
Iron	56-2	577.29	571.49	576.40	575.06	0.54	ppb
Iron	57-2	542.19	543.25	541.14	542.19	0.20	ppb
Krypton	83-1						cps
Lead	206-1	4.08	4.18	4.11	4.12	1.26	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-07	Instrumnet Name :	P8
Client Sample ID :	ME29D4	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:40:33	DataFile Name :	038AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	3.96	3.97	3.88	3.94	1.32	ppb
Lead	208-1	3.96	4.03	3.99	3.99	0.87	ppb
Lithium	6-1				109		%
Magnesium	24-2	191523.02	190074.25	189915.23	190504.17	0.47	ppb
Manganese	55-2	2168.20	2136.12	2121.16	2141.82	1.12	ppb
Molybdenum	94-1	27.56	28.22	28.85	28.21	2.29	ppb
Molybdenum	95-1	33.23	33.52	34.07	33.61	1.28	ppb
Molybdenum	96-1	32.16	32.52	33.28	32.65	1.75	ppb
Molybdenum	97-1	33.40	33.46	34.51	33.79	1.84	ppb
Molybdenum	98-1	33.01	33.25	33.90	33.39	1.39	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	19.18	19.22	19.92	19.44	2.14	ppb
Phosphorus	31-2	671.91	653.65	627.43	651.00	3.43	ppb
Potassium	39-2	16249.12	15759.75	16014.61	16007.83	1.53	ppb
Rhodium	103-1				101		%
Rhodium	103-2				101		%
Scandium	45-1				113		%
Scandium	45-2				113		%
Selenium	82-1	3.01	3.17	2.94	3.04	3.98	ppb
Selenium	77-2	2.31	2.31	4.55	3.06	42.33	ppb
Selenium	78-2	0.86	1.98	2.40	1.75	45.57	ppb
Silicon	28-1	5027.84	5151.20	5037.60	5072.21	1.35	ppb
Silver	107-1	0.10	0.11	0.11	0.11	2.28	ppb
Silver	109-1	0.10	0.10	0.10	0.10	2.20	ppb
Sodium	23-2	116507.80	115473.34	113200.03	115060.39	1.47	ppb
Strontium	86-1	5667.26	5813.88	5781.69	5754.28	1.34	ppb
Strontium	88-1	5736.93	5802.43	5879.86	5806.41	1.23	ppb
Sulfur	34-1	318304.19	327711.45	320786.37	322267.33	1.51	ppb
Terbium	159-1				103		%
Terbium	159-2				104		%
Thallium	203-1	0.24	0.25	0.26	0.25	4.15	ppb
Thallium	205-1	0.24	0.24	0.24	0.24	1.59	ppb
Tin	118-1	0.57	0.60	0.63	0.60	4.52	ppb
Titanium	47-1	5.90	6.59	7.14	6.54	9.53	ppb
Uranium	238-1	11.13	11.08	11.10	11.10	0.21	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-07	Instrumnet Name :	P8
Client Sample ID :	ME29D4	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:40:33	DataFile Name :	038AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	1.55	1.52	1.52	1.53	1.12	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				109		%
Yttrium	89-2				111		%
Zinc	66-2	54.49	53.91	54.04	54.15	0.56	ppb
Zirconium	90-1	0.39	0.33	0.36	0.36	7.60	ppb
Zirconium	91-1	0.34	0.35	0.38	0.36	4.73	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-08RE	Instrumnet Name :	P8
Client Sample ID :	ME29D2D	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:43:46	DataFile Name :	039AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	103.86	103.08	100.63	102.52	1.64	ppb
Antimony	121-1	1.27	1.30	1.27	1.28	1.22	ppb
Arsenic	75-2	2.45	2.53	2.30	2.43	4.72	ppb
Barium	135-1	47.09	48.11	46.93	47.38	1.35	ppb
Barium	137-1	48.13	48.45	47.74	48.11	0.74	ppb
Beryllium	9-1	0.00	0.00	0.00	0.00		ppb
Bismuth	209-1				93		%
Bismuth	209-2				95		%
Bromine	81-1						cps
Cadmium	108-1	2.06	1.75	1.85	1.89	8.42	ppb
Cadmium	106-1	0.42	1.77	0.20	0.80	106.37	ppb
Cadmium	111-1	1.59	1.71	1.64	1.65	3.48	ppb
Calcium	43-1	223998.70	223631.23	227144.98	224924.97	0.86	ppb
Calcium	44-1	219709.75	224283.89	224196.51	222730.05	1.17	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1.98	2.09	2.09	2.05	3.01	ppb
Cobalt	59-2	3.32	3.45	3.39	3.39	2.03	ppb
Copper	63-2	23.04	23.51	23.28	23.28	1.00	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				105		%
Indium	115-1				105		%
Indium	115-2				107		%
Iron	54-2	532.69	544.38	541.56	539.54	1.13	ppb
Iron	56-2	557.11	575.91	570.81	567.94	1.71	ppb
Iron	57-2	527.48	535.76	537.27	533.50	0.99	ppb
Krypton	83-1						cps
Lead	206-1	4.22	4.17	4.25	4.21	0.96	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-08RE	Instrumnet Name :	P8
Client Sample ID :	ME29D2D	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:43:46	DataFile Name :	039AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	4.05	3.95	3.95	3.98	1.37	ppb
Lead	208-1	4.06	4.02	4.06	4.05	0.55	ppb
Lithium	6-1				112		%
Magnesium	24-2	187472.26	189694.32	185738.75	187635.11	1.06	ppb
Manganese	55-2	2055.37	2148.88	2137.28	2113.84	2.41	ppb
Molybdenum	94-1	28.06	27.84	29.14	28.35	2.47	ppb
Molybdenum	95-1	33.12	33.39	34.11	33.54	1.52	ppb
Molybdenum	96-1	32.43	32.52	33.35	32.77	1.55	ppb
Molybdenum	97-1	33.09	33.01	34.14	33.41	1.89	ppb
Molybdenum	98-1	32.88	32.83	33.86	33.19	1.75	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	19.24	19.39	19.30	19.31	0.39	ppb
Phosphorus	31-2	604.50	624.32	558.89	595.90	5.63	ppb
Potassium	39-2	15930.42	15769.95	15751.74	15817.37	0.62	ppb
Rhodium	103-1				102		%
Rhodium	103-2				103		%
Scandium	45-1				116		%
Scandium	45-2				115		%
Selenium	82-1	2.53	2.73	2.95	2.74	7.69	ppb
Selenium	77-2	3.81	3.81	3.00	3.54	13.17	ppb
Selenium	78-2	2.63	2.41	2.37	2.47	5.83	ppb
Silicon	28-1	4973.71	5039.87	5115.85	5043.14	1.41	ppb
Silver	107-1	0.10	0.12	0.11	0.11	5.14	ppb
Silver	109-1	0.11	0.10	0.10	0.10	5.40	ppb
Sodium	23-2	113317.47	113661.15	113126.09	113368.24	0.24	ppb
Strontium	86-1	5582.04	5723.74	5937.06	5747.61	3.11	ppb
Strontium	88-1	5614.24	5808.70	5891.84	5771.59	2.47	ppb
Sulfur	34-1	318083.10	322096.72	324790.46	321656.76	1.05	ppb
Terbium	159-1				103		%
Terbium	159-2				105		%
Thallium	203-1	0.25	0.26	0.25	0.25	2.14	ppb
Thallium	205-1	0.24	0.24	0.24	0.24	0.22	ppb
Tin	118-1	0.50	0.51	0.51	0.51	0.34	ppb
Titanium	47-1	5.31	8.26	4.38	5.98	33.87	ppb
Uranium	238-1	11.28	11.24	11.31	11.27	0.31	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-08RE	Instrumnet Name :	P8
Client Sample ID :	ME29D2D	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:43:46	DataFile Name :	039AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	1.50	1.51	1.48	1.50	0.97	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				110		%
Yttrium	89-2				112		%
Zinc	66-2	52.89	53.18	54.41	53.49	1.51	ppb
Zirconium	90-1	0.35	0.35	0.37	0.35	2.99	ppb
Zirconium	91-1	0.37	0.34	0.35	0.35	3.54	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-07LREX5	Instrumnet Name :	P8
Client Sample ID :	ME29D4L	Dilution Factor :	5
Date & Time Acquired :	2025-02-13 13:47:00	DataFile Name :	040AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	22.42	21.62	22.79	22.28	2.68	ppb
Antimony	121-1	0.27	0.28	0.28	0.28	1.59	ppb
Arsenic	75-2	0.52	0.43	0.49	0.48	9.51	ppb
Barium	135-1	9.88	9.98	10.06	9.97	0.92	ppb
Barium	137-1	10.13	10.12	10.19	10.15	0.36	ppb
Beryllium	9-1	-0.01	0.00	0.00	0.00		ppb
Bismuth	209-1				97		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Cadmium	108-1	0.29	0.38	0.39	0.35	15.93	ppb
Cadmium	106-1	-0.31	0.05	-0.31	-0.19		ppb
Cadmium	111-1	0.33	0.35	0.33	0.33	3.45	ppb
Calcium	43-1	49971.70	47782.99	48358.96	48704.55	2.33	ppb
Calcium	44-1	48256.25	47533.03	48325.09	48038.13	0.91	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.39	0.40	0.41	0.40	2.76	ppb
Cobalt	59-2	0.75	0.75	0.75	0.75	0.61	ppb
Copper	63-2	5.30	5.23	5.23	5.25	0.75	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				104		%
Indium	115-1				105		%
Indium	115-2				105		%
Iron	54-2	116.74	116.29	119.68	117.57	1.57	ppb
Iron	56-2	116.23	116.12	117.39	116.58	0.61	ppb
Iron	57-2	112.85	116.08	117.32	115.42	2.00	ppb
Krypton	83-1						cps
Lead	206-1	0.93	0.88	0.89	0.90	2.84	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-07LREX5	Instrumnet Name :	P8
Client Sample ID :	ME29D4L	Dilution Factor :	5
Date & Time Acquired :	2025-02-13 13:47:00	DataFile Name :	040AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.86	0.84	0.85	0.85	1.58	ppb
Lead	208-1	0.88	0.85	0.87	0.87	1.96	ppb
Lithium	6-1				113		%
Magnesium	24-2	41020.63	40195.85	40753.11	40656.53	1.03	ppb
Manganese	55-2	425.52	429.93	430.76	428.74	0.66	ppb
Molybdenum	94-1	5.98	5.86	6.06	5.97	1.67	ppb
Molybdenum	95-1	7.30	7.03	7.17	7.16	1.83	ppb
Molybdenum	96-1	7.05	6.91	6.98	6.98	1.03	ppb
Molybdenum	97-1	7.18	7.07	7.13	7.13	0.72	ppb
Molybdenum	98-1	7.05	7.10	7.09	7.08	0.38	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	4.16	4.02	4.24	4.14	2.60	ppb
Phosphorus	31-2	114.76	106.03	116.75	112.51	5.07	ppb
Potassium	39-2	3171.02	3143.99	3218.12	3177.71	1.18	ppb
Rhodium	103-1				105		%
Rhodium	103-2				103		%
Scandium	45-1				113		%
Scandium	45-2				110		%
Selenium	82-1	0.77	0.80	0.79	0.79	1.95	ppb
Selenium	77-2	0.00	0.00	0.80	0.27	173.21	ppb
Selenium	78-2	2.74	0.65	0.91	1.43	79.32	ppb
Silicon	28-1	1058.84	1075.45	1075.64	1069.98	0.90	ppb
Silver	107-1	0.03	0.03	0.02	0.03	5.84	ppb
Silver	109-1	0.03	0.03	0.03	0.03	6.56	ppb
Sodium	23-2	24736.61	24242.70	24360.50	24446.60	1.06	ppb
Strontium	86-1	1216.10	1224.23	1232.26	1224.20	0.66	ppb
Strontium	88-1	1230.16	1236.76	1206.55	1224.49	1.30	ppb
Sulfur	34-1	69712.20	67882.16	70126.51	69240.29	1.72	ppb
Terbium	159-1				103		%
Terbium	159-2				103		%
Thallium	203-1	0.06	0.05	0.06	0.05	5.50	ppb
Thallium	205-1	0.06	0.05	0.06	0.05	3.73	ppb
Tin	118-1	0.15	0.13	0.12	0.13	8.20	ppb
Titanium	47-1	3.40	0.81	0.80	1.67	89.85	ppb
Uranium	238-1	2.31	2.23	2.27	2.27	1.78	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-07LREX5	Instrumnet Name :	P8
Client Sample ID :	ME29D4L	Dilution Factor :	5
Date & Time Acquired :	2025-02-13 13:47:00	DataFile Name :	040AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.30	0.30	0.32	0.31	4.05	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				108		%
Yttrium	89-2				107		%
Zinc	66-2	12.56	11.33	12.03	11.97	5.14	ppb
Zirconium	90-1	0.07	0.07	0.06	0.07	5.14	ppb
Zirconium	91-1	0.08	0.17	0.09	0.11	43.96	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-09RE	Instrumnet Name :	P8
Client Sample ID :	ME29D2S	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:50:12	DataFile Name :	041AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1895.09	1887.23	1900.64	1894.32	0.36	ppb
Antimony	121-1	104.75	103.01	105.44	104.40	1.20	ppb
Arsenic	75-2	41.85	41.99	42.31	42.05	0.56	ppb
Barium	135-1	1996.61	2010.70	2033.07	2013.46	0.91	ppb
Barium	137-1	2022.61	2022.46	2025.62	2023.56	0.09	ppb
Beryllium	9-1	47.21	46.99	47.14	47.11	0.23	ppb
Bismuth	209-1				92		%
Bismuth	209-2				94		%
Bromine	81-1						cps
Cadmium	108-1	40.38	42.42	42.06	41.62	2.62	ppb
Cadmium	106-1	38.14	39.32	40.22	39.23	2.66	ppb
Cadmium	111-1	48.92	47.76	48.73	48.47	1.28	ppb
Calcium	43-1	228126.82	223637.49	226005.48	225923.26	0.99	ppb
Calcium	44-1	227164.85	223138.25	225711.60	225338.23	0.90	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	190.00	187.43	187.32	188.25	0.81	ppb
Cobalt	59-2	505.85	494.62	503.52	501.33	1.18	ppb
Copper	63-2	275.90	270.75	271.77	272.81	1.00	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				102		%
Indium	115-1				103		%
Indium	115-2				104		%
Iron	54-2	1672.52	1634.81	1664.23	1657.18	1.20	ppb
Iron	56-2	1584.51	1577.83	1573.04	1578.46	0.36	ppb
Iron	57-2	1522.26	1479.70	1480.84	1494.27	1.62	ppb
Krypton	83-1						cps
Lead	206-1	23.83	23.91	23.85	23.86	0.17	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-09RE	Instrumnet Name :	P8
Client Sample ID :	ME29D2S	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:50:12	DataFile Name :	041AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	23.24	23.64	23.59	23.49	0.93	ppb
Lead	208-1	23.47	23.83	23.76	23.69	0.81	ppb
Lithium	6-1				109		%
Magnesium	24-2	187673.16	183589.79	187704.87	186322.60	1.27	ppb
Manganese	55-2	2595.39	2591.29	2550.78	2579.15	0.96	ppb
Molybdenum	94-1	28.26	28.84	28.44	28.51	1.05	ppb
Molybdenum	95-1	33.72	34.02	33.56	33.77	0.68	ppb
Molybdenum	96-1	32.25	33.59	33.09	32.98	2.05	ppb
Molybdenum	97-1	33.69	34.02	34.18	33.97	0.74	ppb
Molybdenum	98-1	33.60	33.82	33.12	33.52	1.07	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	487.86	478.19	480.92	482.32	1.03	ppb
Phosphorus	31-2	674.63	644.13	595.28	638.01	6.27	ppb
Potassium	39-2	15715.10	15526.16	15460.43	15567.23	0.85	ppb
Rhodium	103-1				98		%
Rhodium	103-2				100		%
Scandium	45-1				110		%
Scandium	45-2				112		%
Selenium	82-1	23.51	23.90	24.78	24.06	2.70	ppb
Selenium	77-2	30.94	29.79	26.86	29.20	7.20	ppb
Selenium	78-2	23.59	25.99	26.56	25.38	6.22	ppb
Silicon	28-1	4967.01	5015.33	5163.38	5048.57	2.03	ppb
Silver	107-1	43.92	43.95	44.11	44.00	0.24	ppb
Silver	109-1	43.85	44.14	45.02	44.34	1.38	ppb
Sodium	23-2	113119.34	112735.44	111532.99	112462.59	0.74	ppb
Strontium	86-1	5609.79	5762.38	5698.11	5690.09	1.35	ppb
Strontium	88-1	5598.77	5767.13	5741.13	5702.34	1.59	ppb
Sulfur	34-1	322326.24	322641.69	326273.01	323746.98	0.68	ppb
Terbium	159-1				103		%
Terbium	159-2				103		%
Thallium	203-1	48.16	48.98	48.94	48.69	0.95	ppb
Thallium	205-1	53.44	53.58	52.51	53.18	1.10	ppb
Tin	118-1	0.63	0.57	0.59	0.59	4.55	ppb
Titanium	47-1	9.29	7.17	4.15	6.87	37.56	ppb
Uranium	238-1	11.26	11.38	11.36	11.33	0.56	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-09RE	Instrumnet Name :	P8
Client Sample ID :	ME29D2S	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:50:12	DataFile Name :	041AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	506.21	505.77	495.87	502.62	1.16	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				107		%
Yttrium	89-2				110		%
Zinc	66-2	513.60	501.56	507.36	507.51	1.19	ppb
Zirconium	90-1	0.37	0.37	0.37	0.37	0.77	ppb
Zirconium	91-1	0.38	0.40	0.39	0.39	2.27	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-01DLX2	Instrumnet Name :	P8
Client Sample ID :	ME29C5	Dilution Factor :	2
Date & Time Acquired :	2025-02-13 13:53:19	DataFile Name :	042AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	618.53	617.42	615.28	617.08	0.27	ppb
Antimony	121-1	0.06	0.06	0.07	0.06	10.58	ppb
Arsenic	75-2	1.17	1.20	1.24	1.21	3.18	ppb
Barium	135-1	15.54	15.83	15.76	15.71	0.94	ppb
Barium	137-1	15.74	16.05	15.81	15.87	1.02	ppb
Beryllium	9-1	0.07	0.08	0.08	0.08	7.20	ppb
Bismuth	209-1				88		%
Bismuth	209-2				91		%
Bromine	81-1						cps
Cadmium	108-1	0.21	0.25	0.28	0.24	13.97	ppb
Cadmium	106-1	-0.26	0.34	0.19	0.09	349.71	ppb
Cadmium	111-1	0.05	0.11	0.09	0.08	32.75	ppb
Calcium	43-1	236101.29	240812.19	238843.71	238585.73	0.99	ppb
Calcium	44-1	233093.35	235187.33	238455.81	235578.83	1.15	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1.11	1.17	1.16	1.14	2.57	ppb
Cobalt	59-2	0.53	0.51	0.49	0.51	4.67	ppb
Copper	63-2	1.40	1.35	1.40	1.38	2.18	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	2726.72	2779.89	2745.66	2750.76	0.98	ppb
Iron	56-2	2891.40	2892.64	2905.60	2896.55	0.27	ppb
Iron	57-2	2730.78	2734.59	2728.81	2731.39	0.11	ppb
Krypton	83-1						cps
Lead	206-1	0.85	0.88	0.86	0.86	1.67	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-01DLX2	Instrumnet Name :	P8
Client Sample ID :	ME29C5	Dilution Factor :	2
Date & Time Acquired :	2025-02-13 13:53:19	DataFile Name :	042AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.76	0.83	0.83	0.81	4.71	ppb
Lead	208-1	0.81	0.83	0.82	0.82	1.67	ppb
Lithium	6-1				104		%
Magnesium	24-2	75387.80	74396.91	73503.53	74429.41	1.27	ppb
Manganese	55-2	42.23	41.79	42.20	42.07	0.58	ppb
Molybdenum	94-1	2.75	2.81	2.83	2.80	1.59	ppb
Molybdenum	95-1	2.00	1.96	1.99	1.98	1.00	ppb
Molybdenum	96-1	2.01	1.97	2.03	2.00	1.58	ppb
Molybdenum	97-1	1.95	2.00	1.90	1.95	2.69	ppb
Molybdenum	98-1	1.92	1.93	1.97	1.94	1.34	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.69	1.76	1.65	1.70	3.30	ppb
Phosphorus	31-2	67.27	36.25	39.86	47.79	35.49	ppb
Potassium	39-2	2795.52	2803.27	2806.12	2801.64	0.20	ppb
Rhodium	103-1				94		%
Rhodium	103-2				96		%
Scandium	45-1				107		%
Scandium	45-2				107		%
Selenium	82-1	0.90	0.80	0.67	0.79	14.58	ppb
Selenium	77-2	0.81	1.62	0.80	1.08	43.76	ppb
Selenium	78-2	0.69	1.17	1.15	1.00	27.31	ppb
Silicon	28-1	4349.74	4307.35	4358.72	4338.60	0.63	ppb
Silver	107-1	0.06	0.05	0.04	0.05	20.53	ppb
Silver	109-1	0.06	0.05	0.04	0.05	23.69	ppb
Sodium	23-2	264356.53	269561.09	265583.83	266500.48	1.02	ppb
Strontium	86-1	11438.54	11468.59	11465.71	11457.62	0.14	ppb
Strontium	88-1	11483.76	11531.01	11617.03	11543.93	0.59	ppb
Sulfur	34-1	132369.03	132452.99	133914.42	132912.14	0.65	ppb
Terbium	159-1				98		%
Terbium	159-2				100		%
Thallium	203-1	0.07	0.08	0.09	0.08	10.32	ppb
Thallium	205-1	0.07	0.08	0.08	0.08	6.19	ppb
Tin	118-1	0.06	0.07	0.08	0.07	11.00	ppb
Titanium	47-1	17.21	16.71	19.37	17.76	7.98	ppb
Uranium	238-1	0.37	0.37	0.38	0.37	1.24	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-01DLX2	Instrumnet Name :	P8
Client Sample ID :	ME29C5	Dilution Factor :	2
Date & Time Acquired :	2025-02-13 13:53:19	DataFile Name :	042AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	1.84	1.79	1.87	1.83	2.31	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				102		%
Yttrium	89-2				105		%
Zinc	66-2	4.42	4.60	4.34	4.46	2.93	ppb
Zirconium	90-1	0.63	0.64	0.63	0.63	1.48	ppb
Zirconium	91-1	0.64	0.66	0.66	0.65	1.32	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV028	Instrumnet Name :	P8
Client Sample ID :	CCV028	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:56:34	DataFile Name :	043CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	50895.79	51118.72	50874.20	50962.91	0.27	ppb
Antimony	121-1	487.28	499.02	497.43	494.58	1.29	ppb
Arsenic	75-2	472.62	472.25	481.05	475.31	1.05	ppb
Barium	135-1	2496.58	2503.65	2499.65	2499.96	0.14	ppb
Barium	137-1	2497.67	2504.52	2467.36	2489.85	0.79	ppb
Beryllium	9-1	486.75	483.14	488.52	486.14	0.56	ppb
Bismuth	209-1				83		%
Bismuth	209-2				85		%
Bromine	81-1						cps
Cadmium	108-1	473.67	480.87	487.91	480.82	1.48	ppb
Cadmium	106-1	476.14	491.48	490.08	485.90	1.75	ppb
Cadmium	111-1	483.16	481.71	490.60	485.16	0.98	ppb
Calcium	43-1	254965.27	255213.03	257761.57	255979.96	0.60	ppb
Calcium	44-1	249873.46	255049.38	258245.47	254389.44	1.66	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	500.05	491.66	506.98	499.57	1.54	ppb
Cobalt	59-2	486.14	491.37	494.89	490.80	0.90	ppb
Copper	63-2	4665.64	4749.27	4778.83	4731.25	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				96		%
Holmium	165-2				95		%
Indium	115-1				91		%
Indium	115-2				91		%
Iron	54-2	125046.52	127713.29	128544.55	127101.46	1.44	ppb
Iron	56-2	124389.61	126562.39	129088.52	126680.18	1.86	ppb
Iron	57-2	127163.20	126234.10	128252.85	127216.71	0.79	ppb
Krypton	83-1						cps
Lead	206-1	2582.67	2534.61	2520.18	2545.82	1.29	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV028	Instrumnet Name :	P8
Client Sample ID :	CCV028	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:56:34	DataFile Name :	043CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2561.73	2542.54	2512.30	2538.86	0.98	ppb
Lead	208-1	2545.40	2527.37	2527.79	2533.52	0.41	ppb
Lithium	6-1				97		%
Magnesium	24-2	251473.40	250207.12	250699.06	250793.19	0.25	ppb
Manganese	55-2	4949.28	4939.61	4976.40	4955.10	0.38	ppb
Molybdenum	94-1	5008.52	5004.67	5004.83	5006.01	0.04	ppb
Molybdenum	95-1	4944.48	4962.04	4955.67	4954.06	0.18	ppb
Molybdenum	96-1	4952.30	4911.50	4962.02	4941.94	0.54	ppb
Molybdenum	97-1	4944.27	4889.37	4978.79	4937.48	0.91	ppb
Molybdenum	98-1	5001.03	4919.18	5022.79	4981.00	1.10	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	448.61	451.72	454.02	451.45	0.60	ppb
Phosphorus	31-2	9750.67	10077.34	9737.96	9855.32	1.95	ppb
Potassium	39-2	122793.69	122394.78	124616.32	123268.26	0.96	ppb
Rhodium	103-1				87		%
Rhodium	103-2				89		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	82-1	470.02	474.80	479.06	474.63	0.95	ppb
Selenium	77-2	500.66	449.17	449.81	466.55	6.33	ppb
Selenium	78-2	450.15	467.69	492.64	470.16	4.54	ppb
Silicon	28-1	598.83	614.39	621.85	611.69	1.92	ppb
Silver	107-1	471.86	482.00	482.23	478.70	1.24	ppb
Silver	109-1	473.84	472.17	483.18	476.40	1.25	ppb
Sodium	23-2	260957.24	263860.96	264058.03	262958.74	0.66	ppb
Strontium	86-1	501.38	504.79	499.93	502.03	0.50	ppb
Strontium	88-1	492.35	495.11	493.75	493.74	0.28	ppb
Sulfur	34-1	9869.59	10155.13	10318.84	10114.52	2.25	ppb
Terbium	159-1				94		%
Terbium	159-2				93		%
Thallium	203-1	513.14	505.20	502.02	506.79	1.13	ppb
Thallium	205-1	523.18	501.66	505.23	510.02	2.26	ppb
Tin	118-1	496.89	502.81	491.15	496.95	1.17	ppb
Titanium	47-1	4853.31	4942.04	4983.03	4926.13	1.35	ppb
Uranium	238-1	501.65	505.04	504.50	503.73	0.36	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV028	Instrumnet Name :	P8
Client Sample ID :	CCV028	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:56:34	DataFile Name :	043CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	511.58	494.97	509.32	505.29	1.78	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	4706.17	4750.47	4780.81	4745.82	0.79	ppb
Zirconium	90-1	504.48	506.14	498.13	502.92	0.84	ppb
Zirconium	91-1	500.24	499.13	500.89	500.09	0.18	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB028	Instrumnet Name :	P8
Client Sample ID :	CCB028	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:59:20	DataFile Name :	044CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1.22	1.22	1.41	1.28	8.56	ppb
Antimony	121-1	0.13	0.12	0.12	0.12	5.61	ppb
Arsenic	75-2	0.05	-0.01	0.02	0.02	153.76	ppb
Barium	135-1	0.04	0.03	0.04	0.03	13.83	ppb
Barium	137-1	0.05	0.03	0.04	0.04	35.09	ppb
Beryllium	9-1	0.13	0.11	0.10	0.11	14.50	ppb
Bismuth	209-1				96		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Cadmium	108-1	0.09	0.06	0.02	0.06	58.63	ppb
Cadmium	106-1	-1.10	0.13	-0.88	-0.62		ppb
Cadmium	111-1	-0.06	0.03	-0.04	-0.02		ppb
Calcium	43-1	8.55	6.17	7.15	7.29	16.43	ppb
Calcium	44-1	3.36	0.87	3.46	2.56	57.24	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.14	0.14	0.13	0.14	1.88	ppb
Cobalt	59-2	0.01	0.00	0.00	0.00	160.27	ppb
Copper	63-2	0.14	0.19	0.12	0.15	25.34	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				102		%
Holmium	165-2				102		%
Indium	115-1				104		%
Indium	115-2				103		%
Iron	54-2	3.59	3.10	3.22	3.30	7.66	ppb
Iron	56-2	4.03	3.44	3.41	3.63	9.63	ppb
Iron	57-2	4.00	4.13	2.70	3.61	21.82	ppb
Krypton	83-1						cps
Lead	206-1	0.16	0.15	0.15	0.15	3.09	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB028	Instrumnet Name :	P8
Client Sample ID :	CCB028	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:59:20	DataFile Name :	044CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.16	0.15	0.15	0.15	5.02	ppb
Lead	208-1	0.16	0.15	0.14	0.15	5.75	ppb
Lithium	6-1				109		%
Magnesium	24-2	-1.54	-2.03	-2.09	-1.89		ppb
Manganese	55-2	0.36	0.22	0.27	0.28	26.21	ppb
Molybdenum	94-1	0.19	0.16	0.16	0.17	9.88	ppb
Molybdenum	95-1	0.19	0.15	0.16	0.17	10.67	ppb
Molybdenum	96-1	0.18	0.15	0.15	0.16	12.32	ppb
Molybdenum	97-1	0.18	0.15	0.14	0.15	14.72	ppb
Molybdenum	98-1	0.16	0.14	0.14	0.15	8.82	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.04	-0.02	-0.06	-0.01		ppb
Phosphorus	31-2	-17.65	-24.45	-24.43	-22.18		ppb
Potassium	39-2	14.20	10.18	9.22	11.20	23.57	ppb
Rhodium	103-1				103		%
Rhodium	103-2				104		%
Scandium	45-1				108		%
Scandium	45-2				105		%
Selenium	82-1	0.16	0.01	-0.28	-0.04		ppb
Selenium	77-2	0.80	0.00	0.00	0.27	173.21	ppb
Selenium	78-2	0.21	0.24	0.48	0.31	48.99	ppb
Silicon	28-1	3.24	2.25	2.84	2.78	17.94	ppb
Silver	107-1	0.06	0.05	0.04	0.05	17.79	ppb
Silver	109-1	0.06	0.05	0.04	0.05	13.90	ppb
Sodium	23-2	41.20	37.22	36.91	38.44	6.21	ppb
Strontium	86-1	0.11	0.07	0.11	0.10	24.58	ppb
Strontium	88-1	0.11	0.09	0.11	0.10	14.46	ppb
Sulfur	34-1	-1320.06	-1359.62	-1087.92	-1255.87		ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	0.05	0.04	0.05	0.05	9.78	ppb
Thallium	205-1	0.05	0.04	0.04	0.04	16.30	ppb
Tin	118-1	0.03	0.03	0.02	0.03	26.12	ppb
Titanium	47-1	0.09	0.07	0.07	0.08	13.91	ppb
Uranium	238-1	0.01	0.01	0.01	0.01	2.32	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB028	Instrumnet Name :	P8
Client Sample ID :	CCB028	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:59:20	DataFile Name :	044CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.01	0.01	0.01	33.52	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				105		%
Yttrium	89-2				103		%
Zinc	66-2	0.14	0.17	0.18	0.16	13.55	ppb
Zirconium	90-1	0.02	0.02	0.02	0.02	15.72	ppb
Zirconium	91-1	0.03	0.03	0.03	0.03	2.62	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-01A	Instrumnet Name :	P8
Client Sample ID :	ME2993A	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 14:59:28	DataFile Name :	050AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10.23	12.92	11.89	11.68	11.65	ppb
Antimony	121-1	0.03	0.02	0.02	0.02	10.84	ppb
Arsenic	75-2	0.62	0.70	0.63	0.65	6.73	ppb
Barium	135-1	7.98	7.99	7.97	7.98	0.17	ppb
Barium	137-1	8.16	7.97	8.28	8.13	1.94	ppb
Beryllium	9-1	-0.02	-0.01	-0.01	-0.01		ppb
Bismuth	209-1				87		%
Bismuth	209-2				85		%
Bromine	81-1						cps
Cadmium	108-1	0.04	0.01	0.08	0.04	84.23	ppb
Cadmium	106-1	-1.42	-1.63	-1.10	-1.38		ppb
Cadmium	111-1	-0.11	-0.12	-0.09	-0.11		ppb
Calcium	43-1	445903.64	442446.40	449724.08	446024.70	0.82	ppb
Calcium	44-1	446133.59	440284.75	450672.87	445697.07	1.17	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.33	-0.34	-0.32	-0.33		ppb
Cobalt	59-2	0.04	0.03	0.04	0.04	21.55	ppb
Copper	63-2	0.49	0.47	0.45	0.47	4.27	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				93		%
Indium	115-1				96		%
Indium	115-2				92		%
Iron	54-2	5121.25	5066.93	4987.83	5058.67	1.33	ppb
Iron	56-2	5327.88	5277.33	5326.30	5310.50	0.54	ppb
Iron	57-2	5027.88	5018.89	5006.04	5017.60	0.22	ppb
Krypton	83-1						cps
Lead	206-1	0.14	0.13	0.11	0.13	10.31	ppb

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-01A	Instrumnet Name :	P8
Client Sample ID :	ME2993A	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 14:59:28	DataFile Name :	050AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.12	0.11	0.12	0.12	8.09	ppb
Lead	208-1	0.13	0.12	0.12	0.12	3.48	ppb
Lithium	6-1				100		%
Magnesium	24-2	169802.57	167403.33	165277.56	167494.48	1.35	ppb
Manganese	55-2	70.09	69.93	69.16	69.73	0.71	ppb
Molybdenum	94-1	1.20	1.30	1.16	1.22	5.73	ppb
Molybdenum	95-1	1.34	1.37	1.42	1.38	3.04	ppb
Molybdenum	96-1	1.36	1.37	1.35	1.36	0.85	ppb
Molybdenum	97-1	1.37	1.39	1.34	1.37	1.78	ppb
Molybdenum	98-1	1.37	1.37	1.35	1.36	0.67	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.18	-0.18	-0.22	-0.19		ppb
Phosphorus	31-2	-2.10	-6.82	-4.96	-4.63		ppb
Potassium	39-2	4143.36	4129.69	4098.45	4123.83	0.56	ppb
Rhodium	103-1				91		%
Rhodium	103-2				90		%
Scandium	45-1				102		%
Scandium	45-2				99		%
Selenium	82-1	11.14	10.56	11.97	11.22	6.28	ppb
Selenium	77-2	8.89	11.41	14.21	11.51	23.13	ppb
Selenium	78-2	12.82	10.33	12.29	11.81	11.11	ppb
Silicon	28-1	8166.97	8080.85	7985.12	8077.65	1.13	ppb
Silver	107-1	0.00	0.01	0.00	0.00	11.85	ppb
Silver	109-1	0.00	0.00	0.00	0.00		ppb
Sodium	23-2	48940.27	48647.10	48321.85	48636.41	0.64	ppb
Strontium	86-1	12202.94	12061.56	12108.88	12124.46	0.59	ppb
Strontium	88-1	12290.85	12300.97	12286.04	12292.62	0.06	ppb
Sulfur	34-1	532447.90	528883.49	536278.49	532536.63	0.69	ppb
Terbium	159-1				96		%
Terbium	159-2				92		%
Thallium	203-1	0.01	0.01	0.01	0.01	17.77	ppb
Thallium	205-1	0.01	0.00	0.01	0.01	27.84	ppb
Tin	118-1	0.07	0.06	0.06	0.06	6.02	ppb
Titanium	47-1	1.00	1.00	1.00	1.00	0.28	ppb
Uranium	238-1	0.82	0.81	0.83	0.82	1.33	ppb

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-01A	Instrumnet Name :	P8
Client Sample ID :	ME2993A	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 14:59:28	DataFile Name :	050AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.03	0.07	0.03	0.04	53.78	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	1.04	1.13	1.00	1.06	6.51	ppb
Zirconium	90-1	0.02	0.03	0.03	0.03	6.49	ppb
Zirconium	91-1	0.04	0.04	0.03	0.04	16.87	ppb

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV029	Instrumnet Name :	P8
Client Sample ID :	CCV029	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 15:09:38	DataFile Name :	053CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	49896.35	51494.33	50886.22	50758.97	1.59	ppb
Antimony	121-1	489.78	496.17	490.97	492.31	0.69	ppb
Arsenic	75-2	485.25	491.43	491.76	489.48	0.75	ppb
Barium	135-1	2509.90	2481.19	2472.35	2487.81	0.79	ppb
Barium	137-1	2537.77	2532.00	2503.59	2524.45	0.72	ppb
Beryllium	9-1	469.64	478.02	483.57	477.08	1.47	ppb
Bismuth	209-1				79		%
Bismuth	209-2				78		%
Bromine	81-1						cps
Cadmium	108-1	479.29	477.86	478.70	478.62	0.15	ppb
Cadmium	106-1	481.57	483.33	481.01	481.97	0.25	ppb
Cadmium	111-1	482.19	483.07	469.97	478.41	1.53	ppb
Calcium	43-1	258632.01	254216.32	259645.70	257498.01	1.12	ppb
Calcium	44-1	258748.64	253411.32	257687.43	256615.79	1.10	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	500.52	496.49	484.54	493.85	1.68	ppb
Cobalt	59-2	496.54	494.60	489.86	493.67	0.70	ppb
Copper	63-2	4745.84	4760.65	4658.54	4721.68	1.17	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				89		%
Holmium	165-2				89		%
Indium	115-1				87		%
Indium	115-2				86		%
Iron	54-2	125479.66	128040.80	125803.36	126441.27	1.10	ppb
Iron	56-2	125411.58	125748.64	125286.98	125482.40	0.19	ppb
Iron	57-2	127708.08	124537.97	124523.27	125589.77	1.46	ppb
Krypton	83-1						cps
Lead	206-1	2497.80	2496.36	2507.06	2500.41	0.23	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV029	Instrumnet Name :	P8
Client Sample ID :	CCV029	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 15:09:38	DataFile Name :	053CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2517.91	2506.76	2515.13	2513.27	0.23	ppb
Lead	208-1	2500.49	2511.66	2510.50	2507.55	0.24	ppb
Lithium	6-1				90		%
Magnesium	24-2	249870.07	251476.90	247548.70	249631.89	0.79	ppb
Manganese	55-2	4867.69	4988.09	4879.35	4911.71	1.35	ppb
Molybdenum	94-1	5005.76	4956.75	4948.92	4970.48	0.62	ppb
Molybdenum	95-1	4935.68	4912.11	4891.29	4913.03	0.45	ppb
Molybdenum	96-1	4935.18	4977.28	4910.94	4941.13	0.68	ppb
Molybdenum	97-1	4931.31	4901.62	4827.53	4886.82	1.09	ppb
Molybdenum	98-1	4937.44	4907.27	4882.24	4908.98	0.56	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	514.75	515.28	511.70	513.91	0.38	ppb
Phosphorus	31-2	9714.42	9636.33	9603.24	9651.33	0.59	ppb
Potassium	39-2	124163.85	123293.10	122239.12	123232.02	0.78	ppb
Rhodium	103-1				83		%
Rhodium	103-2				84		%
Scandium	45-1				95		%
Scandium	45-2				95		%
Selenium	82-1	475.73	472.38	472.26	473.46	0.42	ppb
Selenium	77-2	496.67	470.66	471.71	479.68	3.07	ppb
Selenium	78-2	466.40	493.58	474.68	478.22	2.91	ppb
Silicon	28-1	611.75	609.19	602.59	607.84	0.78	ppb
Silver	107-1	479.87	492.63	479.70	484.07	1.53	ppb
Silver	109-1	480.75	478.00	474.01	477.58	0.71	ppb
Sodium	23-2	264492.08	262664.24	260469.34	262541.89	0.77	ppb
Strontium	86-1	504.67	492.58	504.86	500.70	1.41	ppb
Strontium	88-1	496.53	499.79	498.81	498.37	0.34	ppb
Sulfur	34-1	9967.02	9539.01	9488.75	9664.93	2.72	ppb
Terbium	159-1				88		%
Terbium	159-2				88		%
Thallium	203-1	501.35	496.81	500.08	499.41	0.47	ppb
Thallium	205-1	504.35	498.29	506.95	503.20	0.88	ppb
Tin	118-1	497.77	502.17	493.32	497.75	0.89	ppb
Titanium	47-1	4951.02	4939.51	4918.65	4936.39	0.33	ppb
Uranium	238-1	490.40	494.04	497.51	493.98	0.72	ppb

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV029	Instrumnet Name :	P8
Client Sample ID :	CCV029	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 15:09:38	DataFile Name :	053CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	500.68	499.67	493.79	498.04	0.75	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				92		%
Yttrium	89-2				92		%
Zinc	66-2	4699.43	4742.99	4695.71	4712.71	0.56	ppb
Zirconium	90-1	499.86	498.90	497.14	498.64	0.28	ppb
Zirconium	91-1	506.98	500.01	499.93	502.31	0.80	ppb

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB029	Instrumnet Name :	P8
Client Sample ID :	CCB029	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 15:12:26	DataFile Name :	054CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1.19	0.94	1.48	1.20	22.43	ppb
Antimony	121-1	0.16	0.14	0.14	0.15	5.83	ppb
Arsenic	75-2	0.00	0.00	0.00	0.00	175.93	ppb
Barium	135-1	0.11	0.11	0.10	0.10	5.67	ppb
Barium	137-1	0.13	0.10	0.09	0.10	18.44	ppb
Beryllium	9-1	0.17	0.17	0.15	0.16	7.69	ppb
Bismuth	209-1				91		%
Bismuth	209-2				92		%
Bromine	81-1						cps
Cadmium	108-1	0.06	0.16	0.10	0.10	48.23	ppb
Cadmium	106-1	-1.55	-1.11	-1.77	-1.48		ppb
Cadmium	111-1	-0.09	-0.07	-0.12	-0.09		ppb
Calcium	43-1	14.90	11.71	9.49	12.03	22.58	ppb
Calcium	44-1	9.02	6.36	5.28	6.89	27.94	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.04	-0.07	-0.04	-0.05		ppb
Cobalt	59-2	0.00	0.00	0.01	0.00	309.76	ppb
Copper	63-2	0.19	0.06	0.11	0.12	53.51	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				95		%
Holmium	165-2				94		%
Indium	115-1				98		%
Indium	115-2				96		%
Iron	54-2	2.20	2.76	1.37	2.11	33.12	ppb
Iron	56-2	3.51	2.54	2.68	2.91	18.13	ppb
Iron	57-2	3.88	3.05	2.80	3.24	17.39	ppb
Krypton	83-1						cps
Lead	206-1	0.26	0.22	0.20	0.23	13.80	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB029	Instrumnet Name :	P8
Client Sample ID :	CCB029	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 15:12:26	DataFile Name :	054CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.27	0.22	0.22	0.24	12.22	ppb
Lead	208-1	0.25	0.22	0.21	0.23	10.23	ppb
Lithium	6-1				100		%
Magnesium	24-2	-1.89	-3.24	-3.67	-2.94		ppb
Manganese	55-2	0.29	0.25	0.33	0.29	12.83	ppb
Molybdenum	94-1	0.27	0.20	0.18	0.22	22.65	ppb
Molybdenum	95-1	0.24	0.20	0.18	0.21	14.10	ppb
Molybdenum	96-1	0.23	0.16	0.18	0.19	19.22	ppb
Molybdenum	97-1	0.23	0.17	0.16	0.19	20.55	ppb
Molybdenum	98-1	0.22	0.21	0.16	0.20	17.25	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.17	-0.16	-0.14	-0.16		ppb
Phosphorus	31-2	-22.94	-25.04	-17.72	-21.90		ppb
Potassium	39-2	17.44	11.47	16.33	15.08	21.06	ppb
Rhodium	103-1				98		%
Rhodium	103-2				98		%
Scandium	45-1				101		%
Scandium	45-2				99		%
Selenium	82-1	0.05	-0.29	0.06	-0.06		ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.50	0.24	0.03	-0.08		ppb
Silicon	28-1	2.83	1.95	1.66	2.15	28.26	ppb
Silver	107-1	0.06	0.05	0.05	0.05	11.14	ppb
Silver	109-1	0.06	0.05	0.05	0.05	7.48	ppb
Sodium	23-2	37.67	31.57	35.18	34.81	8.81	ppb
Strontium	86-1	0.05	0.05	0.04	0.05	9.53	ppb
Strontium	88-1	0.05	0.04	0.04	0.04	21.32	ppb
Sulfur	34-1	-896.96	-993.54	-907.41	-932.64		ppb
Terbium	159-1				93		%
Terbium	159-2				95		%
Thallium	203-1	0.05	0.04	0.04	0.04	14.66	ppb
Thallium	205-1	0.04	0.04	0.04	0.04	2.59	ppb
Tin	118-1	0.05	0.05	0.05	0.05	1.03	ppb
Titanium	47-1	0.15	0.14	0.10	0.13	20.92	ppb
Uranium	238-1	0.01	0.01	0.01	0.01	25.16	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB029	Instrumnet Name :	P8
Client Sample ID :	CCB029	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 15:12:26	DataFile Name :	054CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.01	0.00	0.01	0.00	157.34	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				97		%
Zinc	66-2	0.30	0.40	0.46	0.39	21.63	ppb
Zirconium	90-1	0.02	0.02	0.02	0.02	21.97	ppb
Zirconium	91-1	0.03	0.03	0.02	0.03	9.10	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-06	Instrumnet Name :	P8
Client Sample ID :	ME29D2	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:16:52	DataFile Name :	055AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	6.02	6.62	7.13	6.59	8.46	ppb
Antimony	121-1	0.02	0.02	0.01	0.01	28.02	ppb
Arsenic	75-2	0.06	0.07	0.12	0.08	39.96	ppb
Barium	135-1	20.58	21.22	20.69	20.83	1.66	ppb
Barium	137-1	20.62	21.45	20.56	20.88	2.39	ppb
Beryllium	9-1	-0.01	-0.01	-0.01	-0.01		ppb
Bismuth	209-1				85		%
Bismuth	209-2				84		%
Bromine	81-1						cps
Cadmium	108-1	0.06	0.05	0.07	0.06	13.63	ppb
Cadmium	106-1	-2.87	-1.00	-0.57	-1.48		ppb
Cadmium	111-1	-0.17	-0.03	0.02	-0.06		ppb
Calcium	43-1	242240.90	245209.57	249589.14	245679.87	1.50	ppb
Calcium	44-1	237848.06	236692.83	244144.53	239561.81	1.67	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.10	-0.12	-0.11	-0.11		ppb
Cobalt	59-2	0.01	0.01	0.00	0.01	76.43	ppb
Copper	63-2	0.26	0.23	0.22	0.24	9.49	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				93		%
Holmium	165-2				92		%
Indium	115-1				92		%
Indium	115-2				90		%
Iron	54-2	20.31	19.09	19.19	19.53	3.46	ppb
Iron	56-2	19.68	19.83	19.79	19.76	0.39	ppb
Iron	57-2	30.01	28.06	27.82	28.63	4.21	ppb
Krypton	83-1						cps
Lead	206-1	0.38	0.31	0.30	0.33	14.44	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-06	Instrumnet Name :	P8
Client Sample ID :	ME29D2	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:16:52	DataFile Name :	055AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.36	0.30	0.29	0.32	11.91	ppb
Lead	208-1	0.38	0.31	0.29	0.32	15.45	ppb
Lithium	6-1				96		%
Magnesium	24-2	67311.67	66671.04	66227.86	66736.86	0.82	ppb
Manganese	55-2	15.85	15.97	15.48	15.77	1.64	ppb
Molybdenum	94-1	0.08	0.08	0.10	0.08	12.49	ppb
Molybdenum	95-1	0.00	0.00	0.00	0.00		ppb
Molybdenum	96-1	0.00	-0.01	0.00	0.00	38928.23	ppb
Molybdenum	97-1	0.01	0.00	0.00	0.00	657.90	ppb
Molybdenum	98-1	0.00	0.00	0.00	0.00		ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.06	0.07	0.06	0.07	12.03	ppb
Phosphorus	31-2	-13.60	4.17	1.84	-2.53		ppb
Potassium	39-2	2842.50	2821.89	2840.91	2835.10	0.40	ppb
Rhodium	103-1				88		%
Rhodium	103-2				88		%
Scandium	45-1				97		%
Scandium	45-2				96		%
Selenium	82-1	0.95	1.08	1.28	1.10	15.10	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	1.10	0.57	0.61	0.76	39.22	ppb
Silicon	28-1	5027.95	5035.53	5153.01	5072.16	1.38	ppb
Silver	107-1	0.01	0.01	0.01	0.01	28.13	ppb
Silver	109-1	0.00	0.00	0.00	0.00		ppb
Sodium	23-2	60692.56	60327.74	60031.37	60350.56	0.55	ppb
Strontium	86-1	21786.61	21991.88	21834.73	21871.07	0.49	ppb
Strontium	88-1	21977.64	22119.16	21851.23	21982.68	0.61	ppb
Sulfur	34-1	140315.91	142128.87	148042.51	143495.77	2.82	ppb
Terbium	159-1				91		%
Terbium	159-2				90		%
Thallium	203-1	0.00	0.00	0.01	0.01	19.29	ppb
Thallium	205-1	0.01	0.01	0.01	0.01	28.10	ppb
Tin	118-1	-0.04	-0.04	-0.04	-0.04		ppb
Titanium	47-1	0.47	0.56	0.54	0.52	8.85	ppb
Uranium	238-1	0.17	0.17	0.17	0.17	0.54	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-06	Instrumnet Name :	P8
Client Sample ID :	ME29D2	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:16:52	DataFile Name :	055AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.11	0.10	0.11	0.11	4.93	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				94		%
Yttrium	89-2				92		%
Zinc	66-2	2.31	2.34	2.20	2.28	3.34	ppb
Zirconium	90-1	0.05	0.05	0.04	0.05	10.07	ppb
Zirconium	91-1	0.05	0.04	0.04	0.04	3.88	ppb

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-08	Instrumnet Name :	P8
Client Sample ID :	ME29D2D	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:20:07	DataFile Name :	056AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	14.97	26.00	14.82	18.60	34.49	ppb
Antimony	121-1	0.14	0.13	0.13	0.14	3.92	ppb
Arsenic	75-2	0.35	0.29	0.25	0.30	17.48	ppb
Barium	135-1	22.99	23.63	22.85	23.15	1.80	ppb
Barium	137-1	23.52	23.84	23.48	23.61	0.83	ppb
Beryllium	9-1	-0.02	-0.01	-0.01	-0.01		ppb
Bismuth	209-1				86		%
Bismuth	209-2				85		%
Bromine	81-1						cps
Cadmium	108-1	0.24	0.34	0.21	0.26	24.68	ppb
Cadmium	106-1	-0.70	-0.33	-0.74	-0.59		ppb
Cadmium	111-1	0.15	0.18	0.16	0.16	10.61	ppb
Calcium	43-1	245993.12	247051.93	249657.71	247567.59	0.76	ppb
Calcium	44-1	239390.41	240260.70	248858.00	242836.37	2.15	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.06	0.07	0.09	0.07	23.32	ppb
Cobalt	59-2	0.35	0.33	0.33	0.34	4.29	ppb
Copper	63-2	2.61	2.56	2.63	2.60	1.45	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				96		%
Holmium	165-2				93		%
Indium	115-1				95		%
Indium	115-2				92		%
Iron	54-2	70.27	69.45	65.54	68.42	3.69	ppb
Iron	56-2	71.61	70.09	70.46	70.72	1.13	ppb
Iron	57-2	74.85	74.96	74.38	74.73	0.41	ppb
Krypton	83-1						cps
Lead	206-1	0.64	0.64	0.60	0.63	4.10	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-08	Instrumnet Name :	P8
Client Sample ID :	ME29D2D	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:20:07	DataFile Name :	056AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.59	0.59	0.55	0.58	3.64	ppb
Lead	208-1	0.60	0.61	0.58	0.60	2.27	ppb
Lithium	6-1				98		%
Magnesium	24-2	78262.95	78792.47	77962.85	78339.42	0.54	ppb
Manganese	55-2	208.81	208.18	208.06	208.35	0.19	ppb
Molybdenum	94-1	2.82	2.74	2.82	2.79	1.78	ppb
Molybdenum	95-1	3.21	3.22	3.25	3.23	0.67	ppb
Molybdenum	96-1	3.11	3.20	3.12	3.14	1.60	ppb
Molybdenum	97-1	3.24	3.30	3.27	3.27	0.95	ppb
Molybdenum	98-1	3.16	3.21	3.19	3.19	0.79	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	2.12	1.90	1.98	2.00	5.75	ppb
Phosphorus	31-2	35.94	40.03	44.29	40.09	10.41	ppb
Potassium	39-2	4013.03	4042.75	4059.03	4038.27	0.58	ppb
Rhodium	103-1				90		%
Rhodium	103-2				90		%
Scandium	45-1				100		%
Scandium	45-2				99		%
Selenium	82-1	1.34	1.67	1.90	1.63	17.31	ppb
Selenium	77-2	0.00	0.88	0.00	0.29	173.21	ppb
Selenium	78-2	0.29	0.02	-0.50	-0.06		ppb
Silicon	28-1	5085.60	5116.33	5197.45	5133.13	1.13	ppb
Silver	107-1	0.02	0.02	0.02	0.02	3.94	ppb
Silver	109-1	0.01	0.01	0.03	0.02	61.22	ppb
Sodium	23-2	65036.58	65622.51	65118.50	65259.20	0.49	ppb
Strontium	86-1	20312.63	20035.11	20061.72	20136.48	0.76	ppb
Strontium	88-1	20161.90	20171.04	20091.55	20141.50	0.22	ppb
Sulfur	34-1	162178.86	163590.02	164494.67	163421.19	0.71	ppb
Terbium	159-1				94		%
Terbium	159-2				92		%
Thallium	203-1	0.03	0.03	0.03	0.03	11.93	ppb
Thallium	205-1	0.03	0.03	0.02	0.03	5.14	ppb
Tin	118-1	0.01	0.02	0.01	0.01	29.44	ppb
Titanium	47-1	0.98	1.35	0.90	1.08	22.00	ppb
Uranium	238-1	1.27	1.26	1.22	1.25	1.99	ppb

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-08	Instrumnet Name :	P8
Client Sample ID :	ME29D2D	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:20:07	DataFile Name :	056AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.19	0.25	0.20	0.21	15.80	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				97		%
Yttrium	89-2				95		%
Zinc	66-2	7.65	7.29	7.62	7.52	2.62	ppb
Zirconium	90-1	0.08	0.07	0.07	0.07	7.05	ppb
Zirconium	91-1	0.08	0.07	0.08	0.08	6.10	ppb

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-06LX5	Instrumnet Name :	P8
Client Sample ID :	ME29D2L	Dilution Factor :	5
Date & Time Acquired :	2025-02-13 16:23:31	DataFile Name :	057AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.63	1.56	0.83	1.00	49.11	ppb
Antimony	121-1	0.00	0.00	0.00	0.00	17.98	ppb
Arsenic	75-2	-0.01	0.00	-0.01	-0.01		ppb
Barium	135-1	4.24	4.19	4.25	4.23	0.85	ppb
Barium	137-1	4.18	4.29	4.35	4.27	2.04	ppb
Beryllium	9-1	-0.02	-0.01	-0.02	-0.02		ppb
Bismuth	209-1				88		%
Bismuth	209-2				88		%
Bromine	81-1						cps
Cadmium	108-1	0.04	0.04	0.00	0.03	86.96	ppb
Cadmium	106-1	-1.40	-0.78	-0.41	-0.86		ppb
Cadmium	111-1	-0.09	-0.05	-0.02	-0.06		ppb
Calcium	43-1	51533.46	50652.20	50946.46	51044.04	0.88	ppb
Calcium	44-1	49630.59	48938.04	48955.59	49174.74	0.80	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.09	-0.08	-0.11	-0.09		ppb
Cobalt	59-2	-0.02	-0.02	-0.02	-0.02		ppb
Copper	63-2	-0.06	-0.06	-0.06	-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				93		%
Holmium	165-2				92		%
Indium	115-1				94		%
Indium	115-2				92		%
Iron	54-2	3.31	3.05	3.19	3.19	4.11	ppb
Iron	56-2	3.26	3.26	3.07	3.19	3.42	ppb
Iron	57-2	5.69	5.23	6.72	5.88	12.91	ppb
Krypton	83-1						cps
Lead	206-1	0.04	0.05	0.05	0.05	3.31	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-06LX5	Instrumnet Name :	P8
Client Sample ID :	ME29D2L	Dilution Factor :	5
Date & Time Acquired :	2025-02-13 16:23:31	DataFile Name :	057AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.04	0.05	0.05	0.05	4.53	ppb
Lead	208-1	0.05	0.05	0.05	0.05	0.56	ppb
Lithium	6-1				98		%
Magnesium	24-2	13907.67	14043.46	13958.82	13969.98	0.49	ppb
Manganese	55-2	2.89	3.31	3.02	3.07	7.02	ppb
Molybdenum	94-1	0.04	0.01	0.03	0.03	52.91	ppb
Molybdenum	95-1	0.01	0.01	0.01	0.01	18.76	ppb
Molybdenum	96-1	-0.01	0.01	0.00	0.00	1809.81	ppb
Molybdenum	97-1	0.01	-0.01	0.00	0.00	261946.25	ppb
Molybdenum	98-1	0.00	0.00	0.00	0.00	103.34	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.12	-0.08	-0.09	-0.10		ppb
Phosphorus	31-2	-19.36	-21.18	-13.97	-18.17		ppb
Potassium	39-2	591.42	594.86	586.24	590.84	0.73	ppb
Rhodium	103-1				93		%
Rhodium	103-2				92		%
Scandium	45-1				99		%
Scandium	45-2				96		%
Selenium	82-1	0.60	0.75	0.13	0.50	65.12	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	0.03	0.03	0.03	0.03	9.49	ppb
Silicon	28-1	1032.60	1014.67	1029.15	1025.48	0.93	ppb
Silver	107-1	0.00	0.00	0.00	0.00	31.81	ppb
Silver	109-1	0.00	0.00	0.00	0.00		ppb
Sodium	23-2	12337.98	12576.24	12347.73	12420.65	1.09	ppb
Strontium	86-1	4536.61	4472.84	4600.79	4536.74	1.41	ppb
Strontium	88-1	4536.99	4431.87	4612.96	4527.27	2.01	ppb
Sulfur	34-1	29933.15	30176.42	30908.47	30339.35	1.67	ppb
Terbium	159-1				92		%
Terbium	159-2				90		%
Thallium	203-1	0.00	0.01	0.00	0.01	68.29	ppb
Thallium	205-1	0.00	0.01	0.01	0.01	38.71	ppb
Tin	118-1	-0.01	0.00	0.00	0.00		ppb
Titanium	47-1	0.13	0.09	0.09	0.10	23.36	ppb
Uranium	238-1	0.03	0.03	0.03	0.03	1.19	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-06LX5	Instrumnet Name :	P8
Client Sample ID :	ME29D2L	Dilution Factor :	5
Date & Time Acquired :	2025-02-13 16:23:31	DataFile Name :	057AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.02	0.01	0.01	0.01	61.92	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				94		%
Yttrium	89-2				94		%
Zinc	66-2	0.57	0.63	0.59	0.60	5.38	ppb
Zirconium	90-1	0.01	0.00	0.01	0.01	30.42	ppb
Zirconium	91-1	0.01	0.01	0.02	0.01	49.12	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-09	Instrumnet Name :	P8
Client Sample ID :	ME29D2S	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:26:46	DataFile Name :	058AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1846.34	1850.04	1829.36	1841.91	0.60	ppb
Antimony	121-1	106.61	105.45	107.16	106.41	0.82	ppb
Arsenic	75-2	41.90	42.85	41.89	42.21	1.31	ppb
Barium	135-1	2010.03	2036.77	2039.99	2028.93	0.81	ppb
Barium	137-1	2020.84	2030.51	2026.88	2026.08	0.24	ppb
Beryllium	9-1	45.75	46.73	47.06	46.51	1.47	ppb
Bismuth	209-1				86		%
Bismuth	209-2				84		%
Bromine	81-1						cps
Cadmium	108-1	40.07	40.23	38.66	39.65	2.18	ppb
Cadmium	106-1	37.77	38.10	38.03	37.97	0.47	ppb
Cadmium	111-1	47.60	48.06	47.83	47.83	0.49	ppb
Calcium	43-1	244073.40	248653.62	244635.10	245787.37	1.02	ppb
Calcium	44-1	240468.21	243569.70	238694.79	240910.90	1.02	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	189.59	189.44	187.49	188.84	0.62	ppb
Cobalt	59-2	501.26	498.79	503.53	501.20	0.47	ppb
Copper	63-2	238.74	238.64	236.26	237.88	0.59	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				96		%
Holmium	165-2				92		%
Indium	115-1				94		%
Indium	115-2				91		%
Iron	54-2	1191.76	1173.54	1175.98	1180.43	0.84	ppb
Iron	56-2	1098.10	1090.62	1065.77	1084.83	1.56	ppb
Iron	57-2	1021.06	1009.85	1017.02	1015.98	0.56	ppb
Krypton	83-1						cps
Lead	206-1	19.72	19.88	20.13	19.91	1.02	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-09	Instrumnet Name :	P8
Client Sample ID :	ME29D2S	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:26:46	DataFile Name :	058AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	19.75	19.95	20.05	19.92	0.77	ppb
Lead	208-1	19.70	19.76	19.97	19.81	0.72	ppb
Lithium	6-1				97		%
Magnesium	24-2	71702.74	71019.44	69950.74	70890.98	1.25	ppb
Manganese	55-2	549.03	553.58	544.37	548.99	0.84	ppb
Molybdenum	94-1	1.18	1.19	1.19	1.19	0.47	ppb
Molybdenum	95-1	1.22	1.27	1.22	1.23	2.17	ppb
Molybdenum	96-1	1.21	1.25	1.24	1.23	1.63	ppb
Molybdenum	97-1	1.18	1.18	1.19	1.18	0.64	ppb
Molybdenum	98-1	1.20	1.22	1.24	1.22	1.78	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	475.95	478.45	470.18	474.86	0.89	ppb
Phosphorus	31-2	30.27	5.16	0.34	11.92	134.76	ppb
Potassium	39-2	3260.23	3243.35	3255.95	3253.18	0.27	ppb
Rhodium	103-1				90		%
Rhodium	103-2				88		%
Scandium	45-1				99		%
Scandium	45-2				97		%
Selenium	82-1	92.28	97.59	94.08	94.65	2.85	ppb
Selenium	77-2	87.64	100.67	108.47	98.93	10.64	ppb
Selenium	78-2	97.66	103.16	95.11	98.64	4.17	ppb
Silicon	28-1	5073.82	5109.30	4966.08	5049.73	1.48	ppb
Silver	107-1	44.24	45.02	45.09	44.79	1.05	ppb
Silver	109-1	44.75	45.22	45.03	45.00	0.52	ppb
Sodium	23-2	62765.58	61858.57	60710.92	61778.36	1.67	ppb
Strontium	86-1	20607.51	21045.36	21195.29	20949.39	1.46	ppb
Strontium	88-1	20598.48	21255.23	21263.80	21039.17	1.81	ppb
Sulfur	34-1	151028.26	151983.64	149673.47	150895.12	0.77	ppb
Terbium	159-1				93		%
Terbium	159-2				90		%
Thallium	203-1	47.40	47.55	48.44	47.80	1.17	ppb
Thallium	205-1	51.83	51.42	51.93	51.73	0.53	ppb
Tin	118-1	0.03	0.03	0.03	0.03	13.40	ppb
Titanium	47-1	0.68	0.73	0.61	0.67	8.88	ppb
Uranium	238-1	0.56	0.59	0.58	0.58	2.45	ppb

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-09	Instrumnet Name :	P8
Client Sample ID :	ME29D2S	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:26:46	DataFile Name :	058AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	505.66	500.14	500.77	502.19	0.60	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	474.85	469.42	461.69	468.65	1.41	ppb
Zirconium	90-1	0.08	0.08	0.08	0.08	4.78	ppb
Zirconium	91-1	0.12	0.10	0.11	0.11	8.12	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV030	Instrumnet Name :	P8
Client Sample ID :	CCV030	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:31:10	DataFile Name :	059CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	52105.83	51501.39	51560.63	51722.62	0.64	ppb
Antimony	121-1	490.92	496.11	492.77	493.26	0.53	ppb
Arsenic	75-2	492.11	486.23	496.53	491.62	1.05	ppb
Barium	135-1	2484.05	2517.13	2473.92	2491.70	0.91	ppb
Barium	137-1	2522.18	2566.50	2506.88	2531.85	1.22	ppb
Beryllium	9-1	479.07	483.39	471.50	477.99	1.26	ppb
Bismuth	209-1				76		%
Bismuth	209-2				75		%
Bromine	81-1						cps
Cadmium	108-1	479.65	482.83	481.56	481.35	0.33	ppb
Cadmium	106-1	481.84	486.01	481.60	483.15	0.51	ppb
Cadmium	111-1	480.97	490.17	480.44	483.86	1.13	ppb
Calcium	43-1	260762.97	261926.65	258151.10	260280.24	0.74	ppb
Calcium	44-1	261411.60	262155.95	261728.79	261765.45	0.14	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	510.32	498.45	496.08	501.62	1.52	ppb
Cobalt	59-2	499.61	494.44	495.24	496.43	0.56	ppb
Copper	63-2	4831.76	4800.37	4743.16	4791.76	0.94	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				87		%
Holmium	165-2				84		%
Indium	115-1				82		%
Indium	115-2				79		%
Iron	54-2	129877.11	127421.51	127022.63	128107.08	1.21	ppb
Iron	56-2	127482.92	126410.95	125000.34	126298.07	0.99	ppb
Iron	57-2	127676.44	125852.88	127193.52	126907.61	0.74	ppb
Krypton	83-1						cps
Lead	206-1	2563.17	2514.84	2571.96	2549.99	1.21	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV030	Instrumnet Name :	P8
Client Sample ID :	CCV030	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:31:10	DataFile Name :	059CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2547.40	2538.27	2547.37	2544.35	0.21	ppb
Lead	208-1	2546.97	2535.92	2531.50	2538.13	0.31	ppb
Lithium	6-1				86		%
Magnesium	24-2	253738.96	252960.80	252652.86	253117.54	0.22	ppb
Manganese	55-2	5002.15	4865.27	4959.28	4942.23	1.42	ppb
Molybdenum	94-1	5067.84	5021.86	5027.13	5038.94	0.50	ppb
Molybdenum	95-1	5077.73	5007.56	5071.03	5052.11	0.77	ppb
Molybdenum	96-1	4988.78	4969.97	5004.32	4987.69	0.34	ppb
Molybdenum	97-1	5004.01	4938.60	4957.42	4966.67	0.68	ppb
Molybdenum	98-1	5024.10	5002.38	4979.82	5002.10	0.44	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	464.65	463.18	463.68	463.84	0.16	ppb
Phosphorus	31-2	9900.35	9512.85	9649.25	9687.48	2.03	ppb
Potassium	39-2	125819.96	122269.34	124212.30	124100.54	1.43	ppb
Rhodium	103-1				79		%
Rhodium	103-2				78		%
Scandium	45-1				88		%
Scandium	45-2				87		%
Selenium	82-1	484.55	480.69	479.11	481.45	0.58	ppb
Selenium	77-2	476.98	405.21	457.55	446.58	8.31	ppb
Selenium	78-2	483.50	479.86	499.04	487.47	2.09	ppb
Silicon	28-1	610.58	617.06	614.33	613.99	0.53	ppb
Silver	107-1	470.85	479.22	480.57	476.88	1.10	ppb
Silver	109-1	474.81	482.45	469.57	475.61	1.36	ppb
Sodium	23-2	269668.55	266124.72	263300.39	266364.55	1.20	ppb
Strontium	86-1	509.28	509.67	502.58	507.18	0.79	ppb
Strontium	88-1	505.16	499.84	496.66	500.55	0.86	ppb
Sulfur	34-1	10928.50	10911.93	10898.24	10912.89	0.14	ppb
Terbium	159-1				85		%
Terbium	159-2				83		%
Thallium	203-1	512.12	502.87	515.04	510.01	1.25	ppb
Thallium	205-1	513.13	502.40	517.04	510.86	1.48	ppb
Tin	118-1	488.90	503.05	493.34	495.10	1.46	ppb
Titanium	47-1	4922.02	4968.45	4960.25	4950.24	0.50	ppb
Uranium	238-1	505.43	507.24	497.09	503.25	1.08	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV030	Instrumnet Name :	P8
Client Sample ID :	CCV030	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:31:10	DataFile Name :	059CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	482.28	478.84	478.98	480.03	0.41	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				86		%
Yttrium	89-2				85		%
Zinc	66-2	4722.16	4797.45	4713.05	4744.22	0.98	ppb
Zirconium	90-1	507.06	508.66	500.79	505.50	0.82	ppb
Zirconium	91-1	512.18	505.47	507.80	508.48	0.67	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB030	Instrumnet Name :	P8
Client Sample ID :	CCB030	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:34:05	DataFile Name :	060CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1.55	1.41	1.56	1.51	5.68	ppb
Antimony	121-1	0.12	0.12	0.10	0.11	8.99	ppb
Arsenic	75-2	0.04	0.00	0.00	0.01	151.48	ppb
Barium	135-1	0.11	0.08	0.08	0.09	22.87	ppb
Barium	137-1	0.14	0.10	0.07	0.10	33.59	ppb
Beryllium	9-1	0.11	0.11	0.10	0.11	6.79	ppb
Bismuth	209-1				89		%
Bismuth	209-2				89		%
Bromine	81-1						cps
Cadmium	108-1	0.06	0.03	0.16	0.08	82.13	ppb
Cadmium	106-1	-1.82	-1.59	-1.91	-1.78		ppb
Cadmium	111-1	-0.11	-0.11	-0.15	-0.12		ppb
Calcium	43-1	13.13	9.25	8.65	10.34	23.49	ppb
Calcium	44-1	7.82	2.21	2.06	4.03	81.55	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.01	-0.09	-0.07	-0.05		ppb
Cobalt	59-2	0.01	0.00	0.01	0.01	88.16	ppb
Copper	63-2	0.07	0.00	-0.01	0.02	178.67	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				92		%
Holmium	165-2				91		%
Indium	115-1				94		%
Indium	115-2				91		%
Iron	54-2	1.91	0.87	0.55	1.11	63.87	ppb
Iron	56-2	1.76	1.59	1.29	1.55	15.32	ppb
Iron	57-2	3.00	1.90	1.09	2.00	48.10	ppb
Krypton	83-1						cps
Lead	206-1	0.18	0.14	0.11	0.14	23.45	ppb

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB030	Instrumnet Name :	P8
Client Sample ID :	CCB030	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:34:05	DataFile Name :	060CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.17	0.13	0.11	0.14	20.18	ppb
Lead	208-1	0.17	0.13	0.12	0.14	19.90	ppb
Lithium	6-1				97		%
Magnesium	24-2	-3.28	-2.64	-2.96	-2.96		ppb
Manganese	55-2	0.19	0.15	0.12	0.16	24.59	ppb
Molybdenum	94-1	0.22	0.17	0.16	0.18	18.64	ppb
Molybdenum	95-1	0.21	0.15	0.13	0.16	26.01	ppb
Molybdenum	96-1	0.18	0.16	0.14	0.16	13.55	ppb
Molybdenum	97-1	0.19	0.18	0.13	0.17	18.91	ppb
Molybdenum	98-1	0.19	0.16	0.15	0.17	14.26	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.08	-0.19	-0.15	-0.14		ppb
Phosphorus	31-2	-28.57	-28.82	-23.35	-26.91		ppb
Potassium	39-2	11.78	12.00	9.11	10.97	14.67	ppb
Rhodium	103-1				93		%
Rhodium	103-2				93		%
Scandium	45-1				96		%
Scandium	45-2				94		%
Selenium	82-1	0.10	0.22	-0.12	0.07	255.14	ppb
Selenium	77-2	0.00	0.00	1.83	0.61	173.21	ppb
Selenium	78-2	0.31	-0.23	0.57	0.22	187.23	ppb
Silicon	28-1	2.05	1.11	1.53	1.57	30.10	ppb
Silver	107-1	0.05	0.04	0.03	0.04	19.43	ppb
Silver	109-1	0.05	0.04	0.03	0.04	23.37	ppb
Sodium	23-2	23.84	21.87	20.65	22.12	7.28	ppb
Strontium	86-1	0.21	0.15	0.15	0.17	18.87	ppb
Strontium	88-1	0.18	0.14	0.18	0.17	12.72	ppb
Sulfur	34-1	-626.56	-737.65	-620.37	-661.53		ppb
Terbium	159-1				91		%
Terbium	159-2				89		%
Thallium	203-1	0.04	0.04	0.03	0.04	16.77	ppb
Thallium	205-1	0.04	0.04	0.03	0.04	11.98	ppb
Tin	118-1	0.04	0.03	0.03	0.03	16.74	ppb
Titanium	47-1	0.12	0.11	0.08	0.10	17.63	ppb
Uranium	238-1	0.01	0.01	0.01	0.01	29.28	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB030	Instrumnet Name :	P8
Client Sample ID :	CCB030	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:34:05	DataFile Name :	060CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.01	0.00	0.01	0.01	107.62	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				95		%
Yttrium	89-2				92		%
Zinc	66-2	0.22	0.28	0.25	0.25	12.60	ppb
Zirconium	90-1	0.03	0.02	0.02	0.02	19.19	ppb
Zirconium	91-1	0.04	0.02	0.02	0.03	32.33	ppb

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:45:07	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	70	47	97	71	35.18	cps
Antimony	121-1	57	43	43	48	16.12	cps
Arsenic	75-2	3	13	3	7	86.65	cps
Barium	135-1	457	520	450	476	8.12	cps
Barium	137-1	763	777	833	791	4.70	cps
Beryllium	9-1	462	525	416	468	11.66	cps
Bismuth	209-1	14123463	14105716	14215968	14148382	0.42	cps
Bismuth	209-2	5039748	5098469	5053290	5063836	0.61	cps
Bromine	81-1	4404	4151	4191	4248	3.21	cps
Cadmium	108-1	33	13	30	26	41.94	cps
Cadmium	106-1	9570	9754	9667	9663	0.95	cps
Cadmium	111-1	6719	6831	6779	6777	0.83	cps
Calcium	43-1	590	497	533	540	8.71	cps
Calcium	44-1	27633	26969	27326	27309	1.22	cps
Carbon	12-1	4608129	4135938	4030812	4258293	7.22	cps
Carbon	12-2	25576	25683	24874	25378	1.73	cps
Chlorine	35-1	143549	140363	140995	141636	1.19	cps
Chlorine	35-2	490	460	487	479	3.43	cps
Chromium	52-2	2390	2377	2467	2411	2.01	cps
Cobalt	59-2	303	273	297	291	5.41	cps
Copper	63-2	3290	3014	3244	3183	4.65	cps
Dysprosium	156-1	70	120	123	104	28.61	cps
Dysprosium	156-2	0	7	0	2	173.21	cps
Erbium	164-1	97	93	107	99	7.02	cps
Erbium	164-2	20	17	27	21	24.12	cps
Gadolinium	160-1	120	93	157	123	25.78	cps
Gadolinium	160-2	13	27	23	21	32.88	cps
Holmium	165-1	21554382	21426407	21313327	21431372	0.56	cps
Holmium	165-2	6780152	6660068	6659920	6700047	1.04	cps
Indium	115-1	16688942	16961204	16721683	16790610	0.89	cps
Indium	115-2	1381410	1377345	1375359	1378038	0.22	cps
Iron	54-2	940	960	920	940	2.13	cps
Iron	56-2	13623	13700	13790	13704	0.61	cps
Iron	57-2	320	323	287	310	6.54	cps
Krypton	83-1	327	253	327	302	14.01	cps
Lead	206-1	1400	1640	1570	1537	8.03	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:45:07	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1363	1367	1370	1367	0.24	cps
Lead	208-1	6094	6281	6194	6190	1.51	cps
Lithium	6-1	8372388	8616156	8361767	8450104	1.70	cps
Magnesium	24-2	5241	5281	5178	5233	1.00	cps
Manganese	55-2	297	270	327	298	9.52	cps
Molybdenum	94-1	627	643	637	636	1.32	cps
Molybdenum	95-1	583	540	567	563	3.88	cps
Molybdenum	96-1	717	640	680	679	5.65	cps
Molybdenum	97-1	363	417	347	376	9.74	cps
Molybdenum	98-1	940	873	920	911	3.75	cps
Neodymium	150-1	13	20	30	21	39.75	cps
Neodymium	150-2	7	3	7	6	34.70	cps
Nickel	60-2	1490	1620	1637	1582	5.08	cps
Phosphorus	31-2	117	93	117	109	12.38	cps
Potassium	39-2	8786	8863	8936	8862	0.85	cps
Rhodium	103-1	15737345	15800865	15655090	15731100	0.46	cps
Rhodium	103-2	5710063	5592251	5651218	5651177	1.04	cps
Scandium	45-1	11114004	10896030	11031465	11013833	1.00	cps
Scandium	45-2	192832	193203	192095	192710	0.29	cps
Selenium	82-1	-20	27	-37	-10	-328.40	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	0	10	10	7	86.60	cps
Silicon	28-1	543007	539255	539385	540549	0.39	cps
Silver	107-1	227	193	273	231	17.39	cps
Silver	109-1	113	123	90	109	15.71	cps
Sodium	23-2	43695	43568	44060	43774	0.58	cps
Strontium	86-1	773	690	817	760	8.47	cps
Strontium	88-1	2584	2424	2550	2519	3.35	cps
Sulfur	34-1	795846	791649	787450	791648	0.53	cps
Terbium	159-1	22461321	22370025	22202626	22344657	0.59	cps
Terbium	159-2	6476178	6491269	6549446	6505631	0.59	cps
Thallium	203-1	387	350	343	360	6.48	cps
Thallium	205-1	923	953	950	942	1.75	cps
Tin	118-1	2450	2670	2517	2546	4.43	cps
Titanium	47-1	310	250	290	283	10.78	cps
Uranium	238-1	267	183	197	216	20.77	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:45:07	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	13	33	27	24	41.66	cps
Ytterbium	172-1	107	93	93	98	7.87	cps
Ytterbium	172-2	47	53	63	54	15.40	cps
Ytterbium	176-1	2597	2677	2474	2583	3.97	cps
Ytterbium	176-2	357	390	387	378	4.86	cps
Yttrium	89-1	28420853	28710896	28675998	28602582	0.55	cps
Yttrium	89-2	1832389	1794865	1825498	1817584	1.10	cps
Zinc	66-2	200	153	180	178	13.17	cps
Zirconium	90-1	903	1000	993	966	5.59	cps
Zirconium	91-1	167	160	163	163	2.04	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P8
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:48:29	DataFile Name :	005CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1700	1547	1520	1589	6.11	cps
Antimony	121-1	37786	37996	38668	38150	1.21	cps
Arsenic	75-2	343	343	377	354	5.43	cps
Barium	135-1	45844	45553	47085	46160	1.76	cps
Barium	137-1	79388	80243	80269	79967	0.63	cps
Beryllium	9-1	7410	7483	7595	7496	1.24	cps
Bismuth	209-1	14255624	14025076	14111834	14130845	0.82	cps
Bismuth	209-2	5024314	5033342	5054374	5037344	0.31	cps
Bromine	81-1	3734	4301	4154	4063	7.24	cps
Cadmium	108-1	487	433	353	424	15.81	cps
Cadmium	106-1	9667	10171	9790	9876	2.66	cps
Cadmium	111-1	11447	11784	11213	11481	2.50	cps
Calcium	43-1	31591	31174	31668	31478	0.85	cps
Calcium	44-1	524440	526833	530291	527188	0.56	cps
Carbon	12-1	4596789	4285954	4067691	4316811	6.16	cps
Carbon	12-2	26153	25843	25662	25886	0.96	cps
Chlorine	35-1	140147	140285	139460	139964	0.32	cps
Chlorine	35-2	473	457	430	453	4.82	cps
Chromium	52-2	9773	9867	10067	9902	1.51	cps
Cobalt	59-2	7969	8136	8152	8086	1.25	cps
Copper	63-2	14568	14551	14507	14542	0.21	cps
Dysprosium	156-1	70	73	67	70	4.76	cps
Dysprosium	156-2	20	17	0	12	87.67	cps
Erbium	164-1	110	83	113	102	16.09	cps
Erbium	164-2	27	37	23	29	24.03	cps
Gadolinium	160-1	170	150	130	150	13.33	cps
Gadolinium	160-2	33	13	13	20	57.74	cps
Holmium	165-1	21426831	21933311	21253289	21537810	1.64	cps
Holmium	165-2	6763878	6835178	6745924	6781660	0.70	cps
Indium	115-1	16886441	16868485	16610812	16788579	0.92	cps
Indium	115-2	1381954	1389016	1403921	1391631	0.81	cps
Iron	54-2	9013	8733	9046	8931	1.93	cps
Iron	56-2	156656	157276	156825	156919	0.20	cps
Iron	57-2	4054	4151	4201	4135	1.80	cps
Krypton	83-1	290	267	277	278	4.22	cps
Lead	206-1	16968	17665	17455	17363	2.06	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P8
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:48:29	DataFile Name :	005CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	15152	15129	15072	15118	0.27	cps
Lead	208-1	69006	69259	69630	69298	0.45	cps
Lithium	6-1	8611440	8472779	8513657	8532625	0.84	cps
Magnesium	24-2	144976	143771	143582	144110	0.52	cps
Manganese	55-2	1960	2007	1783	1917	6.15	cps
Molybdenum	94-1	38811	38731	39309	38950	0.80	cps
Molybdenum	95-1	47046	46340	46775	46721	0.76	cps
Molybdenum	96-1	51589	51823	52398	51936	0.80	cps
Molybdenum	97-1	28954	28716	29104	28925	0.68	cps
Molybdenum	98-1	76231	75775	74368	75458	1.29	cps
Neodymium	150-1	27	40	17	28	42.13	cps
Neodymium	150-2	3	7	0	3	100.05	cps
Nickel	60-2	3390	3560	3290	3414	4.00	cps
Phosphorus	31-2	170	173	207	183	11.06	cps
Potassium	39-2	77269	78716	78050	78012	0.93	cps
Rhodium	103-1	15920486	15593116	15584426	15699343	1.22	cps
Rhodium	103-2	5725167	5732431	5691702	5716434	0.38	cps
Scandium	45-1	11059226	11125568	11185609	11123468	0.57	cps
Scandium	45-2	190930	193933	195139	193334	1.12	cps
Selenium	82-1	1307	1547	1433	1429	8.40	cps
Selenium	77-2	37	27	23	29	24.03	cps
Selenium	78-2	93	73	87	84	12.06	cps
Silicon	28-1	626053	625662	617941	623218	0.73	cps
Silver	107-1	22916	23861	23517	23431	2.04	cps
Silver	109-1	22155	22342	22445	22314	0.66	cps
Sodium	23-2	314385	314448	313641	314158	0.14	cps
Strontium	86-1	7045	6908	6818	6924	1.65	cps
Strontium	88-1	55824	55383	54603	55270	1.12	cps
Sulfur	34-1	786223	788611	781604	785479	0.45	cps
Terbium	159-1	22099361	22369988	22208083	22225811	0.61	cps
Terbium	159-2	6469590	6576672	6493642	6513301	0.86	cps
Thallium	203-1	19281	19885	19585	19584	1.54	cps
Thallium	205-1	47590	47075	47038	47234	0.65	cps
Tin	118-1	81014	80183	80189	80462	0.59	cps
Titanium	47-1	14247	14164	14414	14275	0.89	cps
Uranium	238-1	60433	60513	61806	60918	1.27	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P8
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:48:29	DataFile Name :	005CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	14908	14734	14421	14688	1.68	cps
Ytterbium	172-1	110	127	97	111	13.53	cps
Ytterbium	172-2	53	40	60	51	19.92	cps
Ytterbium	176-1	2480	2457	2534	2490	1.58	cps
Ytterbium	176-2	387	423	407	406	4.53	cps
Yttrium	89-1	28476792	28711227	28356479	28514833	0.63	cps
Yttrium	89-2	1816455	1832740	1790787	1813327	1.17	cps
Zinc	66-2	3340	3157	3237	3245	2.83	cps
Zirconium	90-1	33139	33363	33166	33223	0.37	cps
Zirconium	91-1	7132	7212	7429	7258	2.12	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P8
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:51:52	DataFile Name :	006CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	72784	73756	73658	73399	0.73	cps
Antimony	121-1	929370	939576	933180	934042	0.55	cps
Arsenic	75-2	16006	16076	16376	16153	1.22	cps
Barium	135-1	1122470	1129729	1136365	1129521	0.62	cps
Barium	137-1	2000817	2061362	2031632	2031271	1.49	cps
Beryllium	9-1	340662	338935	341399	340332	0.37	cps
Bismuth	209-1	14093423	14029981	13797850	13973751	1.11	cps
Bismuth	209-2	5026975	5044046	4991081	5020701	0.54	cps
Bromine	81-1	4354	4227	4154	4245	2.38	cps
Cadmium	108-1	19334	20061	19731	19709	1.85	cps
Cadmium	106-1	36622	37183	37016	36941	0.78	cps
Cadmium	111-1	245512	245770	244332	245205	0.31	cps
Calcium	43-1	304434	303385	306188	304669	0.46	cps
Calcium	44-1	5060916	4997518	5018731	5025722	0.64	cps
Carbon	12-1	4653308	4404155	4238363	4431942	4.71	cps
Carbon	12-2	26891	26855	26457	26734	0.90	cps
Chlorine	35-1	139036	137923	137808	138256	0.49	cps
Chlorine	35-2	517	500	390	469	14.68	cps
Chromium	52-2	184041	186522	185401	185321	0.67	cps
Cobalt	59-2	359710	356404	355702	357272	0.60	cps
Copper	63-2	2949955	2941754	2972387	2954699	0.54	cps
Dysprosium	156-1	110	123	110	114	6.73	cps
Dysprosium	156-2	20	3	7	10	88.20	cps
Erbium	164-1	113	137	127	126	9.33	cps
Erbium	164-2	30	40	43	38	18.36	cps
Gadolinium	160-1	153	113	153	140	16.50	cps
Gadolinium	160-2	27	27	20	24	15.75	cps
Holmium	165-1	21512820	21827413	21725921	21688718	0.74	cps
Holmium	165-2	6752832	6732772	6737852	6741152	0.15	cps
Indium	115-1	16964227	16766206	16795549	16841994	0.63	cps
Indium	115-2	1394833	1393645	1398371	1395616	0.18	cps
Iron	54-2	387484	387278	384646	386469	0.41	cps
Iron	56-2	7202612	7330930	7256288	7263276	0.89	cps
Iron	57-2	177026	175333	176559	176306	0.50	cps
Krypton	83-1	253	340	310	301	14.62	cps
Lead	206-1	4242743	4172138	4130746	4181876	1.35	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P8
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:51:52	DataFile Name :	006CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	3601473	3638879	3569709	3603354	0.96	cps
Lead	208-1	16512384	16568517	16367251	16482718	0.63	cps
Lithium	6-1	8687667	8447874	8573712	8569751	1.40	cps
Magnesium	24-2	1447097	1422650	1451968	1440572	1.09	cps
Manganese	55-2	754305	757517	749992	753938	0.50	cps
Molybdenum	94-1	3318955	3345693	3310980	3325209	0.55	cps
Molybdenum	95-1	4779287	4858299	4777766	4805117	0.96	cps
Molybdenum	96-1	5292276	5313890	5292654	5299607	0.23	cps
Molybdenum	97-1	2992917	3008405	3026981	3009435	0.57	cps
Molybdenum	98-1	7778426	7795712	7732705	7768948	0.42	cps
Neodymium	150-1	103	150	83	112	30.48	cps
Neodymium	150-2	0	3	7	3	100.05	cps
Nickel	60-2	100367	100149	101646	100721	0.80	cps
Phosphorus	31-2	3537	3477	3550	3522	1.11	cps
Potassium	39-2	356050	354867	353850	354923	0.31	cps
Rhodium	103-1	15713518	15646748	15584322	15648196	0.41	cps
Rhodium	103-2	5691107	5602893	5580402	5624801	1.04	cps
Scandium	45-1	11357422	11181033	11132207	11223554	1.06	cps
Scandium	45-2	196585	194884	194490	195320	0.57	cps
Selenium	82-1	13921	14128	14665	14238	2.70	cps
Selenium	77-2	203	223	207	211	5.08	cps
Selenium	78-2	773	740	647	720	9.12	cps
Silicon	28-1	1313093	1322290	1319785	1318389	0.36	cps
Silver	107-1	1177706	1179088	1191479	1182757	0.64	cps
Silver	109-1	1128251	1130948	1133022	1130740	0.21	cps
Sodium	23-2	2867740	2854040	2809863	2843881	1.06	cps
Strontium	86-1	295553	298956	302449	298986	1.15	cps
Strontium	88-1	2721971	2724924	2706234	2717710	0.37	cps
Sulfur	34-1	876158	867393	859138	867563	0.98	cps
Terbium	159-1	21995751	22259924	22583516	22279730	1.32	cps
Terbium	159-2	6521763	6435173	6554063	6503666	0.95	cps
Thallium	203-1	954236	958493	965731	959487	0.61	cps
Thallium	205-1	2439293	2450644	2370697	2420212	1.79	cps
Tin	118-1	754346	760585	757231	757387	0.41	cps
Titanium	47-1	1449105	1415680	1453694	1439493	1.44	cps
Uranium	238-1	3293105	3298727	3314607	3302146	0.34	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P8
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:51:52	DataFile Name :	006CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	141056	142316	143902	142425	1.00	cps
Ytterbium	172-1	133	140	117	130	9.24	cps
Ytterbium	172-2	37	43	47	42	12.06	cps
Ytterbium	176-1	6959	7255	6819	7011	3.18	cps
Ytterbium	176-2	1753	1817	1807	1792	1.90	cps
Yttrium	89-1	28601935	28570079	28657546	28609853	0.15	cps
Yttrium	89-2	1805917	1797910	1799073	1800967	0.24	cps
Zinc	66-2	294625	292768	294973	294122	0.40	cps
Zirconium	90-1	1668731	1710185	1694038	1690984	1.24	cps
Zirconium	91-1	347579	353710	354253	351847	1.05	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P8
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:54:56	DataFile Name :	007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	177921	179340	181305	179522	0.95	cps
Antimony	121-1	2432566	2442614	2427574	2434252	0.31	cps
Arsenic	75-2	40558	40919	40224	40567	0.86	cps
Barium	135-1	2979413	2961019	2990007	2976813	0.49	cps
Barium	137-1	5004843	4994061	5088701	5029202	1.03	cps
Beryllium	9-1	827427	819971	828799	825399	0.58	cps
Bismuth	209-1	14032542	13909606	13987218	13976455	0.44	cps
Bismuth	209-2	4970029	4990470	4879593	4946697	1.19	cps
Bromine	81-1	3847	3991	4227	4022	4.77	cps
Cadmium	108-1	47448	46772	47602	47274	0.93	cps
Cadmium	106-1	76541	75150	77596	76429	1.61	cps
Cadmium	111-1	580248	588396	584398	584347	0.70	cps
Calcium	43-1	743389	748486	746395	746090	0.34	cps
Calcium	44-1	12223124	12307368	12269231	12266574	0.34	cps
Carbon	12-1	4923127	4742039	4628728	4764632	3.12	cps
Carbon	12-2	29964	29854	29590	29802	0.65	cps
Chlorine	35-1	143021	143217	142251	142829	0.36	cps
Chlorine	35-2	413	470	437	440	6.47	cps
Chromium	52-2	448084	452067	450828	450326	0.45	cps
Cobalt	59-2	869006	872645	868349	870000	0.27	cps
Copper	63-2	7406668	7448039	7400325	7418344	0.35	cps
Dysprosium	156-1	100	147	117	121	19.53	cps
Dysprosium	156-2	27	13	10	17	52.93	cps
Erbium	164-1	120	143	113	126	12.55	cps
Erbium	164-2	30	17	37	28	36.66	cps
Gadolinium	160-1	103	117	167	129	25.91	cps
Gadolinium	160-2	23	40	30	31	26.97	cps
Holmium	165-1	22045601	22098606	22191942	22112050	0.34	cps
Holmium	165-2	6835178	6846576	6636036	6772597	1.75	cps
Indium	115-1	16786351	16639984	16813788	16746708	0.56	cps
Indium	115-2	1388730	1407060	1355545	1383778	1.89	cps
Iron	54-2	940242	944939	941855	942345	0.25	cps
Iron	56-2	17591606	17545196	17642573	17593125	0.28	cps
Iron	57-2	427655	428041	427215	427637	0.10	cps
Krypton	83-1	293	367	310	323	11.89	cps
Lead	206-1	10006918	10015160	9924371	9982150	0.50	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P8
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:54:56	DataFile Name :	007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	8588877	8665302	8644256	8632811	0.46	cps
Lead	208-1	39673681	40012901	39897123	39861235	0.43	cps
Lithium	6-1	8685110	8553409	8691047	8643189	0.90	cps
Magnesium	24-2	3488277	3450668	3461972	3466972	0.56	cps
Manganese	55-2	1902461	2002393	1903282	1936045	2.97	cps
Molybdenum	94-1	8174688	7972495	8117394	8088192	1.29	cps
Molybdenum	95-1	11785893	11830994	11804444	11807110	0.19	cps
Molybdenum	96-1	12859959	12951401	12979694	12930352	0.48	cps
Molybdenum	97-1	7195405	7214972	7289764	7233380	0.69	cps
Molybdenum	98-1	18951896	18823787	19185716	18987133	0.97	cps
Neodymium	150-1	280	197	240	239	17.45	cps
Neodymium	150-2	10	7	3	7	50.03	cps
Nickel	60-2	255207	256897	256367	256157	0.34	cps
Phosphorus	31-2	8739	8813	8269	8607	3.43	cps
Potassium	39-2	852036	858204	855488	855243	0.36	cps
Rhodium	103-1	15484931	15619810	15646696	15583812	0.56	cps
Rhodium	103-2	5654001	5626067	5530501	5603523	1.16	cps
Scandium	45-1	11182521	11242239	11444984	11289914	1.22	cps
Scandium	45-2	196718	195894	192637	195083	1.11	cps
Selenium	82-1	34737	34570	34055	34454	1.03	cps
Selenium	77-2	483	500	530	504	4.69	cps
Selenium	78-2	1770	1793	1753	1772	1.13	cps
Silicon	28-1	2466629	2464500	2486351	2472493	0.49	cps
Silver	107-1	3058890	3029408	3057044	3048447	0.54	cps
Silver	109-1	2894209	2918172	2898160	2903514	0.44	cps
Sodium	23-2	6816964	6708042	6799414	6774807	0.86	cps
Strontium	86-1	725958	733001	723842	727600	0.66	cps
Strontium	88-1	6608438	6656331	6568671	6611147	0.66	cps
Sulfur	34-1	1001177	1021256	992412	1004949	1.47	cps
Terbium	159-1	22733925	22578258	22633199	22648460	0.35	cps
Terbium	159-2	6572256	6641564	6341412	6518411	2.41	cps
Thallium	203-1	2471268	2454905	2492573	2472915	0.76	cps
Thallium	205-1	5840211	5781771	5821030	5814337	0.51	cps
Tin	118-1	1936204	1943256	1947019	1942160	0.28	cps
Titanium	47-1	3526764	3495564	3499821	3507383	0.48	cps
Uranium	238-1	7791492	7927419	7882896	7867269	0.88	cps

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P8
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:54:56	DataFile Name :	007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	348362	351345	353700	351136	0.76	cps
Ytterbium	172-1	147	143	200	163	19.47	cps
Ytterbium	172-2	63	40	40	48	28.19	cps
Ytterbium	176-1	13247	13560	13310	13372	1.24	cps
Ytterbium	176-2	3671	3754	3661	3695	1.39	cps
Yttrium	89-1	29259259	29439120	28790929	29163103	1.15	cps
Yttrium	89-2	1813135	1841706	1812873	1822571	0.91	cps
Zinc	66-2	719203	717716	714598	717172	0.33	cps
Zirconium	90-1	4112383	4072308	4143773	4109488	0.87	cps
Zirconium	91-1	864631	865845	872147	867541	0.47	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P8
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:57:55	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	358527	362343	362409	361093	0.62	cps
Antimony	121-1	4804249	4860421	4779015	4814562	0.87	cps
Arsenic	75-2	81336	82768	81433	81846	0.98	cps
Barium	135-1	5828461	5926664	5831257	5862127	0.95	cps
Barium	137-1	10028231	9984304	9907533	9973356	0.61	cps
Beryllium	9-1	1730995	1667583	1703182	1700587	1.87	cps
Bismuth	209-1	13823922	13723092	13808736	13785250	0.39	cps
Bismuth	209-2	4975410	5014715	5049584	5013237	0.74	cps
Bromine	81-1	4344	4251	4264	4286	1.18	cps
Cadmium	108-1	94508	95813	93639	94653	1.16	cps
Cadmium	106-1	143038	142641	142932	142870	0.14	cps
Cadmium	111-1	1146220	1156111	1158527	1153619	0.57	cps
Calcium	43-1	1556001	1540000	1578256	1558086	1.23	cps
Calcium	44-1	24656389	24418520	24600914	24558608	0.51	cps
Carbon	12-1	5237728	5085020	4937408	5086719	2.95	cps
Carbon	12-2	32706	31948	32085	32246	1.25	cps
Chlorine	35-1	145496	145775	147088	146119	0.58	cps
Chlorine	35-2	590	590	470	550	12.60	cps
Chromium	52-2	907226	907783	903483	906164	0.26	cps
Cobalt	59-2	1822380	1825284	1838530	1828731	0.47	cps
Copper	63-2	14011052	13974095	14004711	13996619	0.14	cps
Dysprosium	156-1	153	157	177	162	7.78	cps
Dysprosium	156-2	23	13	20	19	26.96	cps
Erbium	164-1	143	173	163	160	9.55	cps
Erbium	164-2	67	63	63	64	2.99	cps
Gadolinium	160-1	170	163	157	163	4.08	cps
Gadolinium	160-2	23	10	60	31	83.23	cps
Holmium	165-1	21984332	21958620	21915295	21952749	0.16	cps
Holmium	165-2	6864364	6909287	6766741	6846797	1.06	cps
Indium	115-1	16775016	16807280	16715356	16765884	0.28	cps
Indium	115-2	1390354	1400480	1392105	1394313	0.39	cps
Iron	54-2	1987678	2008377	1964266	1986774	1.11	cps
Iron	56-2	35434621	35730041	35693761	35619474	0.45	cps
Iron	57-2	853782	851258	860076	855039	0.53	cps
Krypton	83-1	337	353	270	320	13.78	cps
Lead	206-1	19638420	19989441	19798832	19808897	0.89	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P8
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:57:55	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	17103895	16990103	17032644	17042214	0.34	cps
Lead	208-1	78650144	78633179	78817953	78700425	0.13	cps
Lithium	6-1	8737403	8669742	8527127	8644757	1.24	cps
Magnesium	24-2	6778492	7006477	6927666	6904211	1.68	cps
Manganese	55-2	3897759	3902657	3925676	3908697	0.38	cps
Molybdenum	94-1	16325825	16420515	16215945	16320762	0.63	cps
Molybdenum	95-1	23569219	23648050	23737645	23651638	0.36	cps
Molybdenum	96-1	25664565	25642030	26157426	25821340	1.13	cps
Molybdenum	97-1	14523881	14338104	14589296	14483760	0.90	cps
Molybdenum	98-1	38072165	37586793	38080082	37913013	0.75	cps
Neodymium	150-1	453	380	477	437	11.55	cps
Neodymium	150-2	13	17	23	18	28.64	cps
Nickel	60-2	479441	481237	476547	479075	0.49	cps
Phosphorus	31-2	16373	17060	17197	16877	2.62	cps
Potassium	39-2	1835954	1765095	1807200	1802750	1.98	cps
Rhodium	103-1	15413816	15235959	15490840	15380205	0.85	cps
Rhodium	103-2	5615022	5639649	5541196	5598622	0.92	cps
Scandium	45-1	11262996	11297044	11376958	11312333	0.52	cps
Scandium	45-2	199100	197818	198603	198507	0.33	cps
Selenium	82-1	68427	69372	69137	68979	0.71	cps
Selenium	77-2	1050	983	1060	1031	4.04	cps
Selenium	78-2	3537	3484	3624	3548	1.99	cps
Silicon	28-1	4375051	4369504	4332403	4358986	0.53	cps
Silver	107-1	5977460	6091149	5972123	6013577	1.12	cps
Silver	109-1	5776145	5760322	5643785	5726751	1.26	cps
Sodium	23-2	13632069	13788886	13795694	13738883	0.67	cps
Strontium	86-1	1559558	1524063	1514878	1532833	1.54	cps
Strontium	88-1	13010800	13225737	13135507	13124015	0.82	cps
Sulfur	34-1	1209268	1188210	1223847	1207109	1.48	cps
Terbium	159-1	22644804	22533597	22624169	22600857	0.26	cps
Terbium	159-2	6585669	6594629	6562639	6580979	0.25	cps
Thallium	203-1	4900868	4943498	4850850	4898405	0.95	cps
Thallium	205-1	11589339	11710147	11398516	11566000	1.36	cps
Tin	118-1	3833112	3864151	3829775	3842346	0.49	cps
Titanium	47-1	6998945	6949945	7033705	6994198	0.60	cps
Uranium	238-1	15688956	15551415	15859607	15699993	0.98	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P8
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 11:57:55	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	707185	707795	713325	709435	0.48	cps
Ytterbium	172-1	173	143	183	167	12.49	cps
Ytterbium	172-2	70	60	87	72	18.66	cps
Ytterbium	176-1	23327	24055	23447	23610	1.65	cps
Ytterbium	176-2	7199	7252	7099	7183	1.08	cps
Yttrium	89-1	29092750	29132058	28417435	28880748	1.39	cps
Yttrium	89-2	1870324	1863446	1835484	1856418	0.99	cps
Zinc	66-2	1425551	1423997	1424850	1424799	0.05	cps
Zirconium	90-1	8195723	8241458	8114465	8183882	0.79	cps
Zirconium	91-1	1869238	1871358	1866562	1869053	0.13	cps

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P8
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:00:43	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	701974	702911	708036	704307	0.46	cps
Antimony	121-1	9256451	9233474	9352891	9280939	0.68	cps
Arsenic	75-2	159306	159228	161962	160165	0.97	cps
Barium	135-1	11373372	11340799	11461285	11391818	0.55	cps
Barium	137-1	19760393	19514593	19332544	19535844	1.10	cps
Beryllium	9-1	3250451	3296899	3295077	3280809	0.80	cps
Bismuth	209-1	13528623	13540116	13572970	13547236	0.17	cps
Bismuth	209-2	4849849	4892701	4909476	4884009	0.63	cps
Bromine	81-1	4411	4301	4521	4411	2.49	cps
Cadmium	108-1	182704	185075	184491	184090	0.67	cps
Cadmium	106-1	266817	263404	268927	266383	1.05	cps
Cadmium	111-1	2338209	2362119	2417311	2372546	1.71	cps
Calcium	43-1	2984378	3045490	3008851	3012906	1.02	cps
Calcium	44-1	47214171	48325894	48072644	47870903	1.22	cps
Carbon	12-1	5723093	5682812	5574663	5660190	1.36	cps
Carbon	12-2	36362	36211	36732	36435	0.74	cps
Chlorine	35-1	157247	158355	159154	158252	0.61	cps
Chlorine	35-2	517	510	603	543	9.58	cps
Chromium	52-2	1858771	1892028	1920635	1890478	1.64	cps
Cobalt	59-2	3544411	3513373	3499894	3519226	0.65	cps
Copper	63-2	27003861	27497710	27163215	27221595	0.93	cps
Dysprosium	156-1	310	277	267	284	7.98	cps
Dysprosium	156-2	47	30	20	32	41.81	cps
Erbium	164-1	180	183	207	190	7.65	cps
Erbium	164-2	60	33	50	48	28.20	cps
Gadolinium	160-1	243	210	227	227	7.35	cps
Gadolinium	160-2	50	53	37	47	18.89	cps
Holmium	165-1	21830407	22165404	21702321	21899377	1.09	cps
Holmium	165-2	6865564	6778101	6839169	6827611	0.66	cps
Indium	115-1	16743467	16554179	16400710	16566119	1.04	cps
Indium	115-2	1362365	1370725	1367918	1367003	0.31	cps
Iron	54-2	3870271	3862236	3821793	3851433	0.67	cps
Iron	56-2	68443216	69437724	70799832	69560257	1.70	cps
Iron	57-2	1766666	1745099	1781878	1764548	1.05	cps
Krypton	83-1	313	313	297	308	3.13	cps
Lead	206-1	38656009	37722536	38587289	38321945	1.36	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P8
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:00:43	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	32655839	32833064	33090057	32859653	0.66	cps
Lead	208-1	151638070	151246787	153022521	151969126	0.61	cps
Lithium	6-1	8467041	8504424	8533085	8501516	0.39	cps
Magnesium	24-2	13494906	13594937	13675444	13588429	0.67	cps
Manganese	55-2	7426776	7425180	7607639	7486532	1.40	cps
Molybdenum	94-1	31825263	31914986	31772241	31837497	0.23	cps
Molybdenum	95-1	46316259	46063424	45861693	46080459	0.49	cps
Molybdenum	96-1	51071744	51607384	50357033	51012054	1.23	cps
Molybdenum	97-1	28454403	28765642	28908334	28709460	0.81	cps
Molybdenum	98-1	73990552	74376644	75868022	74745073	1.33	cps
Neodymium	150-1	857	880	773	837	6.70	cps
Neodymium	150-2	10	17	13	13	25.01	cps
Nickel	60-2	908170	916768	912181	912373	0.47	cps
Phosphorus	31-2	34073	34107	33756	33979	0.57	cps
Potassium	39-2	3515272	3471873	3486973	3491373	0.63	cps
Rhodium	103-1	15294735	15214583	15426486	15311935	0.70	cps
Rhodium	103-2	5573103	5500922	5518407	5530810	0.68	cps
Scandium	45-1	11099969	11363835	11151336	11205047	1.25	cps
Scandium	45-2	197555	198716	201203	199158	0.94	cps
Selenium	82-1	134934	136981	135120	135678	0.83	cps
Selenium	77-2	1857	2097	2070	2008	6.55	cps
Selenium	78-2	6812	7089	7145	7015	2.54	cps
Silicon	28-1	8066588	8086432	8014937	8055986	0.46	cps
Silver	107-1	11633538	11395797	11521421	11516919	1.03	cps
Silver	109-1	11011688	10880147	11052876	10981570	0.82	cps
Sodium	23-2	26624307	26648444	27263583	26845445	1.35	cps
Strontium	86-1	3005547	2963861	2964011	2977806	0.81	cps
Strontium	88-1	25825721	25919723	25647980	25797808	0.53	cps
Sulfur	34-1	1604486	1587276	1606482	1599415	0.66	cps
Terbium	159-1	22325799	22361828	22461847	22383158	0.31	cps
Terbium	159-2	6556252	6544610	6544409	6548424	0.10	cps
Thallium	203-1	9290493	9400400	9370768	9353887	0.61	cps
Thallium	205-1	22182366	22292825	22460713	22311968	0.63	cps
Tin	118-1	7599228	7569093	7344557	7504293	1.85	cps
Titanium	47-1	13854367	13974577	13975637	13934860	0.50	cps
Uranium	238-1	30341535	30028802	30457384	30275907	0.73	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P8
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:00:43	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	1457153	1440802	1466481	1454812	0.89	cps
Ytterbium	172-1	243	220	167	210	18.71	cps
Ytterbium	172-2	67	77	63	69	10.08	cps
Ytterbium	176-1	45538	44404	44662	44868	1.32	cps
Ytterbium	176-2	13377	13657	13664	13566	1.21	cps
Yttrium	89-1	28963164	28743283	28341335	28682594	1.10	cps
Yttrium	89-2	1824590	1840985	1848379	1837985	0.66	cps
Zinc	66-2	2888992	2959556	2926163	2924903	1.21	cps
Zirconium	90-1	16081755	15928726	16000432	16003638	0.48	cps
Zirconium	91-1	3648868	3618767	3589845	3619160	0.82	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P8
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:03:30	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1470582	1475943	1463623	1470049	0.42	cps
Antimony	121-1	18680939	18378417	18399688	18486348	0.91	cps
Arsenic	75-2	318984	317218	320381	318861	0.50	cps
Barium	135-1	22922713	22771447	22842365	22845508	0.33	cps
Barium	137-1	38694961	39134433	38344239	38724544	1.02	cps
Beryllium	9-1	6398096	6342319	6492686	6411034	1.19	cps
Bismuth	209-1	13516369	13283944	13216026	13338780	1.18	cps
Bismuth	209-2	4833745	4801576	4803744	4813021	0.37	cps
Bromine	81-1	4521	4547	4501	4523	0.52	cps
Cadmium	108-1	360908	361624	361093	361209	0.10	cps
Cadmium	106-1	511130	521852	514994	515992	1.05	cps
Cadmium	111-1	4632256	4633747	4626030	4630678	0.09	cps
Calcium	43-1	6052022	6037285	6084596	6057968	0.40	cps
Calcium	44-1	96790155	95648842	96930375	96456457	0.73	cps
Carbon	12-1	6598600	6456340	6617489	6557476	1.34	cps
Carbon	12-2	44929	45269	45477	45225	0.61	cps
Chlorine	35-1	182167	185391	187852	185137	1.54	cps
Chlorine	35-2	597	763	697	686	12.24	cps
Chromium	52-2	3828577	3718347	3701812	3749578	1.84	cps
Cobalt	59-2	6987202	6904858	6967000	6953020	0.62	cps
Copper	63-2	53917879	53130588	53057071	53368513	0.89	cps
Dysprosium	156-1	473	480	570	508	10.63	cps
Dysprosium	156-2	60	30	43	44	33.82	cps
Erbium	164-1	320	287	257	288	11.01	cps
Erbium	164-2	80	117	87	94	20.68	cps
Gadolinium	160-1	260	280	307	282	8.29	cps
Gadolinium	160-2	103	83	87	91	11.77	cps
Holmium	165-1	22046079	21822380	22013976	21960811	0.55	cps
Holmium	165-2	6862683	6867375	6819182	6849747	0.39	cps
Indium	115-1	16089554	16376892	16223757	16230068	0.89	cps
Indium	115-2	1333283	1323869	1337866	1331673	0.54	cps
Iron	54-2	7600116	7626122	7673744	7633327	0.49	cps
Iron	56-2	138371515	137567661	140344401	138761192	1.03	cps
Iron	57-2	3492232	3464907	3485215	3480785	0.41	cps
Krypton	83-1	357	447	373	392	12.21	cps
Lead	206-1	75811841	76961544	75486629	76086671	1.02	cps

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P8
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:03:30	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	64966316	64730841	64287666	64661607	0.53	cps
Lead	208-1	302204297	298196749	297907376	299436141	0.80	cps
Lithium	6-1	8573796	8469138	8409260	8484065	0.98	cps
Magnesium	24-2	27416201	26735024	26799385	26983537	1.39	cps
Manganese	55-2	15046564	15036579	15130503	15071216	0.34	cps
Molybdenum	94-1	63813879	64032234	63720577	63855563	0.25	cps
Molybdenum	95-1	92174132	94344812	91178279	92565741	1.75	cps
Molybdenum	96-1	100118969	103449595	100012165	101193576	1.93	cps
Molybdenum	97-1	56992047	57742352	56764926	57166442	0.89	cps
Molybdenum	98-1	149925158	150637878	148841474	149801503	0.60	cps
Neodymium	150-1	1520	1663	1753	1646	7.15	cps
Neodymium	150-2	37	57	50	48	21.31	cps
Nickel	60-2	1933814	1909746	1948980	1930847	1.02	cps
Phosphorus	31-2	68447	66769	67700	67639	1.24	cps
Potassium	39-2	7048051	6962722	6923213	6977996	0.91	cps
Rhodium	103-1	14818827	14884902	14793002	14832244	0.32	cps
Rhodium	103-2	5368513	5456202	5465181	5429965	0.98	cps
Scandium	45-1	11401280	11423427	11308623	11377777	0.54	cps
Scandium	45-2	204282	201559	201131	202324	0.84	cps
Selenium	82-1	267412	268035	266862	267436	0.22	cps
Selenium	77-2	3954	4081	4007	4014	1.58	cps
Selenium	78-2	13597	13450	13657	13568	0.78	cps
Silicon	28-1	17354344	16967102	17450448	17257298	1.48	cps
Silver	107-1	22494649	22836027	22497812	22609496	0.87	cps
Silver	109-1	21694760	21541405	21471028	21569064	0.53	cps
Sodium	23-2	53658661	53495818	53558828	53571102	0.15	cps
Strontium	86-1	6052829	5995449	6038862	6029047	0.50	cps
Strontium	88-1	51631738	51597094	51950236	51726356	0.38	cps
Sulfur	34-1	2425428	2440353	2401641	2422474	0.81	cps
Terbium	159-1	22699146	22534631	22237911	22490563	1.04	cps
Terbium	159-2	6673098	6581308	6653700	6636035	0.73	cps
Thallium	203-1	18352768	18883479	18749629	18661959	1.48	cps
Thallium	205-1	44190271	44610629	43929799	44243567	0.78	cps
Tin	118-1	14948576	14832421	14816999	14865999	0.48	cps
Titanium	47-1	28109064	27620785	27748969	27826272	0.91	cps
Uranium	238-1	61678972	60904626	60676381	61086660	0.86	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P8
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:03:30	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	2923400	2927242	2936323	2928988	0.23	cps
Ytterbium	172-1	270	317	223	270	17.28	cps
Ytterbium	172-2	150	120	130	133	11.46	cps
Ytterbium	176-1	85833	87292	87413	86846	1.01	cps
Ytterbium	176-2	27024	26300	26654	26659	1.36	cps
Yttrium	89-1	29044100	28841801	29065101	28983667	0.43	cps
Yttrium	89-2	1879405	1855412	1870312	1868376	0.65	cps
Zinc	66-2	5717355	5698640	5702779	5706258	0.17	cps
Zirconium	90-1	32429556	32624555	32270707	32441606	0.55	cps
Zirconium	91-1	7101522	7372399	7188707	7220876	1.91	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P8
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:06:15	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	6934661	6941453	6975201	6950439	0.31	cps
Antimony	121-1	12956	13036	12963	12985	0.34	cps
Arsenic	75-2	173	130	173	159	15.75	cps
Barium	135-1	8700	8456	8123	8426	3.44	cps
Barium	137-1	14515	14685	13777	14325	3.37	cps
Beryllium	9-1	2515	2274	2109	2299	8.89	cps
Bismuth	209-1	11526688	11298309	11458907	11427968	1.03	cps
Bismuth	209-2	4263553	4242817	4302168	4269513	0.71	cps
Bromine	81-1	4741	4701	4771	4738	0.74	cps
Cadmium	108-1	293	293	260	282	6.82	cps
Cadmium	106-1	8976	8860	8823	8886	0.90	cps
Cadmium	111-1	7118	7113	6977	7070	1.13	cps
Calcium	43-1	26912580	27023940	26644792	26860437	0.73	cps
Calcium	44-1	434988394	425667287	431304047	430653242	1.09	cps
Carbon	12-1	5938887	5869525	5847166	5885193	0.81	cps
Carbon	12-2	49480	49757	50486	49908	1.04	cps
Chlorine	35-1	135087	131692	129291	132023	2.21	cps
Chlorine	35-2	417	447	463	442	5.35	cps
Chromium	52-2	11625	11865	12035	11842	1.74	cps
Cobalt	59-2	14064	14007	14097	14056	0.32	cps
Copper	63-2	13506	12976	13330	13271	2.04	cps
Dysprosium	156-1	680	657	673	670	1.79	cps
Dysprosium	156-2	273	150	240	221	28.85	cps
Erbium	164-1	743	930	800	824	11.61	cps
Erbium	164-2	247	200	250	232	12.04	cps
Gadolinium	160-1	703	670	677	683	2.58	cps
Gadolinium	160-2	227	227	237	230	2.51	cps
Holmium	165-1	20383783	20247581	20078301	20236555	0.76	cps
Holmium	165-2	6516636	6639694	6498478	6551602	1.17	cps
Indium	115-1	14697908	14607559	14628941	14644803	0.32	cps
Indium	115-2	1287164	1290695	1303685	1293848	0.67	cps
Iron	54-2	34892304	34617165	35054697	34854722	0.63	cps
Iron	56-2	644720590	643781457	643055177	643852408	0.13	cps
Iron	57-2	16273774	16056751	16082949	16137825	0.73	cps
Krypton	83-1	427	450	487	454	6.66	cps
Lead	206-1	19739	20039	19038	19605	2.62	cps

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P8
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:06:15	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	16554	17749	16057	16787	5.18	cps
Lead	208-1	78441	80141	74477	77687	3.74	cps
Lithium	6-1	7514039	7659856	7615379	7596425	0.98	cps
Magnesium	24-2	125630205	127499805	127235355	126788455	0.80	cps
Manganese	55-2	7215	6958	6838	7004	2.75	cps
Molybdenum	94-1	45324	44474	44387	44728	1.16	cps
Molybdenum	95-1	47133	46802	46123	46686	1.10	cps
Molybdenum	96-1	53282	53128	52455	52955	0.83	cps
Molybdenum	97-1	28366	27638	27063	27689	2.36	cps
Molybdenum	98-1	72043	71681	70625	71450	1.03	cps
Neodymium	150-1	357	320	373	350	7.79	cps
Neodymium	150-2	97	70	93	87	16.77	cps
Nickel	60-2	7159	6862	6862	6961	2.46	cps
Phosphorus	31-2	113	110	117	113	2.94	cps
Potassium	39-2	34136569	34321419	34533517	34330501	0.58	cps
Rhodium	103-1	13130156	12844722	12828890	12934590	1.31	cps
Rhodium	103-2	4874409	4869928	4853038	4865791	0.23	cps
Scandium	45-1	10385307	10555759	10506090	10482385	0.84	cps
Scandium	45-2	191302	193744	194957	193334	0.96	cps
Selenium	82-1	-3	-43	-60	-36	-81.89	cps
Selenium	77-2	3	7	3	4	43.40	cps
Selenium	78-2	13	23	13	17	34.65	cps
Silicon	28-1	754147	740750	732854	742583	1.45	cps
Silver	107-1	4144	3814	3761	3906	5.32	cps
Silver	109-1	3704	3577	3510	3597	2.73	cps
Sodium	23-2	243174623	242873016	244107250	243384963	0.26	cps
Strontium	86-1	17578	17241	17765	17528	1.51	cps
Strontium	88-1	147627	148554	146664	147615	0.64	cps
Sulfur	34-1	703419	701740	695428	700196	0.60	cps
Terbium	159-1	20854948	20551882	20672571	20693134	0.74	cps
Terbium	159-2	6227468	6288363	6324240	6280024	0.78	cps
Thallium	203-1	2254	1914	1550	1906	18.46	cps
Thallium	205-1	5518	5078	3987	4861	16.21	cps
Tin	118-1	4477	4327	4057	4287	4.97	cps
Titanium	47-1	6522	6592	7139	6751	5.00	cps
Uranium	238-1	3964	3747	3464	3725	6.73	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P8
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:06:15	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	760	767	757	761	0.67	cps
Ytterbium	172-1	910	853	803	856	6.24	cps
Ytterbium	172-2	333	307	370	337	9.45	cps
Ytterbium	176-1	3020	2947	2844	2937	3.02	cps
Ytterbium	176-2	527	610	613	583	8.42	cps
Yttrium	89-1	26624858	27050735	26611718	26762437	0.93	cps
Yttrium	89-2	1806773	1811952	1828444	1815723	0.62	cps
Zinc	66-2	3204	3110	3007	3107	3.17	cps
Zirconium	90-1	50488	51046	50324	50619	0.75	cps
Zirconium	91-1	11118	10964	11228	11103	1.19	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICV007	Instrumnet Name :	P8
Client Sample ID :	ICV007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:12:53	DataFile Name :	012ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	37134	36947	36659	36913	0.65	cps
Antimony	121-1	3871967	3908574	3938605	3906382	0.85	cps
Arsenic	75-2	69212	68857	69175	69081	0.28	cps
Barium	135-1	451715	454320	457090	454375	0.59	cps
Barium	137-1	781691	790088	788884	786888	0.58	cps
Beryllium	9-1	697819	700194	698322	698779	0.18	cps
Bismuth	209-1	14296648	14402951	14490882	14396827	0.68	cps
Bismuth	209-2	5358541	5359940	5248847	5322443	1.20	cps
Bromine	81-1	4544	4674	4524	4581	1.78	cps
Cadmium	108-1	30778	31219	31543	31180	1.23	cps
Cadmium	106-1	51231	51740	52255	51742	0.99	cps
Cadmium	111-1	478335	478960	481226	479507	0.32	cps
Calcium	43-1	118392	121538	120949	120293	1.39	cps
Calcium	44-1	2043635	2090743	2023692	2052690	1.68	cps
Carbon	12-1	5479126	5186437	5083302	5249622	3.91	cps
Carbon	12-2	32713	31213	31334	31753	2.62	cps
Chlorine	35-1	130431	128726	129012	129389	0.71	cps
Chlorine	35-2	393	470	467	443	9.77	cps
Chromium	52-2	387344	388538	385627	387169	0.38	cps
Cobalt	59-2	749796	747494	738306	745199	0.82	cps
Copper	63-2	578460	585262	584382	582702	0.63	cps
Dysprosium	156-1	47	50	33	43	20.36	cps
Dysprosium	156-2	0	3	0	1	173.21	cps
Erbium	164-1	97	140	150	129	21.99	cps
Erbium	164-2	47	30	20	32	41.81	cps
Gadolinium	160-1	120	140	163	141	15.37	cps
Gadolinium	160-2	20	37	37	31	30.93	cps
Holmium	165-1	22277676	22299623	22517059	22364786	0.59	cps
Holmium	165-2	7191718	7086097	7219314	7165710	0.98	cps
Indium	115-1	17961485	17813961	17962384	17912610	0.48	cps
Indium	115-2	1606287	1520471	1519369	1548709	3.22	cps
Iron	54-2	320531	321216	321676	321141	0.18	cps
Iron	56-2	5965952	5953716	5864734	5928134	0.93	cps
Iron	57-2	141500	141118	140861	141160	0.23	cps
Krypton	83-1	320	290	297	302	5.21	cps
Lead	206-1	3391995	3310963	3380270	3361076	1.30	cps

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LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICV007	Instrumnet Name :	P8
Client Sample ID :	ICV007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:12:53	DataFile Name :	012ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2804263	2750561	2741088	2765304	1.23	cps
Lead	208-1	13005040	12817122	12947705	12923289	0.75	cps
Lithium	6-1	9292160	9240379	9263635	9265391	0.28	cps
Magnesium	24-2	312160	316604	312607	313790	0.78	cps
Manganese	55-2	153613	152656	153859	153376	0.41	cps
Molybdenum	94-1	1607	1443	1417	1489	6.91	cps
Molybdenum	95-1	1003	1030	1027	1020	1.42	cps
Molybdenum	96-1	2167	1967	2167	2100	5.50	cps
Molybdenum	97-1	780	660	683	708	8.99	cps
Molybdenum	98-1	1987	1827	1840	1885	4.71	cps
Neodymium	150-1	30	70	40	47	44.61	cps
Neodymium	150-2	0	0	0	0	0.00	cps
Nickel	60-2	208143	208755	208166	208355	0.17	cps
Phosphorus	31-2	93	80	107	93	14.29	cps
Potassium	39-2	289321	290735	291156	290404	0.33	cps
Rhodium	103-1	16404822	16760085	16677256	16614054	1.12	cps
Rhodium	103-2	6032184	6063654	6008205	6034681	0.46	cps
Scandium	45-1	12004281	11963440	11831991	11933237	0.75	cps
Scandium	45-2	213563	211084	211720	212122	0.61	cps
Selenium	82-1	58965	59098	59714	59259	0.67	cps
Selenium	77-2	890	910	990	930	5.69	cps
Selenium	78-2	3004	2960	3107	3024	2.49	cps
Silicon	28-1	602307	599396	598316	600006	0.34	cps
Silver	107-1	1107852	1121576	1122074	1117167	0.72	cps
Silver	109-1	1071334	1069502	1073173	1071336	0.17	cps
Sodium	23-2	1191871	1184600	1182105	1186192	0.43	cps
Strontium	86-1	2017	2154	2104	2091	3.31	cps
Strontium	88-1	13303	14000	13787	13697	2.61	cps
Sulfur	34-1	744509	746415	746961	745962	0.17	cps
Terbium	159-1	23238351	23358025	23336158	23310845	0.27	cps
Terbium	159-2	7095333	6899909	7017540	7004261	1.40	cps
Thallium	203-1	4098957	4033381	4052321	4061553	0.83	cps
Thallium	205-1	9494856	9284560	9278723	9352713	1.32	cps
Tin	118-1	3067	2780	3124	2990	6.16	cps
Titanium	47-1	350	360	360	357	1.62	cps
Uranium	238-1	180	167	173	173	3.85	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICV007	Instrumnet Name :	P8
Client Sample ID :	ICV007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:12:53	DataFile Name :	012ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	293637	294458	290592	292896	0.70	cps
Ytterbium	172-1	93	110	127	110	15.15	cps
Ytterbium	172-2	40	50	33	41	20.41	cps
Ytterbium	176-1	2387	2334	2374	2365	1.17	cps
Ytterbium	176-2	367	317	443	376	16.99	cps
Yttrium	89-1	30224336	30572685	30005329	30267450	0.95	cps
Yttrium	89-2	1979219	1973095	1989374	1980563	0.42	cps
Zinc	66-2	116642	116951	116540	116711	0.18	cps
Zirconium	90-1	1400	1330	1293	1341	4.04	cps
Zirconium	91-1	1060	1113	1117	1097	2.90	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICB007	Instrumnet Name :	P8
Client Sample ID :	ICB007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:16:15	DataFile Name :	013CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	83	87	67	79	13.58	cps
Antimony	121-1	1177	1350	1253	1260	6.89	cps
Arsenic	75-2	7	10	3	7	50.03	cps
Barium	135-1	360	307	340	336	8.03	cps
Barium	137-1	517	583	547	549	6.08	cps
Beryllium	9-1	1207	1187	1047	1147	7.60	cps
Bismuth	209-1	14381237	14346761	14601173	14443057	0.96	cps
Bismuth	209-2	5351878	5317935	5323001	5330938	0.34	cps
Bromine	81-1	4374	4564	4381	4440	2.43	cps
Cadmium	108-1	50	23	43	39	35.69	cps
Cadmium	106-1	9203	9473	9357	9344	1.45	cps
Cadmium	111-1	6494	6695	6599	6596	1.53	cps
Calcium	43-1	650	587	523	587	10.80	cps
Calcium	44-1	28395	27780	27530	27902	1.60	cps
Carbon	12-1	4711265	4369432	4228766	4436487	5.59	cps
Carbon	12-2	26127	26507	26287	26307	0.73	cps
Chlorine	35-1	128123	127805	128396	128108	0.23	cps
Chlorine	35-2	443	407	397	416	5.91	cps
Chromium	52-2	2427	2244	2444	2371	4.68	cps
Cobalt	59-2	297	273	347	306	12.26	cps
Copper	63-2	3520	3557	3524	3534	0.57	cps
Dysprosium	156-1	27	30	37	31	16.37	cps
Dysprosium	156-2	7	0	3	3	100.05	cps
Erbium	164-1	90	140	113	114	21.86	cps
Erbium	164-2	17	40	40	32	41.80	cps
Gadolinium	160-1	133	93	133	120	19.25	cps
Gadolinium	160-2	17	30	40	29	40.51	cps
Holmium	165-1	22539613	22949709	22497022	22662115	1.10	cps
Holmium	165-2	7196373	7158284	7096404	7150354	0.71	cps
Indium	115-1	18006690	17584474	18180730	17923965	1.71	cps
Indium	115-2	1594601	1495056	1504832	1531496	3.58	cps
Iron	54-2	1060	1110	1107	1092	2.56	cps
Iron	56-2	17284	16663	16283	16743	3.02	cps
Iron	57-2	413	500	427	447	10.45	cps
Krypton	83-1	353	390	367	370	5.02	cps
Lead	206-1	5548	5031	5228	5269	4.95	cps

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICB007	Instrumnet Name :	P8
Client Sample ID :	ICB007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:16:15	DataFile Name :	013CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	4424	4231	4237	4297	2.55	cps
Lead	208-1	21167	20367	20060	20531	2.78	cps
Lithium	6-1	9445845	9322918	9172269	9313677	1.47	cps
Magnesium	24-2	4207	4237	4317	4254	1.34	cps
Manganese	55-2	390	390	360	380	4.56	cps
Molybdenum	94-1	790	777	793	787	1.12	cps
Molybdenum	95-1	780	687	743	737	6.38	cps
Molybdenum	96-1	1010	867	893	923	8.26	cps
Molybdenum	97-1	463	387	520	457	14.65	cps
Molybdenum	98-1	1253	1210	1163	1209	3.72	cps
Neodymium	150-1	20	27	20	22	17.33	cps
Neodymium	150-2	0	3	3	2	86.60	cps
Nickel	60-2	1353	1547	1610	1503	8.89	cps
Phosphorus	31-2	103	87	87	92	10.43	cps
Potassium	39-2	10427	10621	10220	10423	1.92	cps
Rhodium	103-1	16394186	16897397	16831791	16707792	1.64	cps
Rhodium	103-2	6014646	6105031	6077481	6065720	0.76	cps
Scandium	45-1	12122271	11788034	11941896	11950734	1.40	cps
Scandium	45-2	210729	210462	209357	210182	0.35	cps
Selenium	82-1	-117	-133	-20	-90	-67.99	cps
Selenium	77-2	3	0	0	1	173.21	cps
Selenium	78-2	3	10	7	7	50.03	cps
Silicon	28-1	575360	574242	571977	573860	0.30	cps
Silver	107-1	813	680	717	737	9.35	cps
Silver	109-1	633	533	460	542	16.05	cps
Sodium	23-2	52213	50962	51631	51602	1.21	cps
Strontium	86-1	607	620	640	622	2.70	cps
Strontium	88-1	1377	1223	1387	1329	6.89	cps
Sulfur	34-1	753404	758024	760847	757425	0.50	cps
Terbium	159-1	23644356	23323030	23259621	23409003	0.88	cps
Terbium	159-2	6942173	6959327	6822992	6908164	1.07	cps
Thallium	203-1	887	777	793	819	7.24	cps
Thallium	205-1	2100	1997	1900	1999	5.00	cps
Tin	118-1	2770	2707	2787	2755	1.53	cps
Titanium	47-1	360	287	283	310	13.98	cps
Uranium	238-1	123	80	103	102	21.22	cps

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LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICB007	Instrumnet Name :	P8
Client Sample ID :	ICB007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:16:15	DataFile Name :	013CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	13	20	23	19	26.96	cps
Ytterbium	172-1	127	123	103	118	10.72	cps
Ytterbium	172-2	30	37	37	34	11.18	cps
Ytterbium	176-1	2387	2444	2470	2434	1.75	cps
Ytterbium	176-2	290	383	377	350	14.88	cps
Yttrium	89-1	30015280	29996396	30112366	30041348	0.21	cps
Yttrium	89-2	1973457	1979105	2000615	1984392	0.72	cps
Zinc	66-2	330	380	367	359	7.21	cps
Zirconium	90-1	960	1080	1113	1051	7.67	cps
Zirconium	91-1	230	173	243	216	17.24	cps

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LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICSA007	Instrumnet Name :	P8
Client Sample ID :	ICSA007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:19:42	DataFile Name :	014ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	7080640	7350620	7275230	7235497	1.93	cps
Antimony	121-1	20886	21831	21363	21360	2.21	cps
Arsenic	75-2	107	123	130	120	10.01	cps
Barium	135-1	6828	6722	6665	6738	1.23	cps
Barium	137-1	11618	11959	11465	11681	2.16	cps
Beryllium	9-1	2762	2694	2711	2722	1.31	cps
Bismuth	209-1	13162142	13186377	13301788	13216769	0.56	cps
Bismuth	209-2	4787009	4814349	4753007	4784788	0.64	cps
Bromine	81-1	5915	6482	6675	6357	6.22	cps
Cadmium	108-1	7085	7495	7199	7260	2.92	cps
Cadmium	106-1	8656	8803	8506	8655	1.71	cps
Cadmium	111-1	9903	9678	9268	9616	3.35	cps
Calcium	43-1	6320340	6367092	6300784	6329405	0.54	cps
Calcium	44-1	102074315	102923118	101833972	102277135	0.56	cps
Carbon	12-1	52466051	54127933	53734648	53442877	1.63	cps
Carbon	12-2	354075	356815	353108	354666	0.54	cps
Chlorine	35-1	92962425	101557022	104297668	99605705	5.94	cps
Chlorine	35-2	394790	407327	412127	404748	2.21	cps
Chromium	52-2	77981	78071	76362	77472	1.24	cps
Cobalt	59-2	8519	8576	8866	8654	2.15	cps
Copper	63-2	47840	47780	48121	47914	0.38	cps
Dysprosium	156-1	83	100	117	100	16.67	cps
Dysprosium	156-2	33	23	20	26	27.15	cps
Erbium	164-1	107	203	163	158	30.79	cps
Erbium	164-2	37	57	40	44	24.11	cps
Gadolinium	160-1	190	173	207	190	8.77	cps
Gadolinium	160-2	53	53	40	49	15.74	cps
Holmium	165-1	22253414	22223826	22316869	22264703	0.21	cps
Holmium	165-2	6900180	7060071	6927537	6962596	1.23	cps
Indium	115-1	16802890	16937142	16845383	16861805	0.41	cps
Indium	115-2	1408661	1419197	1394366	1407408	0.89	cps
Iron	54-2	16111497	16067536	16255504	16144846	0.61	cps
Iron	56-2	295982349	297163176	296436889	296527471	0.20	cps
Iron	57-2	7428697	7362187	7488657	7426514	0.85	cps
Krypton	83-1	337	383	320	347	9.47	cps
Lead	206-1	72977	74989	73054	73673	1.55	cps

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICSA007	Instrumnet Name :	P8
Client Sample ID :	ICSA007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:19:42	DataFile Name :	014ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	58089	58130	59034	58417	0.91	cps
Lead	208-1	272183	276138	276989	275103	0.93	cps
Lithium	6-1	8497830	8515942	8414926	8476232	0.64	cps
Magnesium	24-2	26542238	26864300	26567260	26657933	0.67	cps
Manganese	55-2	11595	12018	11902	11838	1.85	cps
Molybdenum	94-1	10829463	10976304	10825905	10877224	0.79	cps
Molybdenum	95-1	19092416	19242259	19349522	19228065	0.67	cps
Molybdenum	96-1	20275369	20608356	21048824	20644183	1.88	cps
Molybdenum	97-1	11755680	11841279	11998062	11865007	1.04	cps
Molybdenum	98-1	31191212	31209005	30898490	31099569	0.56	cps
Neodymium	150-1	117	110	87	104	15.08	cps
Neodymium	150-2	33	20	23	26	27.15	cps
Nickel	60-2	11848	11662	11608	11706	1.08	cps
Phosphorus	31-2	359178	363580	366680	363146	1.04	cps
Potassium	39-2	14520286	14788045	14853591	14720641	1.20	cps
Rhodium	103-1	15022857	15039089	15295916	15119287	1.01	cps
Rhodium	103-2	5545099	5532007	5465216	5514107	0.78	cps
Scandium	45-1	11628979	11777101	11716809	11707630	0.64	cps
Scandium	45-2	205126	206548	204029	205235	0.62	cps
Selenium	82-1	43	-33	50	20	231.50	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	13	10	7	10	33.30	cps
Silicon	28-1	968881	976195	972249	972441	0.38	cps
Silver	107-1	2830	2614	2194	2546	12.72	cps
Silver	109-1	2600	2290	2190	2360	9.06	cps
Sodium	23-2	56807406	57587669	57055852	57150309	0.70	cps
Strontium	86-1	204262	204817	205487	204855	0.30	cps
Strontium	88-1	1885237	1907581	1875432	1889416	0.87	cps
Sulfur	34-1	9091998	9104450	9129893	9108781	0.21	cps
Terbium	159-1	22924334	22366887	23112385	22801202	1.70	cps
Terbium	159-2	6787918	6733044	6692843	6737935	0.71	cps
Thallium	203-1	2860	3010	3437	3103	9.65	cps
Thallium	205-1	6775	7479	8033	7429	8.48	cps
Tin	118-1	4941	5464	6513	5639	14.19	cps
Titanium	47-1	5973780	6200197	6073887	6082621	1.87	cps
Uranium	238-1	1030	993	1100	1041	5.21	cps

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LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICSA007	Instrumnet Name :	P8
Client Sample ID :	ICSA007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:19:42	DataFile Name :	014ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	383	327	487	399	20.34	cps
Ytterbium	172-1	123	143	97	121	19.33	cps
Ytterbium	172-2	50	43	33	42	19.87	cps
Ytterbium	176-1	2227	2177	2207	2204	1.14	cps
Ytterbium	176-2	297	280	320	299	6.72	cps
Yttrium	89-1	29823720	29639988	29340640	29601449	0.82	cps
Yttrium	89-2	1947127	1958206	1916332	1940555	1.12	cps
Zinc	66-2	6368	6818	6438	6542	3.70	cps
Zirconium	90-1	1427	1420	1510	1452	3.45	cps
Zirconium	91-1	293	323	303	307	4.98	cps

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LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICSAB007	Instrumnet Name :	P8
Client Sample ID :	ICSAB007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:28:49	DataFile Name :	016ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	6821986	6934903	6953976	6903621	1.03	cps
Antimony	121-1	383172	384531	381277	382993	0.43	cps
Arsenic	75-2	7048	6672	6902	6874	2.76	cps
Barium	135-1	95769	96124	95386	95760	0.39	cps
Barium	137-1	162780	164132	165077	163996	0.70	cps
Beryllium	9-1	135729	135237	134630	135199	0.41	cps
Bismuth	209-1	13205316	13011257	12807916	13008163	1.53	cps
Bismuth	209-2	4704970	4687526	4624232	4672243	0.91	cps
Bromine	81-1	6061	6171	6018	6084	1.30	cps
Cadmium	108-1	12269	12713	12489	12490	1.78	cps
Cadmium	106-1	16213	16009	16180	16134	0.68	cps
Cadmium	111-1	96994	96433	97810	97079	0.71	cps
Calcium	43-1	6123400	6205436	6119154	6149330	0.79	cps
Calcium	44-1	98614729	99249202	98415689	98759873	0.44	cps
Carbon	12-1	53813434	54263543	54209298	54095425	0.45	cps
Carbon	12-2	356220	354224	355379	355274	0.28	cps
Chlorine	35-1	92808779	98698119	101804568	97770489	4.67	cps
Chlorine	35-2	393996	394870	401740	396869	1.07	cps
Chromium	52-2	147623	146599	148659	147627	0.70	cps
Cobalt	59-2	145784	147643	147498	146975	0.70	cps
Copper	63-2	153843	152680	151663	152728	0.71	cps
Dysprosium	156-1	123	100	70	98	27.35	cps
Dysprosium	156-2	20	17	33	23	37.78	cps
Erbium	164-1	170	167	190	176	7.19	cps
Erbium	164-2	53	63	60	59	8.65	cps
Gadolinium	160-1	180	227	177	194	14.38	cps
Gadolinium	160-2	37	43	43	41	9.35	cps
Holmium	165-1	22255949	22147258	22084207	22162471	0.39	cps
Holmium	165-2	6807490	6925893	6965976	6899786	1.19	cps
Indium	115-1	16761407	16703357	16538598	16667787	0.69	cps
Indium	115-2	1390083	1395553	1392287	1392641	0.20	cps
Iron	54-2	15651998	15325142	15395934	15457691	1.11	cps
Iron	56-2	285591742	285028876	283228516	284616378	0.43	cps
Iron	57-2	7141896	7130503	7253546	7175315	0.95	cps
Krypton	83-1	353	303	327	328	7.63	cps
Lead	206-1	356578	356438	355387	356135	0.18	cps

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LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICSAB007	Instrumnet Name :	P8
Client Sample ID :	ICSAB007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:28:49	DataFile Name :	016ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	293251	297502	295435	295396	0.72	cps
Lead	208-1	1366770	1370075	1369057	1368634	0.12	cps
Lithium	6-1	8601006	8352335	8491528	8481623	1.47	cps
Magnesium	24-2	25781615	25487460	25358181	25542419	0.85	cps
Manganese	55-2	40848	40698	41129	40892	0.54	cps
Molybdenum	94-1	10627837	10500876	10414871	10514528	1.02	cps
Molybdenum	95-1	18745763	18792336	18651228	18729776	0.38	cps
Molybdenum	96-1	20091086	20011586	19802989	19968554	0.75	cps
Molybdenum	97-1	11413462	11513168	11160874	11362501	1.60	cps
Molybdenum	98-1	29952642	29866625	29583803	29801023	0.65	cps
Neodymium	150-1	90	127	77	98	26.48	cps
Neodymium	150-2	37	30	17	28	36.66	cps
Nickel	60-2	48663	49315	50138	49372	1.50	cps
Phosphorus	31-2	349843	351126	352863	351277	0.43	cps
Potassium	39-2	14350275	14245537	14124877	14240230	0.79	cps
Rhodium	103-1	15234117	15105981	14855219	15065105	1.28	cps
Rhodium	103-2	5452859	5451511	5483524	5462631	0.33	cps
Scandium	45-1	11654943	11549262	11554904	11586370	0.51	cps
Scandium	45-2	204450	203736	205213	204466	0.36	cps
Selenium	82-1	5655	5741	5675	5690	0.80	cps
Selenium	77-2	77	100	73	83	17.44	cps
Selenium	78-2	330	260	267	286	13.53	cps
Silicon	28-1	1002217	1011802	1001855	1005291	0.56	cps
Silver	107-1	416122	418241	422760	419041	0.81	cps
Silver	109-1	401199	404625	403860	403228	0.45	cps
Sodium	23-2	55043759	54664599	54861391	54856583	0.35	cps
Strontium	86-1	199530	200398	201246	200392	0.43	cps
Strontium	88-1	1802580	1813669	1820141	1812130	0.49	cps
Sulfur	34-1	8904549	9013580	8774408	8897513	1.35	cps
Terbium	159-1	22449426	22512709	22436353	22466163	0.18	cps
Terbium	159-2	6682003	6572165	6610140	6621436	0.84	cps
Thallium	203-1	357173	360033	363783	360330	0.92	cps
Thallium	205-1	859864	855124	856635	857208	0.28	cps
Tin	118-1	4934	5138	5081	5051	2.08	cps
Titanium	47-1	5846940	5931817	5805493	5861416	1.10	cps
Uranium	238-1	1037	980	1017	1011	2.84	cps

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LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	ICSAB007	Instrumnet Name :	P8
Client Sample ID :	ICSAB007	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:28:49	DataFile Name :	016ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	58643	57937	57920	58166	0.71	cps
Ytterbium	172-1	187	157	173	172	8.73	cps
Ytterbium	172-2	57	50	57	54	7.07	cps
Ytterbium	176-1	2424	2067	2200	2230	8.08	cps
Ytterbium	176-2	317	297	390	334	14.69	cps
Yttrium	89-1	29479321	29122847	29575156	29392442	0.81	cps
Yttrium	89-2	1916307	1912901	1911113	1913440	0.14	cps
Zinc	66-2	17921	17661	17534	17706	1.11	cps
Zirconium	90-1	1407	1370	1423	1400	1.95	cps
Zirconium	91-1	310	400	343	351	12.96	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV027	Instrumnet Name :	P8
Client Sample ID :	CCV027	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:31:55	DataFile Name :	017CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3729375	3759127	3764656	3751053	0.51	cps
Antimony	121-1	8725973	8871494	8794886	8797451	0.83	cps
Arsenic	75-2	157101	159869	160886	159285	1.23	cps
Barium	135-1	11000313	11082884	10995007	11026068	0.45	cps
Barium	137-1	19070190	18906951	18877411	18951517	0.55	cps
Beryllium	9-1	3132364	3166048	3166721	3155044	0.62	cps
Bismuth	209-1	12303195	12345314	12325613	12324707	0.17	cps
Bismuth	209-2	4487435	4475431	4525104	4495990	0.58	cps
Bromine	81-1	5091	5211	5254	5185	1.63	cps
Cadmium	108-1	168531	170190	170082	169601	0.55	cps
Cadmium	106-1	249949	247280	249948	249059	0.62	cps
Cadmium	111-1	2216333	2167367	2156174	2179958	1.47	cps
Calcium	43-1	14838654	15032688	14919810	14930384	0.65	cps
Calcium	44-1	242008463	240393203	239915370	240772345	0.46	cps
Carbon	12-1	6153029	5902025	5867691	5974249	2.61	cps
Carbon	12-2	43795	42498	42347	42880	1.86	cps
Chlorine	35-1	5291099	4857806	4635508	4928138	6.77	cps
Chlorine	35-2	15175	13586	12896	13886	8.42	cps
Chromium	52-2	1905622	1895620	1866999	1889414	1.06	cps
Cobalt	59-2	3424240	3441320	3432136	3432566	0.25	cps
Copper	63-2	25709191	25794610	25848126	25783976	0.27	cps
Dysprosium	156-1	463	513	560	512	9.44	cps
Dysprosium	156-2	120	137	120	126	7.67	cps
Erbium	164-1	400	510	537	482	15.02	cps
Erbium	164-2	147	163	167	159	6.74	cps
Gadolinium	160-1	493	430	470	464	6.90	cps
Gadolinium	160-2	150	140	140	143	4.03	cps
Holmium	165-1	21270314	20969680	20840566	21026853	1.05	cps
Holmium	165-2	6697565	6781814	6755031	6744803	0.64	cps
Indium	115-1	15812099	16061969	15676277	15850115	1.23	cps
Indium	115-2	1339423	1351954	1353954	1348444	0.58	cps
Iron	54-2	18894072	18760763	18667326	18774053	0.61	cps
Iron	56-2	344509342	348226435	346185288	346307022	0.54	cps
Iron	57-2	8536021	8532754	8677458	8582078	0.96	cps
Krypton	83-1	380	343	380	368	5.76	cps
Lead	206-1	34778447	35223405	35338317	35113390	0.84	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV027	Instrumnet Name :	P8
Client Sample ID :	CCV027	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:31:55	DataFile Name :	017CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	29778961	30180385	30260137	30073161	0.86	cps
Lead	208-1	138345965	140161275	140088816	139532019	0.74	cps
Lithium	6-1	7977107	8151220	8157052	8095126	1.26	cps
Magnesium	24-2	65803504	65743604	66465174	66004094	0.61	cps
Manganese	55-2	7574067	7642729	7554445	7590414	0.61	cps
Molybdenum	94-1	31078652	31718732	31621276	31472887	1.10	cps
Molybdenum	95-1	46114499	45630956	45223041	45656165	0.98	cps
Molybdenum	96-1	50859841	49855634	49980241	50231905	1.09	cps
Molybdenum	97-1	28777527	27795109	28233489	28268708	1.74	cps
Molybdenum	98-1	74129419	73157114	73609332	73631955	0.66	cps
Neodymium	150-1	907	877	870	884	2.21	cps
Neodymium	150-2	50	57	67	58	14.52	cps
Nickel	60-2	872794	872707	879482	874994	0.44	cps
Phosphorus	31-2	34237	33449	34040	33909	1.21	cps
Potassium	39-2	17731372	17841096	17744441	17772303	0.34	cps
Rhodium	103-1	14491788	14211186	14188454	14297142	1.18	cps
Rhodium	103-2	5253572	5258175	5293268	5268339	0.41	cps
Scandium	45-1	11253017	11356284	11320468	11309923	0.46	cps
Scandium	45-2	201806	203352	206799	203986	1.25	cps
Selenium	82-1	127355	126013	126457	126608	0.54	cps
Selenium	77-2	2014	1980	2020	2005	1.07	cps
Selenium	78-2	6868	6552	6892	6771	2.81	cps
Silicon	28-1	10804139	10657955	10640555	10700883	0.84	cps
Silver	107-1	10587198	10846434	10751864	10728499	1.22	cps
Silver	109-1	10035201	10185606	10066611	10095806	0.79	cps
Sodium	23-2	134175191	133394595	134569951	134046579	0.45	cps
Strontium	86-1	2903376	3013103	2932622	2949701	1.93	cps
Strontium	88-1	25760723	25458760	24939324	25386269	1.64	cps
Sulfur	34-1	1538459	1556197	1556021	1550225	0.66	cps
Terbium	159-1	21514444	21291270	21558161	21454625	0.67	cps
Terbium	159-2	6482583	6420465	6513971	6472340	0.74	cps
Thallium	203-1	8690159	8536098	8717661	8647973	1.13	cps
Thallium	205-1	20474724	20725991	20624169	20608294	0.61	cps
Tin	118-1	7153048	7148274	7101155	7134159	0.40	cps
Titanium	47-1	13928369	13779011	13778732	13828704	0.62	cps
Uranium	238-1	28640752	28768416	29087016	28832062	0.80	cps

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV027	Instrumnet Name :	P8
Client Sample ID :	CCV027	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:31:55	DataFile Name :	017CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	1497414	1477369	1489358	1488047	0.68	cps
Ytterbium	172-1	520	490	603	538	10.92	cps
Ytterbium	172-2	183	207	173	188	9.11	cps
Ytterbium	176-1	44170	43331	43160	43554	1.24	cps
Ytterbium	176-2	13030	13387	13327	13248	1.44	cps
Yttrium	89-1	28232584	28609257	28166964	28336268	0.84	cps
Yttrium	89-2	1868561	1885859	1899051	1884491	0.81	cps
Zinc	66-2	2765509	2763249	2840230	2789663	1.57	cps
Zirconium	90-1	15816303	16058454	15805159	15893305	0.90	cps
Zirconium	91-1	3612288	3641420	3554962	3602890	1.22	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB027	Instrumnet Name :	P8
Client Sample ID :	CCB027	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:34:42	DataFile Name :	018CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	153	197	187	179	12.68	cps
Antimony	121-1	2497	2167	2094	2252	9.54	cps
Arsenic	75-2	3	13	7	8	65.47	cps
Barium	135-1	810	720	787	772	6.05	cps
Barium	137-1	1577	1337	1377	1430	8.99	cps
Beryllium	9-1	1636	1496	1437	1523	6.70	cps
Bismuth	209-1	14496511	14193667	14399589	14363256	1.08	cps
Bismuth	209-2	5289314	5243012	5363567	5298631	1.15	cps
Bromine	81-1	4911	4804	4881	4865	1.13	cps
Cadmium	108-1	60	43	37	47	25.75	cps
Cadmium	106-1	9116	9530	9450	9365	2.34	cps
Cadmium	111-1	6600	6804	6779	6728	1.66	cps
Calcium	43-1	997	1080	930	1002	7.50	cps
Calcium	44-1	37907	35167	35144	36072	4.40	cps
Carbon	12-1	4933881	4615769	4352500	4634050	6.28	cps
Carbon	12-2	27265	27042	26390	26899	1.69	cps
Chlorine	35-1	2316282	2183343	2089073	2196233	5.20	cps
Chlorine	35-2	6502	6502	6628	6544	1.12	cps
Chromium	52-2	3267	3564	3614	3482	5.38	cps
Cobalt	59-2	320	317	270	302	9.25	cps
Copper	63-2	4587	4374	4157	4373	4.92	cps
Dysprosium	156-1	23	17	33	24	34.31	cps
Dysprosium	156-2	10	7	7	8	24.71	cps
Erbium	164-1	110	117	130	119	8.57	cps
Erbium	164-2	23	30	47	33	36.07	cps
Gadolinium	160-1	143	130	107	127	14.65	cps
Gadolinium	160-2	23	20	13	19	26.96	cps
Holmium	165-1	22789795	22281256	22349597	22473549	1.23	cps
Holmium	165-2	7086004	7162182	7128064	7125417	0.54	cps
Indium	115-1	18031870	17758628	17904073	17898190	0.76	cps
Indium	115-2	1510890	1614274	1601725	1575630	3.58	cps
Iron	54-2	1593	1817	1737	1716	6.60	cps
Iron	56-2	26716	26488	26645	26616	0.44	cps
Iron	57-2	713	607	660	660	8.08	cps
Krypton	83-1	377	363	310	350	10.08	cps
Lead	206-1	5668	4954	4874	5166	8.46	cps

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB027	Instrumnet Name :	P8
Client Sample ID :	CCB027	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:34:42	DataFile Name :	018CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	4644	4754	4444	4614	3.41	cps
Lead	208-1	22445	20773	20043	21087	5.84	cps
Lithium	6-1	9250635	9440764	8973147	9221515	2.55	cps
Magnesium	24-2	4254	4114	4094	4154	2.10	cps
Manganese	55-2	633	607	530	590	9.09	cps
Molybdenum	94-1	2300	2260	1797	2119	13.20	cps
Molybdenum	95-1	2737	2484	2380	2534	7.24	cps
Molybdenum	96-1	3057	3074	2514	2881	11.06	cps
Molybdenum	97-1	1777	1603	1443	1608	10.37	cps
Molybdenum	98-1	4257	4034	3581	3957	8.72	cps
Neodymium	150-1	30	13	40	28	48.51	cps
Neodymium	150-2	0	3	0	1	173.21	cps
Nickel	60-2	1587	1463	1547	1532	4.11	cps
Phosphorus	31-2	107	90	83	93	12.88	cps
Potassium	39-2	13213	13523	12829	13188	2.64	cps
Rhodium	103-1	16995450	17072143	16743871	16937154	1.01	cps
Rhodium	103-2	6152691	6120486	6125544	6132907	0.28	cps
Scandium	45-1	12404804	12193792	12149301	12249299	1.11	cps
Scandium	45-2	212561	214858	211533	212984	0.80	cps
Selenium	82-1	-67	13	-17	-23	-173.22	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	20	17	13	17	20.01	cps
Silicon	28-1	610598	602901	601217	604905	0.83	cps
Silver	107-1	1593	1383	1260	1412	11.93	cps
Silver	109-1	1577	1197	1150	1308	17.90	cps
Sodium	23-2	70797	70047	68419	69755	1.74	cps
Strontium	86-1	700	670	710	693	3.00	cps
Strontium	88-1	1590	1657	1430	1559	7.47	cps
Sulfur	34-1	754021	753203	761345	756190	0.59	cps
Terbium	159-1	23331660	23004334	23314000	23216665	0.79	cps
Terbium	159-2	6887555	6843065	6913085	6881235	0.51	cps
Thallium	203-1	1924	1597	1530	1683	12.51	cps
Thallium	205-1	4578	4024	3754	4118	10.19	cps
Tin	118-1	3150	3087	3027	3088	2.00	cps
Titanium	47-1	840	760	633	744	14.00	cps
Uranium	238-1	1070	1170	863	1035	15.12	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB027	Instrumnet Name :	P8
Client Sample ID :	CCB027	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:34:42	DataFile Name :	018CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	50	57	23	43	40.71	cps
Ytterbium	172-1	123	130	97	117	15.12	cps
Ytterbium	172-2	50	10	70	43	70.50	cps
Ytterbium	176-1	2260	2290	2307	2286	1.03	cps
Ytterbium	176-2	307	327	360	331	8.14	cps
Yttrium	89-1	31338257	30748270	31041671	31042733	0.95	cps
Yttrium	89-2	2000565	2008100	2033453	2014039	0.86	cps
Zinc	66-2	313	337	360	337	6.93	cps
Zirconium	90-1	1873	1780	1550	1735	9.59	cps
Zirconium	91-1	417	400	393	403	2.98	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1255-08A	Instrumnet Name :	P8
Client Sample ID :	MDCZN8A	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:38:02	DataFile Name :	019AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2594	2774	2684	2684	3.35	cps
Antimony	121-1	1030	893	907	943	7.99	cps
Arsenic	75-2	143	140	130	138	5.04	cps
Barium	135-1	390806	389514	392559	390960	0.39	cps
Barium	137-1	670995	681211	673285	675163	0.79	cps
Beryllium	9-1	3164	3006	3100	3090	2.56	cps
Bismuth	209-1	13678549	14164429	14023942	13955640	1.79	cps
Bismuth	209-2	5179088	5170514	5101879	5150493	0.82	cps
Bromine	81-1	95936	111979	120922	109612	11.55	cps
Cadmium	108-1	110	97	147	118	21.98	cps
Cadmium	106-1	9273	9383	9080	9245	1.66	cps
Cadmium	111-1	7618	7527	7357	7501	1.77	cps
Calcium	43-1	323849	329840	325767	326485	0.94	cps
Calcium	44-1	5583810	5648406	5428186	5553467	2.04	cps
Carbon	12-1	8220296	9007915	9681024	8969745	8.15	cps
Carbon	12-2	68656	69081	70093	69277	1.07	cps
Chlorine	35-1	3482713	3665093	3771032	3639613	4.01	cps
Chlorine	35-2	13770	13783	13780	13778	0.05	cps
Chromium	52-2	3174	3494	3284	3317	4.90	cps
Cobalt	59-2	26161	25466	25663	25763	1.39	cps
Copper	63-2	6578	6572	6508	6553	0.59	cps
Dysprosium	156-1	1483	1563	1557	1535	2.89	cps
Dysprosium	156-2	603	590	510	568	8.89	cps
Erbium	164-1	1497	1413	1447	1452	2.89	cps
Erbium	164-2	507	473	513	498	4.30	cps
Gadolinium	160-1	1703	1840	1640	1728	5.92	cps
Gadolinium	160-2	647	710	597	651	8.72	cps
Holmium	165-1	22168379	22199821	22381481	22249894	0.52	cps
Holmium	165-2	7017456	7153666	7007925	7059683	1.15	cps
Indium	115-1	17444443	17417972	17570434	17477616	0.47	cps
Indium	115-2	1486304	1484199	1494410	1488305	0.36	cps
Iron	54-2	32560	33753	33780	33365	2.09	cps
Iron	56-2	603366	608784	609660	607270	0.56	cps
Iron	57-2	15468	15192	14691	15117	2.61	cps
Krypton	83-1	407	233	333	324	26.82	cps
Lead	206-1	4461	4447	4301	4403	2.02	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1255-08A	Instrumnet Name :	P8
Client Sample ID :	MDCZN8A	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:38:02	DataFile Name :	019AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	3664	3661	3454	3593	3.35	cps
Lead	208-1	17435	16971	16244	16883	3.55	cps
Lithium	6-1	9020556	8948513	8914865	8961312	0.60	cps
Magnesium	24-2	454492	455595	452575	454221	0.34	cps
Manganese	55-2	329563	333840	336455	333286	1.04	cps
Molybdenum	94-1	1037	1147	1003	1062	7.06	cps
Molybdenum	95-1	937	867	730	844	12.45	cps
Molybdenum	96-1	1223	1080	897	1067	15.35	cps
Molybdenum	97-1	490	517	460	489	5.80	cps
Molybdenum	98-1	1350	1253	1147	1250	8.14	cps
Neodymium	150-1	1633	1557	1567	1586	2.63	cps
Neodymium	150-2	373	327	300	333	11.13	cps
Nickel	60-2	18078	17825	18405	18103	1.61	cps
Phosphorus	31-2	173	187	190	183	4.81	cps
Potassium	39-2	129746	130123	130476	130115	0.28	cps
Rhodium	103-1	16140887	16233083	16095319	16156429	0.43	cps
Rhodium	103-2	5906847	5965936	5858381	5910388	0.91	cps
Scandium	45-1	12255292	12125414	12018765	12133157	0.98	cps
Scandium	45-2	211507	209121	210881	210503	0.59	cps
Selenium	82-1	3134	3317	3254	3235	2.88	cps
Selenium	77-2	43	43	60	49	19.69	cps
Selenium	78-2	127	160	157	148	12.42	cps
Silicon	28-1	164749098	165190894	165532758	165157583	0.24	cps
Silver	107-1	607	577	573	586	3.14	cps
Silver	109-1	380	470	410	420	10.91	cps
Sodium	23-2	15208821	15193214	15055492	15152509	0.56	cps
Strontium	86-1	349025	356458	352817	352767	1.05	cps
Strontium	88-1	3249166	3279488	3220180	3249611	0.91	cps
Sulfur	34-1	1491328	1496044	1472318	1486563	0.84	cps
Terbium	159-1	22615283	22693671	22922485	22743813	0.70	cps
Terbium	159-2	6838284	6794122	6859270	6830559	0.49	cps
Thallium	203-1	1250	1047	933	1077	14.90	cps
Thallium	205-1	3007	2687	2537	2744	8.75	cps
Tin	118-1	5211	5184	4878	5091	3.64	cps
Titanium	47-1	2950	3000	3080	3010	2.18	cps
Uranium	238-1	1270	1143	1110	1175	7.19	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1255-08A	Instrumnet Name :	P8
Client Sample ID :	MDCZN8A	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:38:02	DataFile Name :	019AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	757	690	597	681	11.80	cps
Ytterbium	172-1	533	617	547	566	7.92	cps
Ytterbium	172-2	213	227	273	238	13.25	cps
Ytterbium	176-1	2544	2507	2560	2537	1.08	cps
Ytterbium	176-2	467	387	460	438	10.14	cps
Yttrium	89-1	29931381	30636350	30132857	30233530	1.20	cps
Yttrium	89-2	1979615	1950038	1994791	1974815	1.15	cps
Zinc	66-2	7035	7285	7315	7212	2.13	cps
Zirconium	90-1	1520	1603	1463	1529	4.61	cps
Zirconium	91-1	317	300	330	316	4.76	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166671BL	Instrumnet Name :	P8
Client Sample ID :	PBW671	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:41:41	DataFile Name :	020CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	93	70	117	93	25.00	cps
Antimony	121-1	320	333	363	339	6.55	cps
Arsenic	75-2	7	3	3	4	43.40	cps
Barium	135-1	533	467	567	522	9.75	cps
Barium	137-1	753	860	653	756	13.68	cps
Beryllium	9-1	770	811	744	775	4.39	cps
Bismuth	209-1	14388371	14345881	14615460	14449904	1.00	cps
Bismuth	209-2	5271416	5237178	5354204	5287599	1.14	cps
Bromine	81-1	18005	15959	14264	16076	11.65	cps
Cadmium	108-1	23	33	23	27	21.65	cps
Cadmium	106-1	9617	9603	9653	9625	0.27	cps
Cadmium	111-1	6792	6729	6781	6767	0.50	cps
Calcium	43-1	653	557	640	617	8.50	cps
Calcium	44-1	28802	29270	28061	28711	2.12	cps
Carbon	12-1	5506540	5044648	4732483	5094557	7.64	cps
Carbon	12-2	28868	28511	27780	28386	1.96	cps
Chlorine	35-1	1050990	1007005	963276	1007090	4.35	cps
Chlorine	35-2	3297	3377	3254	3309	1.89	cps
Chromium	52-2	2407	2390	2377	2391	0.63	cps
Cobalt	59-2	180	217	200	199	9.23	cps
Copper	63-2	3054	3274	3317	3215	4.39	cps
Dysprosium	156-1	17	27	27	23	24.74	cps
Dysprosium	156-2	0	0	7	2	173.21	cps
Erbium	164-1	127	137	113	126	9.32	cps
Erbium	164-2	27	67	30	41	53.99	cps
Gadolinium	160-1	120	167	120	136	19.88	cps
Gadolinium	160-2	17	17	33	22	43.28	cps
Holmium	165-1	22578989	22476838	22538106	22531311	0.23	cps
Holmium	165-2	7158487	7100727	7184015	7147743	0.60	cps
Indium	115-1	17985698	18199728	17919276	18034901	0.81	cps
Indium	115-2	1502060	1505972	1621997	1543343	4.42	cps
Iron	54-2	1217	1103	1110	1143	5.56	cps
Iron	56-2	16763	16523	16416	16568	1.07	cps
Iron	57-2	347	427	430	401	11.76	cps
Krypton	83-1	280	323	270	291	9.74	cps
Lead	206-1	2864	2837	2720	2807	2.72	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166671BL	Instrumnet Name :	P8
Client Sample ID :	PBW671	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:41:41	DataFile Name :	020CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2604	2590	2480	2558	2.65	cps
Lead	208-1	11542	11529	11135	11402	2.03	cps
Lithium	6-1	9082270	9090867	8791333	8988157	1.90	cps
Magnesium	24-2	3864	3847	3937	3883	1.23	cps
Manganese	55-2	350	360	357	356	1.43	cps
Molybdenum	94-1	797	753	873	808	7.52	cps
Molybdenum	95-1	790	767	710	756	5.44	cps
Molybdenum	96-1	1040	940	943	974	5.83	cps
Molybdenum	97-1	580	510	503	531	8.00	cps
Molybdenum	98-1	1270	1197	1200	1222	3.39	cps
Neodymium	150-1	20	17	17	18	10.81	cps
Neodymium	150-2	0	7	3	3	100.05	cps
Nickel	60-2	1453	1437	1457	1449	0.74	cps
Phosphorus	31-2	113	103	90	102	11.45	cps
Potassium	39-2	11431	11685	11742	11619	1.42	cps
Rhodium	103-1	16827516	16863143	16681150	16790603	0.57	cps
Rhodium	103-2	6128660	6116653	6116548	6120620	0.11	cps
Scandium	45-1	12156094	12220514	12179266	12185291	0.27	cps
Scandium	45-2	210871	211274	213831	211992	0.76	cps
Selenium	82-1	50	57	10	39	64.90	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	3	17	10	10	66.70	cps
Silicon	28-1	600441	593916	590011	594790	0.89	cps
Silver	107-1	380	450	397	409	8.94	cps
Silver	109-1	253	263	193	237	16.00	cps
Sodium	23-2	59414	58892	58068	58791	1.15	cps
Strontium	86-1	587	620	617	608	3.02	cps
Strontium	88-1	1333	1247	1213	1265	4.90	cps
Sulfur	34-1	753475	755979	759909	756454	0.43	cps
Terbium	159-1	23449650	23087780	23204770	23247400	0.79	cps
Terbium	159-2	6907026	6837061	6888103	6877397	0.53	cps
Thallium	203-1	717	613	733	688	9.45	cps
Thallium	205-1	1693	1740	1840	1758	4.26	cps
Tin	118-1	2697	2667	2694	2686	0.61	cps
Titanium	47-1	357	343	340	347	2.54	cps
Uranium	238-1	100	70	73	81	20.27	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166671BL	Instrumnet Name :	P8
Client Sample ID :	PBW671	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:41:41	DataFile Name :	020CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	7	33	7	16	98.94	cps
Ytterbium	172-1	130	90	140	120	22.05	cps
Ytterbium	172-2	67	23	47	46	47.61	cps
Ytterbium	176-1	2267	2420	2407	2365	3.59	cps
Ytterbium	176-2	313	387	387	362	11.69	cps
Yttrium	89-1	30759455	30695346	30160950	30538584	1.08	cps
Yttrium	89-2	1979673	1989776	2001109	1990186	0.54	cps
Zinc	66-2	267	263	233	254	7.21	cps
Zirconium	90-1	1013	1070	1030	1038	2.81	cps
Zirconium	91-1	190	223	213	209	8.19	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166671BS	Instrumnet Name :	P8
Client Sample ID :	LCS671	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:45:02	DataFile Name :	021LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3107	3247	3387	3247	4.31	cps
Antimony	121-1	78845	78996	80210	79351	0.94	cps
Arsenic	75-2	667	763	743	724	7.04	cps
Barium	135-1	95376	95903	95084	95454	0.43	cps
Barium	137-1	164044	164014	163637	163898	0.14	cps
Beryllium	9-1	15133	14864	15068	15022	0.93	cps
Bismuth	209-1	14433226	14157002	14272197	14287475	0.97	cps
Bismuth	209-2	5307429	5218038	5154449	5226639	1.47	cps
Bromine	81-1	8489	8466	8386	8447	0.64	cps
Cadmium	108-1	883	790	830	834	5.61	cps
Cadmium	106-1	10487	10608	10464	10520	0.73	cps
Cadmium	111-1	16653	16622	16911	16729	0.95	cps
Calcium	43-1	65947	64869	66221	65679	1.09	cps
Calcium	44-1	1070982	1069342	1072800	1071042	0.16	cps
Carbon	12-1	4906517	4689782	4537767	4711355	3.93	cps
Carbon	12-2	28615	27933	27679	28076	1.72	cps
Chlorine	35-1	2557961	2740432	2807885	2702093	4.79	cps
Chlorine	35-2	10867	10801	10717	10795	0.70	cps
Chromium	52-2	17561	18382	17941	17961	2.29	cps
Cobalt	59-2	15826	15916	15839	15860	0.31	cps
Copper	63-2	29294	29624	29120	29346	0.87	cps
Dysprosium	156-1	50	43	43	46	8.45	cps
Dysprosium	156-2	0	0	7	2	173.21	cps
Erbium	164-1	117	80	157	118	32.56	cps
Erbium	164-2	23	37	47	36	32.93	cps
Gadolinium	160-1	120	120	117	119	1.62	cps
Gadolinium	160-2	30	47	20	32	41.81	cps
Holmium	165-1	22591497	22452759	22432318	22492191	0.39	cps
Holmium	165-2	6989712	7012377	7030848	7010979	0.29	cps
Indium	115-1	18132769	17833315	17663158	17876414	1.33	cps
Indium	115-2	1488695	1486602	1485627	1486975	0.11	cps
Iron	54-2	68202	66972	67187	67454	0.97	cps
Iron	56-2	1222722	1224034	1224417	1223724	0.07	cps
Iron	57-2	30720	30670	30506	30632	0.36	cps
Krypton	83-1	323	340	307	323	5.16	cps
Lead	206-1	34405	34245	34406	34352	0.27	cps

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166671BS	Instrumnet Name :	P8
Client Sample ID :	LCS671	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:45:02	DataFile Name :	021LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	29624	30249	29337	29736	1.57	cps
Lead	208-1	136672	136942	137115	136910	0.16	cps
Lithium	6-1	9073496	8803301	9096178	8990991	1.81	cps
Magnesium	24-2	279820	281050	280640	280503	0.22	cps
Manganese	55-2	3570	3671	3527	3589	2.05	cps
Molybdenum	94-1	79146	81018	79623	79929	1.22	cps
Molybdenum	95-1	98687	98197	97143	98009	0.81	cps
Molybdenum	96-1	107727	108143	107650	107840	0.25	cps
Molybdenum	97-1	60310	60401	60337	60349	0.08	cps
Molybdenum	98-1	156929	157699	156501	157043	0.39	cps
Neodymium	150-1	47	30	27	34	31.11	cps
Neodymium	150-2	3	3	7	4	43.40	cps
Nickel	60-2	5885	5765	5855	5835	1.07	cps
Phosphorus	31-2	257	250	270	259	3.93	cps
Potassium	39-2	160838	160619	161738	161065	0.37	cps
Rhodium	103-1	16830001	16612520	16766863	16736461	0.67	cps
Rhodium	103-2	6087651	6061449	5992523	6047207	0.81	cps
Scandium	45-1	12183813	11943609	12127786	12085069	1.04	cps
Scandium	45-2	211672	209406	207503	209527	1.00	cps
Selenium	82-1	3047	3250	3057	3118	3.68	cps
Selenium	77-2	50	50	77	59	26.15	cps
Selenium	78-2	203	193	123	173	25.15	cps
Silicon	28-1	941898	945707	939749	942451	0.32	cps
Silver	107-1	49067	48070	48970	48702	1.13	cps
Silver	109-1	46568	47361	46732	46887	0.89	cps
Sodium	23-2	625661	624333	620739	623578	0.41	cps
Strontium	86-1	13410	13296	13043	13250	1.42	cps
Strontium	88-1	109374	109767	110419	109853	0.48	cps
Sulfur	34-1	779531	782118	776849	779499	0.34	cps
Terbium	159-1	23583575	23074036	23099312	23252308	1.23	cps
Terbium	159-2	6786129	6801495	6726548	6771391	0.58	cps
Thallium	203-1	39985	39624	39487	39698	0.65	cps
Thallium	205-1	93595	95136	94736	94489	0.85	cps
Tin	118-1	161520	162332	162026	161959	0.25	cps
Titanium	47-1	7675	7876	7609	7720	1.80	cps
Uranium	238-1	117577	119027	119693	118766	0.91	cps

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166671BS	Instrumnet Name :	P8
Client Sample ID :	LCS671	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:45:02	DataFile Name :	021LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	31799	32186	31745	31910	0.75	cps
Ytterbium	172-1	147	123	110	127	14.65	cps
Ytterbium	172-2	23	43	53	40	38.19	cps
Ytterbium	176-1	2530	2614	2567	2570	1.63	cps
Ytterbium	176-2	360	357	430	382	10.83	cps
Yttrium	89-1	30707879	30461701	30533642	30567741	0.41	cps
Yttrium	89-2	1993004	1981647	1944440	1973030	1.29	cps
Zinc	66-2	6608	6828	6288	6575	4.13	cps
Zirconium	90-1	67342	69378	69013	68577	1.58	cps
Zirconium	91-1	14861	15148	15335	15115	1.58	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-01	Instrumnet Name :	P8
Client Sample ID :	ME2993	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:48:25	DataFile Name :	022AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1080	1023	1013	1039	3.47	cps
Antimony	121-1	703	603	680	662	7.90	cps
Arsenic	75-2	217	230	267	238	10.89	cps
Barium	135-1	39377	38906	38658	38980	0.94	cps
Barium	137-1	67457	68164	67718	67780	0.53	cps
Beryllium	9-1	592	617	674	628	6.63	cps
Bismuth	209-1	13582605	13714766	13694948	13664106	0.52	cps
Bismuth	209-2	4984340	4947499	4912630	4948156	0.72	cps
Bromine	81-1	152732	165075	174362	164056	6.61	cps
Cadmium	108-1	50	53	30	44	28.39	cps
Cadmium	106-1	9704	9367	9307	9459	2.26	cps
Cadmium	111-1	6844	6559	6574	6659	2.41	cps
Calcium	43-1	28398185	28614051	28492092	28501443	0.38	cps
Calcium	44-1	452392767	455232727	451399807	453008433	0.44	cps
Carbon	12-1	9355157	9985012	10485277	9941815	5.70	cps
Carbon	12-2	73469	72772	73948	73397	0.81	cps
Chlorine	35-1	4195442	4662950	4957716	4605369	8.35	cps
Chlorine	35-2	18722	19370	19460	19184	2.10	cps
Chromium	52-2	1047	1060	1137	1081	4.49	cps
Cobalt	59-2	660	587	750	666	12.29	cps
Copper	63-2	3234	3217	3344	3265	2.11	cps
Dysprosium	156-1	233	217	187	212	11.14	cps
Dysprosium	156-2	43	53	37	44	18.87	cps
Erbium	164-1	210	227	257	231	10.23	cps
Erbium	164-2	67	77	83	76	11.10	cps
Gadolinium	160-1	297	290	300	296	1.72	cps
Gadolinium	160-2	100	60	80	80	25.00	cps
Holmium	165-1	23054543	22959865	22809153	22941187	0.54	cps
Holmium	165-2	7216525	7133606	7138556	7162896	0.65	cps
Indium	115-1	17767065	17636883	17589860	17664603	0.52	cps
Indium	115-2	1483249	1477065	1486716	1482344	0.33	cps
Iron	54-2	795786	802646	808199	802211	0.78	cps
Iron	56-2	15573454	15531266	15333738	15479486	0.83	cps
Iron	57-2	369195	369792	369935	369641	0.11	cps
Krypton	83-1	297	370	333	333	11.00	cps
Lead	206-1	6799	5768	5528	6031	11.19	cps

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On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-01	Instrumnet Name :	P8
Client Sample ID :	ME2993	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:48:25	DataFile Name :	022AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	5811	4714	4631	5052	13.04	cps
Lead	208-1	26674	22394	21377	23482	11.97	cps
Lithium	6-1	9075322	9176693	8961148	9071054	1.19	cps
Magnesium	24-2	47046621	46798484	46738231	46861112	0.35	cps
Manganese	55-2	115018	116474	115738	115743	0.63	cps
Molybdenum	94-1	9313	9467	9563	9448	1.34	cps
Molybdenum	95-1	14918	15435	14568	14974	2.91	cps
Molybdenum	96-1	16303	15449	16396	16049	3.25	cps
Molybdenum	97-1	9076	9463	9250	9263	2.09	cps
Molybdenum	98-1	23904	23707	24094	23902	0.81	cps
Neodymium	150-1	253	290	220	254	13.76	cps
Neodymium	150-2	43	23	43	37	31.49	cps
Nickel	60-2	1177	1203	1027	1136	8.39	cps
Phosphorus	31-2	170	110	127	136	22.85	cps
Potassium	39-2	646914	648649	654746	650103	0.63	cps
Rhodium	103-1	15789881	15811345	15777039	15792755	0.11	cps
Rhodium	103-2	5827069	5852518	5766334	5815307	0.76	cps
Scandium	45-1	12549642	12583578	12621219	12584813	0.28	cps
Scandium	45-2	218276	218194	220984	219151	0.72	cps
Selenium	82-1	47	53	107	69	47.74	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	13	0	10	8	89.21	cps
Silicon	28-1	147993648	149899664	151259834	149717716	1.10	cps
Silver	107-1	663	593	670	642	6.61	cps
Silver	109-1	383	317	337	346	9.90	cps
Sodium	23-2	26667191	26285230	26250875	26401099	0.88	cps
Strontium	86-1	79247310	78642059	78616547	78835305	0.45	cps
Strontium	88-1	686071190	683276190	685434936	684927439	0.21	cps
Sulfur	34-1	48414636	48775459	48344298	48511464	0.48	cps
Terbium	159-1	23363265	23607384	23347291	23439314	0.62	cps
Terbium	159-2	6857828	6879434	6966991	6901418	0.84	cps
Thallium	203-1	1020	1000	943	988	4.03	cps
Thallium	205-1	2547	2360	2184	2364	7.69	cps
Tin	118-1	3520	3611	3327	3486	4.15	cps
Titanium	47-1	3601	3617	3494	3570	1.87	cps
Uranium	238-1	52461	51430	51266	51719	1.25	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-01	Instrumnet Name :	P8
Client Sample ID :	ME2993	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:48:25	DataFile Name :	022AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	137	160	167	154	10.20	cps
Ytterbium	172-1	160	167	137	154	10.20	cps
Ytterbium	172-2	47	53	50	50	6.66	cps
Ytterbium	176-1	2474	2450	2440	2455	0.70	cps
Ytterbium	176-2	343	317	373	344	8.23	cps
Yttrium	89-1	31554012	31604486	31350170	31502889	0.43	cps
Yttrium	89-2	2037199	2031153	2003606	2023986	0.88	cps
Zinc	66-2	897	843	873	871	3.07	cps
Zirconium	90-1	2354	2317	2527	2399	4.68	cps
Zirconium	91-1	603	470	500	524	13.34	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-02	Instrumnet Name :	P8
Client Sample ID :	ME2993D	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:51:40	DataFile Name :	023AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1193	1063	963	1073	10.75	cps
Antimony	121-1	597	620	570	596	4.20	cps
Arsenic	75-2	190	193	253	212	16.80	cps
Barium	135-1	39203	40273	39765	39747	1.35	cps
Barium	137-1	68857	69290	70164	69437	0.96	cps
Beryllium	9-1	640	606	627	625	2.73	cps
Bismuth	209-1	13823258	13847532	14059357	13910049	0.93	cps
Bismuth	209-2	5150467	4991988	5020254	5054236	1.67	cps
Bromine	81-1	166057	181927	189146	179043	6.60	cps
Cadmium	108-1	57	50	50	52	7.37	cps
Cadmium	106-1	10120	10097	9927	10048	1.05	cps
Cadmium	111-1	7101	7103	6957	7054	1.19	cps
Calcium	43-1	29694654	29487269	30561548	29914490	1.91	cps
Calcium	44-1	472100486	480770006	485076339	479315611	1.38	cps
Carbon	12-1	10361452	10843967	11247473	10817631	4.10	cps
Carbon	12-2	76260	75804	76541	76202	0.49	cps
Chlorine	35-1	4682565	5251271	5482518	5138784	8.01	cps
Chlorine	35-2	20705	20601	21032	20779	1.08	cps
Chromium	52-2	1503	1473	1530	1502	1.89	cps
Cobalt	59-2	673	673	637	661	3.20	cps
Copper	63-2	3387	3417	3477	3427	1.34	cps
Dysprosium	156-1	193	150	167	170	12.86	cps
Dysprosium	156-2	47	47	43	46	4.23	cps
Erbium	164-1	227	257	237	240	6.36	cps
Erbium	164-2	57	90	53	67	30.41	cps
Gadolinium	160-1	277	290	243	270	8.90	cps
Gadolinium	160-2	73	73	83	77	7.53	cps
Holmium	165-1	23388841	23949136	23340962	23559647	1.44	cps
Holmium	165-2	7561944	7317953	7233353	7371083	2.31	cps
Indium	115-1	18093638	18611222	18648886	18451249	1.68	cps
Indium	115-2	1633528	1606484	1503702	1581238	4.33	cps
Iron	54-2	844827	819841	819744	828137	1.75	cps
Iron	56-2	16487964	16134301	15876215	16166160	1.90	cps
Iron	57-2	388086	380644	373872	380867	1.87	cps
Krypton	83-1	357	307	353	339	8.25	cps
Lead	206-1	5154	5138	5358	5217	2.35	cps

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-02	Instrumnet Name :	P8
Client Sample ID :	ME2993D	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:51:40	DataFile Name :	023AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	4274	4301	4127	4234	2.21	cps
Lead	208-1	20136	20046	20226	20136	0.45	cps
Lithium	6-1	9212699	9417716	9343096	9324504	1.11	cps
Magnesium	24-2	49680571	48869296	48758463	49102776	1.03	cps
Manganese	55-2	118322	114239	114696	115752	1.93	cps
Molybdenum	94-1	9160	9216	9637	9338	2.79	cps
Molybdenum	95-1	15112	15245	15035	15131	0.70	cps
Molybdenum	96-1	16153	16884	16366	16468	2.28	cps
Molybdenum	97-1	9297	9323	9597	9405	1.77	cps
Molybdenum	98-1	24418	24108	24872	24466	1.57	cps
Neodymium	150-1	227	240	230	232	2.99	cps
Neodymium	150-2	37	43	60	47	25.75	cps
Nickel	60-2	1137	1270	1387	1265	9.89	cps
Phosphorus	31-2	153	130	117	133	13.92	cps
Potassium	39-2	693566	672476	667746	677929	2.03	cps
Rhodium	103-1	16537025	16465389	16622739	16541717	0.48	cps
Rhodium	103-2	6064302	5875552	5851310	5930388	1.97	cps
Scandium	45-1	13053194	13041601	13419176	13171324	1.63	cps
Scandium	45-2	230919	228315	225804	228346	1.12	cps
Selenium	82-1	83	130	60	91	39.12	cps
Selenium	77-2	3	0	10	4	114.60	cps
Selenium	78-2	7	10	10	9	21.63	cps
Silicon	28-1	155020758	157691261	156512894	156408304	0.86	cps
Silver	107-1	527	547	573	549	4.27	cps
Silver	109-1	267	253	313	278	11.34	cps
Sodium	23-2	27769268	26727553	27119281	27205367	1.93	cps
Strontium	86-1	82308929	83172767	82973370	82818355	0.55	cps
Strontium	88-1	706339456	711249563	724269403	713952807	1.30	cps
Sulfur	34-1	50072549	50694514	51630183	50799082	1.54	cps
Terbium	159-1	24004810	24343090	24182709	24176870	0.70	cps
Terbium	159-2	7374372	7013361	7095516	7161083	2.64	cps
Thallium	203-1	873	840	763	826	6.83	cps
Thallium	205-1	2114	2077	1960	2050	3.91	cps
Tin	118-1	3837	3781	3717	3778	1.59	cps
Titanium	47-1	3464	3671	4158	3764	9.46	cps
Uranium	238-1	52863	53820	53633	53439	0.95	cps

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On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-02	Instrumnet Name :	P8
Client Sample ID :	ME2993D	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:51:40	DataFile Name :	023AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	133	147	200	160	22.05	cps
Ytterbium	172-1	173	177	190	180	4.90	cps
Ytterbium	172-2	63	57	43	54	18.71	cps
Ytterbium	176-1	2334	2544	2360	2412	4.74	cps
Ytterbium	176-2	313	343	357	338	6.57	cps
Yttrium	89-1	32272451	32465854	32790709	32509671	0.81	cps
Yttrium	89-2	2135596	2077393	2093913	2102300	1.43	cps
Zinc	66-2	777	833	860	823	5.17	cps
Zirconium	90-1	2350	2224	2287	2287	2.77	cps
Zirconium	91-1	533	460	487	493	7.52	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-01LX5	Instrumnet Name :	P8
Client Sample ID :	ME2993L	Dilution Factor :	5
Date & Time Acquired :	2025-02-13 12:54:57	DataFile Name :	024AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	300	310	320	310	3.23	cps
Antimony	121-1	237	160	260	219	23.90	cps
Arsenic	75-2	37	30	57	41	33.76	cps
Barium	135-1	8333	8206	8383	8307	1.10	cps
Barium	137-1	14168	14248	14258	14224	0.35	cps
Beryllium	9-1	631	569	649	616	6.83	cps
Bismuth	209-1	14387276	14294323	14202697	14294765	0.65	cps
Bismuth	209-2	5226731	5180547	5159436	5188905	0.66	cps
Bromine	81-1	50437	50577	49754	50256	0.88	cps
Cadmium	108-1	43	17	43	34	44.69	cps
Cadmium	106-1	9850	9924	9914	9896	0.40	cps
Cadmium	111-1	6912	6985	6949	6949	0.53	cps
Calcium	43-1	5957736	6027535	5908455	5964575	1.00	cps
Calcium	44-1	94663409	95669709	93263309	94532142	1.28	cps
Carbon	12-1	6600954	6352081	6322801	6425279	2.38	cps
Carbon	12-2	38958	39433	38457	38949	1.25	cps
Chlorine	35-1	1734056	1736909	1707409	1726125	0.94	cps
Chlorine	35-2	5738	5801	5808	5782	0.67	cps
Chromium	52-2	2214	2294	2074	2194	5.08	cps
Cobalt	59-2	257	233	240	243	4.94	cps
Copper	63-2	3377	3194	3280	3284	2.79	cps
Dysprosium	156-1	80	53	67	67	20.00	cps
Dysprosium	156-2	13	13	30	19	50.96	cps
Erbium	164-1	147	130	130	136	7.10	cps
Erbium	164-2	27	33	37	32	15.80	cps
Gadolinium	160-1	157	170	150	159	6.41	cps
Gadolinium	160-2	43	17	33	31	43.29	cps
Holmium	165-1	22971216	23298922	23081908	23117349	0.72	cps
Holmium	165-2	7331677	7306389	7200880	7279649	0.95	cps
Indium	115-1	18157094	18510008	18251957	18306353	1.00	cps
Indium	115-2	1613144	1612101	1604747	1609997	0.28	cps
Iron	54-2	167139	166312	168119	167190	0.54	cps
Iron	56-2	3305715	3261440	3250287	3272481	0.90	cps
Iron	57-2	75917	78018	77047	76994	1.37	cps
Krypton	83-1	347	307	393	349	12.43	cps
Lead	206-1	3594	3651	3637	3627	0.82	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-01LX5	Instrumnet Name :	P8
Client Sample ID :	ME2993L	Dilution Factor :	5
Date & Time Acquired :	2025-02-13 12:54:57	DataFile Name :	024AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	3154	3084	3154	3130	1.29	cps
Lead	208-1	14367	14503	14323	14398	0.65	cps
Lithium	6-1	9461485	9534394	9522082	9505987	0.41	cps
Magnesium	24-2	9730037	9925880	9822319	9826079	1.00	cps
Manganese	55-2	24174	23883	24237	24098	0.78	cps
Molybdenum	94-1	2527	2387	2574	2496	3.89	cps
Molybdenum	95-1	3781	3691	3827	3766	1.85	cps
Molybdenum	96-1	3927	3947	4041	3972	1.52	cps
Molybdenum	97-1	2330	2450	2334	2371	2.88	cps
Molybdenum	98-1	5808	5608	5524	5647	2.58	cps
Neodymium	150-1	63	57	67	62	8.18	cps
Neodymium	150-2	7	20	3	10	88.20	cps
Nickel	60-2	1543	1490	1623	1552	4.32	cps
Phosphorus	31-2	87	90	110	96	13.21	cps
Potassium	39-2	141536	141300	142825	141887	0.58	cps
Rhodium	103-1	16939715	17017556	16994059	16983777	0.24	cps
Rhodium	103-2	5984209	6192352	6118963	6098508	1.73	cps
Scandium	45-1	12929239	13038962	12769917	12912706	1.05	cps
Scandium	45-2	221055	221768	222593	221806	0.35	cps
Selenium	82-1	57	43	-37	21	239.02	cps
Selenium	77-2	7	0	0	2	173.21	cps
Selenium	78-2	3	7	3	4	43.40	cps
Silicon	28-1	31557289	30946039	30987838	31163722	1.10	cps
Silver	107-1	387	440	437	421	7.09	cps
Silver	109-1	237	233	223	231	3.00	cps
Sodium	23-2	5528993	5529971	5349183	5469382	1.90	cps
Strontium	86-1	16514955	16311311	16240047	16355437	0.87	cps
Strontium	88-1	141599918	142669155	140088898	141452657	0.92	cps
Sulfur	34-1	10760080	10671144	10418920	10616715	1.67	cps
Terbium	159-1	23746805	23863868	23874475	23828383	0.30	cps
Terbium	159-2	7002521	7033525	7030149	7022065	0.24	cps
Thallium	203-1	730	737	737	734	0.52	cps
Thallium	205-1	1647	1620	1810	1692	6.08	cps
Tin	118-1	3124	3064	3010	3066	1.85	cps
Titanium	47-1	1173	990	990	1051	10.07	cps
Uranium	238-1	10658	10414	10134	10402	2.52	cps

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On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-01LX5	Instrumnet Name :	P8
Client Sample ID :	ME2993L	Dilution Factor :	5
Date & Time Acquired :	2025-02-13 12:54:57	DataFile Name :	024AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	23	47	50	40	36.33	cps
Ytterbium	172-1	117	97	110	108	9.45	cps
Ytterbium	172-2	57	33	40	43	27.74	cps
Ytterbium	176-1	2340	2480	2520	2447	3.86	cps
Ytterbium	176-2	287	353	377	339	13.78	cps
Yttrium	89-1	31628274	31746440	31868610	31747775	0.38	cps
Yttrium	89-2	2003556	2053715	2058623	2038631	1.49	cps
Zinc	66-2	470	400	447	439	8.12	cps
Zirconium	90-1	1323	1327	1260	1303	2.88	cps
Zirconium	91-1	260	287	240	262	8.93	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-03	Instrumnet Name :	P8
Client Sample ID :	ME2993S	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:58:09	DataFile Name :	025AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	149000	151001	151964	150655	1.00	cps
Antimony	121-1	2106125	2100608	2104620	2103784	0.14	cps
Arsenic	75-2	15152	15212	15001	15122	0.72	cps
Barium	135-1	9715242	9889492	9684534	9763089	1.13	cps
Barium	137-1	16598249	16934461	16706885	16746531	1.02	cps
Beryllium	9-1	341574	340084	340967	340875	0.22	cps
Bismuth	209-1	13964546	14018997	13860178	13947907	0.58	cps
Bismuth	209-2	5056266	5099789	5171460	5109172	1.14	cps
Bromine	81-1	169068	191432	199298	186599	8.41	cps
Cadmium	108-1	15048	15465	15515	15343	1.67	cps
Cadmium	106-1	31359	30961	31723	31348	1.22	cps
Cadmium	111-1	243106	242852	243082	243014	0.06	cps
Calcium	43-1	29219497	29055896	29443072	29239488	0.66	cps
Calcium	44-1	466927500	459976166	466165713	464356460	0.82	cps
Carbon	12-1	9523996	10204581	10497831	10075469	4.96	cps
Carbon	12-2	73040	74018	74146	73735	0.82	cps
Chlorine	35-1	52832488	56891376	59457842	56393902	5.92	cps
Chlorine	35-2	228689	233538	235520	232582	1.51	cps
Chromium	52-2	798669	803067	808282	803339	0.60	cps
Cobalt	59-2	3863034	3929091	3955834	3915986	1.22	cps
Copper	63-2	1425405	1429211	1443290	1432635	0.66	cps
Dysprosium	156-1	247	287	317	283	12.39	cps
Dysprosium	156-2	50	73	53	59	21.43	cps
Erbium	164-1	237	210	300	249	18.58	cps
Erbium	164-2	67	47	43	52	24.17	cps
Gadolinium	160-1	327	277	257	287	12.58	cps
Gadolinium	160-2	83	77	77	79	4.87	cps
Holmium	165-1	23381330	23562732	23569858	23504640	0.45	cps
Holmium	165-2	7416129	7427951	7386353	7410144	0.29	cps
Indium	115-1	18366509	18490285	18303204	18386666	0.52	cps
Indium	115-2	1640422	1644331	1646210	1643654	0.18	cps
Iron	54-2	1009622	1020104	1027235	1018987	0.87	cps
Iron	56-2	19092056	19153172	19219068	19154765	0.33	cps
Iron	57-2	452309	457342	455682	455111	0.56	cps
Krypton	83-1	357	370	297	341	11.45	cps
Lead	206-1	308872	311644	312687	311068	0.63	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-03	Instrumnet Name :	P8
Client Sample ID :	ME2993S	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:58:09	DataFile Name :	025AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	265714	263884	264403	264667	0.36	cps
Lead	208-1	1228733	1231518	1231750	1230667	0.14	cps
Lithium	6-1	9494287	9269050	9666993	9476777	2.11	cps
Magnesium	24-2	48994156	48559521	49222553	48925410	0.69	cps
Manganese	55-2	901272	909779	925800	912284	1.37	cps
Molybdenum	94-1	9617	9433	9580	9543	1.02	cps
Molybdenum	95-1	14921	15269	15299	15163	1.38	cps
Molybdenum	96-1	16490	16420	16463	16458	0.21	cps
Molybdenum	97-1	9307	9040	9213	9186	1.47	cps
Molybdenum	98-1	24011	24685	24442	24379	1.40	cps
Neodymium	150-1	837	793	830	820	2.85	cps
Neodymium	150-2	43	50	93	62	43.63	cps
Nickel	60-2	1004155	1006325	1013228	1007903	0.47	cps
Phosphorus	31-2	123	147	133	134	8.71	cps
Potassium	39-2	668358	677227	682155	675913	1.03	cps
Rhodium	103-1	16536243	16261845	16581394	16459827	1.05	cps
Rhodium	103-2	6020615	5982774	6059804	6021064	0.64	cps
Scandium	45-1	12880229	13133458	13159464	13057717	1.18	cps
Scandium	45-2	228921	230713	233626	231087	1.03	cps
Selenium	82-1	6668	6445	6512	6542	1.75	cps
Selenium	77-2	110	117	123	117	5.72	cps
Selenium	78-2	393	300	320	338	14.55	cps
Silicon	28-1	150708591	149338964	149483808	149843788	0.50	cps
Silver	107-1	1064061	1072464	1084346	1073624	0.95	cps
Silver	109-1	1025903	1040774	1051712	1039463	1.25	cps
Sodium	23-2	27561743	27535045	27430565	27509118	0.25	cps
Strontium	86-1	80619404	80193594	80694949	80502649	0.34	cps
Strontium	88-1	694400523	674770257	692470976	687213919	1.57	cps
Sulfur	34-1	48464058	48376794	49432338	48757730	1.20	cps
Terbium	159-1	24473717	24311105	24437578	24407467	0.35	cps
Terbium	159-2	7195244	7153382	7180645	7176424	0.30	cps
Thallium	203-1	918575	926380	935774	926910	0.93	cps
Thallium	205-1	2391068	2388859	2387983	2389303	0.07	cps
Tin	118-1	4184	4377	4161	4241	2.81	cps
Titanium	47-1	3447	3444	3584	3492	2.29	cps
Uranium	238-1	52682	51635	51621	51979	1.17	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-03	Instrumnet Name :	P8
Client Sample ID :	ME2993S	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 12:58:09	DataFile Name :	025AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	1685010	1687189	1669894	1680698	0.56	cps
Ytterbium	172-1	163	197	167	176	10.46	cps
Ytterbium	172-2	87	53	57	66	28.01	cps
Ytterbium	176-1	2494	2564	2347	2468	4.48	cps
Ytterbium	176-2	313	347	303	321	7.07	cps
Yttrium	89-1	32576030	32134113	32207750	32305965	0.73	cps
Yttrium	89-2	2119682	2127854	2133201	2126913	0.32	cps
Zinc	66-2	295129	296804	297950	296628	0.48	cps
Zirconium	90-1	2894	2784	2620	2766	4.97	cps
Zirconium	91-1	877	797	783	819	6.17	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-04	Instrumnet Name :	P8
Client Sample ID :	ME29C1	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:01:25	DataFile Name :	026AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4497	4531	4237	4422	3.63	cps
Antimony	121-1	8826	8756	8750	8777	0.48	cps
Arsenic	75-2	623	623	617	621	0.62	cps
Barium	135-1	726162	713628	715415	718402	0.94	cps
Barium	137-1	1230306	1226444	1235744	1230832	0.38	cps
Beryllium	9-1	791	785	801	792	1.03	cps
Bismuth	209-1	14093482	13879937	13786182	13919867	1.13	cps
Bismuth	209-2	5146624	4998039	5068803	5071155	1.47	cps
Bromine	81-1	5312636	5616732	5663450	5530940	3.44	cps
Cadmium	108-1	187	213	187	196	7.87	cps
Cadmium	106-1	10184	10314	10301	10266	0.70	cps
Cadmium	111-1	7538	7617	7593	7583	0.53	cps
Calcium	43-1	19166493	19069343	18755838	18997225	1.13	cps
Calcium	44-1	303944575	304640989	296935629	301840398	1.41	cps
Carbon	12-1	114078905	122413722	126026488	120839705	5.07	cps
Carbon	12-2	788168	775318	777855	780447	0.87	cps
Chlorine	35-1	62670526	66454129	67548086	65557580	3.90	cps
Chlorine	35-2	261307	257390	258598	259098	0.77	cps
Chromium	52-2	2870	2834	2667	2790	3.88	cps
Cobalt	59-2	98058	96379	96121	96853	1.09	cps
Copper	63-2	20592	20622	20839	20684	0.65	cps
Dysprosium	156-1	1410	1297	1307	1338	4.69	cps
Dysprosium	156-2	443	303	330	359	20.71	cps
Erbium	164-1	1117	1067	1167	1117	4.48	cps
Erbium	164-2	357	320	423	367	14.29	cps
Gadolinium	160-1	1263	1187	1260	1237	3.50	cps
Gadolinium	160-2	460	447	467	458	2.22	cps
Holmium	165-1	23764777	23946840	24238916	23983511	1.00	cps
Holmium	165-2	7446589	7595452	7552006	7531349	1.02	cps
Indium	115-1	18828712	18846248	18768133	18814364	0.22	cps
Indium	115-2	1718849	1687692	1711841	1706127	0.96	cps
Iron	54-2	250173	249088	247330	248863	0.58	cps
Iron	56-2	4887228	4902077	4851126	4880144	0.54	cps
Iron	57-2	116458	114576	115059	115364	0.85	cps
Krypton	83-1	367	320	367	351	7.67	cps
Lead	206-1	15716	15933	16184	15944	1.47	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-04	Instrumnet Name :	P8
Client Sample ID :	ME29C1	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:01:25	DataFile Name :	026AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	13067	12967	13277	13103	1.21	cps
Lead	208-1	60395	61280	62536	61404	1.75	cps
Lithium	6-1	9841534	9909664	9714308	9821835	1.01	cps
Magnesium	24-2	56245326	55510649	55890711	55882229	0.66	cps
Manganese	55-2	4052903	4068228	3985284	4035472	1.09	cps
Molybdenum	94-1	135529	136539	136273	136114	0.38	cps
Molybdenum	95-1	223829	221587	222824	222747	0.50	cps
Molybdenum	96-1	240836	238537	242692	240689	0.86	cps
Molybdenum	97-1	137701	136689	138432	137607	0.64	cps
Molybdenum	98-1	357217	356218	354475	355970	0.39	cps
Neodymium	150-1	1913	1873	1964	1917	2.35	cps
Neodymium	150-2	413	413	463	430	6.71	cps
Nickel	60-2	31134	31234	30533	30967	1.23	cps
Phosphorus	31-2	490	483	473	482	1.74	cps
Potassium	39-2	1375460	1381667	1391557	1382895	0.59	cps
Rhodium	103-1	16835944	16929149	16590083	16785059	1.04	cps
Rhodium	103-2	6161617	6046904	6074331	6094284	0.98	cps
Scandium	45-1	13673261	13624069	13691984	13663105	0.26	cps
Scandium	45-2	237522	235366	232991	235293	0.96	cps
Selenium	82-1	2147	2250	2260	2219	2.83	cps
Selenium	77-2	7	0	7	4	86.60	cps
Selenium	78-2	3	17	23	14	70.51	cps
Silicon	28-1	129588538	130868111	130458838	130305163	0.50	cps
Silver	107-1	2474	2294	2120	2296	7.70	cps
Silver	109-1	2080	1817	1900	1932	6.97	cps
Sodium	23-2	118325715	119053325	117721882	118366974	0.56	cps
Strontium	86-1	26262965	26037698	26753024	26351229	1.39	cps
Strontium	88-1	228203543	223589357	225959997	225917632	1.02	cps
Sulfur	34-1	15246093	15366677	15114700	15242490	0.83	cps
Terbium	159-1	24525811	24719937	23995853	24413867	1.54	cps
Terbium	159-2	7362401	7356817	7190974	7303397	1.33	cps
Thallium	203-1	2754	3164	3334	3084	9.67	cps
Thallium	205-1	6215	7672	7779	7222	12.10	cps
Tin	118-1	4251	4181	4061	4164	2.31	cps
Titanium	47-1	7088	7385	10236	8237	21.10	cps
Uranium	238-1	2901373	2834284	2824957	2853538	1.46	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-04	Instrumnet Name :	P8
Client Sample ID :	ME29C1	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:01:25	DataFile Name :	026AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	1960	1840	1937	1912	3.33	cps
Ytterbium	172-1	437	523	497	486	9.14	cps
Ytterbium	172-2	150	207	157	171	18.10	cps
Ytterbium	176-1	2624	2824	2554	2667	5.26	cps
Ytterbium	176-2	387	373	467	409	12.35	cps
Yttrium	89-1	33392540	33463693	33243908	33366714	0.34	cps
Yttrium	89-2	2183087	2178177	2224254	2195173	1.15	cps
Zinc	66-2	4311	4387	4341	4346	0.89	cps
Zirconium	90-1	22165	22625	21817	22202	1.83	cps
Zirconium	91-1	5018	5018	5091	5042	0.84	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-05	Instrumnet Name :	P8
Client Sample ID :	ME29C2	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:04:37	DataFile Name :	027AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1663	1800	1783	1749	4.26	cps
Antimony	121-1	4241	4357	3927	4175	5.33	cps
Arsenic	75-2	163	140	177	160	11.60	cps
Barium	135-1	467834	470497	465059	467797	0.58	cps
Barium	137-1	814917	817834	809756	814169	0.50	cps
Beryllium	9-1	621	650	635	635	2.26	cps
Bismuth	209-1	14703567	14499814	14453806	14552396	0.91	cps
Bismuth	209-2	5296627	5288092	5214076	5266265	0.86	cps
Bromine	81-1	1719246	1855787	1944700	1839911	6.17	cps
Cadmium	108-1	623	567	607	599	4.86	cps
Cadmium	106-1	10751	10241	11008	10666	3.66	cps
Cadmium	111-1	7836	7345	7984	7722	4.33	cps
Calcium	43-1	6708981	6709204	6664715	6694300	0.38	cps
Calcium	44-1	107734985	106010528	106355535	106700350	0.86	cps
Carbon	12-1	13940739	14455679	14950784	14449067	3.50	cps
Carbon	12-2	100131	99598	99950	99893	0.27	cps
Chlorine	35-1	25950372	27013042	27916681	26960032	3.65	cps
Chlorine	35-2	103299	105420	104332	104350	1.02	cps
Chromium	52-2	1327	1457	1500	1428	6.32	cps
Cobalt	59-2	36577	37823	37603	37334	1.78	cps
Copper	63-2	7996	7725	7942	7888	1.81	cps
Dysprosium	156-1	367	350	327	348	5.78	cps
Dysprosium	156-2	97	90	73	87	13.87	cps
Erbium	164-1	380	343	370	364	5.20	cps
Erbium	164-2	147	113	100	120	20.03	cps
Gadolinium	160-1	407	363	473	414	13.37	cps
Gadolinium	160-2	130	103	177	137	27.16	cps
Holmium	165-1	24916055	24266815	24361712	24514861	1.43	cps
Holmium	165-2	7658347	7484271	7561298	7567972	1.15	cps
Indium	115-1	19633066	19522079	18975473	19376873	1.82	cps
Indium	115-2	1690955	1707396	1687922	1695424	0.62	cps
Iron	54-2	498310	498468	495737	497505	0.31	cps
Iron	56-2	9480491	9537863	9532812	9517055	0.33	cps
Iron	57-2	225310	227490	227185	226662	0.52	cps
Krypton	83-1	300	317	280	299	6.14	cps
Lead	206-1	23628	23725	23672	23675	0.20	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-05	Instrumnet Name :	P8
Client Sample ID :	ME29C2	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:04:37	DataFile Name :	027AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	19451	19014	19114	19193	1.19	cps
Lead	208-1	91406	90360	90259	90675	0.70	cps
Lithium	6-1	10131145	10183459	10038684	10117763	0.72	cps
Magnesium	24-2	34698659	35543588	34642495	34961581	1.44	cps
Manganese	55-2	1691701	1745300	1672855	1703285	2.21	cps
Molybdenum	94-1	697418	699950	700031	699133	0.21	cps
Molybdenum	95-1	1221457	1225088	1221515	1222686	0.17	cps
Molybdenum	96-1	1311406	1309968	1302266	1307880	0.38	cps
Molybdenum	97-1	770897	758163	754247	761102	1.14	cps
Molybdenum	98-1	2194610	2124626	2089553	2136263	2.50	cps
Neodymium	150-1	503	523	470	499	5.40	cps
Neodymium	150-2	103	100	90	98	7.10	cps
Nickel	60-2	16994	17394	17561	17316	1.68	cps
Phosphorus	31-2	233	243	243	240	2.41	cps
Potassium	39-2	1890037	1843733	1859761	1864511	1.26	cps
Rhodium	103-1	17767497	17208413	17523147	17499686	1.60	cps
Rhodium	103-2	6223788	6252247	6236739	6237591	0.23	cps
Scandium	45-1	13799306	13522809	13587411	13636509	1.06	cps
Scandium	45-2	236871	235086	234295	235417	0.56	cps
Selenium	82-1	763	797	840	800	4.81	cps
Selenium	77-2	3	0	3	2	86.60	cps
Selenium	78-2	3	10	23	12	83.33	cps
Silicon	28-1	57454617	57629112	58495236	57859655	0.96	cps
Silver	107-1	670	723	610	668	8.49	cps
Silver	109-1	527	433	553	504	12.49	cps
Sodium	23-2	48740773	49388039	48673846	48934219	0.81	cps
Strontium	86-1	7973145	8068407	7804593	7948715	1.68	cps
Strontium	88-1	69580224	68123256	68066604	68590028	1.25	cps
Sulfur	34-1	9508370	9520512	9596581	9541821	0.50	cps
Terbium	159-1	25024110	25093738	25309823	25142557	0.59	cps
Terbium	159-2	7387347	7203602	7421107	7337352	1.60	cps
Thallium	203-1	2734	2684	2514	2644	4.36	cps
Thallium	205-1	6375	5965	6148	6163	3.33	cps
Tin	118-1	13357	13343	13150	13283	0.87	cps
Titanium	47-1	3057	3087	2834	2993	4.63	cps
Uranium	238-1	208293	208726	208826	208615	0.14	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-05	Instrumnet Name :	P8
Client Sample ID :	ME29C2	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:04:37	DataFile Name :	027AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	337	297	317	317	6.32	cps
Ytterbium	172-1	240	223	283	249	12.44	cps
Ytterbium	172-2	87	83	63	78	16.23	cps
Ytterbium	176-1	2720	2630	2694	2681	1.72	cps
Ytterbium	176-2	367	350	350	356	2.71	cps
Yttrium	89-1	34493457	33816992	33458170	33922873	1.55	cps
Yttrium	89-2	2182022	2173516	2166081	2173873	0.37	cps
Zinc	66-2	1923	2060	1977	1987	3.47	cps
Zirconium	90-1	3524	3294	3390	3403	3.39	cps
Zirconium	91-1	693	770	753	739	5.46	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-06	Instrumnet Name :	P8
Client Sample ID :	ME29C3	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:07:44	DataFile Name :	028AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	433	387	427	416	6.07	cps
Antimony	121-1	3007	2547	2647	2734	8.85	cps
Arsenic	75-2	220	217	223	220	1.52	cps
Barium	135-1	242822	240143	240438	241134	0.61	cps
Barium	137-1	420250	412920	409480	414216	1.33	cps
Beryllium	9-1	639	654	649	647	1.18	cps
Bismuth	209-1	14781237	14267077	14307339	14451884	1.98	cps
Bismuth	209-2	5196415	5137162	5055084	5129554	1.38	cps
Bromine	81-1	265248	268148	267453	266950	0.57	cps
Cadmium	108-1	90	73	70	78	13.78	cps
Cadmium	106-1	10327	10284	10357	10323	0.36	cps
Cadmium	111-1	7723	7674	7678	7692	0.35	cps
Calcium	43-1	12164024	11703291	11850197	11905837	1.98	cps
Calcium	44-1	192158290	189057011	188454304	189889868	1.05	cps
Carbon	12-1	13012148	13639221	13766340	13472570	3.00	cps
Carbon	12-2	90922	91455	91542	91306	0.37	cps
Chlorine	35-1	13370208	14236468	14515136	14040604	4.25	cps
Chlorine	35-2	54679	54616	54616	54637	0.07	cps
Chromium	52-2	1117	1030	1143	1097	5.40	cps
Cobalt	59-2	1397	1410	1450	1419	1.96	cps
Copper	63-2	7582	7842	7555	7660	2.07	cps
Dysprosium	156-1	300	273	257	277	7.90	cps
Dysprosium	156-2	93	93	127	104	18.43	cps
Erbium	164-1	433	400	327	387	14.11	cps
Erbium	164-2	133	107	110	117	12.46	cps
Gadolinium	160-1	370	453	367	397	12.38	cps
Gadolinium	160-2	160	97	147	134	24.83	cps
Holmium	165-1	24031177	23404361	23256239	23563926	1.75	cps
Holmium	165-2	7321038	7358442	7254928	7311469	0.72	cps
Indium	115-1	19024379	18668729	18565273	18752794	1.28	cps
Indium	115-2	1644665	1627276	1502700	1591547	4.87	cps
Iron	54-2	2844	2930	2970	2915	2.22	cps
Iron	56-2	52714	52958	53553	53075	0.81	cps
Iron	57-2	1693	1570	1557	1607	4.69	cps
Krypton	83-1	357	380	367	368	3.18	cps
Lead	206-1	9607	9637	9880	9708	1.55	cps

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-06	Instrumnet Name :	P8
Client Sample ID :	ME29C3	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:07:44	DataFile Name :	028AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	8613	7749	7636	7999	6.68	cps
Lead	208-1	38466	36517	36764	37249	2.85	cps
Lithium	6-1	9845394	9654608	9521529	9673844	1.68	cps
Magnesium	24-2	12221254	12125479	12259869	12202201	0.57	cps
Manganese	55-2	26334	25179	25626	25713	2.27	cps
Molybdenum	94-1	11945	11635	11435	11672	2.20	cps
Molybdenum	95-1	17181	16507	15999	16562	3.58	cps
Molybdenum	96-1	18526	17982	17828	18112	2.02	cps
Molybdenum	97-1	10624	10164	10304	10364	2.28	cps
Molybdenum	98-1	27330	26746	26776	26951	1.22	cps
Neodymium	150-1	437	433	387	419	6.67	cps
Neodymium	150-2	97	77	93	89	12.05	cps
Nickel	60-2	3881	3877	3997	3918	1.74	cps
Phosphorus	31-2	167	173	170	170	1.96	cps
Potassium	39-2	319427	322801	323507	321912	0.68	cps
Rhodium	103-1	17059126	17001758	16803220	16954701	0.79	cps
Rhodium	103-2	6033549	6050859	5820050	5968153	2.15	cps
Scandium	45-1	13314478	13155310	13042653	13170814	1.04	cps
Scandium	45-2	225751	225705	221084	224180	1.20	cps
Selenium	82-1	100	120	100	107	10.83	cps
Selenium	77-2	3	0	0	1	173.21	cps
Selenium	78-2	7	10	13	10	33.30	cps
Silicon	28-1	63382539	61668897	62329464	62460300	1.38	cps
Silver	107-1	563	470	440	491	13.10	cps
Silver	109-1	357	283	327	322	11.44	cps
Sodium	23-2	51620326	51415176	51690854	51575452	0.28	cps
Strontium	86-1	12855894	12553451	12537126	12648824	1.42	cps
Strontium	88-1	112389078	108126688	106990635	109168801	2.61	cps
Sulfur	34-1	5506060	5358853	5414538	5426484	1.37	cps
Terbium	159-1	24766538	24352501	23961148	24360062	1.65	cps
Terbium	159-2	7107834	7231814	7010076	7116575	1.56	cps
Thallium	203-1	1003	857	910	923	8.04	cps
Thallium	205-1	2467	2254	2014	2245	10.11	cps
Tin	118-1	2580	2607	2624	2604	0.84	cps
Titanium	47-1	1730	1813	1737	1760	2.63	cps
Uranium	238-1	462001	450722	446493	453072	1.77	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-06	Instrumnet Name :	P8
Client Sample ID :	ME29C3	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:07:44	DataFile Name :	028AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	1130	1013	1143	1096	6.53	cps
Ytterbium	172-1	267	230	243	247	7.52	cps
Ytterbium	172-2	107	93	113	104	9.75	cps
Ytterbium	176-1	2617	2524	2727	2623	3.88	cps
Ytterbium	176-2	380	353	380	371	4.15	cps
Yttrium	89-1	33718260	32168374	31902460	32596365	3.01	cps
Yttrium	89-2	2101665	2075402	2044340	2073802	1.38	cps
Zinc	66-2	993	977	1013	994	1.85	cps
Zirconium	90-1	5818	6008	7582	6469	14.97	cps
Zirconium	91-1	1300	1250	1257	1269	2.14	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-07	Instrumnet Name :	P8
Client Sample ID :	ME29C4	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:10:57	DataFile Name :	029AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	370	397	387	384	3.50	cps
Antimony	121-1	247	190	163	200	21.28	cps
Arsenic	75-2	37	3	23	21	79.49	cps
Barium	135-1	48597	47439	48346	48127	1.27	cps
Barium	137-1	84498	83600	81094	83064	2.12	cps
Beryllium	9-1	611	604	617	611	1.13	cps
Bismuth	209-1	12955204	12899795	12926688	12927229	0.21	cps
Bismuth	209-2	4841413	4751943	4727264	4773540	1.26	cps
Bromine	81-1	236939	274190	291623	267584	10.44	cps
Cadmium	108-1	33	40	30	34	14.78	cps
Cadmium	106-1	10271	9577	9850	9899	3.53	cps
Cadmium	111-1	7219	6749	6948	6972	3.39	cps
Calcium	43-1	29713805	29435863	28907945	29352538	1.39	cps
Calcium	44-1	470423513	464804593	464761446	466663184	0.70	cps
Carbon	12-1	10177085	10808196	11057011	10680764	4.25	cps
Carbon	12-2	73184	74179	74072	73812	0.74	cps
Chlorine	35-1	53617818	57465644	58014989	56366150	4.25	cps
Chlorine	35-2	225233	226343	227234	226270	0.44	cps
Chromium	52-2	897	900	1003	933	6.50	cps
Cobalt	59-2	217	213	200	210	4.20	cps
Copper	63-2	3661	3734	3664	3686	1.12	cps
Dysprosium	156-1	77	113	110	100	20.28	cps
Dysprosium	156-2	23	33	13	23	42.86	cps
Erbium	164-1	197	180	117	164	25.67	cps
Erbium	164-2	30	37	43	37	18.18	cps
Gadolinium	160-1	167	203	193	188	10.09	cps
Gadolinium	160-2	33	50	43	42	19.87	cps
Holmium	165-1	22580991	22054472	22517501	22384321	1.28	cps
Holmium	165-2	7194359	7129339	7036612	7120103	1.11	cps
Indium	115-1	17494492	17011730	16998916	17168380	1.65	cps
Indium	115-2	1464979	1465490	1458779	1463083	0.26	cps
Iron	54-2	2620	2330	2680	2544	7.36	cps
Iron	56-2	45382	45184	45435	45334	0.29	cps
Iron	57-2	1877	2100	1987	1988	5.62	cps
Krypton	83-1	373	337	290	333	12.53	cps
Lead	206-1	2774	2830	2804	2803	1.01	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-07	Instrumnet Name :	P8
Client Sample ID :	ME29C4	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:10:57	DataFile Name :	029AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2357	2494	2460	2437	2.92	cps
Lead	208-1	10909	11322	11055	11095	1.89	cps
Lithium	6-1	9186959	8853152	9046400	9028837	1.86	cps
Magnesium	24-2	36727941	36415054	35537752	36226916	1.70	cps
Manganese	55-2	34051	34221	33837	34036	0.57	cps
Molybdenum	94-1	1120	1013	1187	1107	7.90	cps
Molybdenum	95-1	430	443	423	432	2.36	cps
Molybdenum	96-1	593	510	623	576	10.20	cps
Molybdenum	97-1	230	303	243	259	15.09	cps
Molybdenum	98-1	573	577	580	577	0.58	cps
Neodymium	150-1	103	100	67	90	22.53	cps
Neodymium	150-2	13	10	20	14	35.26	cps
Nickel	60-2	1030	1123	893	1016	11.39	cps
Phosphorus	31-2	117	110	133	120	10.02	cps
Potassium	39-2	650746	644999	641611	645785	0.72	cps
Rhodium	103-1	15539015	14919086	15361679	15273260	2.09	cps
Rhodium	103-2	5627380	5717011	5625857	5656749	0.92	cps
Scandium	45-1	12548070	12256036	12364019	12389375	1.19	cps
Scandium	45-2	220004	221559	220289	220617	0.38	cps
Selenium	82-1	103	60	317	160	85.87	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	10	7	13	10	33.30	cps
Silicon	28-1	112427685	110872062	111369848	111556532	0.71	cps
Silver	107-1	820	1030	1167	1006	17.37	cps
Silver	109-1	503	713	890	702	27.57	cps
Sodium	23-2	136392625	136285328	132410881	135029611	1.68	cps
Strontium	86-1	97030832	96448465	96219075	96566124	0.43	cps
Strontium	88-1	848473321	825304654	829820788	834532921	1.47	cps
Sulfur	34-1	36575774	36367912	35516765	36153484	1.55	cps
Terbium	159-1	23364227	22507523	22927199	22932983	1.87	cps
Terbium	159-2	6931954	6790947	6794177	6839026	1.18	cps
Thallium	203-1	660	800	877	779	14.11	cps
Thallium	205-1	1687	1783	2107	1859	11.83	cps
Tin	118-1	2360	2237	2267	2288	2.81	cps
Titanium	47-1	2480	2394	2537	2470	2.92	cps
Uranium	238-1	2767	2734	2634	2711	2.56	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-07	Instrumnet Name :	P8
Client Sample ID :	ME29C4	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:10:57	DataFile Name :	029AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	293	257	260	270	7.51	cps
Ytterbium	172-1	157	130	160	149	11.04	cps
Ytterbium	172-2	33	73	47	51	39.85	cps
Ytterbium	176-1	2460	2337	2484	2427	3.25	cps
Ytterbium	176-2	287	320	313	307	5.75	cps
Yttrium	89-1	30843961	30677204	30627861	30716342	0.37	cps
Yttrium	89-2	2044459	2035165	2019615	2033080	0.62	cps
Zinc	66-2	387	287	330	334	15.00	cps
Zirconium	90-1	2617	2417	2574	2536	4.15	cps
Zirconium	91-1	523	513	517	518	0.98	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166703BL	Instrumnet Name :	P8
Client Sample ID :	PBW703	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:14:15	DataFile Name :	030CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	97	77	73	82	15.35	cps
Antimony	121-1	127	83	107	106	20.55	cps
Arsenic	75-2	0	10	3	4	114.60	cps
Barium	135-1	310	297	367	324	11.46	cps
Barium	137-1	413	450	493	452	8.86	cps
Beryllium	9-1	600	557	569	575	3.83	cps
Bismuth	209-1	14438346	14102042	14272725	14271038	1.18	cps
Bismuth	209-2	5193734	5180843	5181335	5185304	0.14	cps
Bromine	81-1	68540	59807	53488	60612	12.47	cps
Cadmium	108-1	23	33	43	33	30.00	cps
Cadmium	106-1	10164	9954	10047	10055	1.05	cps
Cadmium	111-1	7142	6984	7029	7052	1.15	cps
Calcium	43-1	2050	1773	1600	1808	12.56	cps
Calcium	44-1	49129	45498	43958	46195	5.75	cps
Carbon	12-1	5620396	5224455	5054857	5299903	5.48	cps
Carbon	12-2	30585	30335	29516	30145	1.85	cps
Chlorine	35-1	3938981	3500556	3142101	3527213	11.32	cps
Chlorine	35-2	9583	8960	8533	9025	5.85	cps
Chromium	52-2	2247	2547	2434	2409	6.29	cps
Cobalt	59-2	160	150	157	156	3.27	cps
Copper	63-2	3647	3590	3334	3524	4.74	cps
Dysprosium	156-1	17	20	23	20	16.65	cps
Dysprosium	156-2	0	3	17	7	132.33	cps
Erbium	164-1	103	97	97	99	3.89	cps
Erbium	164-2	33	37	33	34	5.60	cps
Gadolinium	160-1	117	103	177	132	29.55	cps
Gadolinium	160-2	20	13	20	18	21.66	cps
Holmium	165-1	22377073	22189041	22339826	22301980	0.45	cps
Holmium	165-2	7015092	7044037	6983062	7014064	0.43	cps
Indium	115-1	18308009	18401901	18025346	18245085	1.07	cps
Indium	115-2	1478379	1486336	1476508	1480408	0.35	cps
Iron	54-2	853	883	887	874	2.10	cps
Iron	56-2	12906	12919	12726	12850	0.84	cps
Iron	57-2	347	310	360	339	7.64	cps
Krypton	83-1	330	337	313	327	3.68	cps
Lead	206-1	2357	2290	2370	2339	1.83	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166703BL	Instrumnet Name :	P8
Client Sample ID :	PBW703	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:14:15	DataFile Name :	030CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1980	2010	1974	1988	0.98	cps
Lead	208-1	9245	9051	9071	9122	1.17	cps
Lithium	6-1	9209141	9628931	9440816	9426296	2.23	cps
Magnesium	24-2	5358	5191	4904	5151	4.45	cps
Manganese	55-2	317	287	273	292	7.60	cps
Molybdenum	94-1	720	693	783	732	6.31	cps
Molybdenum	95-1	747	747	817	770	5.25	cps
Molybdenum	96-1	900	820	920	880	6.01	cps
Molybdenum	97-1	453	440	463	452	2.59	cps
Molybdenum	98-1	1187	1140	1203	1177	2.79	cps
Neodymium	150-1	20	10	20	17	34.64	cps
Neodymium	150-2	0	0	3	1	173.21	cps
Nickel	60-2	1370	1560	1483	1471	6.50	cps
Phosphorus	31-2	77	57	67	67	15.00	cps
Potassium	39-2	11258	11101	11241	11200	0.77	cps
Rhodium	103-1	16776109	16857686	16694914	16776236	0.49	cps
Rhodium	103-2	6115200	6049197	6087126	6083841	0.54	cps
Scandium	45-1	12439638	12377295	12184234	12333723	1.08	cps
Scandium	45-2	211911	211165	210313	211130	0.38	cps
Selenium	82-1	60	23	7	30	90.93	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	10	10	10	10	0.00	cps
Silicon	28-1	703136	694576	679108	692273	1.76	cps
Silver	107-1	533	503	403	480	14.18	cps
Silver	109-1	343	317	373	344	8.23	cps
Sodium	23-2	67003	68001	66012	67005	1.48	cps
Strontium	86-1	5435	4207	3567	4403	21.55	cps
Strontium	88-1	45485	33221	31224	36643	21.07	cps
Sulfur	34-1	983335	991922	974564	983274	0.88	cps
Terbium	159-1	23582470	23211897	23428254	23407540	0.80	cps
Terbium	159-2	6862828	6772443	6812024	6815765	0.66	cps
Thallium	203-1	783	727	880	797	9.73	cps
Thallium	205-1	1947	1870	1677	1831	7.60	cps
Tin	118-1	2777	2587	2617	2660	3.84	cps
Titanium	47-1	297	300	320	306	4.13	cps
Uranium	238-1	60	67	53	60	11.12	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166703BL	Instrumnet Name :	P8
Client Sample ID :	PBW703	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:14:15	DataFile Name :	030CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	7	20	23	17	52.90	cps
Ytterbium	172-1	147	100	140	129	19.58	cps
Ytterbium	172-2	63	50	57	57	11.76	cps
Ytterbium	176-1	2494	2384	2440	2439	2.26	cps
Ytterbium	176-2	300	347	317	321	7.36	cps
Yttrium	89-1	30963876	31080009	30738667	30927517	0.56	cps
Yttrium	89-2	1952218	1998737	1984916	1978624	1.21	cps
Zinc	66-2	220	233	237	230	3.84	cps
Zirconium	90-1	880	1100	903	961	12.57	cps
Zirconium	91-1	183	167	180	177	4.99	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166703BS	Instrumnet Name :	P8
Client Sample ID :	LCS703	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:17:35	DataFile Name :	031LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3350	3147	3234	3244	3.15	cps
Antimony	121-1	78329	78366	78192	78296	0.12	cps
Arsenic	75-2	787	820	717	774	6.81	cps
Barium	135-1	94258	94386	94191	94278	0.11	cps
Barium	137-1	162482	162418	163390	162764	0.33	cps
Beryllium	9-1	15111	15497	14996	15201	1.73	cps
Bismuth	209-1	14283182	14163471	14048353	14165002	0.83	cps
Bismuth	209-2	5166236	5079841	5085242	5110440	0.95	cps
Bromine	81-1	27711	26271	25129	26370	4.91	cps
Cadmium	108-1	750	967	830	849	12.91	cps
Cadmium	106-1	10928	10851	11295	11024	2.15	cps
Cadmium	111-1	16965	17453	17052	17157	1.52	cps
Calcium	43-1	66690	66727	66064	66494	0.56	cps
Calcium	44-1	1081890	1073600	1077253	1077581	0.39	cps
Carbon	12-1	5123715	4818265	4701659	4881213	4.47	cps
Carbon	12-2	29035	28888	28271	28731	1.41	cps
Chlorine	35-1	3629172	3704999	3663881	3666017	1.04	cps
Chlorine	35-2	13370	13376	13403	13383	0.13	cps
Chromium	52-2	17054	17411	18005	17490	2.75	cps
Cobalt	59-2	15609	15742	15198	15516	1.83	cps
Copper	63-2	29066	28936	29070	29024	0.26	cps
Dysprosium	156-1	20	20	30	23	24.74	cps
Dysprosium	156-2	3	0	13	6	124.93	cps
Erbium	164-1	80	120	73	91	27.70	cps
Erbium	164-2	30	23	23	26	15.07	cps
Gadolinium	160-1	110	117	110	112	3.43	cps
Gadolinium	160-2	17	20	17	18	10.81	cps
Holmium	165-1	22829943	22380911	22290477	22500444	1.28	cps
Holmium	165-2	7035503	7065187	6979054	7026581	0.62	cps
Indium	115-1	17775068	18043639	17844671	17887793	0.78	cps
Indium	115-2	1461302	1459039	1457082	1459141	0.14	cps
Iron	54-2	65432	65888	65566	65629	0.36	cps
Iron	56-2	1200238	1202366	1199799	1200801	0.11	cps
Iron	57-2	29470	29795	30349	29871	1.49	cps
Krypton	83-1	307	303	257	289	9.68	cps
Lead	206-1	32949	34506	33173	33542	2.51	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166703BS	Instrumnet Name :	P8
Client Sample ID :	LCS703	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:17:35	DataFile Name :	031LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	28899	28986	29804	29230	1.71	cps
Lead	208-1	132057	134506	132978	133180	0.93	cps
Lithium	6-1	9312599	9360551	9363702	9345617	0.31	cps
Magnesium	24-2	278711	277418	281033	279054	0.66	cps
Manganese	55-2	3500	3630	3370	3500	3.71	cps
Molybdenum	94-1	79013	78966	79633	79204	0.47	cps
Molybdenum	95-1	97338	97113	97159	97203	0.12	cps
Molybdenum	96-1	106574	106890	106897	106787	0.17	cps
Molybdenum	97-1	60333	60779	59741	60284	0.86	cps
Molybdenum	98-1	156009	155601	155223	155611	0.25	cps
Neodymium	150-1	50	30	30	37	31.49	cps
Neodymium	150-2	3	3	7	4	43.40	cps
Nickel	60-2	5321	5471	5414	5402	1.40	cps
Phosphorus	31-2	263	293	247	268	8.83	cps
Potassium	39-2	159494	157836	158345	158558	0.54	cps
Rhodium	103-1	16812240	16402372	16586694	16600435	1.24	cps
Rhodium	103-2	5942167	5918994	5975283	5945481	0.48	cps
Scandium	45-1	12400650	12085682	12115619	12200650	1.42	cps
Scandium	45-2	210415	207411	207023	208283	0.89	cps
Selenium	82-1	3180	3207	3097	3162	1.82	cps
Selenium	77-2	37	40	57	44	24.11	cps
Selenium	78-2	167	153	170	163	5.40	cps
Silicon	28-1	928745	906862	979572	938393	3.98	cps
Silver	107-1	47886	48916	49485	48763	1.66	cps
Silver	109-1	46107	46127	46100	46111	0.03	cps
Sodium	23-2	627064	626391	625526	626327	0.12	cps
Strontium	86-1	14187	13653	13650	13830	2.24	cps
Strontium	88-1	117306	115150	114970	115808	1.12	cps
Sulfur	34-1	948647	938384	926067	937699	1.21	cps
Terbium	159-1	23198043	23274526	23175650	23216073	0.22	cps
Terbium	159-2	6797736	6746384	6707861	6750660	0.67	cps
Thallium	203-1	39269	39105	38798	39057	0.61	cps
Thallium	205-1	93239	94572	92987	93599	0.91	cps
Tin	118-1	160866	160508	162767	161381	0.75	cps
Titanium	47-1	7422	7792	7502	7572	2.57	cps
Uranium	238-1	116760	116688	117119	116856	0.20	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	PB166703BS	Instrumnet Name :	P8
Client Sample ID :	LCS703	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:17:35	DataFile Name :	031LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	31191	31040	31622	31284	0.96	cps
Ytterbium	172-1	97	120	110	109	10.75	cps
Ytterbium	172-2	43	50	40	44	11.46	cps
Ytterbium	176-1	2750	2720	2464	2645	5.96	cps
Ytterbium	176-2	377	360	400	379	5.30	cps
Yttrium	89-1	30985423	30968003	30287741	30747056	1.29	cps
Yttrium	89-2	1941386	1957588	1919502	1939492	0.99	cps
Zinc	66-2	6588	6301	6325	6405	2.49	cps
Zirconium	90-1	68125	67898	67328	67784	0.61	cps
Zirconium	91-1	15646	14735	14875	15085	3.25	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-01	Instrumnet Name :	P8
Client Sample ID :	ME29C5	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:20:56	DataFile Name :	032AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	89702	89588	90824	90038	0.76	cps
Antimony	121-1	1417	1347	1307	1357	4.10	cps
Arsenic	75-2	757	860	670	762	12.48	cps
Barium	135-1	140941	139719	138730	139797	0.79	cps
Barium	137-1	241265	242739	240552	241519	0.46	cps
Beryllium	9-1	1116	1150	1104	1123	2.13	cps
Bismuth	209-1	12519164	12287364	12095944	12300824	1.72	cps
Bismuth	209-2	4479452	4480773	4452507	4470911	0.36	cps
Bromine	81-1	193506	237810	263068	231461	15.21	cps
Cadmium	108-1	127	173	177	159	17.59	cps
Cadmium	106-1	9563	9593	9360	9506	1.34	cps
Cadmium	111-1	7342	7237	7142	7240	1.39	cps
Calcium	43-1	28583240	28437198	28120090	28380176	0.83	cps
Calcium	44-1	451894620	456910167	445705193	451503327	1.24	cps
Carbon	12-1	14177345	15077565	15628485	14961132	4.90	cps
Carbon	12-2	103588	104434	103615	103879	0.46	cps
Chlorine	35-1	115435095	122218488	124395578	120683054	3.87	cps
Chlorine	35-2	473090	479050	482747	478296	1.02	cps
Chromium	52-2	11164	10781	11041	10995	1.78	cps
Cobalt	59-2	6902	6495	6855	6751	3.30	cps
Copper	63-2	17454	17297	17634	17462	0.97	cps
Dysprosium	156-1	8633	8913	8693	8746	1.69	cps
Dysprosium	156-2	2460	2454	2524	2479	1.56	cps
Erbium	164-1	6745	6959	6922	6875	1.66	cps
Erbium	164-2	2090	1933	2180	2068	6.04	cps
Gadolinium	160-1	8186	7832	8043	8020	2.22	cps
Gadolinium	160-2	2874	2824	2917	2871	1.63	cps
Holmium	165-1	21726914	21424589	21374799	21508767	0.89	cps
Holmium	165-2	6731091	6700022	6792214	6741109	0.70	cps
Indium	115-1	16617626	16032214	16383767	16344535	1.80	cps
Indium	115-2	1363228	1366418	1378442	1369362	0.59	cps
Iron	54-2	799663	798018	803577	800419	0.36	cps
Iron	56-2	15497633	15620295	15661607	15593178	0.55	cps
Iron	57-2	370650	367499	369062	369070	0.43	cps
Krypton	83-1	410	417	407	411	1.24	cps
Lead	206-1	26841	27389	26207	26812	2.21	cps

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-01	Instrumnet Name :	P8
Client Sample ID :	ME29C5	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:20:56	DataFile Name :	032AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	21344	21655	21194	21398	1.10	cps
Lead	208-1	100812	102216	100131	101053	1.05	cps
Lithium	6-1	8616573	8466915	8485352	8522947	0.96	cps
Magnesium	24-2	39888689	39596786	39140104	39541860	0.95	cps
Manganese	55-2	126776	128495	127974	127748	0.69	cps
Molybdenum	94-1	42858	36000	35095	37984	11.18	cps
Molybdenum	95-1	37200	37617	36217	37011	1.94	cps
Molybdenum	96-1	42853	42408	41535	42265	1.59	cps
Molybdenum	97-1	22572	22996	22779	22782	0.93	cps
Molybdenum	98-1	59420	59209	59851	59493	0.55	cps
Neodymium	150-1	12933	12423	12536	12630	2.12	cps
Neodymium	150-2	2544	2680	2667	2630	2.87	cps
Nickel	60-2	8022	8129	8182	8111	1.00	cps
Phosphorus	31-2	477	540	583	533	10.06	cps
Potassium	39-2	821535	821532	829272	824113	0.54	cps
Rhodium	103-1	14350305	14453606	14421733	14408548	0.37	cps
Rhodium	103-2	5308286	5223082	5277761	5269710	0.82	cps
Scandium	45-1	11859794	11665385	11611323	11712167	1.12	cps
Scandium	45-2	206616	206440	207103	206720	0.17	cps
Selenium	82-1	160	77	137	124	34.55	cps
Selenium	77-2	13	13	10	12	15.73	cps
Selenium	78-2	23	20	43	29	43.68	cps
Silicon	28-1	147786511	151883914	149661264	149777230	1.37	cps
Silver	107-1	2130	1890	1757	1926	9.83	cps
Silver	109-1	1637	1373	1267	1426	13.36	cps
Sodium	23-2	273228343	267843183	270326496	270466007	1.00	cps
Strontium	86-1	139455105	138572485	138679931	138902507	0.35	cps
Strontium	88-1	1196867822	1193565556	1184083609	1191505662	0.56	cps
Sulfur	34-1	22640096	22668032	22674735	22660954	0.08	cps
Terbium	159-1	22776663	21933321	21569440	22093141	2.80	cps
Terbium	159-2	6587603	6424352	6521598	6511185	1.26	cps
Thallium	203-1	1950	2180	2110	2080	5.67	cps
Thallium	205-1	4511	5011	5014	4845	5.98	cps
Tin	118-1	4848	4351	4561	4586	5.44	cps
Titanium	47-1	99370	121943	123089	114801	11.65	cps
Uranium	238-1	38241	38689	38265	38398	0.66	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-01	Instrumnet Name :	P8
Client Sample ID :	ME29C5	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:20:56	DataFile Name :	032AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	10574	10767	10954	10765	1.77	cps
Ytterbium	172-1	1970	1970	1970	1970	0.00	cps
Ytterbium	172-2	697	787	780	754	6.65	cps
Ytterbium	176-1	3507	3674	3354	3512	4.56	cps
Ytterbium	176-2	783	777	777	779	0.49	cps
Yttrium	89-1	29828934	29520124	28874235	29407764	1.66	cps
Yttrium	89-2	1919581	1950015	1941699	1937098	0.81	cps
Zinc	66-2	5144	5151	5191	5162	0.49	cps
Zirconium	90-1	45202	40027	43566	42932	6.16	cps
Zirconium	91-1	9083	8973	9244	9100	1.50	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-02	Instrumnet Name :	P8
Client Sample ID :	ME29C7	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:24:13	DataFile Name :	033AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	15962	16399	16590	16317	1.97	cps
Antimony	121-1	9387	9553	9547	9496	0.99	cps
Arsenic	75-2	450	530	470	483	8.61	cps
Barium	135-1	900395	909512	893128	901011	0.91	cps
Barium	137-1	1686723	1678296	1652598	1672539	1.06	cps
Beryllium	9-1	615	616	624	618	0.77	cps
Bismuth	209-1	13889924	13759406	13704779	13784703	0.69	cps
Bismuth	209-2	4977638	4980614	4944582	4967611	0.40	cps
Bromine	81-1	147581	164047	175042	162223	8.52	cps
Cadmium	108-1	237	263	257	252	5.50	cps
Cadmium	106-1	10357	10281	10174	10271	0.90	cps
Cadmium	111-1	8601	8849	8639	8696	1.53	cps
Calcium	43-1	19386271	19684370	19254075	19441572	1.13	cps
Calcium	44-1	308129749	311190735	310202169	309840884	0.50	cps
Carbon	12-1	20102199	21155714	21641756	20966557	3.75	cps
Carbon	12-2	141046	139699	141551	140765	0.68	cps
Chlorine	35-1	21117341	21973896	22156551	21749263	2.55	cps
Chlorine	35-2	82765	82198	81823	82262	0.58	cps
Chromium	52-2	4094	3904	4054	4017	2.49	cps
Cobalt	59-2	11608	11285	11525	11472	1.46	cps
Copper	63-2	11935	11965	12145	12015	0.95	cps
Dysprosium	156-1	1100	1147	1130	1126	2.10	cps
Dysprosium	156-2	253	277	323	284	12.53	cps
Erbium	164-1	1033	967	897	966	7.08	cps
Erbium	164-2	240	247	290	259	10.49	cps
Gadolinium	160-1	1167	1070	1160	1132	4.77	cps
Gadolinium	160-2	320	357	487	388	22.59	cps
Holmium	165-1	22497665	22823111	22658460	22659745	0.72	cps
Holmium	165-2	7192955	7138132	7172526	7167871	0.39	cps
Indium	115-1	17653017	17905174	17824436	17794209	0.72	cps
Indium	115-2	1481372	1486194	1487568	1485045	0.22	cps
Iron	54-2	178466	178473	179455	178798	0.32	cps
Iron	56-2	3499786	3468845	3462966	3477199	0.57	cps
Iron	57-2	82185	81618	82463	82089	0.52	cps
Krypton	83-1	363	263	300	309	16.38	cps
Lead	206-1	14195	13877	14148	14073	1.22	cps

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-02	Instrumnet Name :	P8
Client Sample ID :	ME29C7	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:24:13	DataFile Name :	033AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	11879	11672	11138	11563	3.31	cps
Lead	208-1	53703	54027	52682	53471	1.31	cps
Lithium	6-1	9435338	9329021	9409651	9391337	0.59	cps
Magnesium	24-2	16558219	16829102	16556397	16647906	0.94	cps
Manganese	55-2	431663	432545	431629	431946	0.12	cps
Molybdenum	94-1	160939	159793	158309	159681	0.83	cps
Molybdenum	95-1	270377	269333	270431	270047	0.23	cps
Molybdenum	96-1	289265	292643	288245	290051	0.79	cps
Molybdenum	97-1	166747	166822	165945	166505	0.29	cps
Molybdenum	98-1	435619	435219	428274	433037	0.95	cps
Neodymium	150-1	1427	1603	1473	1501	6.10	cps
Neodymium	150-2	323	360	343	342	5.36	cps
Nickel	60-2	11495	11475	11618	11529	0.67	cps
Phosphorus	31-2	380	300	343	341	11.74	cps
Potassium	39-2	324787	325105	327224	325705	0.41	cps
Rhodium	103-1	16190765	16039132	15885988	16038628	0.95	cps
Rhodium	103-2	5919466	5814345	5771900	5835237	1.30	cps
Scandium	45-1	12654902	12548884	12247109	12483632	1.69	cps
Scandium	45-2	219423	219974	218397	219265	0.36	cps
Selenium	82-1	523	587	660	590	11.59	cps
Selenium	77-2	0	7	10	6	91.64	cps
Selenium	78-2	27	23	50	33	43.59	cps
Silicon	28-1	76725051	77040402	75422877	76396110	1.12	cps
Silver	107-1	673	583	657	638	7.51	cps
Silver	109-1	397	407	387	397	2.52	cps
Sodium	23-2	55797064	56938442	55681013	56138840	1.24	cps
Strontium	86-1	42049291	42328466	41840497	42072751	0.58	cps
Strontium	88-1	364012235	364731075	359518475	362753928	0.78	cps
Sulfur	34-1	12670086	12812659	12723227	12735324	0.57	cps
Terbium	159-1	23596830	23458171	23361253	23472085	0.50	cps
Terbium	159-2	7013397	6886186	6862445	6920676	1.17	cps
Thallium	203-1	920	847	907	891	4.38	cps
Thallium	205-1	2237	2340	2067	2215	6.23	cps
Tin	118-1	2397	2444	2637	2492	5.11	cps
Titanium	47-1	15943	15335	16303	15860	3.08	cps
Uranium	238-1	1754914	1770399	1756620	1760644	0.48	cps

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-02	Instrumnet Name :	P8
Client Sample ID :	ME29C7	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:24:13	DataFile Name :	033AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	2100	2124	2174	2132	1.76	cps
Ytterbium	172-1	423	380	373	392	6.92	cps
Ytterbium	172-2	153	143	133	143	6.98	cps
Ytterbium	176-1	2557	2747	2637	2647	3.60	cps
Ytterbium	176-2	323	410	387	373	12.01	cps
Yttrium	89-1	31811440	31029103	31168870	31336471	1.33	cps
Yttrium	89-2	2043442	2049284	2041675	2044800	0.19	cps
Zinc	66-2	8059	8269	7739	8022	3.33	cps
Zirconium	90-1	19040	19284	18409	18911	2.39	cps
Zirconium	91-1	4381	4264	4011	4218	4.49	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-03	Instrumnet Name :	P8
Client Sample ID :	ME29C6	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:27:28	DataFile Name :	034AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1023	830	1010	954	11.31	cps
Antimony	121-1	210	297	263	257	17.03	cps
Arsenic	75-2	147	123	157	142	12.03	cps
Barium	135-1	182394	178359	179104	179952	1.19	cps
Barium	137-1	312975	308965	310820	310920	0.65	cps
Beryllium	9-1	600	566	535	567	5.73	cps
Bismuth	209-1	13759249	13752409	13749634	13753764	0.04	cps
Bismuth	209-2	4917932	4997921	5006535	4974129	0.98	cps
Bromine	81-1	194180	227403	245854	222479	11.77	cps
Cadmium	108-1	73	50	80	68	23.24	cps
Cadmium	106-1	10464	9960	9737	10054	3.71	cps
Cadmium	111-1	7574	7261	7063	7299	3.53	cps
Calcium	43-1	15624024	15203494	15169396	15332304	1.65	cps
Calcium	44-1	244249110	238193723	241832103	241424979	1.26	cps
Carbon	12-1	12982191	13994259	14373374	13783275	5.22	cps
Carbon	12-2	94380	94169	94014	94188	0.19	cps
Chlorine	35-1	14448869	15128594	15690124	15089195	4.12	cps
Chlorine	35-2	59231	58481	58698	58803	0.66	cps
Chromium	52-2	2280	2217	2114	2204	3.82	cps
Cobalt	59-2	407	430	410	416	3.04	cps
Copper	63-2	3587	3854	3817	3753	3.85	cps
Dysprosium	156-1	193	187	143	174	15.56	cps
Dysprosium	156-2	77	67	53	66	17.86	cps
Erbium	164-1	247	340	267	284	17.28	cps
Erbium	164-2	73	100	70	81	20.27	cps
Gadolinium	160-1	290	297	250	279	9.05	cps
Gadolinium	160-2	80	70	87	79	10.64	cps
Holmium	165-1	23117905	22614986	22605051	22779314	1.29	cps
Holmium	165-2	7208915	7099840	6986978	7098578	1.56	cps
Indium	115-1	18203835	17889340	17759574	17950916	1.27	cps
Indium	115-2	1477776	1471799	1461739	1470438	0.55	cps
Iron	54-2	27239	27142	26465	26949	1.57	cps
Iron	56-2	495227	497269	494669	495722	0.28	cps
Iron	57-2	12779	12729	12796	12768	0.27	cps
Krypton	83-1	280	327	337	314	9.62	cps
Lead	206-1	5184	5411	5291	5296	2.14	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-03	Instrumnet Name :	P8
Client Sample ID :	ME29C6	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:27:28	DataFile Name :	034AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	4588	4457	4244	4430	3.91	cps
Lead	208-1	20650	20500	20126	20425	1.32	cps
Lithium	6-1	9392530	9165237	9156170	9237979	1.45	cps
Magnesium	24-2	19750647	19576188	19271368	19532734	1.24	cps
Manganese	55-2	68188	68808	66490	67829	1.77	cps
Molybdenum	94-1	3197	2980	3074	3084	3.53	cps
Molybdenum	95-1	1270	1203	1253	1242	2.79	cps
Molybdenum	96-1	1733	1760	1760	1751	0.88	cps
Molybdenum	97-1	800	770	823	798	3.35	cps
Molybdenum	98-1	1863	1870	1994	1909	3.84	cps
Neodymium	150-1	173	253	233	220	18.92	cps
Neodymium	150-2	50	57	50	52	7.37	cps
Nickel	60-2	1710	1667	1707	1695	1.42	cps
Phosphorus	31-2	207	257	183	216	17.38	cps
Potassium	39-2	494230	499096	491050	494792	0.82	cps
Rhodium	103-1	16029017	15927541	15998899	15985153	0.33	cps
Rhodium	103-2	5882850	5723715	5705284	5770617	1.69	cps
Scandium	45-1	12552070	12589991	12354686	12498916	1.01	cps
Scandium	45-2	214192	215285	215600	215025	0.34	cps
Selenium	82-1	127	90	107	108	17.03	cps
Selenium	77-2	3	0	0	1	173.21	cps
Selenium	78-2	27	3	10	13	90.16	cps
Silicon	28-1	106709145	103393558	104435462	104846055	1.62	cps
Silver	107-1	637	530	560	576	9.56	cps
Silver	109-1	247	203	293	248	18.17	cps
Sodium	23-2	48340286	48470543	47840974	48217268	0.69	cps
Strontium	86-1	109490282	108825378	106763002	108359554	1.31	cps
Strontium	88-1	938549533	939315586	921173746	933012955	1.10	cps
Sulfur	34-1	15359706	15084986	15066276	15170323	1.08	cps
Terbium	159-1	23552152	23086257	22784769	23141059	1.67	cps
Terbium	159-2	6924983	6843868	6811039	6859963	0.85	cps
Thallium	203-1	557	507	457	507	9.87	cps
Thallium	205-1	1167	1130	1197	1165	2.87	cps
Tin	118-1	2704	2800	2834	2779	2.43	cps
Titanium	47-1	2824	2700	2717	2747	2.44	cps
Uranium	238-1	10458	10344	10598	10467	1.21	cps

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-03	Instrumnet Name :	P8
Client Sample ID :	ME29C6	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:27:28	DataFile Name :	034AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	653	630	667	650	2.86	cps
Ytterbium	172-1	200	223	207	210	5.72	cps
Ytterbium	172-2	70	53	67	63	13.93	cps
Ytterbium	176-1	2434	2417	2414	2421	0.44	cps
Ytterbium	176-2	303	293	320	306	4.41	cps
Yttrium	89-1	31050255	31194923	30569510	30938229	1.06	cps
Yttrium	89-2	2041806	2000360	1993646	2011938	1.30	cps
Zinc	66-2	873	857	787	839	5.48	cps
Zirconium	90-1	7082	6892	6885	6953	1.61	cps
Zirconium	91-1	1523	1440	1483	1482	2.81	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-04	Instrumnet Name :	P8
Client Sample ID :	ME29C9	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:30:44	DataFile Name :	035AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	395911	397259	398292	397154	0.30	cps
Antimony	121-1	14518	15085	14625	14742	2.04	cps
Arsenic	75-2	1980	1927	1940	1949	1.42	cps
Barium	135-1	582456	580742	581180	581460	0.15	cps
Barium	137-1	1010004	1007198	1009262	1008821	0.14	cps
Beryllium	9-1	2435	2369	2314	2372	2.56	cps
Bismuth	209-1	13157060	13279331	13272667	13236353	0.52	cps
Bismuth	209-2	4735819	4797594	4707848	4747087	0.97	cps
Bromine	81-1	426380	488550	525393	480108	10.42	cps
Cadmium	108-1	513	487	493	498	2.79	cps
Cadmium	106-1	10587	10274	10354	10405	1.57	cps
Cadmium	111-1	8872	8708	8846	8809	1.00	cps
Calcium	43-1	30797670	30865107	30539001	30733926	0.56	cps
Calcium	44-1	491383833	492698206	484657899	489579979	0.88	cps
Carbon	12-1	17836137	19025096	19542245	18801159	4.65	cps
Carbon	12-2	129706	130748	128822	129759	0.74	cps
Chlorine	35-1	10669527	11514479	11901886	11361964	5.55	cps
Chlorine	35-2	44652	45277	44241	44723	1.17	cps
Chromium	52-2	46214	46773	46144	46377	0.74	cps
Cobalt	59-2	136611	136685	136382	136559	0.12	cps
Copper	63-2	70923	71211	71013	71049	0.21	cps
Dysprosium	156-1	24095	24155	24159	24136	0.15	cps
Dysprosium	156-2	7052	7269	7239	7186	1.63	cps
Erbium	164-1	19798	19678	19404	19627	1.03	cps
Erbium	164-2	5711	5685	5965	5787	2.67	cps
Gadolinium	160-1	22352	22629	22516	22499	0.62	cps
Gadolinium	160-2	8309	8379	8109	8266	1.70	cps
Holmium	165-1	22836740	22538695	22545876	22640437	0.75	cps
Holmium	165-2	7090826	7022554	7020615	7044665	0.57	cps
Indium	115-1	17439054	17681962	16978823	17366613	2.06	cps
Indium	115-2	1426091	1433482	1427312	1428962	0.28	cps
Iron	54-2	1672844	1672557	1652375	1665925	0.70	cps
Iron	56-2	30763215	30811044	30575087	30716448	0.41	cps
Iron	57-2	723332	728080	721609	724340	0.46	cps
Krypton	83-1	357	287	307	317	11.39	cps
Lead	206-1	83651	83758	82802	83404	0.63	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-04	Instrumnet Name :	P8
Client Sample ID :	ME29C9	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:30:44	DataFile Name :	035AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	66717	67082	66635	66812	0.36	cps
Lead	208-1	316308	317640	314760	316236	0.46	cps
Lithium	6-1	9226794	8919686	8981577	9042686	1.80	cps
Magnesium	24-2	56395162	56282297	55545888	56074449	0.82	cps
Manganese	55-2	5321069	5253956	5268918	5281315	0.67	cps
Molybdenum	94-1	193493	191536	195315	193448	0.98	cps
Molybdenum	95-1	226472	227857	229521	227950	0.67	cps
Molybdenum	96-1	253733	257400	252152	254428	1.06	cps
Molybdenum	97-1	140317	139331	141479	140376	0.77	cps
Molybdenum	98-1	362921	367297	363376	364531	0.66	cps
Neodymium	150-1	33980	33853	34010	33947	0.25	cps
Neodymium	150-2	7319	6965	7299	7194	2.76	cps
Nickel	60-2	66464	66314	66123	66300	0.26	cps
Phosphorus	31-2	1190	1280	1337	1269	5.83	cps
Potassium	39-2	2123895	2136791	2169456	2143381	1.10	cps
Rhodium	103-1	15396611	15527736	15381874	15435407	0.52	cps
Rhodium	103-2	5603051	5510443	5570828	5561440	0.85	cps
Scandium	45-1	12343163	12605683	12592869	12513905	1.18	cps
Scandium	45-2	215082	214425	214766	214758	0.15	cps
Selenium	82-1	607	690	627	641	6.79	cps
Selenium	77-2	40	43	47	43	7.70	cps
Selenium	78-2	63	33	33	43	39.97	cps
Silicon	28-1	245600536	241252470	238714496	241855834	1.44	cps
Silver	107-1	1250	1257	1377	1295	5.51	cps
Silver	109-1	860	1020	1153	1011	14.53	cps
Sodium	23-2	35396146	35968762	34740475	35368461	1.74	cps
Strontium	86-1	72772392	74059686	73002464	73278181	0.94	cps
Strontium	88-1	637230964	634984191	631888604	634701253	0.42	cps
Sulfur	34-1	48814504	49643069	48874318	49110630	0.94	cps
Terbium	159-1	23198769	23118695	22880362	23065942	0.72	cps
Terbium	159-2	6791257	6791604	6773520	6785460	0.15	cps
Thallium	203-1	4374	4374	4227	4325	1.96	cps
Thallium	205-1	10221	10041	10107	10123	0.90	cps
Tin	118-1	16347	16029	15549	15975	2.51	cps
Titanium	47-1	359938	354656	339715	351436	2.98	cps
Uranium	238-1	1363395	1371664	1354178	1363079	0.64	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-04	Instrumnet Name :	P8
Client Sample ID :	ME29C9	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:30:44	DataFile Name :	035AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	45345	44221	44295	44620	1.41	cps
Ytterbium	172-1	6005	5941	5848	5931	1.33	cps
Ytterbium	172-2	2244	2100	2210	2185	3.43	cps
Ytterbium	176-1	6435	6685	6895	6672	3.45	cps
Ytterbium	176-2	1800	1927	1787	1838	4.20	cps
Yttrium	89-1	31087362	31047575	31083000	31072646	0.07	cps
Yttrium	89-2	2002591	2050549	1998014	2017051	1.44	cps
Zinc	66-2	21834	22221	21406	21820	1.87	cps
Zirconium	90-1	174265	178680	176278	176407	1.25	cps
Zirconium	91-1	38132	41020	38924	39359	3.79	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-05	Instrumnet Name :	P8
Client Sample ID :	ME29D1	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:33:59	DataFile Name :	036AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4591	4654	4414	4553	2.73	cps
Antimony	121-1	18646	18463	19130	18746	1.84	cps
Arsenic	75-2	87	90	93	90	3.70	cps
Barium	135-1	71390	70056	69333	70260	1.49	cps
Barium	137-1	123803	119764	120410	121326	1.79	cps
Beryllium	9-1	534	590	571	565	5.07	cps
Bismuth	209-1	13562513	13208306	13295299	13355373	1.38	cps
Bismuth	209-2	4769190	4804710	4805715	4793205	0.43	cps
Bromine	81-1	198145	227570	242505	222740	10.13	cps
Cadmium	108-1	70	123	107	100	27.29	cps
Cadmium	106-1	9760	9553	9603	9639	1.12	cps
Cadmium	111-1	7863	7641	7804	7770	1.48	cps
Calcium	43-1	21600995	21512756	21350626	21488125	0.59	cps
Calcium	44-1	343134462	343092102	341628595	342618386	0.25	cps
Carbon	12-1	16834452	17822756	18252790	17636666	4.12	cps
Carbon	12-2	118846	119931	119326	119367	0.46	cps
Chlorine	35-1	20276335	22259235	22995512	21843694	6.44	cps
Chlorine	35-2	88243	89799	89256	89100	0.89	cps
Chromium	52-2	5338	5231	5498	5356	2.51	cps
Cobalt	59-2	119677	118347	120390	119471	0.87	cps
Copper	63-2	262360	259925	262046	261444	0.51	cps
Dysprosium	156-1	453	380	477	437	11.55	cps
Dysprosium	156-2	133	133	143	137	4.22	cps
Erbium	164-1	537	517	477	510	5.99	cps
Erbium	164-2	127	170	127	141	17.73	cps
Gadolinium	160-1	480	503	487	490	2.45	cps
Gadolinium	160-2	190	123	203	172	24.89	cps
Holmium	165-1	22729811	22457204	22389930	22525648	0.80	cps
Holmium	165-2	7031772	7055213	6987773	7024919	0.49	cps
Indium	115-1	17935296	17721336	17454027	17703553	1.36	cps
Indium	115-2	1458154	1464264	1459639	1460686	0.22	cps
Iron	54-2	85926	85997	86513	86145	0.37	cps
Iron	56-2	1678881	1683633	1696203	1686239	0.53	cps
Iron	57-2	40207	39795	40283	40095	0.65	cps
Krypton	83-1	313	300	347	320	7.51	cps
Lead	206-1	23972	23358	23618	23649	1.30	cps

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-05	Instrumnet Name :	P8
Client Sample ID :	ME29D1	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:33:59	DataFile Name :	036AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	19401	18283	19011	18898	3.00	cps
Lead	208-1	92118	97309	90343	93257	3.88	cps
Lithium	6-1	9330847	9262581	9246274	9279901	0.48	cps
Magnesium	24-2	30898756	31599714	31377057	31291842	1.14	cps
Manganese	55-2	117076	116057	114972	116035	0.91	cps
Molybdenum	94-1	5668	5474	5498	5547	1.90	cps
Molybdenum	95-1	7555	6978	6952	7162	4.76	cps
Molybdenum	96-1	8006	7822	8029	7952	1.42	cps
Molybdenum	97-1	4431	4821	4474	4575	4.67	cps
Molybdenum	98-1	11221	11321	11235	11259	0.48	cps
Neodymium	150-1	533	617	643	598	9.60	cps
Neodymium	150-2	100	137	130	122	15.98	cps
Nickel	60-2	4457	4227	4297	4327	2.73	cps
Phosphorus	31-2	9136	9153	9090	9126	0.36	cps
Potassium	39-2	997805	994301	991153	994420	0.33	cps
Rhodium	103-1	15733053	15679751	15615066	15675956	0.38	cps
Rhodium	103-2	5759578	5687869	5657607	5701685	0.92	cps
Scandium	45-1	12728837	12496731	12412888	12546152	1.30	cps
Scandium	45-2	218425	218722	218444	218530	0.08	cps
Selenium	82-1	207	197	153	186	15.28	cps
Selenium	77-2	0	7	0	2	173.21	cps
Selenium	78-2	10	3	0	4	114.60	cps
Silicon	28-1	80628564	81390957	81717585	81245702	0.69	cps
Silver	107-1	743	857	740	780	8.51	cps
Silver	109-1	557	563	597	572	3.75	cps
Sodium	23-2	64899274	65489942	64736222	65041813	0.61	cps
Strontium	86-1	60040789	58044037	58825054	58969960	1.71	cps
Strontium	88-1	512293112	497273593	502671019	504079241	1.51	cps
Sulfur	34-1	31798165	32212745	31814814	31941908	0.73	cps
Terbium	159-1	23385170	23157263	23154090	23232175	0.57	cps
Terbium	159-2	6851916	6728902	6715325	6765381	1.11	cps
Thallium	203-1	527	523	447	499	9.07	cps
Thallium	205-1	1147	1183	1210	1180	2.69	cps
Tin	118-1	18593	19234	19083	18970	1.77	cps
Titanium	47-1	12250	11335	11535	11707	4.11	cps
Uranium	238-1	13150	12189	12640	12660	3.80	cps

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-05	Instrumnet Name :	P8
Client Sample ID :	ME29D1	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:33:59	DataFile Name :	036AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	800	747	847	798	6.27	cps
Ytterbium	172-1	250	230	313	264	16.45	cps
Ytterbium	172-2	53	73	103	77	32.83	cps
Ytterbium	176-1	2427	2427	2447	2434	0.47	cps
Ytterbium	176-2	340	363	360	354	3.56	cps
Yttrium	89-1	31012493	31144942	30432011	30863149	1.23	cps
Yttrium	89-2	2006761	1984406	1990576	1993914	0.58	cps
Zinc	66-2	9313	9880	9537	9577	2.98	cps
Zirconium	90-1	4234	4057	3871	4054	4.48	cps
Zirconium	91-1	1004	910	977	963	5.00	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-06RE	Instrumnet Name :	P8
Client Sample ID :	ME29D2	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:37:13	DataFile Name :	037AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	563	547	560	557	1.58	cps
Antimony	121-1	223	220	217	220	1.52	cps
Arsenic	75-2	30	27	10	22	48.22	cps
Barium	135-1	98686	96315	97242	97415	1.23	cps
Barium	137-1	168150	169823	167209	168394	0.79	cps
Beryllium	9-1	591	597	582	590	1.28	cps
Bismuth	209-1	13449350	13427265	13697919	13524845	1.11	cps
Bismuth	209-2	4872103	4889213	4835203	4865506	0.57	cps
Bromine	81-1	706468	847768	917363	823867	13.04	cps
Cadmium	108-1	43	40	47	43	7.70	cps
Cadmium	106-1	9900	9850	9997	9916	0.75	cps
Cadmium	111-1	7250	7157	7285	7231	0.91	cps
Calcium	43-1	15972045	15805473	16008558	15928692	0.68	cps
Calcium	44-1	250361156	249764050	248707516	249610907	0.34	cps
Carbon	12-1	13402075	14337380	14652286	14130580	4.60	cps
Carbon	12-2	97054	96091	96484	96543	0.50	cps
Chlorine	35-1	17174752	18314210	19101464	18196808	5.32	cps
Chlorine	35-2	70397	70685	71123	70735	0.52	cps
Chromium	52-2	2160	2187	2167	2171	0.64	cps
Cobalt	59-2	477	397	320	398	19.69	cps
Copper	63-2	5658	6071	5675	5801	4.04	cps
Dysprosium	156-1	73	113	83	90	23.13	cps
Dysprosium	156-2	30	30	33	31	6.18	cps
Erbium	164-1	173	193	187	184	5.52	cps
Erbium	164-2	47	53	77	59	26.75	cps
Gadolinium	160-1	203	197	153	184	14.72	cps
Gadolinium	160-2	37	20	47	34	39.11	cps
Holmium	165-1	22768381	22763256	22374446	22635361	1.00	cps
Holmium	165-2	7014058	6993092	7030996	7012715	0.27	cps
Indium	115-1	17936034	17746673	17728115	17803607	0.65	cps
Indium	115-2	1457310	1450768	1456181	1454753	0.24	cps
Iron	54-2	4024	3817	4007	3949	2.91	cps
Iron	56-2	72426	73089	72945	72820	0.48	cps
Iron	57-2	2304	2364	2394	2354	1.95	cps
Krypton	83-1	293	280	313	296	5.68	cps
Lead	206-1	5174	5298	5211	5228	1.21	cps

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-06RE	Instrumnet Name :	P8
Client Sample ID :	ME29D2	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:37:13	DataFile Name :	037AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	4431	4334	4584	4450	2.83	cps
Lead	208-1	20697	20770	20750	20739	0.18	cps
Lithium	6-1	9416975	9379436	9222819	9339743	1.10	cps
Magnesium	24-2	18815512	18770766	18918117	18834798	0.40	cps
Manganese	55-2	25743	25383	25065	25397	1.34	cps
Molybdenum	94-1	1180	1237	1207	1208	2.35	cps
Molybdenum	95-1	700	607	737	681	9.84	cps
Molybdenum	96-1	787	823	713	774	7.23	cps
Molybdenum	97-1	400	347	377	374	7.14	cps
Molybdenum	98-1	930	937	910	926	1.50	cps
Neodymium	150-1	107	83	97	96	12.25	cps
Neodymium	150-2	23	20	17	20	16.65	cps
Nickel	60-2	1730	1677	1807	1738	3.76	cps
Phosphorus	31-2	143	117	103	121	16.82	cps
Potassium	39-2	442284	440576	443892	442251	0.37	cps
Rhodium	103-1	16104391	16191355	15935119	16076955	0.81	cps
Rhodium	103-2	5766789	5735197	5697128	5733038	0.61	cps
Scandium	45-1	12590707	12582497	12613234	12595479	0.13	cps
Scandium	45-2	215278	215032	215074	215128	0.06	cps
Selenium	82-1	337	343	433	371	14.55	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	3	0	3	2	86.60	cps
Silicon	28-1	92977872	93828815	92595179	93133955	0.68	cps
Silver	107-1	620	620	673	638	4.83	cps
Silver	109-1	243	217	293	251	15.50	cps
Sodium	23-2	32732790	32591450	32636301	32653514	0.22	cps
Strontium	86-1	140775171	140203105	140035381	140337886	0.28	cps
Strontium	88-1	1204913422	1219174035	1218541102	1214209520	0.66	cps
Sulfur	34-1	13875380	13695254	13721296	13763976	0.71	cps
Terbium	159-1	23519315	23206892	23113237	23279815	0.91	cps
Terbium	159-2	6741841	6799013	6714048	6751634	0.64	cps
Thallium	203-1	427	420	393	413	4.27	cps
Thallium	205-1	1027	1020	927	991	5.64	cps
Tin	118-1	2180	2267	2180	2209	2.27	cps
Titanium	47-1	2000	2164	2040	2068	4.12	cps
Uranium	238-1	10958	10961	10498	10806	2.47	cps

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-06RE	Instrumnet Name :	P8
Client Sample ID :	ME29D2	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:37:13	DataFile Name :	037AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	353	337	313	334	6.01	cps
Ytterbium	172-1	157	193	207	186	13.95	cps
Ytterbium	172-2	50	57	50	52	7.37	cps
Ytterbium	176-1	2267	2387	2410	2355	3.27	cps
Ytterbium	176-2	267	393	393	351	20.83	cps
Yttrium	89-1	30948118	30999402	31213376	31053632	0.45	cps
Yttrium	89-2	1993702	1993499	2011953	1999718	0.53	cps
Zinc	66-2	1717	1573	1567	1619	5.24	cps
Zirconium	90-1	2577	2417	2644	2546	4.58	cps
Zirconium	91-1	503	540	503	516	4.11	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-07	Instrumnet Name :	P8
Client Sample ID :	ME29D4	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:40:33	DataFile Name :	038AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	9194	8546	8793	8844	3.70	cps
Antimony	121-1	24245	24562	24178	24328	0.84	cps
Arsenic	75-2	720	843	790	784	7.89	cps
Barium	135-1	219560	221315	218560	219812	0.63	cps
Barium	137-1	384586	381328	380091	382002	0.61	cps
Beryllium	9-1	511	529	517	519	1.71	cps
Bismuth	209-1	13453865	13239558	13307573	13333665	0.82	cps
Bismuth	209-2	4823357	4820479	4753973	4799270	0.82	cps
Bromine	81-1	521742	547637	541592	536990	2.52	cps
Cadmium	108-1	727	793	723	748	5.28	cps
Cadmium	106-1	10531	10678	10164	10457	2.53	cps
Cadmium	111-1	14865	14581	14687	14711	0.98	cps
Calcium	43-1	14498706	14516474	14684360	14566513	0.70	cps
Calcium	44-1	233389410	229560837	230224923	231058390	0.89	cps
Carbon	12-1	41143084	42649097	42726704	42172962	2.12	cps
Carbon	12-2	278500	275696	278335	277511	0.57	cps
Chlorine	35-1	11966083	12947895	13183179	12699052	5.08	cps
Chlorine	35-2	50387	50300	50575	50421	0.28	cps
Chromium	52-2	11071	11378	10951	11133	1.98	cps
Cobalt	59-2	26702	26491	26251	26481	0.85	cps
Copper	63-2	140715	139177	140130	140007	0.55	cps
Dysprosium	156-1	700	790	777	756	6.43	cps
Dysprosium	156-2	207	227	217	217	4.62	cps
Erbium	164-1	857	873	910	880	3.10	cps
Erbium	164-2	250	350	300	300	16.67	cps
Gadolinium	160-1	857	903	837	866	3.95	cps
Gadolinium	160-2	263	260	293	272	6.74	cps
Holmium	165-1	22241201	22442346	22319256	22334268	0.45	cps
Holmium	165-2	7022093	7139572	7157822	7106496	1.04	cps
Indium	115-1	17790687	17381487	17359726	17510634	1.39	cps
Indium	115-2	1446072	1458534	1458581	1454395	0.50	cps
Iron	54-2	86375	86697	85574	86216	0.67	cps
Iron	56-2	1680920	1676983	1688290	1682064	0.34	cps
Iron	57-2	39558	39939	39715	39737	0.48	cps
Krypton	83-1	337	310	337	328	4.70	cps
Lead	206-1	64010	64513	63769	64098	0.59	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-07	Instrumnet Name :	P8
Client Sample ID :	ME29D4	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:40:33	DataFile Name :	038AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	53075	52275	51358	52236	1.65	cps
Lead	208-1	245289	245531	244490	245103	0.22	cps
Lithium	6-1	9274851	9106017	9165122	9181997	0.93	cps
Magnesium	24-2	54374538	54378056	54237146	54329913	0.15	cps
Manganese	55-2	3510279	3484938	3454446	3483221	0.80	cps
Molybdenum	94-1	192652	194676	195380	194236	0.73	cps
Molybdenum	95-1	336059	334558	333947	334855	0.32	cps
Molybdenum	96-1	356528	355825	357473	356609	0.23	cps
Molybdenum	97-1	208898	206556	209129	208194	0.68	cps
Molybdenum	98-1	540253	537018	537644	538305	0.32	cps
Neodymium	150-1	1017	933	933	961	5.01	cps
Neodymium	150-2	200	223	227	217	6.71	cps
Nickel	60-2	41069	41467	42834	41790	2.22	cps
Phosphorus	31-2	2597	2550	2450	2532	2.96	cps
Potassium	39-2	2501249	2444867	2479880	2475332	1.15	cps
Rhodium	103-1	16123316	15778290	15756549	15886052	1.30	cps
Rhodium	103-2	5750337	5706212	5702169	5719572	0.47	cps
Scandium	45-1	12592925	12334995	12530569	12486163	1.08	cps
Scandium	45-2	216177	217839	217457	217158	0.40	cps
Selenium	82-1	870	907	823	867	4.82	cps
Selenium	77-2	10	10	20	13	43.30	cps
Selenium	78-2	20	37	43	33	36.05	cps
Silicon	28-1	91567692	91877962	91290025	91578560	0.32	cps
Silver	107-1	2717	2774	2780	2757	1.26	cps
Silver	109-1	2294	2357	2267	2306	2.01	cps
Sodium	23-2	63637459	63557674	62197967	63131034	1.28	cps
Strontium	86-1	37167585	37628699	36741832	37179372	1.19	cps
Strontium	88-1	323647269	323046089	321421129	322704829	0.36	cps
Sulfur	34-1	29335460	29557865	29410867	29434731	0.38	cps
Terbium	159-1	23336376	23081487	22954415	23124093	0.84	cps
Terbium	159-2	6734942	6814999	6807262	6785734	0.65	cps
Thallium	203-1	4814	4981	5141	4979	3.28	cps
Thallium	205-1	11775	11255	11512	11514	2.26	cps
Tin	118-1	11542	11875	12179	11865	2.69	cps
Titanium	47-1	18564	20268	22304	20379	9.19	cps
Uranium	238-1	682504	668872	673279	674885	1.03	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-07	Instrumnet Name :	P8
Client Sample ID :	ME29D4	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:40:33	DataFile Name :	038AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	4878	4811	4831	4840	0.71	cps
Ytterbium	172-1	600	570	537	569	5.57	cps
Ytterbium	172-2	193	217	207	206	5.69	cps
Ytterbium	176-1	2610	2560	2567	2579	1.05	cps
Ytterbium	176-2	417	463	343	408	14.84	cps
Yttrium	89-1	31527778	31113952	30549806	31063845	1.58	cps
Yttrium	89-2	2000067	2006708	2033679	2013484	0.88	cps
Zinc	66-2	33727	33626	33653	33669	0.15	cps
Zirconium	90-1	14771	12666	13393	13610	7.85	cps
Zirconium	91-1	2897	2907	3050	2951	2.91	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-08RE	Instrumnet Name :	P8
Client Sample ID :	ME29D2D	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:43:46	DataFile Name :	039AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	8399	8246	8129	8258	1.64	cps
Antimony	121-1	24308	24469	24432	24403	0.34	cps
Arsenic	75-2	860	887	820	856	3.92	cps
Barium	135-1	222477	223742	222256	222825	0.36	cps
Barium	137-1	386296	382869	384138	384434	0.45	cps
Beryllium	9-1	504	505	511	507	0.79	cps
Bismuth	209-1	13182039	13214463	13122701	13173067	0.35	cps
Bismuth	209-2	4894397	4762508	4819178	4825361	1.37	cps
Bromine	81-1	458862	485296	502000	482053	4.51	cps
Cadmium	108-1	800	673	720	731	8.76	cps
Cadmium	106-1	10237	10774	10147	10386	3.26	cps
Cadmium	111-1	14638	14950	14922	14837	1.16	cps
Calcium	43-1	14655124	14699418	14778911	14711151	0.43	cps
Calcium	44-1	230399877	236294396	233806257	233500177	1.27	cps
Carbon	12-1	41785584	42535884	43139103	42486857	1.60	cps
Carbon	12-2	282616	284361	282257	283078	0.40	cps
Chlorine	35-1	11765431	12822914	13179610	12589318	5.84	cps
Chlorine	35-2	49692	49538	50772	50000	1.35	cps
Chromium	52-2	10984	11305	11408	11232	1.97	cps
Cobalt	59-2	25944	26708	26498	26383	1.50	cps
Copper	63-2	140658	141871	141846	141458	0.49	cps
Dysprosium	156-1	827	833	837	832	0.61	cps
Dysprosium	156-2	213	303	240	252	18.33	cps
Erbium	164-1	957	953	953	954	0.20	cps
Erbium	164-2	283	303	257	281	8.33	cps
Gadolinium	160-1	850	800	837	829	3.12	cps
Gadolinium	160-2	287	360	280	309	14.37	cps
Holmium	165-1	22450059	22497959	22441299	22463105	0.14	cps
Holmium	165-2	7028059	7089681	7079651	7065797	0.47	cps
Indium	115-1	17442555	17696844	17594861	17578087	0.73	cps
Indium	115-2	1458949	1469599	1478129	1468893	0.65	cps
Iron	54-2	86865	87777	88167	87603	0.76	cps
Iron	56-2	1671516	1708512	1709795	1696607	1.28	cps
Iron	57-2	39652	39829	40324	39935	0.87	cps
Krypton	83-1	297	403	287	329	19.66	cps
Lead	206-1	64871	64198	64935	64668	0.63	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-08RE	Instrumnet Name :	P8
Client Sample ID :	ME29D2D	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:43:46	DataFile Name :	039AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	53055	51967	51609	52210	1.44	cps
Lead	208-1	246246	244551	245136	245311	0.35	cps
Lithium	6-1	9438927	9505253	9424028	9456069	0.46	cps
Magnesium	24-2	54825813	54869824	54241646	54645761	0.64	cps
Manganese	55-2	3427746	3544531	3559255	3510511	2.05	cps
Molybdenum	94-1	197366	195466	199212	197348	0.95	cps
Molybdenum	95-1	337037	339268	337338	337881	0.36	cps
Molybdenum	96-1	361772	362119	361592	361828	0.07	cps
Molybdenum	97-1	208230	207415	208834	208160	0.34	cps
Molybdenum	98-1	541502	539742	541997	541080	0.22	cps
Neodymium	150-1	940	997	1067	1001	6.34	cps
Neodymium	150-2	203	203	207	204	0.94	cps
Nickel	60-2	42436	42286	42503	42409	0.26	cps
Phosphorus	31-2	2424	2470	2250	2381	4.87	cps
Potassium	39-2	2526162	2473512	2494390	2498021	1.06	cps
Rhodium	103-1	16068016	15878967	16029661	15992215	0.62	cps
Rhodium	103-2	5836660	5714613	5830412	5793895	1.19	cps
Scandium	45-1	12738016	12797509	12667688	12734404	0.51	cps
Scandium	45-2	222681	220249	222364	221765	0.60	cps
Selenium	82-1	733	793	833	787	6.40	cps
Selenium	77-2	17	17	13	16	12.40	cps
Selenium	78-2	47	43	43	44	4.34	cps
Silicon	28-1	91632292	93276402	93712885	92873860	1.18	cps
Silver	107-1	2684	2900	2860	2815	4.10	cps
Silver	109-1	2554	2347	2317	2406	5.36	cps
Sodium	23-2	63758279	63253197	63560149	63523875	0.40	cps
Strontium	86-1	36835334	37704379	38078069	37539261	1.70	cps
Strontium	88-1	318686842	329148428	325054308	324296526	1.63	cps
Sulfur	34-1	29653473	30156384	30092565	29967474	0.91	cps
Terbium	159-1	23160581	22801196	23215395	23059058	0.98	cps
Terbium	159-2	6847427	6826276	6809269	6827657	0.28	cps
Thallium	203-1	4914	5058	4831	4934	2.32	cps
Thallium	205-1	11529	11599	11478	11535	0.52	cps
Tin	118-1	10397	10287	10441	10375	0.76	cps
Titanium	47-1	16934	26275	13936	19048	33.78	cps
Uranium	238-1	677984	676914	676302	677067	0.13	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-08RE	Instrumnet Name :	P8
Client Sample ID :	ME29D2D	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:43:46	DataFile Name :	039AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	4864	4848	4801	4838	0.68	cps
Ytterbium	172-1	457	560	470	496	11.34	cps
Ytterbium	172-2	207	193	187	196	5.21	cps
Ytterbium	176-1	2530	2714	2390	2545	6.37	cps
Ytterbium	176-2	390	457	487	444	11.13	cps
Yttrium	89-1	31722958	31667511	30832287	31407585	1.59	cps
Yttrium	89-2	2024414	2025808	2054944	2035055	0.85	cps
Zinc	66-2	33730	33543	34646	33973	1.74	cps
Zirconium	90-1	13443	13337	13654	13478	1.20	cps
Zirconium	91-1	3094	2890	2900	2961	3.87	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-07LREX5	Instrumnet Name :	P8
Client Sample ID :	ME29D4L	Dilution Factor :	5
Date & Time Acquired :	2025-02-13 13:47:00	DataFile Name :	040AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1783	1737	1800	1773	1.85	cps
Antimony	121-1	5268	5348	5404	5340	1.29	cps
Arsenic	75-2	183	153	170	169	8.90	cps
Barium	135-1	46781	46837	47436	47018	0.77	cps
Barium	137-1	81523	80735	81651	81303	0.61	cps
Beryllium	9-1	470	545	507	507	7.39	cps
Bismuth	209-1	13548695	13927196	13711052	13728981	1.38	cps
Bismuth	209-2	4927591	4983788	4920790	4944056	0.70	cps
Bromine	81-1	126286	128922	128657	127955	1.13	cps
Cadmium	108-1	133	167	170	157	12.94	cps
Cadmium	106-1	9797	9900	9760	9819	0.74	cps
Cadmium	111-1	8538	8560	8510	8536	0.30	cps
Calcium	43-1	3195049	3078972	3067420	3113814	2.27	cps
Calcium	44-1	49470118	49109349	49147546	49242338	0.40	cps
Carbon	12-1	12783073	13015634	12552577	12783761	1.81	cps
Carbon	12-2	79403	79647	79436	79496	0.17	cps
Chlorine	35-1	3757005	3838720	3816109	3803945	1.11	cps
Chlorine	35-2	13777	13677	13336	13596	1.70	cps
Chromium	52-2	4194	4241	4247	4227	0.69	cps
Cobalt	59-2	5848	5835	5808	5830	0.35	cps
Copper	63-2	33419	33299	32815	33178	0.96	cps
Dysprosium	156-1	207	130	183	173	22.67	cps
Dysprosium	156-2	33	33	43	37	15.75	cps
Erbium	164-1	313	277	263	284	9.10	cps
Erbium	164-2	87	87	97	90	6.41	cps
Gadolinium	160-1	290	273	273	279	3.45	cps
Gadolinium	160-2	77	57	93	76	24.29	cps
Holmium	165-1	22616897	22421206	22421813	22486639	0.50	cps
Holmium	165-2	6882761	6948132	6977816	6936237	0.70	cps
Indium	115-1	17892406	17723978	17352149	17656178	1.57	cps
Indium	115-2	1449542	1449067	1447449	1448686	0.08	cps
Iron	54-2	18889	18969	19213	19024	0.89	cps
Iron	56-2	343167	345581	344198	344316	0.35	cps
Iron	57-2	8326	8623	8586	8512	1.90	cps
Krypton	83-1	317	320	327	321	1.59	cps
Lead	206-1	15806	15459	15446	15571	1.31	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-07LREX5	Instrumnet Name :	P8
Client Sample ID :	ME29D4L	Dilution Factor :	5
Date & Time Acquired :	2025-02-13 13:47:00	DataFile Name :	040AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	12666	12656	12630	12651	0.15	cps
Lead	208-1	59687	59226	59427	59447	0.39	cps
Lithium	6-1	9685783	9251438	9661671	9532964	2.56	cps
Magnesium	24-2	11400194	11259814	11252142	11304050	0.74	cps
Manganese	55-2	674365	686763	678226	679785	0.93	cps
Molybdenum	94-1	41304	40710	41983	41332	1.54	cps
Molybdenum	95-1	72377	70233	71412	71341	1.51	cps
Molybdenum	96-1	76780	75708	76281	76256	0.70	cps
Molybdenum	97-1	44053	43702	43939	43898	0.41	cps
Molybdenum	98-1	113224	114780	114272	114092	0.70	cps
Neodymium	150-1	193	240	240	224	12.00	cps
Neodymium	150-2	60	60	33	51	30.13	cps
Nickel	60-2	10084	9884	10164	10044	1.44	cps
Phosphorus	31-2	567	540	570	559	2.94	cps
Potassium	39-2	485456	485225	489316	486666	0.47	cps
Rhodium	103-1	16544811	16401677	16484506	16476998	0.44	cps
Rhodium	103-2	5868253	5807116	5831585	5835651	0.53	cps
Scandium	45-1	12446486	12543593	12347724	12445935	0.79	cps
Scandium	45-2	211531	213211	210154	211632	0.72	cps
Selenium	82-1	210	220	217	216	2.36	cps
Selenium	77-2	0	0	3	1	173.21	cps
Selenium	78-2	47	17	20	28	59.19	cps
Silicon	28-1	19541777	19993468	19684677	19739974	1.17	cps
Silver	107-1	887	860	813	853	4.35	cps
Silver	109-1	710	760	687	719	5.21	cps
Sodium	23-2	13258759	13098189	12972875	13109941	1.09	cps
Strontium	86-1	7772092	7872834	7910301	7851743	0.91	cps
Strontium	88-1	67624819	68412076	66622122	67553006	1.33	cps
Sulfur	34-1	7042667	6934753	7023078	7000166	0.82	cps
Terbium	159-1	23030971	22828177	22934489	22931212	0.44	cps
Terbium	159-2	6734304	6675051	6728209	6712521	0.49	cps
Thallium	203-1	1393	1350	1440	1395	3.23	cps
Thallium	205-1	3417	3354	3467	3413	1.66	cps
Tin	118-1	4844	4614	4491	4650	3.86	cps
Titanium	47-1	10708	2810	2737	5418	84.55	cps
Uranium	238-1	142947	141807	142110	142288	0.42	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-07LREX5	Instrumnet Name :	P8
Client Sample ID :	ME29D4L	Dilution Factor :	5
Date & Time Acquired :	2025-02-13 13:47:00	DataFile Name :	040AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	950	947	1003	967	3.29	cps
Ytterbium	172-1	223	197	167	196	14.50	cps
Ytterbium	172-2	83	60	60	68	19.87	cps
Ytterbium	176-1	2267	2447	2527	2414	5.52	cps
Ytterbium	176-2	297	267	290	284	5.54	cps
Yttrium	89-1	30720840	30912596	30857383	30830273	0.32	cps
Yttrium	89-2	1960987	1966398	1928881	1952088	1.04	cps
Zinc	66-2	7759	7075	7389	7408	4.62	cps
Zirconium	90-1	3307	3477	3237	3340	3.70	cps
Zirconium	91-1	800	1485	843	1043	36.80	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-09RE	Instrumnet Name :	P8
Client Sample ID :	ME29D2S	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:50:12	DataFile Name :	041AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	145344	146636	147680	146553	0.80	cps
Antimony	121-1	1995569	1977632	1995514	1989572	0.52	cps
Arsenic	75-2	14347	14201	14618	14389	1.47	cps
Barium	135-1	9381426	9520789	9490170	9464128	0.77	cps
Barium	137-1	16148285	16272179	16066399	16162288	0.64	cps
Beryllium	9-1	328537	329724	332990	330417	0.70	cps
Bismuth	209-1	13121313	12999276	13036626	13052405	0.48	cps
Bismuth	209-2	4791621	4756220	4719281	4755707	0.76	cps
Bromine	81-1	427523	461109	474847	454493	5.36	cps
Cadmium	108-1	15105	15989	15629	15574	2.86	cps
Cadmium	106-1	29932	30788	30818	30513	1.65	cps
Cadmium	111-1	240282	236564	237797	238214	0.79	cps
Calcium	43-1	14243519	13987912	14060701	14097377	0.93	cps
Calcium	44-1	227336610	223702210	225076103	225371641	0.81	cps
Carbon	12-1	39028095	40257360	41317238	40200898	2.85	cps
Carbon	12-2	268012	269248	267695	268318	0.31	cps
Chlorine	35-1	53307383	57541677	60519119	57122726	6.34	cps
Chlorine	35-2	228456	235419	236122	233332	1.82	cps
Chromium	52-2	755375	754924	754527	754942	0.06	cps
Cobalt	59-2	3740071	3704904	3771687	3738888	0.89	cps
Copper	63-2	1573479	1564394	1570285	1569386	0.29	cps
Dysprosium	156-1	827	917	783	842	8.08	cps
Dysprosium	156-2	227	197	187	203	10.24	cps
Erbium	164-1	957	1013	943	971	3.83	cps
Erbium	164-2	280	310	253	281	10.09	cps
Gadolinium	160-1	880	800	787	822	6.14	cps
Gadolinium	160-2	273	283	253	270	5.66	cps
Holmium	165-1	22469582	22462438	22329064	22420361	0.35	cps
Holmium	165-2	6841754	6847924	6848164	6845948	0.05	cps
Indium	115-1	17526018	17064413	17256798	17282409	1.34	cps
Indium	115-2	1424718	1424817	1435576	1428370	0.44	cps
Iron	54-2	258838	256337	260936	258704	0.89	cps
Iron	56-2	4522651	4562609	4548875	4544712	0.45	cps
Iron	57-2	108888	107239	107324	107817	0.86	cps
Krypton	83-1	327	317	280	308	7.98	cps
Lead	206-1	357809	355612	355777	356399	0.34	cps

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-09RE	Instrumnet Name :	P8
Client Sample ID :	ME29D2S	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:50:12	DataFile Name :	041AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	297301	299576	299827	298901	0.47	cps
Lead	208-1	1389646	1397975	1397571	1395064	0.34	cps
Lithium	6-1	9139811	9214379	9275863	9210017	0.74	cps
Magnesium	24-2	52535746	52065564	53233296	52611535	1.12	cps
Manganese	55-2	4143003	4190621	4125167	4152930	0.81	cps
Molybdenum	94-1	193534	194112	193937	193861	0.15	cps
Molybdenum	95-1	334169	331247	331140	332185	0.52	cps
Molybdenum	96-1	350294	358464	357865	355541	1.28	cps
Molybdenum	97-1	206432	204868	208563	206621	0.90	cps
Molybdenum	98-1	538793	532964	528788	533515	0.94	cps
Neodymium	150-1	1487	1567	1410	1488	5.27	cps
Neodymium	150-2	220	240	223	228	4.71	cps
Nickel	60-2	987370	980504	986116	984663	0.37	cps
Phosphorus	31-2	2570	2494	2317	2460	5.28	cps
Potassium	39-2	2385502	2387793	2377765	2383687	0.22	cps
Rhodium	103-1	15478449	15580012	15259386	15439282	1.06	cps
Rhodium	103-2	5669491	5614707	5639981	5641393	0.49	cps
Scandium	45-1	12156235	12177722	12112840	12148932	0.27	cps
Scandium	45-2	213151	215941	215945	215012	0.75	cps
Selenium	82-1	6735	6729	7069	6844	2.84	cps
Selenium	77-2	133	127	117	126	6.68	cps
Selenium	78-2	353	383	400	379	6.24	cps
Silicon	28-1	87330259	88329862	90435139	88698420	1.79	cps
Silver	107-1	1027807	1036599	1025614	1030007	0.56	cps
Silver	109-1	978655	992673	998215	989848	1.02	cps
Sodium	23-2	60923092	61511309	60856696	61097032	0.59	cps
Strontium	86-1	36042611	36384199	36452424	36293078	0.61	cps
Strontium	88-1	309431222	313235742	315932909	312866624	1.04	cps
Sulfur	34-1	28665063	28742985	28901909	28769985	0.42	cps
Terbium	159-1	23085060	23263846	22933926	23094278	0.72	cps
Terbium	159-2	6750417	6705343	6627386	6694382	0.93	cps
Thallium	203-1	883116	889908	891562	888195	0.50	cps
Thallium	205-1	2325400	2309935	2270163	2301833	1.24	cps
Tin	118-1	12210	11508	11522	11747	3.42	cps
Titanium	47-1	28035	21761	12662	20819	37.13	cps
Uranium	238-1	673583	674343	675150	674359	0.12	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-09RE	Instrumnet Name :	P8
Client Sample ID :	ME29D2S	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:50:12	DataFile Name :	041AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	1563824	1582910	1551954	1566229	1.00	cps
Ytterbium	172-1	500	460	540	500	8.00	cps
Ytterbium	172-2	180	210	190	193	7.90	cps
Ytterbium	176-1	2540	2674	2560	2591	2.78	cps
Ytterbium	176-2	333	353	453	380	16.92	cps
Yttrium	89-1	30886723	30353774	30753734	30664743	0.90	cps
Yttrium	89-2	1995419	1968442	2010878	1991580	1.08	cps
Zinc	66-2	311807	308493	312061	310787	0.64	cps
Zirconium	90-1	13744	13674	13687	13702	0.27	cps
Zirconium	91-1	3100	3180	3164	3148	1.34	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-01DLX2	Instrumnet Name :	P8
Client Sample ID :	ME29C5	Dilution Factor :	2
Date & Time Acquired :	2025-02-13 13:53:19	DataFile Name :	042AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	45743	45663	45650	45685	0.11	cps
Antimony	121-1	1073	1173	1307	1185	9.88	cps
Arsenic	75-2	390	400	417	402	3.35	cps
Barium	135-1	70646	70606	71089	70780	0.38	cps
Barium	137-1	121506	121621	121177	121435	0.19	cps
Beryllium	9-1	956	1014	1012	994	3.30	cps
Bismuth	209-1	12715489	12479762	12339802	12511684	1.52	cps
Bismuth	209-2	4635389	4614199	4641775	4630455	0.31	cps
Bromine	81-1	127138	145091	158170	143466	10.86	cps
Cadmium	108-1	100	113	123	112	10.43	cps
Cadmium	106-1	9460	9587	9620	9556	0.88	cps
Cadmium	111-1	6975	7091	7098	7055	0.98	cps
Calcium	43-1	14314213	14696917	14475686	14495605	1.33	cps
Calcium	44-1	226508990	230063643	231642710	229405114	1.15	cps
Carbon	12-1	9255557	9379985	9475315	9370286	1.18	cps
Carbon	12-2	61672	62689	62147	62169	0.82	cps
Chlorine	35-1	54057318	58109581	60142807	57436569	5.39	cps
Chlorine	35-2	228625	232743	232133	231167	0.96	cps
Chromium	52-2	6805	7015	7002	6941	1.69	cps
Cobalt	59-2	4111	3934	3784	3943	4.15	cps
Copper	63-2	11054	10788	11124	10989	1.62	cps
Dysprosium	156-1	4467	4381	4287	4379	2.06	cps
Dysprosium	156-2	1260	1353	1180	1265	6.86	cps
Erbium	164-1	3464	3290	3310	3355	2.83	cps
Erbium	164-2	1053	1023	1033	1037	1.47	cps
Gadolinium	160-1	3887	3914	3964	3922	0.99	cps
Gadolinium	160-2	1383	1550	1457	1463	5.71	cps
Holmium	165-1	21182652	21299700	21497667	21326673	0.75	cps
Holmium	165-2	6847001	6665591	6658719	6723770	1.59	cps
Indium	115-1	16832440	16546381	16754261	16711027	0.88	cps
Indium	115-2	1368253	1380340	1376350	1374981	0.45	cps
Iron	54-2	405827	413728	409951	409835	0.96	cps
Iron	56-2	7937183	7940704	8001725	7959871	0.46	cps
Iron	57-2	187885	188150	188353	188129	0.12	cps
Krypton	83-1	287	250	307	281	10.22	cps
Lead	206-1	13724	13874	13454	13684	1.56	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-01DLX2	Instrumnet Name :	P8
Client Sample ID :	ME29C5	Dilution Factor :	2
Date & Time Acquired :	2025-02-13 13:53:19	DataFile Name :	042AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	10661	11215	11175	11017	2.80	cps
Lead	208-1	51671	52241	51052	51655	1.15	cps
Lithium	6-1	8795580	8671015	8866068	8777554	1.13	cps
Magnesium	24-2	20330275	20063485	19885968	20093243	1.11	cps
Manganese	55-2	65238	64575	65409	65074	0.68	cps
Molybdenum	94-1	18386	18727	18816	18643	1.22	cps
Molybdenum	95-1	19297	18873	19030	19066	1.12	cps
Molybdenum	96-1	21256	20789	21346	21131	1.42	cps
Molybdenum	97-1	11648	11922	11275	11615	2.80	cps
Molybdenum	98-1	30023	29999	30527	30183	0.99	cps
Neodymium	150-1	6288	6045	6282	6205	2.23	cps
Neodymium	150-2	1473	1403	1410	1429	2.70	cps
Nickel	60-2	4971	5104	4904	4993	2.04	cps
Phosphorus	31-2	387	280	293	320	18.16	cps
Potassium	39-2	416498	417635	419385	417839	0.35	cps
Rhodium	103-1	14878664	14714744	14804715	14799374	0.55	cps
Rhodium	103-2	5425590	5359849	5514451	5433297	1.43	cps
Scandium	45-1	11803964	11882474	11800062	11828833	0.39	cps
Scandium	45-2	205308	205312	205968	205529	0.18	cps
Selenium	82-1	233	207	170	203	15.64	cps
Selenium	77-2	3	7	3	4	43.40	cps
Selenium	78-2	17	23	23	21	18.21	cps
Silicon	28-1	74333122	74103897	74460704	74299241	0.24	cps
Silver	107-1	1690	1307	1217	1405	17.90	cps
Silver	109-1	1487	1077	993	1186	22.28	cps
Sodium	23-2	137074208	139774445	138152898	138333850	0.98	cps
Strontium	86-1	69508584	69488271	69201464	69399440	0.25	cps
Strontium	88-1	600283058	600998351	603133751	601471720	0.25	cps
Sulfur	34-1	11926331	12012733	12051765	11996943	0.54	cps
Terbium	159-1	22180830	21775334	22020285	21992149	0.93	cps
Terbium	159-2	6492547	6478258	6473240	6481348	0.15	cps
Thallium	203-1	1633	1673	1860	1722	7.02	cps
Thallium	205-1	3914	4227	4081	4074	3.85	cps
Tin	118-1	3454	3564	3647	3555	2.73	cps
Titanium	47-1	50185	49046	56437	51889	7.67	cps
Uranium	238-1	21859	21205	21488	21517	1.52	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-01DLX2	Instrumnet Name :	P8
Client Sample ID :	ME29C5	Dilution Factor :	2
Date & Time Acquired :	2025-02-13 13:53:19	DataFile Name :	042AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	5494	5338	5604	5479	2.45	cps
Ytterbium	172-1	953	1037	1057	1016	5.40	cps
Ytterbium	172-2	417	380	407	401	4.72	cps
Ytterbium	176-1	3010	2817	2917	2915	3.32	cps
Ytterbium	176-2	510	500	533	514	3.32	cps
Yttrium	89-1	29212895	29127848	29014905	29118549	0.34	cps
Yttrium	89-2	1909490	1902699	1916883	1909691	0.37	cps
Zinc	66-2	2774	2877	2737	2796	2.60	cps
Zirconium	90-1	21450	21998	21560	21669	1.34	cps
Zirconium	91-1	4874	4981	4931	4929	1.08	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV028	Instrumnet Name :	P8
Client Sample ID :	CCV028	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:56:34	DataFile Name :	043CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3535000	3532243	3513856	3527033	0.33	cps
Antimony	121-1	8509016	8678935	8597689	8595213	0.99	cps
Arsenic	75-2	146357	147125	148517	147333	0.74	cps
Barium	135-1	10752277	10739298	10655704	10715760	0.49	cps
Barium	137-1	18278046	18254315	17872133	18134831	1.26	cps
Beryllium	9-1	3022086	3014729	3012931	3016582	0.16	cps
Bismuth	209-1	11727509	11812567	11845226	11795101	0.52	cps
Bismuth	209-2	4296215	4270807	4287030	4284684	0.30	cps
Bromine	81-1	37945	34730	34111	35595	5.78	cps
Cadmium	108-1	162151	163952	165322	163808	0.97	cps
Cadmium	106-1	237421	243787	241616	240941	1.34	cps
Cadmium	111-1	2118236	2103394	2128835	2116822	0.60	cps
Calcium	43-1	14631113	14331477	14325122	14429237	1.21	cps
Calcium	44-1	229826670	229559523	230035743	229807312	0.10	cps
Carbon	12-1	5876718	5886167	5805687	5856191	0.75	cps
Carbon	12-2	42411	41869	41452	41911	1.15	cps
Chlorine	35-1	4023469	3786049	3544930	3784816	6.32	cps
Chlorine	35-2	10884	10581	10090	10518	3.81	cps
Chromium	52-2	1797359	1758167	1812090	1789205	1.56	cps
Cobalt	59-2	3256777	3274898	3296950	3276208	0.61	cps
Copper	63-2	24058825	24364218	24505411	24309485	0.94	cps
Dysprosium	156-1	503	493	397	464	12.68	cps
Dysprosium	156-2	150	123	113	129	14.70	cps
Erbium	164-1	507	490	517	504	2.67	cps
Erbium	164-2	163	150	143	152	6.69	cps
Gadolinium	160-1	333	427	430	397	13.83	cps
Gadolinium	160-2	113	187	153	151	24.30	cps
Holmium	165-1	20442279	20502667	20480572	20475173	0.15	cps
Holmium	165-2	6302901	6359128	6415116	6359048	0.88	cps
Indium	115-1	15299830	15560077	15119859	15326589	1.44	cps
Indium	115-2	1253458	1253136	1269406	1258667	0.74	cps
Iron	54-2	17465084	17745886	17853808	17688259	1.13	cps
Iron	56-2	320634029	324558415	330895775	325362740	1.59	cps
Iron	57-2	8216135	8114205	8240466	8190269	0.82	cps
Krypton	83-1	317	310	273	300	7.78	cps
Lead	206-1	34520029	34123504	34022937	34222157	0.77	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV028	Instrumnet Name :	P8
Client Sample ID :	CCV028	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:56:34	DataFile Name :	043CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	29170221	29161740	28894630	29075530	0.54	cps
Lead	208-1	134160146	134176045	134569350	134301847	0.17	cps
Lithium	6-1	8164794	8205756	8110519	8160356	0.59	cps
Magnesium	24-2	63782212	63135031	63232319	63383187	0.55	cps
Manganese	55-2	7158228	7107546	7157438	7141071	0.41	cps
Molybdenum	94-1	30496679	30499073	30371756	30455836	0.24	cps
Molybdenum	95-1	43634243	43826258	43585971	43682157	0.29	cps
Molybdenum	96-1	47889463	47535126	47822101	47748897	0.39	cps
Molybdenum	97-1	26978543	26701593	27075551	26918562	0.72	cps
Molybdenum	98-1	71415001	70305744	71484701	71068482	0.93	cps
Neodymium	150-1	850	770	820	813	4.97	cps
Neodymium	150-2	53	77	43	58	29.61	cps
Nickel	60-2	822789	824223	828059	825023	0.33	cps
Phosphorus	31-2	31695	32583	31477	31918	1.84	cps
Potassium	39-2	16828556	16687739	16983264	16833186	0.88	cps
Rhodium	103-1	13727944	13696400	13780915	13735086	0.31	cps
Rhodium	103-2	5076776	5004752	5019700	5033743	0.76	cps
Scandium	45-1	11172654	10933222	10820327	10975401	1.64	cps
Scandium	45-2	193132	192140	192058	192443	0.31	cps
Selenium	82-1	120337	121665	122240	121414	0.80	cps
Selenium	77-2	1950	1760	1747	1819	6.25	cps
Selenium	78-2	5975	6245	6518	6246	4.35	cps
Silicon	28-1	10159055	10185661	10196429	10180382	0.19	cps
Silver	107-1	10119648	10295573	10236590	10217270	0.88	cps
Silver	109-1	9692400	9619274	9782589	9698088	0.84	cps
Sodium	23-2	127287498	128042138	128083385	127804340	0.35	cps
Strontium	86-1	2874844	2896816	2856875	2876178	0.70	cps
Strontium	88-1	24280813	24437693	24267896	24328801	0.39	cps
Sulfur	34-1	1578371	1566694	1563085	1569383	0.51	cps
Terbium	159-1	21160027	21074768	20944214	21059670	0.52	cps
Terbium	159-2	6088688	6050913	6102338	6080646	0.44	cps
Thallium	203-1	8407349	8337434	8307763	8350849	0.61	cps
Thallium	205-1	20340258	19644763	19839477	19941499	1.80	cps
Tin	118-1	6982480	7037141	6831470	6950364	1.53	cps
Titanium	47-1	13315052	13267895	13239807	13274251	0.29	cps
Uranium	238-1	26811125	27188174	27234065	27077788	0.86	cps

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV028	Instrumnet Name :	P8
Client Sample ID :	CCV028	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:56:34	DataFile Name :	043CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	1431971	1378353	1417709	1409344	1.97	cps
Ytterbium	172-1	457	497	453	469	5.14	cps
Ytterbium	172-2	220	157	173	183	17.91	cps
Ytterbium	176-1	41298	41646	41391	41445	0.43	cps
Ytterbium	176-2	12056	12723	12669	12483	2.97	cps
Yttrium	89-1	27558028	27581368	27465381	27534926	0.22	cps
Yttrium	89-2	1803362	1814258	1797918	1805179	0.46	cps
Zinc	66-2	2587348	2598283	2613772	2599801	0.51	cps
Zirconium	90-1	15565196	15629810	15317788	15504265	1.06	cps
Zirconium	91-1	3447500	3442782	3440358	3443547	0.11	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB028	Instrumnet Name :	P8
Client Sample ID :	CCB028	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:59:20	DataFile Name :	044CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	163	163	177	168	4.59	cps
Antimony	121-1	2470	2310	2217	2332	5.49	cps
Arsenic	75-2	23	3	13	13	75.02	cps
Barium	135-1	653	607	643	634	3.87	cps
Barium	137-1	1207	990	1080	1092	9.97	cps
Beryllium	9-1	1424	1291	1205	1307	8.43	cps
Bismuth	209-1	13774670	13510525	13620835	13635343	0.97	cps
Bismuth	209-2	4997054	4997251	4893155	4962486	1.21	cps
Bromine	81-1	20088	18689	18669	19149	4.25	cps
Cadmium	108-1	57	47	33	46	25.70	cps
Cadmium	106-1	9130	9684	9250	9354	3.11	cps
Cadmium	111-1	6501	6892	6618	6671	3.01	cps
Calcium	43-1	1103	970	1000	1024	6.83	cps
Calcium	44-1	32729	30676	32253	31886	3.37	cps
Carbon	12-1	5032127	4764464	4619478	4805356	4.36	cps
Carbon	12-2	28892	27679	28027	28199	2.21	cps
Chlorine	35-1	1931440	1815185	1693656	1813427	6.56	cps
Chlorine	35-2	5521	5054	5271	5282	4.42	cps
Chromium	52-2	3060	3040	3027	3043	0.55	cps
Cobalt	59-2	360	323	293	326	10.26	cps
Copper	63-2	4084	4364	3971	4140	4.89	cps
Dysprosium	156-1	20	10	13	14	35.26	cps
Dysprosium	156-2	0	3	0	1	173.21	cps
Erbium	164-1	120	100	97	106	11.95	cps
Erbium	164-2	37	33	37	36	5.42	cps
Gadolinium	160-1	87	117	107	103	14.78	cps
Gadolinium	160-2	17	23	23	21	18.21	cps
Holmium	165-1	21951586	22043103	21531057	21841915	1.25	cps
Holmium	165-2	6886511	6785231	6791050	6820931	0.83	cps
Indium	115-1	17611583	17351301	17662570	17541818	0.95	cps
Indium	115-2	1425111	1411415	1416720	1417749	0.49	cps
Iron	54-2	1513	1437	1453	1468	2.75	cps
Iron	56-2	25297	23604	23523	24141	4.15	cps
Iron	57-2	597	603	507	569	9.49	cps
Krypton	83-1	280	333	380	331	15.11	cps
Lead	206-1	4014	3817	3834	3888	2.81	cps

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB028	Instrumnet Name :	P8
Client Sample ID :	CCB028	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:59:20	DataFile Name :	044CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	3501	3254	3290	3348	3.98	cps
Lead	208-1	15994	14854	14830	15226	4.37	cps
Lithium	6-1	9119194	9341448	9137860	9199500	1.34	cps
Magnesium	24-2	5091	4941	4921	4984	1.86	cps
Manganese	55-2	867	640	723	743	15.42	cps
Molybdenum	94-1	1950	1777	1697	1808	7.16	cps
Molybdenum	95-1	2404	2064	2144	2204	8.07	cps
Molybdenum	96-1	2654	2300	2234	2396	9.42	cps
Molybdenum	97-1	1477	1273	1190	1313	11.23	cps
Molybdenum	98-1	3551	3174	3144	3289	6.89	cps
Neodymium	150-1	13	23	27	21	32.88	cps
Neodymium	150-2	10	10	0	7	86.60	cps
Nickel	60-2	1740	1617	1537	1631	6.28	cps
Phosphorus	31-2	93	70	70	78	17.32	cps
Potassium	39-2	11355	10737	10591	10894	3.72	cps
Rhodium	103-1	16344396	16166886	16216590	16242624	0.56	cps
Rhodium	103-2	5909875	5754625	5903731	5856077	1.50	cps
Scandium	45-1	11876242	12024561	11666985	11855930	1.52	cps
Scandium	45-2	202560	201806	201626	201997	0.25	cps
Selenium	82-1	33	-7	-87	-20	-305.51	cps
Selenium	77-2	3	0	0	1	173.21	cps
Selenium	78-2	10	10	13	11	17.30	cps
Silicon	28-1	638128	629011	620268	629136	1.42	cps
Silver	107-1	1607	1253	1250	1370	14.96	cps
Silver	109-1	1340	1263	1047	1217	12.50	cps
Sodium	23-2	67080	64803	64592	65491	2.11	cps
Strontium	86-1	1470	1243	1483	1399	9.64	cps
Strontium	88-1	8666	7292	8453	8137	9.09	cps
Sulfur	34-1	734947	740751	741212	738970	0.47	cps
Terbium	159-1	22396516	22237241	22424948	22352901	0.45	cps
Terbium	159-2	6479663	6434881	6561380	6491975	0.99	cps
Thallium	203-1	1337	1183	1373	1298	7.77	cps
Thallium	205-1	3104	2547	2544	2731	11.80	cps
Tin	118-1	3057	2940	2850	2949	3.51	cps
Titanium	47-1	580	530	513	541	6.41	cps
Uranium	238-1	637	607	627	623	2.45	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB028	Instrumnet Name :	P8
Client Sample ID :	CCB028	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 13:59:20	DataFile Name :	044CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	40	53	53	49	15.74	cps
Ytterbium	172-1	133	117	147	132	11.37	cps
Ytterbium	172-2	60	40	27	42	39.73	cps
Ytterbium	176-1	2140	2090	2067	2099	1.79	cps
Ytterbium	176-2	273	307	323	301	8.45	cps
Yttrium	89-1	30289384	30347656	29558232	30065091	1.46	cps
Yttrium	89-2	1925474	1845665	1848365	1873168	2.42	cps
Zinc	66-2	267	283	290	280	4.29	cps
Zirconium	90-1	1730	1553	1680	1655	5.50	cps
Zirconium	91-1	370	380	370	373	1.55	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-01A	Instrumnet Name :	P8
Client Sample ID :	ME2993A	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 14:59:28	DataFile Name :	050AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	767	963	897	876	11.42	cps
Antimony	121-1	517	433	433	461	10.43	cps
Arsenic	75-2	190	217	193	200	7.26	cps
Barium	135-1	35530	35583	34581	35231	1.60	cps
Barium	137-1	61633	60263	61044	60980	1.13	cps
Beryllium	9-1	350	379	437	389	11.47	cps
Bismuth	209-1	12423238	12429610	12017571	12290140	1.92	cps
Bismuth	209-2	4328759	4323200	4304652	4318870	0.29	cps
Bromine	81-1	137867	149769	160183	149273	7.48	cps
Cadmium	108-1	40	27	50	39	30.10	cps
Cadmium	106-1	8639	8543	8583	8588	0.57	cps
Cadmium	111-1	6066	6005	6010	6027	0.57	cps
Calcium	43-1	25570742	25883799	25942705	25799082	0.77	cps
Calcium	44-1	410048421	412828061	416675754	413184078	0.81	cps
Carbon	12-1	7838108	8368751	8503702	8236854	4.27	cps
Carbon	12-2	59985	60815	61699	60833	1.41	cps
Chlorine	35-1	3259737	3739774	4028666	3676059	10.57	cps
Chlorine	35-2	14925	15845	16172	15647	4.14	cps
Chromium	52-2	1217	1180	1283	1227	4.27	cps
Cobalt	59-2	577	480	557	538	9.49	cps
Copper	63-2	5594	5568	5494	5552	0.93	cps
Dysprosium	156-1	173	167	187	176	5.80	cps
Dysprosium	156-2	40	60	67	56	24.98	cps
Erbium	164-1	220	203	177	200	10.93	cps
Erbium	164-2	67	77	40	61	31.02	cps
Gadolinium	160-1	217	217	230	221	3.48	cps
Gadolinium	160-2	50	53	60	54	9.35	cps
Holmium	165-1	20869052	21024337	20540758	20811383	1.19	cps
Holmium	165-2	6281381	6272663	6239248	6264431	0.36	cps
Indium	115-1	16347873	16103160	16010590	16153874	1.08	cps
Indium	115-2	1266811	1269961	1275922	1270898	0.36	cps
Iron	54-2	702619	704654	697281	701518	0.54	cps
Iron	56-2	13486269	13540565	13737281	13588038	0.97	cps
Iron	57-2	318997	322768	323620	321795	0.76	cps
Krypton	83-1	307	327	290	308	5.96	cps
Lead	206-1	3317	3244	2864	3142	7.75	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-01A	Instrumnet Name :	P8
Client Sample ID :	ME2993A	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 14:59:28	DataFile Name :	050AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2700	2477	2507	2561	4.73	cps
Lead	208-1	12643	12176	11919	12246	3.00	cps
Lithium	6-1	8450837	8299375	8505164	8418459	1.27	cps
Magnesium	24-2	42253741	42224763	41905759	42128087	0.46	cps
Manganese	55-2	99742	100876	100286	100301	0.57	cps
Molybdenum	94-1	8169	8726	7812	8236	5.59	cps
Molybdenum	95-1	12693	12986	13293	12991	2.31	cps
Molybdenum	96-1	14174	14277	13944	14132	1.21	cps
Molybdenum	97-1	8042	8156	7822	8007	2.12	cps
Molybdenum	98-1	21069	20909	20562	20847	1.24	cps
Neodymium	150-1	223	230	163	206	17.86	cps
Neodymium	150-2	40	40	27	36	21.64	cps
Nickel	60-2	1233	1247	1180	1220	2.89	cps
Phosphorus	31-2	137	123	130	130	5.13	cps
Potassium	39-2	565501	571350	570048	568966	0.54	cps
Rhodium	103-1	14509149	14275871	14295926	14360315	0.90	cps
Rhodium	103-2	5110644	5074518	5127132	5104098	0.53	cps
Scandium	45-1	11165272	11390277	11231460	11262336	1.03	cps
Scandium	45-2	189475	192058	193058	191530	0.97	cps
Selenium	82-1	2927	2764	3107	2933	5.86	cps
Selenium	77-2	33	43	53	43	23.08	cps
Selenium	78-2	170	140	163	158	9.98	cps
Silicon	28-1	131533538	132775208	129379325	131229357	1.31	cps
Silver	107-1	330	333	303	322	5.10	cps
Silver	109-1	87	83	87	86	2.25	cps
Sodium	23-2	23454542	23632180	23596730	23561151	0.40	cps
Strontium	86-1	72013797	70898421	70614696	71175638	1.04	cps
Strontium	88-1	623932937	621980844	616321857	620745213	0.64	cps
Sulfur	34-1	42972931	43550888	43532909	43352243	0.76	cps
Terbium	159-1	21582006	21594517	21053916	21410146	1.44	cps
Terbium	159-2	6048286	5970328	5930363	5982992	1.00	cps
Thallium	203-1	490	463	423	459	7.31	cps
Thallium	205-1	1147	1007	1060	1071	6.60	cps
Tin	118-1	3420	3314	3277	3337	2.23	cps
Titanium	47-1	3020	3097	3047	3055	1.27	cps
Uranium	238-1	46897	46221	45883	46334	1.11	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1231-01A	Instrumnet Name :	P8
Client Sample ID :	ME2993A	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 14:59:28	DataFile Name :	050AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	97	207	107	137	44.51	cps
Ytterbium	172-1	177	177	150	168	9.18	cps
Ytterbium	172-2	63	73	53	63	15.79	cps
Ytterbium	176-1	2187	2147	2037	2124	3.66	cps
Ytterbium	176-2	270	307	300	292	6.68	cps
Yttrium	89-1	28369951	28257931	28034859	28220914	0.60	cps
Yttrium	89-2	1735326	1758148	1737210	1743562	0.73	cps
Zinc	66-2	737	797	727	753	5.03	cps
Zirconium	90-1	1730	1827	1787	1781	2.73	cps
Zirconium	91-1	433	447	363	414	10.80	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV029	Instrumnet Name :	P8
Client Sample ID :	CCV029	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 15:09:38	DataFile Name :	053CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3272432	3375867	3368617	3338972	1.73	cps
Antimony	121-1	7934253	8071227	8067513	8024331	0.97	cps
Arsenic	75-2	139045	141128	140633	140268	0.78	cps
Barium	135-1	10028013	9954710	10019641	10000788	0.40	cps
Barium	137-1	17228663	17261240	17240280	17243395	0.10	cps
Beryllium	9-1	2747516	2774923	2783022	2768487	0.67	cps
Bismuth	209-1	11207037	11280562	11071651	11186417	0.95	cps
Bismuth	209-2	3961713	3982666	3935024	3959801	0.60	cps
Bromine	81-1	12492	12132	12232	12285	1.51	cps
Cadmium	108-1	152211	152391	154205	152936	0.72	cps
Cadmium	106-1	222668	224385	225610	224221	0.66	cps
Cadmium	111-1	1961144	1972915	1939011	1957690	0.88	cps
Calcium	43-1	13736244	13654250	14009214	13799903	1.35	cps
Calcium	44-1	220265370	218159250	222847890	220424170	1.07	cps
Carbon	12-1	5734260	5721293	5823173	5759575	0.96	cps
Carbon	12-2	40960	40843	40539	40781	0.53	cps
Chlorine	35-1	523476	519648	513668	518931	0.95	cps
Chlorine	35-2	1750	1930	1710	1797	6.52	cps
Chromium	52-2	1698760	1684414	1660022	1681065	1.17	cps
Cobalt	59-2	3141049	3127504	3127835	3132130	0.25	cps
Copper	63-2	23108398	23171089	22895860	23058449	0.63	cps
Dysprosium	156-1	403	450	507	453	11.42	cps
Dysprosium	156-2	83	90	103	92	11.04	cps
Erbium	164-1	360	390	403	384	5.77	cps
Erbium	164-2	150	133	87	123	26.62	cps
Gadolinium	160-1	400	427	423	417	3.49	cps
Gadolinium	160-2	127	127	150	134	10.02	cps
Holmium	165-1	19147084	19013968	19064603	19075218	0.35	cps
Holmium	165-2	5942224	5948357	5940599	5943727	0.07	cps
Indium	115-1	14648482	14585071	14441471	14558342	0.73	cps
Indium	115-2	1183320	1196051	1187928	1189100	0.54	cps
Iron	54-2	16548794	16879723	16746921	16725146	1.00	cps
Iron	56-2	305250962	305947575	307804595	306334378	0.43	cps
Iron	57-2	7791454	7594981	7668330	7684921	1.29	cps
Krypton	83-1	343	290	377	337	12.99	cps
Lead	206-1	31904025	32094929	31635550	31878168	0.72	cps

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV029	Instrumnet Name :	P8
Client Sample ID :	CCV029	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 15:09:38	DataFile Name :	053CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	27398856	27456492	27038049	27297799	0.83	cps
Lead	208-1	125944400	127336838	124920765	126067334	0.96	cps
Lithium	6-1	7693390	7633919	7568397	7631902	0.82	cps
Magnesium	24-2	59843371	60203817	59842887	59963359	0.35	cps
Manganese	55-2	6647849	6809518	6726195	6727854	1.20	cps
Molybdenum	94-1	28876030	28808966	28850632	28845210	0.12	cps
Molybdenum	95-1	41264622	41377314	41326767	41322901	0.14	cps
Molybdenum	96-1	45212671	45942299	45467256	45540742	0.81	cps
Molybdenum	97-1	25491910	25529565	25219866	25413780	0.66	cps
Molybdenum	98-1	66796939	66889441	66749982	66812121	0.11	cps
Neodymium	150-1	793	763	790	782	2.10	cps
Neodymium	150-2	30	63	53	49	34.99	cps
Nickel	60-2	891250	891814	894278	892447	0.18	cps
Phosphorus	31-2	29817	29567	29754	29713	0.44	cps
Potassium	39-2	16067841	15948766	15967094	15994567	0.40	cps
Rhodium	103-1	13141470	12927724	12990359	13019851	0.84	cps
Rhodium	103-2	4756825	4777391	4719229	4751148	0.62	cps
Scandium	45-1	10340607	10457417	10504925	10434316	0.81	cps
Scandium	45-2	182368	182294	184077	182913	0.55	cps
Selenium	82-1	115389	115442	115762	115531	0.17	cps
Selenium	77-2	1790	1700	1697	1729	3.06	cps
Selenium	78-2	5728	6075	5818	5874	3.06	cps
Silicon	28-1	9594378	9664271	9608554	9622401	0.38	cps
Silver	107-1	9547346	9842097	9680775	9690073	1.52	cps
Silver	109-1	9122590	9108387	9123646	9118208	0.09	cps
Sodium	23-2	121820708	120930208	121092455	121281124	0.39	cps
Strontium	86-1	2741434	2695946	2771528	2736303	1.39	cps
Strontium	88-1	23198319	23526615	23551597	23425510	0.84	cps
Sulfur	34-1	1467974	1452802	1455656	1458811	0.55	cps
Terbium	159-1	19629991	19711968	19911443	19751134	0.73	cps
Terbium	159-2	5746655	5724629	5686070	5719118	0.54	cps
Thallium	203-1	7849665	7829650	7735165	7804827	0.78	cps
Thallium	205-1	18737803	18634173	18607015	18659664	0.37	cps
Tin	118-1	6489039	6573782	6523273	6528698	0.65	cps
Titanium	47-1	12571543	12683991	12687816	12647783	0.52	cps
Uranium	238-1	25046654	25398210	25102612	25182492	0.75	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV029	Instrumnet Name :	P8
Client Sample ID :	CCV029	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 15:09:38	DataFile Name :	053CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	1323347	1320142	1317367	1320285	0.23	cps
Ytterbium	172-1	467	500	427	464	7.91	cps
Ytterbium	172-2	170	187	170	176	5.48	cps
Ytterbium	176-1	38419	38747	38673	38613	0.45	cps
Ytterbium	176-2	11649	11782	11959	11796	1.32	cps
Yttrium	89-1	26107911	26304833	26384549	26265764	0.54	cps
Yttrium	89-2	1668700	1672383	1665400	1668828	0.21	cps
Zinc	66-2	2439647	2461260	2460553	2453820	0.50	cps
Zirconium	90-1	14611263	14693228	14685815	14663435	0.31	cps
Zirconium	91-1	3310066	3289223	3298675	3299321	0.32	cps

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On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB029	Instrumnet Name :	P8
Client Sample ID :	CCB029	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 15:12:26	DataFile Name :	054CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	150	140	170	153	9.96	cps
Antimony	121-1	2754	2514	2414	2560	6.83	cps
Arsenic	75-2	7	7	7	7	0.00	cps
Barium	135-1	900	887	837	874	3.82	cps
Barium	137-1	1653	1450	1350	1485	10.41	cps
Beryllium	9-1	1617	1524	1422	1521	6.41	cps
Bismuth	209-1	12854940	13014717	12693521	12854393	1.25	cps
Bismuth	209-2	4637478	4835440	4525892	4666270	3.36	cps
Bromine	81-1	10291	9753	9657	9900	3.45	cps
Cadmium	108-1	43	77	57	59	28.49	cps
Cadmium	106-1	8343	8456	8056	8285	2.49	cps
Cadmium	111-1	5986	6009	5729	5908	2.63	cps
Calcium	43-1	1397	1223	1090	1237	12.43	cps
Calcium	44-1	35855	33667	32494	34005	5.02	cps
Carbon	12-1	4324170	4117800	3893508	4111826	5.24	cps
Carbon	12-2	23422	24090	23846	23786	1.42	cps
Chlorine	35-1	434412	425648	417734	425932	1.96	cps
Chlorine	35-2	1417	1300	1410	1376	4.76	cps
Chromium	52-2	2207	2234	2207	2216	0.69	cps
Cobalt	59-2	270	287	360	306	15.67	cps
Copper	63-2	4074	3604	3667	3782	6.75	cps
Dysprosium	156-1	13	13	13	13	0.00	cps
Dysprosium	156-2	7	7	0	4	86.60	cps
Erbium	164-1	90	90	90	90	0.00	cps
Erbium	164-2	43	30	37	37	18.18	cps
Gadolinium	160-1	123	77	100	100	23.33	cps
Gadolinium	160-2	3	17	10	10	66.70	cps
Holmium	165-1	20424776	20452362	20260381	20379173	0.51	cps
Holmium	165-2	6223177	6483738	6221681	6309532	2.39	cps
Indium	115-1	16477757	16420381	16351238	16416458	0.39	cps
Indium	115-2	1303666	1378445	1295181	1325764	3.46	cps
Iron	54-2	1217	1360	1107	1228	10.35	cps
Iron	56-2	22203	20772	20151	21042	5.00	cps
Iron	57-2	547	520	480	516	6.51	cps
Krypton	83-1	310	337	297	314	6.48	cps
Lead	206-1	5194	4684	4237	4705	10.18	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB029	Instrumnet Name :	P8
Client Sample ID :	CCB029	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 15:12:26	DataFile Name :	054CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	4594	4074	3881	4183	8.82	cps
Lead	208-1	20306	18619	17485	18803	7.55	cps
Lithium	6-1	8617961	8321619	8403700	8447760	1.81	cps
Magnesium	24-2	4641	4531	4211	4461	5.01	cps
Manganese	55-2	703	680	753	712	5.26	cps
Molybdenum	94-1	2380	1853	1760	1998	16.73	cps
Molybdenum	95-1	2774	2387	2194	2451	12.05	cps
Molybdenum	96-1	3007	2240	2460	2569	15.37	cps
Molybdenum	97-1	1697	1347	1250	1431	16.42	cps
Molybdenum	98-1	4201	4031	3214	3815	13.83	cps
Neodymium	150-1	30	17	33	27	33.06	cps
Neodymium	150-2	3	0	10	4	114.60	cps
Nickel	60-2	1233	1327	1303	1288	3.77	cps
Phosphorus	31-2	70	67	87	74	14.39	cps
Potassium	39-2	10978	10707	10854	10846	1.25	cps
Rhodium	103-1	15223481	15682879	15247934	15384764	1.68	cps
Rhodium	103-2	5377929	5738732	5483191	5533284	3.35	cps
Scandium	45-1	11127322	11209439	11149665	11162142	0.38	cps
Scandium	45-2	188121	197847	188551	191506	2.87	cps
Selenium	82-1	3	-87	7	-26	-207.19	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	0	10	7	6	91.64	cps
Silicon	28-1	591343	581589	573873	582268	1.50	cps
Silver	107-1	1463	1350	1187	1333	10.43	cps
Silver	109-1	1247	1163	1063	1158	7.93	cps
Sodium	23-2	60625	60712	59578	60305	1.05	cps
Strontium	86-1	1083	1053	1010	1049	3.52	cps
Strontium	88-1	5301	4324	4481	4702	11.16	cps
Sulfur	34-1	722003	719649	722625	721426	0.22	cps
Terbium	159-1	20996326	20759335	20533641	20763101	1.11	cps
Terbium	159-2	6008650	6410939	6048030	6155873	3.60	cps
Thallium	203-1	1250	1090	1017	1119	10.66	cps
Thallium	205-1	2614	2594	2494	2567	2.51	cps
Tin	118-1	3110	3077	3030	3073	1.31	cps
Titanium	47-1	693	677	557	642	11.61	cps
Uranium	238-1	970	767	667	801	19.29	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB029	Instrumnet Name :	P8
Client Sample ID :	CCB029	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 15:12:26	DataFile Name :	054CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	40	17	47	34	45.73	cps
Ytterbium	172-1	113	100	90	101	11.58	cps
Ytterbium	172-2	37	50	33	40	22.05	cps
Ytterbium	176-1	2067	1857	2067	1997	6.07	cps
Ytterbium	176-2	250	293	297	280	9.30	cps
Yttrium	89-1	28941405	28341844	28341614	28541621	1.21	cps
Yttrium	89-2	1751298	1848091	1703242	1767544	4.17	cps
Zinc	66-2	333	410	423	389	12.49	cps
Zirconium	90-1	1777	1537	1477	1597	9.94	cps
Zirconium	91-1	360	363	330	351	5.23	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-06	Instrumnet Name :	P8
Client Sample ID :	ME29D2	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:16:52	DataFile Name :	055AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	463	510	547	507	8.24	cps
Antimony	121-1	317	297	200	271	23.01	cps
Arsenic	75-2	23	27	40	30	29.40	cps
Barium	135-1	86792	86883	87308	86995	0.32	cps
Barium	137-1	147756	149213	147426	148132	0.64	cps
Beryllium	9-1	382	377	356	372	3.75	cps
Bismuth	209-1	12027147	12187648	11896570	12037122	1.21	cps
Bismuth	209-2	4295387	4229709	4305834	4276977	0.96	cps
Bromine	81-1	595118	703803	769568	689496	12.78	cps
Cadmium	108-1	43	40	47	43	7.70	cps
Cadmium	106-1	7579	8202	8653	8145	6.62	cps
Cadmium	111-1	5525	5960	6321	5935	6.72	cps
Calcium	43-1	13496241	13550591	13597483	13548105	0.37	cps
Calcium	44-1	212398144	209648697	213188950	211745264	0.88	cps
Carbon	12-1	8892093	9611794	9997517	9500468	5.91	cps
Carbon	12-2	68026	67501	68559	68029	0.78	cps
Chlorine	35-1	11630460	12878644	13712930	12740678	8.23	cps
Chlorine	35-2	51461	52967	54786	53071	3.14	cps
Chromium	52-2	1933	1913	1950	1932	0.95	cps
Cobalt	59-2	330	373	293	332	12.05	cps
Copper	63-2	4301	4221	4161	4227	1.66	cps
Dysprosium	156-1	97	87	83	89	7.81	cps
Dysprosium	156-2	30	27	23	27	12.51	cps
Erbium	164-1	150	157	183	163	10.80	cps
Erbium	164-2	33	63	33	43	39.97	cps
Gadolinium	160-1	160	137	150	149	7.86	cps
Gadolinium	160-2	43	37	23	34	29.57	cps
Holmium	165-1	20268187	19776435	20035452	20026692	1.23	cps
Holmium	165-2	6151212	6123504	6197465	6157394	0.61	cps
Indium	115-1	15569448	15653584	15364015	15529016	0.96	cps
Indium	115-2	1224607	1246439	1239537	1236861	0.90	cps
Iron	54-2	3577	3467	3494	3513	1.63	cps
Iron	56-2	61026	62295	62446	61922	1.26	cps
Iron	57-2	2130	2040	2034	2068	2.61	cps
Krypton	83-1	270	260	250	260	3.85	cps
Lead	206-1	6578	5635	5301	5838	11.35	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-06	Instrumnet Name :	P8
Client Sample ID :	ME29D2	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:16:52	DataFile Name :	055AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	5368	4778	4478	4874	9.29	cps
Lead	208-1	25881	22134	20500	22838	12.08	cps
Lithium	6-1	8285666	7974414	8074983	8111688	1.96	cps
Magnesium	24-2	16168202	16250786	16207761	16208916	0.25	cps
Manganese	55-2	21987	22484	21884	22118	1.45	cps
Molybdenum	94-1	1080	1043	1180	1101	6.42	cps
Molybdenum	95-1	523	527	510	520	1.70	cps
Molybdenum	96-1	640	590	690	640	7.81	cps
Molybdenum	97-1	397	340	340	359	9.12	cps
Molybdenum	98-1	830	863	807	833	3.42	cps
Neodymium	150-1	107	107	87	100	11.55	cps
Neodymium	150-2	17	10	10	12	31.50	cps
Nickel	60-2	1610	1653	1633	1632	1.33	cps
Phosphorus	31-2	97	153	147	132	23.42	cps
Potassium	39-2	377053	379908	383950	380304	0.91	cps
Rhodium	103-1	13837988	13896903	13872554	13869148	0.21	cps
Rhodium	103-2	4960820	4962815	4925990	4949875	0.42	cps
Scandium	45-1	10847372	10759206	10606999	10737859	1.13	cps
Scandium	45-2	182861	185560	186307	184909	0.98	cps
Selenium	82-1	227	260	313	267	16.40	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	20	13	13	16	24.76	cps
Silicon	28-1	78876899	78352962	79034530	78754797	0.45	cps
Silver	107-1	340	427	417	394	12.02	cps
Silver	109-1	67	73	103	81	24.08	cps
Sodium	23-2	28061549	28304899	28279403	28215283	0.47	cps
Strontium	86-1	121481878	122825562	123459885	122589108	0.82	cps
Strontium	88-1	1054164891	1062675664	1062819851	1059886802	0.47	cps
Sulfur	34-1	11571404	11615743	11896441	11694529	1.51	cps
Terbium	159-1	20620604	20015995	20627258	20421286	1.72	cps
Terbium	159-2	5821967	5902534	5840890	5855130	0.72	cps
Thallium	203-1	383	387	407	392	3.22	cps
Thallium	205-1	1263	1113	1077	1151	8.59	cps
Tin	118-1	1780	1813	1783	1792	1.02	cps
Titanium	47-1	1527	1743	1677	1649	6.73	cps
Uranium	238-1	9460	9660	9454	9525	1.23	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-06	Instrumnet Name :	P8
Client Sample ID :	ME29D2	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:16:52	DataFile Name :	055AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	310	300	330	313	4.87	cps
Ytterbium	172-1	130	143	150	141	7.22	cps
Ytterbium	172-2	27	57	37	40	38.18	cps
Ytterbium	176-1	1917	1863	1970	1917	2.78	cps
Ytterbium	176-2	313	287	353	318	10.56	cps
Yttrium	89-1	26805940	26849459	27182365	26945921	0.76	cps
Yttrium	89-2	1699633	1699257	1637076	1678655	2.15	cps
Zinc	66-2	1373	1407	1337	1372	2.55	cps
Zirconium	90-1	2494	2377	2234	2368	5.50	cps
Zirconium	91-1	467	447	453	456	2.24	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-08	Instrumnet Name :	P8
Client Sample ID :	ME29D2D	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:20:07	DataFile Name :	056AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1087	1862	1090	1346	33.17	cps
Antimony	121-1	2500	2310	2350	2387	4.20	cps
Arsenic	75-2	110	93	80	94	15.92	cps
Barium	135-1	98686	99928	98605	99073	0.75	cps
Barium	137-1	171526	171287	172184	171665	0.27	cps
Beryllium	9-1	364	401	419	395	7.12	cps
Bismuth	209-1	12172853	12051363	12370663	12198293	1.32	cps
Bismuth	209-2	4294165	4333351	4301439	4309652	0.48	cps
Bromine	81-1	688747	793057	841436	774414	10.08	cps
Cadmium	108-1	107	137	97	113	18.37	cps
Cadmium	106-1	8746	8793	8776	8772	0.27	cps
Cadmium	111-1	7008	7053	7109	7056	0.72	cps
Calcium	43-1	13916352	14107286	13947795	13990478	0.73	cps
Calcium	44-1	217067537	219899117	222841477	219936043	1.31	cps
Carbon	12-1	14106042	14796803	15221213	14708019	3.83	cps
Carbon	12-2	98715	100628	100829	100057	1.17	cps
Chlorine	35-1	12362908	13801170	14571036	13578371	8.25	cps
Chlorine	35-2	54626	56041	56242	55636	1.58	cps
Chromium	52-2	2560	2657	2714	2644	2.93	cps
Cobalt	59-2	2604	2474	2470	2516	3.02	cps
Copper	63-2	16306	16233	16573	16371	1.09	cps
Dysprosium	156-1	137	167	123	142	15.60	cps
Dysprosium	156-2	33	33	47	38	20.39	cps
Erbium	164-1	213	247	190	217	13.15	cps
Erbium	164-2	110	47	67	74	43.49	cps
Gadolinium	160-1	230	217	187	211	10.51	cps
Gadolinium	160-2	50	57	67	58	14.52	cps
Holmium	165-1	20647557	20408045	20383967	20479856	0.71	cps
Holmium	165-2	6161334	6247892	6322407	6243878	1.29	cps
Indium	115-1	15915486	16024363	15786205	15908685	0.75	cps
Indium	115-2	1259180	1275629	1272314	1269041	0.69	cps
Iron	54-2	10521	10554	10000	10358	3.00	cps
Iron	56-2	193993	192785	193490	193423	0.31	cps
Iron	57-2	5034	5111	5068	5071	0.76	cps
Krypton	83-1	267	320	260	282	11.65	cps
Lead	206-1	10257	10041	9747	10015	2.56	cps

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-08	Instrumnet Name :	P8
Client Sample ID :	ME29D2D	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:20:07	DataFile Name :	056AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	8199	8029	7856	8028	2.14	cps
Lead	208-1	37995	38209	37729	37977	0.63	cps
Lithium	6-1	8365482	8229794	8277235	8290837	0.83	cps
Magnesium	24-2	19420489	19823456	19590526	19611490	1.03	cps
Manganese	55-2	295696	298893	298361	297650	0.58	cps
Molybdenum	94-1	18005	17254	17945	17735	2.35	cps
Molybdenum	95-1	29227	28927	29441	29198	0.89	cps
Molybdenum	96-1	31081	31556	31051	31230	0.91	cps
Molybdenum	97-1	18265	18352	18335	18318	0.25	cps
Molybdenum	98-1	46574	46635	46809	46673	0.26	cps
Neodymium	150-1	187	193	147	176	14.38	cps
Neodymium	150-2	37	17	33	29	37.08	cps
Nickel	60-2	5354	5018	5154	5175	3.27	cps
Phosphorus	31-2	257	273	287	272	5.52	cps
Potassium	39-2	546377	558005	559522	554635	1.30	cps
Rhodium	103-1	14124273	14032755	14305849	14154292	0.98	cps
Rhodium	103-2	5076443	5033772	5078859	5063025	0.50	cps
Scandium	45-1	11014427	11117694	10877279	11003134	1.10	cps
Scandium	45-2	188917	191542	191305	190588	0.76	cps
Selenium	82-1	337	417	480	411	17.47	cps
Selenium	77-2	0	3	0	1	173.21	cps
Selenium	78-2	10	7	0	6	91.64	cps
Silicon	28-1	81003724	82253987	81742840	81666850	0.77	cps
Silver	107-1	630	617	660	636	3.49	cps
Silver	109-1	293	337	670	433	47.59	cps
Sodium	23-2	31062917	31777770	31495035	31445240	1.14	cps
Strontium	86-1	117943828	114734738	115864128	116180898	1.40	cps
Strontium	88-1	1007038705	993658332	998159452	999618830	0.68	cps
Sulfur	34-1	13458067	13695554	13469206	13540942	0.99	cps
Terbium	159-1	20995891	20687458	21110616	20931322	1.05	cps
Terbium	159-2	5928684	5944962	6017208	5963618	0.79	cps
Thallium	203-1	773	847	757	792	6.04	cps
Thallium	205-1	1877	1850	1810	1846	1.82	cps
Tin	118-1	2517	2584	2610	2570	1.87	cps
Titanium	47-1	2940	3961	2687	3196	21.10	cps
Uranium	238-1	70371	69215	68897	69494	1.12	cps

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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-08	Instrumnet Name :	P8
Client Sample ID :	ME29D2D	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:20:07	DataFile Name :	056AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	533	717	577	609	15.74	cps
Ytterbium	172-1	173	153	180	169	8.22	cps
Ytterbium	172-2	60	70	67	66	7.77	cps
Ytterbium	176-1	2140	2080	2070	2097	1.81	cps
Ytterbium	176-2	300	453	350	368	21.26	cps
Yttrium	89-1	27913743	27530383	27764504	27736210	0.70	cps
Yttrium	89-2	1714305	1752511	1719810	1728875	1.19	cps
Zinc	66-2	4287	4154	4327	4256	2.13	cps
Zirconium	90-1	3314	2960	3167	3147	5.64	cps
Zirconium	91-1	710	657	727	698	5.24	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-06LX5	Instrumnet Name :	P8
Client Sample ID :	ME29D2L	Dilution Factor :	5
Date & Time Acquired :	2025-02-13 16:23:31	DataFile Name :	057AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	110	170	123	134	23.43	cps
Antimony	121-1	113	120	97	110	10.92	cps
Arsenic	75-2	3	7	3	4	43.40	cps
Barium	135-1	18229	17845	18122	18065	1.10	cps
Barium	137-1	30518	31059	31440	31006	1.49	cps
Beryllium	9-1	349	389	354	364	5.99	cps
Bismuth	209-1	12426209	12489378	12368142	12427910	0.49	cps
Bismuth	209-2	4482823	4451324	4482586	4472244	0.41	cps
Bromine	81-1	235902	239639	243234	239592	1.53	cps
Cadmium	108-1	37	37	23	32	23.90	cps
Cadmium	106-1	8263	8479	8646	8463	2.27	cps
Cadmium	111-1	5851	5997	6099	5982	2.08	cps
Calcium	43-1	2876724	2874936	2854291	2868651	0.43	cps
Calcium	44-1	44421106	44535854	43976459	44311140	0.67	cps
Carbon	12-1	6414192	6294059	6084022	6264091	2.67	cps
Carbon	12-2	38270	38888	38203	38453	0.98	cps
Chlorine	35-1	3553318	3759467	3756797	3689860	3.20	cps
Chlorine	35-2	13436	13226	13440	13367	0.92	cps
Chromium	52-2	2000	2010	1940	1983	1.91	cps
Cobalt	59-2	120	170	170	153	18.83	cps
Copper	63-2	2774	2727	2754	2751	0.85	cps
Dysprosium	156-1	27	27	43	32	29.85	cps
Dysprosium	156-2	0	7	7	4	86.60	cps
Erbium	164-1	133	103	107	114	14.37	cps
Erbium	164-2	23	23	30	26	15.07	cps
Gadolinium	160-1	87	107	90	94	11.35	cps
Gadolinium	160-2	33	27	20	27	24.99	cps
Holmium	165-1	20108457	19882830	19885107	19958798	0.65	cps
Holmium	165-2	6101597	6145560	6203136	6150097	0.83	cps
Indium	115-1	15694835	15714726	15856046	15755202	0.56	cps
Indium	115-2	1265511	1265380	1262903	1264598	0.12	cps
Iron	54-2	1347	1293	1330	1323	2.06	cps
Iron	56-2	21212	20929	20739	20960	1.14	cps
Iron	57-2	650	613	713	659	7.68	cps
Krypton	83-1	303	247	307	286	11.81	cps
Lead	206-1	1980	2034	1990	2001	1.42	cps

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-06LX5	Instrumnet Name :	P8
Client Sample ID :	ME29D2L	Dilution Factor :	5
Date & Time Acquired :	2025-02-13 16:23:31	DataFile Name :	057AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1740	1800	1753	1765	1.79	cps
Lead	208-1	8178	8214	8111	8168	0.64	cps
Lithium	6-1	8253405	8309662	8308327	8290465	0.39	cps
Magnesium	24-2	3386652	3371920	3397103	3385225	0.37	cps
Manganese	55-2	4294	4811	4474	4526	5.80	cps
Molybdenum	94-1	847	673	790	770	11.48	cps
Molybdenum	95-1	653	630	600	628	4.26	cps
Molybdenum	96-1	570	740	627	646	13.41	cps
Molybdenum	97-1	393	323	347	354	10.06	cps
Molybdenum	98-1	890	937	850	892	4.86	cps
Neodymium	150-1	47	30	23	33	36.07	cps
Neodymium	150-2	3	7	13	8	65.47	cps
Nickel	60-2	1310	1353	1353	1339	1.87	cps
Phosphorus	31-2	80	73	97	83	14.43	cps
Potassium	39-2	86182	85424	85451	85686	0.50	cps
Rhodium	103-1	14663702	14650494	14390399	14568198	1.06	cps
Rhodium	103-2	5233444	5140679	5160720	5178281	0.94	cps
Scandium	45-1	10866880	11049037	10906346	10940754	0.88	cps
Scandium	45-2	185163	182577	185055	184265	0.79	cps
Selenium	82-1	143	180	23	116	70.91	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	7	7	7	7	0.00	cps
Silicon	28-1	16652093	16646689	16658512	16652431	0.04	cps
Silver	107-1	287	283	250	273	7.42	cps
Silver	109-1	77	120	80	92	26.15	cps
Sodium	23-2	5809857	5838560	5811016	5819811	0.28	cps
Strontium	86-1	25732050	25319132	25364571	25471918	0.89	cps
Strontium	88-1	221365757	215800397	218763550	218643235	1.27	cps
Sulfur	34-1	3082017	3152750	3168677	3134481	1.47	cps
Terbium	159-1	20621093	20437103	20428998	20495732	0.53	cps
Terbium	159-2	5902972	5844139	5905417	5884176	0.59	cps
Thallium	203-1	353	483	397	411	16.10	cps
Thallium	205-1	990	1163	1197	1117	9.94	cps
Tin	118-1	2270	2374	2267	2304	2.63	cps
Titanium	47-1	620	520	513	551	10.84	cps
Uranium	238-1	1987	1957	1970	1971	0.76	cps

Reviewed By:kareem
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Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-06LX5	Instrumnet Name :	P8
Client Sample ID :	ME29D2L	Dilution Factor :	5
Date & Time Acquired :	2025-02-13 16:23:31	DataFile Name :	057AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	80	50	40	57	36.74	cps
Ytterbium	172-1	107	137	113	119	13.25	cps
Ytterbium	172-2	43	47	40	43	7.70	cps
Ytterbium	176-1	2007	2017	2110	2045	2.79	cps
Ytterbium	176-2	280	283	343	302	11.79	cps
Yttrium	89-1	27267327	27212279	26503000	26994202	1.58	cps
Yttrium	89-2	1712536	1693336	1700177	1702016	0.57	cps
Zinc	66-2	470	497	483	483	2.76	cps
Zirconium	90-1	1110	1067	1157	1111	4.05	cps
Zirconium	91-1	207	243	290	247	16.93	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-09	Instrumnet Name :	P8
Client Sample ID :	ME29D2S	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:26:46	DataFile Name :	058AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	122681	123734	123787	123401	0.51	cps
Antimony	121-1	1849164	1815923	1834593	1833226	0.91	cps
Arsenic	75-2	12169	12302	12185	12219	0.59	cps
Barium	135-1	8598612	8650816	8613815	8621081	0.31	cps
Barium	137-1	14689171	14654126	14542363	14628553	0.52	cps
Beryllium	9-1	289971	291960	293346	291759	0.58	cps
Bismuth	209-1	12222007	12250836	12070341	12181061	0.80	cps
Bismuth	209-2	4282969	4227639	4272778	4261129	0.69	cps
Bromine	81-1	670556	793359	853838	772584	12.09	cps
Cadmium	108-1	13647	13603	12996	13415	2.71	cps
Cadmium	106-1	27073	27040	26849	26988	0.45	cps
Cadmium	111-1	213008	213499	211266	212591	0.55	cps
Calcium	43-1	13693375	13838646	13840322	13790781	0.61	cps
Calcium	44-1	216238503	217273617	216449263	216653795	0.25	cps
Carbon	12-1	10578320	11431832	11715113	11241755	5.26	cps
Carbon	12-2	77633	79105	80777	79172	1.99	cps
Chlorine	35-1	48720564	53511516	56605871	52945984	7.50	cps
Chlorine	35-2	210468	214718	217712	214300	1.70	cps
Chromium	52-2	652992	656758	657658	655803	0.38	cps
Cobalt	59-2	3210840	3215993	3284643	3237159	1.27	cps
Copper	63-2	1179990	1187234	1189246	1185490	0.41	cps
Dysprosium	156-1	143	140	187	157	16.62	cps
Dysprosium	156-2	7	37	20	21	71.19	cps
Erbium	164-1	160	197	220	192	15.73	cps
Erbium	164-2	47	30	70	49	41.10	cps
Gadolinium	160-1	193	160	137	163	17.44	cps
Gadolinium	160-2	50	30	23	34	40.30	cps
Holmium	165-1	20904884	20069962	20435318	20470055	2.04	cps
Holmium	165-2	6166839	6137764	6173877	6159493	0.31	cps
Indium	115-1	16128479	15771835	15681088	15860467	1.49	cps
Indium	115-2	1251971	1248721	1253958	1251550	0.21	cps
Iron	54-2	160045	158646	160840	159844	0.69	cps
Iron	56-2	2719441	2718724	2688262	2708809	0.66	cps
Iron	57-2	63373	63092	64284	63583	0.98	cps
Krypton	83-1	307	330	320	319	3.67	cps
Lead	206-1	276077	278903	278211	277730	0.53	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-09	Instrumnet Name :	P8
Client Sample ID :	ME29D2S	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:26:46	DataFile Name :	058AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	235524	238517	236130	236724	0.67	cps
Lead	208-1	1087483	1093066	1088637	1089729	0.27	cps
Lithium	6-1	8323403	8204024	8185661	8237696	0.91	cps
Magnesium	24-2	17392418	17339733	17279286	17337146	0.33	cps
Manganese	55-2	759503	770829	766902	765745	0.75	cps
Molybdenum	94-1	7926	7879	7866	7890	0.40	cps
Molybdenum	95-1	11488	11732	11331	11517	1.75	cps
Molybdenum	96-1	12589	12799	12639	12676	0.87	cps
Molybdenum	97-1	6918	6802	6888	6870	0.88	cps
Molybdenum	98-1	18239	18302	18619	18387	1.11	cps
Neodymium	150-1	693	687	683	688	0.74	cps
Neodymium	150-2	13	47	40	33	52.92	cps
Nickel	60-2	834571	844445	839605	839541	0.59	cps
Phosphorus	31-2	233	157	143	178	27.32	cps
Potassium	39-2	435482	436113	442910	438168	0.94	cps
Rhodium	103-1	14280041	14227522	13785920	14097828	1.93	cps
Rhodium	103-2	4959717	4941129	4942512	4947786	0.21	cps
Scandium	45-1	10923187	10835737	11015058	10924661	0.82	cps
Scandium	45-2	184664	185875	188056	186198	0.92	cps
Selenium	82-1	23998	25016	24145	24386	2.26	cps
Selenium	77-2	320	363	397	360	10.68	cps
Selenium	78-2	1220	1273	1190	1228	3.44	cps
Silicon	28-1	80147845	80058434	79117334	79774538	0.72	cps
Silver	107-1	942628	952361	948349	947780	0.52	cps
Silver	109-1	909375	912273	903185	908278	0.51	cps
Sodium	23-2	29304714	29071316	28867550	29081193	0.75	cps
Strontium	86-1	120033912	120830938	121837405	120900752	0.75	cps
Strontium	88-1	1032094171	1049767504	1051448304	1044436660	1.03	cps
Sulfur	34-1	12482451	12455964	12481562	12473326	0.12	cps
Terbium	159-1	21017578	20867514	20745464	20876852	0.65	cps
Terbium	159-2	5918830	5845343	5833627	5865934	0.79	cps
Thallium	203-1	809716	814091	817059	813622	0.45	cps
Thallium	205-1	2100735	2088999	2078834	2089523	0.52	cps
Tin	118-1	2777	2840	2724	2780	2.10	cps
Titanium	47-1	2104	2227	1940	2090	6.88	cps
Uranium	238-1	31646	33260	32348	32418	2.50	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	Q1339-09	Instrumnet Name :	P8
Client Sample ID :	ME29D2S	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:26:46	DataFile Name :	058AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	1353343	1347337	1364866	1355182	0.66	cps
Ytterbium	172-1	197	177	223	199	11.77	cps
Ytterbium	172-2	60	63	80	68	15.81	cps
Ytterbium	176-1	2237	2174	2217	2209	1.47	cps
Ytterbium	176-2	263	333	360	319	15.66	cps
Yttrium	89-1	28001900	27601383	27634425	27745903	0.80	cps
Yttrium	89-2	1690625	1670984	1693066	1684892	0.72	cps
Zinc	66-2	249767	248532	247311	248537	0.49	cps
Zirconium	90-1	3374	3551	3377	3434	2.95	cps
Zirconium	91-1	990	860	887	912	7.53	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV030	Instrumnet Name :	P8
Client Sample ID :	CCV030	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:31:10	DataFile Name :	059CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3124314	3114374	3154161	3130949	0.66	cps
Antimony	121-1	7743063	7720797	7733076	7732312	0.14	cps
Arsenic	75-2	129058	129747	131432	130079	0.94	cps
Barium	135-1	9663165	9661587	9575341	9633364	0.52	cps
Barium	137-1	16671449	16738769	16486966	16632394	0.78	cps
Beryllium	9-1	2651151	2665910	2603357	2640139	1.24	cps
Bismuth	209-1	10842334	10816163	10784775	10814424	0.27	cps
Bismuth	209-2	3718790	3841158	3771281	3777076	1.63	cps
Bromine	81-1	65200	61126	59760	62029	4.56	cps
Cadmium	108-1	148312	147308	148150	147923	0.36	cps
Cadmium	106-1	216915	215814	215722	216150	0.31	cps
Cadmium	111-1	1904647	1915160	1892977	1904261	0.58	cps
Calcium	43-1	13039699	13061448	12847816	12982988	0.91	cps
Calcium	44-1	209521464	209533417	208779870	209278250	0.21	cps
Carbon	12-1	5332927	5398407	5299790	5343708	0.94	cps
Carbon	12-2	38303	37942	38106	38117	0.47	cps
Chlorine	35-1	1917035	1828743	1724327	1823368	5.29	cps
Chlorine	35-2	5708	5044	5248	5333	6.37	cps
Chromium	52-2	1583483	1559878	1570485	1571282	0.75	cps
Cobalt	59-2	2889475	2883958	2922132	2898521	0.71	cps
Copper	63-2	21509342	21551669	21542095	21534369	0.10	cps
Dysprosium	156-1	497	460	373	443	14.29	cps
Dysprosium	156-2	77	103	77	86	17.99	cps
Erbium	164-1	433	420	490	448	8.30	cps
Erbium	164-2	140	97	97	111	22.51	cps
Gadolinium	160-1	380	343	353	359	5.28	cps
Gadolinium	160-2	103	93	113	103	9.68	cps
Holmium	165-1	18589343	18668997	18449173	18569171	0.60	cps
Holmium	165-2	5577096	5627302	5655748	5620048	0.71	cps
Indium	115-1	13746492	13807122	13858922	13804178	0.41	cps
Indium	115-2	1092594	1090125	1099154	1093958	0.43	cps
Iron	54-2	15660001	15494791	15625644	15593478	0.56	cps
Iron	56-2	283686069	283696656	283788449	283723725	0.02	cps
Iron	57-2	7121604	7079683	7238178	7146488	1.15	cps
Krypton	83-1	370	320	240	310	21.15	cps
Lead	206-1	31673599	31001420	31613477	31429499	1.18	cps

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV030	Instrumnet Name :	P8
Client Sample ID :	CCV030	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:31:10	DataFile Name :	059CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	26817719	26657049	26675022	26716597	0.33	cps
Lead	208-1	124110278	123273712	122701935	123361975	0.57	cps
Lithium	6-1	7277450	7252597	7260965	7263670	0.17	cps
Magnesium	24-2	55559118	55860508	56440352	55953326	0.80	cps
Manganese	55-2	6245707	6126538	6317434	6229893	1.55	cps
Molybdenum	94-1	27570042	27388895	27495134	27484690	0.33	cps
Molybdenum	95-1	40035711	39582099	40197199	39938337	0.80	cps
Molybdenum	96-1	43102169	43047983	43468106	43206086	0.53	cps
Molybdenum	97-1	24395256	24137175	24297647	24276693	0.54	cps
Molybdenum	98-1	64100249	63984269	63875889	63986802	0.18	cps
Neodymium	150-1	807	693	713	738	8.20	cps
Neodymium	150-2	40	60	70	57	26.96	cps
Nickel	60-2	735658	739588	748974	741407	0.92	cps
Phosphorus	31-2	27780	26925	27626	27444	1.66	cps
Potassium	39-2	14885925	14589275	14993084	14822761	1.41	cps
Rhodium	103-1	12408247	12384699	12343424	12378790	0.27	cps
Rhodium	103-2	4369383	4410199	4435053	4404878	0.75	cps
Scandium	45-1	9736033	9708946	9689817	9711599	0.24	cps
Scandium	45-2	166731	168151	170103	168328	1.01	cps
Selenium	82-1	110840	110235	110183	110419	0.33	cps
Selenium	77-2	1573	1360	1523	1486	7.51	cps
Selenium	78-2	5434	5488	5661	5528	2.14	cps
Silicon	28-1	9016997	9082296	9026437	9041910	0.39	cps
Silver	107-1	9120958	9159671	9262448	9181026	0.80	cps
Silver	109-1	8772379	8794994	8631988	8733120	1.01	cps
Sodium	23-2	113554102	113016808	113116175	113229028	0.25	cps
Strontium	86-1	2609005	2617607	2588461	2605024	0.57	cps
Strontium	88-1	22257887	22079013	22000931	22112610	0.60	cps
Sulfur	34-1	1448561	1443390	1439605	1443852	0.31	cps
Terbium	159-1	19112563	18858382	19016406	18995783	0.68	cps
Terbium	159-2	5313744	5459295	5354512	5375850	1.40	cps
Thallium	203-1	7757408	7598852	7760125	7705462	1.20	cps
Thallium	205-1	18443797	18014450	18485351	18314533	1.42	cps
Tin	118-1	6205440	6300032	6230304	6245259	0.79	cps
Titanium	47-1	11767197	11845164	11802306	11804889	0.33	cps
Uranium	238-1	24974206	25003401	24431675	24803094	1.30	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCV030	Instrumnet Name :	P8
Client Sample ID :	CCV030	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:31:10	DataFile Name :	059CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	1165424	1166964	1180858	1171082	0.73	cps
Ytterbium	172-1	493	497	427	472	8.36	cps
Ytterbium	172-2	140	180	180	167	13.86	cps
Ytterbium	176-1	37984	38600	38235	38273	0.81	cps
Ytterbium	176-2	11028	11168	11302	11166	1.23	cps
Yttrium	89-1	24621791	24683945	24753746	24686494	0.27	cps
Yttrium	89-2	1527261	1553966	1541509	1540912	0.87	cps
Zinc	66-2	2241243	2296369	2282167	2273260	1.26	cps
Zirconium	90-1	13977971	14057557	13879121	13971550	0.64	cps
Zirconium	91-1	3153679	3120234	3143468	3139127	0.55	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB030	Instrumnet Name :	P8
Client Sample ID :	CCB030	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:34:05	DataFile Name :	060CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	167	160	170	166	3.08	cps
Antimony	121-1	2017	2060	1733	1937	9.16	cps
Arsenic	75-2	17	7	7	10	57.72	cps
Barium	135-1	893	767	743	801	10.08	cps
Barium	137-1	1697	1467	1207	1457	16.83	cps
Beryllium	9-1	1172	1141	1071	1128	4.59	cps
Bismuth	209-1	12619486	12601075	12388605	12536389	1.02	cps
Bismuth	209-2	4521083	4527706	4467212	4505333	0.74	cps
Bromine	81-1	32498	31519	29331	31116	5.21	cps
Cadmium	108-1	43	33	77	51	44.40	cps
Cadmium	106-1	7909	8136	7882	7976	1.75	cps
Cadmium	111-1	5659	5752	5534	5648	1.94	cps
Calcium	43-1	1233	1033	987	1084	12.08	cps
Calcium	44-1	33084	28492	27971	29849	9.43	cps
Carbon	12-1	4214865	3926430	3828638	3989978	5.03	cps
Carbon	12-2	23823	24050	23262	23711	1.71	cps
Chlorine	35-1	1028077	982838	938115	983010	4.58	cps
Chlorine	35-2	3214	3210	3030	3151	3.33	cps
Chromium	52-2	2280	1970	2060	2104	7.58	cps
Cobalt	59-2	340	277	327	314	10.62	cps
Copper	63-2	3290	3040	2987	3106	5.22	cps
Dysprosium	156-1	13	10	10	11	17.30	cps
Dysprosium	156-2	0	10	3	4	114.60	cps
Erbium	164-1	103	113	53	90	35.72	cps
Erbium	164-2	13	37	27	26	45.82	cps
Gadolinium	160-1	107	80	93	93	14.29	cps
Gadolinium	160-2	20	17	23	20	16.65	cps
Holmium	165-1	19693953	19905273	19622307	19740511	0.75	cps
Holmium	165-2	6071248	6097552	6081278	6083360	0.22	cps
Indium	115-1	15792558	15630324	15694495	15705792	0.52	cps
Indium	115-2	1254473	1256500	1262209	1257727	0.32	cps
Iron	54-2	1127	1007	963	1032	8.20	cps
Iron	56-2	17018	16880	16126	16675	2.88	cps
Iron	57-2	470	410	360	413	13.32	cps
Krypton	83-1	327	243	350	307	18.29	cps
Lead	206-1	3904	3364	2897	3388	14.87	cps

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB030	Instrumnet Name :	P8
Client Sample ID :	CCB030	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:34:05	DataFile Name :	060CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	3270	2830	2554	2885	12.53	cps
Lead	208-1	15137	13059	11829	13342	12.53	cps
Lithium	6-1	8267835	8177460	8163845	8203046	0.69	cps
Magnesium	24-2	4111	4327	4247	4228	2.59	cps
Manganese	55-2	540	493	443	492	9.82	cps
Molybdenum	94-1	1927	1597	1540	1688	12.37	cps
Molybdenum	95-1	2344	1830	1623	1932	19.19	cps
Molybdenum	96-1	2344	2157	1927	2142	9.74	cps
Molybdenum	97-1	1387	1300	1057	1248	13.71	cps
Molybdenum	98-1	3561	3097	2894	3184	10.73	cps
Neodymium	150-1	20	30	23	24	20.83	cps
Neodymium	150-2	0	0	3	1	173.21	cps
Nickel	60-2	1333	1163	1247	1248	6.81	cps
Phosphorus	31-2	50	50	67	56	17.32	cps
Potassium	39-2	9777	9957	9573	9769	1.96	cps
Rhodium	103-1	14731080	14576094	14542257	14616477	0.69	cps
Rhodium	103-2	5213736	5341349	5164815	5239966	1.74	cps
Scandium	45-1	10593358	10706983	10559478	10619939	0.73	cps
Scandium	45-2	179917	182698	182529	181715	0.86	cps
Selenium	82-1	17	47	-40	8	565.73	cps
Selenium	77-2	0	0	7	2	173.21	cps
Selenium	78-2	10	3	13	9	57.30	cps
Silicon	28-1	551155	542601	541518	545091	0.97	cps
Silver	107-1	1243	1127	907	1092	15.65	cps
Silver	109-1	1173	930	780	961	20.65	cps
Sodium	23-2	51698	51587	50979	51421	0.75	cps
Strontium	86-1	1890	1560	1573	1675	11.16	cps
Strontium	88-1	11238	9280	10975	10498	10.12	cps
Sulfur	34-1	707678	706830	705878	706795	0.13	cps
Terbium	159-1	20218770	20525300	20254945	20333005	0.82	cps
Terbium	159-2	5831000	5832642	5795853	5819832	0.36	cps
Thallium	203-1	997	1103	863	988	12.17	cps
Thallium	205-1	2610	2394	2194	2399	8.69	cps
Tin	118-1	2854	2754	2734	2780	2.31	cps
Titanium	47-1	580	560	487	542	9.06	cps
Uranium	238-1	867	687	557	703	22.13	cps

Reviewed By:kareem
On:2/18/2025 11:55:14 AM
Inst Id :P8

LB Number :	LB134712	Operator :	Jaswal
Lab Sample ID :	CCB030	Instrumnet Name :	P8
Client Sample ID :	CCB030	Dilution Factor :	1
Date & Time Acquired :	2025-02-13 16:34:05	DataFile Name :	060CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	57	23	37	39	43.15	cps
Ytterbium	172-1	97	83	90	90	7.41	cps
Ytterbium	172-2	33	7	30	23	62.26	cps
Ytterbium	176-1	1990	1890	1904	1928	2.82	cps
Ytterbium	176-2	263	243	300	269	10.69	cps
Yttrium	89-1	27143694	26945047	27003517	27030753	0.38	cps
Yttrium	89-2	1673415	1665659	1689951	1676342	0.74	cps
Zinc	66-2	277	313	297	296	6.21	cps
Zirconium	90-1	1700	1453	1510	1555	8.31	cps
Zirconium	91-1	420	310	310	347	18.32	cps

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Prep Standard - Chemical Standard Summary

Order ID : Q1339

Test : Metals CLP MS

Prepbatch ID : PB166703,

Sequence ID/Qc Batch ID: LB134712,

Standard ID :
MP84041,MP84297,MP84414,MP84415,MP84416,MP84417,MP84418,MP84419,MP84420,MP84421,MP84422,MP84423,MP84438,MP84439,MP84440,MP84441,MP84442,MP84443,MP84444,MP84466,MP84600,

Chemical ID :
M4883,M4884,M4888,M5192,M5229,M5288,M5289,M5304,M5472,M5476,M5496,M5498,M5513,M5519,M5658,M5739,M5751,M5798,M5799,M5800,M5801,M5811,M5815,M5816,M5817,M5820,M5873,M5874,M5960,M5962,M5977,M5978,M5981,M5993,M5999,M6021,M6023,M6025,M6028,M6030,M6032,M6055,M6079,M6121,M6126,M6127,M6128,M6144,M6145,M6146,M6150,M6151,W3112,

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Fax : 908 789 8922

Metals STANDARD PREPARATION LOG

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
170	1:1HCL	MP84297	01/31/2025	02/28/2025	Eman Mughal	None	None	Sarabjit Jaswal 01/31/2025

FROM 1250.00000ml of M6121 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

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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)	MP84414	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 10.00000ml of M6126 + 175.00000ml of W3112 + 5.00000ml of M6121 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2902	S8 ICPMS	MP84415	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 1.00000ml of M5496 + 2.50000ml of M5288 + 2.50000ml of M5811 + 5.00000ml of M5498 + 5.00000ml of M6127 + 5.00000ml of M6144 + 79.00000ml of MP84414 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3947	S7(SFAM,6020,200.8)	MP84416	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 0.00000ml of M4884 + 0.00000ml of M4888 + 0.00000ml of M5192 + 0.00000ml of M5288 + 0.00000ml of M5513 + 1.00000ml of M5476 + 1.00000ml of M5799 + 1.00000ml of M5981 + 1.00000ml of M6079 + 1.90000ml of M5496 + 10.00000ml of M5977 + 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 M5519 + 4.90000ml of M5811 + 5.00000ml of M6121 + 50.00000ml of M5304 + 830.60000ml of W3112 + 9.00000ml of M5751 + 9.00000ml of M6128 + 9.00000ml of M6145 + 9.90000ml of M5498 + 9.90000ml of M6127 + 9.90000ml of M6144 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3948	S6(SFAM,6020,200.8)	MP84417	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 48.50000ml of W3112 + 50.00000ml of MP84416 = Final Quantity: 100.000 ml

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Fax : 908 789 8922

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3949	S5(SFAM,6020,200.8)	MP84418	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 73.50000ml of W3112 + 25.00000ml of MP84416 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3954	S4(SFAM,6020,200.8)	MP84419	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 86.00000ml of W3112 + 12.50000ml of MP84416 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3951	S3(SFAM, 6020,200.8)	MP84420	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 88.50000ml of W3112 + 10.00000ml of MP84417 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3955	S2CONC(SFAM,6020,200.8)	MP84421	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 0.05000ml of M5476 + 0.05000ml of M5798 + 0.05000ml of M5800 + 0.05000ml of M5801 + 0.05000ml of M5960 + 0.05000ml of M5981 + 0.05000ml of M6023 + 0.05000ml of M6025 + 0.05000ml of M6028 + 0.05000ml of M6030 + 0.05000ml of M6079 + 0.05000ml of M6128 + 0.10000ml of M5496 + 0.10000ml of M5658 + 0.10000ml of M5751 + 0.10000ml of M6146 + 0.25000ml of M5799 + 0.25000ml of M5811 + 0.25000ml of M5962 + 0.25000ml of M5977 + 0.25000ml of M5978 + 0.25000ml of M6021 + 0.25000ml of M6145 + 0.50000ml of M6032 + 2.00000ml of M5815 + 2.00000ml of M5817 + 2.50000ml of M5498 + 2.50000ml of M5519 + 2.50000ml of M6121 + 2.50000ml of M6127 + 2.50000ml of M6144 + 225.25000ml of W3112 + 5.00000ml of M6126 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3956	S2(SFAM,6020,200.8)	MP84422	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 98.00000ml of W3112 + 0.50000ml of MP84421 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3957	S1(SFAM,6020,200.8)	MP84423	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 88.50000ml of W3112 + 10.00000ml of MP84422 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3961	CCV	MP84438	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 0.00000ml of M4884 + 0.00000ml of M5978 + 0.20000ml of M5513 + 0.50000ml of M5476 + 0.50000ml of M5799 + 0.50000ml of M5981 + 0.50000ml of M6079 + 1.00000ml of M5815 + 1.00000ml of M5817 + 10.00000ml of M6126 + 12.45000ml of M5519 + 12.45000ml of M5811 + 2.00000ml of M6032 + 24.95000ml of M5498 + 24.95000ml of M6127 + 24.95000ml of M6144 + 25.00000ml of M5304 + 4.50000ml of M5751 + 4.50000ml of M6128 + 4.50000ml of M6145 + 4.95000ml of M5496 + 5.00000ml of M5977 + 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
3958	ICV(SFAM)	MP84439	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 2.00000ml of M6150 + 98.00000ml of MP84414 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1142	ICSA ICPMS	MP84440	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 10.00000ml of M5873 + 90.00000ml of MP84414 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1143	ICSAB ICPMS	MP84441	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 10.00000ml of M5873 + 10.00000ml of M5874 + 80.00000ml of MP84414 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3962	MG 10PPM FOR TUNE	MP84442	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 0.01000ml of M6127 + 9.99000ml of MP84414 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3894	TUNE 200PPB	MP84443	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 2.00000ml of M6055 + 2.00000ml of MP84442 + 96.00000ml of MP84414 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3903	ISS 3PPM	MP84444	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 5.00000ml of M6126 + 75.00000ml of M5739 + 170.00000ml of MP84414 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
870	ICPMS SPIKE SOL.B	MP84466	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/13/2025

FROM 0.45000ml of M5962 + 5.00000ml of M5993 + 5.00000ml of M5999 + 39.55000ml of MP84414 = Final Quantity: 50.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3963	CONC.LCSW SPIKE	MP84600	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Kareem Khairalla 02/20/2025

FROM 0.05000ml of M5229 + 0.05000ml of M5472 + 0.05000ml of M5798 + 0.05000ml of M5800 + 0.05000ml of M5801 + 0.05000ml of M5960 + 0.05000ml of M6023 + 0.05000ml of M6025 + 0.05000ml of M6028 + 0.05000ml of M6030 + 0.05000ml of M6079 + 0.10000ml of M5289 + 0.10000ml of M5658 + 0.10000ml of M5751 + 0.10000ml of M6146 + 0.25000ml of M4883 + 0.25000ml of M5192 + 0.25000ml of M5799 + 0.25000ml of M5978 + 0.25000ml of M6021 + 0.25000ml of M6128 + 0.25000ml of M6145 + 0.50000ml of M6032 + 1.00000ml of M5811 + 1.25000ml of M5816 + 1.25000ml of M5820 + 1.25000ml of M6151 + 2.50000ml of M4884 + 2.50000ml of M5498 + 2.50000ml of M5519 + 2.50000ml of M6126 + 2.50000ml of M6127 + 2.50000ml of M6144 + 227.05000ml of W3112 = Final Quantity: 250.000 ml

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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	070221	09/07/2025	08/06/2021 / jaswal	08/05/2021 / jaswal	M4883

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57014 / Si, 1000 PPM, 125 ml	030921	03/09/2025	08/06/2021 / jaswal	08/05/2021 / jaswal	M4884

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57022 / Ti, 1000 PPM, 125 ml	070721	09/27/2025	08/06/2021 / jaswal	08/05/2021 / jaswal	M4888

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57042 / Mo, 1000 PPM, 125 ml	051722	05/17/2025	07/01/2022 / bin	06/17/2022 / jaswal	M5192

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57092 / U, 1000 PPM, 125 ml	073021	09/10/2025	11/27/2022 / jaswal	07/05/2022 / bin	M5229

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

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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 #
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.	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

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

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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

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

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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.	58126 / Fe, 10000 PPM, 500 ml	051523	05/15/2026	02/06/2025 / kareem	01/03/2024 / jaswal	M5811

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

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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.	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	07/03/2024 / kareem	06/11/2024 / kareem	M5960

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

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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 #
Inorganic Ventures	CLPP-SPK-4 / SOIL/WATER SPIKE SOLN 4, 125mL	V2-MEB742036	03/12/2029	10/04/2024 / Jaswal	02/22/2024 / Jaswal	M5993

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57023 / V, 1000 PPM, 125 ml	062424	06/24/2027	09/28/2024 / jaswal	08/05/2024 / Jaswal	M6021

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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

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

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57040 / Zr, 1000 PPM, 125 ml	071423	07/14/2026	01/15/2025 / Jaswal	09/30/2024 / Jaswal	M6079

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	121724	12/17/2027	02/04/2025 / jaswal	01/13/2025 / Jaswal	M6145

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	071724	07/17/2027	01/31/2025 / kareem	10/18/2024 / kareem	M6146

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-1 / ICV (ICP/ICPMS) STOCK SOLN	ICV1-1014	07/07/2025	02/07/2025 / JANVI	04/20/2021 / JANVI	M6150

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22G2862015	08/18/2025	02/18/2025 / Sagar	01/15/2025 / Sagar	M6151

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

INORGANIC VENTURES™

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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:

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



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Certified Reference Material CRM

M6032

R: 8/5/24

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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		

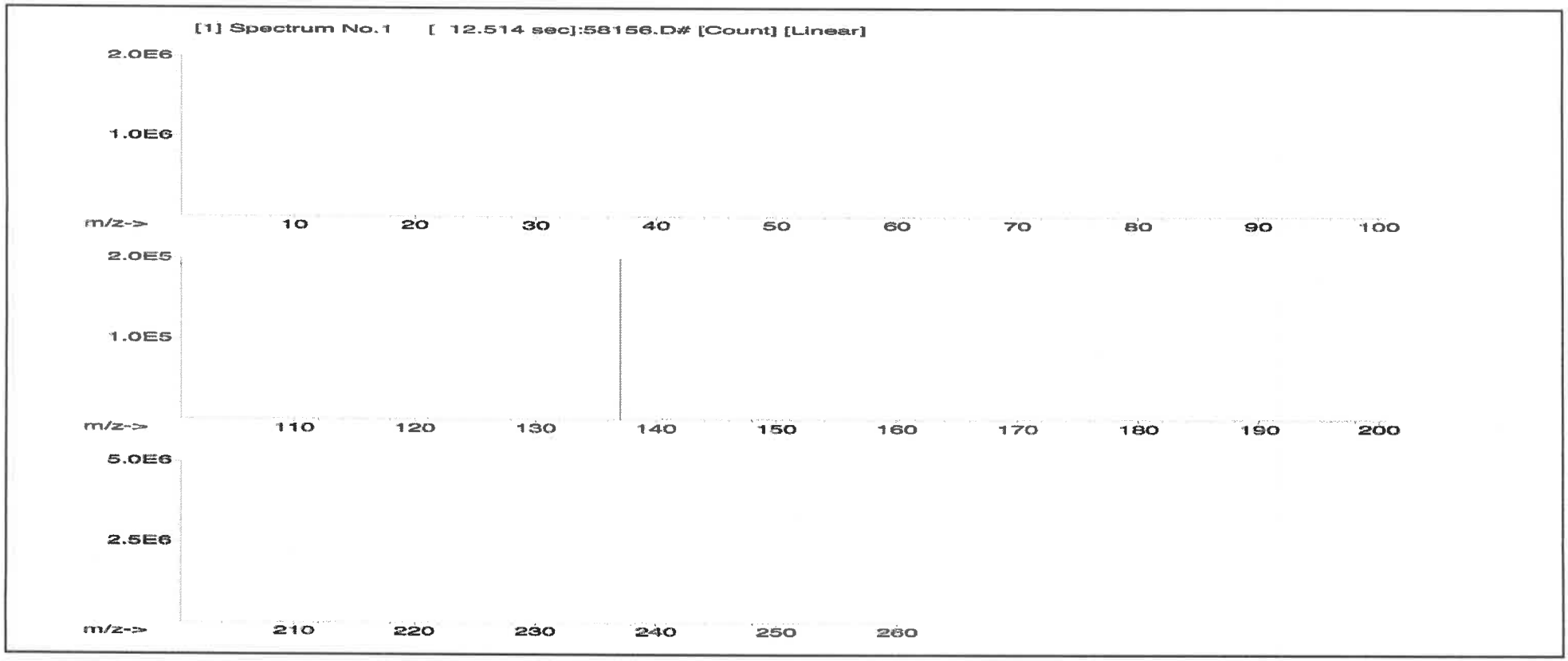
Giovanni Esposito

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



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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	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).

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M6028

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R 8/15/24

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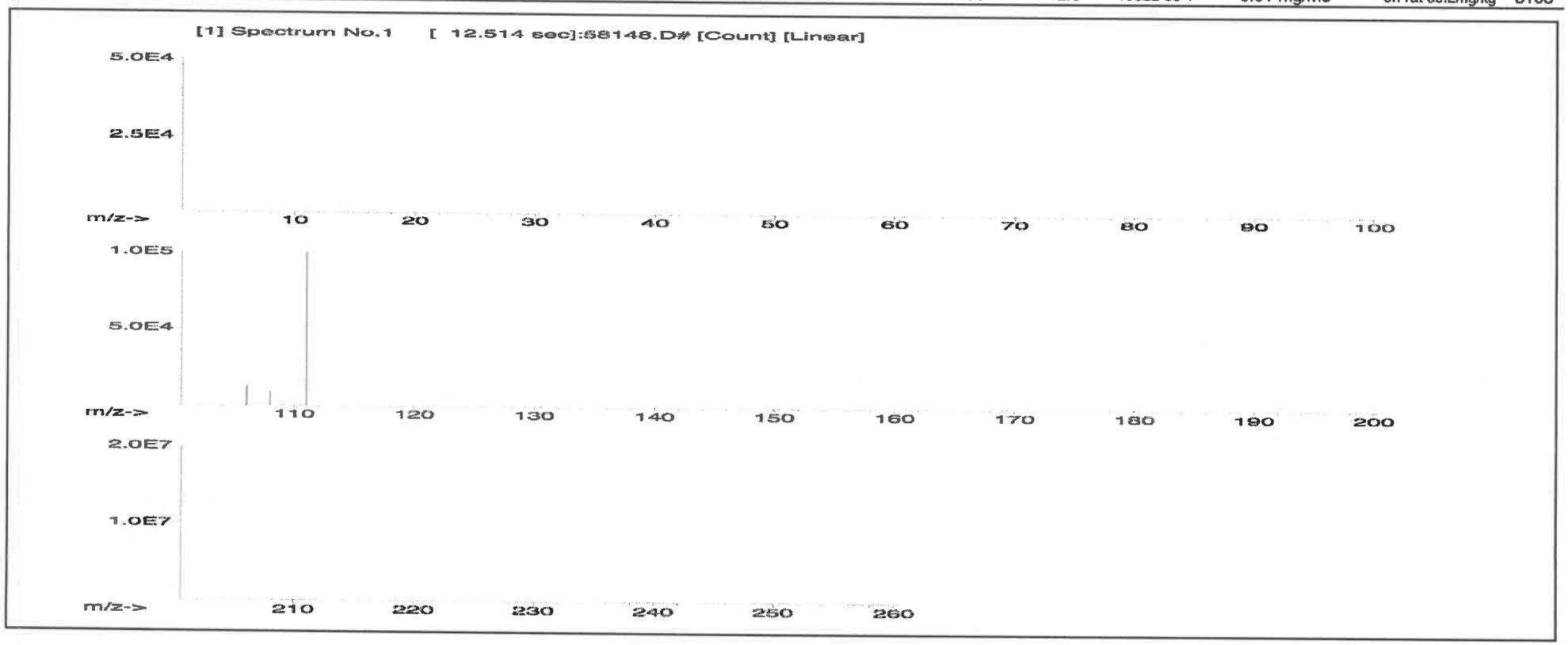
CERTIFIED WEIGHT REPORT:

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
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



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	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:

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).

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Certified Reference Material CRM

R : 01/03/24. M5810, M5811

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CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 051523
Description: Iron (Fe)

Expiration Date: 051526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

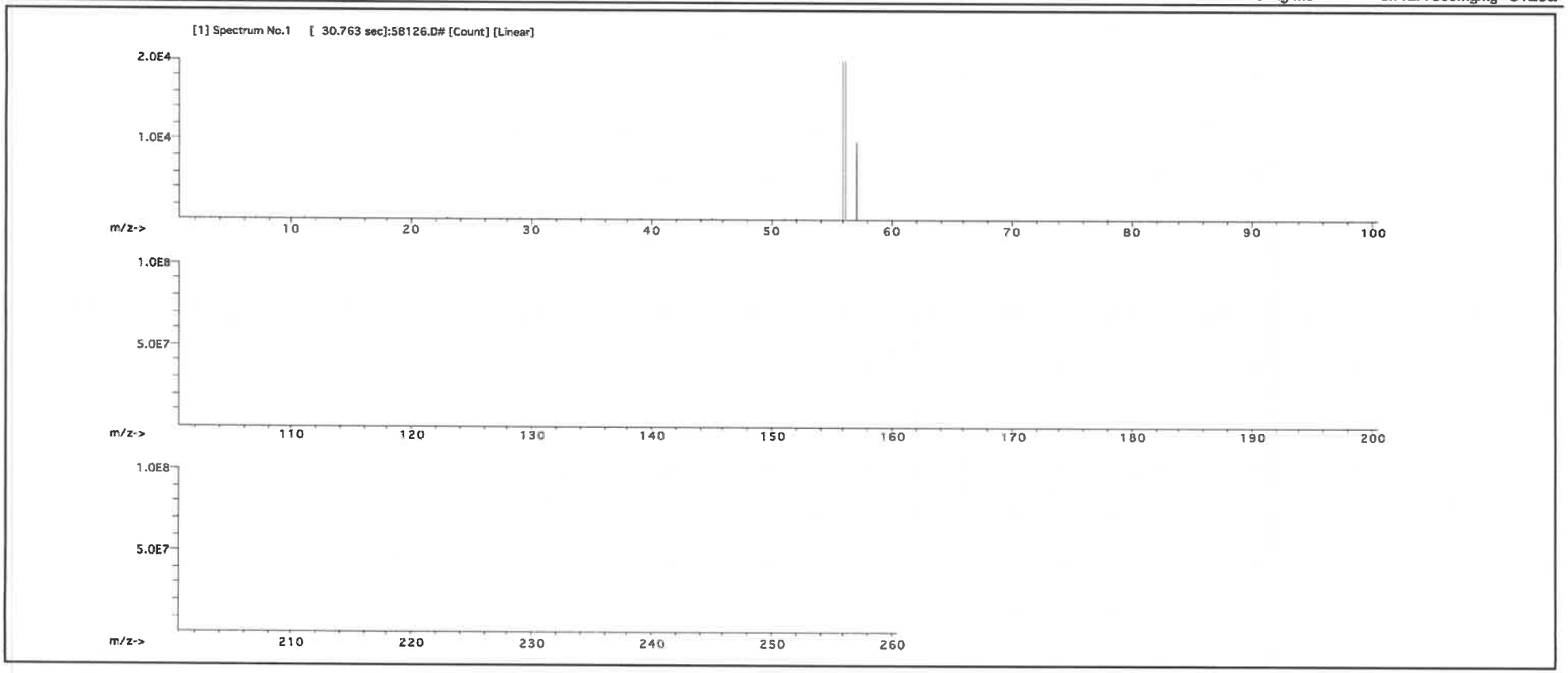
Weight shown below was diluted to (mL): 5000.1 ± 0.12 Flask Uncertainty

		Lot #		
Solvent:	21110221	Nitric Acid		
	5.0%	250.0 (mL)	Nitric Acid	
		5E-05	Balance Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	051523
Reviewed By:	Pedro L. Rentas	051523

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 (Fe)	IN346	2302010-500	10000	99.995	0.10	100.0	50.0034	50.0111	**10001.5**	**20.0**	7439-89-6	5 mg/m3	orl-rat 7500mg/kg	3126a



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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.10	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	<0.05	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.10	Ge	<0.10	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.10
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).

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Certified Reference Material CRM

R: 8/5/24 M6025

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398

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

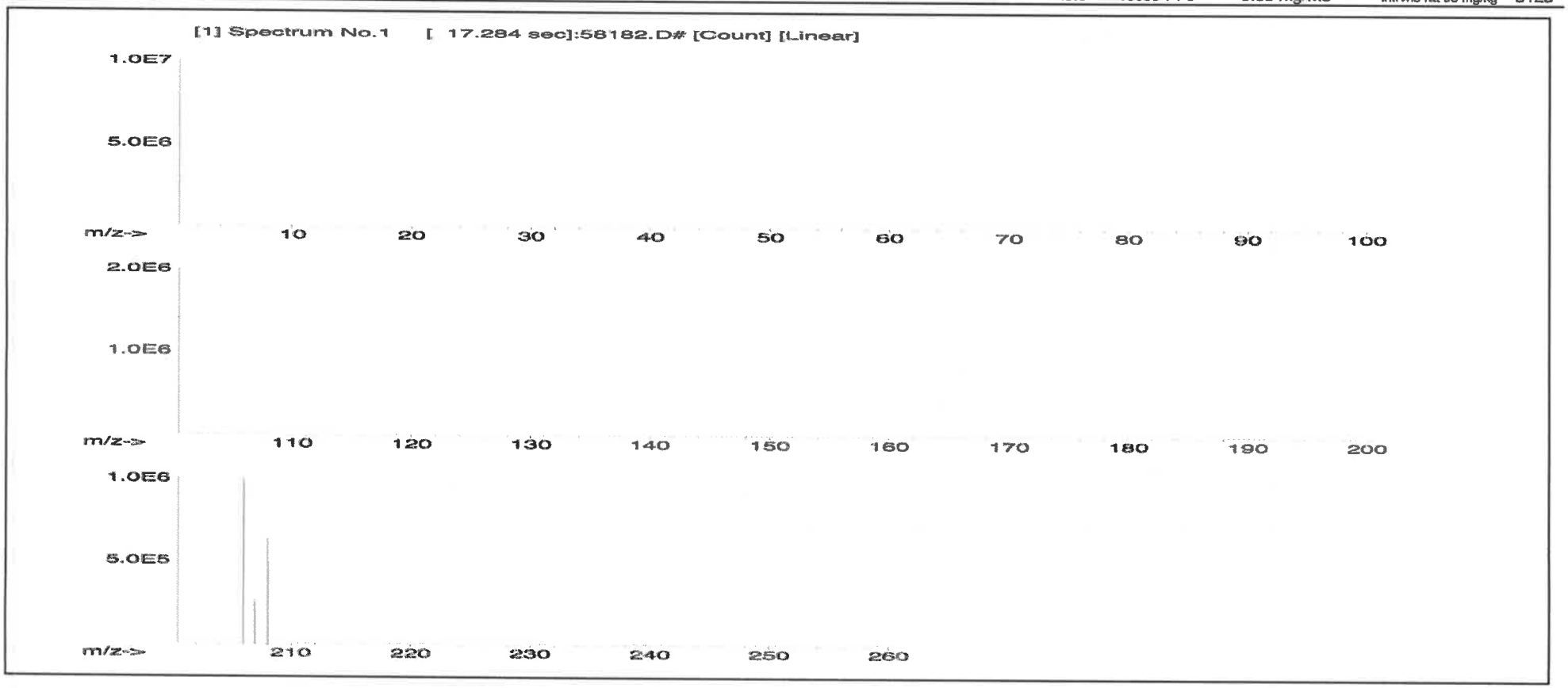
Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

		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



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	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.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	20370011	Nitric Acid	
Lot Number:	**070221**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	070224			
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	

Giovanni Esposito

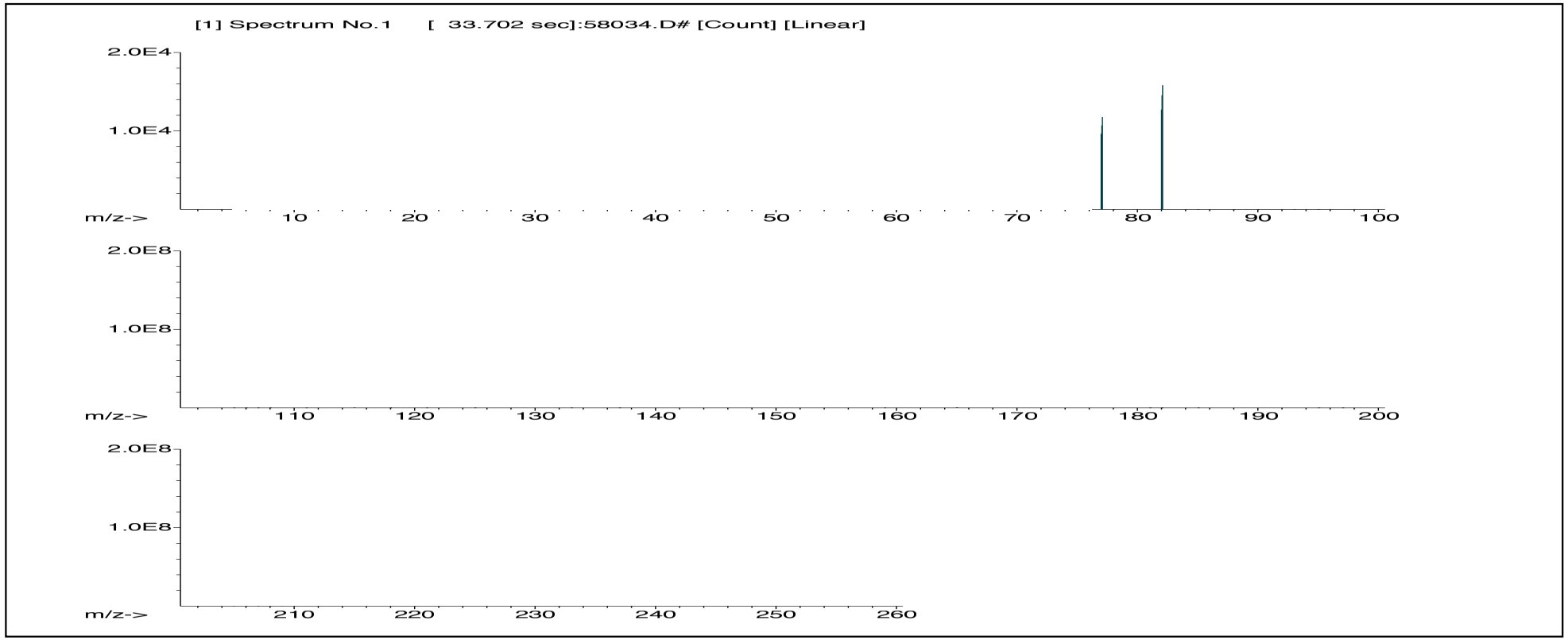
Formulated By:	Giovanni Esposito	070221

Pedro Rentas

Reviewed By:	Pedro L. Rentas	070221

400

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(IV) oxide (Se)	58134	021621	0.1000	200.0	0.084	1000	10000.2	**1000.0**	**2.2**	7446-08-4	0.2 mg/m3	orl-rat 68 mg/kg	3149



401

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	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:

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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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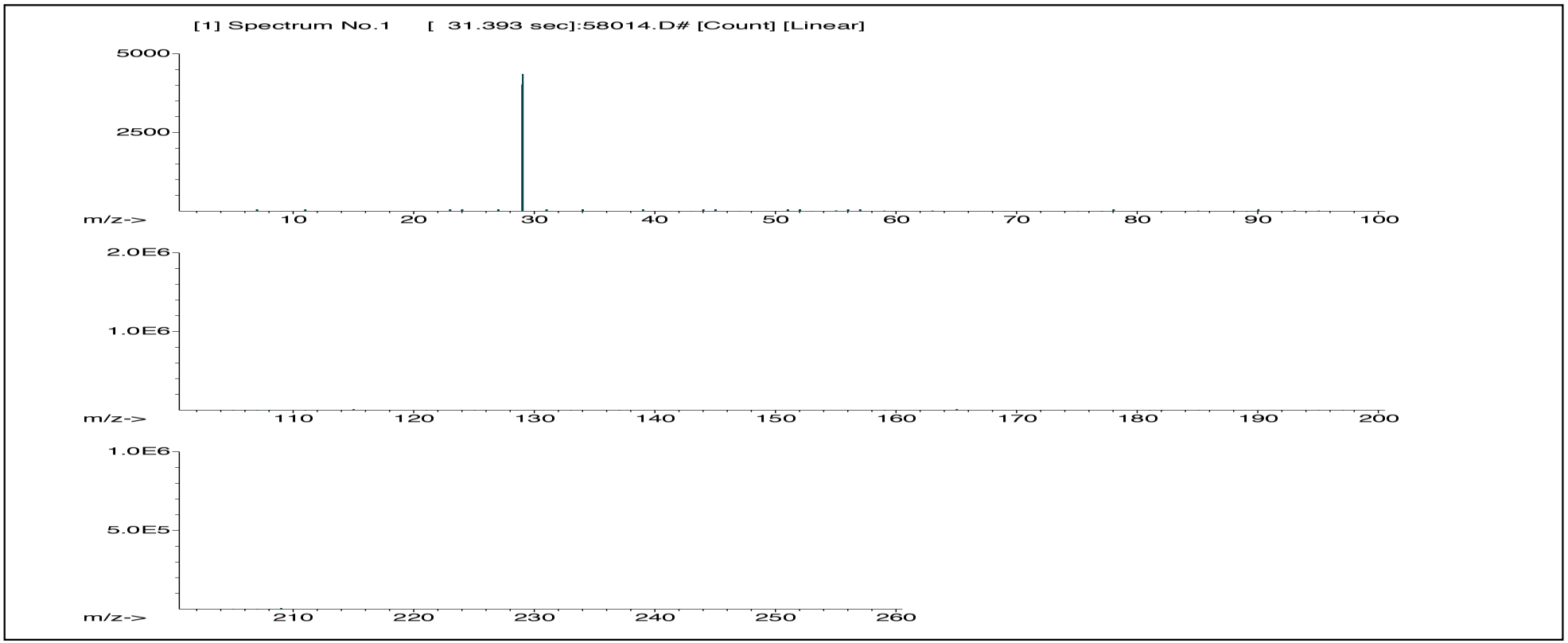
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57014**	19410105	Nitric Acid	
Lot Number:	**030921**			
Description:	**Silicon (Si)**			
		2.0%	60.0	Nitric Acid
Expiration Date:	030924		(mL)	
Recommended Storage:	Ambient (20 ºC)			
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 030921
Reviewed By:	Pedro L. Rentas 030921

402

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 hexafluorosilicate (Si)	58114	070120	0.1000	300.0	0.084	1000	10000.0	**1000.0**	**2.1**	16919-19-0	2.50 mg/m3	orl-rat 70 mg/kg	NA



403

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	T	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:



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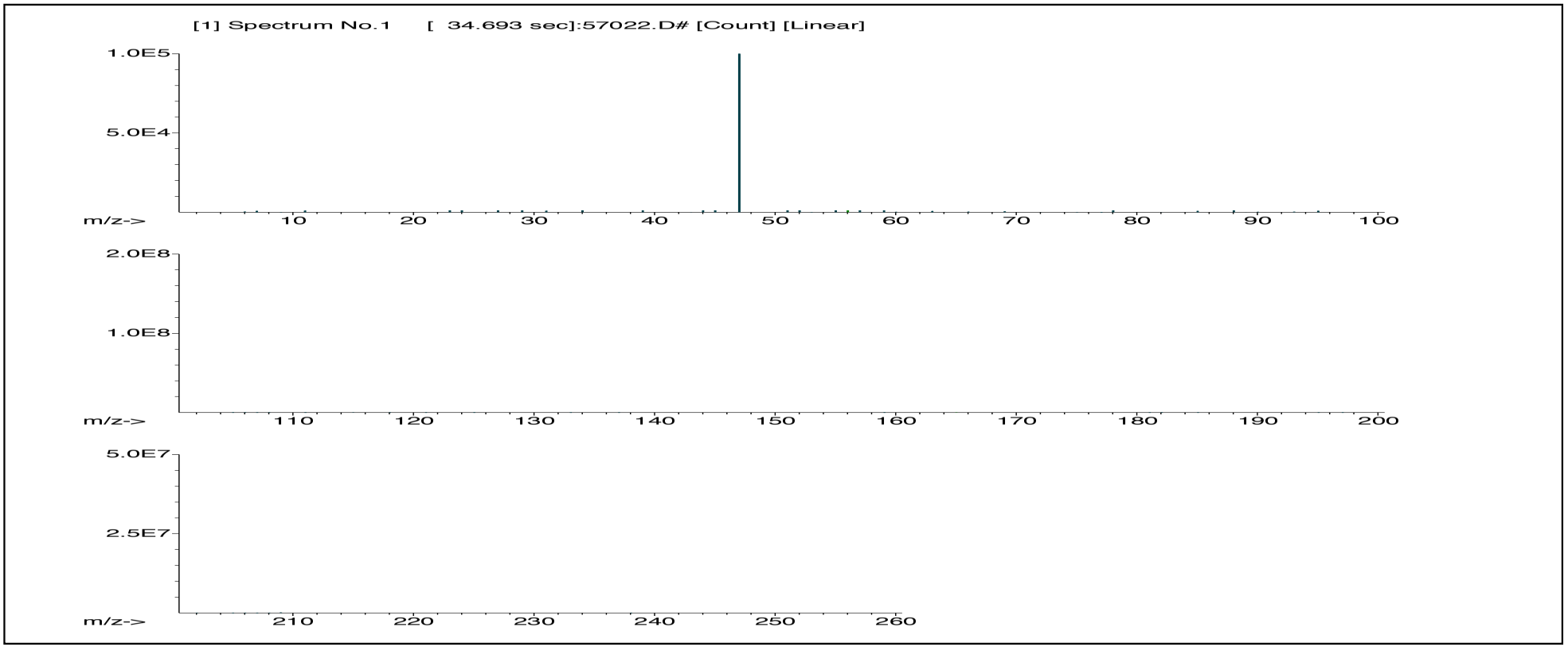
404

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57022**	20370011	Nitric Acid	
Lot Number:	**070721**			
Description:	**Titanium (Ti)**			
		2.0%	40.0	Nitric Acid
Expiration Date:	070724		(mL)	
Recommended Storage:	Ambient (20 ºC)			
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	070721
Reviewed By:	Pedro L. Rentas	070721

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette	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 hexafluorotitanate (Ti)	58122	070120	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	16962-40-6	2.5 (F) mg/m3	NA	3162a



405

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	<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	T	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



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406

CERTIFIED WEIGHT REPORT:

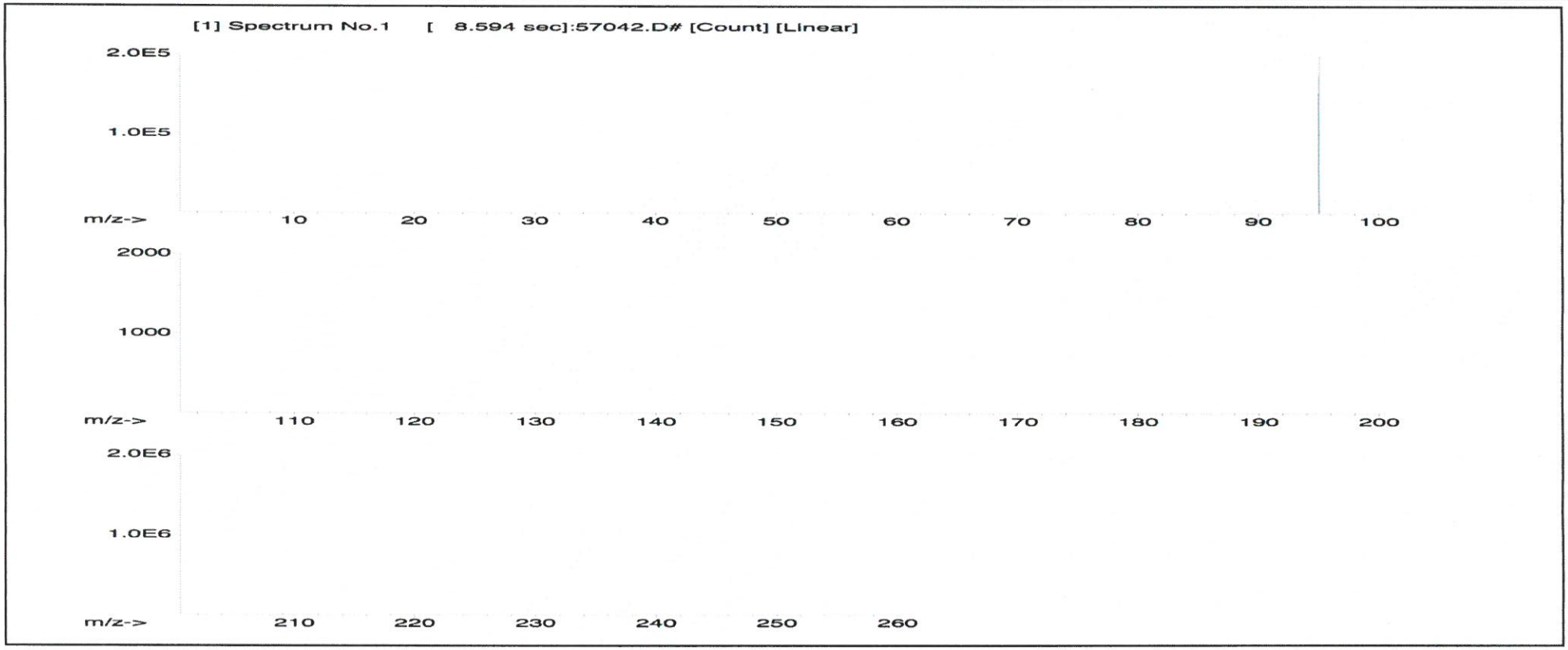
Part Number: 57042
Lot Number: 051722
Description: Molybdenum (Mo)
Expiration Date: 051725
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 3000.41

Lot #	Solvent:		
MKBQ8597V	Ammonium hydroxide		
0.5%	15.0 (mL)	Ammonium hydroxide	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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

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



407

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	<0.02	Ge	<0.02	La	<0.02	Mo	T	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



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M529 R: 07/05/22 BH

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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57092**	20370011	Nitric Acid		
Lot Number:	**073021**				
Description:	**Uranium (U)**	2.0%	60.0 (mL)	Nitric Acid	
Expiration Date:	073024				
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		

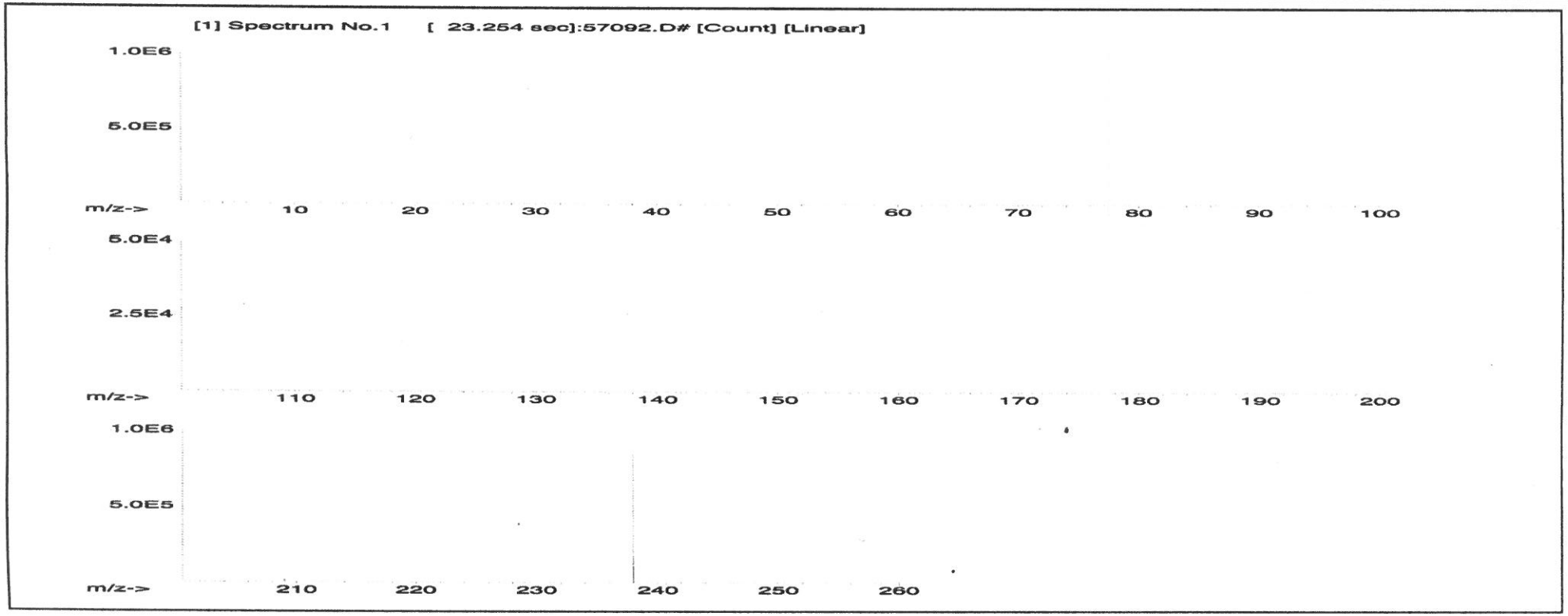
Giovanni Esposito

Formulated By:	Giovanni Esposito	073021

Pedro Rentas

Reviewed By:	Pedro L. Rentas	073021

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. Triuranium octoxide (U)	58192	122120	0.1000	300.0	0.084	1000	10001.1	**1000.0**	2.1	1344-59-8	0.05 mg/m3	orl-rat 100 mg/kg	3164



409

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	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:

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M5288 R: 07/21/2022

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410

CERTIFIED WEIGHT REPORT:

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

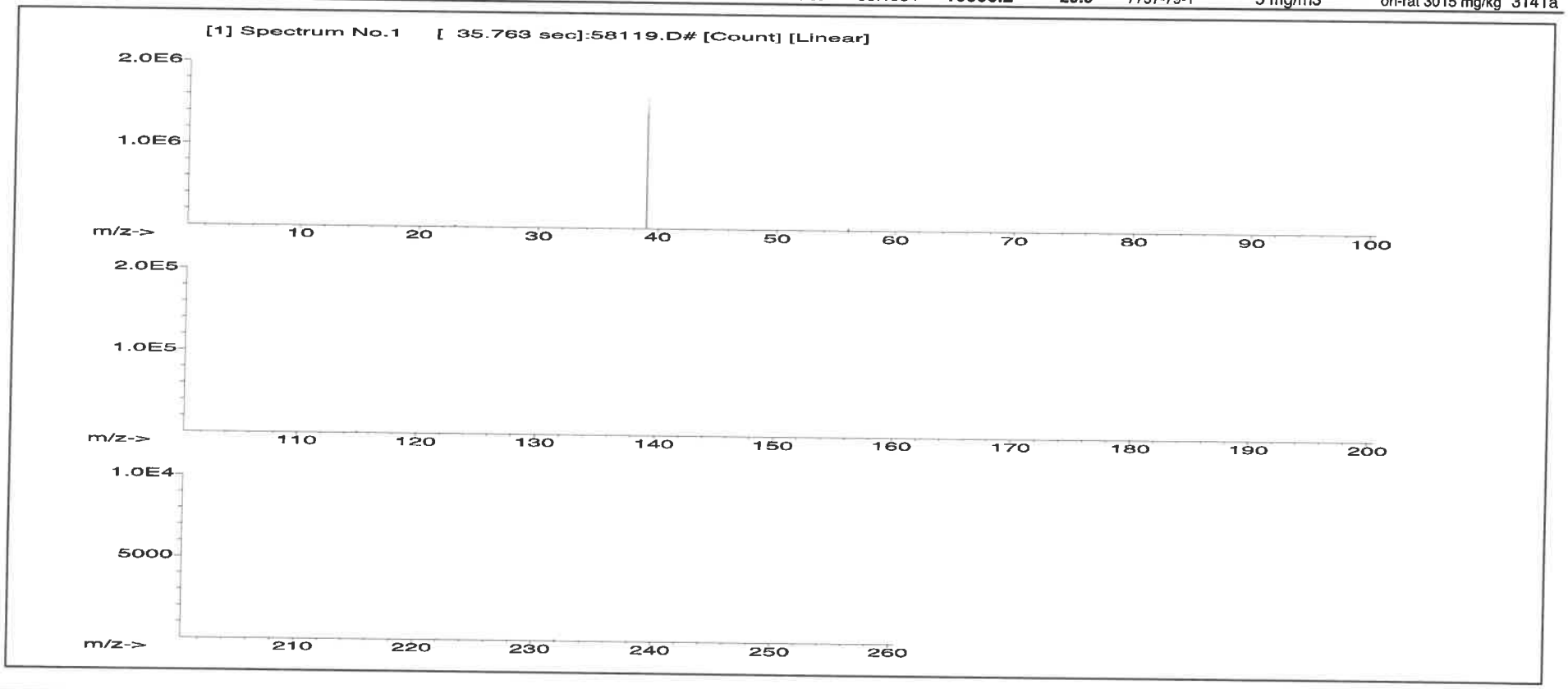
Expiration Date: 071125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	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).

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M5289 R: 07/12/22 (BH)

Certified Reference Material CRM

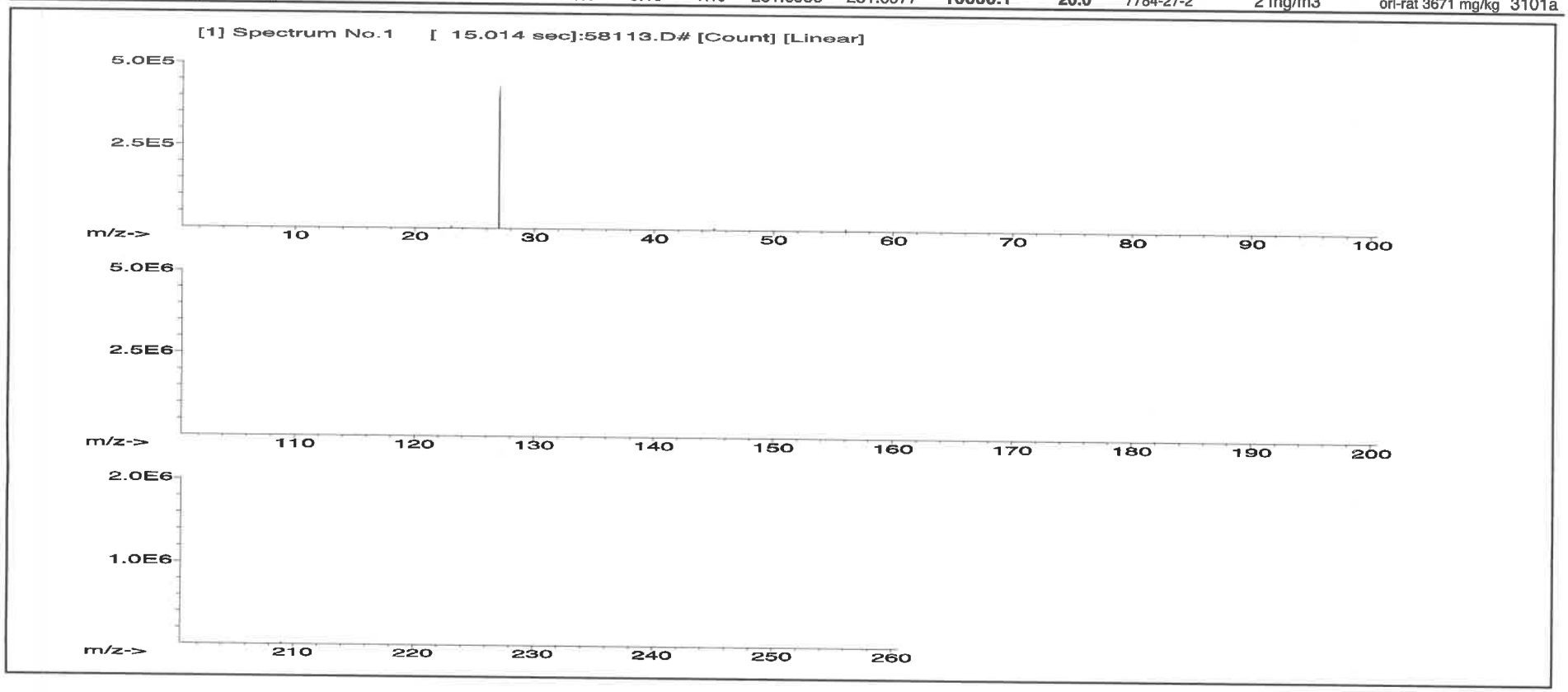
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CERTIFIED WEIGHT REPORT:

Part Number:	**58113**		**Lot #**		
Lot Number:	**070622**	**Solvent:**	20370011	Nitric Acid	
Description:	**Aluminum (Al)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	070625				
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	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).

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inorganicventures.com

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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

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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



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Certified Reference Material CRM

M5496 R 7/20/23

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418

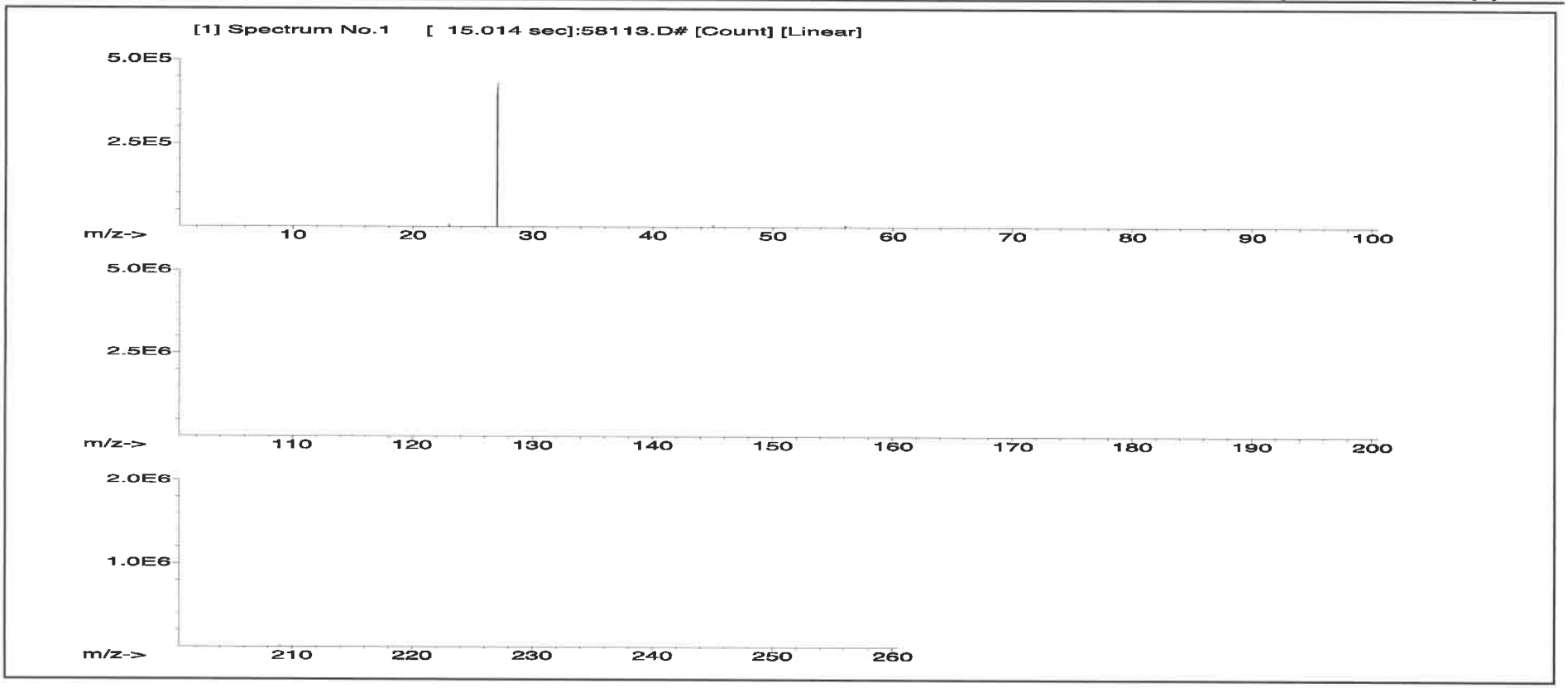
CERTIFIED WEIGHT REPORT:

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



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Certified Reference Material CRM

M5497 - M5498 R: 03/17/23 BH

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CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

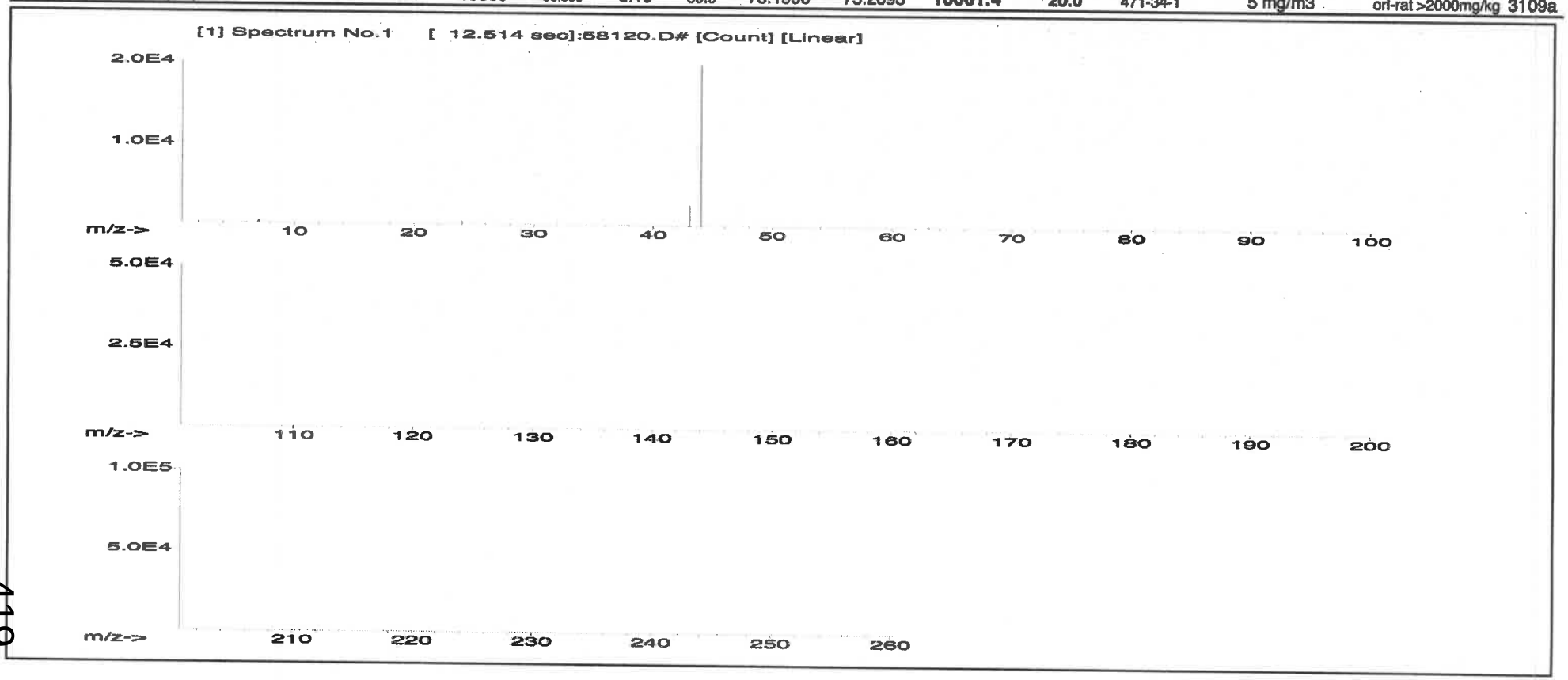
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	Lot #		
Solvent:	21110221	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask 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



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	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).

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Certified Reference Material CRM

M 5513 R: 03/17/23

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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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

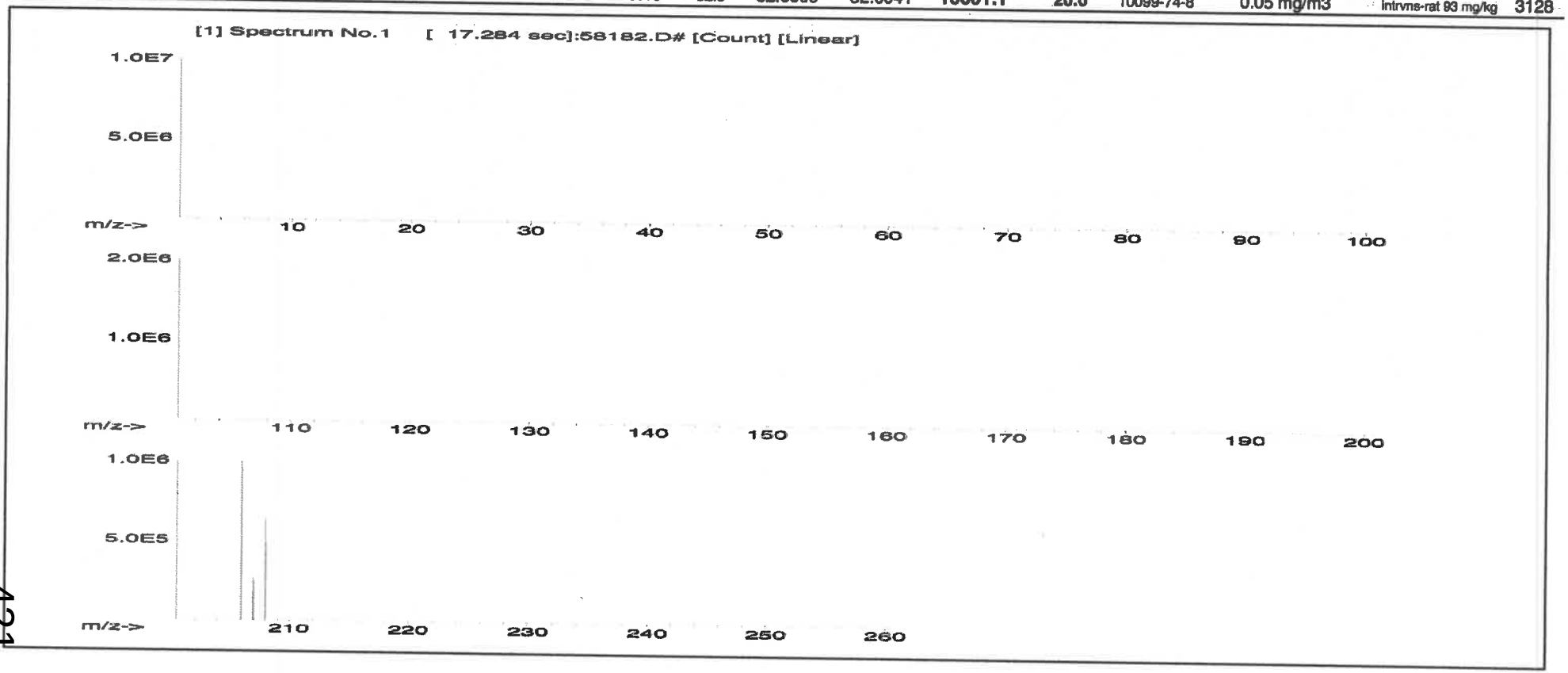
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

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



421

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).

422

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423

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

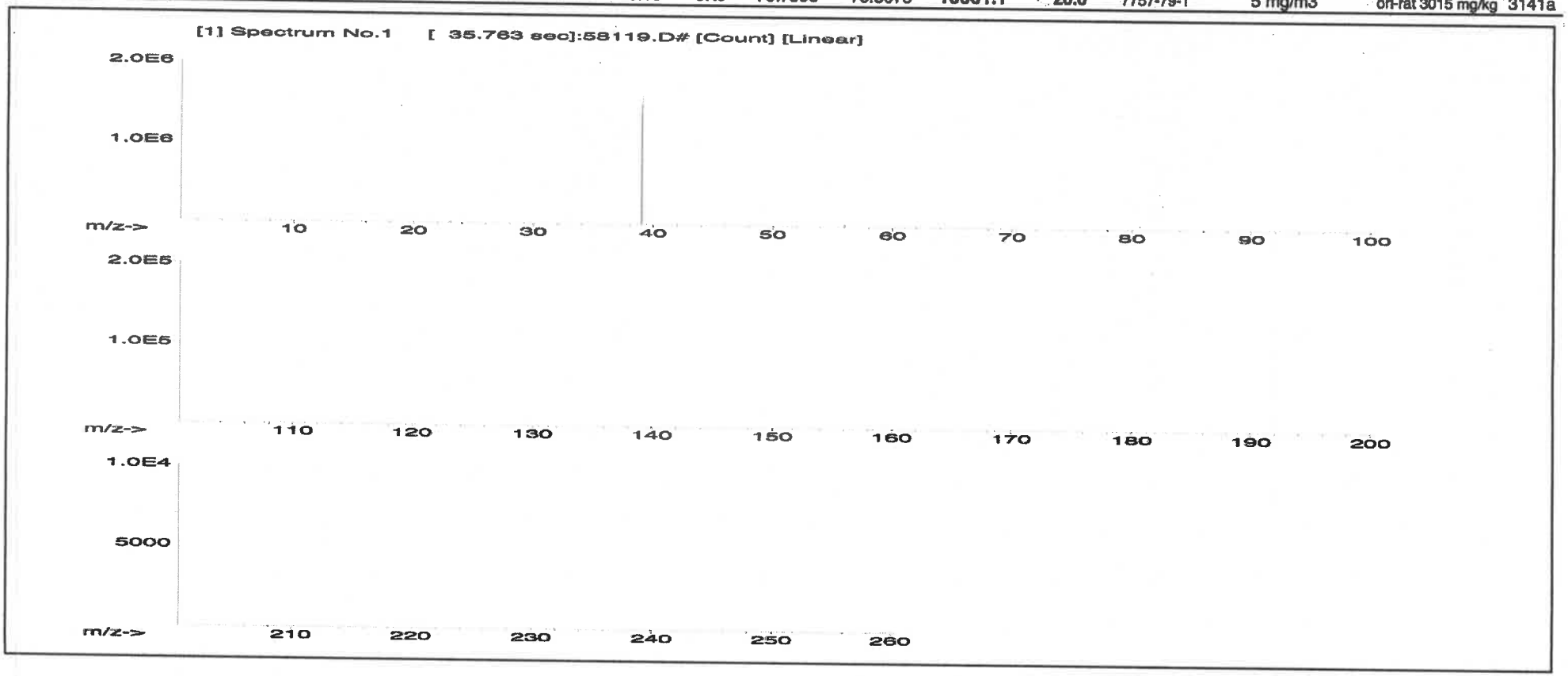
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

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



424

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).

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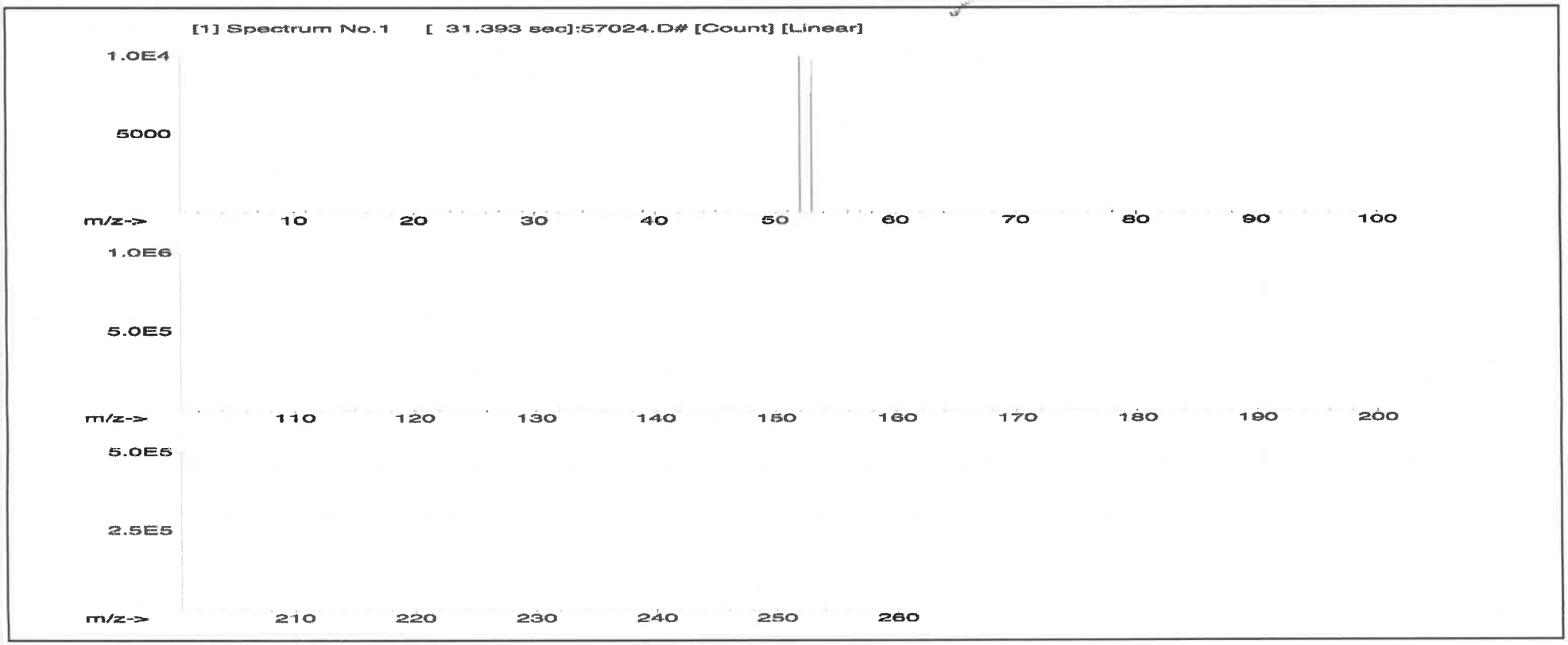
425

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.

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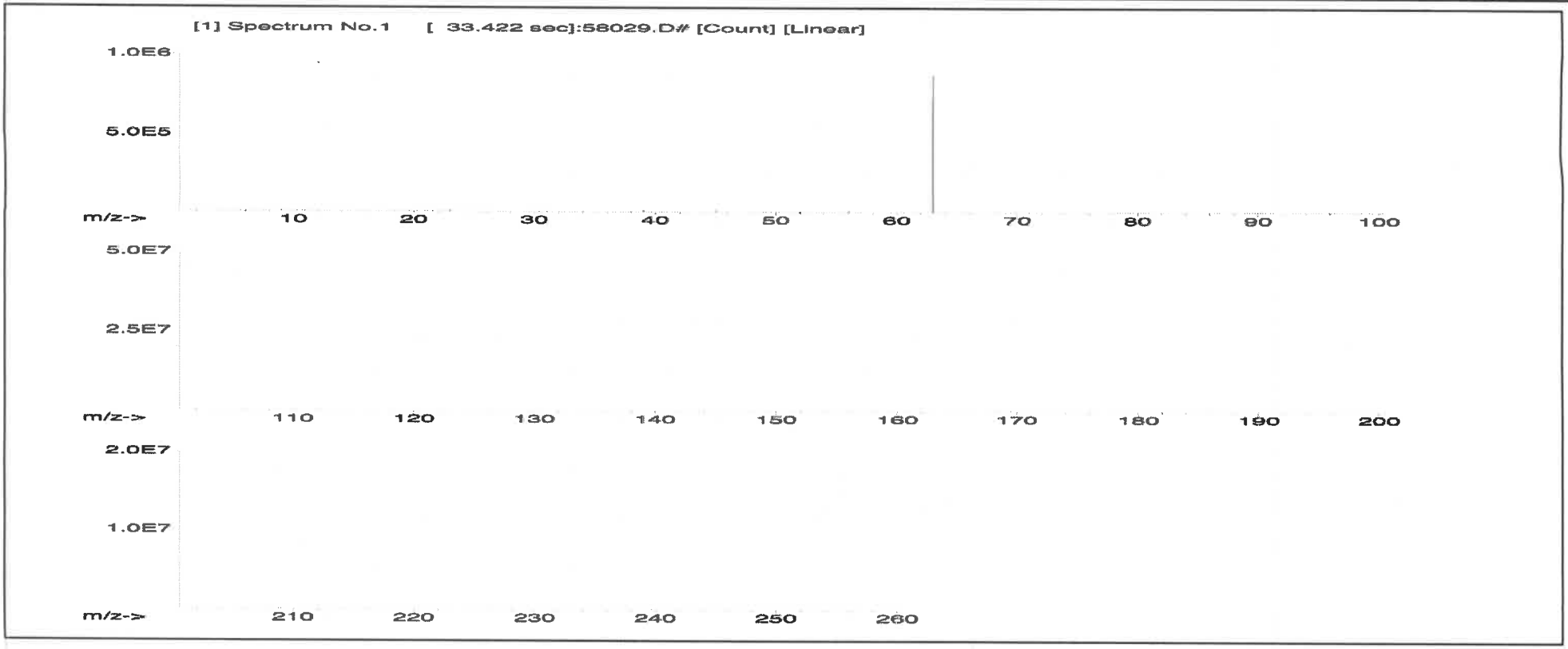
427

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



428

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.

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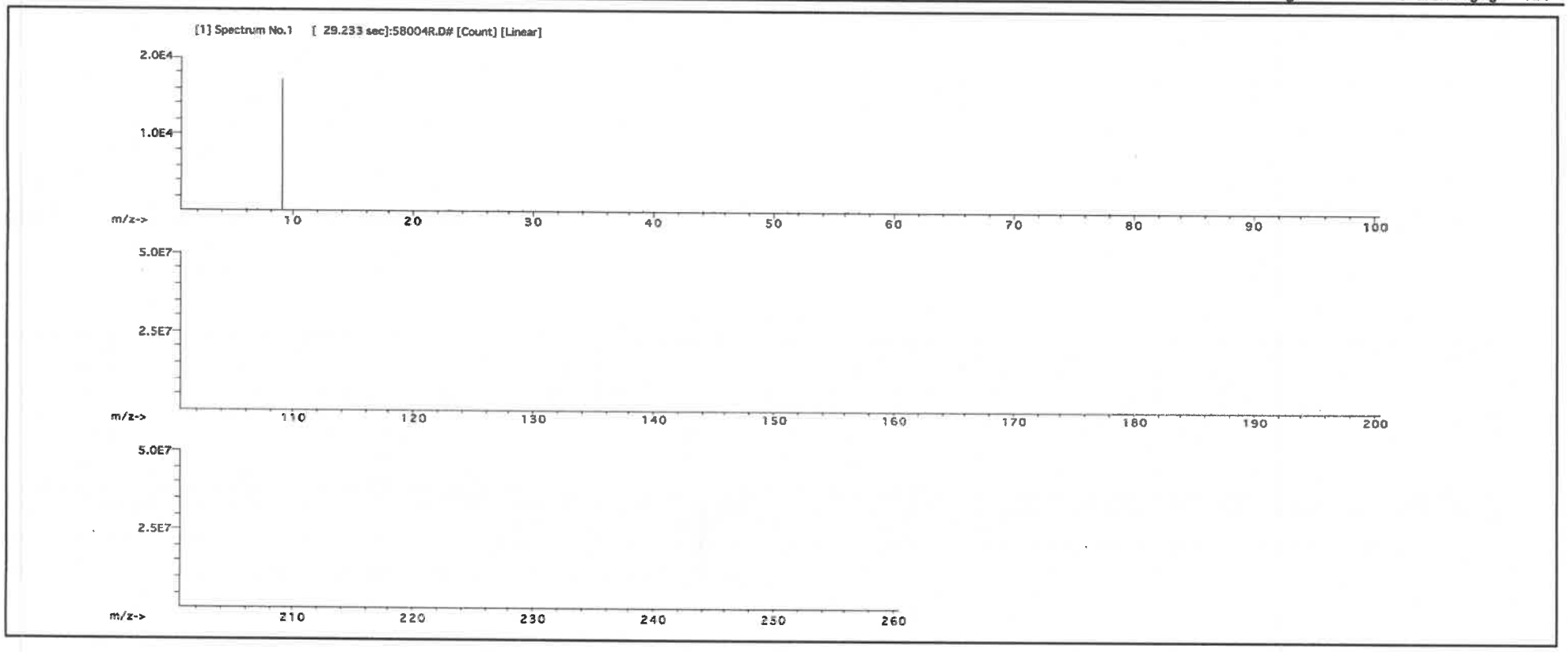
429

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.

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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

430

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431

CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

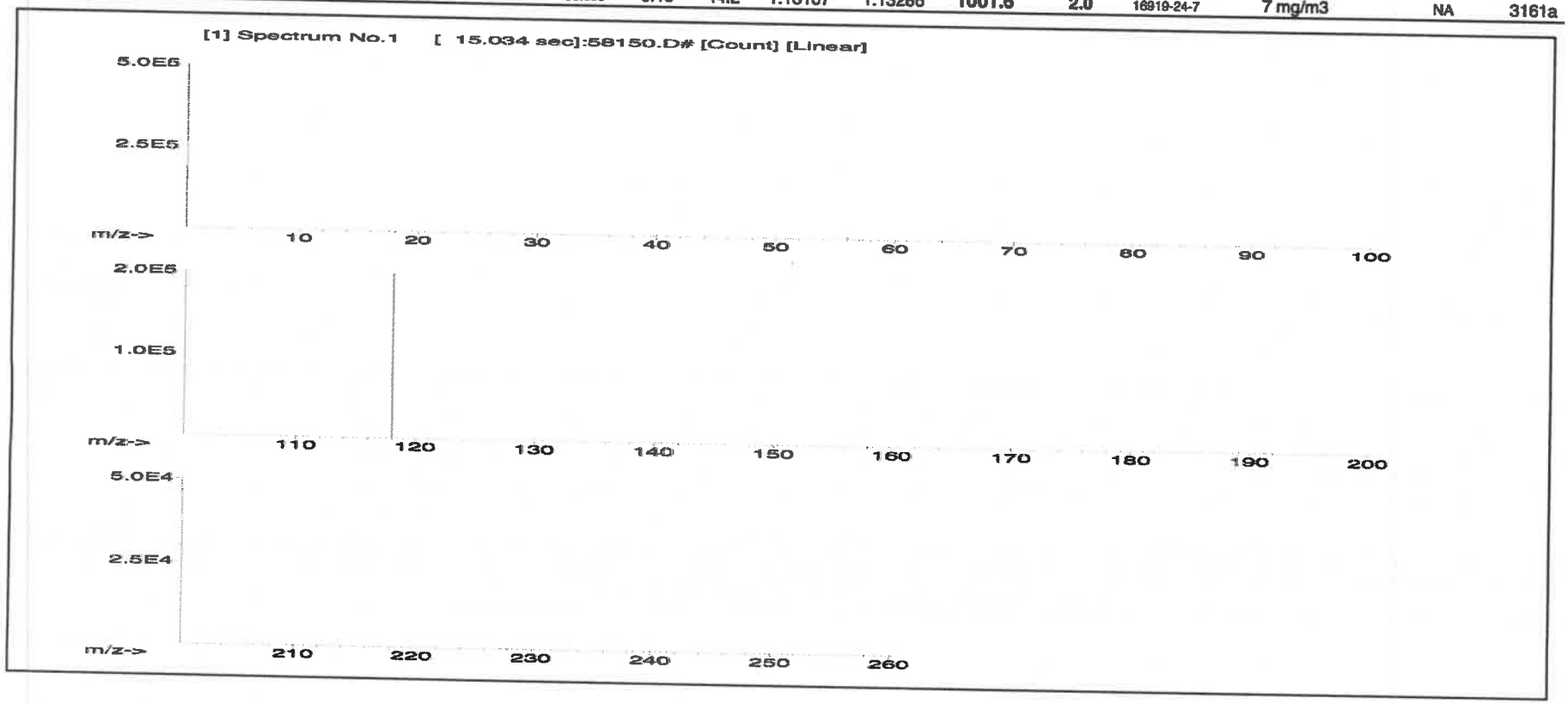
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	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



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:

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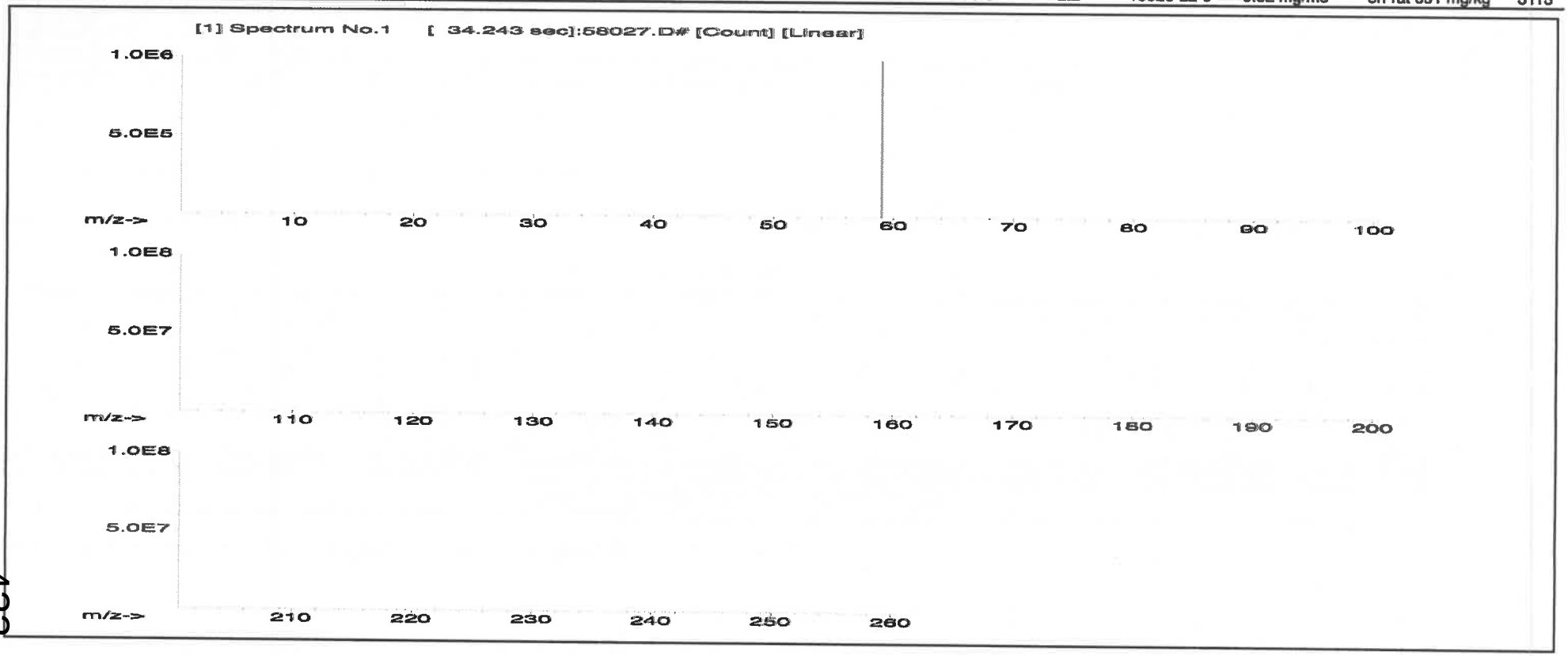
CERTIFIED WEIGHT REPORT:

		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



433

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.
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* 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).

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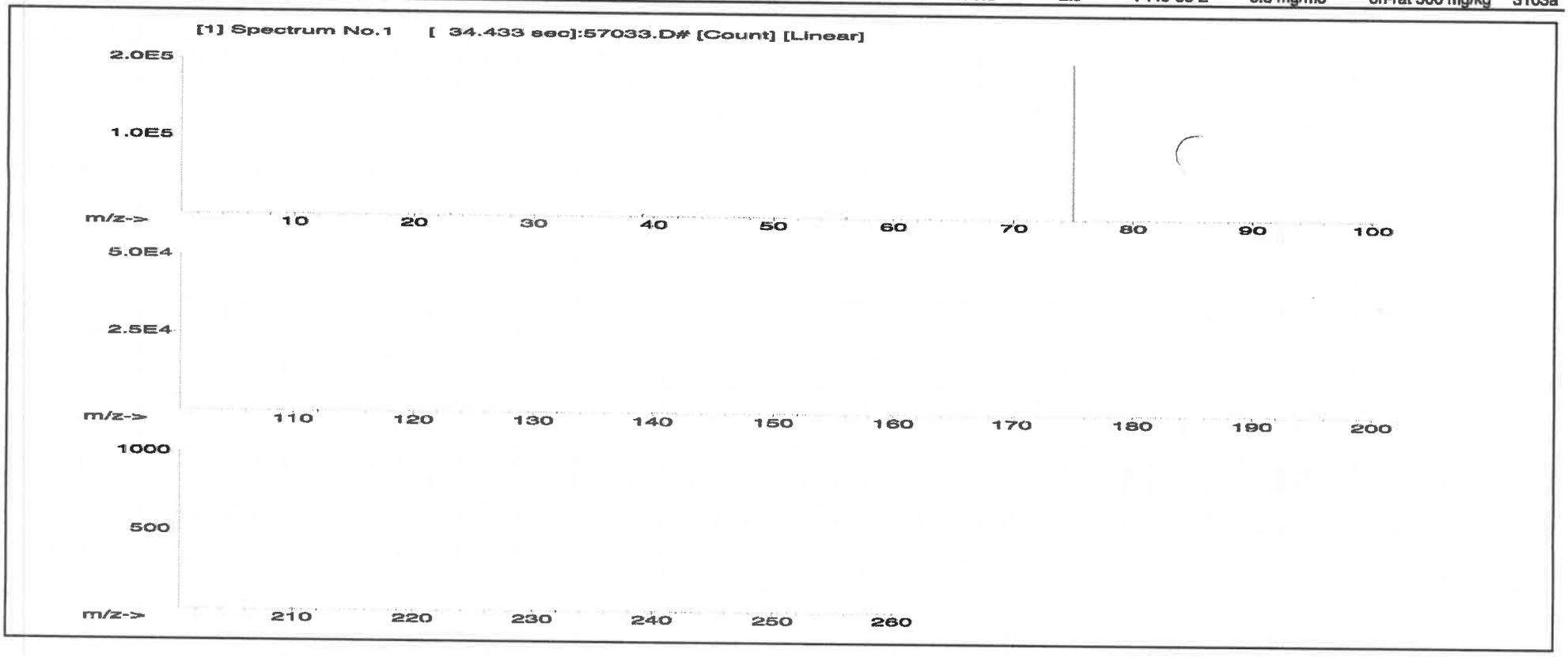
435

CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**	24002546	Nitric Acid		
Lot Number:	**111323**				
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



436

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.

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
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* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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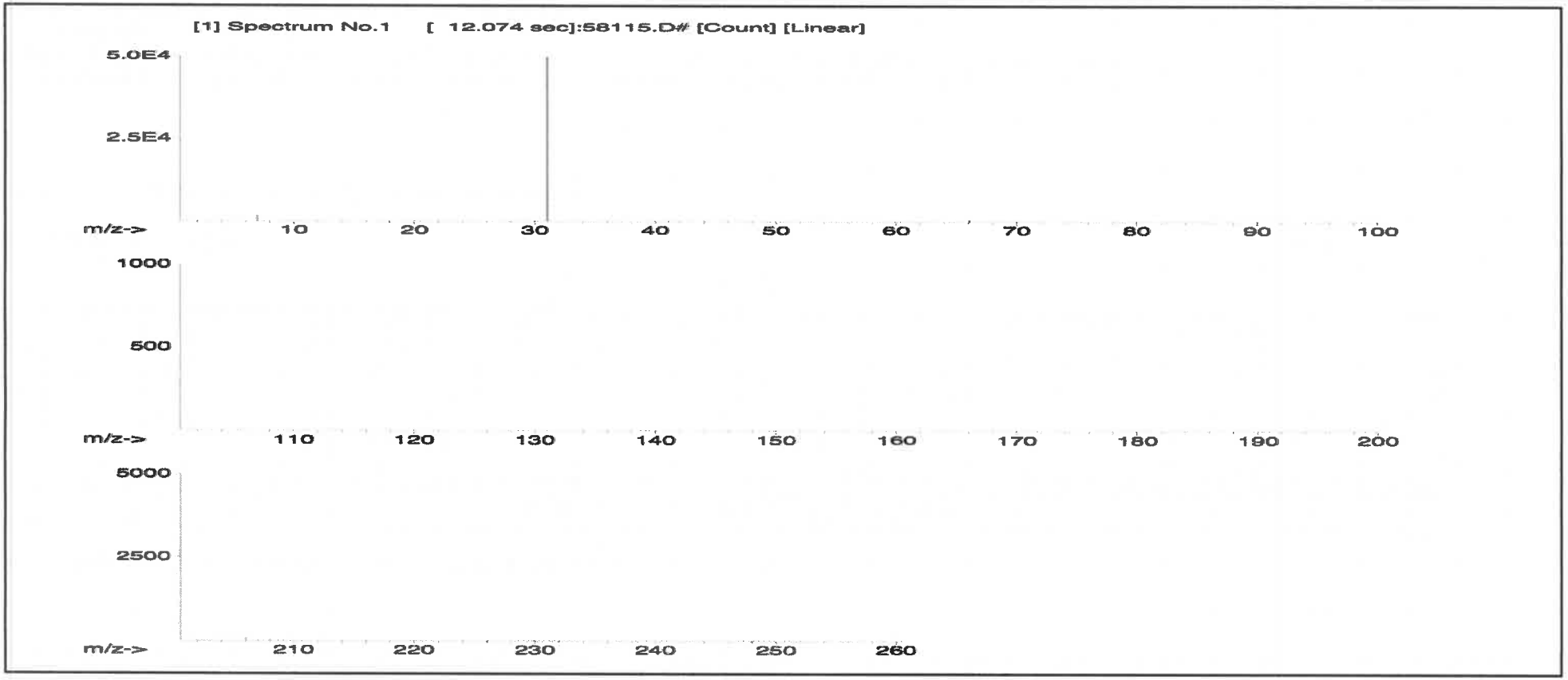
437

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



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.

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* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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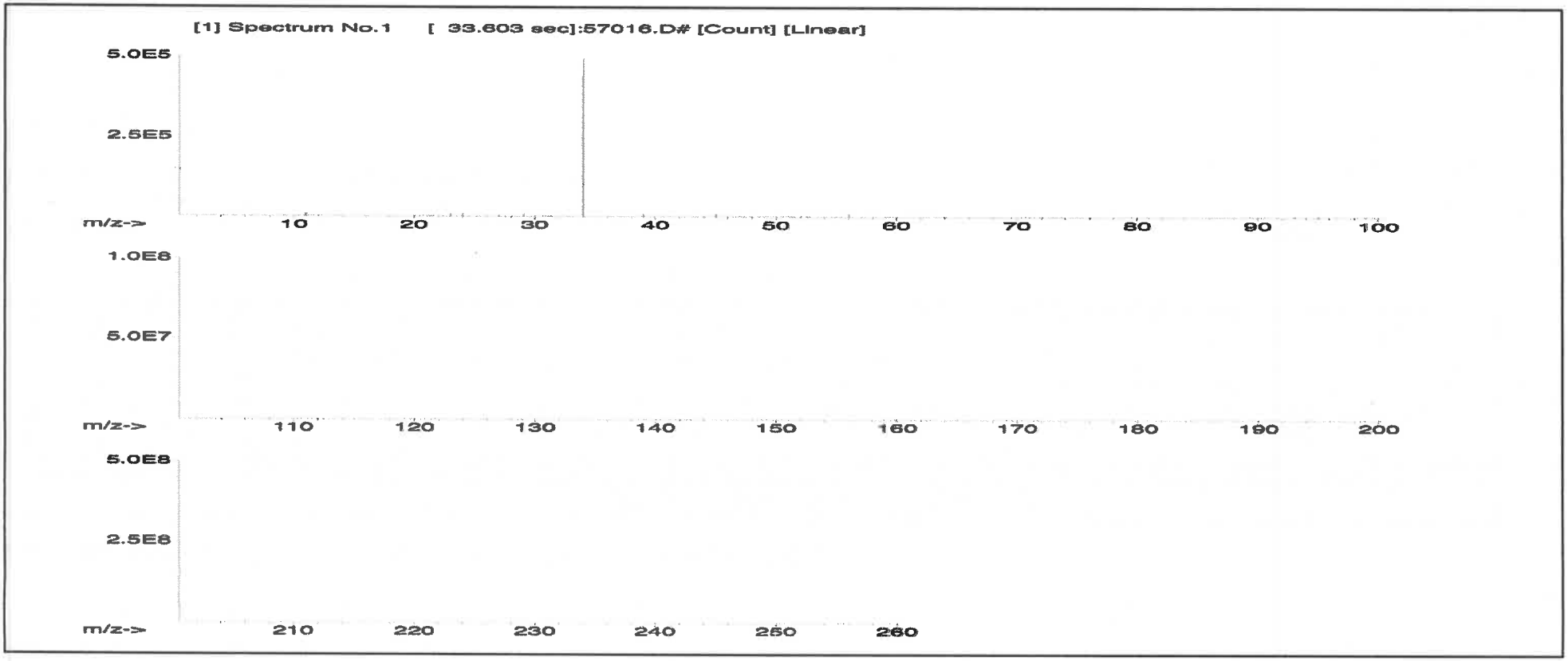
439

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



440

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:

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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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441

CERTIFIED WEIGHT REPORT:

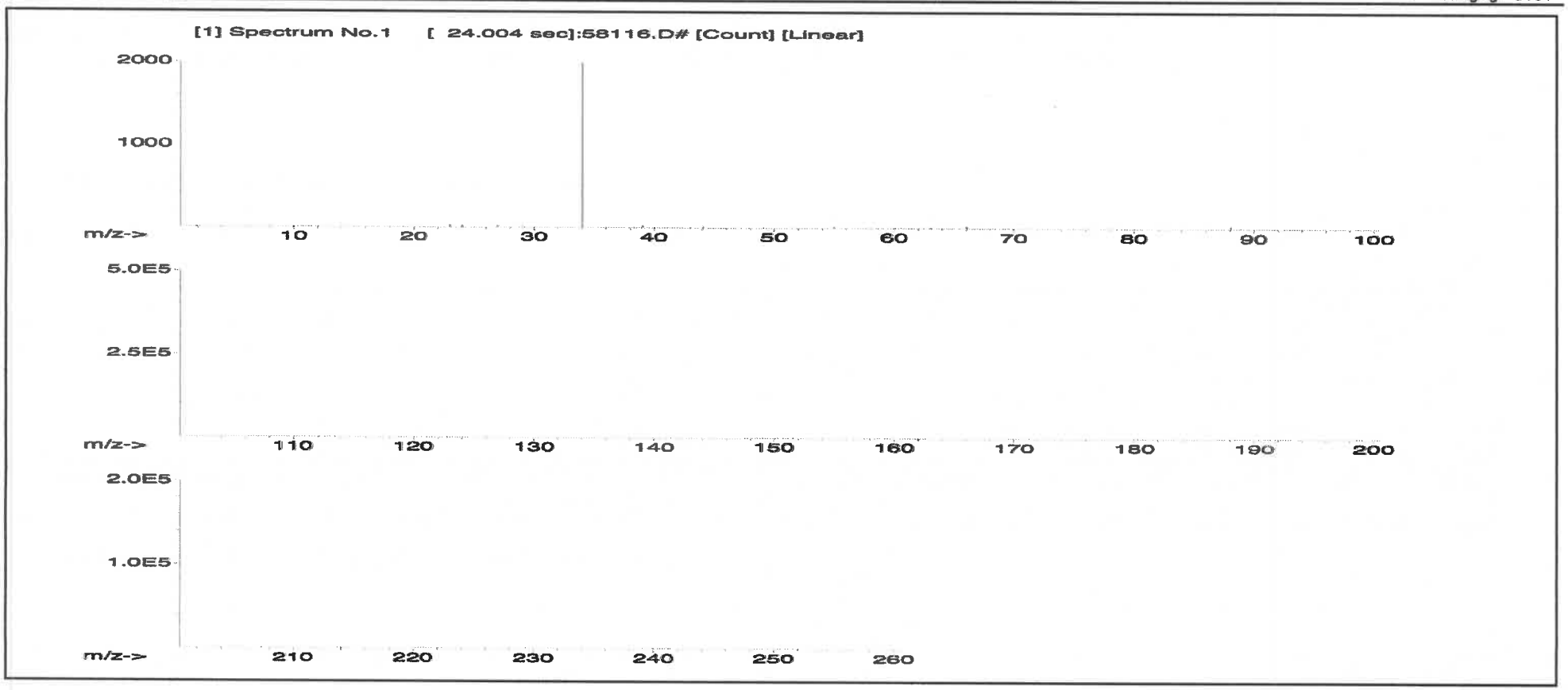
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

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



442

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:

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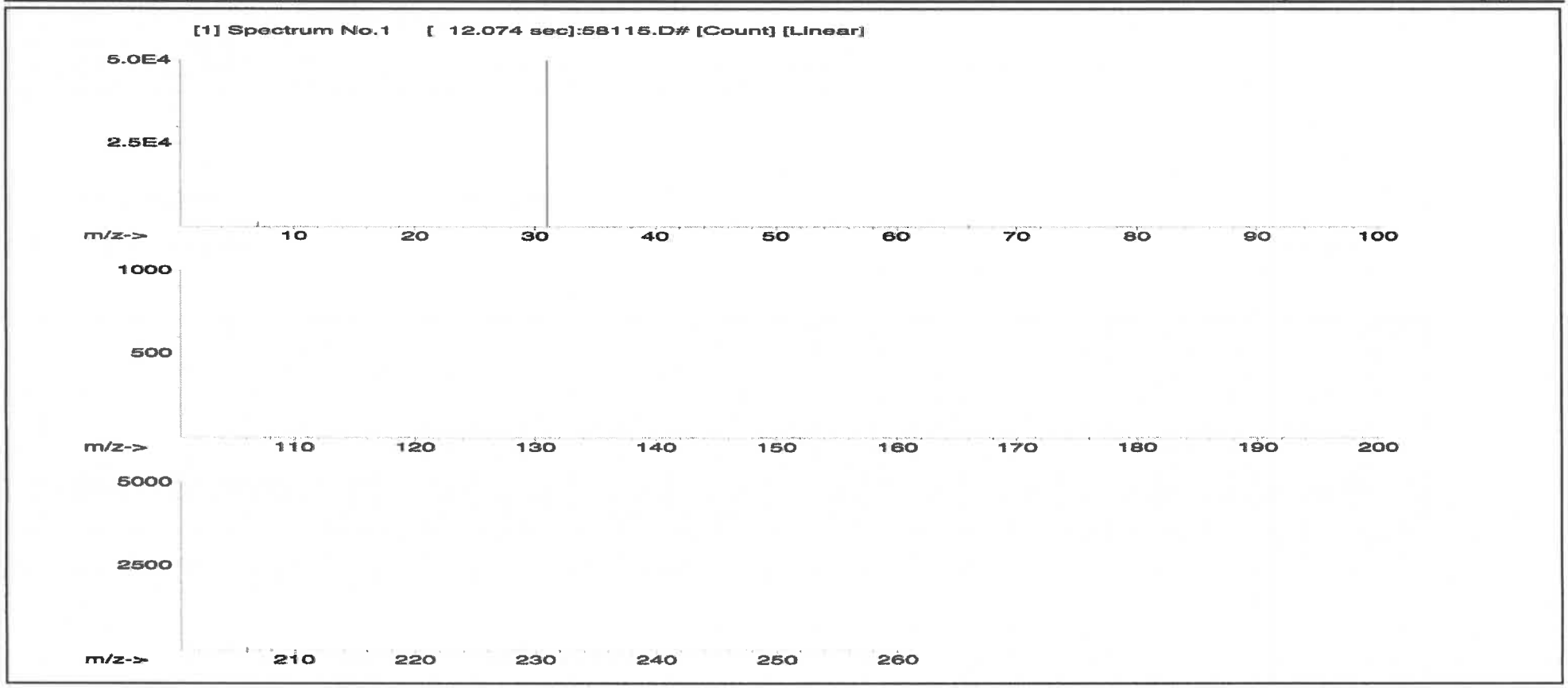
443

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



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.

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* 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

M5960 KK R. 6/11/24

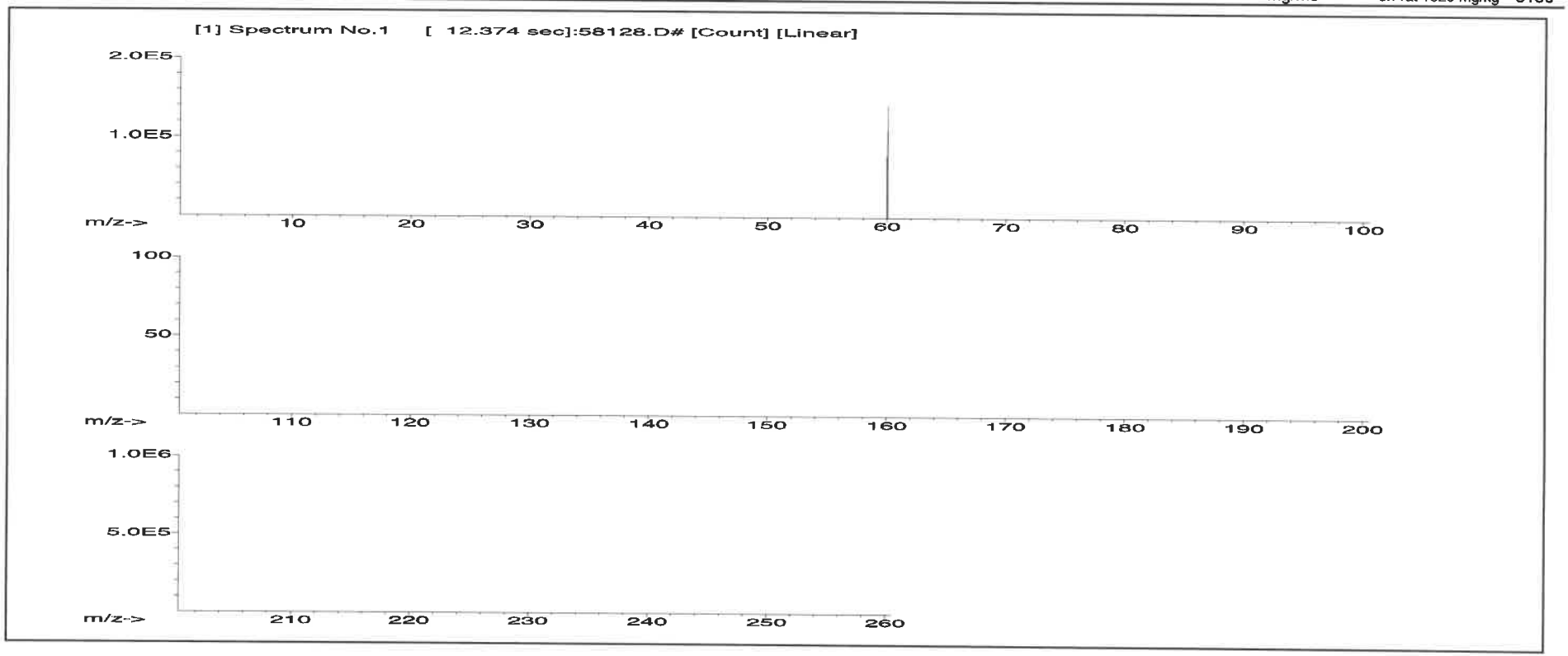
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57028**		**Lot #**		
Lot Number:	**041124**	**Solvent:**	24002546	Nitric Acid	
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



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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	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	<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).

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Certified Reference Material CRM

M5962 R! 06/14/24.

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

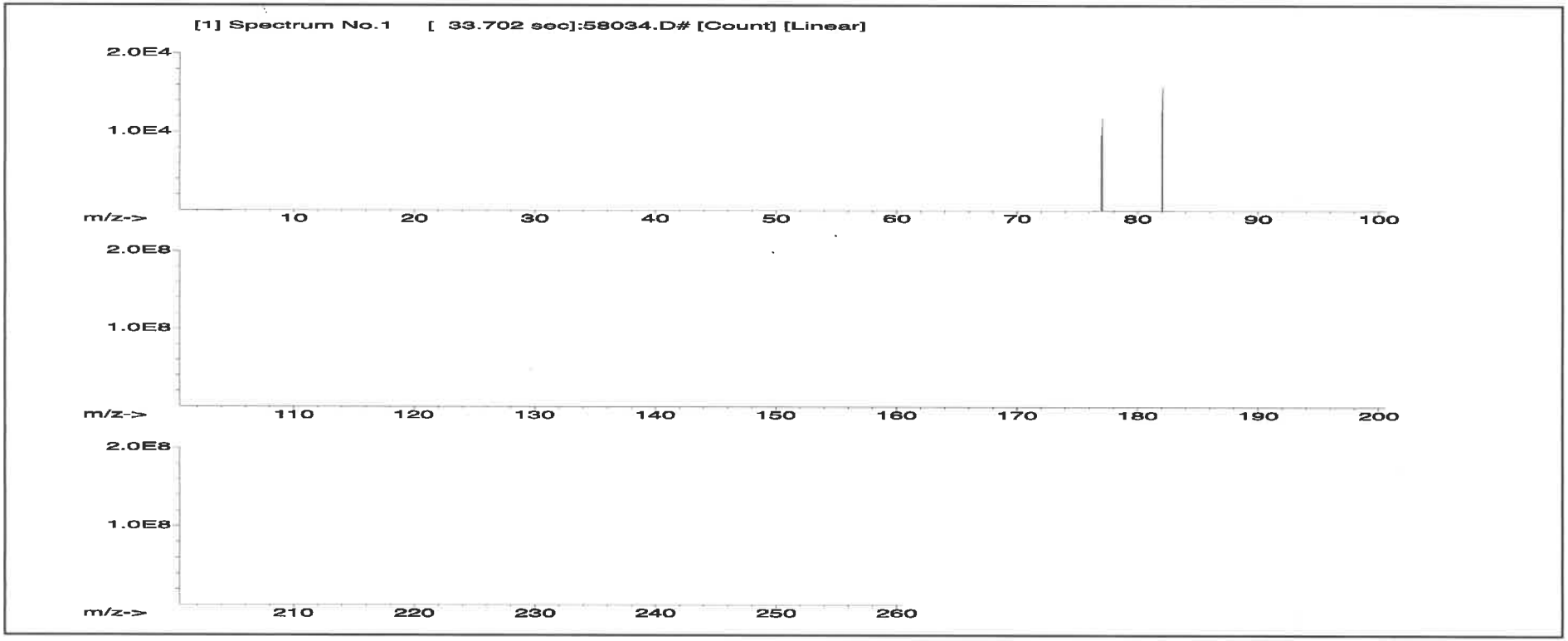
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CERTIFIED WEIGHT REPORT:

		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



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).

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Certificate of Analysis

M5976, M5977
R: 02/22/24

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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



M5978, M5979

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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

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5981 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		

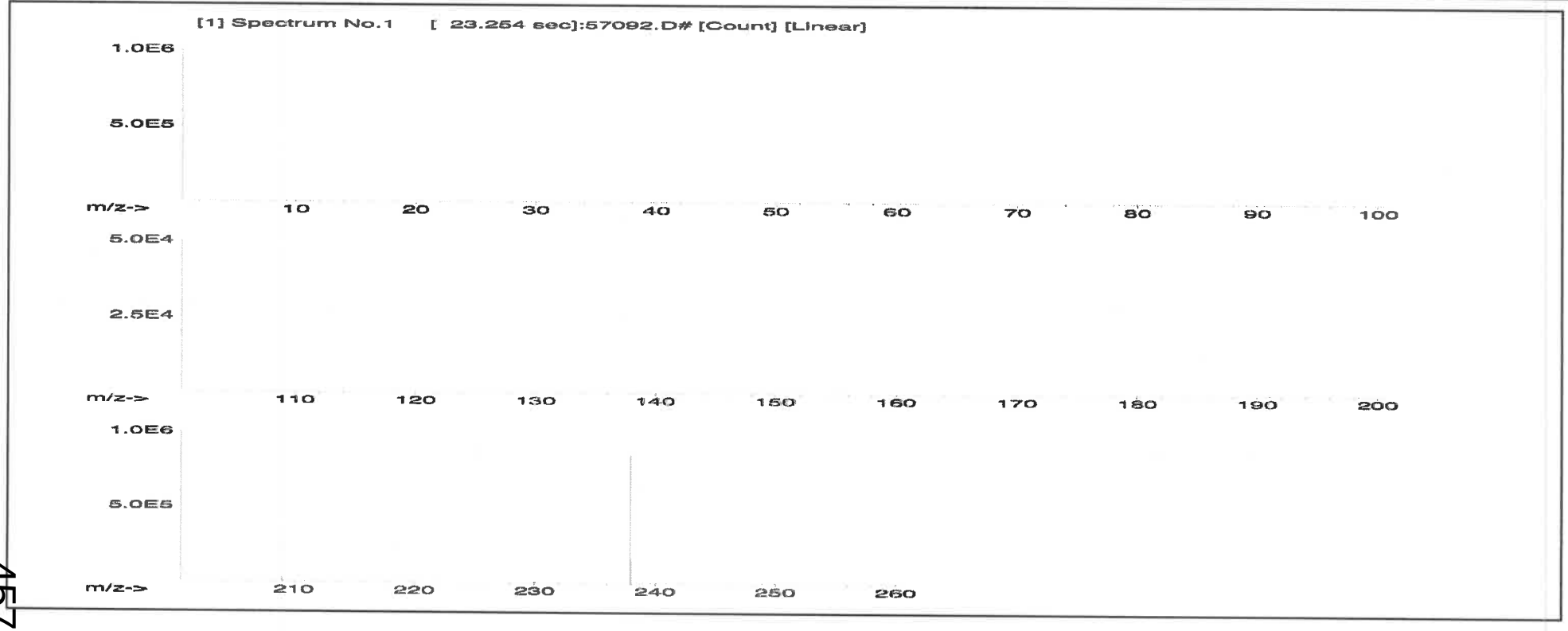
Giovanni Esposito

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



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	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).

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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:

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



INORGANIC VENTURES™
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Certificate of Analysis

R 18/19/24, 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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6079 R: 9/30/24

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

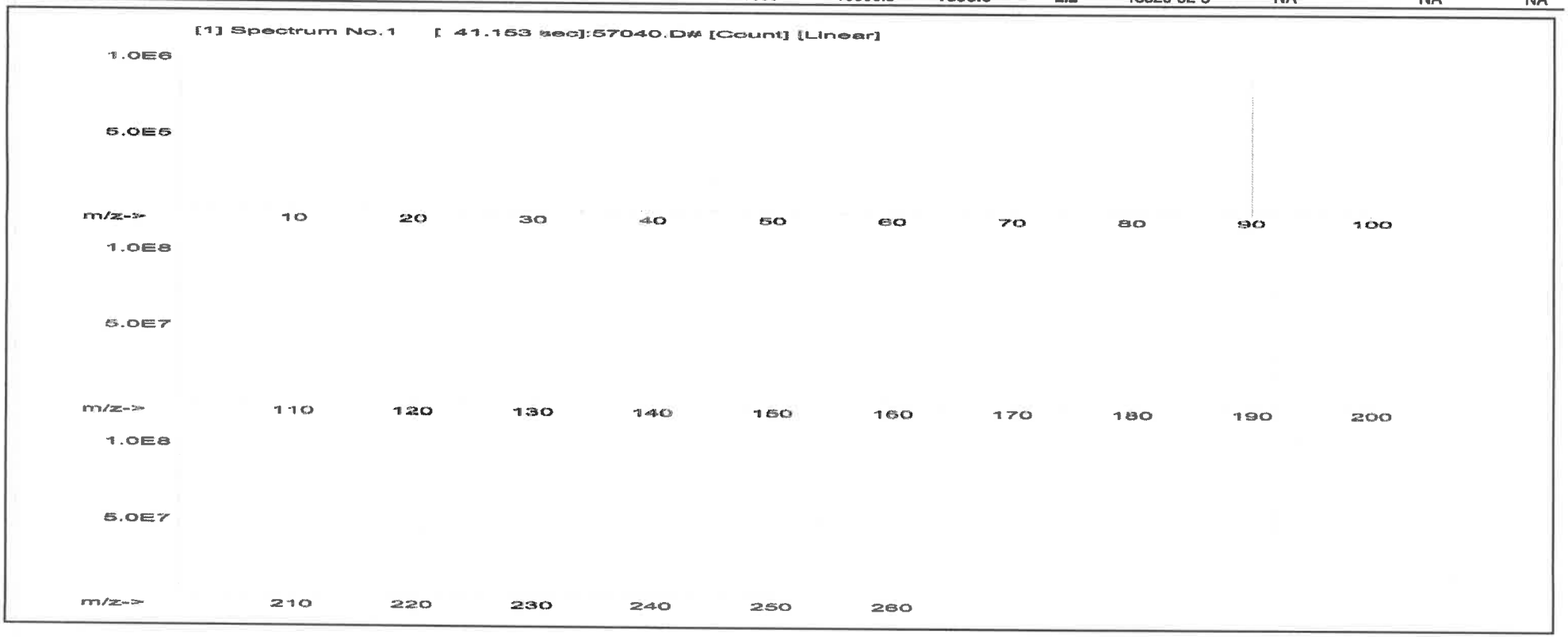
467

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



468

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:

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).

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

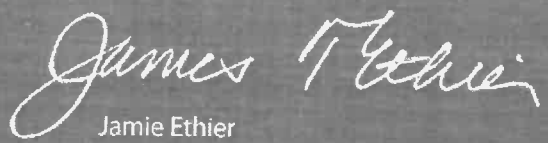
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Material No.: 9530-33
Batch No.: 0000275677

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

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

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AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

R → 1/13/25

M 6127

Part Number:	**58112**	**Solvent:**	**Lot #** 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	

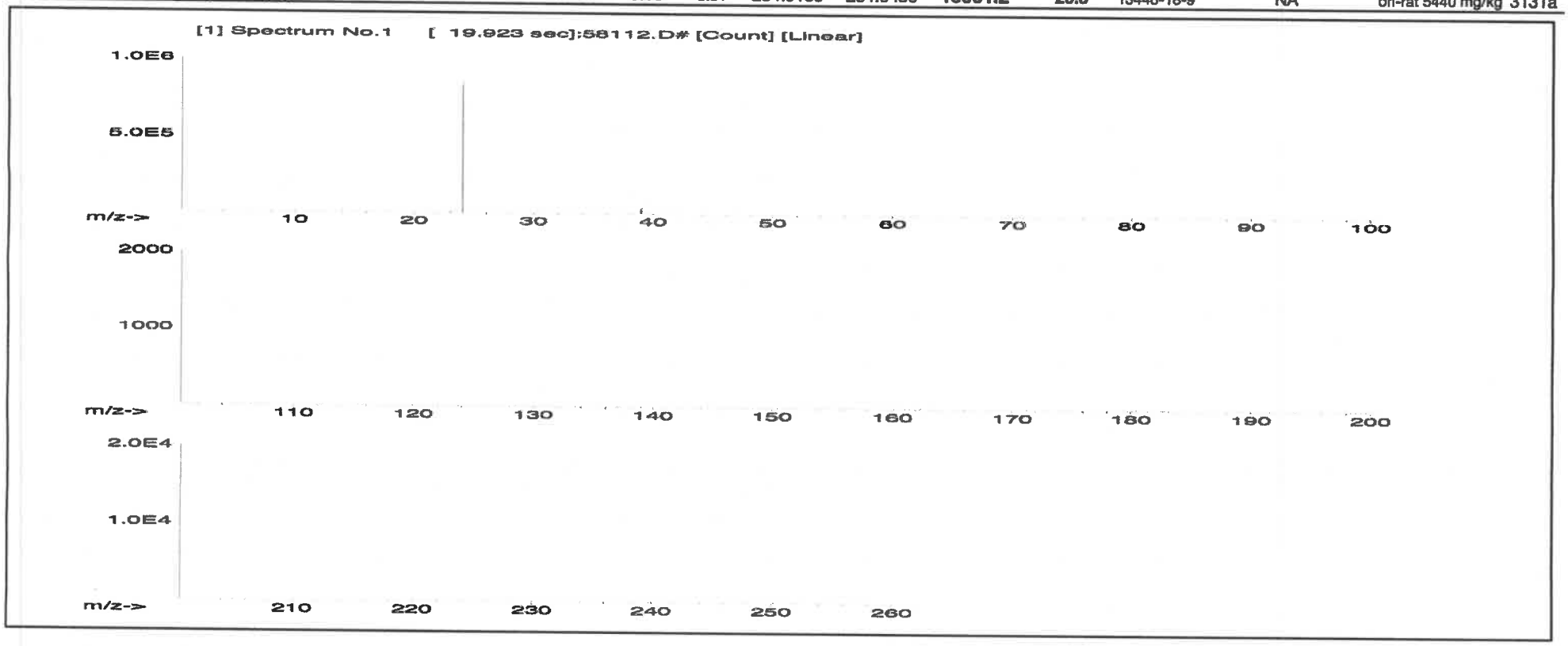
Giovanni Esposito

Formulated By: Giovanni Esposito 112124

Pedro Rentas

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



474

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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are 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).

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475

CERTIFIED WEIGHT REPORT:

R->1/13/28

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	

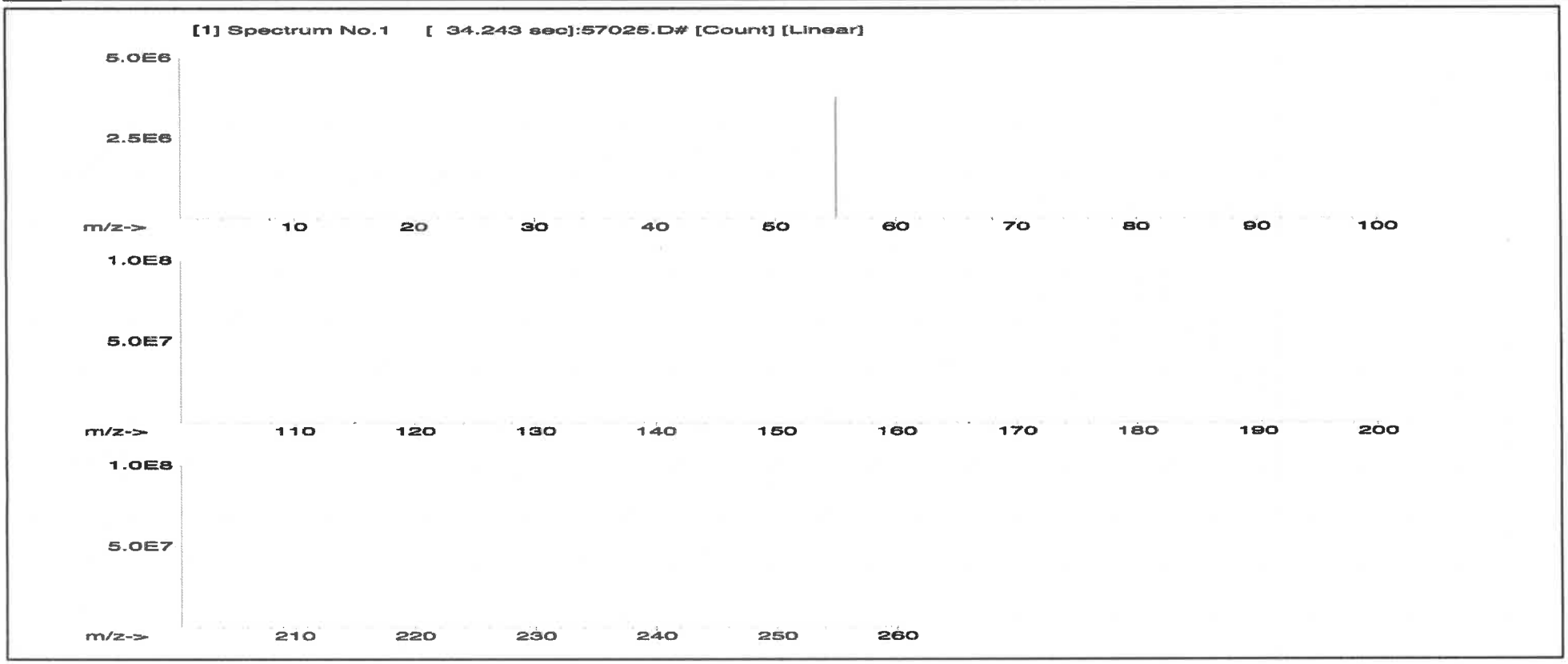
Giovanni Esposito

Formulated By:	Giovanni Esposito	101124

Pedro Rentas

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



476

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).

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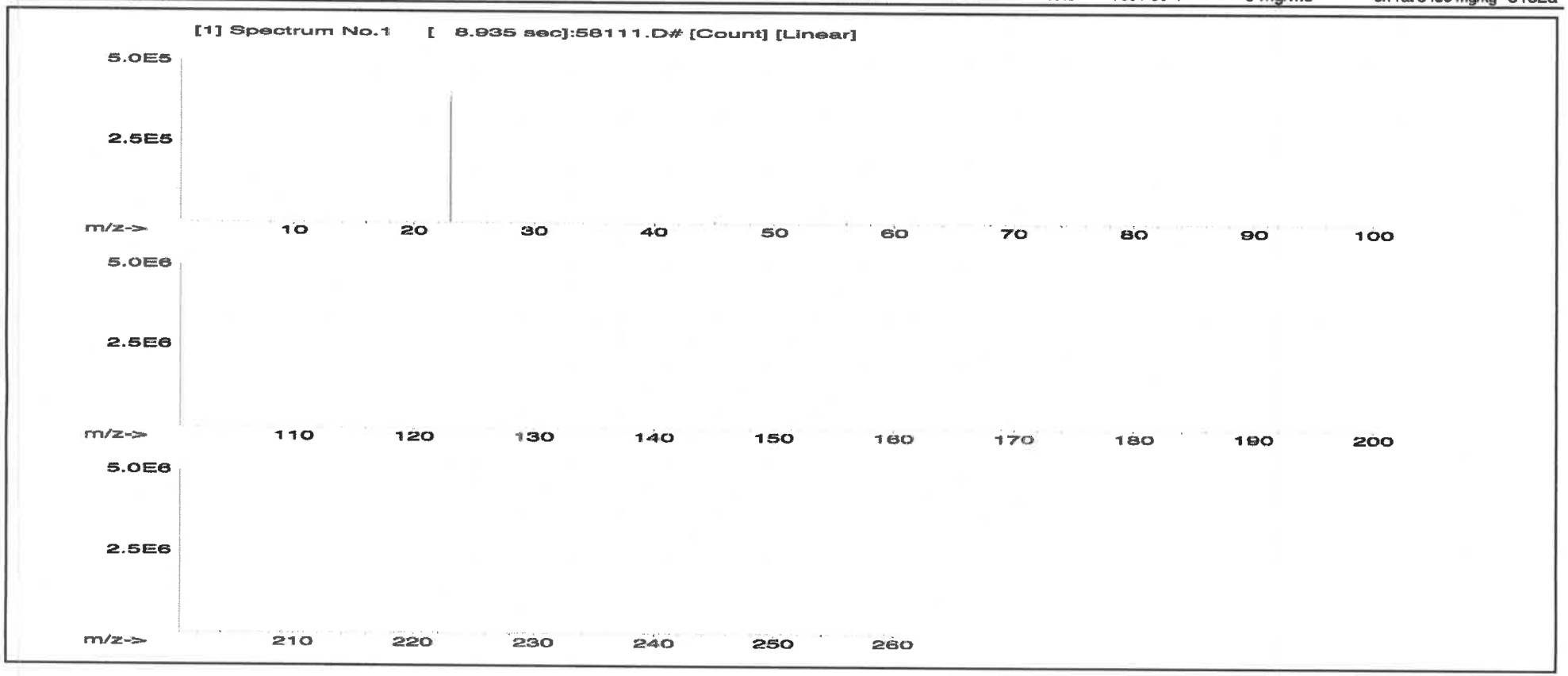
CERTIFIED WEIGHT REPORT:

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

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



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	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

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

479

CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 121724
Description: Zinc (Zn)
Expiration Date: 121727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

R → 1/13/25

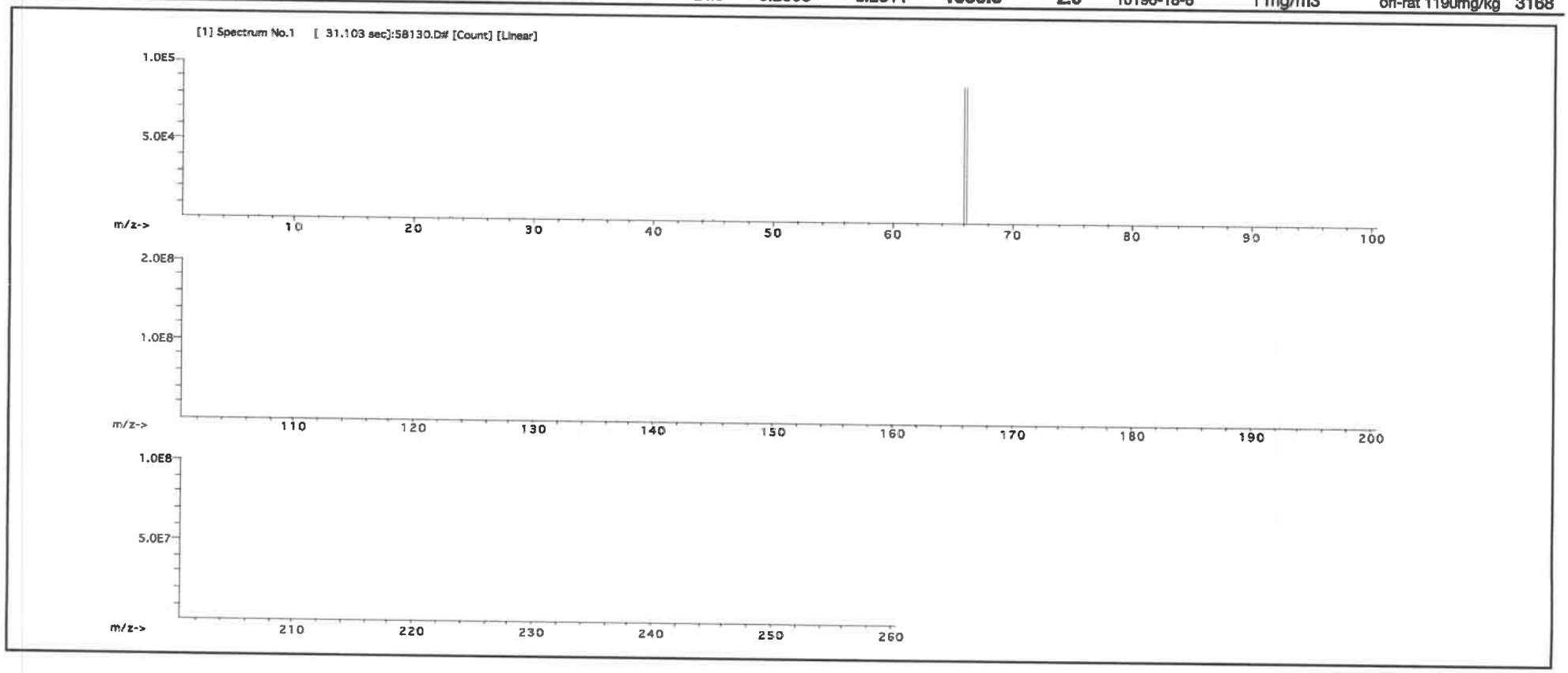
M6145

	Lot #	
Solvent:	24012496	Nitric Acid
2%	40.0 (mL)	Nitric Acid

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 121724
Reviewed By: Pedro L. Rentas 121724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	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	8.2308	8.2311	**1000.0**	**2.0**	10196-18-6	1 mg/m3	ori-rat 1190mg/kg	3168



480

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:

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).

R : 4/20/21

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

M6150

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

(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

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

M6151

R→ 1/15/25

Material No.: 9530-33
Batch No.: 22G2862015
Manufactured Date: 2022-06-15
Retest Date: 2027-06-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.9 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.191
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	1.3 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	163.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.7 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.6 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855 282 6867 or +1 610 386 1700

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	2.9 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	0.8 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities - Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	0.5 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	2.3 ppb
Trace Impurities - Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Tantalum (Ta)	≤ 1.0 ppb	1.6 ppb
Trace Impurities - Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	4.0 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	1.5 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	0.3 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

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

James T Ethier

Jamie Ethier
Vice President Global Quality

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:

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

M6030

R: 8/5/24

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

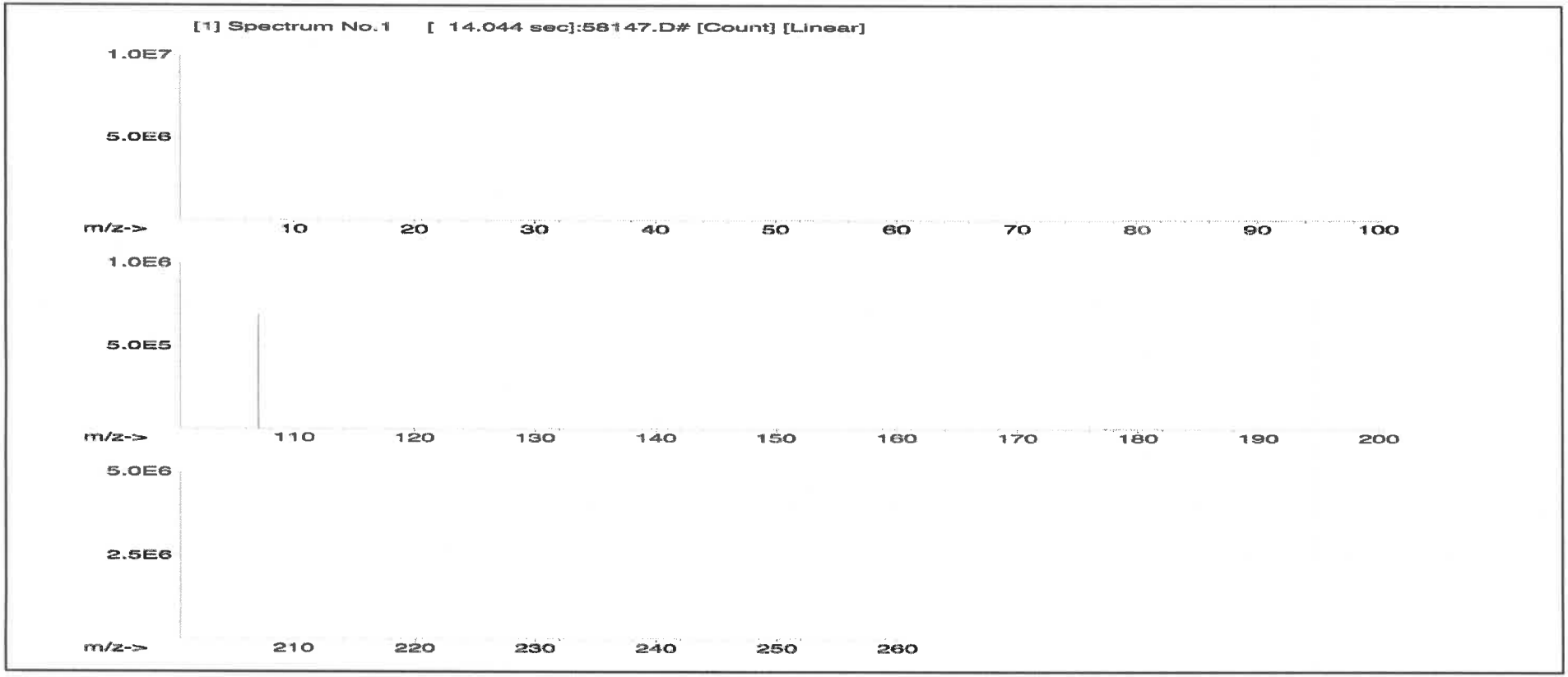
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CERTIFIED WEIGHT REPORT:

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



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	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: 10/18/24

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

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CERTIFIED WEIGHT REPORT: MG146

		Lot #	Solvent:	
Part Number:	**57051**	24002546	Nitric Acid	
Lot Number:	**071724**			
Description:	**Antimony (Sb)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071727			
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):	2000.26	0.058	Flask Uncertainty	

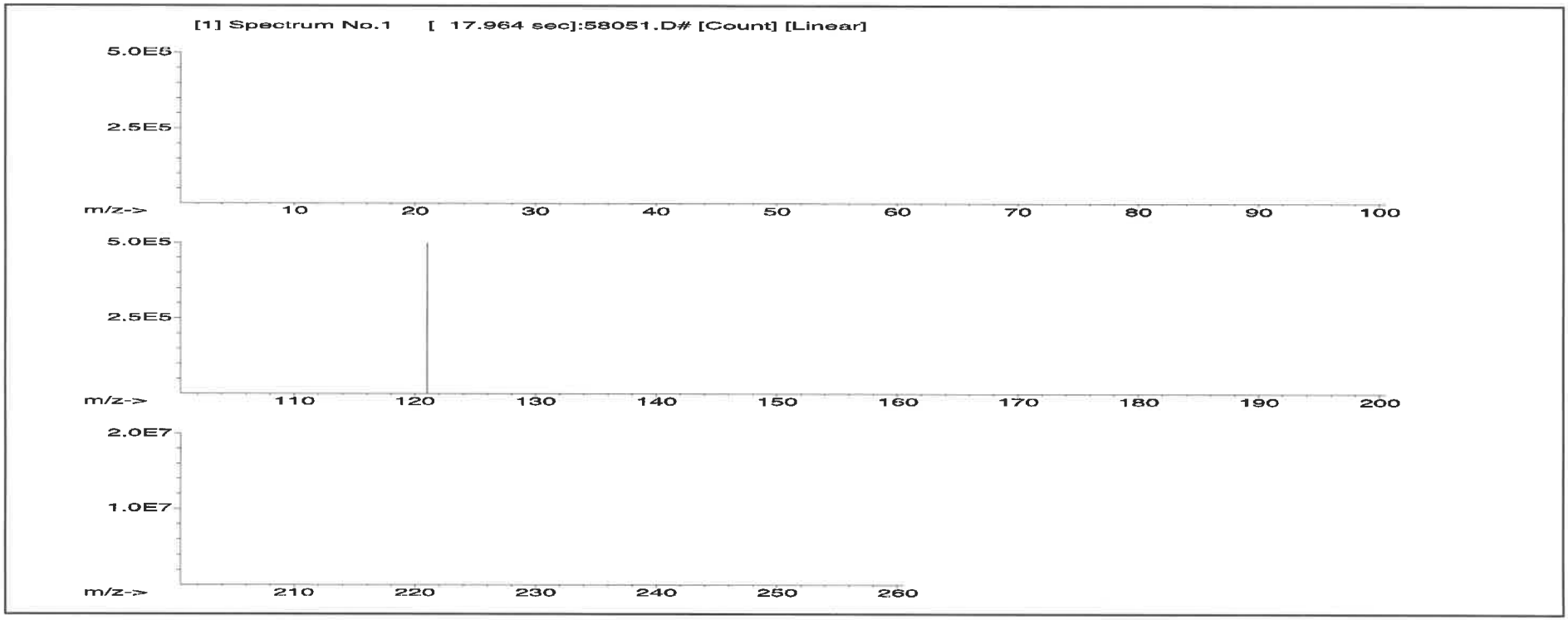
Giovanni Esposito

Formulated By:	Giovanni Esposito	071724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	071724

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	060324	0.1000	200.0	0.084	1000	10001.4	**1000.0**	**2.2**	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



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).

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 888.01
ACCREDITED Reference Material Producer Certificate 888.02

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

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

R: 03/16/23 M5473, M5474, M5475, M5476

502

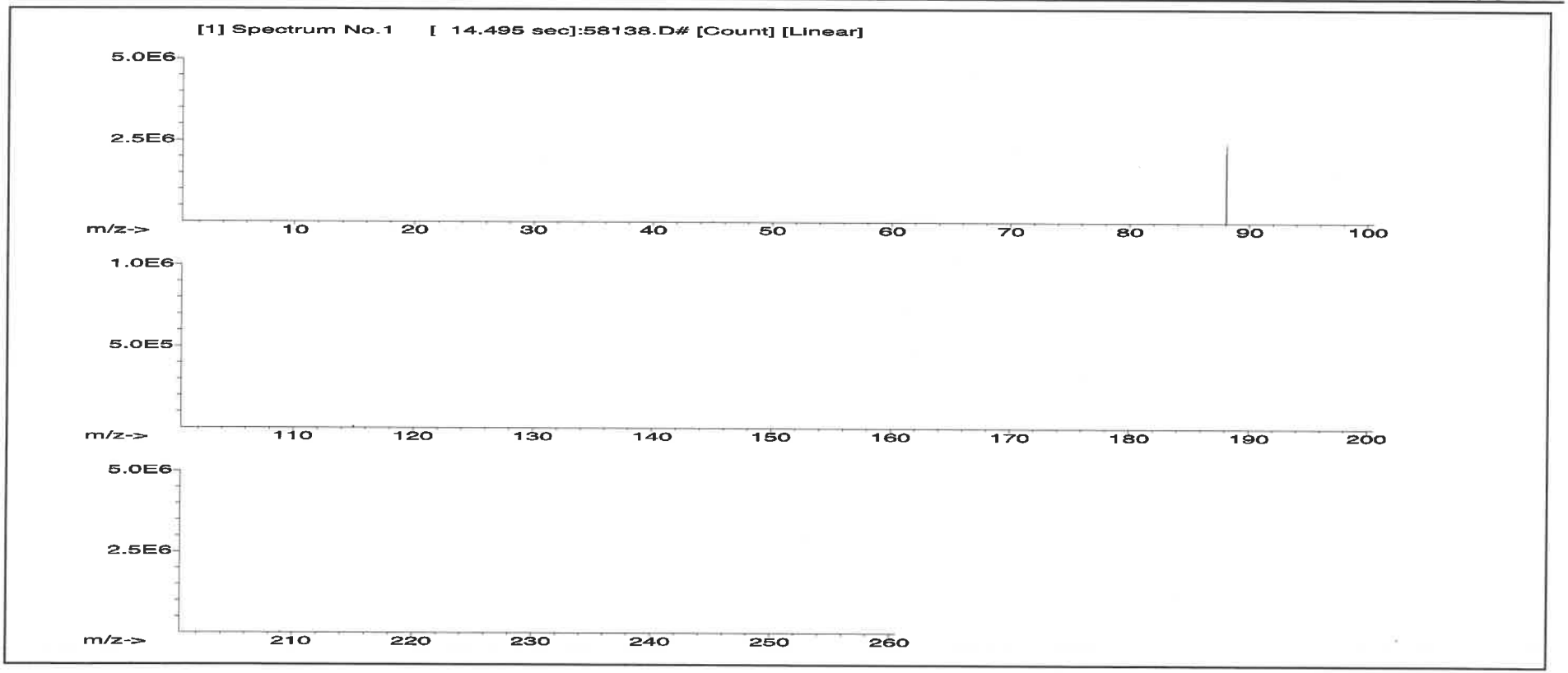
CERTIFIED WEIGHT REPORT:

Part Number:	**56138**		**Solvent:**	20510011	Nitric Acid
Lot Number:	**082922**				
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		

Lot #

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



503

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).

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R ! 8/5/24

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504

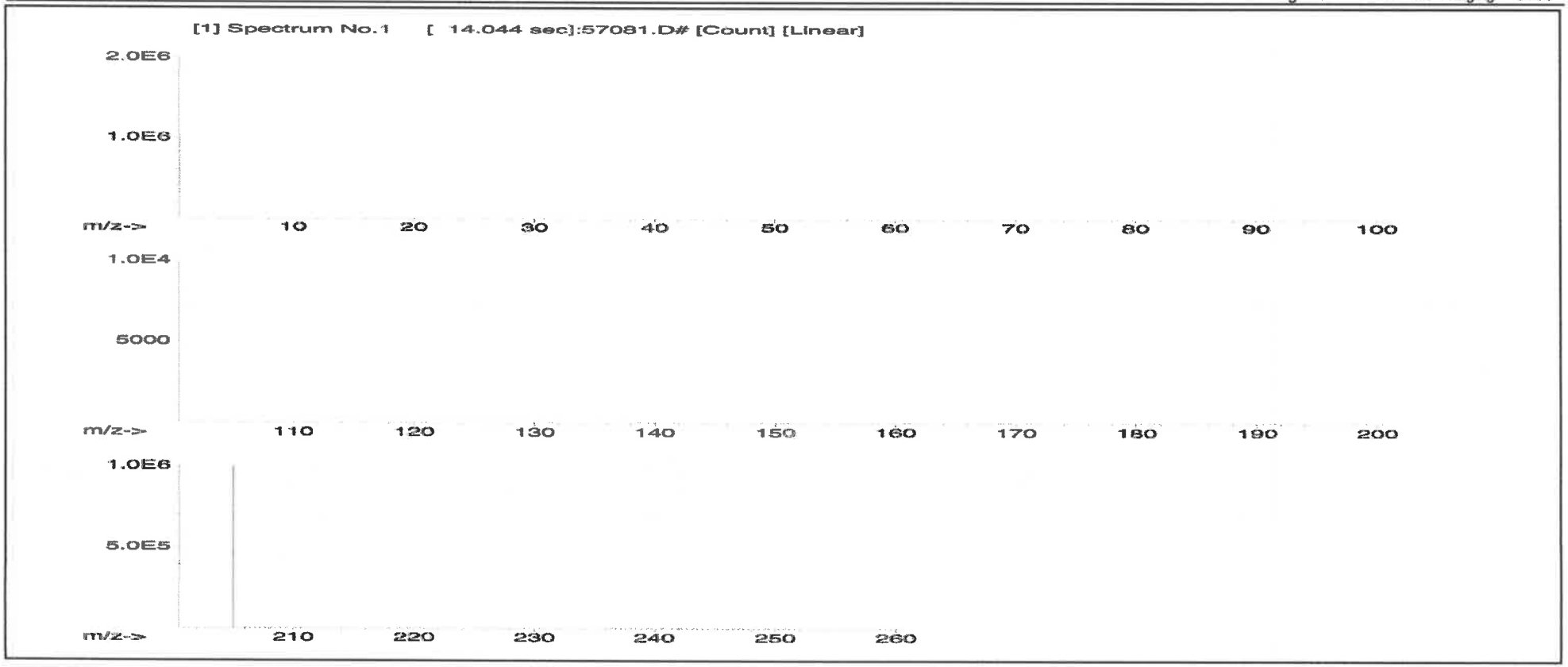
CERTIFIED WEIGHT REPORT:

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



505

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).

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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	

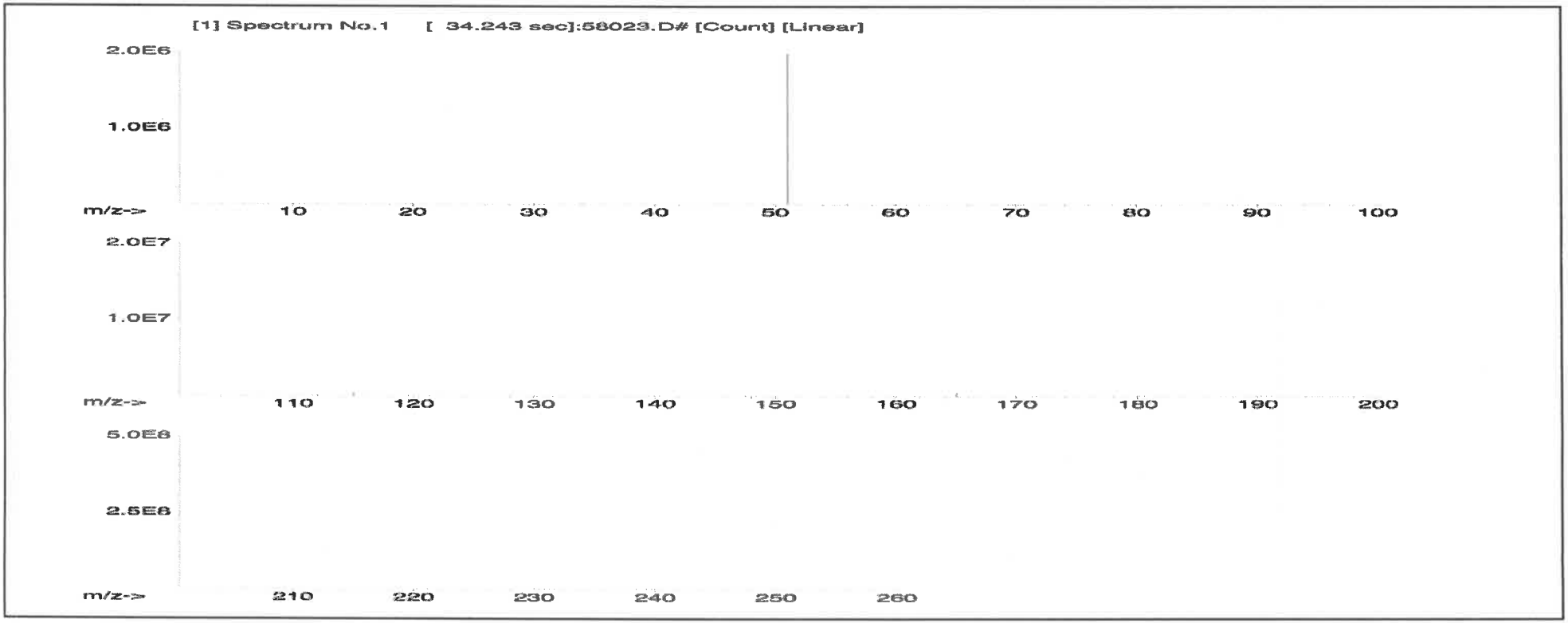
Aleah O'Brady

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



507

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.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB166703

SOP ID : M200.8-Trace Elements-22, MSFAM01.1-Metals ICPMS-2

SDG No : ME29C5

Matrix : WATER

Pippete ID: ICP A

Balance ID : N/A

Filter paper ID : N/A

pH Strip ID : M6069

Hood ID : #3

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

Start Digest Date: 02/12/2025 **Time :** 13:55 **Temp :** 96 °C

End Digest Date: 02/12/2025 **Time :** 17:05 **Temp :** 96 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. #1

Dig Technician Signature: Jpp

Supervisor Signature: JP

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LCSW	0.50	MP84600
Spike Sol. B	0.50	MP84466
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	1.00	MP84041
1:1 HCL	0.50	MP84297
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK#1 CELL#55 TEMP : 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
2/12/25 17:20	Jpp / Met dig	JP / Met Dig
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB166703

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
PB166703BL	PBW703	<2	50	50	Colorless	Colorless	Clear	Clear	N/A	1
PB166703BS	LCS703	<2	50	50	Colorless	Colorless	Clear	Clear	MP84600	2
Q1339-01	ME29C5	<2	50	50	Colorless	Colorless	Clear	Clear	N/A	3
Q1339-02	ME29C7	<2	50	50	Colorless	Colorless	Clear	Clear	N/A	4
Q1339-03	ME29C6	<2	50	50	Colorless	Colorless	Clear	Clear	N/A	5
Q1339-04	ME29C9	<2	50	50	Colorless	Colorless	Clear	Clear	N/A	6
Q1339-05	ME29D1	<2	50	50	Colorless	Colorless	Clear	Clear	N/A	7
Q1339-06	ME29D2	<2	50	50	Colorless	Colorless	Clear	Clear	N/A	8
Q1339-07	ME29D4	<2	50	50	Colorless	Colorless	Clear	Clear	N/A	9
Q1339-08	ME29D2D	<2	50	50	Colorless	Colorless	Clear	Clear	N/A	10
Q1339-09	ME29D2S	<2	50	50	Colorless	Colorless	Clear	Clear	MP84466	11

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 # LB134712

Review By	Janvi Patel	Review On	2/14/2025 5:32:06 PM
Supervise By	Kareem Khairalla	Supervise On	2/18/2025 11:55:14 AM

STD. NAME	STD REF.#
ICAL Standard	MP84414,MP84423,MP84422,MP84420,MP84419,MP84418,MP84417,MP84416,MP84415
ICV Standard	MP84439
CCV Standard	MP84438
ICSA Standard	MP84440,MP84441
CRI Standard	
LCS Standard	MP84600
Chk Standard	MP84444,MP84443

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	TUNE	TUNE007	TUNE	02/13/25 11:12		Jaswal	OK
2	S00	S0	CAL1	02/13/25 11:45		Jaswal	OK
3	S02	S02	CAL3	02/13/25 11:48		Jaswal	OK
4	S03	S03	CAL4	02/13/25 11:51		Jaswal	OK
5	S04	S04	CAL5	02/13/25 11:54		Jaswal	OK
6	S05	S05	CAL6	02/13/25 11:57		Jaswal	OK
7	S06	S06	CAL7	02/13/25 12:00		Jaswal	OK
8	S07	S07	CAL8	02/13/25 12:03		Jaswal	OK
9	S08	S08	CAL9	02/13/25 12:06		Jaswal	OK
10	ICV007	ICV007	ICV	02/13/25 12:12	Instrument paused for calibration review	Jaswal	OK
11	ICB007	ICB007	ICB	02/13/25 12:16		Jaswal	OK
12	ICSA007	ICSA007	ICSA	02/13/25 12:19		Jaswal	OK
13	ICSAB007	ICSAB007	ICSAB	02/13/25 12:28	Instrument paused for review	Jaswal	OK
14	CCV027	CCV027	CCV	02/13/25 12:31		Jaswal	OK
15	CCB027	CCB027	CCB	02/13/25 12:34		Jaswal	OK
16	Q1255-08A	MDCZN8A	PS	02/13/25 12:38	PS for Se(0.1ml of MP84474 in 10ml sample)	Jaswal	OK
17	PB166671BL	PBW671	MB	02/13/25 12:41		Jaswal	OK
18	PB166671BS	LCS671	LCS	02/13/25 12:45		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 # LB134712

Review By	Janvi Patel	Review On	2/14/2025 5:32:06 PM
Supervise By	Kareem Khairalla	Supervise On	2/18/2025 11:55:14 AM

STD. NAME	STD REF.#
ICAL Standard	MP84414,MP84423,MP84422,MP84420,MP84419,MP84418,MP84417,MP84416,MP84415
ICV Standard	MP84439
CCV Standard	MP84438
ICSA Standard	MP84440,MP84441
CRI Standard	
LCS Standard	MP84600
Chk Standard	MP84444,MP84443

19	Q1231-01	ME2993	SAM	02/13/25 12:48		Jaswal	OK
20	Q1231-02	ME2993D	DUP	02/13/25 12:51		Jaswal	OK
21	Q1231-01L	ME2993L	SD	02/13/25 12:54		Jaswal	OK
22	Q1231-03	ME2993S	MS	02/13/25 12:58		Jaswal	OK
23	Q1231-04	ME29C1	SAM	02/13/25 13:01		Jaswal	OK
24	Q1231-05	ME29C2	SAM	02/13/25 13:04		Jaswal	OK
25	Q1231-06	ME29C3	SAM	02/13/25 13:07		Jaswal	OK
26	Q1231-07	ME29C4	SAM	02/13/25 13:10		Jaswal	OK
27	PB166703BL	PBW703	MB	02/13/25 13:14		Jaswal	OK
28	PB166703BS	LCS703	LCS	02/13/25 13:17		Jaswal	OK
29	Q1339-01	ME29C5	SAM	02/13/25 13:20	Na high	Jaswal	Dilution
30	Q1339-02	ME29C7	SAM	02/13/25 13:24		Jaswal	OK
31	Q1339-03	ME29C6	SAM	02/13/25 13:27		Jaswal	OK
32	Q1339-04	ME29C9	SAM	02/13/25 13:30		Jaswal	OK
33	Q1339-05	ME29D1	SAM	02/13/25 13:33		Jaswal	OK
34	Q1339-06RE	ME29D2	SAM	02/13/25 13:37	NOT USE	Jaswal	Not Ok
35	Q1339-07	ME29D4	SAM	02/13/25 13:40		Jaswal	OK
36	Q1339-08RE	ME29D2D	DUP	02/13/25 13:43	NOT USE	Jaswal	Not Ok
37	Q1339-07LRE	ME29D4L	SD	02/13/25 13:47	NOT USE	Jaswal	Not Ok
38	Q1339-09RE	ME29D2S	MS	02/13/25 13:50	NOT USE	Jaswal	Not Ok

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Instrument ID: P8

Daily Analysis Runlog For Sequence/QCBatch ID # LB134712

Review By	Janvi Patel	Review On	2/14/2025 5:32:06 PM
Supervise By	Kareem Khairalla	Supervise On	2/18/2025 11:55:14 AM

STD. NAME	STD REF.#
ICAL Standard	MP84414,MP84423,MP84422,MP84420,MP84419,MP84418,MP84417,MP84416,MP84415
ICV Standard	MP84439
CCV Standard	MP84438
ICSA Standard	MP84440,MP84441
CRI Standard	
LCS Standard	MP84600
Chk Standard	MP84444,MP84443

39	Q1339-01DL	ME29C5	SAM	02/13/25 13:53	Report 2x for Na	Jaswal	Confirms
40	CCV028	CCV028	CCV	02/13/25 13:56		Jaswal	OK
41	CCB028	CCB028	CCB	02/13/25 13:59		Jaswal	OK
42	Q1231-01A	ME2993A	PS	02/13/25 14:59	PS for Se(0.1ml of MP84474 in 10ml sample)	Jaswal	OK
43	CCV029	CCV029	CCV	02/13/25 15:09		Jaswal	OK
44	CCB029	CCB029	CCB	02/13/25 15:12		Jaswal	OK
45	Q1339-06	ME29D2	SAM	02/13/25 16:16		Jaswal	OK
46	Q1339-08	ME29D2D	DUP	02/13/25 16:20		Jaswal	OK
47	Q1339-06L	ME29D2L	SD	02/13/25 16:23		Jaswal	OK
48	Q1339-09	ME29D2S	MS	02/13/25 16:26		Jaswal	OK
49	CCV030	CCV030	CCV	02/13/25 16:31		Jaswal	OK
50	CCB030	CCB030	CCB	02/13/25 16:34		Jaswal	OK

EPA SAMPLE NO.

ME29C5

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.: ME29C5

Matrix: Water Lab Sample ID: Q1339-01

% Solids: Date Received: 02/07/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U*	02/19/2025	1635

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

Comments:

EPA SAMPLE NO.

ME29C6

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.: ME29C5

Matrix: Water Lab Sample ID: Q1339-03

% Solids: Date Received: 02/07/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.025	J*	02/19/2025	1640

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

Comments:

EPA SAMPLE NO.

ME29C7

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.: ME29C5

Matrix: Water Lab Sample ID: Q1339-02

% Solids: Date Received: 02/07/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U*	02/19/2025	1638

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

Comments:

EPA SAMPLE NO.

ME29C9

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.: ME29C5

Matrix: Water Lab Sample ID: Q1339-04

% Solids: Date Received: 02/07/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.036	J*	02/19/2025	1642

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

Comments:

EPA SAMPLE NO.

ME29D1

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.: ME29C5

Matrix: Water Lab Sample ID: Q1339-05

% Solids: Date Received: 02/07/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U*	02/19/2025	1644

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

Comments:

EPA SAMPLE NO.

ME29D2

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.: ME29C5

Matrix: Water Lab Sample ID: Q1339-06

% Solids: Date Received: 02/07/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U*	02/19/2025	1647

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

Comments:

EPA SAMPLE NO.

ME29D4

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.: ME29C5

Matrix: Water Lab Sample ID: Q1339-07

% Solids: Date Received: 02/07/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.035	J*	02/19/2025	1649

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

Comments:

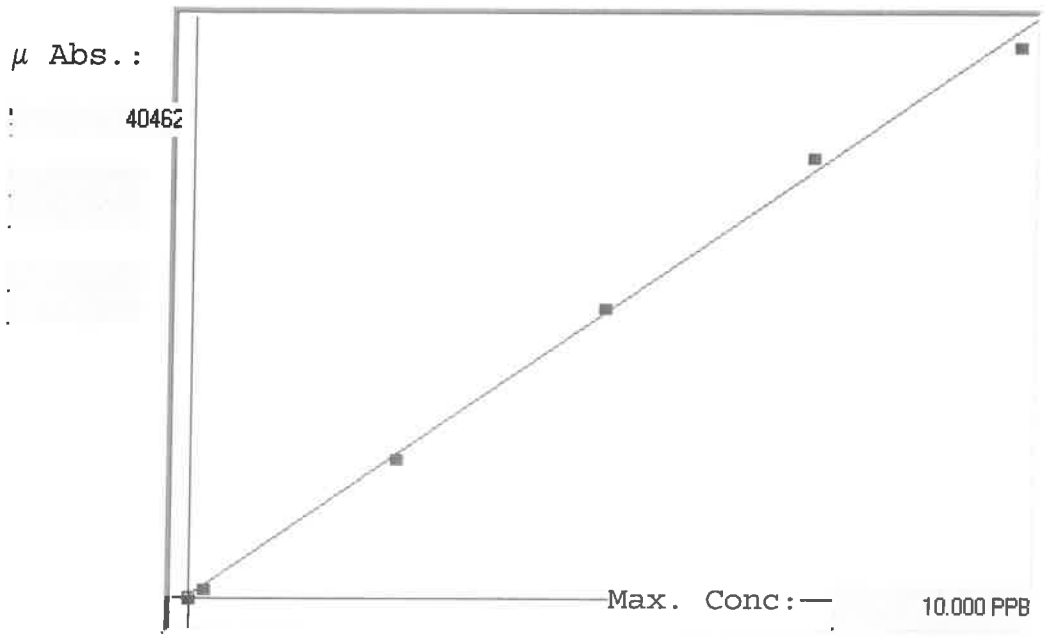
Reviewed By:jignesh
On:2/20/2025 9:08:45 AM
Inst Id :CV1

LB134747

SFAM01.1

INSTRUMENT ID: CV1

Linear



A= 0.0000e+000

B= 2.4123e-004 slope

C= -3.3511e-002 y-intercept

Rho= 0.9989311

Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	%
0.00	0.000	-0.034	-0.034	0	0.000	0					=
0.05	0.050										-17
0.20	0.200	0.167	-0.033	831	0.0 %	831					-2
2.50	2.500	2.445	-0.055	10274	0.0 %	10274					2
5.00	5.000	5.104	0.104	21298	0.0 %	21298					4
7.50	7.500	7.790	0.290	32431	0.0 %	32431					-3
10.0	10.000	9.727	-0.273	40462	0.0 %	40462					

Reviewed By:jignesh
On:2/20/2025 9:08:45 AM
Inst Id :CV1

LB134747

INSTRUMENT ID : CV1

Sample ID	Extended ID	µ Abs.	Conc.		Stnd Conc	Method	Units	Date	Type
0	S0	0	-		0	SFAM01.1	PPB	2/19/2025 14:26	Std
0.2	S01	831	-		0.2	SFAM01.1	PPB	2/19/2025 14:28	Std
2.5	S02	10274	-		2.5	SFAM01.1	PPB	2/19/2025 14:31	Std
5	S03	21298	-		5	SFAM01.1	PPB	2/19/2025 14:33	Std
7.5	S04	32431	-		7.5	SFAM01.1	PPB	2/19/2025 14:35	Std
10	S05	40462	-		10	SFAM01.1	PPB	2/19/2025 14:38	Std
ICV010	ICV010	15781	3.7734	-		SFAM01.1	PPB	2/19/2025 14:43	SMPL
ICB010	ICB010	-7	-0.0352	-		SFAM01.1	PPB	2/19/2025 14:48	SMPL
CCV087	CCV087	21702	5.2018	-		SFAM01.1	PPB	2/19/2025 14:50	SMPL
CCB087	CCB087	-298	-0.1054	-		SFAM01.1	PPB	2/19/2025 14:52	SMPL
PB166782BL	PBW782	282	0.0345	-		SFAM01.1	PPB	2/19/2025 14:55	SMPL
Q1231-01	ME2993	314	0.0422	-		SFAM01.1	PPB	2/19/2025 14:57	SMPL
Q1231-02	ME2993D	280	0.034	-		SFAM01.1	PPB	2/19/2025 14:59	SMPL
Q1231-03	ME2993S	5535	1.3017	-		SFAM01.1	PPB	2/19/2025 15:02	SMPL
Q1231-04	ME29C1	496	0.0861	-		SFAM01.1	PPB	2/19/2025 15:04	SMPL
Q1231-05	ME29C2	247	0.0261	-		SFAM01.1	PPB	2/19/2025 15:06	SMPL
Q1231-06	ME29C3	167	0.0068	-		SFAM01.1	PPB	2/19/2025 15:08	SMPL
Q1231-07	ME29C4	186	0.0114	-		SFAM01.1	PPB	2/19/2025 15:11	SMPL
Q1255-01	MDCZM3	219	0.0193	-		SFAM01.1	PPB	2/19/2025 15:13	SMPL
Q1255-02	MDCZP0	297	0.0381	-		SFAM01.1	PPB	2/19/2025 15:15	SMPL
Q1255-03	MDCZP1	330	0.0461	-		SFAM01.1	PPB	2/19/2025 15:17	SMPL
Q1255-04	MDCZP5	2458	0.5594	-		SFAM01.1	PPB	2/19/2025 15:20	SMPL
Q1255-05	MDCZM4	-78	-0.0523	-		SFAM01.1	PPB	2/19/2025 15:22	SMPL
Q1255-06	MDCZN3	283	0.0348	-		SFAM01.1	PPB	2/19/2025 15:24	SMPL
Q1255-07	MDCZP2	259	0.029	-		SFAM01.1	PPB	2/19/2025 15:27	SMPL
Q1255-08	MDCZN8	-23	-0.0391	-		SFAM01.1	PPB	2/19/2025 15:29	SMPL
Q1255-09	MDCZN8D	-8	-0.0354	-		SFAM01.1	PPB	2/19/2025 15:31	SMPL
Q1255-10	MDCZN8S	5182	1.2166	-		SFAM01.1	PPB	2/19/2025 15:33	SMPL
Q1255-11	MDCZL6	173	0.0082	-		SFAM01.1	PPB	2/19/2025 15:36	SMPL
Q1255-12	MDCZL9	-36	-0.0422	-		SFAM01.1	PPB	2/19/2025 15:38	SMPL
CCV088	CCV088	0	-0.0335	-		SFAM01.1	PPB	2/19/2025 15:40	SMPL
CCV088	CCV088	21376	5.1231	-		SFAM01.1	PPB	2/19/2025 15:41	SMPL
CCB088	CCB088	-240	-0.0914	-		SFAM01.1	PPB	2/19/2025 15:43	SMPL
Q1255-13	MDCZN9	333	0.0468	-		SFAM01.1	PPB	2/19/2025 15:46	SMPL
Q1255-14	MDCZN2	354	0.0519	-		SFAM01.1	PPB	2/19/2025 15:48	SMPL
Q1255-15	MDCZN7	281	0.0343	-		SFAM01.1	PPB	2/19/2025 15:50	SMPL
Q1255-16	MDCZP4	278	0.0336	-		SFAM01.1	PPB	2/19/2025 15:52	SMPL
PB166783BL	PBW783	180	0.0099	-		SFAM01.1	PPB	2/19/2025 15:55	SMPL
Q1245-05	A6327	400	0.063	-		SFAM01.1	PPB	2/19/2025 16:01	SMPL
Q1245-06	A6328	201	0.015	-		SFAM01.1	PPB	2/19/2025 16:04	SMPL
Q1245-07	A6329	207	0.0164	-		SFAM01.1	PPB	2/19/2025 16:06	SMPL
Q1245-08	A6330	223	0.0203	-		SFAM01.1	PPB	2/19/2025 16:08	SMPL
Q1245-09	A6335	256	0.0282	-		SFAM01.1	PPB	2/19/2025 16:10	SMPL
Q1245-10	A6335D	193	0.013	-		SFAM01.1	PPB	2/19/2025 16:13	SMPL
Q1245-11	A6335S	5350	1.2571	-		SFAM01.1	PPB	2/19/2025 16:15	SMPL
Q1245-12	A6336	242	0.0249	-		SFAM01.1	PPB	2/19/2025 16:17	SMPL

Reviewed By:jignesh
On:2/20/2025 9:08:45 AM
Inst Id :CV1

LB134747

INSTRUMENT ID : CV1

Q1245-13	A6337	228	0.0215	-	SFAM01.1	PPB	2/19/2025 16:19	SMPL
Q1245-14	A6338	301	0.0391	-	SFAM01.1	PPB	2/19/2025 16:22	SMPL
Q1245-15	A6339	251	0.027	-	SFAM01.1	PPB	2/19/2025 16:24	SMPL
Q1245-16	A6340	268	0.0311	-	SFAM01.1	PPB	2/19/2025 16:26	SMPL
Q1245-17	A6341	204	0.0157	-	SFAM01.1	PPB	2/19/2025 16:29	SMPL
CCV089	CCV089	22472	5.3875	-	SFAM01.1	PPB	2/19/2025 16:31	SMPL
CCB089	CCB089	-284	-0.102	-	SFAM01.1	PPB	2/19/2025 16:33	SMPL
Q1339-01	ME29C5	171	0.0077	-	SFAM01.1	PPB	2/19/2025 16:35	SMPL
Q1339-02	ME29C7	218	0.0191	-	SFAM01.1	PPB	2/19/2025 16:38	SMPL
Q1339-03	ME29C6	241	0.0246	-	SFAM01.1	PPB	2/19/2025 16:40	SMPL
Q1339-04	ME29C9	290	0.0364	-	SFAM01.1	PPB	2/19/2025 16:42	SMPL
Q1339-05	ME29D1	227	0.0212	-	SFAM01.1	PPB	2/19/2025 16:44	SMPL
Q1339-06	ME29D2	213	0.0179	-	SFAM01.1	PPB	2/19/2025 16:47	SMPL
Q1339-07	ME29D4	283	0.0348	-	SFAM01.1	PPB	2/19/2025 16:49	SMPL
Q1339-08	ME29D2D	253	0.0275	-	SFAM01.1	PPB	2/19/2025 16:51	SMPL
Q1339-09	ME29D2S	5342	1.2552	-	SFAM01.1	PPB	2/19/2025 16:54	SMPL
Q1245-03	A6315	36037	8.6599	-	SFAM01.1	PPB	2/19/2025 16:58	SMPL
Q1245-04	A6316	28475	6.8357	-	SFAM01.1	PPB	2/19/2025 17:05	SMPL
CCV090	CCV090	21387	5.1258	-	SFAM01.1	PPB	2/19/2025 17:14	SMPL
CCB090	CCB090	-70	-0.0504	-	SFAM01.1	PPB	2/19/2025 17:19	SMPL

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Prep Standard - Chemical Standard Summary

Order ID : Q1339

Test : Mercury

Prepbatch ID : PB166783,

Sequence ID/Qc Batch ID: LB134747,

Standard ID :
MP84563,MP84564,MP84565,MP84566,MP84567,MP84568,MP84569,MP84570,MP84571,MP84572,MP84573,MP84574,MP84575,MP84576,MP84577,MP84581,

Chemical ID :
M4371,M4465,M4916,M5062,M5532,M5789,M5882,M5884,M6041,M6126,M6151,W3112,

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3965	2:1 H2SO4 : HNO3	MP84563	02/18/2025	06/03/2025	Mohan Bera	None	None	Janvi Patel 02/19/2025

FROM 1600.00000ml of M6041 + 800.00000ml of M6126 = Final Quantity: 3200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP84564	02/18/2025	08/18/2025	Mohan Bera	None	None	Janvi Patel 02/19/2025

FROM 100.00000gram of M4916 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
66	POTASSIUM PERSULFATE SOLUTION 5 %	MP84565	02/18/2025	08/06/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Janvi Patel 02/19/2025

FROM 100.00000ml of M4465 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
67	SODIUM CHLORIDE - HYDROXYL- CHLORIDE SOLUTION	MP84566	02/18/2025	06/25/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Janvi Patel 02/19/2025

FROM 2000.00000ml of W3112 + 240.00000gram of M4371 + 240.00000gram of M5884 = Final Quantity: 2000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP84567	02/19/2025	02/20/2025	Mohan Bera	None	METALS_PIPETTE_3 (A)	Iwona Zarych 02/19/2025

FROM 1.00000ml of M6126 + 2.50000ml of M5062 + 96.50000ml of W3112 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1340	Hg 0.00 PPB STD	MP84568	02/19/2025	02/20/2025	Mohan Bera	None	METALS_PIPETTE_3 (A)	Iwona Zarych 02/19/2025

FROM 2.50000ml of M6126 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1341	Hg 0.2 PPB STD	MP84569	02/19/2025	02/20/2025	Mohan Bera	None	METALS_PIPETTE_3 (A)	Iwona Zarych 02/19/2025

FROM 2.50000ml of M6126 + 247.30000ml of W3112 + 0.20000ml of MP84567 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1342	Hg 2.5 PPB STD	MP84570	02/19/2025	02/20/2025	Mohan Bera	None	METALS_PIPETTE_3 (A)	Iwona Zarych 02/19/2025

FROM 2.50000ml of M6126 + 245.00000ml of W3112 + 2.50000ml of MP84567 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1343	Hg 5.0 PPB STD	MP84571	02/19/2025	02/20/2025	Mohan Bera	None	METALS_PIPETTE_3 (A)	Iwona Zarych 02/19/2025

FROM 2.50000ml of M6126 + 242.50000ml of W3112 + 5.00000ml of MP84567 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1344	Hg 7.5 PPB STD	MP84572	02/19/2025	02/20/2025	Mohan Bera	None	METALS_PIPETTE_3 (A)	Iwona Zarych 02/19/2025

FROM 2.50000ml of M6126 + 240.00000ml of W3112 + 7.50000ml of MP84567 = Final Quantity: 250.000 ml

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Fax : 908 789 8922

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1345	Hg 10.0 PPB STD	MP84573	02/19/2025	02/20/2025	Mohan Bera	None	METALS_PIPETTE_3 (A)	Iwona Zarych 02/19/2025

FROM 2.50000ml of M6126 + 237.50000ml of W3112 + 10.00000ml of MP84567 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP84574	02/19/2025	02/20/2025	Mohan Bera	None	METALS_PIPETTE_3 (A)	Iwona Zarych 02/19/2025

FROM 2.50000ml of M5532 + 2.50000ml of M6126 + 245.00000ml of W3112 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1351	ICB (Hg 0.00 PPB SOLUTION)	MP84575	02/19/2025	02/20/2025	Mohan Bera	None	METALS_PIPETTE_3 (A)	Iwona Zarych 02/19/2025

FROM 2.50000ml of M5789 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1358	CCV (Hg 5.0 PPB SOLUTION)	MP84576	02/19/2025	02/20/2025	Mohan Bera	None	METALS_PIPETTE_3 (A)	Iwona Zarych 02/19/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6126 + 10.00000ml of MP84567 = Final Quantity: 500.000 ml

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Fax : 908 789 8922

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1352	CCB (Hg 0.00 PPB SOLUTION)	MP84577	02/19/2025	02/20/2025	Mohan Bera	None	METALS_PIPETTE_3 (A)	Iwona Zarych 02/19/2025

FROM 495.00000ml of W3112 + 5.00000ml of M6126 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
68	STANNOUS CHLORIDE SOLUTION	MP84581	02/19/2025	02/20/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Iwona Zarych 02/19/2025

FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M6151 = Final Quantity: 500.000 ml

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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-2196-01 / Hydroxylamine Hydrochloride, Crystal (cs/4x500g)	0000215387	06/25/2025	07/01/2019 / RICHARD	06/07/2019 / RICHARD	M4371

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3238-05 / Potassium Persulfate (2.5kg)	0000234156	08/06/2025	07/23/2019 / jaswal	07/25/2019 / manojkumar	M4465

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3227-05 / Potassium Permanganate (2.5kg)	210800	03/31/2026	11/30/2022 / mohan	07/28/2021 / mohan	M4916

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	MSHG-10PPM / MERCURY HCl 125mL 10ug/mL	S2-HG709270	09/22/2026	05/28/2022 / mohan	01/27/2022 / mohan	M5062

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV5-0415	02/28/2025	01/02/2025 / jaswal	03/30/2023 / mohan	M5532

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)	23G1262003	07/30/2025	02/08/2024 / Al-Terek	06/26/2023 / Al-Terek	M5789

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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-3980-01 / Stannous Chloride (cs/4x500g)	232820	08/31/2028	04/30/2024 / mohan	04/25/2024 / mohan	M5882

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3624-05 / Sodium Chloride, Crystal (cs/4x2.5kg)	0000281938	07/06/2026	04/30/2024 / mohan	04/25/2024 / mohan	M5884

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	23D2462010	03/20/2028	08/16/2024 / mohan	08/16/2024 / mohan	M6041

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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 #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22G2862015	08/18/2025	02/18/2025 / Sagar	01/15/2025 / Sagar	M6151

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

ThermoFisher SCIENTIFIC

M5882 M3

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	T142	Quality Test / Release Date	08/17/2023
Lot Number	232820		
Description	STANNOUS CHLORIDE, DIHYDRATE CERTIFIED ACS (Suitable for Mercury Determination)		
Country of Origin	United States	Suggested Retest Date	Aug/2028
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear crystals
ASSAY	%	Inclusive Between 98 - 103	100.65
CALCIUM	%	<= 0.005	0.0017
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	%	<= 0.003	0.0011
LEAD (Pb)	%	<= 0.01	0.0006
MERCURY (Hg)	ppm	<= 0.05	<0.05
POTASSIUM (K)	%	<= 0.005	0.0001
SODIUM (Na)	%	<= 0.01	<0.01
SOLUBILITY IN HCL	PASS/FAIL	= PASS TEST	PASS TEST
SULFATE (SO4)	PASS/FAIL	= P.T. (ABOUT 0.003%)	P.T. (ABOUT 0.003%)

Harout Sahagian - Quality Control Supervisor - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

M4371

Hydroxylamine Hydrochloride, Crystal
BAKER ANALYZED® A.C.S. Reagent
Suitable for Mercury Determination
(hydroxylammonium chloride)

Rec – 06.07.19

J.T.Baker® | avantor™

Material No.: 2196-01
Batch No.: 0000215387
Manufactured Date: 2018/06/27
Retest Date: 2025/06/25
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay ($NH_2OH \cdot HCl$) (by $KMnO_4$ titrn)	>= 96.0 %	99.1
Clarity of Alcohol Solution	Passes Test	PT
Residue after Ignition	<= 0.050 %	0.017
Titrable Free Acid (meq/g)	<= 0.25	0.19
Ammonium (NH_4)	Passes Test	PT
Sulfur Compounds (as SO_4)	<= 0.005 %	< 0.003
Trace Impurities - ACS - Heavy Metals (as Pb)	<= 5 ppm	4
Trace Impurities - Iron (Fe)	<= 5 ppm	< 3
Trace Impurities - Mercury (Hg)	<= 0.050 ppm	< 0.005

For Laboratory, Research or Manufacturing Use

Country of Origin: CN
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2015, FSSC22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Gliwice, Poland 9001:2015, 13485:2012
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2015, 17025:2005
Panoli, India 9001:2015

James Ethier
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

535

Certificate of Analysis
ThermoFisher SCIENTIFIC

M4913-16
MB

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	P279	Quality Test / Release Date	01/12/2021
Lot Number	210306		
Description	POTASSIUM PERMANGANATE, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Jan/2026

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Dark purple to purple green crystals
ASSAY	%	>= 99	99.3
CHLORIDE & CHLORATE	%	<= 0.005	<0.005
IDENTIFICATION	PASS/FAIL	= PASS TEST	pass test
INSOLUBLE MATTER	%	<= 0.2	<0.2
MERCURY (Hg)	ppm	<= 0.05	<0.004
SULFATE (SO4)	%	<= 0.02	<0.02

Julian Burton

Julian Burton - Quality Control Manager – Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

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

M5062
M5063
M3

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 Mass Spec Solution
Catalog Number:	MSHG-10PPM
Lot Number:	S2-HG709270
Matrix:	10% (v/v) HCl
Value / Analyte(s):	10 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	1959
Starting Material Purity:	99.9994%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.001 ± 0.053 µg/mL

Density: 1.020 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \Sigma(w_i)(X_i)$$

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.

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

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

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

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/4}$$

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

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4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.000011	M	Eu	<	0.000201	O	Na		0.000004	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al		0.000001	O	Fe		0.000001	M	Nb	<	0.000201	O	Si		0.000005	M	Zr	<	0.000201
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201				
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007				
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201				
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201				
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201				
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216				
O	Ca		0.000007	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201				
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402				
M	Ce	<	0.000201	O	K		0.000020	M	Rb	<	0.000201	O	Tl	<	0.016508				
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201				
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058				
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201				
M	Cu	<	0.000402	O	Mg		0.000001	O	S	<	0.053950	M	W	<	0.000604				
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201				
M	Er	<	0.000201	M	Mo		0.000009	M	Sc	<	0.000201	M	Yb	<	0.000201				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+

Chemical Compatibility - Stable in HNO_3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

Stability - 2-100 ppb levels not stable in 1% HNO_3 / LDPE container, stable in 10% HNO_3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO_3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO_3 / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO_3); Oxide (Soluble in HNO_3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 22, 2026

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation



Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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.

MSS28-37
MB

Contains Metals in Dilute Acidic or Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets Available Upon Request

(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

Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

MF884
MB

avantor™ | J.T.Baker®

Material No.: 3624-01
Batch No.: 0000281938
Manufactured Date: 2021-06-07
Retest Date: 2026-06-07
Revision No.: 1

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	≥ 99.0 %	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	≤ 0.005 %	0.003 %
Iodide (I)	≤ 0.002 %	< 0.002 %
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO_3)	≤ 0.003 %	< 0.001 %
ACS - Phosphate (PO_4)	≤ 5 ppm	< 5 ppm
Sulfate (SO_4)	≤ 0.004 %	< 0.004 %
Barium (Ba)	Passes Test	Passes Test
ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Calcium (Ca)	≤ 0.002 %	< 0.001 %
Magnesium (Mg)	≤ 0.001 %	< 0.001 %
Potassium (K)	≤ 0.005 %	0.001 %

For Laboratory,Research,or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs
Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

James T Ethier

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 Mansford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

M 6041-46
MS

avantor™ | J.T.Baker®

Material No.: 9673-33
Batch No.: 23D2462010
Manufactured Date: 2023-03-22
Retest Date: 2028-03-20
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (H_2SO_4)	95.0 – 98.0 %	96.1 %
Appearance	Passes Test	Passes Test
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Substances Reducing Permanganate (as SO2)	≤ 2 ppm	< 2 ppm
Ammonium (NH_4)	≤ 1 ppm	1 ppm
Chloride (Cl)	≤ 0.1 ppm	< 0.1 ppm
Nitrate (NO_3)	≤ 0.2 ppm	< 0.1 ppm
Phosphate (PO_4)	≤ 0.5 ppm	< 0.1 ppm
Trace Impurities – Aluminum (Al)	≤ 30.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 4.0 ppb	< 2.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	8.5 ppb
Trace Impurities – Cadmium (Cd)	≤ 2.0 ppb	< 0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 6.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 0.5 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gold (Au)	≤ 10.0 ppb	0.5 ppb
Heavy Metals (as Pb)	≤ 500.0 ppb	< 100.0 ppb
Trace Impurities – Iron (Fe)	≤ 50.0 ppb	1.3 ppb
Trace Impurities – Lead (Pb)	≤ 0.5 ppb	< 0.5 ppb
Trace Impurities – Magnesium (Mg)	≤ 7.0 ppb	0.8 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Nickel (Ni)	≤ 2.0 ppb	0.3 ppb
Trace Impurities – Potassium (K)	≤ 500.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se)	≤ 50.0 ppb	< 0.1 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	31.5 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb

>>> Continued on page 2 >>>

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

avantor™ | J.T.Baker®

Material No.: 9673-33
Batch No.: 23D2462010

Test	Specification	Result
Trace Impurities - Sodium (Na)	≤ 500.0 ppb	5.4 ppb
Trace Impurities - Strontium (Sr)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	0.4 ppb

For Laboratory,Research,or Manufacturing Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

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

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

M6151

R→ 1/15/25

Material No.: 9530-33
Batch No.: 22G2862015
Manufactured Date: 2022-06-15
Retest Date: 2027-06-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.9 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.191
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	1.3 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	163.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.7 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.6 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855 282 6867 or +1 610 386 1700

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	2.9 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	0.8 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities - Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	0.5 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	2.3 ppb
Trace Impurities - Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Tantalum (Ta)	≤ 1.0 ppb	1.6 ppb
Trace Impurities - Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	4.0 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	1.5 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	0.3 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

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

James T Ethier

Jamie Ethier
Vice President Global Quality

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB166783

SOP ID : M7470A-Mercury-19, MSFAM01.1-Mercury in Water-2

SDG No : A6311/ME29C5

Matrix : WATER

Pippete ID: HG A

Balance ID : N/A

Filter paper ID : NA

pH Strip ID : M6069

Hood ID : #1

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

Start Digest Date: 02/19/2025 **Time :** 11:25 **Temp :** 95 °C

End Digest Date: 02/19/2025 **Time :** 13:25 **Temp :** 95 °C

Digestion tube ID: M6054

Block thermometer ID: HG-DIG#2

Dig Technician Signature: MB

Supervisor Signature:

Temp : 1. 95°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	100mL	MP84574
CCV	100mL	MP84576
Matrix Spike	0.40mL	MP84567
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
HNO3/H2SO4(1:2)	7.5mL	MP84563
KMnO4 (5%)	15.0mL	MP84564
K2S2O8 (5%)	8.0mL	MP84565
Hydroxylamine HCL (12%)	6.0mL	MP84566
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

LAB SAMPLE ID	CLIENT SAMPLE ID	Wt(g)/Vol(ml)	Comment
0.0 ppb	S0	100mL	MP84568
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	100mL	MP84569
2.5 ppb	S2.5	100mL	MP84570
5.0 ppb	S5.0	100mL	MP84571
7.5 ppb	S7.5	100mL	MP84572
10.0 ppb	S10.0	100mL	MP84573
ICV	ICV	100mL	MP84574
ICB	ICB	100mL	MP84575
CCV	CCV	100mL	MP84576
CCB	CCB	100mL	MP84577
CRI	CRI	N/A	N/A
CHK STD	CHK STD	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
2/19/25 @ 1315	MB · DIG · Lab	MB manual Lab
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB166783

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Comment	Prep Pos
PB166783BL	PBW783	100	100	<2	N/A	2-1
Q1245-03	A6315	100	100	<2	N/A	2
Q1245-04	A6316	100	100	<2	N/A	3
Q1245-05	A6327	100	100	<2	N/A	4
Q1245-06	A6328	100	100	<2	N/A	5
Q1245-07	A6329	100	100	<2	N/A	6
Q1245-08	A6330	100	100	<2	N/A	7
Q1245-09	A6335	100	100	<2	N/A	8
Q1245-10	A6335D	100	100	<2	N/A	9
Q1245-11	A6335S	100	100	<2	MP84567	10
Q1245-12	A6336	100	100	<2	N/A	11
Q1245-13	A6337	100	100	<2	N/A	12
Q1245-14	A6338	100	100	<2	N/A	13
Q1245-15	A6339	100	100	<2	N/A	14
Q1245-16	A6340	100	100	<2	N/A	15
Q1245-17	A6341	100	100	<2	N/A	16
Q1339-01	ME29C5	100	100	<2	N/A	17
Q1339-02	ME29C7	100	100	<2	N/A	18
Q1339-03	ME29C6	100	100	<2	N/A	19
Q1339-04	ME29C9	100	100	<2	N/A	20
Q1339-05	ME29D1	100	100	<2	N/A	21
Q1339-06	ME29D2	100	100	<2	N/A	22
Q1339-07	ME29D4	100	100	<2	N/A	23
Q1339-08	ME29D2D	100	100	<2	N/A	24
Q1339-09	ME29D2S	100	100	<2	MP84567	25

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 # LB134747

Review By	Mohan Bera	Review On	2/20/2025 8:58:10 AM
Supervise By	Jignesh Parikh	Supervise On	2/20/2025 9:08:45 AM

STD. NAME	STD REF.#
ICAL Standard	MP84568,MP84569,MP84570,MP84571,MP84572,MP84573
ICV Standard	MP84574
CCV Standard	MP84576
ICSA Standard	
CRI Standard	
LCS Standard	
Chk Standard	MP84575,MP84577,MP84581

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	02/19/25 14:26		Mohan	OK
2	S0.2	S01	CAL2	02/19/25 14:28		Mohan	OK
3	S2.5	S02	CAL3	02/19/25 14:31		Mohan	OK
4	S5	S03	CAL4	02/19/25 14:33		Mohan	OK
5	S7.5	S04	CAL5	02/19/25 14:35		Mohan	OK
6	S10	S05	CAL6	02/19/25 14:38		Mohan	OK
7	ICV010	ICV010	ICV	02/19/25 14:43		Mohan	OK
8	ICB010	ICB010	ICB	02/19/25 14:48		Mohan	OK
9	CCV087	CCV087	CCV	02/19/25 14:50		Mohan	OK
10	CCB087	CCB087	CCB	02/19/25 14:52		Mohan	OK
11	PB166782BL	PBW782	MB	02/19/25 14:55		Mohan	OK
12	Q1231-01	ME2993	SAM	02/19/25 14:57		Mohan	OK
13	Q1231-02	ME2993D	DUP	02/19/25 14:59		Mohan	OK
14	Q1231-03	ME2993S	MS	02/19/25 15:02		Mohan	OK
15	Q1231-04	ME29C1	SAM	02/19/25 15:04		Mohan	OK
16	Q1231-05	ME29C2	SAM	02/19/25 15:06		Mohan	OK
17	Q1231-06	ME29C3	SAM	02/19/25 15:08		Mohan	OK
18	Q1231-07	ME29C4	SAM	02/19/25 15:11		Mohan	OK

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Supervise By	Jignesh Parikh	Supervise On	2/20/2025 9:08:45 AM

STD. NAME	STD REF.#
ICAL Standard	MP84568,MP84569,MP84570,MP84571,MP84572,MP84573
ICV Standard	MP84574
CCV Standard	MP84576
ICSA Standard	
CRI Standard	
LCS Standard	
Chk Standard	MP84575,MP84577,MP84581

19	Q1255-01	MDCZM3	SAM	02/19/25 15:13		Mohan	OK
20	Q1255-02	MDCZP0	SAM	02/19/25 15:15		Mohan	OK
21	Q1255-03	MDCZP1	SAM	02/19/25 15:17		Mohan	OK
22	Q1255-04	MDCZP5	SAM	02/19/25 15:20		Mohan	OK
23	Q1255-05	MDCZM4	SAM	02/19/25 15:22		Mohan	OK
24	Q1255-06	MDCZN3	SAM	02/19/25 15:24		Mohan	OK
25	Q1255-07	MDCZP2	SAM	02/19/25 15:27		Mohan	OK
26	Q1255-08	MDCZN8	SAM	02/19/25 15:29		Mohan	OK
27	Q1255-09	MDCZN8D	DUP	02/19/25 15:31		Mohan	OK
28	Q1255-10	MDCZN8S	MS	02/19/25 15:33		Mohan	OK
29	Q1255-11	MDCZL6	SAM	02/19/25 15:36		Mohan	OK
30	Q1255-12	MDCZL9	SAM	02/19/25 15:38		Mohan	OK
31	CCV088	CCV088	CCV	02/19/25 15:41		Mohan	OK
32	CCB088	CCB088	CCB	02/19/25 15:43		Mohan	OK
33	Q1255-13	MDCZN9	SAM	02/19/25 15:46		Mohan	OK
34	Q1255-14	MDCZN2	SAM	02/19/25 15:48		Mohan	OK
35	Q1255-15	MDCZN7	SAM	02/19/25 15:50		Mohan	OK
36	Q1255-16	MDCZP4	SAM	02/19/25 15:52		Mohan	OK
37	PB166783BL	PBW783	MB	02/19/25 15:55		Mohan	OK
38	Q1245-05	A6327	SAM	02/19/25 16:01		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 # LB134747

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Supervise By	Jignesh Parikh	Supervise On	2/20/2025 9:08:45 AM

STD. NAME	STD REF.#
ICAL Standard	MP84568,MP84569,MP84570,MP84571,MP84572,MP84573
ICV Standard	MP84574
CCV Standard	MP84576
ICSA Standard	
CRI Standard	
LCS Standard	
Chk Standard	MP84575,MP84577,MP84581

39	Q1245-06	A6328	SAM	02/19/25 16:04		Mohan	OK
40	Q1245-07	A6329	SAM	02/19/25 16:06		Mohan	OK
41	Q1245-08	A6330	SAM	02/19/25 16:08		Mohan	OK
42	Q1245-09	A6335	SAM	02/19/25 16:10		Mohan	OK
43	Q1245-10	A6335D	DUP	02/19/25 16:13		Mohan	OK
44	Q1245-11	A6335S	MS	02/19/25 16:15		Mohan	OK
45	Q1245-12	A6336	SAM	02/19/25 16:17		Mohan	OK
46	Q1245-13	A6337	SAM	02/19/25 16:19		Mohan	OK
47	Q1245-14	A6338	SAM	02/19/25 16:22		Mohan	OK
48	Q1245-15	A6339	SAM	02/19/25 16:24		Mohan	OK
49	Q1245-16	A6340	SAM	02/19/25 16:26		Mohan	OK
50	Q1245-17	A6341	SAM	02/19/25 16:29		Mohan	OK
51	CCV089	CCV089	CCV	02/19/25 16:31		Mohan	OK
52	CCB089	CCB089	CCB	02/19/25 16:33		Mohan	OK
53	Q1339-01	ME29C5	SAM	02/19/25 16:35		Mohan	OK
54	Q1339-02	ME29C7	SAM	02/19/25 16:38		Mohan	OK
55	Q1339-03	ME29C6	SAM	02/19/25 16:40		Mohan	OK
56	Q1339-04	ME29C9	SAM	02/19/25 16:42		Mohan	OK
57	Q1339-05	ME29D1	SAM	02/19/25 16:44		Mohan	OK
58	Q1339-06	ME29D2	SAM	02/19/25 16:47		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 # LB134747

Review By	Mohan Bera	Review On	2/20/2025 8:58:10 AM
Supervise By	Jignesh Parikh	Supervise On	2/20/2025 9:08:45 AM

STD. NAME	STD REF.#
ICAL Standard	MP84568,MP84569,MP84570,MP84571,MP84572,MP84573
ICV Standard	MP84574
CCV Standard	MP84576
ICSA Standard	
CRI Standard	
LCS Standard	
Chk Standard	MP84575,MP84577,MP84581

59	Q1339-07	ME29D4	SAM	02/19/25 16:49		Mohan	OK
60	Q1339-08	ME29D2D	DUP	02/19/25 16:51		Mohan	OK
61	Q1339-09	ME29D2S	MS	02/19/25 16:54		Mohan	OK
62	Q1245-03	A6315	SAM	02/19/25 16:58		Mohan	OK
63	Q1245-04	A6316	SAM	02/19/25 17:05		Mohan	OK
64	CCV090	CCV090	CCV	02/19/25 17:14		Mohan	OK
65	CCB090	CCB090	CCB	02/19/25 17:19		Mohan	OK

EPA SAMPLE NO.

ME29C5

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.: ME29C5

Matrix: Water Lab Sample ID: Q1339-01

% Solids: Date Received: 02/07/2025

Analytical Method: CN

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
57-12-5	Cyanide	10	U	02/13/2025	1535

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

Comments:

EPA SAMPLE NO.

ME29C6

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.: ME29C5

Matrix: Water Lab Sample ID: Q1339-03

% Solids: Date Received: 02/07/2025

Analytical Method: CN

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
57-12-5	Cyanide	10	U	02/13/2025	1535

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

Comments:

EPA SAMPLE NO.

ME29D1

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.: ME29C5

Matrix: Water Lab Sample ID: Q1339-05

% Solids: Date Received: 02/07/2025

Analytical Method: CN

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
57-12-5	Cyanide	10	U	02/13/2025	1535

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

Comments:

EPA SAMPLE NO.

ME29D2

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.: ME29C5

Matrix: Water Lab Sample ID: Q1339-06

% Solids: Date Received: 02/07/2025

Analytical Method: CN

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
57-12-5	Cyanide	10	U	02/13/2025	1535

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

Comments:

Reviewed By:Iwona
On:2/14/2025 1:05:47 PM
Inst Id :KONELAB

LB13

Test results — Aquakem 7.2AQ1 —

CHEMTECH CONSULTING GROUP INC
284 Sheffield Street, Mountainside, NJ 07092

2/13/2025 15:55 — Reviewed by : NF — Instrument ID : Konelab

Test: CNEPA-NEW

Sample Id	Result	Dil. 1 +	Response	Errors
ICV001 ICV001	94.274	0.0	0.085	
ICB001 ICB001	-0.196	0.0	0.001	
CCV001 CCV001	239.834	0.0	0.214	
CCB001 CCB001	-0.034	0.0	0.001	
PB166718BL PBW718	-0.273	0.0	0.001	
Q1329-01 ME29C5	0.331	0.0	0.001	
Q1329-03 ME29C6	-0.308	0.0	0.001	
Q1329-05 ME29D1	-0.299	0.0	0.001	
Q1329-06 ME29D2	2.379	0.0	0.003	
Q1329-08 ME29D2D	2.337	0.0	0.003	
Q1329-09 ME29D2S	95.397	0.0	0.086	
CCV002 CCV002	251.112	0.0	0.224	
CCB002 CCB002	-0.275	0.0	0.001	

NF
02-13-2025

N	13
Mean	52.637
SD	92.4476
CV%	175.63

Reviewed By:Iwona
On:2/14/2025 1:05:47 PM
Inst Id :KONELAB

Aquakem v. 7.2AQ1
Results from time period:
Thu Feb 13 14:59:36 2025
Thu Feb 13 15:39:34 2025

Sample Id	n/Ctr	Test short name	Test type	Result	tesult un	Result date and time	Stat
S0.0	A	CNEPA-NEW	P	-0.2092	µg/l	2/13/2025 14:59:36	
S5.0	A	CNEPA-NEW	P	4.6731	µg/l	2/13/2025 14:59:37	
S10.0	A	CNEPA-NEW	P	9.3299	µg/l	2/13/2025 14:59:38	
S100.0	A	CNEPA-NEW	P	99.593	µg/l	2/13/2025 14:59:39	
S250.0	A	CNEPA-NEW	P	253.0303	µg/l	2/13/2025 14:59:40	
S500.0	A	CNEPA-NEW	P	498.5829	µg/l	2/13/2025 14:59:41	
ICV001 ICV001	S	CNEPA-NEW	P	94.2735	µg/l	2/13/2025 15:27:39	
ICB001 ICB001	S	CNEPA-NEW	P	-0.1955	µg/l	2/13/2025 15:27:41	
CCV001 CCV001	S	CNEPA-NEW	P	239.8335	µg/l	2/13/2025 15:27:43	
CCB001 CCB001	S	CNEPA-NEW	P	-0.034	µg/l	2/13/2025 15:27:45	
PB166718BL PBW718	S	CNEPA-NEW	P	-0.2732	µg/l	2/13/2025 15:27:47	
Q1339-01 ME29C5	S	CNEPA-NEW	P	0.3308	µg/l	2/13/2025 15:35:12	
Q1339-03 ME29C6	S	CNEPA-NEW	P	-0.3077	µg/l	2/13/2025 15:35:14	
Q1339-05 ME29D1	S	CNEPA-NEW	P	-0.2994	µg/l	2/13/2025 15:35:16	
Q1339-06 ME29D2	S	CNEPA-NEW	P	2.3787	µg/l	2/13/2025 15:35:17	
Q1339-08 ME29D2D	S	CNEPA-NEW	P	2.3366	µg/l	2/13/2025 15:35:19	
Q1339-09 ME29D2S	S	CNEPA-NEW	P	95.3973	µg/l	2/13/2025 15:35:22	
CCV002 CCV002	S	CNEPA-NEW	P	251.1117	µg/l	2/13/2025 15:39:31	
CCB002 CCB002	S	CNEPA-NEW	P	-0.2748	µg/l	2/13/2025 15:39:33	

Reviewed By:Iwona
On:2/14/2025 1:05:47 PM
Inst Id :KONELAB

Calibration results Aquakem 7.2AQ1

CHEMTECH CONSULTING GROUP INC
284 Sheffield Street, Mountainside, NJ 07092

2/13/2025 15:00 Reviewed by : NF Instrument ID : Konelab

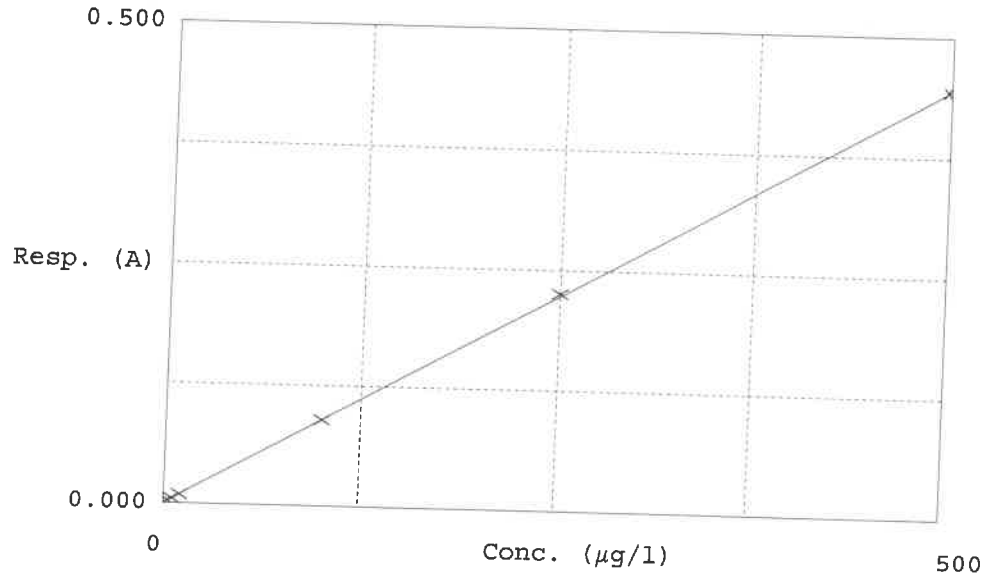
Test CNEPA-NEW

Accepted 2/13/2025 15:00

~~Factor~~ Slope ~~1126~~ 0.000888 NF 02.14.2025
~~Bias~~ Intercept 0.001

Coeff. of det. 0.999940

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	0.0PPBCN S0.0	0.001	-0.2092	0.0000	
2	5.0PPBCN S5.0	0.005	4.6731	5.0000	-6.5
3	10PPBCN S10.0	0.009	9.3299	10.0000	-6.7
4	100PPBCN S100.0	0.089	99.5930	100.0000	-0.4
5	250PPBCN S250.0	0.226	253.0303	250.0000	1.2
6	500PPBCN S500.0	0.444	498.5829	500.0000	-0.3

Re

NF
02.13.2025

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

Prep Standard - Chemical Standard Summary

Order ID : Q1339

Test : Cyanide

Prepbatch ID : PB166718,

Sequence ID/Qc Batch ID: LB134713,

Standard ID :
WP110103,WP110390,WP110391,WP111286,WP111294,WP111295,WP111387,WP111927,WP111929,WP111930,WP111931,WP111932,WP111933,WP111934,WP111935,WP111936,WP111937,

Chemical ID :
M5673,M6121,W2668,W2882,W3001,W3012,W3019,W3101,W3112,W3113,W3121,W3139,W3154,

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

Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
539	CN BUFFER	WP110103	10/08/2024	04/08/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 10/08/2024

FROM 138.00000gram of W2668 + 862.00000ml of W3112 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3214	Magnesium Chloride For Cyanide 2.5M(51%W/V)	WP110390	10/24/2024	04/24/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 10/24/2024

FROM 500.00000ml of W3112 + 510.00000gram of W3001 = Final Quantity: 1000.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1714	Sulfuric Acid, 50% (v/v)	WP110391	10/24/2024	04/24/2025	Niha Farheen Shaik	None	None	Iwona Zarych 10/24/2024

FROM 1000.00000ml of M5673 + 1000.00000ml of W3112 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2816	CN-EPA Pyridine-Burbituric Acid solution	WP111286	01/02/2025	04/30/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCSC-5)	Glass Pipette-A	Iwona Zarych 01/02/2025

FROM 15.00000gram of W2882 + 15.00000ml of M6121 + 75.00000ml of W3019 + 895.00000ml of W3112 = Final Quantity: 1000.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
11	Sodium hydroxide absorbing solution 0.25 N	WP111294	01/07/2025	07/07/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 01/07/2025

FROM 21.00000L of W3112 + 210.00000gram of W3113 = Final Quantity: 21.000 L

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3850	Cyanide MS-MSD spiking solution, 5PPM	WP111295	01/07/2025	07/07/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/07/2025

FROM 1.00000ml of W3154 + 199.00000ml of WP111294 = Final Quantity: 200.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1581	Sodium hydroxide solution, 1.25N	WP111387	01/14/2025	07/14/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Jignesh Parikh 01/14/2025

FROM 50.00000gram of W3113 + 950.00000ml of W3112 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1582	Chloramine T solution, 0.014M	WP111927	02/13/2025	02/14/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 02/14/2025

FROM 0.08000gram of W3139 + 20.00000ml of W3112 = Final Quantity: 20.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1585	Cyanide Intermediate standard solution, 10PPM	WP111929	02/13/2025	02/14/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 02/14/2025

FROM 1.00000ml of W3154 + 79.00000ml of W3112 + 20.00000ml of WP111387 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1586	Cyanide Cal Std, 500 PPB	WP111930	02/13/2025	02/14/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 02/14/2025

FROM 5.00000ml of WP111929 + 95.00000ml of WP111294 = Final Quantity: 0.100 L

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1587	Cyanide Cal Std, 250 PPB	WP111931	02/13/2025	02/14/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 02/14/2025

FROM 2.50000ml of WP111929 + 97.50000ml of WP111294 = Final Quantity: 0.100 L

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1588	Cyanide Cal Std, 100 PPB	WP111932	02/13/2025	02/14/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 02/14/2025

FROM 1.00000ml of WP111929 + 99.00000ml of WP111294 = Final Quantity: 0.100 L

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1589	Cyanide Cal Std, 10 PPB	WP111933	02/13/2025	02/14/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 02/14/2025

FROM 4.00000ml of WP111931 + 96.00000ml of WP111294 = Final Quantity: 0.100 L

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1590	Cyanide Cal Std, 5 PPB	WP111934	02/13/2025	02/14/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 02/14/2025

FROM 2.00000ml of WP111931 + 98.00000ml of WP111294 = Final Quantity: 0.100 L

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Fax : 908 789 8922

Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1591	Cyanide blank std, 0 PPB	WP111935	02/13/2025	02/14/2025	Niha Farheen Shaik	None	None	Iwona Zarych 02/14/2025

FROM 100.00000ml of WP111294 = Final Quantity: 0.100 L

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1763	Cyanide ICV Std	WP111936	02/13/2025	02/14/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 02/14/2025

FROM 0.50000ml of W3012 + 49.50000ml of WP111294 = Final Quantity: 50.000 ml

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Fax : 908 789 8922

Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1592	Cyanide CCV Std, 250 PPB	WP111937	02/13/2025	02/14/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 02/14/2025

FROM 2.50000ml of WP111929 + 97.50000ml of WP111294 = Final Quantity: 0.100 L

Alliance TECHNICAL GROUP
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-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	23D2462010	03/20/2028	09/21/2023 / mohan	09/05/2023 / mohan	M5673

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.	J3818-5 / SODIUM PHOSPHATE, MONOBAS/HYD, CRYS, ACS, 2.5 KG	0000225799	12/03/2025	04/05/2021 / Alexander	02/10/2020 / apatel	W2668

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	EM-BX0035-3 / Barbituric Acid, 100 gms	1.00132.0100	04/30/2025	12/07/2021 / JASWAL	11/30/2021 / apatel	W2882

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	01237-10KG / Megnasium Chloride Hexahydrate ACS 10KG	002251-03319	06/06/2027	01/23/2023 / Iwona	06/06/2022 / Iwona	W3001

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	/ ICV-CN	ICV6-400	12/31/2025	01/08/2025 / Iwona	02/20/2020 / Iwona	W3012

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
SIGMA ALDRICH	270970-1L / Pyridine 1L	SHBQ2113	04/03/2028	04/03/2023 / Iwona	04/03/2023 / Iwona	W3019

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	470112-662 / TEST STRIPES, NITRATE/NITRITE, PK50	402403	04/30/2026	05/02/2024 / Iwona	04/10/2024 / Iwona	W3101

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19510-7 / Sodium Hydroxide Pellets 12 Kg	23B1556310	12/31/2025	07/08/2024 / Iwona	07/08/2024 / Iwona	W3113

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	140444 / TEST PAPERS,PH 0-14,.5 SENSI,100PK	HC446507	07/25/2029	07/25/2024 / Iwona	07/25/2024 / Iwona	W3121

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	JTE494-6 / CHLORAMINE-T BAKER 250GM	10239484	09/09/2029	09/09/2024 / Iwona	09/09/2024 / Iwona	W3139

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 #
PCI Scientific Supply, Inc.	RC2543-4 / CYANIDE STD 1000PPM 4OZ	1411J58	05/31/2025	12/02/2024 / Iwona	12/02/2024 / Iwona	W3154

~~W2918~~ W3001 Rec. 06/06/22 Exp. 06/06/27

Chem-Impex International, Inc.

Tel: (630) 766-2112
E-mail: sales@chemimpex.com
Shipping and Correspondence:
935 Dillon Drive
Wood Dale, IL 60191

Fax: (630) 766-2218
Web site: www.chemimpex.com
Manufacturing site:
825 Dillon Drive
Wood Dale, IL 60191

Certificate of Analysis

Catalogue Number	01237
Product	**Magnesium chloride hexahydrate**
Lot Number	002251-03319
	Magnesium chloride•$6H_2O$
CAS Number	7791-18-6
Molecular Formula	$MgCl_2$•$6H_2O$
Molecular Weight	203.3

Appearance	Colorless crystals, very deliquescent
Heavy Metals	< 5 ppm
Anion	Nitrate : < 0.001% Phosphate : < 5 ppm Sulfate : < 0.002%
Cation	Ammonium : < 0.002% Barium : < 0.005% Calcium : 0.0006% Iron : < 5 ppm Manganese : 1.8 ppm Potassium : 0.0006% Sodium : 0.0008% Strontium : 0.0015%
Insoluble material	0.0025%
Assay by titration	100.29%
Grade	ACS reagent
Storage	Store at RT
Country of Origin	India

Certificate of Analysis

Catalog Number: 01237 **Lot Number: 002251-03319**

Remarks	See material safety data sheet for additional information
	For laboratory use only

The foregoing is a copy of the Certificate of Analysis as provided by our supplier

Bala Kumar
Quality Control Manager

Sigma-Aldrich.

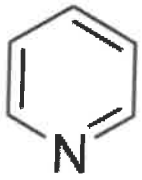
W3019
Rec 4/3/23

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
Pyridine - anhydrous, 99.8%

Product Number:	**270970**
Batch Number:	**SHBQ2113**
Brand:	SIAL
CAS Number:	110-86-1
MDL Number:	MFCD00011732
Formula:	C5H5N
Formula Weight:	79.10 g/mol
Quality Release Date:	15 DEC 2022



Test	Specification	Result
Appearance (Color)	Colorless	Colorless
Appearance (Form)	Liquid	Liquid
Infrared Spectrum	Conforms to Structure	Conforms
Purity (GC)	≥ 99.75 %	99.99 %
Water (by Karl Fischer)	≤ 0.003 %	0.002 %
Residue on Evaporation	≤ 0.0005 %	< 0.0001 %

Larry Coers, Director
Quality Control
Sheboygan Falls, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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

W2160, W2161, W2162, W2163, W2164 Receive by AP on 9/2/2016

(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

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

9673- 33

avantor™ | J.T.Baker®

Material No.: 9673-33
Batch No.: 23D2462010
Manufactured Date: 2023-03-22
Retest Date: 2028-03-20
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (H_2SO_4)	95.0 – 98.0 %	96.1 %
Appearance	Passes Test	Passes Test
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Substances Reducing Permanganate (as SO2)	≤ 2 ppm	< 2 ppm
Ammonium (NH_4)	≤ 1 ppm	1 ppm
Chloride (Cl)	≤ 0.1 ppm	< 0.1 ppm
Nitrate (NO_3)	≤ 0.2 ppm	< 0.1 ppm
Phosphate (PO_4)	≤ 0.5 ppm	< 0.1 ppm
Trace Impurities – Aluminum (Al)	≤ 30.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 4.0 ppb	< 2.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	8.5 ppb
Trace Impurities – Cadmium (Cd)	≤ 2.0 ppb	< 0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 6.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 0.5 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gold (Au)	≤ 10.0 ppb	0.5 ppb
Heavy Metals (as Pb)	≤ 500.0 ppb	< 100.0 ppb
Trace Impurities – Iron (Fe)	≤ 50.0 ppb	1.3 ppb
Trace Impurities – Lead (Pb)	≤ 0.5 ppb	< 0.5 ppb
Trace Impurities – Magnesium (Mg)	≤ 7.0 ppb	0.8 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Nickel (Ni)	≤ 2.0 ppb	0.3 ppb
Trace Impurities – Potassium (K)	≤ 500.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se)	≤ 50.0 ppb	< 0.1 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	31.5 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb

>>> Continued on page 2 >>>

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

avantor™ | J.T.Baker®

Material No.: 9673-33
Batch No.: 23D2462010

Test	Specification	Result
Trace Impurities - Sodium (Na)	≤ 500.0 ppb	5.4 ppb
Trace Impurities - Strontium (Sr)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	0.4 ppb

For Laboratory,Research,or Manufacturing Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

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

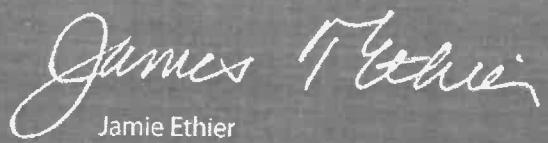
584

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

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Certificate of Analysis

1.00132.0000 Barbituric acid for analysis EMSURE®
Batch N020065932

	Spec. Values		Batch Values	
Assay (acidimetric)	≥ 99	%	99.6	%
Identity (IR-spectrum)	passes test		passes test	
Chloride (Cl)	≤ 40	ppm	≤ 40	ppm
Heavy metals (as Pb)	≤ 50	ppm	≤ 50	ppm
Fe (Iron)	≤ 10	ppm	≤ 10	ppm
Sulfated ash	≤ 0.1	%	≤ 0.1	%
Loss on Drying (105 °C)	≤ 0.1	%	≤ 0.1	%
Suitability as reagent (for cyanide determination)	passes test		passes test	

Date of release (DD.MM.YYYY) 17.04.2020
Minimum shelf life (DD.MM.YYYY) 30.04.2025

Ioannis Chartomatsidis
Responsible laboratory manager quality control

This document has been produced electronically and is valid without a signature.

W2668 Received on 02/10/2020 by AP

Sodium Phosphate, Monobasic, Monohydrate,
Crystal
BAKER ANALYZED® A.C.S. Reagent

(sodium dihydrogen phosphate, monohydrate)

Material No.: 3818-05
Batch No.: 0000225799
Manufactured Date: 2018/12/05
Retest Date: 2025/12/03
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay ($NaH_2PO_4 \cdot H_2O$)	98.0 - 102.0 %	99.5
pH of 5% Solution at 25°C	4.1 - 4.5	4.3
Insoluble Matter	<= 0.01 %	< 0.01
Chloride (Cl)	<= 5 ppm	< 5
ACS - Sulfate (SO_4)	<= 0.003 %	< 0.003
Calcium (Ca)	<= 0.005 %	<0.005
Potassium (K)	<= 0.01 %	< 0.01
Heavy Metals (as Pb)	<= 0.001 %	< 0.001
Trace Impurities - Iron (Fe)	<= 0.001 %	< 0.001

For Laboratory, Research or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs

Country of Origin: IN
Packaging Site: Paris Mfg Ctr & DC

Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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Certificate of Analysis

Sodium Hydroxide (Pellets)

Material: 0583

Grade: ACS GRADE

Batch Number: 23B1556310

Chemical Formula: NaOH
Molecular Weight: 40
CAS #: 1310-73-2
Appearance:

Pellets

Manufacture Date: 12/14/2022
Expiration Date: 12/31/2025

Storage: Room Temperature

TEST	SPECIFICATION	ANALYSIS	DISPOSITION
Calcium	<= 0.005 %	<0.005 %	PASS
Chloride	<= 0.005 %	0.002 %	PASS
Heavy Metals	<= 0.002 %	<0.002 %	PASS
Iron	<= 0.001 %	<0.001 %	PASS
Magnesium	<= 0.002 %	<0.002 %	PASS
Mercury	<= 0.1 ppm	<0.1 ppm	PASS
Nickel	<= 0.001 %	<0.001 %	PASS
Nitrogen Compounds	<= 0.001 %	<0.001 %	PASS
Phosphate	<= 0.001 %	<0.001 %	PASS
Potassium	<= 0.02 %	<0.02 %	PASS
Purity	>= 97.0 %	99.2 %	PASS
Sodium Carbonate	<= 1.0 %	0.5 %	PASS
Sulfate	<= 0.003 %	<0.003 %	PASS

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

This document has been electronically produced and is valid without a signature.

Leona Edwardson, Quality Control Sr. Manager - Solon
VWR Chemicals, LLC.
28600 Fountain Parkway, Solon OH 44139 USA

Additional Information

Analysis may have been rounded to significant digits in specification limits.

Product meets analytical specifications of the grades listed.

Certificate of Analysis

Sodium Hydroxide (Pellets)

Material: **0583**

Grade: **ACS GRADE**

Batch Number: **23B1556310**

Chemical Formula:	NaOH	Manufacture Date:	12/14/2022
Molecular Weight:	40	Expiration Date:	12/31/2025
CAS #:	1310-73-2		
Appearance:		Storage:	Room Temperature

Pellets

Spec Set: 0583ACS

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

This document has been electronically produced and is valid without a signature.

Leona Edwardson, Quality Control Sr. Manager - Solon
VWR Chemicals, LLC.
28600 Fountain Parkway, Solon OH 44139 USA

Additional Information

Analysis may have been rounded to significant digits in specification limits.

Product meets analytical specifications of the grades listed.

ThermoFisher SCIENTIFIC

Certificate of Analysis

W3139 Received on 9/9/24 by IZ

Product No.:	A12044
Product:	Chloramine-T trihydrate, 98%
Lot No.:	10239484

Appearance:	White powder
Melting Point:	166°C(dec)
Assay (Iodometric titration):	100.5%
Identification (FTIR):	Conforms

Order our products online **thermofisher.com/chemicals**

This document has been electronically generated and does not require a signature.

Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third party data or information associated with the product. Products are for research and development use only. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.

RICCA CHEMICAL COMPANY®
W3154 Rec. on 12/2/24 by IZ

448 West Fork Dr
Arlington, TX 76012
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

Certificate of Analysis

Cyanide Standard, 1000 ppm CN^-

Lot Number: 1411J58 **Product Number:** 2543

Manufacture Date: NOV 22, 2024
Expiration Date: MAY 2025

This standard is prepared using accurate volumetric techniques from material that has been assayed against Silver Nitrate solution certifiec traceable to NIST Standard Reference Material 999. The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is the combined uncertainty based on the stability of the assayed Potassium Cyanide, and the uncertainty in the mass and volume measurements.
Use 0.16% (w/v) (0.04 N) Sodium Hydroxide or 0.225 % (w/v) (0.04 N) Potassium Hydroxide to make dilutions of this standard. Restandardize weekly if extreme accuracy is required.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Cyanide	151-50-8	ACS
Sodium Hydroxide	1310-73-2	Reagent

Test	Specification	Result
Appearance	Colorless liquid	Passed
Cyanide (CN^-)	995-1005 ppm	1000 ppm

Specification	Reference
Stock Standard Cyanide Solution	APHA (4500-CN- F)
Stock Cyanide Solution	APHA (4500-CN- E)
Stock Cyanide Solution	APHA (4500-CN- K)
Stock Cyanide Solution	APHA (4500-CN- H)
Cyanide Reference Solution (1000 mg/L)	EPA (SW-846) (7.3.3.2)
Cyanide Calibration Stock Solution (1,000 mg/L CN-)	EPA (SW-846) (9213)
Stock Cyanide Solution	EPA (335.3)
Stock Cyanide Solution	EPA (335.2)
Cyanide Solution Stock	ASTM (D 4282)
Simple Cyanide Solution, Stock (1.0 g/L CN)	ASTM (D 4374)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
2543-16	500 mL amber poly	6 months
2543-32	1 L amber poly	6 months
2543-4	120 mL amber poly	6 months

Recommended Storage: 2°C - 8°C (36°F - 46°F)



Luis Briceno (11/22/2024)
Operations Supervisor

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.

Alliance TECHNICAL GROUP

Water Cyanide Preparation Sheet

PB166718

SOP ID : MSFAM01.1-Cyanide-2

SDG No : ME2964

Matrix : WATER

Pippete ID : WC

Balance ID : N/A

Hood ID : HOOD#1

Block ID : MC-1, MC-2

Weigh By : N/A

Start Digest Date: 02/13/2025 **Time :** 11:00 **Temp :** 123 °C

End Digest Date: 02/13/2025 **Time :** 12:30 **Temp :** 127 °C

Digestion tube ID : M5595

Filter paper ID : N/A

pH Meter ID : N/A

Block Thermometer ID : WC CYANIDE

Prep Technician Signature: JB

Supervisor Signature: NF

Standared Name	MLS USED	STD REF. # FROM LOG
PBW	50.0ML	W3112
MATRIX SPIKE SOLUTION	1.0ML	WP111295
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
0.25N NaOH	50.0ML	WP111294
50% v/v H2SO4	5.0ML	WP110391
51% w/v MgCL2	2.0ML	WP110390
pH Paper 0-14	N/A	W3121
Nitrate/Nitrite Strip	N/A	W3101
Lead Acetate strip	N/A	W3134
KI-starch paper	N/A	W3155
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

LAB SAMPLE ID	CLIENT SAMPLE ID	Wt(g)/Vol(ml)	Comment
S0	S0	50.0ML	WP111935 I batch
S5.0	S5.0	50.0ML	WP111934 "
S10.0	S10.0	50.0ML	WP111933 "
S100.0	S100.0	50.0ML	WP111932 "
S250.0	S250.0	50.0ML	WP111931 "
S500.0	S500.0	50.0ML	WP111930 "
ICV	ICV	50.0ML	WP111936 "
ICB	ICB	50.0ML	W3112 "
CCV	CCV	50.0ML	WP111937 "
CCB	CCB	50.0ML	W3112 "
Midrange	Midrange	N/A	N/A
HIGHSTD	HIGHSTD	N/A	N/A
LOWSTD	LOWSTD	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

MIDI-DISTILATION_AQUEOUS; I-ST BATCH MC-2 START TEMP:123 C; MC-2 END TEMP: 126 C Block Therm.ID: WC-CYANIDE-2,

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
02.13.2025, 12:45	JB / WC	NF(WC)
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Cyanide Preparation Sheet

PB166718

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
PB166718BL	PBW718	50	50	>10	Negative	Negative	Negative	N/A I batch	N/A
Q1339-01	ME29C5	50	50	>10	Negative	Negative	Negative	N/A "	N/A
Q1339-03	ME29C6	50	50	>10	Negative	Negative	Negative	N/A "	N/A
Q1339-05	ME29D1	50	50	>10	Negative	Negative	Negative	N/A "	N/A
Q1339-06	ME29D2	50	50	>10	Negative	Negative	Negative	N/A "	N/A
Q1339-08	ME29D2D	50	50	>10	Negative	Negative	Negative	N/A "	N/A
Q1339-09	ME29D2S	50	50	>10	Negative	Negative	Negative	N/A "	N/A

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

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB134713

Review By	Niha Farheen Shaik	Review On	2/14/2025 12:50:41 PM
Supervise By	Iwona Zarych	Supervise On	2/14/2025 1:05:47 PM

STD. NAME	STD REF.#
ICAL Standard	WP111935,WP111934,WP111933,WP111932,WP111931,WP111930
ICV Standard	WP111936
CCV Standard	WP111937
ICSA Standard	
CRI Standard	
LCS Standard	
Chk Standard	WP110103,WP111286,WP111927

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0.0	S0	CAL1	02/13/25 14:59		Niha	OK
2	S5.0	S01	CAL2	02/13/25 14:59		Niha	OK
3	S10.0	S02	CAL3	02/13/25 14:59		Niha	OK
4	S100.0	S03	CAL4	02/13/25 14:59		Niha	OK
5	S250.0	S04	CAL5	02/13/25 14:59		Niha	OK
6	S500.0	S05	CAL6	02/13/25 14:59		Niha	OK
7	ICV001	ICV001	ICV	02/13/25 15:27		Niha	OK
8	ICB001	ICB001	ICB	02/13/25 15:27		Niha	OK
9	CCV001	CCV001	CCV	02/13/25 15:27		Niha	OK
10	CCB001	CCB001	CCB	02/13/25 15:27		Niha	OK
11	PB166718BL	PBW718	MB	02/13/25 15:27		Niha	OK
12	Q1339-01	ME29C5	SAM	02/13/25 15:35		Niha	OK
13	Q1339-03	ME29C6	SAM	02/13/25 15:35		Niha	OK
14	Q1339-05	ME29D1	SAM	02/13/25 15:35		Niha	OK
15	Q1339-06	ME29D2	SAM	02/13/25 15:35		Niha	OK
16	Q1339-08	ME29D2D	DUP	02/13/25 15:35		Niha	OK
17	Q1339-09	ME29D2S	MS	02/13/25 15:35		Niha	OK
18	CCV002	CCV002	CCV	02/13/25 15:39		Niha	OK

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

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB134713

Review By	Niha Farheen Shaik	Review On	2/14/2025 12:50:41 PM
Supervise By	Iwona Zarych	Supervise On	2/14/2025 1:05:47 PM

STD. NAME	STD REF.#
ICAL Standard	WP111935,WP111934,WP111933,WP111932,WP111931,WP111930
ICV Standard	WP111936
CCV Standard	WP111937
ICSA Standard	
CRI Standard	
LCS Standard	
Chk Standard	WP110103,WP111286,WP111927

19	CCB002	CCB002	CCB	02/13/25 15:39		Niha	OK

ATTN GUEST: JOHN FILOON
2153846932
TOWN PLACE SUITES,
1440 N DIXIE HWY
MONROE MI 48162

45 LBS

42 OF 50

SHIP TO:
ALLIANCE TECHNICAL GROUP LLC
908 7898900
ALLIANCE TECHNICAL GROUP LLC
284 SHEFFIELD ST # 1
MOUNTAINSIDE NJ 07092

NJ 078 9-41

2-7-25
2.6°
1030

UPS NEXT DAY AIR

1

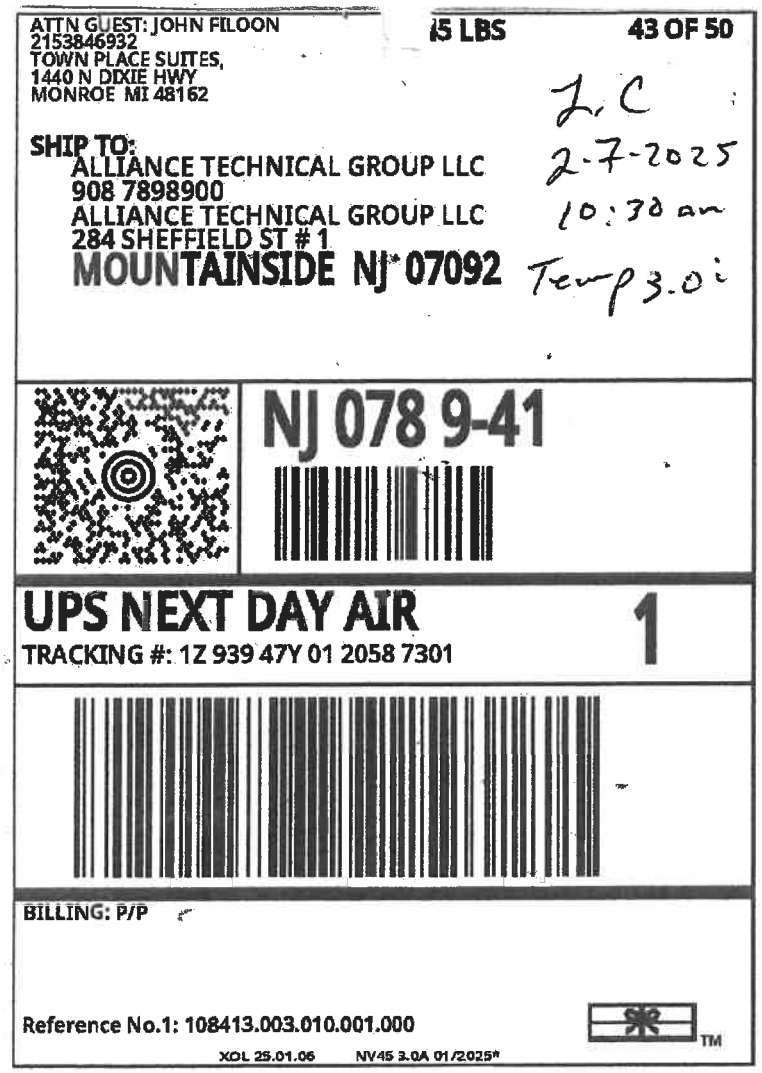
TRACKING #: 1Z 939 47Y 01 2569 4696

BILLING: P/P

Reference No.1: 108413.003.010.001.000

XOL 25.01.06 NV45 3.0A 01/2025*

597



ATTN GUEST: JOHN FILOON
2153846932
TOWN PLACE SUITES,
1440 N DIXIE HWY
MONROE MI 48162

5 LBS

43 OF 50

J.C
2-7-2025
10:30 am
Temp 3.0

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

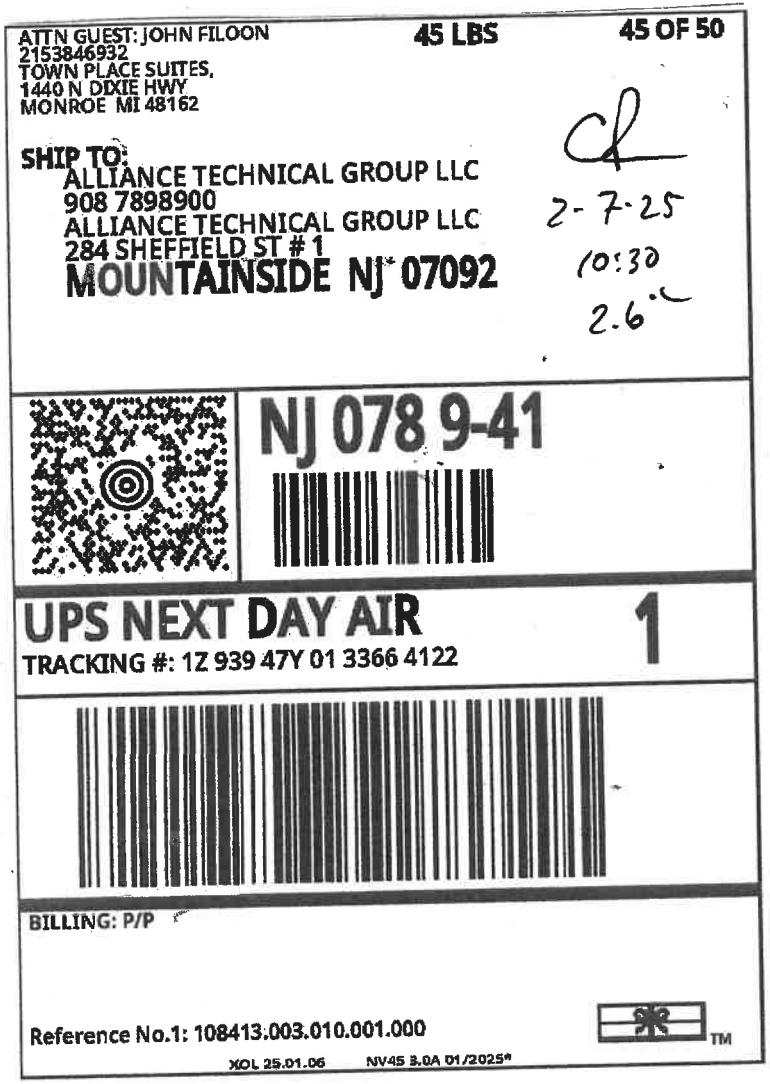
TRACKING #: 1Z 939 47Y 01 2058 7301

BILLING: P/P

Reference No.1: 108413.003.010.001.000

XOL 25.01.06 NV45 3.0A 01/2025*

598


ATTN GUEST: JOHN FILOON
2153846932
TOWN PLACE SUITES,
1440 N DIXIE HWY
MONROE MI 48162

45 LBS

45 OF 50

CL
2-7-25
10:30
2.6

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 3366 4122

BILLING: P/P

Reference No.1: 108413.003.010.001.000

XOL 25.01.06 NV45 3.0A 01/2025*

599

ATTN GUEST: JOHN FILOON
2153846932
TOWN PLACE SUITES,
1440 N DIXIE HWY
MONROE MI 48162

45 LBS

46 OF 50

CR
2-7-25
10:30
2-8

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 3597 6336

BILLING: P/P

Reference No.1: 108413.003.010.001.000

XOL 25.01.06 NV45 3.0A 01/2025*

600

Alliance TECHNICAL GROUP 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Login Summary Report

Order ID :	Q1339	Order Date :	2/7/2025 10:30:00 AM	Project Mgr :	Deepak
Client :	USEPA CLP SMO	Project :	51900	Report Type :	USEPA CLP
Contact :	Anita Kapadia	Receive Date :	2/7/2025 10:30:00 AM	EDD Type :	EPA CLP
Date Sign Off :	2/11/2025 2:51:43 PM				

Sample ID	Client ID	Matrix	Sampling Date	Test	Test Group	Method	TAT Days	Fax Due Date	HC Due Date
Q1339-01	ME29C5	Water	02/04/2025						
				Cyanide		SFAM_CN	15	02/28/2025	02/28/2025
				Hardness, Total		SFAM_MS	15	02/28/2025	02/28/2025
				Mercury		SFAM_HG	15	02/28/2025	02/28/2025
				Metals CLP MS		SFAM_MS	15	02/28/2025	02/28/2025
Q1339-02	ME29C7	Water	02/04/2025						
				Hardness, Total		SFAM_MS	15	02/28/2025	02/28/2025
				Mercury		SFAM_HG	15	02/28/2025	02/28/2025
				Metals CLP MS		SFAM_MS	15	02/28/2025	02/28/2025
Q1339-03	ME29C6	Water	02/04/2025						
				Cyanide		SFAM_CN	15	02/28/2025	02/28/2025
				Hardness, Total		SFAM_MS	15	02/28/2025	02/28/2025
				Mercury		SFAM_HG	15	02/28/2025	02/28/2025
				Metals CLP MS		SFAM_MS	15	02/28/2025	02/28/2025
Q1339-04	ME29C9	Water	02/04/2025						
				Hardness, Total		SFAM_MS	15	02/28/2025	02/28/2025
				Mercury		SFAM_HG	15	02/28/2025	02/28/2025
				Metals CLP MS		SFAM_MS	15	02/28/2025	02/28/2025
Q1339-05	ME29D1	Water	02/05/2025						
				Cyanide		SFAM_CN	15	02/28/2025	02/28/2025
				Hardness, Total		SFAM_MS	15	02/28/2025	02/28/2025
				Mercury		SFAM_HG	15	02/28/2025	02/28/2025
				Metals CLP MS		SFAM_MS	15	02/28/2025	02/28/2025
Q1339-06	ME29D2	Water	02/05/2025						
				Cyanide		SFAM_CN	15	02/28/2025	02/28/2025
				Hardness, Total		SFAM_MS	15	02/28/2025	02/28/2025
				Mercury		SFAM_HG	15	02/28/2025	02/28/2025
				Metals CLP MS		SFAM_MS	15	02/28/2025	02/28/2025
Q1339-07	ME29D4	Water	02/05/2025						
				Hardness, Total		SFAM_MS	15	02/28/2025	02/28/2025

				Mercury	SFAM_HG	15	02/28/2025	02/28/2025
				Metals CLP MS	SFAM_MS	15	02/28/2025	02/28/2025
Q1339-08	ME29D2D	Water	02/05/2025					
				Cyanide	SFAM_CN	15	02/28/2025	02/28/2025
				Hardness, Total	SFAM_MS	15	02/28/2025	02/28/2025
				Mercury	SFAM_HG	15	02/28/2025	02/28/2025
				Metals CLP MS	SFAM_MS	15	02/28/2025	02/28/2025
Q1339-09	ME29D2S	Water	02/05/2025					
				Cyanide	SFAM_CN	15	02/28/2025	02/28/2025
				Hardness, Total	SFAM_MS	15	02/28/2025	02/28/2025
				Mercury	SFAM_HG	15	02/28/2025	02/28/2025
				Metals CLP MS	SFAM_MS	15	02/28/2025	02/28/2025

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB166703 **WorkList ID :** 187677 **Department :** Digestion **Date :** 02-12-2025 13:07:03

603

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1339-01	ME29C5	Water	Metals CLP MS	1:1 HNO3 to pH < 2	USEP01	C11	02/04/2025	SFAM_MS
Q1339-02	ME29C7	Water	Metals CLP MS	1:1 HNO3 to pH < 2	USEP01	C11	02/04/2025	SFAM_MS
Q1339-03	ME29C6	Water	Metals CLP MS	1:1 HNO3 to pH < 2	USEP01	C11	02/04/2025	SFAM_MS
Q1339-04	ME29C9	Water	Metals CLP MS	1:1 HNO3 to pH < 2	USEP01	C11	02/04/2025	SFAM_MS
Q1339-05	ME29D1	Water	Metals CLP MS	1:1 HNO3 to pH < 2	USEP01	C11	02/05/2025	SFAM_MS
Q1339-06	ME29D2	Water	Metals CLP MS	1:1 HNO3 to pH < 2	USEP01	C11	02/05/2025	SFAM_MS
Q1339-07	ME29D4	Water	Metals CLP MS	1:1 HNO3 to pH < 2	USEP01	C11	02/05/2025	SFAM_MS
Q1339-08	ME29D2D	Water	Metals CLP MS	1:1 HNO3 to pH < 2	USEP01	C11	02/05/2025	SFAM_MS
Q1339-09	ME29D2S	Water	Metals CLP MS	1:1 HNO3 to pH < 2	USEP01	C11	02/05/2025	SFAM_MS

Date/Time 02112125 13:37

Raw Sample Received by: SRS.met.dlo

Raw Sample Relinquished by: CR SR

Date/Time 02112125 14:37

Raw Sample Received by: CR SR

Raw Sample Relinquished by: SRS.met.dlo

WORKLIST(Hardcopy Internal Chain)

WorkList Name : Q1245/1339_HgW **WorkList ID :** 187758 **Department :** Digestion **Date :** 02-18-2025 16:15:01

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1245-03	A6315	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	01/09/2025	SFAM_HG
Q1245-04	A6316	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	01/09/2025	SFAM_HG
Q1245-05	A6327	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	01/09/2025	SFAM_HG
Q1245-06	A6328	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	01/29/2025	SFAM_HG
Q1245-07	A6329	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	01/29/2025	SFAM_HG
Q1245-08	A6330	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	01/29/2025	SFAM_HG
Q1245-09	A6335	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	01/29/2025	SFAM_HG
Q1245-10	A6335D	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	01/29/2025	SFAM_HG
Q1245-11	A6335S	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	01/29/2025	SFAM_HG
Q1245-12	A6336	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	01/29/2025	SFAM_HG
Q1245-13	A6337	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	01/29/2025	SFAM_HG
Q1245-14	A6338	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	01/29/2025	SFAM_HG
Q1245-15	A6339	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	01/30/2025	SFAM_HG
Q1245-16	A6340	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	01/30/2025	SFAM_HG
Q1245-17	A6341	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	01/30/2025	SFAM_HG
Q1339-01	ME29C5	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	01/30/2025	SFAM_HG
Q1339-02	ME29C7	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	02/04/2025	SFAM_HG
Q1339-03	ME29C6	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	02/04/2025	SFAM_HG
Q1339-04	ME29C9	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	02/04/2025	SFAM_HG
Q1339-05	ME29D1	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	02/04/2025	SFAM_HG
Q1339-06	ME29D2	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	02/05/2025	SFAM_HG

604

Date/Time 2/19/25 @ 10:35

Raw Sample Received by: MB - DHL Lab

Raw Sample Relinquished by: MB - DHL Lab

Date/Time 2/19/25 @ 11:30

Raw Sample Received by: MB - DHL Lab

Raw Sample Relinquished by: MB - DHL Lab

WORKLIST(Hardcopy Internal Chain)

WorkList Name : Q1245/1339_HgW **WorkList ID :** 187758 **Department :** Digestion **Date :** 02-18-2025 16:15:01

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1339-07	ME29D4	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	02/05/2025	SFAM_HG
Q1339-08	ME29D2D	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	02/05/2025	SFAM_HG
Q1339-09	ME29D2S	Water	Mercury	1:1 HNO3 to pH < 2	USEP01	C11	02/05/2025	SFAM_HG

609

Date/Time 2/19/25 @ 10:33

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: [illegible]

Date/Time 2/19/25 @ 13:30

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: [illegible]

WORKLIST(Hardcopy Internal Chain)

WorkList Name : cn q1339 **WorkList ID :** 187670 **Department :** Distillation **Date :** 02-12-2025 10:19:23

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1339-01	ME29C5	Water	Cyanide	1:1 NaOH to pH >12	USEP01	C11	02/04/2025	SFAM_CN
Q1339-03	ME29C6	Water	Cyanide	1:1 NaOH to pH >12	USEP01	C11	02/04/2025	SFAM_CN
Q1339-05	ME29D1	Water	Cyanide	1:1 NaOH to pH >12	USEP01	C11	02/05/2025	SFAM_CN
Q1339-06	ME29D2	Water	Cyanide	1:1 NaOH to pH >12	USEP01	C11	02/05/2025	SFAM_CN
Q1339-08	ME29D2D	Water	Cyanide	1:1 NaOH to pH >12	USEP01	C11	02/05/2025	SFAM_CN
Q1339-09	ME29D2S	Water	Cyanide	1:1 NaOH to pH >12	USEP01	C11	02/05/2025	SFAM_CN

909

Date/Time 02·13·2025, 10:15

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature]

Date/Time 02·13·2025, 13:00

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature]